

### B. Interaction With the International Community

Since publication of the initial standards in 1973, EPA, together with the Federal Aviation Administration (FAA), has worked with the International Civil Aviation Organization (ICAO) on the development of international aircraft engine emission standards. ICAO was established in 1944 by the United Nations (by the Convention on International Civil Aviation, the "Chicago Convention") " \* \* in order that international civil aviation may be developed in a safe and orderly manner and that international air transport services may be established on the basis of equality of opportunity and operated soundly and economically."<sup>3</sup> ICAO's responsibilities include developing aircraft technical and operating standards, recommending practices, and generally fostering the growth of international civil aviation.

In 1972 at the United Nations Conference on the Human Environment, ICAO's position on the human environment was developed to be the following: "[i]n fulfilling this role ICAO is conscious of the adverse environmental impact that may be related to aircraft activity and its responsibility and that of its member States to achieve maximum compatibility between the safe and orderly development of civil aviation and the quality of the human environment." Also, in 1972 ICAO established the position to continue " \* \* \* with the assistance and cooperation of other bodies of the Organization and other international organizations \* \* \* the work related to the development of Standards, Recommended Practices and Procedures and/or guidance material dealing with the quality of the human environment \* \* \*."<sup>4</sup>

The United States is one of 188 participating member States of ICAO.<sup>5</sup> Under the basic ICAO treaty established in 1944 (the Chicago Convention), a participating nation which elects not to adopt the ICAO standards must provide a written explanation to ICAO

describing why a given standard is impractical to comply with or not in their national interest.<sup>6</sup> ICAO has no punitive powers for states that elect not to adopt ICAO standards. ICAO standards require States to provide written notification and failure to provide such notification could have negative consequences as detailed below.

If a Contracting State files a written notification indicating that it does not meet ICAO standards, other Contracting States are absolved of their obligations to "recognize as valid" the certificate of airworthiness issued by that Contracting State, since that certificate will not have been issued under standards "equal to or above" ICAO standards. In other words, other Contracting States do not have to allow aircraft belonging to that Contracting State to travel through their airspace.<sup>7</sup> Further, if it fails to file a written notification, it will be in default of its obligations, and risks mandatory exclusion of its aircraft from the airspace of other Contracting States and the loss of its voting power in the Assembly and Council.<sup>8</sup>

The ICAO Council's Committee on Aviation Environmental Protection (CAEP) undertakes ICAO's technical work in the environmental field. The CAEP is responsible for evaluating, researching, and recommending measures to the ICAO Council that address the environmental impact of international civil aviation. CAEP is composed of various Study Groups, Work Groups, Committees and other contributing memberships that include atmospheric, economic, aviation, environmental, and other professionals committed to ICAO's previously stated

position regarding aviation and the environment. At CAEP meetings, the United States is represented by the FAA, which plays an active role at these meetings (see section V for further discussion of FAA's role). EPA is a principal participant in the development of U.S. policy in ICAO/CAEP and other international venues. (EPA assists and technically advises FAA on aviation emissions matters.) If the ICAO Council adopts a CAEP proposal to adopt a new environmental standard, it then becomes part of the ICAO standards and recommended practices (Annex 16 to the Chicago Convention).<sup>9</sup>

On June 30, 1981, the ICAO Council adopted its first international standards and recommended practices covering aircraft engine emissions.<sup>10</sup> These standards limit aircraft engine emissions of NO<sub>x</sub>, CO, and hydrocarbons (HC), in relation to other engine performance parameters, and are commonly known as stringency standards. On March 24, 1993, the ICAO Council approved a proposal adopted at the second meeting of the CAEP (CAEP/2) to tighten the original NO<sub>x</sub> standard by 20 percent and amend the test procedures. At the next CAEP meeting (CAEP/3) in December 1995, the CAEP recommended a further tightening of 16 percent and additional test procedure amendments, but on March 20, 1997 the ICAO Council rejected this stringency proposal and approved only the test procedure amendments. At its next meeting (CAEP/4) in April 1998, the CAEP adopted a similar 16 percent NO<sub>x</sub> reduction proposal, which the ICAO Council approved on February 26, 1999.<sup>11</sup> The CAEP/4 16 percent NO<sub>x</sub> reduction standard applies to new engine designs certified after December 31, 2003 (applies only to newly certified engines).<sup>12</sup>

As discussed earlier, in 1997 EPA amended its regulations to adopt the

<sup>9</sup> ICAO, "Aircraft Engine Emissions," International Standards and Recommended Practices, Environmental Protection, Annex 16, Volume II, Second Edition, July 1993. Copies of this document can be obtained from ICAO (<http://www.icao.int>).

<sup>10</sup> ICAO, Foreword of "Aircraft Engine Emissions," International Standards and Recommended Practices, Environmental Protection, Annex 16, Volume II, Second Edition, July 1993. Copies of this document can be obtained from ICAO (<http://www.icao.int>).

<sup>11</sup> International Civil Aviation Organization (ICAO), Aircraft Engine Emissions, Annex 16, Volume II, Second Edition, July 1993, Amendment 4 effective on July 19, 1999. Copies of this document can be obtained from ICAO (<http://www.icao.int>).

<sup>12</sup> These NO<sub>x</sub> standards will be interchangeably be referred to as the 1998 CAEP/4 standards and the 1999 ICAO standards throughout this notice.

<sup>3</sup> ICAO, "Convention on International Civil Aviation," Sixth Edition, Document 7300/6, 1980. Copies of this document can be obtained from the ICAO Web site located at <http://www.icao.int>.

<sup>4</sup> International Civil Aviation Organization (ICAO), Foreword of "Aircraft Engine Emissions," International Standards and Recommended Practices, Environmental Protection, Annex 16, Volume II, Second Edition, July 1993. Copies of this document can be obtained from the ICAO Web site located at <http://www.icao.int>.

<sup>5</sup> As of June 20, 2002 there were 188 Contracting States according to the ICAO Web site located at <http://www.icao.int>.

<sup>6</sup> Text of Article 38 of Chicago Convention: Any State which finds it impracticable to comply in all respects with any such international standard or procedure, or to bring its own regulations or practices into full accord with any international standard or procedure after amendment of the latter, or which deems it necessary to adopt regulations or practices differing in any particular respect from those established by an international standard, shall give immediate notification to the International Civil Aviation Organization of the differences between its own practice and that established by the international standard. \* \* \* In any such case, the Council shall make immediate notification to all other states of the difference which exists between one or more features of an international standard and the corresponding national practice of that State.

<sup>7</sup> Text of Article 33 of Chicago Convention: Certificates of airworthiness and certificates of competency and licenses issued or rendered valid by the contracting State in which the aircraft is registered, shall be recognized as valid by the other contracting States, provided that the requirements under which such certificates or licenses were issued or rendered valid are equal to or above the minimum standards which may be established from time to time pursuant to this Convention.

<sup>8</sup> Articles 87 and 88 of Chicago Convention.