
Appendix A: Acknowledgements

The outcome of an effort as extensive as the Next Generation Fire Suppression Technology Program reflects the contributions of a large number of individuals and teams.

During the decade of the NGP, there were hundreds of technical staff involved in the research itself. These scientists, engineers, and technicians are listed as NGP project leaders and Contracting Officer's Representatives (Appendix B) and co-authors of the NGP publications (Appendix C), or are acknowledged in those publications.

Chapter 2 contains original material not available in other NGP reports. The following people and organizations provided assistance and contributions, without which this compilation of information would not have been possible. Ms. Donna Egner, SURVIAC, who was able to unearth every historical report requested from SURVIAC and DTIC; Joe Manchor, NAVAIR Survivability, Naval Air Warfare Center Weapons Division, who provided valuable source information related to vulnerability assessments, live fire testing, and continuing JASPO-sponsored testing activity; Frank Bosworth, Meggitt Safety Systems, Inc., Harlan Hagge, Kidde Aerospace, and Roger Butler, AirScrew Ltd., for their assistance in obtaining authorization to use graphics of fire suppression system components owned by their respective companies; James Jackson, Rolls-Royce Corporation, for his assistance in obtaining authorization to use graphics of a Rolls-Royce turboshaft engine; the Naval Air Systems Command Public Affairs Offices, for their review and public release authorization of source material; and Robert Clodfelter, AFP Associates, Chuck Dorney, USAF, Air Force Materiel Command, Ronald McGregor, USAF, Kirtland Air Force Base, and William Leach, Naval Air Systems Command, for their expert reviews of the material.

The second part of Chapter 11 also contains original material. Several organizations and individuals provided valuable assistance in the complex tests that led to validation of NGP principles. Andy Fultz and Tracy Barnes, Wyle Laboratories, provided leadership of the experimental facility operations and experimental project management; Dr. Peter Disimile and John Davis, ESI Systems, Inc., assisted with the airflow studies and other aspects of the experiments; Dr. Anthony Hamins, National Institute of Standards and Technology (NIST), consulted on fire dynamics and extinguishant mixing; Drs. John Hewson and Gregory Homicz, Sandia National Laboratories, provided numerical analysis of flow and mixing in engine nacelle environments; Bradford Colton, Halotron, Inc., supplied the "second-generation" BTM agent, and Gerry Brabham, Kidde Aerospace, Inc., supplied nozzles for flow and discharge studies.

The members of the NGP Technical Coordinating Committee (listed in Chapter 1) provided perspective and insight during the formulation of the research program, the performance of the 42 research projects, and the interpretation of the results.

There would have been no NGP, but for the initiative of Dr. Donald Dix and Mr. Paul Piscopo of the Office of the Secretary of Defense. In addition, they, along with the members of the Halon Alternatives R&D Steering Group (HASG) provided guidance as the policies within the Department of Defense evolved over the lifetime of the NGP.

With a large program come diverse and often difficult administrative requirements. Frank and Linda Gamboa (Gamboa International Corp.) handled all the expected and unexpected tasks as they arose, freeing the Technical Program Manager to focus on the technical program. In addition, Frank's interactions with staff of various units of the Department of Defense provided guidance on the priorities and realities of research in the public interest. Linda's facilitation of the Halon Options Technical Working Conferences promoted a flow of information into the NGP and effective dissemination of NGP results.

The leadership and committees of the DoD Strategic Environmental Research and Development Program (directed initially by Dr. John Harrison and subsequently by Bradley Smith, with Managers Dr. Jeff Marquese, Dr. Carl Adema, Dr. Robert Holst, and Charles Pellerin) provided valuable oversight, guidance, and advice, as well as the lion's share of the funding.

Several additional people were instrumental in bringing this book to fruition. Ed Mai and Mike Fancher (NIST) re-drew and edited many of the figures from versions photocopied from NGP reports. Sonya Wilson, HeiTech Services, Inc., put the text into final format and compiled the various indexes, no mean feat given the size complexity of the document. Sheila Turner, HeiTech Services, Inc., and Paul Reneke of NIST read the manuscript to check spelling, grammar, and consistency. Ilse Putman, NIST, assisted with the logistics of publication.

The legacy of all these contributors is safer, yet greener, aircraft.