

History of Taggant Research and Use

During 1977 to 1980, a pilot test was conducted for the ATF by the Aerospace Corporation. This feasibility demonstration program evaluated the addition of identification taggants manufactured by the 3M Corporation to 6.4 million pounds of packaged, cap-sensitive explosives manufactured by four companies (Atlas, DuPont, Hercules, and Independent). Taggant addition during manufacture, recordkeeping, and taggant recovery and analysis procedures were evaluated.¹¹

In 1980, the Swiss government began requiring that all manufactured explosives contain identification taggants to aid in criminal investigations. Some success in resolving bombing cases has been reported,¹² although the usefulness of the Swiss experience is controversial, in part because of differences between the U.S. and Swiss explosives industries.¹³

Previous Evaluation of Taggants

In 1980, the Office of Technology Assessment (OTA) examined the use of identification taggants in commercial explosives.¹⁴ While it concluded that taggants could be useful for law enforcement, OTA noted the need for further development and safety/compatibility evaluation testing.

COMMITTEE'S APPROACH TO EVALUATION OF TAGGANTS

Taggant Taxonomy

In an effort to categorize the many existing and proposed taggant concepts, the committee developed a draft taggant concepts taxonomy as shown in Box 1. Such a taxonomy should prove useful for stimulating thinking about new taggant approaches and for ensuring a complete consideration of taggant concepts. The reader is cautioned that this taxonomy is only a draft tool being used to stimulate committee thinking at this point.

¹¹ Aerospace Corporation. 1980. Identification Tagging Pilot Test for Packaged, Cap-Sensitive Explosives: Final Report. ATR-80(5860-03)-1ND. Washington, D.C.: Aerospace Corporation.

¹² Scharer, J. 1995. "Switzerland's Explosives Identification Program," in Proceedings of the International Explosives Symposium. Fairfax, Va.: Government Printing Office.

¹³ Ronay, C. 1997. Testimony to the Committee on Marking, Rendering Inert, and Licensing of Explosive Materials.

¹⁴ Office of Technology Assessment. 1980. Taggants in Explosives. Washington, D.C.: Government Printing Office.