## B. <u>Statistical Methods</u>

1. The potential respondent universe is 354 bomb technicians from State and local police departments. The desired response rate is seventy percent of this population, but no lower than forty percent to ensure reliability of the information.

The survey will consist of the following:

- Fill-in-the blank or forced choice questions to determine demographic characteristics.
- Likert scales to assess perceptions. A Likert scale provides a way for respondents to quantify opinions about a given statement.
- Open-ended questions to obtain general comments.
- 2. The survey was constructed for ease in analyzing, tabulating, and summarizing the data. The analysis of the data will be kept as simple as possible and limited to what is necessary to draw proper conclusions with the data.

## Quantitative Analysis:

Use of descriptive statistics will enable ATF to summarize a large amount of information. Data analysis files will be built using a statistical software package. The statistical methods to be employed are those of central tendency: mean, median, and mode. The mean is the arithmetic average for a group of numbers. The median is the middle value. The mode of a set of numbers is the value which occurs with the greatest frequency; i.e., the most common value.

Another way ATF will use statistics is through a frequency distribution and percentages. The represented data will reflect post-training measurements of performance for the group of respondents.

Qualitative Analysis:

A content analysis of the survey questions will be performed. The most common themes found in the answers to the qualitative questions will be presented. Telephone interviews to gather qualitative information will also supplement the quantitative data.

3. In order to maximize response rates, ATF will employ the use of electronic medium. For the 42 individuals who are not accessible via email, the survey will be mailed to them with an accompanying, self-addressed, stamped envelope. The survey will be sent via an e-

mail attachment to each respondent. To ensure consistency in completing the instrument, simple and straightforward instructions will be provided for completing and returning the survey. A point of contact for questions also will be established. The instrument was designed for ease in completing, which will facilitate response. It has the least number of questions necessary to cover the topics, and asks for short, objective answers, primarily using the "check boxes" method with some questions asking for a brief narrative response. The level of readability is appropriate to the respondents' knowledge, ability, and background. Adequate time will also be allowed for respondents to complete the instrument. A friendly reminder will be sent to those respondents who have not met the deadline.

- 4. No tests of procedures or methods will be undertaken.
- 5. ATF has employed a contractor to develop the data collection instrument, and to collect and analyze the data:

C2 Technologies, Inc. 7700 Leesburg Pike, Suite 219 Falls Church, VA 22043-2614 Point of Contact: Tom Tatem: 703-748-2789 Ext: 3062