SUPPORTING STATEMENT
U.S. Department of Commerce
National Institute of Standards and Technology (NIST)
Survey of the Need for the Improvement of the Infrared Reflectance Measurements Standards
OMB Control No. 0693-XXXX

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g. establishments, State and local governmental units, households, or persons) in the universe and the corresponding sample are to be provided in tabular form. The tabulation must also include expected response rates for the collection as a whole. If the collection has been conducted before, provide the actual response rate achieved.

The respondents are laboratory units, represented by individual managers or technicians, within companies, universities, and federal government agencies. The respondent laboratories are those involved with calibration measurements of materials infrared optical properties, typically requiring high accuracy measurement data. There are approximately 50 to 100 such laboratories within the United States. This number (universe of labs in US) comes through personal observation and interaction with community members over the last two decades including the following: 1) multiple personal attendance at conferences, which attract paper submissions from industrial and governmental labs dealing in the subject area - specifically several conferences within the SPIE Defense and Security Symposium, and the SPIE Optics and Photonics Symposium, CALCON (Conference on Characterization and Radiometric Calibration for Remote Sensing), the EO/IR Calibration and Characterization Workshop; 2) specific organization of conferences (7) chaired by NIST Point of Contact (L. Hannsen) and co-chaired within the SPIE Optics and Photonics Symposium since 1998; 3) teaching at NIST's Spectrophotometry and Radiation Thermometry Short Courses; 4) organization and conductance of an intercomparison of infrared spectral reflectance among 25 participating laboratories across the spectrum of industry, government and academic laboratories; and 5) calibration measurements performed for NIST customers over the last 15 years.

A similar Survey was performed in 1992, (L. M. Hanssen, “Parameters for an infrared diffuse reflectance standard,” Opt. Eng. **32**, 877-879 (1993), with 17 respondents. We expect a higher response rate than this previous study because today there are more laboratories, as well as a greater fraction of laboratories requiring high accuracy data. Many of the potential respondents are active participants in the conferences listed in Part A, Question 16, are NIST customers for infrared optical property calibration measurements, and have attended NIST short courses in Spectrophotometry.

2. Describe the procedures for the collection, including: the statistical methodology for stratification and sample selection; the estimation procedure; the degree of accuracy needed for the purpose described in the justification; any unusual problems requiring specialized sampling procedures; and any use of periodic (less frequent than annual) data collection cycles to reduce burden.

The purpose of the Survey will be to obtain input to help guide the direction of development of infrared reflectance measurements at NIST. A one-time collection of information will suffice. The needs and requirements are long term and are not expected to change from year to year. NIST will proceed on the basis of input from this one Survey. Since the accuracy required is more qualitative than quantitative, the anticipated response from a large fraction (> 25%) of the universe should be more than sufficient for the purpose of this collection.

No sampling selection will be conducted. NIST will be conducting a census survey (contacting every laboratory identified by NIST in Question 1 above).

3. Describe the methods used to maximize response rates and to deal with nonresponse. The accuracy and reliability of the information collected must be shown to be adequate for the intended uses. For collections based on sampling, a special justification must be provided if they will not yield "reliable" data that can be generalized to the universe studied.

An open period of approximately 2-3 months will be provided for submission of responses. Periodic e-mail reminders will be sent to all of those initially contacted via email, as well as those obtaining the survey from the website, at least once half-way through the response period, and a final reminder one week before the closing date. The website will be updated to indicate the time remaining for submission.

The information is intended to ascertain what our customer, wishes, needs and requirements are for accurate measurement data and support from NIST through standards, comparisons, and workshops. Since the accuracy required is more qualitative than quantitative, the anticipated response from a large fraction (> 25%) of the universe should be more than sufficient for the purpose of this collection.

4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections, but if ten or more test respondents are involved OMB must give prior approval.

No tests are planned.

5. Provide the name and telephone number of individuals consulted on the statistical aspects of the design, and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

NIST Point of Contact

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