OMB Control No. # 0693-0033 – NIST Generic Clearance for Program Evaluation Data Collections

TITLE OF THE COLLECTION: Research Examining the Quality, Market Value, and Effectiveness of Manufacturing Credentials

<u>FOUR STANDARD SURVEY QUESTIONS</u>

1. Explain who will be surveyed and why the group is appropriate to survey.
The National Institute of Standards and Technology (NIST) through the Hollings Manufacturing Extension Partnership (MEP) is conducting this research study to determine the quality, market value, and effectiveness of the credentials used in manufacturing as perceived by individuals responsible for workforce hiring and promotion decisions. This survey will be sent to MEP center companies across the United States and Puerto Rico, requesting that individuals with hiring authority (e.g., owner/CEO, presidents, chief operating officers, HR, etc.) complete the survey. This information on Manufacturing Credentials will be helpful in reducing training costs, narrowing the skills gap and aligning workforce to industry needs.

2. Explain how the survey was developed including consultation with interested parties, pre-testing, and responses to suggestions for improvement.
The survey was developed by the project contractor, Workcred, in partnership with the NIST MEP Program Manager, Mary Ann Pacelli. The Workcred project staff are recognized workforce credentialing experts. To gather input from the population to be served, feedback on the survey was gathered from a small focus group of 8 representatives from MEP centers across the U.S. The survey was also piloted with a total of 5 companies working with the MEP centers. The survey has been revised according to the feedback received and with the expertise of the research team.

3. Explain how the survey will be conducted, how customers will be sampled if fewer than all customers will be surveyed, expected response rate, and actions your agency plans to take to improve the response rate.
The survey will be conducted via an electronic questionnaire, Surveygzimo, a well-known online survey software program which is used by many Fortune 500 companies and government agencies. The NIST MEP will distribute the survey to the MEP Network of 51 centers. In addition, NIST MEP will distribute the survey to a select group of 14 stakeholders that will include Manufacturing USA Institutes and National Industry Associates. Each Center or Stakeholder will be asked to invite 10 clients or members to complete the survey. We expect survey response to be at least 60%, as the invitation will be personal from the MEP Center or Stakeholder contact. We will improve the response rate by writing a strong introduction to the survey explaining the importance of the study and how the information will be used. The Survey has been reviewed several times to clarify and streamline questions and reduce the time needed to complete the instrument. We believe that this will reduce "survey burnout" and result in more respondents participating and sending in completed surveys. At least 1 reminder will be sent during the survey open period, estimated to be 3 weeks.

4. Describe how the results of the survey will be analyzed and used to generalize the results to the entire customer population.

The results of the survey will be analyzed by the Workcred project staff in partnership with NIST MEP Program Manager. During the planning and design phase, the project team defined and confirmed a set of Research Goals that guided the development of the survey instrument:

1. **In general, are credentials valued?**
2. **In general, are credentials used by manufacturing?**
3. **Do they make a difference?**
   If yes, what are your reasons?
   - a. Productivity increases
   - b. Motivation increases
   - c. Retention increases
   - d. Promotions occur more quickly

   If no, what are your reasons credentials are not used and valued?
   - a. Have to be retrained anyway
   - b. Don't have the knowledge and skills that the credential states
   - c. No difference in performance between certified and non-certified
   - d. Experience is a better predictor for successful performance
   - e. Increase in salary associated with the credential is not cost effective
   - f. More cost effective to create our own credentials (or training program)
   - g. Has knowledge but can't perform
4. **At what job levels within manufacturing are credentials more effective?**
   - a. Entry Level (new hire with minimally qualifications)
   - b. Midcareer
   - c. Senior level
5. **In general, how are credentials used by the manufacturer?**
   - o Preferred
   - o Required for employment
   - o Required for promotion
   - o Required for retention
   - **o** Not used
6. **How do employees in manufacturing facilities assess potential hires to determine if they are qualified to competently perform at their jobs?** What credentials are being used in the technical operations of manufacturing?
   - o This would include degrees, certificates, certifications and licenses, union credentials (apprenticeships)
7. **Which credentials are the most prevalent?**
   - o Across all manufacturing regardless of type of manufacturing
   - o According to type of manufacturing
   - o Related to state and geographic region
   - **o** According to size of manufacturing
8. **What are the specific names of the credentials used within each type of job role associated with the technical operations of manufacturing?**
9. **What specific credentials are required by most manufacturers and why do they require them?**

      a. Size of manufacturer
      b. Geographic region
      c. Sector of manufacturer

10. What specific credentials are generally preferred by most manufacturers and why do they prefer them?

11. When are the credentials generally acquired?
- *Before hiring*
- *After they are hired*
  - Voluntarily obtained credential
  - Needed to obtain a promotion
  - **o** Use as a professional development tool

12. What support are the workers given after they are hired to obtain a credential?

13. When individuals are hired without credentials, what type of training do you conduct to up-skill these employees?

14. When individuals are hired with credentials, do you still have to conduct training to up-skill employees?

We will use the survey results to explore various relationships to answer key questions of the study. The analysis will range from simple analysis such as frequency distributions, central measures and variance analyses (e.g., mean, mode, medians, standard deviation), and advanced analyses (correlations, regressions, t-tests, and ANOVAs). The analyses will help us answer questions that the study seeks to answer.

Responses will be collated and compared across a variety of factors including type of manufacturing sector, geographic region, type of job, role of respondent. This will allow us to identify key factors that influence the use and perceived of credentials and what employers are looking for in making workforce decisions. The sample size used when distributing the survey is expected to be large enough to allow results to be extrapolated and considered valid for the entire customer population.