



Call Order 002: Business Strategy for the Training, Certifying and Recruitment of Job Analysts

Final Report on the Business Strategy for the Training, Certifying and Recruitment of Job Analysts

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Social Security Administration

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Biographical Summaries

Candace Cronin, Ph.D., a manager with ICF, served as the co-project manager for Call Order 002 and was the team lead for preparing the final Call Order 002 report. Dr. Cronin has served in project management roles for numerous personnel and management consulting projects for private and public sector clients, including U.S. Federal, state and local entities. Dr. Blair Cronin's areas of expertise include job analysis; benchmarking studies; training; interviewing and focus group facilitation techniques, competency modeling; assessment development, administration, validation and scoring; business process review; work-life policy and program development; survey design and administration; and qualitative and quantitative research methodologies and analysis. Dr. Blair Cronin led the job analysis portion of a project for the Florida Department of Elder Affairs, served as a technical advisor on a project for the *National Cooperative Freight Research Program* (NCFRP) where she was responsible for designing a benchmarking process to be used by freight agencies, and is a trained facilitator. She holds an M.S. and a Ph.D. in Industrial-Organizational Psychology, with an emphasis in business management, from The Pennsylvania State University.

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Jessica Jenkins, M.Phil., a Senior Associate with ICF, had a significant role in conducting research, facilitating focus groups, and preparing reports for Call Orders 1 and 2. Ms. Jenkins has five years of job analysis experience. She has conducted job analyses spanning a variety of occupations and industries in both the public and private sectors and has contributed to several projects relating to occupational analysis and disability, including prior work with the Social Security Administration and the Department of Labor's Office of Disability Employment Policy (ODEP). Ms. Jenkins

Christopher Riches, B.A., an Associate with ICF, conducted research and prepared the interim report on recruitment practices for Call Order 002. Mr. Riches has more than four years of experience performing psychological, organizational and public policy research and over two years of experience conducting benchmarking and master planning studies. He also has experience in the areas of education, public health communications, and early childhood development. Mr. Riches has performed a number of different research activities including literature reviews, survey and interview protocol development, interview and focus group facilitation, data analysis, and report writing. Mr. Riches' recent work includes training design and development as well as benchmarking projects in which he compared Federal government practices to similar organizations elsewhere in the government and in private industry. He supported training development for the Florida Statewide Public Guardianship Association by collecting and reviewing training materials, revising current training materials based on job analysis results and state regulations, and writing additional training material as necessary. In an effort for the Marine Corps, he supported a Functionality Assessment of Voluntary Education programs that benchmarked the Marine Corps' staffing and service delivery practices against those at other military and private providers. Mr. Riches has a B.A. in Psychology from Georgetown University.

Beth Heinen, Ph.D., a Senior Associate with ICF, served as a task lead for the literature reviews for both Call Order 001 and Call Order 002, and was integral in developing the user-friendly final job analysis report for Call Order 001. Dr. Heinen has more than eight years of organizational research and management consulting experience. She has worked with clients such as the Social Security Administration, Texas Child Protective Services, the U.S. House of Representatives, and the Army Research Institute. Dr. Heinen's primary work activities include addressing workforce issues, such as recruitment, retention, training and development, and work-family issues. Dr. Heinen has extensive experience conducting job analyses, interviews and focus groups, developing and administering surveys and tests, assessing and evaluating programs, and analyzing data. Dr. Heinen has presented research at national conferences and published articles in scholarly journals and book chapters on these and other topics. Dr. Heinen has a Ph.D. in Industrial/Organizational Psychology from George Mason University.

Daniel Fien-Helfman, B.A., an Analyst with ICF, assisted with the collection and evaluation of data from the literature review and interviews with Subject Matter Experts for both Call Orders 001 and 002 and designed and developed the Job Analysis Practices Database (Call Order 001) and Job Analysis Candidate Tracking Database (Call Order 002). Mr. Fien-Helfman has worked on several projects related to workforce issues and more specifically concerned with identifying best practices in addressing workforce shortages, attracting, recruiting, developing and retaining skilled staff. Two of his most recent projects have resulted in reports and guidebooks to help clients, such as the National Cooperative Highway Research Program, in their recruitment and retention efforts by creating a sustainable workforce. Mr. Fien-Helfman holds a B.A. in Psychology with a minor in Business Management from the College of William and Mary.

Katina Gracien, B.S., an Analyst with ICF, conducted research on best practices regarding assessment-based certificate programs and training for Call Order 002. Ms. Katina Gracien has worked on a variety of projects where she has conducted focus groups, administered surveys, operated survey telephone help lines, collected and analyzed data and researched compensation and employment practices. Ms. Gracien's clients have included the U.S. Census Bureau, Social Security Administration, the U.S. House of Representatives and the Center for Army Leadership. Ms. Gracien uses SAS, SPSS and other programs to analyze data for many projects. Ms. Gracien holds a B.S. in Statistics from the North Carolina State University.

Joan Knapp, Ph.D., the CEO of Knapp & Associates International, Inc. (K&AI), served as technical advisor on Call Order 002. Dr. Knapp founded K&AI in 1989 to serve credentialing organizations, professional and trade associations and industry. Her company provides consulting services to organizations that offer certification, accreditation and continuing education programs to the professions and industry. Dr. Knapp has over 35 years experience in developing, validating and evaluating credentialing programs in various industry sectors. Over the years, Dr. Knapp has conducted research in various phases of assessment including validation studies, reliability improvement, technical and operational audits, continuing competency assurance and recertification, and the evaluation of professional and continuing education programs. She, in partnership with her clients, has designed and developed over 60 program startups and conducted over 45 national and international job analyses for a variety of organizations. Dr. Knapp is the author of scholarly articles on the subjects of professional competency, measurement, and education. She also has published a number of popular publications within the certification community. Dr. Knapp has been a board member of several professional certification organizations.

Lance Anderson, Ph.D., a Vice President at ICF, serves as the Project Director for the BPA with SSA. Dr. Anderson has over 20 years of experience in occupational analysis. He has directed projects dealing with job and occupational analysis, recruitment, selection, training, certification, and disabilities. Some of these projects have been multi-million dollar efforts, including a \$5,000,000 project with the State of Alabama to conduct job analysis and test development for 50 jobs. Dr. Anderson has conducted or supervised over 100 job analyses, has played a key role in evaluating occupational information for SSA, and has developed methods for using occupational information to determine disability. Dr. Anderson also played an important role in the development of the O*NET occupational information system. Dr. Anderson is currently directing a project to identify factors that affect the return to work of veterans with severe injuries. He is a parent of an adult with an intellectual disability, and an active member of the disability community. He holds a Ph.D. in Industrial and Organizational Psychology from Bowling Green State University.

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1. Executive Summary

E.1 Overview of the Project

The Social Security Administration (SSA) is undertaking a project to develop a new occupational information system (OIS) tailored specifically for the SSA's disability programs and adjudication process. To develop this OIS, SSA will need to recruit, train, and certify job analysts who will collect job information to populate the OIS. As part of this project, SSA awarded ICF International with a Blank Purchase Agreement (BPA) in September 2010 to assist SSA in the development of business processes and standards required to recruit, train, and certify job analysts. SSA desires to develop a business strategy that is informed by research on the various processes and programs currently used to train, certify and recruit job analysts. As such, ICF International has been contracted by SSA to execute Call Order 002.

The purpose of Call Order 002 is to perform the research needed to provide SSA with data and information on existing practices and procedures for training, certifying and recruiting job analysts. It is important that SSA is provided with a comprehensive review of existing practices so SSA can evaluate current techniques and make informed decisions about what components of existing practices may be used versus where new development will be needed. This review will enable SSA to identify a business strategy for recruiting, training, and certifying its job analysts and will help SSA identify the qualifications and training needed for a future SSA job analyst. Call Order 002 was addressed in several subtasks, each with its own purpose to assist in meeting the overall purpose of Call Order 002. These subtasks included:

- Researching and recommending strategy for training job analyst candidates
- Researching and recommending strategy for certifying job analyst candidates
- Researching and recommending strategy for recruiting job analyst candidates
- Developing a candidate tracking database for potential job analysts
- Documenting our methodology for Call Order 002
- Providing documentation of data and literature collected.

The purpose of the training subtask was to provide a review of various training curricula and approaches, to assess their relevance to SSA's needs, and to describe the minimum qualification standards for the job analyst candidates who will attend the training. For the certification subtask, the purpose was to provide an analysis of current processes, techniques, and procedures that could be used to effectively evaluate and certify a job analyst candidate's achievement of proficiency in all recommended course material and training regimens that SSA might provide for job analyst candidates. The purpose of the recruitment subtask was to conduct case studies of organizations (i.e., benchmarking partners) facing similar recruiting challenges and needs that SSA will face in recruiting job analyst candidates to gather information on the recruiting practices of these organizations. The purpose of the candidate tracking database subtask was to develop a database that SSA can use to track and monitor job analyst candidates as they move through the training and certification program, as well as to manage assignments given to the certified analysts. Finally, the purpose of the remaining two subtasks was to provide SSA with complete documentation of our methodology for completing the Call Order and the data we collected.

It should be noted that the purpose of this project was to review and document existing practices regarding the training, certification, and recruitment of job analysts. Thus, this project did not involve

designing a training curriculum or certification program or providing a single approach to training, certification or recruitment. The focus was on the identification of best practices, broad recommendations, and strategic decisions that must be made as the job analysis content model and taxonomy are developed.

E.2 Steps Taken to Complete the Project

To complete each subtask, ICF engaged in several steps to collect data about existing practices for training, certifying, and recruiting job analyst candidates.

Literature Review

A literature review was conducted in order to gain an understanding of various facets of training, such as training types, transfer of training, and training environments. The literature review was used to supplement information that was not collected in the training and recruitment interviews with the purpose of ensuring that all information relevant to training, certifying, and recruiting job analysts was collected and recorded. This task involved locating and entering articles into a literature review database.

Training Data Collection

In addition to collecting training information from existing literature, training experts were interviewed over the phone in order to provide information on training approaches, critical training components, best training delivery methods, and participant engagement during training. In order to obtain a comprehensive view of training requirements and best practices, interviews were scheduled with job analysis trainers, instructional systems design experts, leaders of large scale training initiatives, and other training and job analysis experts/academics. Additionally, focus groups were conducted with job analysis professionals in order to gather information about strong job analysis methodologies, minimum qualifications needed for job analyst candidates, and recommended strategies, methods, and practices to deliver job analyst training. These focus groups were conducted in conjunction with Call Order 0001 as input was needed from job analysis experts for both calls.

Certification Data Collection

For the certification subtask, certificate program standards set forth by reputable credentialing organizations were reviewed and necessary certificate program features and standards were identified. Organizations that have certificate programs in place were also contacted to provide information about their specific certificate programs and what motivated their organizations to seek accreditation for their certificate programs.

Recruitment Data Collection

The primary purpose of the recruitment data collection task was to identify and address factors that may facilitate or inhibit the recruitment and retention of job analysts that are trained and certified by SSA. To do so, benchmarking interviews were conducted with organizations or agencies that have experience with workforce challenges similar to those that SSA will likely face regarding the job analyst positions. These interviews allowed for the collection of detailed, situation-specific information on tested recruitment practices from each of the benchmarking partners.

Development of Candidate Tracking Database

The first step in this subtask was to develop a list of the potential uses or purposes for a candidate tracking database and identify fields to include based on these uses. Once SSA's desired uses and data fields were identified, a Microsoft Access database was created as a means to enter and store candidate information (e.g., contact information, references, etc.), training progress, certification information, and job assignments.

E.3 Recommendations

The training, certification, and recruitment of job analysts are all interrelated and will influence one another. The design and structure of a training program should be determined based upon the learning objectives, so that the end goal dictates the process of teaching that goal. The primary learning objective is likely for participants to be able to successfully apply SSA's job analysis methodology, and the specific sub-components of that objective will be based on SSA's final job analysis methodology and instrument. All of the training activities should be linked to these specific learning objectives, and since the certificate program should be based on what is taught in training, all of the certificate activities should be linked to these specific learning objectives as well. The certificate program should demonstrate that the participants have learned the training content and accomplished all of the learning objectives. Thus, the information and data that were collected to inform the training subtask of this Call Order will also provide direction for developing the certificate program. Additionally, information gathered in the training subtask, specifically necessary knowledge, skills, and abilities for job analysts as well as minimum qualifications, will inform the recruitment of job analysts. In turn, the recruitment strategy will impact the level and amount of training needed because that will be based on the experience and educational background of those recruited.

Training Strategies Recommendations

While SSA's methodology and instrument are still under development, various recommendations regarding the training of job analyst candidates have been formulated based on the interviews and focus groups with training experts and existing training literature. These recommendations, and the conclusions from our research supporting those recommendations, are presented in Exhibit ES-1.

Exhibit ES-1: Summary of Training Conclusions and Recommendations	
SSA Job Analyst Knowledge, Skills and Abilities	
SSA Job Analyst Knowledge, Skills and Abilities	<ul style="list-style-type: none"> ▪ The SSA Job Analyst role will require a broad set of KSAs because these individuals must use a variety of tools and methods to gather, analyze, and report data. ▪ Of highest importance to the role will be knowledge of SSA's work analysis instrument and job analysis practices (e.g., coding procedures, rating scales). Since job analysts will not have previous knowledge or experience with SSA's work analysis instrument or practices, training will be essential. ▪ <i>Recommendation: Refine the SSA Job Analyst KSAs based on the final SSA job analysis methodology and work analysis instrument.</i>

Exhibit ES-1: Summary of Training Conclusions and Recommendations	
Minimum Qualifications	
Minimum Qualifications	<ul style="list-style-type: none"> ▪ KSAs were identified for MQ development if they were rated as both necessary at entry and extremely important for performing work as an SSA job analyst. Three KSAs met these criteria: <ul style="list-style-type: none"> ♦ Ability to understand written materials. ♦ Ability to visually perceive objects (e.g., job equipment), people and environments. ♦ Ability to adapt to situational circumstances. ♦ MQs are intended to serve as an initial hurdle to identify those who are minimally acceptable and eligible to apply, while screening out individuals that will absolutely not be able to perform the job successfully. ▪ <i>Recommendation: SSA’s MQs should address specific and relevant course work or experience performing specific types of job activities, which can more easily be linked to job relevant knowledge, skills and abilities (KSA) that are required to perform the job.</i> ▪ <i>Recommendation: Based upon the three KSAs identified above, SSA should use MQs such as the following:</i> <ul style="list-style-type: none"> ♦ <i><u>Education</u>: Completed high school degree and college-level technical writing course.</i> ♦ <i><u>Personal/Education/Work Experience</u>: Maintained employment for a period of at least six months that involved collecting visual data; <u>or</u> Participated in personal or educational activities for at least six months where visual cues had to be gathered and interpreted to conduct the activity successfully.</i> ♦ <i><u>Personal/Education/Work Experience</u>: Conducted education, professional or volunteer activities involving interactions with professionals from different occupations or disciplines; <u>or</u> Engaged in collecting job information from career fields that vary in work environment, function and services performed.</i>
Existing Job Analyst Training	
Existing Job Analyst Training	<ul style="list-style-type: none"> ▪ Typical characteristics of existing job analyst trainings include: <ul style="list-style-type: none"> ♦ Classroom-based ♦ Anyone can participate (no pre-requisites) ♦ Content focuses on data collection skills particular to the job analysis method ♦ Opportunities for practice ♦ No summative assessment ▪ <i>Recommendation: Once the job analysis methodology has been determined, SSA should review the existing trainings to identify those that use similar job analysis methods and explore the possibility of using these existing materials in training development.</i>

Exhibit ES-1: Summary of Training Conclusions and Recommendations	
Recommended Training Practices: Training Design and Structure	
Critical Design Considerations	<ul style="list-style-type: none"> ■ Critical design considerations were determined by asking training experts about the most important elements to consider when designing a training program. ■ <i>Recommendation: SSA should follow the below guidance when designing the job analyst training:</i> <ul style="list-style-type: none"> ◆ <i>All of the training activities should be linked to specific, measurable and observable learning objectives.</i> ◆ <i>The background and experience levels of the participants must be considered during training design.</i> ◆ <i>The training should first address the concepts to create a general understanding of the material. Subsequently, the participants should be allowed the opportunity to perform the relevant behaviors.</i> ◆ <i>Each session should be kept relatively short and should include review questions or an interactive component to help keep participants' attention.</i> ◆ <i>Budgetary concerns should impact features such as the sophistication of materials and the range of activities that can be offered, but should not dictate the material that can be taught.</i>
Instructional Design Models	<ul style="list-style-type: none"> ■ Training experts noted that the Instructional Systems Design (ISD) ADDIE is one of the most well known and widely applied training design models due to its flexibility and strong emphasis on evaluation. ■ <i>Recommendation: The ISD ADDIE model is recommended for use in designing the SSA job analyst training. This model includes the following phases:</i> <ul style="list-style-type: none"> ◆ <i>Analysis</i> ◆ <i>Design</i> ◆ <i>Development</i> ◆ <i>Implementation</i> ◆ <i>Evaluation</i> ■ <i>Recommendation: Evaluation should be conducted during each phase, as well as at the conclusion of training design.</i>

Exhibit ES-1: Summary of Training Conclusions and Recommendations

Training Features	<ul style="list-style-type: none"> ■ Training features recommended for use by SSA were identified by reviewing the literature and gathering input from experts on practices that increase the likelihood participants will fully understand the material and will be able to apply it on the job. ■ <i>Recommendation: The training should include the following features:</i> <ul style="list-style-type: none"> ◆ <i>Lecture – to provide information on content</i> ◆ <i>Discussion – to provide an opportunity for clarification and reflection</i> ◆ <i>Practice – to provide participants an opportunity to try the behaviors and build their skills</i> ◆ <i>Feedback – to inform participants on their progress and help them improve</i> ◆ <i>Resource Materials – to provide participants with materials to which they can refer after the training has concluded</i> ■ <i>Recommendation: To increase participant engagement, the training should include a variety of activities, communicate the importance of the training, and highlight how the training can benefit the participant beyond the SSA context (e.g., building their resume, giving them experience with assessing other job requirements that they may not typically capture).</i> ■ <i>Recommendation: To enhance transfer of training, the training should emphasize the expectation to adhere strictly to the process taught, incorporate significant time for practice, provide feedback, use knowledgeable instructors, and encourage a network of peer support. After training, an auditing system should be used, and a support network should be implemented.</i>
Training the Trainers	<ul style="list-style-type: none"> ■ All trainers must have a deep understanding of the content taught in the training to ensure that they are communicating the accurate information to participants and are able to answer questions and provide guidance. ■ When multiple trainers are being used, it is important to work toward consistency and standardization in training delivery to ensure that all participants are receiving the same quality of training, regardless of their training location and instructor. ■ <i>Recommendation: SSA should develop train-the-trainer sessions that address the course content, as well as delivery guidelines and expectations.</i>
Training Assessment/ Integration with Certificate Process	<ul style="list-style-type: none"> ■ Because an assessment-based certificate program is most appropriate for SSA’s needs, a training assessment will need to be developed and integrated with the certificate process. ■ <i>Recommendation: The assessment should be tied to specific training objectives, which must be well defined and outline what the participants need to accomplish from the training to be successful on the job.</i> ■ <i>Recommendation: The training should include a knowledge assessment (e.g., multiple-choice) as well as a behavioral component that includes realistic job analysis scenarios.</i>

Exhibit ES-1: Summary of Training Conclusions and Recommendations	
Evaluation of Training	<ul style="list-style-type: none"> ▪ Kirkpatrick’s four levels of criteria represent a well-known and widely used model of training evaluation. It was the primary training evaluation model discussed by the training experts who were interviewed. ▪ Training experts noted that, because of the obvious need for training on SSA’s specific job analysis process, it may not be necessary to evaluate the training at the organizational results level (fourth level in Kirkpatrick’s model); instead, behavior may be the highest necessary level of analysis for the job analyst training. ▪ <i>Recommendation: Evaluation of SSA training should include at least three of the four levels of training evaluation criteria in Kirkpatrick’s model:</i> <ul style="list-style-type: none"> ♦ <i>Reactions – what participants thought of the training</i> ♦ <i>Learning – whether participants learned the training objectives</i> ♦ <i>Behavior – whether participants transferred the training material to job performance</i>
Recommended Training Practices: Training Content and Materials	
Training Content	<ul style="list-style-type: none"> ▪ Important job analyst KSAs that were rated most difficult to learn include the following: <ul style="list-style-type: none"> ♦ Ability to judge/make decisions. ♦ Ability to recognize ambiguous, conflicting, or incomplete information to seek clarification. ♦ Skill in discerning the KSAs required to perform a task. ♦ Skill in observing the performance of a job to gather information about the job. ♦ Ability to estimate the value or worth of something (e.g., make ratings of the importance of KSAs; make rating of the amount of an ability needed). ▪ <i>Recommendation: KSAs that need to be addressed in the job analyst training should be reassessed after the job analysis methodology has been finalized.</i>
Data Collection Procedures	<ul style="list-style-type: none"> ▪ Training experts highlighted the importance of focusing on data collection procedures as a major component of the SSA job analyst training. ▪ <i>Recommendation: A significant portion of the training should be dedicated to training the specific data collection processes they will need to follow.</i> ▪ <i>Recommendation: The training must also emphasize the importance of ensuring the quality of data that are collected.</i> ▪ <i>Recommendation: The training should also address how to respond to challenges or accommodate situational differences that necessitate some flexibility in the standard job analysis methodology.</i>

Exhibit ES-1: Summary of Training Conclusions and Recommendations	
Security of Data	<ul style="list-style-type: none"> ▪ Security of data is a primary concern, as SSA job analysts will be collecting data from a variety of organizations in all industries. ▪ <i>Recommendation: Data security issues must be addressed during the training, including a discussion about ethics and issues with data confidentiality and sensitive information.</i> ▪ <i>Recommendation: The training should emphasize the consequences of failing to adhere to data security requirements.</i> ▪ <i>Recommendation: The training should include practice scenarios or case studies that highlight these concerns, so that participants have the opportunity to practice identifying sensitive information, using ethical conduct, and taking appropriate action.</i> ▪ <i>Recommendation: The training also needs to address how to communicate about confidentiality and data security issues to job analysis participants.</i>
Training Materials	<ul style="list-style-type: none"> ▪ The importance of including opportunity for comprehensive practice during training was strongly emphasized by experts and throughout the training literature. ▪ <i>Recommendation: During training, participants should have the opportunity to use all types of materials that they will need to use on-site during a job analysis.</i>
Training Delivery Methods	
Classroom-Based Training	<ul style="list-style-type: none"> ▪ Classroom-based training refers to traditional training led by an instructor. All trainees attend the training in-person, and the material is taught face-to-face to all trainees at once. ▪ Large scale classroom trainings may be administered centrally or regionally. ▪ Advantages: <ul style="list-style-type: none"> ♦ Allows for maximum interaction between instructor and trainees ♦ Instructors can actively monitor participant reactions and provide clarification and feedback ♦ Classmates may serve as a network of support for one another ♦ Allows participants the opportunity for hands-on practice ▪ Disadvantages: <ul style="list-style-type: none"> ♦ Classroom training results in a high administration cost when conducting large-scale training with geographically dispersed trainees ♦ The effectiveness of classroom training depends largely on the effectiveness of the instructor ♦ Inconsistencies between training sessions are likely ▪ <i>Recommendation: Classroom-based training should not be used as the sole delivery method for SSA job analyst training.</i>

Exhibit ES-1: Summary of Training Conclusions and Recommendations

E-Learning	<ul style="list-style-type: none"> ▪ E-learning refers to a broad range of training delivery methods that use technology to deliver training to participants, who do not meet face-to-face. ▪ Variations include self-paced online training, instructor-led distance learning, webcasts, and multi-media training (e.g., CD-ROM; audio/video) ▪ Advantages: <ul style="list-style-type: none"> ♦ Low administration cost due to elimination of costs for participant travel, classroom, and instructors ♦ Ensures consistent, standardized delivery ♦ Convenient for participants, as they do not have to travel ♦ Training can be delivered more efficiently due to lack of time spent on breaks or discussion ♦ Participants are able to go through the training at their own pace ▪ Disadvantages: <ul style="list-style-type: none"> ♦ Participants receive limited feedback ♦ Participants may not feel that they have a community of support ♦ Participants cannot be observed to ensure they are learning the material ♦ Does not afford participants the opportunity for hands-on practice ♦ Because participants will take the training from different locations, technological problems are a potential concern (e.g., amount of bandwidth available, firewalls) ♦ Training content is difficult to update ▪ <i>Recommendation: E-learning should not be used as the sole delivery method for SSA job analyst training.</i>
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Exhibit ES-1: Summary of Training Conclusions and Recommendations

Blended Training	<ul style="list-style-type: none"> ▪ Blended methods combine traditional classroom training with e-learning in an effort to take advantage of the benefits of both of these delivery methods. ▪ Blended methods could involve any combination of the classroom and e-learning variations described previously. The recommended approach involves self-paced online training, followed by classroom-based training. ▪ Advantages: <ul style="list-style-type: none"> ♦ Combines the best of classroom and web-based training, as participants can learn the content online and practice their skills in person ♦ Administration costs are reduced in comparison to pure classroom-based training ▪ Disadvantages: <ul style="list-style-type: none"> ♦ Significant development effort is required, as both the web-based and classroom components will need to be designed and developed ▪ While online training may be more cost effective when training a large number of geographically dispersed participants, online training alone would not allow participants the opportunity for hands-on practice or to receive an appropriate amount of feedback. ▪ Including an online training component as the first hurdle of the training would help to reduce administration costs and would allow participants to arrive at the classroom training with a stronger knowledge base from which they can build their skills. ▪ Although the development of a blended training approach may be more involved, we believe this initial effort will be worth the benefits the blended method will afford during training administration. ▪ <i>Recommendation: Blended training delivery is recommended for the SSA job analyst training.</i>
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Certification Recommendations

One of the first recommendations regarding certification for SSA involves the types of certificates that SSA could provide to individuals who become job analysts for SSA. Types of certificates or credentials that could be given include:

- Certificates of attendance
- Certificates of participation
- Assessment-based certificate programs
- Personnel or professional certification

Exhibit ES-2 provides an overview of each of these types of credentials as well as how each meets SSA's needs for a certification strategy. As can be seen in the exhibit, an assessment-based certificate program would be the most suitable for SSA's needs.

Exhibit ES-2: Types of Credentials/Certificates by SSA Needs			
Credential Type	Attests Candidates Received Specific SSA Training	Attests Candidates Met Learning Outcomes of SSA Training	Attests Candidates Met Pre-determined Level of Competency
Certificate of Attendance/ Participation	X		
Assessment-Based Certificate Programs	X	X	X
Professional Certification			X

In addition to recommending an assessment-based certificate program, Exhibit ES-3 provides additional recommendations regarding the certification of SSA job analysts that is based on current industry standards related to credentialing, current credentialing practices of known job analysis methods, and interviews with representatives from organizations who have successfully implemented assessment-based certificate programs.

Exhibit ES-3: Summary of Certification Conclusions and Recommendations	
Established Industry Certificate Program Standards	<ul style="list-style-type: none"> ▪ Given the legal scrutiny that SSA will likely face, SSA needs a credentialing process that is of the highest quality and can be recognized by an outside third party as valid and rigorous. ▪ <i>Recommendation: SSA should follow one of two approved industry standards for assessment-based certificate programs, either ANSI or ICE.</i> ▪ <i>Recommendation: Even if SSA is either not prepared to undergo the accreditation process in the near future or does not wish at this time to have the certificate program ever accredited, it is recommended that the program be “built” to comply with these standards from the outset.</i>
Accreditation of Certificate Program	<ul style="list-style-type: none"> ▪ Accreditation and third party validation for assessment-based certificate programs appear to have significant value to agencies similar to SSA. ▪ The public and the Federal government and its agencies have become familiar with certification and program standards and are increasingly requesting third party validation of the credentialing, training, etc. work of federal agencies. ▪ <i>Recommendation: SSA should follow-up with ANSI, FBI, and the FDA to answer any specific questions that SSA might have concerning development and operations of a certificate program and the importance of standards and accreditation.</i> ▪ <i>Recommendation: While seeking accreditation is recommended, if the certificate program is only administered short-term (less than two years), it may not be feasible. Even so, it is recommended that the program be “built” to comply with the standards from the outset.</i>

Exhibit ES-3: Summary of Certification Conclusions and Recommendations	
Creating a Certificate Program	<ul style="list-style-type: none"> ▪ Adherence to the standards will require that SSA’s certificate program include policies, procedures and communications, quality control checks, record maintenance and control, and program evaluation. ▪ The standards are very particular about how certificates can be issued and used and that must be well-communicated to participants. ▪ A comprehensive assessment-based certificate program includes both formative and summative evaluative components where the candidate is required to demonstrate application of training concepts throughout the training program. ▪ The requirements for assessment-based certificate programs are quite extensive and could be difficult to implement for someone unfamiliar with them. ▪ <i>Recommendation: SSA should develop clear policies and procedures for program operation and administration and information about the program that can be communicated to stakeholders.</i> ▪ <i>Recommendations: On an annual basis, SSA should conduct a quality control check or evaluation of the program, including the administrative functions as well as the training and assessments.</i> ▪ <i>Recommendation: Both formative and summative assessments are advised for this program.</i> ▪ <i>Recommendation: SSA should maintain both participant records and records on how the program was developed and administered.</i> ▪ <i>Recommendation: SSA should have a designated authority to oversee, manage and be responsible for the program</i> ▪ <i>Recommendation: An assessment specialist should be involved early in the design process.</i>
Certificate Program Training Development	<ul style="list-style-type: none"> ▪ Certificate program standards require training programs to be developed and delivered by qualified individuals, following accepted standards. Additionally, the training content must be based on the purpose and learning goals. ▪ <i>Recommendation: Certificate program training should be based on learning objectives, follow generally accepted training guidelines and models, and use delivery methods that are appropriate for the learning objectives.</i> ▪ <i>Recommendation: When developing the content of the assessment-based certificate program, the training recommendations laid out in this report should be considered and incorporated. For example, recommendations regarding the training delivery method should be incorporated into the development of the assessment-based certificate program.</i> ▪ <i>Recommendation: An assessment specialist should be involved when the learning objectives are being developed.</i>
Certificate Program Materials	<ul style="list-style-type: none"> ▪ Detailed training and program materials can help to ensure quality by providing each analyst with all of the information that he or she needs to accurately collect data. ▪ <i>Recommendation: Providing certificate program participants with detailed materials or guidelines will help to ensure accuracy in their data collection.</i>

Exhibit ES-3: Summary of Certification Conclusions and Recommendations	
Existing Job Analysis Credentialing	<ul style="list-style-type: none"> ▪ The process for certifying job analysts for other job analysis methods typically involves completing a specific training on the method, completing an assessment which takes the form of either a multiple-choice examination or work samples of job analyses, and meeting a pre-determined passing score on the assessment. ▪ Existing job analyst certifications do not meet SSA’s need nor do they fully meet the requirements of an assessment-based certificate program. ▪ <i>Recommendation: Because exiting job analysis credentialing is based on the specific method being trained, SSA will not be able to use an existing program and should develop its own certificate program based on the method, instrument, and content model selected.</i>
Credentialing for Data Entry	<ul style="list-style-type: none"> ▪ Certificate program training should emphasize consistency and accuracy of data entry and teach trainees about interpreting data consistently, as these are essential for ensuring quality in the information received from the analysts and their data entry. ▪ Existing large-scale databases use a combination of training, providing very detailed resources, and set limits in developed databases to ensure the quality of data entered. ▪ <i>Recommendation: SSA should develop a software program to enter data that can limit the types of data entered into various fields and can provide warnings regarding suspect entries.</i> ▪ <i>Recommendation: A detailed data entry instruction handbook or guidebook should be provided to participants to ensure that they are able to correctly enter data regarding their completed job analyses.</i>
Audit Process	<ul style="list-style-type: none"> ▪ Audits can be used to assess the quality of data and identify any discrepancies or inconsistencies after data is entered. ▪ Audits can be conducted on a pre-determined schedule, if a problem in data quality is identified, or if certain triggers (e.g., new analyst, analyst who has not performed an analysis for a long time) are met. ▪ If SSA uses independent consultants or professional job analysts, these individuals will likely have experience in other job analysis methods, which may impact how they perform SSA’s methodology. ▪ <i>Recommendation: Beyond a credentialing process, SSA should consider developing an audit process for checking the quality of job analysts’ work after they have been in the field for awhile, as SSA job analysts may not perform job analyses for SSA on a continual or routine basis and SSA may need to periodically assess the work of its job analysts to ensure quality.</i> ▪ <i>Recommendation: SSA should develop clear policies and procedures for how the auditing process will occur, how often it will occur, who will be audited, how work will be evaluated, and what measure will be used.</i>

Recruitment Techniques Recommendations

Recommendations for the recruitment of job analysts can be drawn from the interviews that were completed with the benchmarking partners. These recommendations are presented in Exhibit ES-5.

Exhibit ES-5: Summary of Recruitment Recommendations	
Sources of Job Analyst Candidates	<ul style="list-style-type: none"> ▪ The benchmarking partners for this study typically recruited graduate level experts in fields such as vocational rehabilitation, physical and occupational therapy, and I/O Psychology. ▪ Graduate level experts are likely to be the most expensive and the most likely to be fully engaged in another permanent position. ▪ Graduate students would have the knowledge needed and the interest and could be compensated for less pay than a practicing professional, but they would require careful supervision and practical training to ensure a quality work product. ▪ Retired professionals could be another potential candidate source from which SSA could draw. ▪ The numbers in each of these potential candidate sources may be insufficient to support the scale of SSA’s job analysis program, so pursuing multiple sources may be the approach that is needed and the practicality of each source is undetermined. ▪ <i>Recommendation: Focus recruiting on candidates with training or experience in job analysis.</i> ▪ <i>Recommendation: Conduct research to determine the number of qualified individuals within each of these groups and the likely interests within each of these sources for working with SSA.</i>
Recruiting Framework	<ul style="list-style-type: none"> ▪ Recruiting for internal staff who exclusively perform this work would provide greater control over the work and would simplify recruitment and selection, but would be a large effort and would result in a large workforce. ▪ Recruiting a network of independent providers to perform the job analyses would provide great flexibility, but would require careful management and quality controls. ▪ Contracting with organizations like BTE that already have existing networks would be the simplest overall approach for SSA, but it would require further analysis to determine how many organizations like this exist, whether their network providers have all of the required skill sets to perform the analyses required by SSA, and what costs would be involved in gaining access to this network. ▪ <i>Recommendation: Conduct a cost-benefit analysis of various recruiting frameworks such as recruiting for internal employee positions, recruiting for external contract positions, or contracting with an organization that has a pre-existing network of providers to determine the best recruitment framework for SSA’s needs.</i>

Exhibit ES-5: Summary of Recruitment Recommendations

Recruitment Logistics	<ul style="list-style-type: none"> ▪ SSA must be capable of capturing occupational data throughout the country to ensure their disability determinations are justifiable nationwide. ▪ Achieving the high level of recruitment intensity expected as SSA ramps up recruitment across the country could be challenging from a centralized location. However, maintaining hundreds of recruiting offices across the country as Census did is similarly impractical from SSA's perspective. ▪ The longer the recruitment and selection process takes, the more likely applicants are to move on and find other work by the time they are brought on board. ▪ <i>Recommendation: Consider establishing a few temporary regional recruitment offices for the initial wave of recruitment.</i> ▪ <i>Recommendation: Develop a recruitment and hiring process that moves candidates through the process as quickly as possible. For full-time hires, targeting candidates who have worked for other government agencies may help to expedite the on-boarding process.</i>
Compensation	<ul style="list-style-type: none"> ▪ A key element of a successful high-volume, quick turnaround hiring is a competitive pay structure. ▪ Competitive compensation will vary based on education level, experience, discipline, and location. ▪ While useful, the information on compensation gathered from the benchmarking partners is not enough to determine a competitive compensation rate. ▪ An hourly rate would more accurately compensate employees or contractors for the time put into each job analysis. ▪ <i>Recommendation: A compensation study is recommended to determine a competitive hourly rate, which should then be adjusted by location, and evaluate cost reimbursement practices.</i> ▪ <i>Recommendation: Compensation should be competitive and provided as an hourly rate with caps on the total hours that can be spent based on various categories of jobs.</i>
Candidate Tracking	<ul style="list-style-type: none"> ▪ The Census Bureau tracks personal information, test scores and results of candidate background checks. ▪ BTE's audit system offers a prime example of the benefits of automatically tracking analyses from conception through completion. ▪ <i>Recommendation: The candidate tracking system should log candidate information, along with screening and selection data, and should be integrated with performance auditing.</i> ▪ <i>Recommendation: SSA should maintain data on not only the number of analyses performed by an analyst but the quality of the analyses as judged by SSA's own experts.</i>

Exhibit ES-5: Summary of Recruitment Recommendations

Candidate Training	<ul style="list-style-type: none"> ▪ SSA may need to train people with experience ranging from graduate coursework to a career in job analysis and expertise ranging from I/O Psychology to Physical Therapy. ▪ Keeping individuals with such a range of backgrounds engaged in a training could be challenging. ▪ <i>Recommendation: Develop and use a modular training structure if the experience and educational backgrounds of participants will vary.</i>
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E.4 Conclusions and Strategic Decisions

While some recommendations can be made, a single strategy or solution depends on additional decisions by SSA. This Final Report articulates some of the decisions SSA must make prior to selecting a single strategy or solution. Decisions made within each of the three areas will impact the effectiveness of strategies SSA chooses to implement within the other areas. We provide a brief overview of some of these decisions in this section. In Exhibit ES-6, we also identify potential resource needs for SSA to either assist in the decision-making process or to assist in implementing the recommendations. Chapter 8 in the Final Report provides more detail regarding these strategic decisions.

Training

1. **Select the instruments and methods for job analysis.** The training curriculum should be tied directly to the work requirements and performance expected of analysts, which will be based on the methodology and instrument. The work requirements will determine the knowledges, skills, and abilities (KSAs) that are needed and the extent to which those KSAs can be taught or will be needed at entry (prior to training).
2. **Establish learning objectives.** The first step in designing the job analyst training should be for SSA to clarify the learning objectives, which should be measurable and observable. For example, the primary objective is likely for participants to be able to successfully apply SSA's job analysis methodology. The specific sub-components of that objective will thus need to be determined and refined as SSA finalizes its job analysis practices.
3. **Determine the size of the candidate pool.** The size of the candidate pool SSA desires will impact the types of candidates that SSA will need to target. The level of experience SSA can expect at entry for analysts will depend on the type of candidates, which will affect training. Candidates, however, must at least possess the minimum qualifications identified. The size of the candidate pool will be impacted by the deployment strategy SSA chooses.
4. **Identify the amount of time available to train analysts and collect all job analysis information.** The amount of time that SSA has available to recruit, select and train job analysts will impact how the training program can be implemented. In our recommendations, we suggest SSA consider a blended training model but the way this model is implemented will depend on the timeframe available for training.

Certificate program

5. **Identify the length of time over which SSA will recruit and train job analysts.** We have recommended that SSA develop an assessment-based certificate program and to potentially seek

accreditation through ANSI or ICE. SSA must determine whether it will administer the certificate program for more than two years because the accreditation process usually requires a certificate program to be in place for at least two years before it can be accredited. The determination to seek accreditation should also be influenced by the extent to which accreditation will verify job analysts share a common understanding of SSA's chosen job analysis method, the resources SSA has available, and the extent to which accreditation may speak to the defensibility of the OIS.

- 6. Estimate the expected tenure and experience levels of analysts.** We have recommended that a quality review or formal auditing process be considered. The characteristics of that auditing process should be based, in part, on the expected tenure and experience levels of analysts.

Recruitment

- 7. Determine deployment strategy.** SSA will need to decide how many job analyses will be conducted (i.e., number of jobs to be analyzed), when job analysis assignments will occur, location of job analysis assignments, and the frequency of assignments. The decision regarding when analysts will need to be deployed will provide insight into the best recruitment, selection and training strategy for SSA.
- 8. Articulate selection strategy.** SSA needs a detailed selection strategy that identifies how many job analysts will be needed to collect data for the OIS and the region(s) where candidates should be targeted. These considerations will impact whether SSA finds it best to maintain regional recruitment centers or a more centralized base for recruitment of job analyst. SSA should also consider whether it would be beneficial to leverage an existing network of "on demand" job analysts as opposed to establishing their own network or hiring full-time.
- 9. Identify employment status for analysts.** The status of employment SSA chooses to maintain with these candidates may also influence the extent to which the employment is attractive to candidates of different experience levels.
- 10. Specify selection test battery.** Once the taxonomy and job analysis method have been fully developed and the necessary KSAs identified, SSA will need to develop a battery of selection tests that will be used to select candidates. One of the most important considerations regarding the selection test battery is its job relevance which will impact the extent to which it is legally defensible.
- 11. Select a compensation approach.** While the case studies conducted under this project scope provide some insight into how other organizations compensate analysts, it does not provide enough information. We suggest that SSA conduct a comprehensive study of national and local compensation practices.

Candidate tracking

- 12. Choose an approach for auditing job analysts.** An important component to monitoring and assessing performance quality of job analysts is the use of an auditing system. This system may have specialized software requirements which may impact compatibility with any tracking system SSA implements. To ensure compatibility of these systems, we encourage a market study of existing auditing tools. This study would help to weigh the costs and benefits of each auditing tool.

Exhibit ES-6: Potential Resources Needed		
Potential Resource	Purpose	Recommendation and/or Strategic Decision for which Resource is Needed
Contractor with occupational and job analysis expertise	<ul style="list-style-type: none"> ▪ Assist with developing OIS prototype ▪ Develop and pilot test work analysis instrument ▪ Provide guidance on how to prioritize job analysis assignments ▪ Conduct a comprehensive compensation study ▪ Determine the type of recruiting framework that will best meet needs 	<ul style="list-style-type: none"> ▪ Strategic Decision 1: Select the instruments and methods for job analysis ▪ Strategic Decision 7: Determine deployment strategy ▪ Strategic Decision 11: Select a compensation approach ▪ Recommendation: Conduct a comprehensive compensation study ▪ Recommendation: Conduct a cost-benefit analysis of various recruiting frameworks ▪ Recommendation: Conduct research to determine the number of qualified individuals within each of the potential candidate sources (i.e., professionals, graduate students, retirees).
Assessment specialist or consultant with experience developing and implementing assessment-based certificate programs	<ul style="list-style-type: none"> ▪ Ensure that the certificate program aligns with the training objectives ▪ Assist with preparing for certificate program accreditation process ▪ Guarantee that credentialing process is of the highest quality and can be recognized by an outside third party as valid and rigorous 	<ul style="list-style-type: none"> ▪ Recommendation: SSA should follow one of two approved industry standards for assessment-based certificate programs, either ANSI or ICE. ▪ Recommendation: Assessment should be tied to specific training objectives ▪ Recommendation: An assessment specialist should be involved when the learning objectives are being developed. ▪ Recommendation: Assessment-based certificate programs should be followed in the development of certificate program

Exhibit ES-6: Potential Resources Needed		
Potential Resource	Purpose	Recommendation and/or Strategic Decision for which Resource is Needed
Contractor with training design expertise	<ul style="list-style-type: none"> ▪ Ensure that participants are learning necessary components of SSA’s job analysis process ▪ Assist in ensuring industry-accepted training design principles are followed ▪ Develop and design training 	<ul style="list-style-type: none"> ▪ Strategic Decision 2: Establish learning objectives ▪ Recommendation: All of the training activities should be lined to specific, measurable, and observable learning objectives ▪ Recommendation: The Instructional Systems Design (ISD) ADDIE model is recommended for training design ▪ Recommendation: Develop and use a modular training structure if the experience and educational backgrounds of participants will vary. ▪ Recommendation: Certificate program training should be based on learning objectives, follow generally accepted training guidelines and models, and use delivery methods that are appropriate for the learning objectives. ▪ Recommendation: Evaluation of SSA training should include at least three of the four levels of training evaluation criteria in Kirkpatrick’s model
Headhunter agencies, professional organizations or societies, credentialing organizations	<ul style="list-style-type: none"> ▪ Help identify talent when candidates with advanced skills are needed 	<ul style="list-style-type: none"> ▪ Recommendation: Focus on recruiting candidates with training or experience in job analysis
Existing networks of providers or organizations like BTE	<ul style="list-style-type: none"> ▪ Assist in recruiting independent consultants who are interested in performing job analyses for SSA 	<ul style="list-style-type: none"> ▪ Recommendation: Focus on recruiting candidates with training or experience in job analysis

Exhibit ES-6: Potential Resources Needed		
Potential Resource	Purpose	Recommendation and/or Strategic Decision for which Resource is Needed
Unemployment agencies or temporary staffing agencies	<ul style="list-style-type: none"> ▪ Assistance in finding candidates who will serve on a rotational or short-term basis ▪ Assistance in administering pay to large numbers of staff 	<ul style="list-style-type: none"> ▪ Recommendation: Conduct a cost-benefit analysis of various recruiting frameworks
Technology vendor that can provide information technology services	<ul style="list-style-type: none"> ▪ Create or provide training using computer-based technology if software is not readily available to SSA ▪ Provide training using multiple delivery methods, specifically online components ▪ Develop software for audit process, if needed 	<ul style="list-style-type: none"> ▪ Recommendation: Implement a blended training delivery that includes online components ▪ Recommendation: Develop an audit process to ensure quality in data entry
Contractor with knowledge of existing audit software packages	<ul style="list-style-type: none"> ▪ Conduct a market study of data collection evaluation processes and available audit software packages 	<ul style="list-style-type: none"> ▪ Strategic Decision 12: Choose an approach for auditing job analysts ▪ Recommendation: SSA should develop clear policies and procedures for how the auditing process will occur, how often it will occur, who will be audited, how work will be evaluated, and what measure will be used.
Software compatible with the OIS database that can be used for quality control	<ul style="list-style-type: none"> ▪ Conduct regular quality checks of information entered into the OIS database ▪ Set limits on data that can be entered or provide warnings for suspect data 	<ul style="list-style-type: none"> ▪ Recommendation: Develop an audit process to check the quality of job analysts' work
Auditors who can evaluate OIS database entries	<ul style="list-style-type: none"> ▪ Provide assistance in ensuring the quality of data entered into the OIS database by evaluating analysts in person or via electronic media 	<ul style="list-style-type: none"> ▪ Recommendation: Develop an audit process to check the quality of job analysts' work

Exhibit ES-6: Potential Resources Needed		
Potential Resource	Purpose	Recommendation and/or Strategic Decision for which Resource is Needed
Contractor with expertise and experience in testing	<ul style="list-style-type: none"> ▪ Ensure that pre-employment testing is conducted in a legally defensible manner ▪ Develop a selection test battery ▪ Assist in designing a hiring process 	<ul style="list-style-type: none"> ▪ Strategic Decision 10: Specify selection test battery ▪ Recommendation: Develop a recruitment and hiring process that moves candidates through the process as quickly as possible.

SECTION 1: Project Background

Section 1 provides information on the project background and includes the following two chapters:

Chapter 1: Project Overview

Chapter 2: Call 002 Methodology

These two chapters provide information about the project background and the purpose of Call Order 002 and each of the subtasks. It also includes an overview of the methodology used to perform each task and subtask within the Call 002 project.

Chapter 1: Project Overview

1.1 Introduction

The Social Security Administration (SSA) is undertaking a project to develop a new occupational information system (OIS) tailored specifically for the SSA's disability programs and adjudication process. The Occupational Information Development (OID) project will provide SSA with a long-term replacement for the information that the agency currently uses in its disability evaluation process and obtains from the Dictionary of Occupational Titles (DOT) and companion volumes, including the Selected Characteristics of Occupations (SCO) and the Revised Handbook for Analyzing Jobs (RHAIJ).

As part of the OID project, SSA awarded ICF International with a Blank Purchase Agreement (BPA) in September 2010. The BPA includes separate Call Orders with an overarching purpose to assist SSA in the development of the business processes and standards required to recruit, train, and certify job analysts. SSA desires to develop a business strategy that is informed by research on the various processes and programs currently used to train, certify and recruit job analysts. As such, ICF International has been contracted by SSA to execute Call Order 002.

1.2 Project Background

SSA holds a significant responsibility for processing and making determinations regarding disability. The decision on whether a claimant is "disabled" has a substantial impact on his or her life. The decision process also has an impact on our nation's economy, as a change in the process or the information used in the process could result in a shift in the funding needed to pay for the disability program. SSA currently uses a multi-step process to determine whether an individual qualifies for disability. Two of these steps (i.e., whether the individual can perform any of his/her previous jobs or other jobs in the economy) require occupational information. SSA needs an updated source for job information to continue processing disability claims in an effective manner; hence, the development of the OIS.

While the DOT is an established source for occupational information, SSA stakeholders realize that DOT does not fully meet SSA's needs. The Department of Labor (DOL) developed the original DOT in the 1930s to provide a tool for matching people with jobs and was later adapted for the purposes of making disability determinations. For the SSA to continue to successfully meet its goals, however, the agency needs up-to-date data. The world of work has changed since the last update to the DOT, and changes will continue to occur as supply, demand, technology and globalization impact the type and number of jobs. The DOL has no plans to update the DOT, and O*NET, DOL's replacement of the occupational information system does not meet SSA's needs. The result is that SSA needs another source for the data.

SSA began work on the OIS development in 2008 and is conducting the project in many phases over the next several years. SSA is currently in the Research and Development Phase that will include the development of a content model and survey instruments specifically designed and created for use by SSA job analysts during data collection. To create the content model, SSA solicited and received advice and guidance from the Occupational Information Development Advisory Panel, disability adjudicators, members of stakeholder organizations, and internal SSA components responsible for disability research, policy development, hearings and appellate operations. Currently the OISD Workgroup, internal to SSA, is refining the list of elements to collect, test and include in the final job analysis instrument. SSA estimates the final version of the instrument will be available in December 2011.

Given the high stakes of disability determinations, the information and method that SSA uses to develop its OID will be highly scrutinized. Thus, SSA has contracted with ICF International to conduct a

comprehensive review of methods used in the field to gather job information (i.e., job analysis) (Call Order 0001) and review of the training and certificate practices needed to prepare those analysts who will be tasked with the rigorous data collection (Call Order 002). It is important that SSA is provided with a comprehensive review of existing practices so SSA can evaluate current techniques and make informed decisions about what components of existing practices may be used versus where new development will be needed.

1.3 Purpose of Call Order 002 and of Each Subtask

The purpose of Call Order 002 is to perform the research needed to provide SSA with data and information that will enable SSA to identify a business strategy for recruiting, training and certifying job analysts. Call Order 002 consisted of two main tasks: 1) Task Meetings/Discussions and 2) Business Strategy for the Training, Certifying and Recruitment of Job Analyst Candidates. Task 2 was further broken down into seven subtasks:

- Research and Recommended Strategy for Training of Job Analyst Candidates
- Research and Recommended Strategy for Certification of Job Analyst Candidates
- Research and Recommended Strategy for Recruitment of Job Analyst Candidates
- Development of Candidate Tracking Database for Potential Job Analysts
- Documentation of Detailed Methodology
- Documentation for SSA – Literature Reviews and Expert Interviews
- Final Report of Business Strategy for the Training, Certifying and Recruitment of Job Analysts.

The purpose of the training subtask was to provide a review of various training curricula and approaches, to assess their relevance to SSA's needs, and to describe the minimum qualification standards for the job analyst candidates who will attend the training. For the certification subtask, the purpose was to provide an analysis of current processes, techniques, and procedures that could be used to effectively evaluate and certify a job analyst candidate's achievement of proficiency in all recommended course material and training regimens that SSA might provide for job analyst candidates.

The purpose of the recruitment subtask was to conduct case studies of organizations (i.e., benchmarking partners) facing similar recruiting challenges and needs that SSA will face in recruiting job analyst candidates. These case studies were intended to gather information on the recruiting practices of these benchmarking partners to include information on the strategies used specifically for recruiting job analysts, conducting large-scale recruitment, conducting geographically dispersed recruitment, recruiting for temporary or on-call work, recruiting resources and logistics and compensation.

The purpose of the candidate tracking database subtask was to develop a database that SSA can use to track and monitor job analyst candidates as they move through the training and certification program, as well as to manage assignments given to the certified analysts. The purpose of the two documentation subtasks was to provide SSA with complete documentation of our methodology for completing the Call Order and the data we collected. SSA will also need to have clear and available documentation of how it developed the OID, including the information upon which it was based, the decisions that were made and the justifications for those decisions, to be able to respond to challenges and questions. Thus, we have provided SSA with greater detail on the methodology used to gather information on business processes and standards for recruiting, training and certifying job analysts; detailed notes on the qualitative data gathered; and complete documentation of the literature reviewed and the criteria used to determine which literature was included for analysis. More information on our methodology for each of the subtasks and

the activities we performed to gather the data are provided in our Detailed Methodology Report, which can be found in Appendix A.

The purpose of the Final Report is to present the findings, and recommendations regarding the training, certification, and recruitment of job analysts. This information is provided in the following chapters of this report.

Chapter 2: Call 002 Methodology

This chapter provides a broad overview of the steps used to gather information about existing practices for training, certifying, and recruiting job analyst candidates. While this chapter provides a brief overview of the activities undertaken as a part of this Call Order, the full, detailed methodology is provided in Appendix A.

2.1 Task 1: Task Meetings/Discussions

Throughout the completion of Call Order 002, SSA and ICF have been committed to partnership and frequent communication through regular summary progress reports, telephone conference calls, and meetings. This dialogue started at the Project Kick-Off Meeting on October 20, 2010. Since this Kick-Off Meeting, SSA and ICF have had regular and candid discussions regarding SSA's vision of the Call 002 deliverables, ICF's project plan, the research timeline, and final results. These open communications have been beneficial. For example, it has allowed for refinement of deliverables for Call Order 002. The ICF team has provided SSA with meeting minutes and monthly project updates. These reporting procedures, along with frequent contact with the project management team, have ensured that SSA is well-informed of task completion, and any challenges or issues which required immediate attention.

2.2 Task 2: Business Strategy for Training, Certifying, and Recruitment of Job Analyst Candidates

Subtask 2.1—Documentation of a Detailed Methodology

As a part of Call Order 002, the ICF team has kept a detailed record of all activities completed for the Call and each of its subtasks. This information was compiled into a comprehensive methodology, which has details regarding each of the tasks completed and decisions made during the project as well as justification for the decisions as needed. As mentioned, the Detailed Methodology Report is provided in Appendix A.

Subtask 2.2—Research/Recommend Strategy for Training Job Analyst Candidates

This subtask involved several activities, one of which was to conduct a review of the training literature in order to gain an understanding of various facets of training, such as training types, transfer of training, and training environments. Gathered articles were screened for relevance, methodological detail, quality, and date of publication. Only articles identified as relevant based on these criteria were entered into the Microsoft Access database. The rejected articles, but not their content, were entered into the database. Of the 85 data sources identified, 51 were rated as relevant and fully entered into the database.

Another activity for this subtask included conducting focus groups with job analysis professionals in order to gather information about strong job analysis methodologies, minimum qualifications needed for job analyst candidates, and recommended strategies, methods, and practices to deliver job analyst training. These focus groups were conducted in conjunction with Call Order 0001. In sum, twelve focus groups were conducting including a total of 31 job analysis experts who work in a variety of fields relevant to job analysis including:

- *Vocational Rehabilitation*—uses job analysis for prevention of disability, rehabilitation planning, and disability accommodation¹
- *Physical and Occupational Therapy*—uses job analysis for evaluating injured workers, planning rehabilitation, developing transitional work plans, and conducting environmental modification and risk management programs²
- *Human Resources*—uses job analysis for employee selection, training, appraisal, and establishing compensation rates³
- *Industrial/Organizational Psychology*—uses job analysis for employee selection, training, appraisal, and establishing compensation rates³
- *Ergonomics*—uses job analysis to identify specific stressors and risks in the job⁴
- *Occupational Health*—uses job analysis to identify safety concerns and job hazards and to identify potential preventive measures⁵

The third activity for this subtask involved interviews with training experts over the phone to provide information regarding training approaches, critical training components, best training delivery methods, and participant engagement during training. To obtain a comprehensive view of training requirements and best practices, interviews were scheduled with job analysis trainers, instructional systems design experts, leaders of large scale training initiatives, and other training and job analysis experts/academics. In total, 13 interviews were conducted with training experts.

Subtask 2.3—Research and Recommend Strategy for Certification of Job Analyst Candidates

As a part of this subtask, certificate program standards set forth by reputable credentialing organizations were reviewed and necessary certificate program features and standards were identified. Two credentialing associations have standards for certificate programs that have been approved as American National Standards by the American National Standard Institute (ANSI). These are:

- American Society for Testing and Materials International (ASTM)
- Institute for Credentialing Excellence (ICE) – ANSI/ICE 1100: 2010 (E)

¹ Lysaght, R., & Shaw, L. (2011). Job Analysis (What it is and how it is used). In J.H. Stone & M. Blouin, (eds.) *International Encyclopedia of Rehabilitation*. Retrieved from <http://cirrie.buffalo.edu/encyclopedia/en/article/268/>

² Lysaght, R. (1997). Job analysis in occupational therapy: stepping into the complex world of business and industry. *American Journal of Occupational Therapy*, 51(7), 569-75.

³ Brannick, M. T., Levine, E. L., & Morgeson, F. P. (2007). *Job and work analysis: Methods, research, and applications for human resource management* (2nd ed.). Thousand Oaks, CA: Sage Publications.

⁴ Keyserling, W. M., Armstrong, T. J., & Punnett, L. (1991). Ergonomic job analysis: a structured approach for identifying risk factors associated with overexertion injuries and disorders. *Applied Occupational and Environmental Hygiene*, 6(5), 353-363.

⁵ Canadian Centre for Occupational Health and Safety. (2008). Job safety analysis. Retrieved from <http://www.ccohs.ca/oshanswers/hsprograms/job-haz.html>

Other organizations that offer certificate program standards, accreditation, or certification in disciplines relevant to this specific project were also so researched. These organizations included:

- American Association for Higher Education (AAHE)
- Accrediting Commission for Career Schools/Colleges of Technology (ACCST)
- American Council on Education (ACE)
- Accrediting Council for Independent Colleges and Schools (ACICS)
- AERA/APA/NCME: American Educational Research Association/American Psychological Association/National Council on Measurement in Education, Standards for Educational and Psychological Testing
- Joint Committee on Testing Practices
- The Council for Adult and Experiential Learning (CAEL)
- International Association for Continuing Education and Training (IACET)
- Council on Occupational Education (COE)
- Commission on Rehabilitation Counselor Certification (CRCC)
- American Board of Vocational Experts.
- American Board of Medical Specialties
- American Board of Nursing Specialties
- Council on Engineering Specialty Boards
- Certification of Disability Management Specialists Commission
- Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)
- Association for Driver Rehabilitation Services.
- National Council for Recreational Therapy Certification
- National Board for Certifying Occupational Therapists, etc.

To learn more about accreditation of certificate programs, SSA requested information from organizations that have sought accreditation for their certificate programs. We interviewed two federal organizations, Federal Bureau of Investigation (FBI) Academy and US Food and Drug Administration (FDA). Representatives from these organizations were asked about their motivation for seeking accreditation for their certificate program, the benefits of accreditation, how the program was developed, how the program is operated, and the cost to operate the program.

Because an important aspect of the SSA job analyst role will be ensuring that data is accurate and entered correctly. We examined, through web searches, programs that offer education and certification in data entry. Additionally, we contacted individuals who work with large national medical databases where accuracy and quality is of utmost importance. The contacted individuals were asked about ways in which they assure that data entry will be correct and of high quality.

Subtask 2.4—Research and Recommend Strategy for Recruitment of Job Analyst Candidates

As a first step, potential organizations that may be useful benchmarking partners were identified. Organizations such as private disability and worker’s compensation insurance organizations, vocational rehabilitation service providers and Federal and state government agencies were identified based on their potential to offer insight into one or more of several challenging aspects of SSA’s planned recruitment effort.

Six organizations were selected and contacted for benchmarking interviews. Most of the interviews were with only one organization; however, one interview included two different organizations that were very similar in their purpose and functions performed. These interviews allowed for the collection of detailed, situation-specific information on tested recruitment practices from each of the benchmarking partners. Additionally, information was collected via internet searches for two organizations that were not available to participate in interviews.

Subtask 2.5—Documentation for SSA – Literature Reviews and Expert Interviews/Focus Groups

To ensure SSA has documentation of all sources of information that were gathered and used in the completion of Call Order 002, we provided SSA with the complete training literature review database and notes from all qualitative data collections (i.e., focus groups, training interviews, and benchmark interviews). The training literature review database is a Microsoft Access database, with each identified literature source included as its own entry.

During each of the focus groups and interviews, notes were taken by a recorder. These are not verbatim notes, but rather a summary of main points discussed by the participant(s). The notes were organized by protocol question, combined and provided to SSA.

Subtask 2.6—Development of Candidate Tracking Database of Potential Analysts

The first step in this subtask was to develop a list of the potential uses or purposes for a candidate tracking database and identify fields to include based on these uses. Once SSA's desired uses and data fields were identified, a Microsoft Access database was created as a means to enter and store candidate information (e.g., contact information, references, etc.), training progress, certification information, and job assignments.

Subtask 2.7—Final Report of Business Strategy for the Training, Certifying and Recruitment of Job Analysts

This subtask involved the creation of this final report, which provides a full report of our research, methodology, findings and conclusions from the previous subtasks. This report includes a compilation of the previously submitted training strategies, certification strategies, and recruitment strategies interim reports, with additional conclusions and recommendations for SSA in developing a business strategy to train, certify, and recruit job analysts. In addition, oral presentations were provided to SSA to share the method, findings and recommendations that resulted from the research conducted during this project.

SECTION 2: Project Results

Section 2 provides information on the results of the project and includes the following four chapters:

Chapter 3: Results of Job Analysis Training Research

Chapter 4: Results of Job Analysis Certificate Program Research

Chapter 5: Results of Recruitment Practices Research

Chapter 6: Candidate Tracking Database

These four chapters provide information about the research results and findings regarding the training, certification, and recruitment of job analysts. It also provides information about the candidate tracking database developed to record information about job analyst candidates in terms of their training and certificate status.

Chapter 3: Results of Job Analysis Training Research

3.1 Focus of Research

The training research we conducted provided insight into the capabilities job analysts will need to collect job information using the necessary precision and rigor required for SSA's OIS. This chapter provides an overview of the probable knowledges, skills and abilities and minimum qualifications (MQs) analysts will need to conduct job analysis for the SSA OIS. The KSAs identified are those that are necessary across most job analytic methods, with emphasis on the collection of physical abilities which is presumed to be especially important in making disability determinations. For example, many of the KSAs that emerged with high importance are those that pertain to extracting, gathering, synthesizing, processing and recording information through multiple methods. While the ratings for each of the KSAs are based on expert judgment, it is likely that the importance values for each of the KSAs may shift and new KSAs emerge once they are linked directly to the performance requirements of the job analysis method SSA selects, which will be decided based upon the content in the work analysis instrument SSA designs. Furthermore, the MQs may require adjustment pending the complexity and discretion required of analysts in using the work analysis instrument and performing the job analytic method selected.

In addition to identifying the competence that will be needed for SSA job analysts, this research reviewed approaches to preparing and educating candidates for the job analyst role by reviewing established job analysis training programs and interviewing training experts. Most of the existing programs are specific to precise job analysis methods (e.g., Functional Job Analysis); however, elements of these programs could be adapted and combined to develop SSA's job analysis training program. This chapter also reviews the critical components to training programs such as training design, training features, transfer of training considerations, and training delivery methods.

3.2 Job Analyst Knowledge, Skills, and Abilities

In order to have high psychological fidelity, a training program should simulate the tasks the participants will perform on the job and provide trainees with the opportunity to use the knowledge, skills, and abilities (KSAs) that the job requires.⁶ Thus, the first place to start in the development of a job analysis training program for SSA job analyst candidates is the identification of KSAs for the SSA job analyst role. While SSA will need to finalize the job analyst KSAs after the job analysis methodology and work analysis instrument have been developed, in this chapter we provide an initial overview of the KSAs that we expect will be important for SSA job analysts, based upon the current vision for this role. This list was drafted by ICF job analysts, vetted during our focus groups with job analysis professionals and revised by ICF. The list was then sent to a panel of seven subject matter experts (SMEs) who have an average of 15 years of experience in the conduct of job analysis to gather ratings for each KSA. This panel of experts rated the job analyst KSA list on the importance and difficulty of each KSA, as well as when the KSA should be acquired.⁷ In this section, we present a summary of the KSAs that were rated as important for the position of SSA job analyst. KSAs were deemed important if they had a mean rating of 3 ("important") or higher across all raters. Using this cutoff criterion, all KSAs from the original list were retained.

⁶ Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations* (4th ed.). Belmont, CA: Wadsworth.

⁷ More detail on the SME panel and ratings collected are provided in section 3.3 (pg. 3-6), *Minimum Qualifications*.

3.2.1 Knowledge

Exhibit 3-1 presents the list of knowledge statements for SSA Job Analysts, sorted by mean importance rating. The most important knowledge statement was “Knowledge of SSA’s work analysis instrument and job analysis practices (e.g., coding procedures, rating scales)” (mean=4.86), which highlights the need to have an understanding of SSA’s specific job analysis procedures, regardless of knowledge gained through other job analysis experiences. Other highly important knowledge statements involved more general job analysis principles including “Knowledge of job analysis principles, methods, and uses” (mean=4.43), “Knowledge of the purpose of job analysis data collected for SSA” (mean=4.43), and “Knowledge of professional ethics and standards of conduct” (mean=4.43).

Exhibit 3-1: SSA Job Analyst Knowledge Importance Ratings		
How important will this KSA be for an SSA Job Analyst?		
1 = Not important		
2 = Slightly important		
3 = Important		
4 = Very important		
5 = So important that an individual could not perform the job without it, even with other KSAs		
KNOWLEDGES	Mean	Standard Deviation
1. Knowledge of SSA’s work analysis instrument and job analysis practices (e.g., coding procedures, rating scales)	4.86	0.38
2. Knowledge of job analysis principles, methods, and uses.	4.43	0.98
3. Knowledge of the purpose of job analysis data collected for SSA.	4.43	0.53
4. Knowledge of professional ethics and standards of conduct.	4.43	0.79
5. Knowledge of professional and legal guidelines for job analysis data.	4.29	1.11
6. Knowledge of basic kinesthetic and ergonomic principles (e.g., understanding of human range of motion).	4.29	0.95
7. Knowledge of interview techniques.	3.57	1.13
8. Knowledge of methods of data collection.	3.57	1.40
9. Knowledge of sources of occupational information.	3.57	1.13
10. Knowledge of various human skills and abilities.	3.57	1.62
11. Knowledge of various types of organizational cultures (e.g., unions) and how organizations function.	3.57	0.98

3.2.2 Skills

Exhibit 3-2 lists the skill statements that were deemed important to the SSA job analyst position. The skill with the highest mean importance rating was “Skill in observing the performance of a job to gather information about the job” (mean=4.71), followed by “Skill in maintaining records and data” (mean=4.57), “Skill in asking questions to gather information about a job” (mean=4.29), and “Skill in discerning the KSAs required to perform a task” (mean=4.29). Each of these skills is frequently used in most job analysis methodologies, and the raters indicated that these skills will likely be highly important for SSA job analysts as well.

The skill with the lowest mean importance rating was “Skill in facilitating focus groups to gather information about a job” (mean=3.00). Focus groups tend to be less common than other job analysis procedures such as interviews and job observations, so it seems likely that this was rated lower due to the uncertainty of whether this data collection procedure would be part of the SSA job analysis methodology.

Exhibit 3-2: SSA Job Analyst Skill Importance Ratings		
How important will this KSA be for an SSA Job Analyst?		
1 = Not important		
2 = Slightly important		
3 = Important		
4 = Very important		
5 = So important that an individual could not perform the job without it, even with other KSAs		
SKILLS	Mean	Standard Deviation
1. Skill in observing the performance of a job to gather information about the job.	4.71	0.49
2. Skill in maintaining records and data.	4.57	0.53
3. Skill in asking questions to gather information about a job.	4.29	0.76
4. Skill in discerning the KSAs required to perform a task.	4.29	0.76
5. Skill in verbally interacting with others.	4.14	0.69
6. Skill in establishing rapport with people from diverse backgrounds.	4.14	0.69
7. Skill in synthesizing information (i.e., taking a variety of information and integrating it to present a comprehensive and uniform perspective).	4.14	0.90
8. Skill in reviewing data to identify errors.	4.14	0.69
9. Skill in explaining facts, ideas and information to others in a way they can understand.	4.00	1.41
10. Skill in using common computer software applications (e.g., word processing software, spreadsheet software).	4.00	0.82
11. Skill in using a variety of measurement tools (e.g., tape measure, pressure gauge, pedometer, scale).	4.00	0.82
12. Skill in writing descriptions of jobs, tasks and KSAs.	3.86	0.90
13. Skill in planning (e.g., for making appointments; for determining amount of time needed to interview and observe).	3.86	0.90
14. Skill in writing emails and letters.	3.71	1.11
15. Skill in entering data into paper forms and electronic databases.	3.71	0.49
16. Skill in extracting information about a job from written documents.	3.57	0.98
17. Skill in performing basic mathematical computations (e.g., add, subtract, multiply, divide, calculate percentages).	3.57	1.40
18. Skill in using digital cameras, including taking and uploading photos.	3.43	0.79
19. Skill in using a telephone to schedule and gather information.	3.43	0.53
20. Skill in facilitating focus groups to gather information about a job.	3.00	0.82

3.2.3 Abilities

Exhibit 3-3 presents the abilities that will be needed by SSA job analysts and their importance ratings. The ability statement with the highest mean rating was “Ability to visually perceive objects (e.g., job equipment), people and environments” (mean=4.71). Other abilities rated high in importance included “Ability to understand written materials” (mean=4.57), “Ability to follow instructions precisely” (mean=4.57), “Ability to adapt to situational circumstances” (mean=4.57), and “Ability to guide oneself in the completion of tasks” (mean=4.57).

Only three ability statements had mean ratings of less than 4.0: “Ability to present a professional presence (e.g., look professional and behave in a professional manner)” (mean=3.57), “Ability to withstand a

variety of environmental conditions (e.g., heat, cold, inclement weather, loud noise)” (mean=3.71), and “Ability to portray a sense of confidence in new situations” (mean=3.86).

Exhibit 3-3: SSA Job Analyst Ability Importance Ratings		
How important will this KSA be for an SSA Job Analyst?		
1 = Not important		
2 = Slightly important		
3 = Important		
4 = Very important		
5 = So important that an individual could not perform the job without it, even with other KSAs		
ABILITIES	Mean	Standard Deviation
1. Ability to visually perceive objects (e.g., job equipment), people and environments.	4.71	0.49
2. Ability to understand written materials.	4.57	0.79
3. Ability to follow instructions precisely.	4.57	0.53
4. Ability to adapt to situational circumstances.	4.57	0.79
5. Ability to guide oneself in the completion of tasks.	4.57	5.00
6. Ability to listen attentively.	4.43	0.79
7. Ability to recognize ambiguous, conflicting, or incomplete information to seek clarification.	4.43	4.00
8. Ability to reason from detailed facts to general principles (i.e., inductive reasoning).	4.29	0.76
9. Ability to estimate the value or worth of something (e.g., make ratings of the importance of KSAs; make rating of the amount of an ability needed).	4.14	0.69
10. Ability to reason from the general to the specific (i.e., deductive reasoning).	4.14	1.07
11. Ability to absorb and retain facts and information.	4.00	1.00
12. Ability to be polite and courteous when dealing with others.	4.00	0.82
13. Ability to judge/make decisions.	4.00	1.00
14. Ability to perceive details in information that is provided in a variety of formats.	4.00	0.82
15. Ability to portray a sense of confidence in new situations.	3.86	4.00
16. Ability to withstand a variety of environmental conditions (e.g., heat, cold, inclement weather, loud noise).	3.71	1.11
17. Ability to present a professional presence (e.g., look professional and behave in a professional manner).	3.57	0.98

3.2.4 Summary of SSA Job Analyst KSAs

In sum, Exhibit 3-4 presents a list of all of the KSAs ranked by importance, with the most important KSAs in the left column and the moderately important KSAs in the right column. Overall, the KSAs presented in this chapter were intended to provide an overview of the KSAs that are important to successfully performing the role of an SSA Job Analyst. We also used the ratings from the SME panel to investigate the characteristics that are needed prior to entry, as described in the next section and to assess which KSAs should be taught during training, which will be discussed in section 3.5.2 (pg. 3-29), *Training Content*. This list is just an initial list that will need to be refined once SSA’s job analysis methodology and work analysis instrument are finalized.

Exhibit 3-4: KSAs Rank Ordered by Importance	
Very Important-So Important Cannot Perform Job Without It (mean = 4.00-5.00)	Important-Very Important (mean = 3.00-3.99)
K1. Knowledge of SSA's work analysis instrument and job analysis practices (e.g., coding procedures, rating scales). (mean=4.86)	S9. Skill in explaining facts, ideas and information to others in a way they can understand. (mean=4)
S1. Skill in observing the performance of a job to gather information about the job. (mean=4.71)	S10. Skill in using common computer software applications (e.g., word processing software, spreadsheet software). (mean=4)
S2. Skill in maintaining records and data. (mean=4.57)	S11. Skill in using a variety of measurement tools (e.g., tape measure, pressure gauge, pedometer, scale). (mean=4)
A2. Ability to understand written materials. (mean=4.57)	A11. Ability to absorb and retain facts and information. (mean=4)
A3. Ability to follow instructions precisely. (mean=4.57)	A12. Ability to be polite and courteous when dealing with others. (mean=4)
A4. Ability to adapt to situational circumstances. (mean=4.57)	A13. Ability to judge/make decisions. (mean=4)
A5. Ability to guide oneself in the completion of tasks. (mean=4.57)	A14. Ability to perceive details in information that is provided in a variety of formats. (mean=4)
K2. Knowledge of job analysis principles, methods, and uses. (mean=4.43)	S12. Skill in writing descriptions of jobs, tasks and KSAs. (mean=3.86)
K3. Knowledge of the purpose of job analysis data collected for SSA. (mean=4.43)	S13. Skill in planning (e.g., for making appointments; for determining amount of time needed to interview and observe). (mean=3.86)
K4. Knowledge of professional ethics and standards of conduct. (mean=4.43)	A15. Ability to portray a sense of confidence in new situations. (mean=3.86)
A6. Ability to listen attentively. (mean=4.43)	S14. Skill in writing emails and letters. (mean=3.71)
A7. Ability to recognize ambiguous, conflicting, or incomplete information to seek clarification. (mean=4.43)	S15. Skill in entering data into paper forms and electronic databases. (mean=3.71)
K5. Knowledge of professional and legal guidelines for job analysis data. (mean=4.29)	A16. Ability to withstand a variety of environmental conditions (e.g., heat, cold, inclement weather, loud noise). (mean=3.71)
K6. Knowledge of basic kinesthetic and ergonomic principles (e.g., understanding of human range of motion). (mean=4.29)	K7. Knowledge of interview techniques. (mean=3.57)
S3. Skill in asking questions to gather information about a job. (mean=4.29)	K8. Knowledge of methods of data collection. (mean=3.57)
S4. Skill in discerning the KSAs required to perform a task. (mean=4.29)	K9. Knowledge of sources of occupational information. (mean=3.57)
A8. Ability to reason from detailed facts to general principles (i.e., inductive reasoning). (mean=4.29)	K10. Knowledge of various human skills and abilities. (mean=3.57)
S5. Skill in verbally interacting with others. (mean=4.14)	K11. Knowledge of various types of organizational cultures (e.g., unions) and how organizations function. (mean=3.57)
S6. Skill in establishing rapport with people from diverse backgrounds. (mean=4.14)	S16. Skill in extracting information about a job from written documents. (mean=3.57)

Exhibit 3-4: KSAs Rank Ordered by Importance	
Very Important-So Important Cannot Perform Job Without It (mean = 4.00-5.00)	Important-Very Important (mean = 3.00-3.99)
S7. Skill in synthesizing information (i.e., taking a variety of information and integrating it to present a comprehensive and uniform perspective). (mean=4.14)	S17. Skill in performing basic mathematical computations (e.g., add, subtract, multiply, divide, calculate percentages). (mean=3.57)
S8. Skill in reviewing data to identify errors. (mean=4.14)	A17. Ability to present a professional presence (e.g., look professional and behave in a professional manner). (mean=3.57)
A9. Ability to estimate the value or worth of something (e.g., make ratings of the importance of KSAs; make rating of the amount of an ability needed). (mean=4.14)	S18. Skill in using digital cameras, including taking and uploading photos. (mean=3.43)
A10. Ability to reason from the general to the specific (i.e., deductive reasoning). (mean=4.14)	S19. Skill in using a telephone to schedule and gather information. (mean=3.43)
	S20. Skill in facilitating focus groups to gather information about a job. (mean=3)

3.3 Minimum Qualifications

Minimum Qualifications (MQs) are often used as part of the screening process for selecting applicants into a job. The MQs provide an indication of whether candidates are qualified to perform a specified job. Gibson and Prien (1977) define MQs as “A statement of the minimum level of competence the individual must have for a job” (p. 447).⁸ More recently, Levine, Maye, Ulm, & Gordon (1997) described MQs as the “Statements of education, experiences and/or closely related personal attributes needed to perform a job satisfactorily, that are used as standards to screen applications” (p. 1009).⁹ The most common types of MQs include educational requirements (e.g., high school diploma), past work experience in a particular career field, or personal experiences. These types of MQs can be effective screening tools in terms of conserving selection resources for both the hiring organization and the applicant (e.g., time, money). However, the use of MQs can result in unnecessary adverse impact and the inappropriate filtering of applicants when not properly developed through a rigorous method that identifies job relevant and necessary MQs. Traditional MQs that are written as broad statements such as “1 year of experience in maintenance work” or “college degree” can often result in screening out individuals who may have been qualified to perform the job. Well written MQs should be specific to the actual types of experience or education required to perform the job. In most cases, it is difficult to demonstrate how advanced degree programs are linked directly to the performance required on the job. Instead, specific and relevant course work or experience performing specific types of job activities can more easily be linked to job relevant knowledge, skills and abilities (KSA) that are required to perform the job.

For this project, we identified the MQs that demonstrated a direct link to the KSAs deemed by experts as important and required to perform the SSA job analyst role. The methodology the ICF team used to develop the MQs provides content validation evidence for the selection of the MQs. Using ratings from subject matter experts on the job analyst KSAs and our pre-determined criteria outlined in the Detailed Methodology in Appendix A, three KSAs were identified for MQs. These KSAs and the percentage agreement among raters for each criterion are indicated in Exhibit 3-7.

⁸ Gibson, J. W. & Prien, E. P. (1977). Validation of minimum qualifications. *Public Personnel Management*, 6, 447-456.

⁹ Levine, E. L., Maye, D. M., Ulm, R. A., & Gordon, T. R. (1997). A methodology for developing and validating minimum qualifications (MQs). *Personnel Psychology*, 50, 1009-1023.

Exhibit 3-7: KSAs Meeting MQ Rating Criteria			
KSAs	Q1: How important will this KSA be for an SSA Job Analyst? 1 = Not important 2 = Slightly important 3 = Important 4 = Very important 5 = So important that an individual could not perform the job without it, even with other KSAs	Q2: When should this KSA be acquired? 0 = N/A (This KSA is not necessary) 1 = On the job 2 = During training 3 = Before selection (needed at entry)	Q3: How difficult is it to learn this KSA? 1 = Very easy 2 = Easy 3 = Average 4 = Difficult 5 = Very difficult
	% of raters selecting "5"	% of raters selecting "3"	% of raters selecting "4" or "5"
Ability to understand written materials.	71%	100%	43%
Ability to visually perceive objects (e.g., job equipment), people and environments.	71%	100%	43%
Ability to adapt to situational circumstances.	71%	71%	86%

For KSAs to which SMEs provided a “5” for Q1 or “3” for Q2, we asked SMEs to “provide examples of relevant courses or prior job experience where this KSA could be acquired.” These examples were then used to create behavioral statements that indicate the minimum qualifications candidates need to apply and be considered for subsequent hurdles in the selection process. Based on those examples, MQs were identified for the retained KSAs and are presented in Exhibit 3-8. No KSAs met the preferred qualification criteria and thus, no preferred qualifications were identified.

Exhibit 3-8: Minimum Qualifications for SSA Job Analysts	
Retained KSAs	Minimum Qualification (MQ)
Ability to understand written materials.	<u>Education:</u> Completed high school degree <u>and</u> college-level technical writing course.
Ability to visually perceive objects (e.g., job equipment), people and environments.	<u>Personal/Education/Work Experience:</u> Maintained employment for a period of at least six months that involved collecting visual data; or Participated in personal or educational activities for at least six months where visual cues had to be gathered and interpreted to conduct the activity successfully.
Ability to adapt to situational circumstances.	<u>Personal/Education/Work Experience:</u> Conducted education, professional or volunteer activities involving interactions with professionals from different occupations or disciplines; <u>or</u> Engaged in collecting job information from career fields that vary in work environment, function and services performed.

These minimum qualifications represent recommendations for the minimal requirements that SSA job analysts should meet to be eligible for participating in the SSA job analyst training. These minimum qualifications are intended to serve as an initial hurdle to identify those who are minimally acceptable and eligible to apply, while screening out individuals that will absolutely not be able to perform the job

successfully. The minimum qualifications do not necessarily address the type of individuals SSA should seek to target in their recruitment efforts; instead, recruitment efforts should focus on higher level qualifications that are likely to identify those that will be able to perform the job well, as opposed to at a minimally acceptable level. A profile of the type of individuals that SSA may want to target for recruitment efforts can be informed by the entire list of important and needed at entry KSAs, as well as data collected from benchmarking partners about recruiting practices for job analysts. As such, more information and recommendations on the type of individuals that SSA may want to target for recruitment is provided in this report in *Chapter 5: Results of Recruitment Practices Research* (pg. 5-1).

3.4 Overview of Existing Job Analysis Training Programs

This section presents an overview of existing job analysis training programs in terms of their format, length, content, and features. While each training has a unique purpose and is unique to a given job analysis methodology, reviewing the job analysis trainings that currently exist may help to provide an indication of effective approaches in training for job analysts that can be used to inform the development of SSA's training. The programs described in this section include the following:

- Developing a Curriculum (DACUM) Training
- ErgoScience Quantitative Job Demands Analysis (QJDA) Training
- Functional Job Analysis (FJA) Training
- King County, WA Job Analysis Training
- Matheson Essential Function Job Analysis Training
- OccuPro Systems and Solutions Job Analysis Training
- Position Analysis Questionnaire (PAQ) Work Analysis Seminar
- Society for Human Resource Management Job Analysis Module
- TruSight Job Description Training (formerly Employer's Association)
- WorkAbility Systems Training
- WorldatWork Job Analysis, Documentation and Evaluation Course (Offered as part of its credentialing program)

A description of these training programs is provided below, and a summary table is provided at the end of the section in Exhibit 3-9 (pg. 3-17).

3.4.1 Developing a Curriculum (DACUM) Training

The training program for the Developing a Curriculum (DACUM) occupational analysis method is a five-day workshop that teaches participants how to use the DACUM process to conduct job analyses.¹⁰ The DACUM training is designed to teach participants how to describe a job in terms of desired competencies, with an ultimate purpose of being able to design training curricula based on the competencies that are necessary for the job. This is an in-person training program that can occur either at DACUM's offices or on location for organizations wishing to train their employees in the DACUM method. The cost to attend a DACUM training program is \$1,550 per person. Upon completion of the DACUM training, participants receive a certificate of completion, showing that they have received training in the DACUM method.

¹⁰ DACUM (n.d.). DACUM & SCID Training Information. Retrieved from <http://www.dacumohiostate.com/>

The DACUM training includes lecture and PowerPoint presentations that teach participants about the DACUM process, its philosophy, and the purposes for which DACUM job analysis can be used. The lecture presentations also provide information about the structure of DACUM job analyses, how to create duty and task statements, common errors to avoid in creating these statements, and the process for conducting a DACUM job analysis panel. Each training participant receives a DACUM Handbook that provides all of the relevant information taught in the training workshop. This is beneficial so that when conducting DACUM job analyses outside of the workshop, analysts are easily able to follow the exact process that they taught for conducting the analyses.

During DACUM training the instructors help participants to gain important facilitation skills that are necessary in order to successfully complete the DACUM job analysis. These facilitation skills are imperative given that data is collect for DACUM through focus groups that are facilitated by the DACUM job analysts. As a part of the training program, participants also gain practice in conducting job analyses. They work with other trainees and experienced DACUM facilitators in order to practice the skills and tasks necessary to conduct the DACUM method.

3.4.2 ErgoScience Quantitative Job Demands Analysis (QJDA) Training

ErgoScience provides training for occupational health professionals in conducting Quantitative Job Demands Analyses (QJDA). This QJDA training is a self-paced, online training course.¹¹ While this training is self-paced, it typically requires approximately three hours to complete; however, activities are currently being added to the training program.¹² Following the training program, job analysts must pass a test with at least an 85% score. This test has a multiple choice component as well as a practical exam component where test takers must view a video tape of a job and submit their analysis of the job being performed.

The ErgoScience QJDA training is designed with the purpose of teaching participants how to perform accurate job analyses. The focus of the ErgoScience QJDA training is learning to examine and quantify physical demands for a given position. As such, course participants are taught about defining jobs in terms of the required physical demands, writing ADA & EEOC-compliant job descriptions, and completing accurate reports about the JDA results. Teaching participants about data collection comprises approximately one third to one half of the training content, with the other training time devoted to describing the job analysis process and how to complete the job analysis products, such as a job analysis report and job descriptions. Many of the tools that are used to collect data in QJDA, such as scales and tape measures, are familiar to participants and therefore even though data collection training occurs online, participants can still understand the tools that they will use when actually conducting these job analyses.

3.4.3 Functional Job Analysis (FJA) Training

Functional Job Analysis (FJA) is one specific model that can be used to conduct job analyses. While there is not a specific organization that offers training in FJA, there are training requirements for conducting this type of job analysis. The book titled *Functional Job Analysis* describes these requirements.¹³

¹¹ ErgoScience (2009). Job Demands Analysis. Retrieved from http://www.ergoscience.com/service_details.php?serviceID=003

¹² Personal communication with ErgoScience trainer.

¹³ Fine, S. A., & Cronshaw, S. F. (1999). *Functional job analysis: A foundation for human resources management*. Mahwah, New Jersey: Lawrence Erlbaum

Because of the complexity of FJA, one of the developers of this job analysis model suggests that training for functional job analysts should first include a five-day training workshop. This workshop should provide information to job analyst candidates in the form of lectures, demonstrations, and FJA practice exercises. The purpose of the training workshop is to provide training with regards to the overall theory and process of conducting FJA as well as the specific rating scales that are used. In addition to the workshop, job analyst candidates should observe a certified functional job analyst actually performing FJA, which takes the form of a two-day focus group. Once candidates have observed an FJA focus group, they should conduct a two-day FJA focus group on their own, under the supervision of a certified job analyst. Because it includes these three major aspects (workshop, observation, and performing an FJA), this training program ensures that job analyst candidates have the knowledge necessary to conduct FJA, have seen an actual FJA and understand the tone and process of the FJA focus group, and that they have practice and experience in conducting FJA before they go out on their own to do the job analyses.

3.4.4 King County, WA Job Analysis Training

Another job analysis training program identified was offered by the King County, Washington Human Resources department. Although this job analysis training program is no longer offered due to budget cuts and the department now uses only internal employees to conduct job analyses,¹⁴ the format and content of the previously used training can still be used to inform a job analysis training program for SSA and is therefore included here.

The purpose of King County's job analysis training program was to ensure that individuals from outside of the organization who were conducting job analyses for the department were doing so using the exact procedures desired by the department. For King County, job analyses were conducted in order to create job descriptions. To participate in training and become a job analyst for King County, individuals were required to be registered as vocational counselors with the Washington State Department of Labor. The job analysis training was conducted in person, once each quarter, and lasted approximately four hours. It should be noted that in the state of Washington, conducting job analyses is part of the training required to become a registered vocational counselor; therefore each of the participants in King County's job analysis training already had a background knowledge of job analysis and had received instruction in how to perform a generic job analysis. Because of this requirement, the training could be conducted in a shorter time frame than other a job analysis training programs for which participants do not have pre-existing knowledge of job analysis.

Each King County job analysis training session began with an explanation of the structure of the organization as well as of the jobs in the organization and how they are related to one another. The instruction started with this information because the department wanted to ensure that each individual conducting job analyses was aware of the organizational structure and which jobs are similar across different departments. The training then moved to explaining the procedures for conducting job analyses for the department, the process for being assigned job analyses to complete, and how to submit completed analyses to the department. The King County Human Resources department has a specific worksheet that must be completed during each job analysis,¹⁵ so the final part of the training program included instructions in how to use this form and where various information should be entered in order to correctly complete the job analysis worksheet. The types of information collected during the job analysis include essential functions, physical demands of the job, and environmental factors.

¹⁴ Personal communication with King County Human Resources Division.

¹⁵ King County Human Resources Division (n.d.). Job analysis worksheet. Retrieved from <http://www.kingcounty.gov/employees/HumanResources/services/jobanalysis/resources.aspx>

3.4.5 Matheson Essential Function Job Analysis Training

The job analysis training course offered by Matheson is delivered in a live internet classroom, where participants must call in to the class on the phone or use a microphone on their computer to allow for participation in the training by all individuals in the course.¹⁶ Participants must attend the course for one-hour each week over a total of six weeks, but time is also required outside of this scheduled hour for course participants to read course materials and practice the topics that they learn in the course. The cost for the Matheson live, online job analysis training course is \$350 per person.

The Matheson job analysis training includes instruction on many topics that are important parts of job analysis. For example, instruction is provided with regards to preparing to conduct a job analysis, reference resources, tools used to analyze jobs, various ways to collect job-related data such as using a structured interview and the forms that must be completed, measuring physical demands and linking them to essential job functions, and writing both accurate job function statements and the final job analysis report. The focus of Matheson's job analysis course is to teach job analyst candidates to identify and measure the physical, cognitive, aptitude, and temperamental demands of a job as well as the essential functions necessary for the jobs being analyzed.¹⁷

3.4.6 OccuPro Systems and Solutions Job Analysis Training

While OccuPro previously offered a training course specific to job analysis, the job analysis course is no longer offered as a standalone class but rather is now a part of a larger course. When offered, the standalone job analysis course was an eight-hour course; in the currently offered, broader course, approximately six hours are allotted to teaching course participants about job analysis.¹⁸ The cost to attend the currently offered, broader-level course is \$500. Job analysis instruction is provided using a combination of delivery methods including lectures, PowerPoint presentations, handouts, hands-on training and practice of the lessons taught, and presentations by the training participants. Because the OccuPro training includes background information on job analysis, there are no pre-requisites required before participating in the job analysis training. The training course is designed for people who want to offer pre-placement, post-offer testing and who want to ensure that their organizations are being EEOC, ADA, and civil rights compliant.

The content included in OccuPro's job analysis training is meant to provide an overview of job analysis as well as teach job analyst candidates about how to perform job analysis and create documents based on their findings. Specifically, during the job analysis training, participants learn about job analysis terms and how to identify industry standards, perform job analyses, gather information about physical demands, and identify essential versus nonessential functions. Additionally, participants are taught how to write a description and job analysis report. Before the conclusion of the job analysis training, participants are required to perform a job analysis on their own and present their findings to the other course participants.

3.4.7 Position Analysis Questionnaire (PAQ) Work Analysis Seminar

While attending a training session is not necessary to conduct a job analysis using the Position Analysis Questionnaire (PAQ), PAQ Services does provide seminars to help prepare individuals to conduct job

¹⁶ Matheson (2008). Essential Function Job Analysis. Retrieved from <http://www.roymatheson.com/essential-function-job-analysis>

¹⁷ Matheson (2008). Essential Function Job Analysis. Retrieved from <http://www.roymatheson.com/essential-function-job-analysis>

¹⁸ OccuPro (2011). Pre-Placement Post-Offer Screening Training. Retrieved from http://www.occupro.net/index.cfm/fuseaction/Education.Post_Offer_Training

analyses using the PAQ.¹⁹ The PAQ training is intended to teach job analysts how to complete the PAQ questionnaire, so if job analysts already have experience or training in the techniques used, training is not necessary. Additionally, there is a manual that can be used to assist analysts in how to conduct a PAQ job analysis and how to complete the PAQ questionnaire.

When an individual does need training to learn how to administer and complete the PAQ, the PAQ work analysis seminar is an in-person training session that can be conducted either at PAQ's headquarters or at an organization that would like to provide PAQ training for its employees. The PAQ training requires two days to complete.

The PAQ seminar teaches job analyst candidates to use the PAQ questionnaire. As a part of this instruction, participants are taught about interviewing job incumbents and supervisors in order to gain knowledge and information about the job being analyzed. They are also taught to identify duties and tasks of jobs and to determine the skills and competencies necessary for performing the job. The seminar also includes hands-on practice in conducting analyses. In addition to teaching job analyst candidates about how to conduct job analyses, the PAQ seminar also provides instruction regarding how to use the results of the job analyses. For example, the seminar explains typical uses of job analyses such as writing job descriptions, using data for disability determinations, and identifying criteria that can be used to select employees.

3.4.8 Society for Human Resource Management Job Analysis Module

The Society for Human Resource Management (SHRM) provides teaching modules on various topics related to instruction in human resources. One of these modules covers the topic of job analysis.²⁰ These modules are designed for HR educators and college instructors to teach about job analysis in the context of a larger course and are not necessarily meant as a training program in job analysis. However, the job analysis module does include information about job analysis and its place in today's workplace as well as general information about conducting job analyses and example scenarios that could be helpful in designing a job analysis training curriculum. This type of information would be especially useful if the individuals hired to conduct job analyses for SSA are not experienced or educated in the area of job analysis.

The SHRM job analysis module is designed to be three class sessions, which would be approximately three to four and half hours in an instructor-led course. The module begins with an overview of job analysis, providing information regarding the historical context of job analysis, the importance of job analysis to various HR functions, and the various types of information that are collected during a job analysis (e.g., job tasks, tools used, work context, physical demands, etc.), sources of this information (e.g., job incumbents, supervisors, industry resources, etc.), and data collection methods (e.g., observation, interview, questionnaire, etc.). The module then requires students to participate in a group activity in which they must determine the best sources and methods to collect data for analyzing a job and subsequently rate the importance of tasks for the job they are considering. Students are also taught about the difference between essential and non-essential tasks and then utilize this information in an activity in which they must determine which tasks are essential or nonessential for an example job. The final part of the SHRM job analysis module provides instruction about writing job descriptions following job analyses as well as the importance of maintaining up-to-date job analyses.

¹⁹ PAQ Services (2011). Work Analysis Seminar. Retrieved from <http://www.paq.com/index.cfm?FuseAction=Main.PAQTraining>

²⁰ Meglich, P. A. (2009). Job Analysis. Retrieved from <http://www.shrm.org/Education/hrededucation/Pages/JobAnalysis.aspx>

3.4.9 TruSight Job Description Training (formerly Employer's Association)

TruSight, which was formerly known as the Employer's Association, offers a training course about writing useful job descriptions which includes instruction about how to conduct job analyses.²¹ Therefore, the purpose of this course is to learn to conduct a job analysis as a means to write high-quality job descriptions. This is a beginner level course that is meant to introduce various job analysis approaches to individuals who have the responsibility for writing job descriptions within their organizations. TruSight's job description/job analysis course is a four-hour course that is taught in-person at TruSight's headquarters. TruSight members are given a discounted rate of \$185 for this course while the course will cost non-TruSight members \$275 to attend.

Although the main focus of this course is to understand job descriptions, their uses, and how to write a useful job description, it also presents information specific to job analysis. For instance, the training includes instruction on how to conduct a job analysis and how to use job analysis to determine the essential functions of jobs.

3.4.10 WorkAbility Systems Training

The Workability Certification seminar is designed for occupational health professionals with a portion of the training program devoted to conducting and reporting job analyses.²² The purpose of the training is to help participants develop job analysis and functional capacity evaluation skills. To attend the WorkAbility training, WorkAbility Network (WAN) providers must pay \$970 whereas all others must pay \$1,070. This training program is a two-day, in-person seminar that is delivered in groups of approximately 25 individuals and includes approximately four to five hours of instruction regarding functional job analysis. Additionally, after job analyst candidates complete the classroom training and conduct a job analysis in the field on their own, there is another five to six hours of follow-up interactions with the trainer after the initial training to prepare, discuss, and mentor the job analyst candidate regarding the job analysis they are conducting on their own.

The WorkAbility training takes a "tell, show, and do" approach to training.²³ Using this approach, training participants are first taught the WorkAbility job analysis approach, how to complete a job analysis, and how to use the WorkAbility software through a lecture and slide presentation. They also discuss the difference between essential and nonessential job functions. The training then shows participants how to conduct a job analysis by analyzing a job that everyone in the training is familiar with and using the actual tools used to conduct a job analysis, such as a scale and a tape measure, as well as using the WorkAbility job analysis software. Finally, training participants participate in lab practice activities in which they begin to analyze a job on their own, taking measurements and imputing information into the software program.

Following the actual training seminar, job analyst candidates must submit to the trainer two job analyses that they conducted on their own following the training seminar. The trainer reviews these analyses to ensure that they are done correctly and have adequate detail. This submission process is much like a mentoring relationship with the trainer in that job analyst candidates submit their work and receive feedback on their work and advice from an expert in this specific job analysis practice.

²¹ TruSight (2011). Writing Practical and Useful Job Descriptions. Retrieved from <http://www.trusightinc.com/Training/1346/WritingPracticalandUsefulJobDescriptions.aspx>

²² WorkAbility (2011). WorkAbility Certification Seminar. Retrieved from <http://ejobmatch.workability.us/seminars/030411/announcement/announcement.htm>

²³ Personal communication with WorkAbility president, Rick Wickstrom.

3.4.11 WorldatWork Job Analysis, Documentation and Evaluation Course (Offered as part of its credentialing program)

As part of their Certified Compensation Professional program, WorldatWork offers a job analysis training course.²⁴ The purpose of this course is to teach individuals how to effectively complete job analyses, job documentation, and job evaluation in a way that will help their organization to attract and retain talent. This course is quite unique in its delivery method because it offers four different options that individuals can choose between for their job analysis instruction. The job analysis course is offered in a classroom setting, via e-learning (self-paced online course), on-site (brings trainer to your location), and by self-study (just sent the course materials). If participants choose the classroom instruction, the job analysis course lasts approximately eight hours. Whichever delivery method of the course material is chosen, all participants take an examination following the completion of the course materials. For participants who are WorldatWork members the course plus the examination costs \$1,175 (\$1,810 for non-members). If participants choose not to take the exam, the course alone will cost WorldatWork members \$990 (\$1,480 for non-members).

WorldatWork's Job Analysis, Documentation, and Evaluation course covers a variety of topics relevant to job analysis. The course provides information about background information on job analysis, sources of job analysis information, and possible sources of error when conducting job analyses. It provides instruction on various methods that can be used to collect job analysis information and on documenting the information collected during a job analysis.

3.4.12 Summary of Job Analysis Training Programs

A summary of the 11 existing job analysis trainings described in this section is presented in Exhibit 3-9 (pg. 3-17). As shown in the table, although some of the trainings are intended for specific audiences, they generally do not require specific pre-requisites or experience. So while there may be the expectation that individuals participating in these training courses have a specific background or coursework in a specified area, this is often not an actual pre-requisite to participate in a course, nor are the participants' backgrounds verified before participating in the training. This trend is in line with our recommendations for minimum qualifications described earlier in this chapter, which will allow SSA to draw from a broad, multi-disciplinary participant pool.

Length of the existing training programs ranges from three hours to nine days, depending on factors such as the extent of information presented, the training delivery method, and the amount of opportunity for practice. Due to the criticality of SSA's job analysis training, the need to ensure all job analyses are performed consistently and to SSA's standards, and the expected variation in participant backgrounds, we expect that SSA's training will be a minimum of several days in length.

Existing job analysis trainings are more commonly offered in the classroom, as this delivery method was used for eight of the trainings; however, two of the trainings are offered online. The final training was offered through multiple options, including online and classroom based, depending upon the participant's choice. Determining the appropriate delivery method involves a number of considerations, as each method has different benefits and disadvantages. For example, online trainings tend to have lower administration costs and offer convenience to participants, whereas classroom trainings allow more opportunity for practice and feedback. Such considerations will be discussed in more detail in reference to SSA's needs in section 3.6 (pg. 3-32), *Training Delivery Methods*.

²⁴ WorldatWork (n.d.). Job Analysis, Documentation and Evaluation. Retrieved from <http://www.worldatwork.org/waw/adim/seminars/html/seminars-c2.jsp>

In regard to the topics covered, most job analysis trainings focus on the skills that are most important to the particular approach they take to data collection. Once SSA's process is defined, their training content should likewise focus on the most important skills for their data collection approach. Based on our current assumptions of SSA's likely process, the most important skills, which were identified in section 3.2 (pg. 3-1), include skill in observing the performance of a job and skill in asking questions. These skills will likely need to be a main focus in SSA's job analysis training.

Most of the job analysis trainings offered some opportunity for practice, which ranged from more simple practice exercises during group activities to full-scale sample job analyses. We strongly recommend providing training participants with the opportunity for job analysis practice during their training experience, prior to entering the field and performing job analyses independently. Our recommendations for including practice in the training, as well as other types of training features, are presented in section 3.5 (pg. 3-20), *Recommended Training Practices*.

The majority of the training programs either did not offer a certificate or offered a certificate of completion, while the WorldatWork training is part of a professional credentialing program. Only the ErgoScience QJDA Training requires participants to pass an assessment in order to earn a certificate. Despite the lack of existing assessment-based certificate programs on job analysis, we believe this type of program is most suitable for SSA's needs. Detailed rationale for this conclusion is presented in Chapter 4 of this report, *Results of Job Analysis Certification Program Research* (pg. 4-1).

While we have provided a summary of existing job analysis training programs, this project did not include the evaluation of these trainings. It is important to note that experts may consider some of these programs to be more reputable and well established than others. Additionally, these programs differ in terms of the expected competence level and background of participants and in their relevance to SSA's job analyst training. As SSA's job analysis methodology has not yet been determined, it is not possible to evaluate the relevance of these programs to SSA's methodology at this stage. The purpose of this section was to examine the content, training delivery method, and structure of existing job analyst trainings to assess the norms; however, it may be beneficial to evaluate these programs on their usefulness to SSA after the job analysis methodology has been finalized.

Exhibit 3-9: Summary of Existing Job Analysis Training

JA Training	Pre-requisites/ Intended Audience	Length	Delivery Method	Topics Covered	Purpose of Training	Practice Included in Training	Certificate/ Assessment	Cost*
1. DACUM Training	No pre-requisites, intended for a variety of audiences (e.g., training coordinators, educational specialists, HR development specialists)	5 days	In-person/classroom	<ul style="list-style-type: none"> ▪ DACUM process, philosophy and uses ▪ DACUM JA structure ▪ How to create duty and task statements ▪ Common errors ▪ How to conduct a DACUM JA panel 	To describe a job in terms of desired competencies for the ultimate purpose of designing training curricula	Yes	Yes; certificate of completion	\$1,550
2. ErgoScience QJDA Training	No pre-requisites, intended for physical and occupational therapists	3 hours	Self-paced, online	<ul style="list-style-type: none"> ▪ Identifying required physical demands ▪ Writing ADA & EEOC-compliant job descriptions ▪ Completing accurate reports of the results 	To teach participants to perform accurate job analyses for examining and quantifying physical demands for a given position	Yes; assessment includes a practice job analysis	Yes; assessment-based (multiple-choice questions and video-based practice job analysis; must achieve 85%)	
3. FJA Training	No pre-requisites	9 days (5-day workshop; 2-day observation; 2-day practice)	In-person/classroom	<ul style="list-style-type: none"> ▪ FJA theory, process, and rating scales ▪ How to conduct job analysis focus groups 	To provide training on the overall theory and process of conducting FJA as well as the specific rating scales	Yes	Yes; certificate of completion	

Exhibit 3-9: Summary of Existing Job Analysis Training

JA Training	Pre-requisites/ Intended Audience	Length	Delivery Method	Topics Covered	Purpose of Training	Practice Included in Training	Certificate/ Assessment	Cost*
4. King County Job Analysis Training	Must be a registered vocational counselor	4 hours	In-person/ classroom	<ul style="list-style-type: none"> ▪ King County organizational structure ▪ King County’s job analysis procedures ▪ Receiving job analysis assignments ▪ Submitting completed analyses 	To ensure that individuals outside of the organization are conducting job analyses for the department using the exact procedures desired by the department	No	Yes; certificate of completion	
5. Matheson Essential Function Job Analysis Training	No pre-requisites	6 hours (1 hour per week for 6 weeks)	Live internet classroom	<ul style="list-style-type: none"> ▪ Preparing to conduct a job analysis ▪ Analyzing reference resources ▪ Tools used to analyze jobs ▪ Conducting structured interviews ▪ Completion of job analysis forms ▪ Measuring physical demands and linking them to essential job functions ▪ Writing job function statements and the final job analysis report 	To teach job analysts to identify and measure the physical, cognitive, aptitude, and temperamental demands of a job as well as the essential functions	Yes, outside of class meeting time	No	\$350

Exhibit 3-9: Summary of Existing Job Analysis Training

JA Training	Pre-requisites/ Intended Audience	Length	Delivery Method	Topics Covered	Purpose of Training	Practice Included in Training	Certificate/ Assessment	Cost*
6. OccuPro Systems and Solutions Job Analysis	No pre-requisites, intended for a variety of professions (e.g., safety & health professionals, occupational therapists, human resource professionals)	6 hours within a larger course (previously a standalone 8 hour course)	In-person/classroom	<ul style="list-style-type: none"> ▪ Overview of job analysis ▪ Performing job analysis ▪ Gathering physical demands data ▪ Identifying essential functions ▪ Writing job descriptions and completing job analysis reports 	Designed for people who want to offer pre-placement, post-offer testing and who want to ensure that their organizations are being EEOC, ADA, and civil rights compliant	Yes; must perform a job analysis independently and present results	No	\$500
7. PAQ Work Analysis Seminar	No pre-requisites, intended for compensation, employment, management, and human resource professionals who are new to the field	2 days	In-person/classroom	<ul style="list-style-type: none"> ▪ Completing the PAQ questionnaire ▪ Conducting interviews ▪ Identifying duties, tasks, skills, and competencies ▪ Using job analysis results 	To teach job analysts how to complete the PAQ questionnaire	Yes	No	
8. SHRM Job Analysis Module	No pre-requisites; intended for those with little to no job analysis experience	Approximately 3 to 4.5 hours total across 3 sessions (designed to be a module in a larger course)	In-person/classroom	<ul style="list-style-type: none"> ▪ Overview of job analysis ▪ Types of data collected ▪ Sources of information ▪ Data collection methods ▪ Identifying essential tasks ▪ Writing job descriptions 		Yes, through class activities	No	
9. TruSight Job Description Training	No pre-requisites; beginner course for participants who write job descriptions	4 hours	In-person/classroom	<ul style="list-style-type: none"> ▪ Understanding job descriptions, their uses, and how to write them ▪ Conducting job analysis ▪ Identifying essential functions 	To learn to conduct a job analysis as a means to write high-quality job descriptions	No	No	\$185 for members and \$275 for non-TruSight members

Exhibit 3-9: Summary of Existing Job Analysis Training

JA Training	Pre-requisites/ Intended Audience	Length	Delivery Method	Topics Covered	Purpose of Training	Practice Included in Training	Certificate/ Assessment	Cost*
10. WorkAbility Systems Training	Intended for occupational health professionals	4-5 hours during a 2-day seminar; an additional 5-6 hours of follow-up time	In-person/classroom	<ul style="list-style-type: none"> ▪ Conducting a WorkAbility job analysis ▪ Using the WorkAbility software and other tools ▪ Identifying essential functions 	To help participants develop job analysis and functional capacity evaluation skills	Yes; must conduct two job analyses independently	Yes	\$970 for WorkAbility Network (WAN) providers and \$1,070 for all others
11. WorldatWork Job Analysis, Documentation and Evaluation Course	No pre-requisites, but intended for compensation professionals	8 hours (classroom option)	4 options: classroom, self-paced online, on-site, and self-study	<ul style="list-style-type: none"> ▪ Background information on job analysis ▪ Sources of job analysis information ▪ Possible sources of error ▪ Data collection procedures ▪ Documentation of job analysis data 	To teach individuals how to complete job analyses, job documentation, and job evaluation in a way that will help their organization to attract and retain talent	No	Yes; part of Certified Compensation Professional program	\$990 for course alone, without assessment, for WorldatWork members and \$1,480 for non-members

*Costs are per person and are either paid by the individual participant or by the participant’s organization.

3.5 Specific Training Practices

In this section, we provide an overview of training practices that are recommended for SSA's job analyst training, based upon recommendations collected through interviews with training experts as well as a review of the training literature. Our recommended training practices address the following components of training:

- Training design and structure
- Training content and materials.

3.5.1 Training Design and Structure

The design and structure of a training program should be determined based upon the training objectives, so that the end goal dictates the process of teaching that goal. During interviews with training experts, this recommendation was widely noted as the most critical factor in determining how a training program should be designed.²⁵ Thus, the first step in designing the job analyst training should be for SSA to clarify the learning objectives, which should be measurable and observable. The primary objective is likely for participants to be able to successfully apply SSA's job analysis methodology. The specific sub-components of that objective will thus need to be determined and refined as SSA finalizes its job analysis practices. All of the training activities should then be linked back to the specific learning objectives. This step is particularly important when an assessment-based certificate program will be implemented, as the participants will need to demonstrate that they have accomplished all of the learning objectives. An assessment specialist should be involved early in the design process.

Additionally, the needs of the target audience will need to be considered; for example, the training will need to consider the background and experience levels of the participants.²⁵ Based upon the minimum qualifications recommended in section 3.3 (pg. 3-6), which indicate the pool of candidates may not be limited to a specific field of study, required educational degree or professional certification, the training participants may have a wide range of prior experience; however, all participants will be novices in terms of SSA's specific methodology. More experienced job analysts will need to be "re-programmed" to consider themselves novices in order to adopt the SSA job analysis methodology.

According to training expert interviews, the training should first address the concepts to create a general understanding of the material. Ordering the training in this way creates a knowledge base prior to the development of related skills. Subsequently, the participants should be allowed the opportunity to perform the relevant behaviors. Each session should be kept relatively short and should include review questions or an interactive component to help keep participants' attention.²⁵

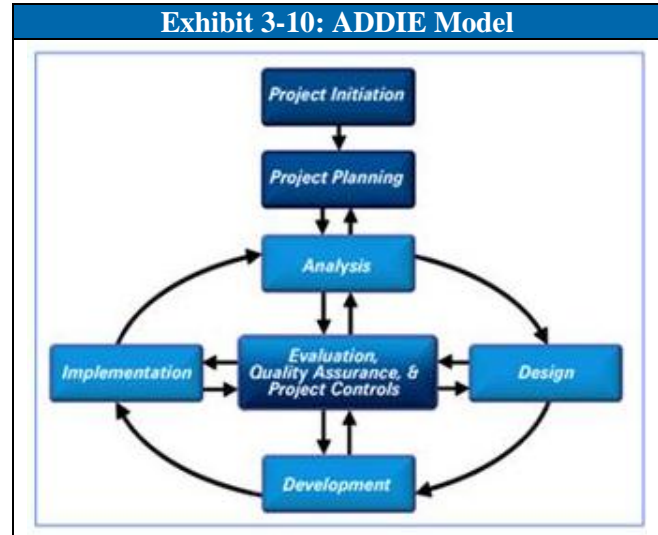
Training experts noted that budget has a large impact on the length and format of the training. However, multiple participants suggested that for a training of such high importance, the training objectives, content, and participant needs should dictate the training design, while budget should not be considered a main driver. Budgetary concerns should impact features such as the sophistication of materials and the range of activities that can be offered, but should not dictate the material that can be taught due to the high stakes associated with the creation of this system for SSA and its claimants.

²⁵ This information was acquired in interviews with training experts in 2011.

3.5.1.1 Instructional Design Models

One of the most well-known and frequently used instructional design models is the Instructional Systems Design (ISD) Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model. The ADDIE model presents a flexible set of guidelines for developing training programs according to its five phases:

1. **Analysis**—The analysis phase involves developing measurable instructional goals and objectives, determining the learning environment, and identifying the participants' existing knowledge and skills.
2. **Design**—The design phase is a systematic and specific process of determining the structure and format of the training, including training content and subject matter, lesson plans, media, exercises, and assessments.
3. **Development**—After the design of the training has been determined in phase 2, the development phase involves creating the planned training. This phase includes tasks such as creating storyboards, writing content, designing graphics, and developing the programming for web-based trainings.
4. **Implementation**—The implementation phase involves determining how the developed training will be put into place, including determining how to prepare the trainers and participants.
5. **Evaluation**—Finally, both formative and summative training evaluation should be conducted. Formative training is conducted at each stage of the ADDIE process to assess the effectiveness and quality of each phase. Summative evaluation is conducted to assess training effectiveness criteria following training implementation. Evaluation is a crucial phase of the process to ensure that participants are learning the skills they need,²⁶ and summative evaluation is a crucial component of training design when developing an assessment-based certificate program.



A graphic illustration of the ADDIE model process is presented in Exhibit 3-10. Due to its flexible use and focus on evaluation at each stage of training development, this model was recommended by training experts for use by SSA during its development of a training for job analysts.²⁶

3.5.1.2 Training Features

Lecture

Due to the importance of communicating specific information to the SSA job analyst candidates, a lecture component of the training should be incorporated. The lecture component refers to the push of information to participants, regardless if that information is presented by an instructor or by computer. During the lecture, students should be taught the concepts, definitions, and processes relevant to the SSA job analysis methodology. Research has indicated that lectures tend to result in effective training across

²⁶ This information was acquired in interviews with training experts in 2011.

different types of skills and tasks trained.²⁷ However, despite their effectiveness, it is recommended that lectures be combined with other training methods. Specifically, lectures should be applied as the first component of the training and combined with more interactive approaches, as lectures have often been criticized as too passive due to the lack of opportunity to clarify material.²⁸

Discussion

Class discussions can take a variety of different formats, but in general, they allow the learners to have the opportunity to share their thoughts on different issues and challenges and as such were recommended by the training experts. Discussion topics may be originated through an instructor who aims to spark discussion among participants or through training participants who aim to seek clarification on certain issues. They may take place in a classroom, through an online discussion forum, or during study groups. Discussions are beneficial training features, as they open up two-way communication and allow learners to seek clarification and think about the material from a new perspective.

Training experts indicated that it will be important for all SSA discussion forums to be monitored by an instructor to ensure that participants are not distributing incorrect information to one another,²⁹ which is only a concern when discussion forums are online and not classroom-based. When discussion forums are based online, this concern can be addressed by assigning a monitor to the discussion forum.

Practice

Throughout the interviews with training experts, one of the most heavily emphasized themes was the need to offer training participants ample opportunity for practice.²⁹ SSA job analysts will need to be able to take the information they learned during training and apply it independently in the field. They will be required to follow a specific methodology involving multiple data collection procedures. Understanding the material alone will not be sufficient; they must learn the skills needed to perform this methodology. Additionally, they will be faced with a variety of different circumstances as they collect data from different organizations in different industries. Thus, they must be able to apply the methodology across these different types of situations. Incorporating a significant amount of practice into the training will aid the participants in becoming proficient in these skills. The practice opportunities should provide realistic scenarios and should reflect a variety of different jobs and situations to encompass the different types of experiences the job analysts will encounter.

A variety of different practice techniques are possible during training. The case study technique provides trainees with a written description of a realistic dilemma, and then they are asked to analyze the problem and provide solutions based upon factors provided about the context, the people involved, and the applicable guidelines. Case studies are intended to allow participants to build skills in analysis and problem solving. The method typically involves asking trainees to analyze the situation individually and then discuss potential solutions with a group to promote feedback and learn from the solutions of others.²⁸ In addition, this can be a valuable way to ensure participants are using the same frame of reference when making ratings.

Another practice technique involves the use of role playing. Role playing typically involves acting out a scenario for the purposes of developing interpersonal skills.²⁸ Role playing may be an effective technique in the SSA job analyst training for participants to practice their interviewing skills. In addition to role

²⁷ Arthur Jr., W., Bennett Jr., W., Edens, P.S., Bell, S.T. (2003). Effectiveness of training in organizations: A meta-analysis of design and evaluation features. *Journal of Applied Psychology*, 88(2), 234-245.

²⁸ Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations* (4th ed.). Belmont, CA: Wadsworth.

²⁹ This information was acquired in interviews with training experts in 2011.

playing for interview practice, participants should be afforded the opportunity to practice with all aspects of the job analysis data collection. For example, they could be provided with sample background materials that they can practice reviewing. Observation can be practiced by providing video-based scenarios that participants watch and analyze. They should also have the opportunity to practice making ratings and completing the SSA work analysis instrument based upon collected data. Some training experts suggested that the participants should be required to practice each of the tasks individually, and work to practicing entire practice job analyses.³⁰

Feedback

Another training feature that was emphasized strongly by training experts was the need to incorporate a feedback mechanism. The training needs to provide participants with information on how they are performing, including their strengths and areas needing improvement. Additionally, feedback needs to be provided in a timely manner so that participants do not continue repeating their mistakes.³⁰

One method of providing feedback is through the use of self-assessments, which require participants to answer questions for the purpose of development rather than more formal assessment. Self-assessments are most appropriate for more objective, knowledge-based content. For example, self-assessments during the lecture section of the training may be useful in helping participants ensure they understand the purpose of SSA's job analyses, data security and ethical concerns, and knowledge of the job analysis process. Alternatively, for skill-based content, it will likely be more appropriate to have feedback provided by an instructor, who can analyze the participant's technique.³⁰ This feedback can be provided during the practice opportunities discussed in the previous section. Feedback from peers, moderated by an instructor, may also be useful, particularly when participants hold a variety of different experiences and backgrounds. In addition, practice and feedback on assessments or assessments similar to the final assessment that will be given at the end of the training to receive a certificate will be helpful for participants to prepare for the final assessment.

Resource Materials

Resource materials should be provided to participants to allow them to refer back to the content taught in the training. Such materials could also be provided in advance of the training to allow participants to enter on a more similar playing field.³⁰ In addition to text-based references, more interactive resources could also be available, such as having an SSA point of contact maintain a phone, email, or chat hotline where training participants, and later SSA job analysts, could turn with questions or to ask for advice.³⁰

Features to Enhance Participant Engagement

Incorporating features to enhance participant engagement will improve the likelihood that participants are interested and motivated in the training, facilitating their learning. Because participants will not necessarily be SSA employees and are more likely to be contract hires or temporary employees, ensuring participant motivation and commitment will be even more important.

The primary focus in much of the participant engagement literature involves the inclusion of variety in the training. Lectures can be broken up with other types of activities. Small group activities and group discussions allow participants to connect with other learners and collaborate. Incorporating practice

³⁰ This information was acquired in interviews with training experts in 2011.

exercises or role playing activities allows participants to apply the content knowledge that they have learned. Case studies or videos allow them to observe the content in action.^{30, 31, 32, 33}

Another simple but effective technique to enhance participant engagement is simply to communicate the importance of the training. If participants understand the criticality of the training and find value in participating, they will be more likely to actively engage in the material. Emphasizing the criticality of the training can be addressed not only by communicating the value of the course for being an SSA job analyst, but for participants' professional development in general by emphasizing that the training will help participants to build their job analysis skills. Because participants may not necessarily be long-term job analysts for SSA, highlighting the applicability of the training outside of the SSA context will be important.³⁴

One concern is that participants are likely to lose interest in training when it covers material on which they are already knowledgeable. This concern occurs when participants enter the training with varying backgrounds, as will likely be the case for SSA. This concern is more surmountable when the training is delivered online, and the training provides participants with the ability to skip material that they already know. Alternatively, participants could be allowed to test out of certain portions of the training.³⁴

The certificate requirement will also increase participant engagement, as trainees will be required to demonstrate that they have learned in order to earn their certificate and become an SSA job analyst. The knowledge that they will need to pass an assessment in order to work as an SSA job analyst will likely increase participant motivation.³⁴

Features to Enhance Transfer of Training

Due to the criticality of ensuring that SSA job analysts are correctly applying the job analysis methodology when they are in the field, it will be important to incorporate features that promote transfer of training.

The SSA training will need to emphasize the importance of the job analysis training and the expectation that analysts will strictly follow the methods they have learned when they are on the job. Clearly communicating expected outcomes helps to ensure that participants understand that they must follow the procedures they have learned during training and that it is not merely a step they must complete.³⁵ In particular, participants with prior job analysis experience must understand that they are required to use SSA's job analysis methods, rather than drawing on their prior experience and using the techniques that they have in the past.

The training should incorporate exercises that allow participants to obtain a significant amount of practice.^{34, 36} Exercises and demonstration should closely resemble the job analyses they will actually perform. Providing real-life examples throughout the training helps prepare trainees for the situations they should expect to encounter on the job and should include both typical scenarios as well as more challenging situations in which the job analysis does not proceed as expected. After practice sessions,

³¹ 1080 Group, LLC. (2008). Five keys to getting started with interactive online training. Troutdale, OR: Author.

³² Clark, R. C. (2010). Evidence-Based Training Methods: A Guide for Training Professionals. Nashville, TN: The American Society for Training and Development (ASTD) Press.

³³ Silva, J. & Bultitude, K. (2009). Best practice in communications training for public engagement with science, technology, engineering, and mathematics. *Journal of Science Communication*, 8(2), 1-13.

³⁴ This information was acquired in interviews with training experts in 2011.

³⁵ Wick, C. (2003). *The course isn't the finish line*. Fort Hill Company

³⁶ Burke, L. & Hutchins, H. (2008). Identifying best practices in training transfer: A qualitative study of training professionals.

participants should receive immediate feedback so they can understand what they are doing correctly and what needs to be improved.³⁷

Enhancing training transfer also depends largely on the training instructors. Trainers must have both a thorough understanding of SSA's job analysis methodology as well as teaching. In addition to the training instructors, peer support assists transfer of training.³⁸ Participants should be encouraged to work together and help one another. This support can be particularly helpful during practice sessions, during which participants can discuss concerns and suggestions.³⁷

After training is complete, job monitoring efforts should be put into place.^{37, 38} An auditing system should provide a check on the quality of the job analysis data that are being collected. Results of auditing may indicate that an analyst needs additional training or assistance. This system could also involve the use of a coach or mentor to accompany the job analyst on site and ensure techniques are being appropriately applied.³⁷

Additional post-training measures that may be implemented to assist with training transfer and help maintain SSA data standards include fostering a community of job analysts where they can share their experiences and obtain advice. Such continual learning support would help the job analyst feel connected. As noted previously, these discussions should be monitored by SSA to ensure the information being shared and the advice given is in line with SSA's methodology. In addition, job analysts could be afforded the opportunity to take refresher courses that provide an opportunity to review procedures that are used less often.³⁷

3.5.1.3 Training the Trainers

In addition to developing the SSA job analyst training, another crucial step will involve developing and implementing training for the instructors providing the job analyst training. Training the trainers serves several key objectives. In particular, it is important to ensure that all trainers have a deep understanding of the content taught in the training to ensure that they are communicating the accurate information to participants and are able to answer questions and provide guidance. Additionally, training the trainers helps to achieve more consistency and standardization in training delivery when multiple trainers are being used, which helps to ensure that all participants are receiving the same quality of training, regardless of their training location and instructor. To meet both of these objectives, SSA's train-the-trainer sessions must address the course content, as well as delivery guidelines and expectations. Overall, the quality of training instructors can have a large impact on the quality of the training itself, and the inclusion of train-the-trainer sessions prior to implementation of the SSA job analyst training will help to ensure the instructors are as prepared as possible.

3.5.1.4 Training Assessment/Integration with Certificate Process

Because we have recommended that SSA's training be part of an assessment-based certificate program, SSA's training must include an assessment that requires participants to demonstrate their mastery of the training's learning objectives. In this section, we describe recommendations for the training assessment.

³⁷ This information was acquired in interviews with training experts in 2011.

³⁸ Burke, L. & Hutchins, H. (2008). Identifying best practices in training transfer: A qualitative study of training professionals.

Objectives

Because an assessment-based certificate program is most appropriate to SSA's needs, the assessment is a key piece in the certificate program process. In this case, the training assessment should provide participants with the opportunity to demonstrate that they are knowledgeable about SSA's job analysis methodology and that they have the competence to successfully perform job analysis using this methodology. More specific training objectives will need to be developed after SSA's job analysis methodology has been finalized; these objectives will need to be measurable and observable. The assessment should be tied to these specific training objectives, which must be well defined and outline what the participants need to accomplish from the training to be successful on the job.³⁷ The assessment must be aligned with the purpose, scope, and learning outcomes of the certificate program.^{39, 40}

Format

In regard to the format of the assessment, experts suggest that although knowledge may be measured using a multiple-choice format, the assessment should also include a component that requires participants to apply their skills to realistic scenarios.⁴¹ The knowledge-based assessment could use a variety of question formats, such as multiple-choice, true/false, drag-and-drop sequence questions, and fill-in-the-blank.

The behavioral portion of the assessment should include realistic job analysis scenarios. These scenarios could include video vignettes that require participants to indicate how to respond. Another option is to assess participants using a behavioral checklist that lists the behaviors an analyst should exhibit. In general, the behavioral portion of the assessment should indicate whether the analyst can determine a competent response to the realistic job analysis situations that are presented.⁴¹ Although some experts recommended including an on-site job analysis component as the final portion of the assessment, this would be a very resource intensive practice due to the scale of hiring required for SSA. Thus, ICF recommends focusing on including realistic scenarios in the assessment to avoid the need for on-site assessment after training is complete.

One possibility is to use an incremental testing format, through which the candidates are tested at the end of each learning module as well as at the completion of the course. The benefit of this method is that when participants fail a section, they can focus where they have problems rather than on the full curriculum. Additionally, this method tends to lead to increased first time pass rates, as participants are able to digest one section of the material at a time. In one applied example, changing to an incremental assessment increased first-time pass rates from approximately 40% to 90%.⁴¹

Some training experts recommended using pre-tests and post-tests to assess what the participants learned during the course; however, they cautioned that pre-tests can decrease the motivation of less experienced participants who perform poorly on the pre-test.⁴¹

Several of the training experts interviewed suggested that the passing grade for certification should be at least 80-85%. While this number is somewhat arbitrary prior to test development, this recommendation provides a general indication that participants should be able to demonstrate that they have learned the majority of the material and that the criteria for passing should be set relatively high.⁴¹ The specific cut score that is set will depend upon factors including the difficulty level of the test, the format of the test, and the relevance/importance of items on the test.

³⁹ ASTM. (2009). *ASTM E2659 – 09e1 Standard Practice for Certificate Programs*.

⁴⁰ ICE. (2009). *ICE 1100 2010(E) – Standard for Assessment-Based Certificate Programs*.

⁴¹ This information was acquired in interviews with training experts in 2011.

3.5.1.5 Evaluation of Training

Kirkpatrick's^{42, 43} four levels of criteria represent a well-known and widely used model of training evaluation, which was the primary training evaluation model discussed by the training experts who were interviewed. The four levels of training evaluation criteria in the model include the following:

1. Reactions
2. Learning
3. Behavior
4. Results

Reactions. The reaction criterion refers to what participants thought of the training. Research has illustrated the multi-dimensional nature of reactions, with categories including factors such as satisfaction with the instructor, satisfaction with the training/administration process, satisfaction with the testing process, utility of the training program, satisfaction with the course materials, and satisfaction with the course structure.⁴⁴ Participant reactions are typically measured by administering a questionnaire at the conclusion of the training. Questionnaire responses should be anonymous to obtain the most honest responses. While the questionnaire should primarily focus on quantitative responses, it should also allow space for open-ended comments. Prior to launching the questionnaire, it should be pilot tested to assess clarity and completeness, to determine the time required to finish the questionnaire, and to solicit suggestions for improvement.⁴⁵

While participant reactions can be useful to ensure participants are enjoying the training and to identify potential improvements, it is important to keep in mind that participant reactions are not necessarily related to learning or performance on the job.⁴⁵ While a measure of participant reactions does not present a comprehensive view of training effectiveness and should not be the only method of training evaluation, the inclusion of a reactions questionnaire at the conclusion of the SSA job analyst training would be a simple, low cost way to obtain feedback on the training.

Learning. Learning refers to whether participants learned the concepts and techniques that were the learning objectives of the training. Measures of learning should be objective and quantifiable, and should focus specifically on learning of the training material, rather than performance on the job. End-of-training assessments can serve as the measure of training learning.⁴⁵ As the training participants will be required to pass an assessment in order to earn a certificate to work as SSA job analysts, this assessment can serve as SSA's evaluation of participant learning.

Behavior. Behavior refers to the transfer of material learned in training to performance on the job. While the learning criterion measures whether participants grasped the training content, the behavior criterion assesses whether they are actually using the material they learned. When measuring behavior for training evaluation purposes, it is important to focus specifically on the performance elements taught in the training. For SSA job analysts, behavior may be best measured by the inclusion of an auditing process. This could involve both a data review to ensure the work analysis instrument is being completed fully and

⁴² Kirkpatrick, D. L. (1959, 1960). Techniques for evaluating training programs. *Journal of the American Society of Training Directors*, 13, 3-9, 21-26; 14, 13-18, 28-32.

⁴³ Kirkpatrick, D. L. (1994) *Evaluating training programs: The four levels*. San Francisco: Berrett-Koehler.

⁴⁴ Morgan, R. B., & Casper, W. (2000). Examining the factor structure of participant reaction to training: A multidimensional approach. *Human Resources Development Quarterly*, 11, 301-317.

⁴⁵ Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations* (4th ed.). Belmont, CA: Wadsworth.

correctly, as well as an in-person audit, during which the analyst is rated on his or her data collection techniques through the use of a behavioral rating checklist.⁴⁵

Results. The results criterion refers to the impact of the training on organizational objectives. For example, this may involve examining whether the training helps to reduce costs, turnover, absenteeism, grievances, or to increase morale.⁴⁵ Overall, measuring results involves assessing whether the training program is worth the effort for the organization (i.e., return on investment). Because of the obvious need for training on SSA's specific job analysis process, it may not be necessary to evaluate the training at the organizational results level; instead, behavior may be the highest necessary level of analysis.⁴⁶

3.5.2 Training Content and Materials

As stated previously, the KSAs needed by an SSA job analyst should form the basis of the training content. In addition, we specifically asked training experts about training for data collection and on data security, knowing these areas would be important for SSA. We present recommendations for the training content and training materials in the following sections.

3.5.2.1 Training Content

While the specific job analyst training content will need to be determined after SSA's job analysis methodology has been finalized, in this section we provide an overview of some of the KSAs that should be taught during training. KSAs are included in this section if at least two-thirds of the raters indicated that the KSA should be acquired during training. In total, 18 of the 48 SSA Job Analyst KSAs met this criterion. These KSAs are presented in Exhibit 3-11, which sorts the KSAs by mean difficulty rating. The KSAs can be roughly sorted into thirds, with the top third being rated on average more than 3.5 indicating they are the most difficult to learn, and the bottom third being rated less than 3.0, indicating they are the least difficult to learn.

The KSAs rated as the most difficult to learn tend to be relatively abstract. Notably, this category contains all of the ability statements and two of the skill statements, while none of the knowledge statements had mean difficulty ratings of more than 3.5. Each of these KSAs will need to be trained in reference to SSA's specific job analysis methodology. For example, while the "Ability to judge/make decisions" is a broad ability, the training can address how to make the types of decisions required by analysts, such as how to determine whether sufficient data has been collected on a position or how to select the most appropriate ratings for a position using SSA's work analysis instrument rating scales. In general, these KSAs may take more time to learn in training, as they each involve a certain level of ambiguity and may require participants to obtain a certain amount of practice before they become comfortable using these KSAs on their own.

⁴⁶ This information was acquired in interviews with training experts in 2011.

Exhibit 3-11: KSA Difficulty Ratings		
How difficult is it to learn this KSA?		
1 = Very easy		
2 = Easy		
3 = Average		
4 = Difficult		
5 = Very difficult		
KSAs	Mean	Standard Deviation
1. Ability to judge/make decisions.	4.29	0.49
2. Ability to recognize ambiguous, conflicting, or incomplete information to seek clarification.	3.86	0.69
3. Skill in discerning the KSAs required to perform a task.	3.57	0.53
4. Skill in observing the performance of a job to gather information about the job.	3.57	0.79
5. Ability to estimate the value or worth of something (e.g., make ratings of the importance of KSAs; make rating of the amount of an ability needed).	3.57	0.79
6. Knowledge of professional and legal guidelines for job analysis data.	3.43	0.79
7. Skill in writing descriptions of jobs, tasks and KSAs.	3.43	0.79
8. Skill in extracting information about a job from written documents.	3.43	0.53
9. Skill in facilitating focus groups to gather information about a job.	3.29	0.49
10. Knowledge of various types of organizational cultures (e.g., unions) and how organizations function.	3.14	0.90
11. Knowledge of interview techniques.	3.00	0.58
12. Skill in asking questions to gather information about a job.	3.00	0.58
13. Skill in using a variety of measurement tools (e.g., tape measure, pressure gauge, pedometer, scale).	2.86	0.69
14. Knowledge of SSA's work analysis instrument and job analysis practices (e.g., coding procedures, rating scales)	2.71	0.76
15. Knowledge of the purpose of job analysis data collected for SSA.	2.57	0.79
16. Skill in using digital cameras, including taking and uploading photos.	2.43	0.79
17. Knowledge of sources of occupational information.	2.29	0.49
18. Skill in entering data into paper forms and electronic databases.	2.00	1.00

The KSAs of average difficulty, KSAs #6-12 in Exhibit 3-11, tend to be more concrete in comparison to the KSAs with higher mean difficulty ratings. For example, these include KSAs that would require providing training participants with background knowledge on subjects such as the professional and legal guidelines for job analysis data and different types of organizational cultures and functions. Other KSAs in this category would require teaching a specific process, such as the method of writing task and KSA statements or job descriptions, or the process of facilitating a focus group. In general, the KSAs in this category are relatively easy to teach but may require some time for participants to fully master.

Finally, KSAs #13-18 in Exhibit 3-11 were rated as relatively easy to learn. Again, these KSAs tend to be relatively concrete and would involve teaching background information such as occupational information sources or the purpose of SSA's job analysis data, or specific processes, such as how to enter the collected data or to use a digital camera. Overall, these KSAs should be relatively easy for participants to acquire.

3.5.2.2 Data Collection Procedures

When training for data collection, a significant portion of the training should be dedicated to training the specific data collection procedures.^{47, 48} This should generally include instruction in the processes, an opportunity for participants to practice using the processes, and feedback on what components they are performing correctly versus what needs to be improved.⁴⁸ Interactive, hands-on activities should be included when training for data collection to increase the effectiveness of the training and allow participants to practice the data collection procedures.⁴⁷

The specific data collection processes will depend on SSA's job analysis, but will likely include instruction on topics such as the following:

- How to prepare for a site visit
- How to collect and review background materials
- How to conduct job observations
- How to conduct job analysis interviews
- How to how to facilitate job analysis focus groups
- How to measure physical demands
- How to complete the SSA work analysis instrument

Due to the need to ensure data collected on such a large scale, with many analysts collecting data from many organizations and industries across the national labor market, it will be critical to teach the specific processes that must be followed for each of the data collection procedures the job analysts will use. Ensuring standardization in the manner will maximize the comparability of results.

In addition to training on the specific data collection procedures, the training must also emphasize the importance of the quality of data that are collected.⁴⁹ Analysts will need to understand how to review their own data, identify gaps and errors, and remedy any identified concerns; thus, these components should be incorporated into the training.

While the training will generally cover the specific, required job analysis process, it should also address how to respond to challenges or accommodate situational differences that necessitate some flexibility in the standard job analysis methodology.

Participants will also need to be instructed on data documentation. This will involve understanding how to correctly complete all fields of the SSA work analysis instrument, including how to make each of the required ratings. In addition, analysts should be instructed on how to document data that are not necessarily included in the final work analysis instrument, such as each individual set of interview notes.

In terms of the length of time required to teach the data collection processes, training experts generally indicated that it would depend on contextual factors such as the objectives of the training and the

⁴⁷ Condelli, L., Castillo, L., Seburn, M., Deveaux, J. (2002). *Guide for Improving NRS Data Quality: Procedures for Data Collection and Training*. Washington, DC: U.S. Department of Education. Retrieved from <http://www.nrsweb.org/traininginfo/dataquality.pdf>

⁴⁸ This information was acquired in interviews with training experts in 2011.

⁴⁹ Condelli, L., Castillo, L., Seburn, M., Deveaux, J. (2002). *Guide for Improving NRS Data Quality: Procedures for Data Collection and Training*. Washington, DC: U.S. Department of Education. Retrieved from <http://www.nrsweb.org/traininginfo/dataquality.pdf>

experience level of the participants. However, they noted that the amount of time provided for practicing the procedure and providing feedback will need to be significantly longer than the amount of time initially spent introducing the content.⁵⁰

3.5.2.3 Security of Data

Because SSA job analysts will be collecting data from a variety of organizations in all industries, it will be crucial to emphasize the importance of data security, including procedures for submitting data, storing data, de-identifying data, and so forth. Training experts emphasized the importance of addressing data security issues during the job analysis training. This should include a discussion about ethics and issues with data confidentiality and sensitive information. The training should emphasize the consequences of failing to adhere to data security requirements. The theme of data security should be weaved in throughout the training, bringing the issue up early, and then returning to it during each stage of the training when security or confidentiality issues may arise. Highlighting the risks and consequences involved will be important to ensure participants are motivated to attend to this information during the training and adhere to it when they are in the field.⁵⁰

In addition to explaining data security concepts, issues, and procedures, the training should include practice scenarios or case studies that highlight these concerns, so that participants have the opportunity to practice identifying sensitive information and taking appropriate action. For example, participants could be presented with a case study in which information has been compromised, and they must determine how to respond. Other scenarios could involve illustrating the consequences of failing to adhere to data security requirements. While these types of issues do not need to be involved in every scenario, by returning to it at multiple points throughout the training, it will reinforce its importance.⁵¹

In addition to following data security guidelines and maintaining confidentiality, job analysts also need to recognize the importance of expressing these concerns to participants during the job analysis so that they will be comfortable in providing accurate and comprehensive data. For example, job analysts will need to convey to interviewees that their data will be kept confidential and explain the purpose of the job analysis. Thus, the training should emphasize both the importance of maintaining data security, as well as expressing this information to others.⁵¹

3.5.2.4 Training Materials

During training, participants should have the opportunity to use all types of materials that they will need to use on-site during a job analysis. These will need to be finalized after the SSA job methodology has been determined; however, this may include materials such as pressure gauges, digital cameras, video cameras, measuring tape, PDA devices, scales, voice recorders, goniometers, and so forth. Participants should be instructed on the proper way to use each of the required materials, and then they should have the opportunity to practice using them.

Aside from the job analysis tools, other training materials will vary depending upon the training delivery. For example, this may involve the use of different graphics, videos, or presentational materials.⁵² In terms of development for web-based trainings, development materials may involve rapid development tools⁵³ or

⁵⁰ This information was acquired in interviews with training experts in 2011.

⁵¹ This information was acquired in interviews with training experts in 2011.

⁵² Clark, R. C. (2010). *Evidence-Based Training Methods: A Guide for Training Professionals*. Nashville, TN: The American Society for Training and Development (ASTD) Press.

⁵³ Towse, M. (2009). Best Practices: Creating Successful Online Modules. *Learning Solutions e-Magazine*.

off-the shelf web training products.⁵⁴ More detail on training delivery is presented in the following section, *Training Delivery Methods*.

3.6 Training Delivery Methods

The manner in which a training program is delivered to its audience can take on many different forms. The most appropriate form for any given training should be based on the training objectives. The training delivery method should enhance learning of the training objectives,^{55, 56} but it should not drive the training design or structure.⁵⁷

In this section, we present three training delivery methods – 1) Classroom-Based training, 2) E-Learning, and 3) Blended training. Each method is presented in an exhibit that includes a description of the method, information on implementation and resources needed for the method, and a brief evaluation of the method. The ratings of low/short, moderate, or high/long that are provided regarding the resources needed are broad generalizations intended to aid in comparing the delivery methods to one another. More specific estimates for these rating categories are not provided because the cost and time required for training development and administration depends on factors that have not yet been determined, such as the length of the training, the specific modalities used, the training content, and the number of participants. Thus, in this section, we provide a general overview of the three delivery methods, which are presented on the following pages in Exhibits 3-12 through 3-14.

⁵⁴ 1080 Group, LLC. (2008). *Five keys to getting started with interactive online training*. Troutdale, OR: Author.

⁵⁵ ASTM. (2009). *ASTM E2659 – 09e1 Standard Practice for Certificate Programs*.

⁵⁶ ICE. (2009). *ICE 1100 2010(E) – Standard for Assessment-Based Certificate Programs*.

⁵⁷ This information was acquired in interviews with training experts in 2011.

Exhibit 3-12: Training Delivery Method 1: CLASSROOM-BASED TRAINING	
OVERVIEW	
<p>Description: Classroom-based training refers to traditional training led by an instructor. All trainees attend the training in-person, and the material is taught face-to-face to all trainees at once. Classroom training typically involves use of the lecture method in combination with class discussions. After the basic material has been taught, trainers may use more interactive techniques such as case studies and role playing to allow the trainees to practice what they have learned.⁵⁸</p> <p>Variations of the Method:</p> <ul style="list-style-type: none"> ▪ Central administration – Trainings are held in one central location, to which all attendees must travel. This results in more control and standardization of the training; however, significant travel costs are involved when trainees are geographically dispersed. ▪ Regional administration – Trainings are held in multiple locations in different regions of the nation. <p>Applicability to Job Analyst Training: Classroom training allows the opportunity for a more hands-on approach and would allow participants to gain experience practicing the SSA job analysis methodology. The more interactive nature of classroom training allows more opportunity for discussion and feedback.</p>	
IMPLEMENTATION	
<p>Steps to Implement – Presents the key steps that should be followed, in order to successfully implement the strategy</p> <ol style="list-style-type: none"> 1. Develop instructional objectives 2. Design structure and content of training 3. Develop qualifications for instructors 4. Recruit, select, and train instructors 5. Coordinate training logistics 	
RESOURCES NEEDED	
<p>Estimated Time to Develop – Provides an estimate of how long it will take to develop the training strategy</p> <p> <input type="radio"/> Short <input checked="" type="radio"/> Moderate <input type="radio"/> Long </p> <p>Classroom training can be developed in a moderate amount of time compared to other delivery methods. Other than training design, the development activities associated specifically with classroom training involve locating and preparing instructors and determining the training logistics. When training involves a large, national effort, training logistics may be somewhat time consuming.</p>	<p>Estimated Cost to Develop – Provides an estimate of the costs to develop the training strategy</p> <p> <input checked="" type="radio"/> Low <input type="radio"/> Moderate <input type="radio"/> High </p> <p>The development cost of classroom-based training is relatively low compared to other delivery methods, as there are no additional development costs involved other than design of the training structure and content.</p>

⁵⁸ Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations* (4th ed.). Belmont, CA: Wadsworth.

Exhibit 3-12: Training Delivery Method 1: CLASSROOM-BASED TRAINING	
<p><i>Estimated Time to Administer</i> – Provides an estimate of how long the training will take for the participant to complete</p> <p style="margin-left: 40px;"> <input type="radio"/> Short <input type="radio"/> Moderate <input checked="" type="radio"/> Long </p> <p>Due to breaks and discussions, classroom training tends to take longer to administer the same amount of content in comparison to other types of trainings.⁵⁹</p>	<p><i>Estimated Cost to Administer</i> – Provides an estimate of the cost for each participant to participate in the training</p> <p style="margin-left: 40px;"> <input type="radio"/> Low <input checked="" type="radio"/> Moderate <input type="radio"/> High </p> <p>Administration costs for classroom training include fixed costs such as personnel expenses for the trainers and the cost of using the training rooms, as well as variable costs such as the training materials for each participant. Because travel costs for each participant can vary substantially, travel costs are excluded from this administration cost rating, and classroom training is considered to have a moderate overall administration cost in compared to other delivery methods.</p>
<p><i>Resources Needed to Implement & Sustain Strategy</i> – Identifies the internal and external resources that will be needed to successfully implement and sustain the training strategy</p> <ul style="list-style-type: none"> ▪ Subject matter experts to inform training content ▪ Instructors who are effective at teaching and knowledgeable about the SSA job analysis methodology (may involve development of training for instructors) ▪ Classrooms in which to hold the training ▪ Funding for participants to travel to the training 	

⁵⁹ 1080 Group, LLC. (2008). *Five keys to getting started with interactive online training*. Troutdale, OR: Author.

Exhibit 3-12: Training Delivery Method 1: CLASSROOM-BASED TRAINING	
EVALUATION OF THE DELIVERY METHOD	
<p><i>Findings from Research & Practice</i></p> <ul style="list-style-type: none"> ▪ The majority of existing job analysis training programs discussed in chapter 4 are classroom-based trainings, suggesting that this is an appropriate delivery method for this topic. The classroom-based job analysis trainings include Developing a Curriculum (DACUM) Training, Functional Job Analysis (FJA) Training, King County, WA Job Analysis Training, OccuPro Systems and Solutions Job Analysis Training, Position Analysis Questionnaire (PAQ) Work Analysis Seminar, Society for Human Resource Management Job Analysis Module, TruSight Job Description Training (formerly Employer's Association), and WorkAbility Systems Training. Additionally, the WorldatWork Job Analysis, Documentation and Evaluation Course can be taken as classroom training. ▪ Occupational health and safety technicians receive hands-on training and classroom instruction.⁶⁰ ▪ Decades of research supports the effectiveness of traditional lecture-based classroom training.^{61, 62, 63} 	
<p><i>Advantages</i></p> <ul style="list-style-type: none"> ▪ Allows for maximum interaction between instructor and trainees⁶⁴ ▪ Instructors can actively monitor participant reactions and provide clarification and feedback⁶⁴ ▪ Classmates may serve as a network of support for one another⁶⁴ ▪ Allows participants the opportunity for hands-on practice⁶⁴ 	<p><i>Disadvantages</i></p> <ul style="list-style-type: none"> ▪ Classroom training results in substantial administration costs when conducting large-scale training with geographically dispersed trainees⁶⁴ ▪ The effectiveness of classroom training depends largely on the effectiveness of the instructor⁶⁵ ▪ Inconsistencies between training sessions are likely⁶⁴

⁶⁰ Career Overview. (2002). *Occupational Health and Safety Specialist and Technician Career and Job Information*. Accessed from: <http://www.careeroverview.com/occupational-health-and-safety-technician-career.html>.

⁶¹ Arthur Jr., W., Bennett Jr., W., Edens, P.S., Bell, S.T. (2003). Effectiveness of training in organizations: A meta-analysis of design and evaluation features. *Journal of Applied Psychology*, 88(2), 234-245.

⁶² Burke, M. J., & Day, R. R. (1986). A cumulative study of the effectiveness of management training. *Journal of Applied Psychology*, 71, 232-245.

⁶³ Miner, J. B. (1963). Evidence regarding the value of a management course based on behavioral science subject matter. *Journal of Business of the University of Chicago*, 36, 325-335.

⁶⁴ This information was acquired in interviews with training experts in 2011.

⁶⁵ Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations* (4th ed.). Belmont, CA: Wadsworth.

Exhibit 3-13: Training Delivery Method 2: E-LEARNING	
OVERVIEW	
<p>Description: E-learning refers to a broad range of training delivery methods that use technology to deliver training to participants, who do not meet face-to-face.</p> <p>Variations of the Method:</p> <ul style="list-style-type: none"> ▪ <i>Self-paced online training</i>—Participants access the training via the internet and are able to complete the training on their own time, at their own speed. ▪ <i>Instructor-led distance learning</i>—An instructor leads the training in a format similar to traditional classroom training; however, participants send and receive assignments electronically and do not meet in person. ▪ <i>Webcasts</i>—Webcasts can be presented in two forms: live, synchronous webcasts or recorded, asynchronous webcasts.⁶⁶ ▪ <i>Multi-media training (e.g., CD-ROM; audio/video)</i>—While multi-media features are often incorporated into other training formats, pure multi-media training, such as that delivered via CD-ROM, has become rare with the advance of online training.⁶⁷ <p>Applicability to Job Analyst Training: E-learning is advantageous when training geographically dispersed participants due to its convenience and low cost of administration.</p>	
IMPLEMENTATION	
<p>Steps to Implement – Presents the key steps that should be followed, in order to successfully implement the strategy</p> <ol style="list-style-type: none"> 1. Develop instructional objectives 2. Design structure and content of training 3. Determine the most effective e-learning modality for structure and content 4. Program training 5. Conduct testing 	
RESOURCES NEEDED	
<p>Estimated Time to Develop – Provides an estimate of how long it will take to develop the training strategy</p> <ul style="list-style-type: none"> <input type="radio"/> Short <input type="radio"/> Moderate <input checked="" type="radio"/> Long <p>Due to the time required to program and test web-based training, the development phase tends to be relatively long compared to other delivery methods. However, certain methods can be employed to reduce development time, such as the use of electronic storyboards or online review tools.⁶⁸</p>	<p>Estimated Cost to Develop – Provides an estimate of the costs to develop the training strategy</p> <ul style="list-style-type: none"> <input type="radio"/> Low <input checked="" type="radio"/> Moderate <input type="radio"/> High <p>The cost to develop will depend upon the complexity of the technology incorporated into the training. For example, Flash-based training tends to be more expensive than more simplistic online training.⁶⁷ Based upon one expert’s prior experience, one hour of basic online training costs \$20K-\$35K to develop, while more complex training can be up to \$100K per hour.⁶⁷</p>

⁶⁶ 1080 Group, LLC. (2008). *Five keys to getting started with interactive online training*. Troutdale, OR: Author.

⁶⁷ This information was acquired in interviews with training experts in 2011.

⁶⁸ Roytek, M.A. (2010). Enhancing instructional design efficiency: Methodologies employed by instructional designers. *British Journal of Educational Technology*, 41(2), 170-180.

Exhibit 3-13: Training Delivery Method 2: E-LEARNING	
<p>Estimated Time to Administer – Provides an estimate of how long the training will take for the participant to complete</p> <ul style="list-style-type: none"> <input checked="" type="radio"/> Short <input type="radio"/> Moderate <input type="radio"/> Long <p>E-learning methods allow participants to learn on their own time, which leads to an administration time that can vary between participants. However, in general, the content can be administered more efficiently than in-person trainings, as time for discussions and breaks is not incorporated into the training time.⁶⁹</p>	<p>Estimated Cost to Administer – Provides an estimate of the cost for each participant to participate in the training</p> <ul style="list-style-type: none"> <input checked="" type="radio"/> Low <input type="radio"/> Moderate <input type="radio"/> High <p>E-learning helps to reduce training costs by eliminating the need for travel and minimizing downtime and disruption of work activities.⁷⁰</p>
<p>Resources Needed to Implement & Sustain Strategy – Identifies the internal and external resources that will be needed to successfully implement and sustain the training strategy</p> <ul style="list-style-type: none"> ▪ Subject matter experts to inform training content ▪ Programmers to develop the training ▪ Web hosting capability 	
EVALUATION OF THE DELIVERY METHOD	
<p>Findings from Research & Practice</p> <ul style="list-style-type: none"> ▪ Several job analysis trainings described in chapter 4 are offered online including ErgoScience Quantitative Job Demands Analysis (QJDA) Training and Matheson Essential Function Job Analysis Training. Additionally, the WorldatWork Job Analysis, Documentation and Evaluation Course can be taken as e-learning. ▪ Most research that has compared the effectiveness of e-learning methods with traditional classroom training has found higher levels of learning through the e-learning approach⁷¹ 	
<p>Advantages</p> <ul style="list-style-type: none"> ▪ Low administration cost due to eliminated costs for participant travel, classroom, and instructors⁶⁹ ▪ Ensures consistent, standardized delivery⁶⁹ ▪ Convenient for participants, as they do not have to travel⁶⁹ ▪ Training can be delivered more efficiently due to lack of time spent on breaks or discussion⁶⁹ ▪ Participants are able to go through the training at their own pace^{69, 71} 	<p>Disadvantages</p> <ul style="list-style-type: none"> ▪ Participants receive limited feedback⁶⁹ ▪ Participants may not feel that they have a community of support⁶⁹ ▪ Participants cannot be observed to ensure they are learning the material⁶⁹ ▪ Does not afford participants the opportunity for hands-on practice⁶⁹ ▪ Because participants will take the training from different locations, technological problems are a potential concern (e.g., amount of bandwidth available, firewalls)^{71, 69} ▪ Training content is difficult to update⁶⁹

⁶⁹ This information was acquired in interviews with training experts in 2011.

⁷⁰ 1080 Group, LLC. (2008). *Five keys to getting started with interactive online training*. Troutdale, OR: Author.

⁷¹ Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations* (4th ed.). Belmont, CA: Wadsworth.

Exhibit 3-14: Training Delivery Method 3: BLENDED TRAINING	
OVERVIEW	
<p>Description: Blended methods combine traditional classroom training with e-learning in an effort to take advantage of the benefits of both of these delivery methods.</p> <p>Variations of the Method: Blended methods could involve any combination of the classroom and e-learning variations described previously. Training experts generally recommended the following combination:</p> <ol style="list-style-type: none"> 1. <i>Self-paced online training</i>—An online training component would be provided first to introduce the job analysis content 2. <i>Classroom-based training</i>—After successful completion of the online component, participants would then meet for a classroom training where they could obtain more practice and feedback. <p>Applicability to Job Analyst Training: A blended approach would allow SSA to achieve the cost saving benefits of online training during the first portion, where participants would be taught the job analysis content and processes. Then, participants who pass the online training are then able to take the classroom training, during which they can practice using the job analysis methodology and obtain specific feedback from a knowledgeable instructor.</p>	
IMPLEMENTATION	
<p>Steps to Implement – Presents the key steps that should be followed, in order to successfully implement the strategy</p> <ol style="list-style-type: none"> 1. Develop instructional objectives 2. Determine appropriate delivery method for each objective 3. Design structure and content of training 4. Program web training 5. Conduct testing for web training 6. Develop qualifications for classroom instructors 7. Recruit, select, and train classroom instructors 6. Coordinate training logistics for classroom training 	
RESOURCES NEEDED	
<p>Estimated Time to Develop – Provides an estimate of how long it will take to develop the training strategy</p> <p style="margin-left: 40px;"> <input type="radio"/> Short <input type="radio"/> Moderate <input checked="" type="radio"/> Long </p> <p>Due to the need to develop both a web-based and a classroom component of the training, development of blended methods is relatively long compared to other delivery methods.</p>	<p>Estimated Cost to Develop – Provides an estimate of the costs to develop the training strategy</p> <p style="margin-left: 40px;"> <input type="radio"/> Low <input type="radio"/> Moderate <input checked="" type="radio"/> High </p> <p>Due to the need to develop both a web-based and a classroom component of the training, development costs for blended methods are relatively high compared to other delivery methods.</p>

Exhibit 3-14: Training Delivery Method 3: BLENDED TRAINING	
<p>Estimated Time to Administer – Provides an estimate of how long the training will take for the participant to complete</p> <ul style="list-style-type: none"> <input type="radio"/> Short <input checked="" type="radio"/> Moderate <input type="radio"/> Long <p>Blended methods combine the short administration time of online trainings with the longer administration time of classroom training, for a moderate overall administration period.</p>	<p>Estimated Cost to Administer – Provides an estimate of the cost for each participant to participate in the training</p> <ul style="list-style-type: none"> <input type="radio"/> Low <input checked="" type="radio"/> Moderate <input type="radio"/> High <p>Blended methods combine the low administration costs of online trainings with the higher administration costs of classroom training, for a moderate overall administration cost.</p>
<p>Resources Needed to Implement and Sustain Strategy – Identifies the internal and external resources that will be needed to successfully implement and sustain the training strategy</p> <ul style="list-style-type: none"> ▪ Subject matter experts to inform training content ▪ Instructors who are effective at teaching and knowledgeable about the SSA job analysis methodology (may involve development of training for instructors) ▪ Classrooms in which to hold the classroom training ▪ Funding for participants to travel to the classroom training ▪ Programmers to develop the web-based training ▪ Web hosting capability 	
EVALUATION OF THE DELIVERY METHOD	
<p>Findings from Research & Practice</p> <ul style="list-style-type: none"> ▪ Research indicated that blended training can be designed to facilitate transfer to the work setting⁷² ▪ Research has supported the effectiveness of blended training at integrating declarative and procedural knowledge⁷³ ▪ Participants appreciate the use of a blended learning technique⁷³ ▪ Blended training is being used increasingly in practice to take advantage of the benefits of classroom training, while obtaining some of the cost savings of e-learning⁷⁴ 	
<p>Advantages</p> <ul style="list-style-type: none"> ▪ Combines the best of classroom and web-based training, as participants can learn the content online and practice their skills in person⁷⁵ ▪ Administration costs are reduced in comparison to pure classroom-based training⁷⁵ 	<p>Disadvantages</p> <ul style="list-style-type: none"> ▪ Significant development effort is required, as both the web-based and classroom components will need to be designed and developed⁷⁵

⁷² Lee, J. (2010). Design of blended training for transfer into the workplace. *British Journal of Educational Technology*, 41, 181–198.

⁷³ Kupetz, R., & Ziegenmeyer, B. (2005). Blended Learning in a Teacher Training Course: Integrated Interactive E-Learning and Contact Learning. *ReCALL*, 17(2), 179–196.

⁷⁴ Holton, E. F. III, Coco, M. L., Lowe, J. L., & Dustch, J. V. (2006). Blended delivery strategies for competency-based training. *Advances in Developing Human Resources*, 8(10), 210-228.

⁷⁵ This information was acquired in interviews with training experts in 2011.

Chapter 4: Results of Job Analysis Certificate Program Research

4.1 Focus of Research

It will be crucial that SSA job analysts collect job information in a consistent and structured manner to ensure validity of the data that will populate the OIS, legal defensibility in the use of the OIS, and the integrity of disability determinations made as a result of the job-specific data. To address this need, SSA desires to have a certification process that attests to the competency of job analyst candidates to use the work analysis instrument designed by SSA and the procedures involved in the job analysis method selected. This chapter reviews the types of credentialing programs that exist and the features of assessment-based certificate programs which should be considered by SSA.

4.2 Overview of Certification and Certificate Programs

There is often confusion among professionals regarding the application of certification versus certificate programs. This chapter helps differentiate these programs. Given SSA's need for precision in data collection and the consequences of decisions made from that data, credentialing should be tied directly to the specific training provided to SSA job analyst candidates. Thus, while professional certification is covered in this chapter, certificate programs are discussed in greater depth based on SSA's needs. Additionally, the components of an assessment-based certificate program are described. A comprehensive assessment-based certificate program, as described in this chapter, includes both formative and summative evaluative components where the candidate is required to demonstrate application of training concepts throughout the training program.

4.3 Types of Certificates and Credentials

There are different types of certificates or credentials and each type has different inferences that can be made about the individual holding the certificate. The most appropriate type of certificate or credential for a given situation depends on the purpose or desire for the certification. The types of certificates or credentials include:

- Certificates of attendance
- Certificates of participation
- Assessment-based certificate programs
- Personnel or professional certification.

Each type is briefly described in the following sections, along with how each type relates to SSA's needs.

4.3.1 Certificate of Attendance/Certificate of Participation

A certificate of attendance is given to an individual who attends a training session as proof that they were in attendance.⁷⁶ A certificate of participation is similar to a certificate of attendance but is typically used

⁷⁶ ASTM International (2009). *Standard Practice for Certificate Programs*. (Designation: E 2659 – 09). West Conshohocken, Pennsylvania: Author. Institute for Credentialing Excellence (2010). *ICE 1100: 2010(E) – Standard for Assessment-Based Certificate Programs*. Washington, DC: Author.

to signify that that individual actively participated in a learning program or event.⁷⁷ Individuals receiving a certificate of attendance or participation do not have to necessarily demonstrate competency or knowledge following their training. Each individual in attendance receives a certificate regardless of their learning or their ability to use instruments or tools presented during the training. This type of certificate would not be adequate for SSA's needs because there is no way to guarantee that candidates have learned the requisite knowledges or skills to effectively use SSA's job analysis instrument or follow SSA's job analysis procedure correctly.

4.3.2 Assessment-Based Certificate Programs

An assessment-based certificate program is defined as a program that provides training, instruction or a learning event or series of events to teach individuals specific knowledges, skills, and/or learning outcomes. Additionally, a certificate program must have some type of evaluation or assessment, such as an examination, to assess participants' attainment of the learning outcomes. In a certificate program, only participants who complete the training and successfully pass the evaluation at a specified performance standard or proficiency level receive a certificate.⁷⁸

With a certificate program, the primary focus is on the education of participants, with usage of the evaluation to confirm that participants have met the training's learning goals. A certificate program requires a training tailored to the specific knowledges or skills that are associated with the purpose and scope of the certificate program. The evaluation or assessment associated with the certificate program must be specific to the training and its learning objectives, and must enable participants to demonstrate their learned knowledge related to the training.

An assessment-based certificate program would fully meet the needs of SSA and is in line with the model that SSA has proposed thus far. To ensure that job analyses are conducted consistently and effectively across analysts, candidates must be trained in the same manner and evaluated, which occurs as a part of a certificate program. A certificate program for SSA would involve a training that is tailored to the job analysis method and instrument that the SSA job analysts would be implementing. This training would ensure that all job analysts received information specific to the job analysis procedure being used. This tailored, focused training, with standardized content and consistent delivery, will also ensure that each job analyst can appropriately and accurately collect the necessary information in the manner chosen by SSA. Additionally, a certificate program would require all candidates to demonstrate that they are competent in SSA's job analysis procedures and can appropriately and effectively use SSA's job analysis instrument and tools before receiving a certificate.

4.3.3 Professional or Personnel Certification

Professional or personnel certification is defined as a process by which a non-governmental body assesses the proficiency or competency of individuals and confers recognition and the use of a credential to those individuals who meet the specified criteria. Thus, professional certification includes only an evaluation of knowledge, without providing training or instruction to individuals completing the evaluation, and therefore, is not specific to a particular procedure. The knowledge and skills that are assessed for the

⁷⁷ ASTM International (2009). *Standard Practice for Certificate Programs*. (Designation: E 2659 – 09). West Conshohocken, Pennsylvania: Author. Institute for Credentialing Excellence (2010). *ICE 1100: 2010(E) – Standard for Assessment-Based Certificate Programs*. Washington, DC: Author.

⁷⁸ ASTM International (2009). *Standard Practice for Certificate Programs*. (Designation: E 2659 – 09). West Conshohocken, Pennsylvania: Author. Institute for Credentialing Excellence (2010). *ICE 1100: 2010(E) – Standard for Assessment-Based Certificate Programs*. Washington, DC: Author.

certification are not specific to any particular method or process but are typically more broad and general knowledges and skills needed for a given profession. For example, if a certification for job analysts was used, the analysts would not be required to attend training about a particular job analysis procedure, but rather would need to demonstrate general knowledge and understanding of job analysis as a whole.

Due to SSA's need for consistent and appropriately collected data using SSA's job analysis instrument and procedures, a professional certification would not fully meet the needs of SSA nor would it be consistent with the model that SSA has proposed thus far. Because a professional certification for job analysts would not be tied to a specific job analysis procedure, there would be no way to ensure that each job analyst was trained in and could specifically perform SSA's job analysis procedure appropriately and consistently. SSA needs a training program and credentialing process that can guarantee each job analysis is prepared to perform job analyses using the method specific to SSA, and therefore should not use professional or personnel certification.

Exhibit 4-1 indicates what inferences could be drawn with each of the credential types for SSA's job analyst candidates. Based on this, we determined that an assessment-based certificate program would be most suitable for SSA.

Exhibit 4-1: Types of Credentials/Certificates by SSA Needs			
Credential Type	Attests Candidates Received Specific SSA Training	Attests Candidates Met Learning Outcomes of SSA Training	Attests Candidates Met Pre-determined Level of Competency
Certificate of Attendance/ Participation	X		
Assessment-Based Certificate Programs	X	X	X
Professional Certification			X

4.4 Standards and Accreditation

Given how critical it is going to be for the information in SSA's OIS to be accurately and consistently collected, SSA's training and credentialing process for job analyst candidates will need to be of high quality. In addition, it will be very beneficial for SSA in the legal defensibility of its OIS, if the quality of their job analyst training and credentialing process could be verified and approved by an objective third party. Both of these two needs suggest that SSA should strive to meet industry standards and seek accreditation of its job analyst training and credentialing process.

Industry standards are developed to ensure the quality of products or services. There are industry standards for the whole range of products and services that are developed or provided throughout the world. As stated on the International Organization for Standards (ISO)'s website (the network of the national standards institute of 160 and the world's largest developer of international standards), "When products, systems, machinery and devices work well and safely, it is often because they meet standards. However, when standards are absent, we soon notice."⁷⁹

⁷⁹ International Organization for Standards (2011). Retrieved on February 28, 2011 from http://www.iso.org/iso/about/discover-iso_why-standards-matter.htm.

Standards also provide a foundation for recognition or accreditation and imply that what is recognized is of quality. Accreditation by an external and recognized organization confirms and documents that a product or service meets a particular standard. Accreditation promotes confidence in those who receive a certificate or certification from a certificate issuer that they have received a quality training and it promotes confidence in stakeholders who hire or rely on the work of those individuals.

There are two standards recognized by credentialing agencies that have been developed for assessment-based certificate programs. Both of these standards have been approved by the American National Standards Institute (ANSI), who serves as administrator and coordinator of the nation's non-profit voluntary standardization system, which has existed for more than 90 years⁸⁰. ANSI assists the development of national standards by accrediting the practices and procedures of standard-setting organizations.

One organization that has developed a standard for assessment-based certificate programs is ASTM International, formerly known as the American Society for Testing and Materials. ASTM international is a non-profit organization that develops and delivers standards in order to improve product quality, safety, customer satisfaction, and global commerce. A mission of ASTM is to develop high-quality standards and to increase knowledge surrounding standards and their usage.⁸¹

Another organization that offers a standard for assessment-based certificate programs is the Institute for Credentialing Excellence (ICE). Like ASTM, ICE is a non-profit organization that sets standards for credentialing programs. The mission of ICE is to promote excellence in credentialing, which it strives to do by providing education, research, advocacy resources, and accreditation to credentialing organizations.⁸²

We provide more detail regarding these two standards in the following sections. Should SSA seek accreditation for a job analyst certificate program, either of these two standards can be followed; however, different accrediting bodies adhere to different standards. For example, if SSA seeks accreditation from ANSI, SSA will need to adhere to the standard published by ASTM International. If SSA decides to adhere to ICE's standard, SSA can seek accreditation directly from ICE. SSA may also choose to seek accreditation from both accrediting bodies (ANSI and ICE). While the accreditation program for certificate programs with both of these accrediting bodies are still in pilot stages, we believe the programs will be fully running by the time SSA's job analyst certificate program would be eligible to apply.

4.4.1 ASTM E2659

One of the main reasons for the development of ASTM's standard for assessment-based certificate programs, the ASTM E2659, was that organizations were incorrectly using the term "certificate program" by saying that they were offering a certificate program but in actuality were offering certificates of attendance. Conversely some organizations were calling their programs certification programs when in actuality they were certificate programs. In either case, these organizations were not meeting the requirements of an assessment-based certificate program. Some organizations called any program, in which participants were issued a certificate at the conclusion, a certificate program and some even called

⁸⁰ ANSI (2011). Introduction to ANSI. Retrieved on February 28, 2011 from http://www.ansi.org/about_ansi/introduction/introduction.aspx?menuid=1.

⁸¹ ASTM (2011). About ASTM International. Retrieved from <http://www.astm.org/ABOUT/aboutASTM.html>.

⁸² ICE (2011). About Us. Retrieved from <http://www.credentialingexcellence.org/GeneralInformation/AboutUs/tabid/54/Default.aspx>.

it a certification program; however, these programs were offering neither. At the time that ASTM E2659 was developed, there were no guidelines specific to assuring quality of certificate programs and as such, ASTM strove to create guidelines for these types of programs. An additional purpose of developing the ASTM E2659 was to clarify the differences between certificate and certification programs because of the lack of understanding of this difference by organizations developing these programs.

ASTM E2659 provides guidance for the development and administration of high-quality certificate programs. It provides information on the organizational structure necessary for certificate issuers, requirements for the certificate program including development, implementation, and evaluation, and requirements for issuing certificates. ASTM's standard lays out the differences between certificate programs and certificates issued through other means as well as between certificate and certification programs in order to help distinguish between these different programs. In June 2009, E2659 was selected by ANSI as the standard to be used in evaluating certificate programs for potential accreditation.

4.4.2 ICE 1100: 2010(E)

ICE provides education regarding certificates and certification as well as their standards and accreditation processes to organizations who issue certificates and to individuals who undergo these programs. ICE is accredited by ANSI as an organization that develops certification standards.

Because of its focus on credentialing and providing information and support in credentialing to organizations, ICE worked to develop the ICE 1100, which is its standard for assessment-based certificate programs. Much like with ASTM E2659, a purpose of ICE's standard is to delineate the differences between certificate programs and certification programs as well as to set a standard for certificate programs (ICE and ASTM were actually working on their standards simultaneously). While there are some similarities between certificate programs and certification programs, ICE determined that the instruction and training available as a part of certificate programs can be very beneficial in meeting the mission of ICE. As a part of the standard development process, ICE wanted to identify the key elements necessary for quality assessment-based certificate programs. To accomplish this goal as well as to focus on the importance of training to certificate programs, ICE consulted with experts in training and education in order to ensure that the ICE 1100 requirements were in line with best practices for educating individuals.

The ICE 1100 standard includes instruction for developing high-quality assessment-based certificate programs. It includes information about a variety of topics relevant to certificate programs, such as the organizational structure of certificate program issuing organizations, conducting certificate program activities, managing records and documents, assuring quality, developing and delivering training, developing and evaluating assessments, and issuing certificates. ICE 1100 also provides a clear definition of certification programs, explanation of what a certificate signifies, as well as an explanation of how these programs differ from certification programs. The ICE 1100 was approved by ANSI in March of 2009.

4.5 Key Features of Assessment-Based Certificate Programs

To assist SSA in understanding how its job analyst certificate program will need to be structured and administered to meet either or both of the published standards for assessment-based certificate programs, we have reviewed and evaluated the requirements in each standard. Each standard addresses similar topics or features of certificate programs. In the following sections, we review the requirements associated with nine different features:

- Structure and financial capacity of issuing organization

- Management of certificate programs
- Policies, procedures and communications
- Quality control checks
- Record and document maintenance and control
- Provision of education/training
- Assessment of outcomes
- Program development and evaluation
- Certificate issuance and use.

For each feature, we compare the requirements in each standard and identify where there is overlap and where there are differences. There are far more similarities than differences between the two standards. Then, we describe what the requirements for that feature would mean for SSA.

4.5.1 Structure and Financial Capacity of Issuing Organization

This feature addresses requirements for how the organization that is administering the certificate program must be structured to give assurance to stakeholders that it is capable and reliable to issue certificates. Stakeholders are any individuals who have an interest in or may be affected by the certificate program. We have also included the requirements regarding financial resources in this feature. Exhibit 4-2 presents the ASTM E2659 and ICE 1100 requirements for this feature. The numbers in the following exhibits represent the location of each requirement within its respective standard.

Exhibit 4-2: Requirements Associated with Structure and Financial Capacity of Issuing Organization	
ASTM E2659	ICE 1100: 2010(E)
5.1.1 The certificate issuer shall be, or reside within, a legal business entity or governmental agency.	2.1 The certificate provider shall be a recognized legal entity.
5.1.2 The certificate issuer shall be an appropriate and qualified issuer of the certificate.	
5.1.2.1 The certificate program’s purpose, scope, and intended outcomes are consistent with the stated mission and work of the certificate issuer.	
5.2.3 The certificate issuer shall demonstrate responsible financial management and have sufficient financial resources to conduct certificate program activities properly.	2.2 The certificate provider shall have the financial resources necessary to carry out its operations capably and support an effective certificate program.
5.2.3.1 Formal financial reports shall provide evidence of financial stability. Where certificate programs are one element of a certificate issuer’s activities, the certificate program finances shall be a clear and identifiable component of overall reports.	
5.2.3.2 Written procedures shall exist for proper financial controls.	

Both the ASTM E2659 and ICE 1100 state that as the certificate issuer, SSA will be required to be or reside in a legal business entity or governmental agency. As a governmental entity, SSA will readily be able to meet those requirements. ASTM E2659 will further require that SSA be an appropriate and

qualified issuer and further defines that to mean that the purpose, scope, and intended outcomes of SSA’s job analysis certificate program is in line with SSA’s stated mission and work. SSA will need to be clear when it defines the purpose, scope and outcomes of its certificate program how the certificate program relates to the overall mission and work of SSA.

In addition to these organizational structure requirements, ASTM E2659 and ICE 1100 will require SSA to demonstrate that it has the necessary financial resources to administer the certificate program. An important planning step for SSA to ensure it will be able to meet these requirements will be to plan for and identify the costs that will be associated with developing and implementing the certificate program. Beyond the costs to develop the training and assessments, costs will include the costs for providing the training, conducting the assessments, conducting routine quality control checks on the certificate program, documenting and maintaining records, and issuing certificates.

4.5.2 Management of Certificate Program

This feature addresses requirements for how the certificate program is managed and operated by the certificate issuer. Exhibit 4-3 presents the requirements in the ASTM E2659 and ICE 1100 standards for the Management of Certificate Program feature.

Exhibit 4-3: Requirements Associated with Management of Certificate Program	
ASTM E2659	ICE 1100: 2010(E)
5.1.3 The certificate issuer shall have a clearly designated authority charged to administer the certificate program and ensure compliance with the provisions of this practice.	
5.2.2 The certificate issuer shall have sufficient and qualified personnel to conduct certificate program activities properly.	3.2 The certificate provider shall employ or contract a sufficient number of people with the necessary education, training, technical knowledge, and experience to perform functions relating to the type, range, and volume of work performed, under a responsible management.
5.2.2.1 The certificate issuer shall define the qualifications for personnel involved in certificate program activities.	3.3 The certificate provider shall use subject matter experts and qualified individuals in the development, delivery, and maintenance of the certificate program. The required qualifications, credentials, skills, and/or competencies for these individuals shall be defined and documented by the certificate provider.
5.2.2.2 Personnel shall be qualified for their assigned roles on the basis of appropriate education, training, and/or experience.	6.2 The certificate provider shall document and ensure that facilitators/instructors possess the qualifications and skills to deliver the education/training as designed.
5.2.2.3 The certificate issuer shall evaluate on an ongoing basis the qualifications of personnel to perform assigned roles. Training and development plans shall be implemented where deficiencies are found.	
5.2.5 The certificate issuer shall hold ultimate responsibility for the certificate program and its activities.	3.4 The certificate provider shall retain sole responsibility for defining the: a) purpose and scope of the certificate program; and b) criteria (e.g., prerequisites, performance, proficiency, or passing standard) for successful completion of the certificate program.

Exhibit 4-3: Requirements Associated with Management of Certificate Program (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
<p>5.2.5.1 If a certificate issuer collaborates or contracts with other individuals or entities in the development or administration of the certificate program, the responsibility for assurance of quality and conformance with these standards rests with the certificate issuer.</p> <p>(1) The certificate issuer shall have current contracts or agreements with collaborators and contractors that clearly specify the responsibilities assigned and include provisions to ensure confidentiality and prevent conflicts of interest. (2) The certificate issuer shall ensure each collaborator or contractor is qualified to carry out the responsibilities assigned and shall monitor on an ongoing basis the performance of collaborators or contractors in carrying out assigned responsibilities in accordance with documented policies and procedures and in compliance with the provisions of this practice.</p>	<p>3.1 The certificate provider is responsible for monitoring, assessing, and assuring the quality of all activities performed on its behalf in accordance with documented procedure. This responsibility includes activities performed by employees, committees, contractors, and/or other individuals.</p>
<p>5.2.5.2 The decision to issue the certificate shall not be outsourced.</p>	
<p>5.2.5.3 In the case in which external financial support is received in whole or in part for the certificate program, the responsibility for assurance of quality and conformance with this practice rests with the certificate issuer and there shall be documentation that no undue influence has been created because of this financial support. (1) The certificate issuer shall have documented policies and procedures regarding disclosure of commercial support.</p>	

To meet the ASTM E2659 Standard, there must be a designated authority to oversee, manage and be responsible for the certificate program; therefore, SSA’s job analysis certificate program will need to have an identified individual or individuals to serve as the program’s director and manager. In addition to a program director(s), both ASTM E2659 and ICE 1100 require sufficient numbers of qualified personnel to perform the certificate program activities. This requirement means that SSA will need to (1) identify the types of personnel needed, (2) define the qualifications of those personnel, and (3) determine how many of each type of personnel are needed. An initial list of the types of personnel needed is likely to include:

- Training developers
- Assessment developers
- Trainers
- Administrative personnel
- Internal auditors/quality control monitors

The plan for the certificate program will help to identify the types and number of personnel needed and once the final certificate program is developed, this information can be finalized. As noted in the

requirements for ICE 1100, the confirmation and documentation of the qualifications and competence of the training instructors/facilitators that will implement any instructor-led components of the certificate program will be just as important as certifying the competence of the job analysts. To meet ASTM E2659, SSA will also have to monitor the competence of the certificate program personnel and if any personnel are found to be performing less than adequately, SSA will need to provide training and development to those personnel.

As stated in both standards, SSA will hold ultimate responsibility for the certificate program as the certificate issuer, which means SSA will be responsible for assuring the quality of the program. While SSA may contract or collaborate with others in the development and administration of the certificate program, SSA must retain sole responsibility for the following:

- Defining the purpose and scope of the certificate program
- Defining the criteria for successful completion of the certificate program
- Making the decision to issue a certificate.

In addition, should SSA contract or collaborate with others, SSA must have contracts or agreements that (1) clearly define the tasks to be performed by the others, (2) provide procedures for confidentiality, and (3) ensure no conflicts of interest. SSA will also be required to ensure the qualifications of those contracted personnel and monitor their performance.

4.5.3 Policies, Procedures, and Communications

This feature addresses requirements for information that must be documented, communicated, and published for stakeholders about the certificate program. The required information is designed to ensure stakeholders understand the program and can assess its veracity. Exhibit 4-4 presents the requirements in the ASTM E2659 and ICE 1100 standards for the Policies, Procedures and Communications feature.

Exhibit 4-4: Requirements Associated with Policies, Procedures and Communications	
ASTM E2659	ICE 1100: 2010(E)
5.2.1 Policies and procedures of the certificate program shall be fair and equitable and comply with all applicable regulatory and statutory requirements and legal obligations.	2.8 The policies and procedures of the certificate provider and their implementation shall be fair and equitable to participants and shall comply with all applicable regulations and statutory requirements. The certificate provider shall not impede or inhibit access by participants, except as provided for in this Standard.

Exhibit 4-4: Requirements Associated with Policies, Procedures and Communications (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
<p>5.2.1.1 There shall be written policies and procedures outlined to address, at a minimum, the following:</p> <ul style="list-style-type: none"> (1) Certificate program plan; (2) Records and document control; (3) Internal audit; (4) Certificate issuance and use; (5) Invalidating a certificate; (6) Complaints and appeals; (7) Privacy, confidentiality, and security; (8) Program commercial support and disclosure; (9) Fees, cancellation, and refunds; (10) Compliance with the Americans with Disabilities Act; and (11) Nondiscrimination. 	<p>2.3 The certificate provider shall define policies and procedures for the operation of the assessment-based certificate program and for the development and delivery of the education/training and assessment(s) that constitute(s) the certificate program. These policies and procedures shall specify the:</p> <ul style="list-style-type: none"> a) qualifications required of all individuals involved in the development and delivery of the education/training and assessment(s); b) procedures used to develop and update the education/training; c) methods for delivering the education/training; d) procedures used to develop and update the assessment(s); e) methods for conducting the assessment(s); f) types of assessment used and procedures for evaluating or scoring participants' performance on the assessment(s); and g) type of feedback provided to participants.
<p>5.2.1.2 Personnel shall be assigned to implement systematically and effectively the policies and procedures within a framework that is clearly defined and understood.</p>	
<p>5.2.4 The certificate issuer shall demonstrate responsible and timely communications to primary stakeholders of the certificate program.</p>	
<p>5.2.4.1 The certificate issuer shall publish (or make available to primary stakeholders) the following information in advance of the program:</p> <ul style="list-style-type: none"> (1) Certificate program purpose, scope, and intended learning outcomes; (2) Description of the requisites to earn the certificate; (3) Special requirements for participation, if applicable (such as technology equipment or skills); (4) Qualifications of instructional personnel; (5) Fees, deadlines, cancellation, and refund policies; (6) Academic or continuing education credit earned, specified in the terms outlined by the credit-approving entity; (7) Commercial support disclosure, if applicable; (8) Any changes to the certificate program purpose, scope, intended learning outcomes, requisites, and the effective date of the changes; and (9) Statement about what inferences can appropriately be made regarding certificate holders. 	<p>2.4 The certificate provider shall publish:</p> <ul style="list-style-type: none"> a) the purpose and scope of the certificate program; b) the target audience for the certificate program; c) prerequisites (if any); d) a description of the education/training provided and the intended learning outcomes; e) a brief description of the assessments, including an overview of how they are developed and validated, how participant performance on the assessment(s) is (are) evaluated/scored, the valid uses of the assessment results, and the percentage of participants who meet the performance, proficiency, or passing standard for the assessment; f) the qualifications of the facilitators/instructors and assessment developers; g) the requirements (if any) for renewing the certificate; and h) any changes in program requirements and the effective date of the changes.

Exhibit 4-4: Requirements Associated with Policies, Procedures and Communications (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
<p>5.2.4.2 The certificate issuer shall represent the certificate program and its purpose, scope, and intended learning outcomes in an accurate and responsible way. (1) The certificate issuer shall not state or in any way imply that certificate holders are certified, licensed, accredited, or registered to engage in a specific occupation or profession.</p>	
<p>5.5.1 The policies and procedures for complaints and appeals shall be published and readily accessible by stakeholders.</p>	<p>2.6 The certificate provider shall define policies and procedures for the resolution of complaints and/or appeals received from participants and other parties.</p>
<p>5.5.2 The policies and procedures shall ensure that complaints and appeals are resolved in an unbiased and timely manner.</p>	
	<p>2.7 The certificate provider shall publish policies and procedures to be followed in the event that a participant misrepresents his/her identity or eligibility status, gives or receives unauthorized assistance on the assessment, or engages in other violations of established policies.</p>

To meet the requirements of both ASTM E2659 and ICE 1100, SSA will need to develop a number of well-defined policies and procedures regarding the operation and administration of the certificate program and ensure that personnel are capable of effectively following them. The policies and procedures that SSA will need to develop must comply with regulatory, statutory and legal requirements. For instance, the assessment for SSA’s job analysis certificate program should comply with the Uniform Guidelines on Employee Selection Procedures⁸³, the Principles for the Validation of Personnel Selection Procedures⁸⁴, and the Standards for Educational and Psychological Testing.⁸⁵ Likewise, SSA’s certificate program will need to comply with the Americans with Disabilities Act and due process requirements (e.g., procedures for waging an appeal). The policies and procedures for how the certificate program is operated and administered must also ensure that all participants are treated fairly and equitably. This requirement means that all job analyst candidates will need to receive the same opportunities for participation, instruction, and assessment, and all candidates will need to be held to the same standards and criteria for participation and receipt of a certificate.

In addition to developing policies and procedures, to meet the standards, SSA will need to publish and communicate information about its job analysis certificate program to stakeholders. These requirements enable stakeholders to easily obtain information on the program so they can understand what the program provides and means for them. The types of information that SSA must publish include:

- The purpose, scope and intended learning outcomes of the program
- A description of the education/training

⁸³ Equal Employment Opportunity Commission, Civil Service Commission, Department of Labor, & Department of Justice. (1978). *Uniform guidelines on employee selection procedures*. Federal Register, 43(166), 38290-38315.

⁸⁴ Society for Industrial and Organizational Psychology, Inc. (2003). *Principles for the validation and use of personnel selection procedures*. (4th Ed.). Bowling Green, OH: Author.

⁸⁵ American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.

- The intended audience
- Any prerequisites or special requirements needed for participating
- Information about the assessment
- Qualifications of instructors/trainers
- Fees, deadlines, cancellation, and refund policies
- Any changes in the program and the effective date of the changes
- Inferences that can be made regarding certificate holders.

One way SSA could easily meet these requirements would be to develop a web page on their agency website for the certificate program and post the information on that web page for stakeholders to access and download. If SSA were to develop a web page or any publications or materials on its job analyst certificate program, SSA must ensure that it represents the program appropriately and does not imply that candidates will become certified, licensed, or accredited. SSA must accurately represent that candidates will receive a certificate in SSA’s job analysis method.

Should any stakeholder have a complaint or an appeal regarding the certificate program, both the ASTM E2659 and ICE 1100 require there to be policies and procedures in place for how those complaints or appeals will be received and resolved. ASTM E2659 states that the resolution of any complaints or appeals must be provided in a reasonable period of time and must be unbiased. To meet these requirements, SSA will need to provide job analyst candidates and other stakeholders with a clear complaint and appeals process and ensure that personnel are assigned to respond to those issues in a timely manner. Along those same lines, ICE 1100 will require SSA to have a policy and procedure in place to address any participant that may misrepresent him- or herself or violate any certificate program policies, including getting assistance on the assessment.

4.5.4 Quality Control Checks

This feature addresses requirements for ensuring and evaluating the quality of the certificate program. Exhibit 4-5 presents the requirements in the ASTM E2659 and ICE 1100 standards for the Quality Control Checks feature.

Exhibit 4-5: Requirements Associated with Quality Control Checks	
ASTM E2659	ICE 1100: 2010(E)
	<p>5.1 The certificate provider shall have a documented quality assurance procedure in place for all administrative, educational/training, and assessment processes. The quality assurance procedure shall specify the:</p> <ul style="list-style-type: none"> a) quality criteria for operational procedures and the products and services offered by the certificate provider; b) procedures used to ensure that the quality criteria are met; c) procedures for identifying products, services, and/or processes that do not conform to quality criteria; d) procedures for correcting identified deficiencies; e) procedures for evaluating the effectiveness of corrective actions; and f) title of the person responsible for managing the quality assurance procedure.

Exhibit 4-5: Requirements Associated with Quality Control Checks (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
<p>5.3.1 The internal audits shall be planned and performed on a regular basis, at least annually.</p>	<p>5.2 All components of the certificate program shall be reviewed periodically (at least annually) by subject matter experts and other qualified individuals to ensure that the:</p> <ul style="list-style-type: none"> a) content of the education/training and assessment(s) is current and accurate; b) design and delivery of the education/training are consistent with generally accepted instructional design principles and appropriate for the intended learning outcomes; and c) development of the assessment(s) and the evaluation/scoring of participant performance on the assessment(s) are consistent with generally accepted measurement principles and appropriate for assessing accomplishment of the intended learning outcomes.
<p>5.3.2 The results of the audits, including deficiencies identified along with corrective and preventive actions, shall be communicated to certificate program management.</p>	
<p>5.3.3 Corrective and preventive actions shall be approved by certificate program management and implemented by appropriate personnel.</p>	
	<p>5.3 The certificate provider shall conduct periodic program evaluations to assess program quality and effectiveness and implement future improvements. At a minimum, program evaluations shall include the evaluation of the:</p> <ul style="list-style-type: none"> a) participants’ performance and their accomplishment of the intended learning outcomes by the certificate provider; b) facilitators/instructors by participants and the certificate provider; c) certificate program [content, design, delivery method, assessment(s)] by facilitators/instructors and certificate providers; and d) certificate program [content, design, delivery method, assessment(s)] by participants. <p>Evaluation of the certificate program by other stakeholders also may be included.</p>

To meet the requirements of ASTM E2659 and ICE 1100, SSA will need to develop and document a quality control procedure. This procedure must outline the criteria that will be used by SSA to evaluate the quality of administrative or operational functions as well as the education/training and assessments. Examples of criteria for administrative or operational functions could include:

- Candidates are registered for the certificate program within a certain timeframe [to be determined by SSA] from the time they submit their application.
- Candidates receive feedback on their assessment.
- Candidates receive their certificate within a certain number of working days [to be determined by SSA] from the time they complete their assessment.

- Complaints or appeals are resolved within a certain number of working days [to be determined by SSA].

Examples of criteria for evaluating the education/training and assessments could include:

- A certain percent [to be determined by SSA] of participant evaluations are positive.
- Training instructors cover all training topics and material.
- A certain percent [to be determined by SSA] of candidates pass the assessments.
- A certain percent [to be determined by SSA] of the evaluations of users or consumers of the job analysts services are positive.

SSA must then document how it will evaluate its administrative or operational functions, education/training, and assessment against the defined criteria. If SSA uses and maintains a candidate tracking database that records such things as when candidate applications are submitted, when candidates are registered, when certificates are mailed to candidates who pass the assessment, when complaints or appeals are received and when complaints or appeals are processed, SSA will have easily-obtained, quantifiable data for evaluating the quality of its administrative/operational functions.

Ideas for ways that SSA could evaluate or audit the education/training and assessments of its job analysis certificate program could include asking participants to complete a training evaluation form at the end of the education/training, having quality control staff periodically sit-in on any instructor-led components of the education/training, and evaluating the pass rate of candidates on the assessments. In addition, ICE 1100 will require SSA to have all components of its certificate program reviewed by subject matter experts and to gather feedback on the certificate program from participants, training instructors/facilitators, as well as its own feedback of the program. Whatever ways SSA determines to evaluate or audit its certificate program, both ASTM E2659 and ICE 1100 require that it be done at least annually.

4.5.5 Record and Document Maintenance and Control

This feature addresses requirements for handling records and documents. Exhibit 4-6 presents the requirements in the ASTM E2659 and ICE 1100 standards for the Record and Document Maintenance and Control feature.

Exhibit 4-6: Requirements Associated with Record and Document Maintenance and Control	
ASTM E2659	ICE 1100: 2010(E)
5.4.1 The certificate issuer shall identify an individual or individuals responsible for overseeing the records and document control system or systems.	4.1 The certificate provider shall identify the title(s) of the person(s) responsible for maintaining and disposing of program records, documents, and/or materials.
5.4.2 The certificate issuer shall have documented records control policies and procedures that are understood and implemented by all relevant personnel.	4.3 The certificate provider shall have procedures in place for reviewing, approving, updating, and ensuring the currency of records, documents, and/or other materials.
5.4.2.1 The policy and procedures shall address which records are kept, by whom, for how long, and how they are disposed.	
5.4.2.2 Records of academic or continuing education credits granted shall be maintained consistently with the provisions specified by the agency administering the credit and any applicable national standards.	

Exhibit 4-6: Requirements Associated with Record and Document Maintenance and Control (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
<p>5.4.2.3 Records of certificates issued shall be maintained for a period of time beyond the term of validity printed on the certificates to allow stakeholders reasonable access to such records.</p>	
<p>5.4.2.4 The procedures shall enable learners and certificate holders to receive verification and documentation, in an accurate and timely manner, of their progress in or completion of the program, earning of academic or continuing education credits (if applicable), certificate issue date, and certificate term of validity.</p>	
<p>5.4.2.5 The procedures shall enable stakeholders to confirm, in an accurate and timely manner, the certificate term of validity for individual certificate holders.</p>	
	<p>4.2 The certificate provider shall maintain a record system that is appropriate to its particular circumstances and in compliance with relevant regulations. The records, documents, and/or other materials maintained shall include:</p> <ul style="list-style-type: none"> a) a listing of all individuals who are currently participating in but have not yet successfully completed the program, including their status and the requirements met to date; b) a listing of all participants who have been awarded a certificate and the date that the certificate was awarded; c) the performance of participants on the assessment(s) and the related performance, proficiency, or passing standard for the assessment(s); and d) the effectiveness of the assessments [e.g., information describing key measurement characteristics, such as difficulty, and reliability, as appropriate to the type and nature of the assessment(s)].
<p>5.4.3 The certificate issuer shall have documented policies and procedures for maintaining the privacy of individuals and the confidential and secure handling of information and records that are understood and implemented by all relevant personnel.</p>	<p>4.4 The records, documents, and/or other materials shall be identified, managed, and disposed of in such a way as to ensure the integrity of the certificate program and the confidentiality of the information, as appropriate. The records, documents, and/or other materials shall be kept for a reasonable period of time, as stated in policy and/or as required by relevant bodies, or by contractual, legal, or other obligations.</p>
<p>5.4.3.1 The certificate issuer shall reasonably respect and maintain the privacy of certificate program participants to the extent possible while executing the certificate program process.</p>	<p>4.5 All personal and financial information pertaining to participants (e.g., date of birth, social security number, credit card number, assessment results) shall be maintained in a secure manner by the certificate provider and/or its contractors, as required by applicable laws.</p>

Exhibit 4-6: Requirements Associated with Record and Document Maintenance and Control (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
5.4.3.2 The certificate issuer shall hold in confidence and handle in a secure manner any information of a confidential nature related to or obtained from certificate program participants, learning outcomes evaluation instruments, keys, results, and related materials.	4.6 All assessment materials, data, and results shall be maintained and handled in a secure manner by the certificate provider and/or its contractors throughout their useful life.
5.4.3.3 The certificate issuer shall publish (or make available to primary stakeholders) which information shall be treated as confidential and the conditions for disclosure of information to parties other than the individual providing the information or the certificate issuer.	4.7 The certificate provider shall state what information must be treated as confidential and the conditions under which such information may be disclosed to parties other than the organization or individual from whom the information was obtained. Participants shall be informed of all these conditions prior to entering the certificate program. Confidentiality shall be maintained in accordance with documented guidelines and applicable laws by all individuals working for the certificate provider, including external bodies or individuals acting on its behalf.
5.4.4 The certificate issuer shall have documented policies and procedures for document control that are understood and implemented by all relevant personnel.	
5.4.4.1 The procedures shall address the proper control of document creation, approval, revision and reapproval, distribution, and prevention of obsolete document use.	

To have a certificate program that can be eligible for accreditation, SSA will be required to keep and manage records and documents in a secure manner. ICE 1100 specifies certain records and documents that must be maintained by SSA. They include:

- A list of all job analyst candidates who are participating in SSA’s job analysis certificate program but who have not yet completed the program at the given time.
- A list of all job analyst candidates who have been issued a certificate with the date of issuance.
- The scores of job analyst candidates on the assessment(s) and the passing score.
- Psychometric properties of the assessment(s), such as item difficulty and reliability.

These records and documents will need to be available and accessible at all times.

SSA will need to develop and document policies and procedures that specify:

- Which records must be kept
- How long records must be kept (The time needs to be reasonable and records of certificates issued must be kept beyond their expiration date.)
- How records will be disposed of
- Who will keep and maintain the records
- How the privacy of individuals will be maintained

- How records and documents will be created, approved, reviewed, revised, updated and distributed.
- How currency of records and document will be maintained such that obsolete document use will be prevented.
- How records and documents will be kept confidential and secure to include procedures for disaster recovery.

SSA will need to specify an individual who will be responsible for managing the certificate program records and documents. SSA will also need to publish what information it will keep confidential and when information may be disclosed to others. This information needs to be made known to job analyst candidates before they enter the program. For example, SSA will need to handle all personal and financial information of job analyst candidates securely and confidentially. In addition to personal and financial information of job analyst candidates, SSA will need to keep all assessment materials and results secure and confidential.

4.5.6 Provision of Education/Training

This feature includes requirements related to the education/training that is developed for the certificate program. Specifically, this feature addresses the way that the course is designed and its content, with emphasis placed on matching the learning outcomes with the instructional material content and delivery. Exhibit 4-7 presents the requirements in the ASTM E2659 and the ICE 1100 Standards for the Provision of Education/Training feature.

Exhibit 4-7: Requirements Associated with Provision of Education/Training	
ASTM E2659	ICE 1100: 2010(E)
<p>6.2.5 The course or curriculum shall be:</p> <p>6.2.5.1 Designed, developed, and delivered by qualified personnel following training and education industry generally accepted practices for instructional design and adult learning.</p>	<p>6.1 The certificate provider shall ensure that the education/training is developed, delivered, and reviewed by subject matter experts and qualified individuals.</p> <p>6.8 The design of the education/training shall be consistent with generally accepted instructional design principles and appropriate for the intended learning outcomes.</p>
<p>6.2.5 The course or curriculum shall be:</p> <p>6.2.5.2 Aligned with the certificate program’s purpose, scope, and intended learning outcomes</p>	<p>6.3 The certificate provider shall provide facilitators/instructors with feedback on their performance.</p> <p>6.4 The content of the education/training shall be consistent with the purpose and scope of the certificate program and the intended learning outcomes.</p>
<p>6.2.5 The course or curriculum shall be:</p> <p>6.2.5.3 Delivered in ways appropriate for the purpose and scope of the certificate program and the accomplishment of the intended learning outcomes.</p>	<p>6.10 The certificate provider shall specify the methods for delivery of the education/training (e.g., classroom, online synchronous, online asynchronous). These methods shall enable accomplishment of the intended learning outcomes and be consistent with the purpose and scope of the certificate program.</p>
	<p>6.5 The intended learning outcomes, content and design of the education/training, delivery method, and assessment(s) shall all be in alignment [i.e., the content, design, and delivery of the education/training shall be appropriate for accomplishing the intended learning outcomes, and the assessment(s) shall be appropriate for assessing participants’ accomplishment of the intended learning outcomes].</p>

Exhibit 4-7: Requirements Associated with Provision of Education/Training (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
<p>6.2.2 The program scope and intended learning outcomes shall be based on the needs of the primary stakeholders.</p>	<p>6.6 The intended learning outcomes and the knowledge, skills, and competencies to be addressed in the education/training shall be determined systematically based on an analysis of the needs of the:</p> <ul style="list-style-type: none"> a) participants; b) industry (as appropriate); c) consumers (as appropriate); and d) other identified stakeholders (as appropriate). <p>The procedure used to conduct this analysis shall be consistent with the published purpose of the program. The procedure for selecting content for the education/training shall include an analysis of participant and stakeholder needs appropriate to the purpose, scope, and stakes of the certificate program.</p>
	<p>6.7 The content of the education/training shall be reviewed periodically (at least annually) to ensure that it remains current and accurate. The certificate provider shall specify the procedures to be used for updating the content as well as the circumstances under which updating should occur</p>
	<p>6.9 The design of the education/training should be modified as needed to ensure that it incorporates changes in the purpose, scope, or content of the certificate program and reflects current, generally accepted instructional design principles.</p>

Both the ASTM E2659 and ICE 1000 standards require the training program to be developed and delivered by qualified individuals in accordance with generally accepted standards for instructional design. By researching training programs and using the information about training that will be gathered from subject matter experts in the focus groups and interviews that are part of this Call Order, SSA is already working towards satisfying this requirement. Understanding the accepted practices in developing training and educational programs will aid SSA in creating a training program that is aligned with currently accepted standards.

Additionally, with regards to both the development and delivery of the training program, both standards require that the training be aligned with the certificate program’s purpose and scope as well as the intended learning outcomes. This requirement means that SSA needs to ensure that the purpose, scope, and learning goals of the certificate program are very clearly defined. The training program then needs to be developed with a focus on these things. To ensure that training is being delivered effectively, ICE 1100 would require SSA to provide training to instructors prior to the instructors delivering their initial training sessions and feedback to instructors regarding their performance during training sessions. SSA could meet this requirement by having someone observe the instructor while s/he is providing instruction or by having training participants provide feedback to the instructor. Thus, SSA would need to implement some type of feedback system for instructors in order to meet the requirements set forth in ICE 1100.

When developing the learning outcomes for the certificate program as well as what will be taught in training, both sets of standards require thought to be given to important stakeholders. Therefore, SSA will need to define who the targeted participants for the certificate program will be and develop the learning outcomes while considering these specific individuals. Additionally, SSA should identify other

potential stakeholders, such as employers, administrative law judges, disability claimants, and make sure that the learning outcomes and training content be developed with consideration for these stakeholders.

Both ASTM E2659 and ICE 1100 require that the delivery methods be aligned with the purpose, scope, and learning goals of the certificate program. To meet this requirement, it will be necessary for SSA to choose specific training delivery methods that will effectively enable candidates to learn the knowledge and skills needed to perform SSA’s job analysis procedure. As stated, the qualitative data that is being collected for other subtasks of this Call Order will assist SSA in identifying the most appropriate delivery methods for its purposes and goals.

4.5.7 Assessment of Outcomes

The seventh feature, assessment of outcomes, addresses requirements for the assessment that must be administered to ensure that training participants have met the required learning outcomes for the training course. This feature speaks to how the assessment should be developed, conducted, and scored. The requirements for the assessment of outcomes addressed in ASTM E2659 and ICE 1100 are presented in Exhibit 4-8.

Exhibit 4-8: Requirements Associated with Assessment of Outcomes	
ASTM E2659	ICE 1100: 2010(E)
	7.1 The certificate provider shall conduct one or more assessments of participants’ accomplishment of the intended learning outcomes and the effectiveness of the education/training.
6.2.6 The evaluation(s) of learner attainment of intended learning outcomes shall: 6.2.6.2 Be aligned with and evaluate the extent to which learners achieve the intended learning outcomes;	7.2 The assessment(s) shall be appropriate for measuring participants’ accomplishment of the intended learning outcomes and consistent with the published purpose of the certificate.
6.2.6 The evaluation(s) of learner attainment of intended learning outcomes shall: 6.2.6.4 Provide an opportunity for learners to provide feedback on the content of the evaluation method or instrument;	
6.2.6 The evaluation(s) of learner attainment of intended learning outcomes shall: 6.2.6.5 Have procedures in place to verify the identity of individuals being evaluated and to ensure the security of the evaluation instrument. (1) The certificate program’s evaluation of learner attainment of intended learning outcomes shall be administered with a level of identity verification and instrument security congruent with the certificate program’s purpose, scope, and intended learning outcomes	
6.2.7 The scoring of the evaluation of learner attainment of intended learning outcomes shall: 6.2.7.1 Be designed and conducted by qualified personnel following training and education industry generally accepted practices in assessing learner outcomes	7.3 The certificate provider shall adhere to generally accepted measurement principles in the development of the assessment(s) and the evaluation/scoring of participants’ performance.

Exhibit 4-8: Requirements Associated with Assessment of Outcomes (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
<p>6.2.6 The evaluation(s) of learner attainment of intended learning outcomes shall:</p> <p>6.2.6.1 Be designed, developed, and delivered by qualified personnel following training and education industry generally accepted practices for assessing learning outcomes;</p>	<p>7.4 Individuals who develop or conduct the assessment(s) or who evaluate/score participants' performance shall have the required knowledge and skills for their role.</p>
<p>6.2.6 The evaluation(s) of learner attainment of intended learning outcomes shall:</p> <p>6.2.6.3 Use evaluation methods and delivery appropriate for and consistent with the certificate program's purpose, scope, and intended learning outcomes;</p> <p>NOTE—The evaluation of learning shall be consistent with the level of the intended learning outcomes identified (that is, if it is indicated that behavior changes or results are intended outcomes, then those outcomes shall be measured).</p>	<p>7.5 The certificate provider shall employ a procedure to demonstrate that the assessment is valid for its intended purpose. At a minimum, this procedure shall include documentation of the linkage between the assessment and the intended learning outcomes (e.g., a table listing the knowledge, skills, and/or competencies needed for participants to achieve the intended learning outcomes and identifying how the specified knowledge, skills, and/or competencies are covered by the assessment). A job/practice analysis shall be conducted for high-stakes certificate programs when their scope is sufficiently broad to support such a study.</p>
	<p>7.6 The certificate provider shall ensure that the assessment is revised as necessary to reflect changes in the scope or purpose of the program (e.g., changes in the intended learning outcomes, changes in the education/training).</p>
	<p>7.7 The certificate provider shall specify how the assessment(s) shall be conducted. These specifications shall ensure comparability in the environments in which the assessment occurs and permit participants to exert their best effort. Specifications shall address the:</p> <ul style="list-style-type: none"> a) conditions of the environments in which the assessment(s) take(s) place (e.g., type of setting); b) method(s) of conducting the assessment(s) (e.g., face to face, computer, paper and pencil); c) qualifications required of individuals conducting the assessment(s) (e.g., facilitators/instructors, proctors, raters); d) materials and equipment needed to conduct the assessment(s); e) instructions to participants; f) time allotted for conducting the assessment(s); and g) level of security required to be consistent with the intended purpose of the certificate.
<p>6.2.7 The scoring of the evaluation of learner attainment of intended learning outcomes shall:</p> <p>6.2.7.2 Use methods appropriate for and consistent with the certificate program's purpose, scope, and intended learning outcomes;</p>	

Exhibit 4-8: Requirements Associated with Assessment of Outcomes (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
<p>6.2.7 The scoring of the evaluation of learner attainment of intended learning outcomes shall:</p> <p>6.2.7.3 Be based on a passing standard established through a criterion-referenced method in advance of the evaluation being administered;</p>	<p>7.8 The certificate provider shall identify a performance, proficiency, or passing standard for the assessment(s) which participants must achieve in order to be awarded the certificate. The certificate provider shall use a generally accepted method for setting the performance, proficiency, or passing standard. This method shall:</p> <ul style="list-style-type: none"> a) link the performance, proficiency, or passing standard to the expected performance of a participant who has achieved the intended learning outcomes; and b) be consistent with the nature and intended use of the assessment.
<p>6.2.7 The scoring of the evaluation of learner attainment of intended learning outcomes shall:</p> <p>6.2.7.4 Be guided by established and documented answer key(s), rubric(s) or other scoring guide(s). (1) Learner feedback shall be considered in finalizing answer key(s) or rubric(s).</p>	<p>7.9 The certificate provider shall document the rules, methods, and/or rubrics for evaluating and/or scoring participant performance on all types of assessment (both objectively and subjectively evaluated/scored assessments).</p>
	<p>7.10 For subjectively evaluated/scored assessment(s) (e.g., essays, work products, portfolios, demonstrations, presentations), the certificate provider shall:</p> <ul style="list-style-type: none"> a) supply raters with rating or scoring scales, performance evaluation checklists, rubrics, and/or other appropriate guidelines to be used to evaluate participant performance; b) train raters in the use of the rating or scoring scales, performance evaluation checklists, rubrics, and/or other appropriate guidelines; c) establish procedure(s) by which raters can be calibrated periodically (if multiple raters are used); d) conduct analyses of the consistency and/or agreement in the raters' evaluation/scoring as appropriate for the type of assessment and its intended use; and e) establish procedure(s) by which significant differences between raters can be discussed and/or remedied (if applicable).
	<p>7.11 The certificate provider shall ensure the comparability of different forms (versions) of the same assessment with respect to content coverage and overall difficulty (e.g., the questions on two comparable versions of a written examination should cover the same knowledge areas and be of the same overall difficulty).</p>
<p>6.2.8 The results of the evaluation of learner attainment of intended learning outcomes shall be:</p> <p>6.2.8.1 Communicated to participants in a consistent, timely, and appropriate manner</p>	<p>7.12 The certificate provider shall report the results of the assessment(s) to participants in a consistent format that is appropriate to the type of assessment. At a minimum, participants shall be informed as to whether they have accomplished the intended learning outcomes. A report of participants' relative strengths and weaknesses also may be provided.</p>
<p>6.2.8 The results of the evaluation of learner attainment of intended learning outcomes shall be:</p> <p>6.2.8.2 Documented as part of the learner's record.</p>	

Exhibit 4-8: Requirements Associated with Assessment of Outcomes (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
	7.13 The certificate provider shall prepare reports of assessment results in aggregate form (e.g., results based on the performance of an entire class) to support program evaluation and address other stakeholder interests.
	7.14 The certificate provider shall supply participants and stakeholders with guidance on interpreting and using the results of the assessment(s), including what inferences can appropriately be drawn from the results.
6.2.10.2 The evaluation shall measure the quality and effectiveness of learner evaluation methods/instruments. (1) Evaluator or instrument performance or both, as applicable, shall be monitored for patterns and trends. (2) Methods/instruments shall be reviewed by the oversight committee to verify appropriate and accurate linkage to and measurement of the learning outcomes.	7.15 The certificate provider shall assess the effectiveness of the assessment(s) on a regular basis to ensure ongoing utility for measuring participants' accomplishment of the intended learning outcomes. This procedure may include the collection of data pertaining to the: a) overall difficulty of the assessment(s) (e.g., the percentage of participants who achieve a satisfactory performance on a hands-on demonstration) or of individual items or components of an assessment (e.g., the percentage of participants who answer a multiple-choice question correctly); and b) Measurement precision of the assessment(s), that is, the degree to which the results obtained are free from measurement error (e.g., a measure of inter-rater agreement on the assessment of a product produced by a participant).

By definition, an assessment-based certificate program must have some type of assessment or test that can be used to demonstrate participants' knowledge of the training's learning goals. ICE 1100 specifies that there must be at least one assessment given to training participants. Both ASTM E2659 and ICE 1100 specify that the assessment given needs to be aligned with the purpose, scope, and learning outcomes of the certificate program. Like with the training requirements, this emphasizes the importance of SSA developing a clear purpose, scope, and intended learning objectives before creating the training assessment so that the assessment can be consistent with these things.

ASTM E2659 also specifies that before taking an assessment, the test taker's identity should be verified. This could be accomplished by asking each test taker to bring appropriate identification when they are going to take the assessment. Appropriate identification could be defined as a valid, non-expired driver's license, state-issued identification card, or passport. The identification should include both a picture and signature. SSA would need to insure that individuals checking this identification were knowledgeable in examining IDs to check the identity of test takers.

Regarding the development of the assessment, both ASTM E2659 and ICE 1100 require the assessment to be developed, designed, and delivered by qualified individuals. To meet this requirement, SSA is currently seeking information from experts in the fields of training and job analysis in order to ensure that any assessment materials will be developed according to accepted industry standards. SSA will need to ensure that any materials developed are done so by qualified individuals. The assessment should be aligned with the purpose of SSA's certificate program and valid for assessing the intended learning outcomes.

Both ASTM E2659 and ICE 1100 also include requirements regarding the scoring of learning assessments. A requirement listed in ASTM 2659 is that the methods used for scoring must be consistent with the purpose, scope, and intended learning outcomes of the certificate program. Again, this would require these things to be well defined before developing the scoring system for the assessment, with care to ensure that the assessment supports the certificate program's purpose, scope, and learning outcomes.

In scoring participant performance on the assessment, SSA would be required to set a passing standard before giving the assessment, according to both ASTM E2659 and ICE 1100. Based on ASTM E2659's requirements, this would require using a criterion-referenced method. The main idea of a criterion-referenced method is that SSA would need to test, in advance of actually implementing the assessment, whether performance on the assessment is related to performance as a job analyst. The importance of the assessment is not really in passing the test, but rather that by passing the test it can be expected that the participant will be proficient in meeting the learning goals of the program, which for this training would likely be along the lines of being able to successfully perform a job analysis using SSA's methodology. While ICE 1100 does not specifically state that a criterion-referenced method must be used, it does say that the passing standard should be linked to expected performance, which implies that something like a criterion-referenced method may be necessary in developing the passing standard for the assessment.

According to both ASTM E2659 and ICE 1100, a rubric or scoring guide is necessary before scoring any assessments. This requirement means that SSA would need to develop a scoring rubric document that lays out the rules and methods that will be used in scoring the assessments. ICE 1100 provides additional requirements specifically for the usage of subjectively scored assessments, which for SSA's purposes could be something like a practice job analysis report. If SSA were to choose this type of assessment, ICE 1100 would require additional steps for scoring the assessments, such as creating a rubric, training scorers on how to use the rubric, and assessing the consistency of ratings on the assessment. If choosing to use subjective assessments, SSA will need to allow for additional time in scoring the assessments to train the graders as well as to ensure that scoring is similar across graders.

If there are multiple forms of the same assessment, ICE 1100 requires that these forms be matched in terms of content and difficulty. For example, each test would have an easy question about topic 1 and a difficult question about topic 2, but these questions would not be the same across test forms. In order to satisfy this requirement, if SSA chooses to use multiple forms of the same test, they would need to develop multiple questions about the same topic that would be considered to be the same difficulty level. Statistical methods, such as equating, can be used to ensure multiple tests are comparable.

Regarding the reporting of scores on the assessments, both ASTM E2659 and ICE 1100 require that training participants be given their results in a consistent format, with ASTM E2659 also specifying that this be done in a timely matter. This requirement involves informing the participants as to whether or not they met the required learning outcomes for the training, which would require SSA to have a method in place to provide these individual scores. ICE 1100 would also require SSA to provide participants with assistance on the interpretation of results. Therefore, according to this set of requirements, it would not be sufficient to give only a score to participants: SSA would need to have a guide or system in place that could help individuals understand what their scores mean and the conclusions that can be drawn from the scores. With regards to reporting, ICE 1100 requires that in addition to individual training participants receiving their results, the certificate program must also report aggregate results for the training program. This requirement would not require any extra resources for SSA: it would just mean that the overall results for a training session or program be made available.

ASTM E2659 also requires certificate programs to document assessment scores as part of the training participants' record. SSA would need to have a system that could be used to track the training progress and success of all participants taking part in the training to meet this requirement, which is something

SSA has already considered. A candidate tracking database was drafted as a part of this Call Order and can be seen in chapter 6 (pg. 6-1).

4.5.8 Program Development and Evaluation

This feature addresses requirements for development of the certificate program plan and the certificate program itself, as well as required continuing evaluation of the certificate program. This feature is not specifically addressed in the ICE 1100 Standard, and as such the requirements in the ASTM E2659 standard for Program Development and Evaluation are presented in Exhibit 4-9.

Exhibit 4-9: Requirements Associated with Program Development and Evaluation	
ASTM E2659	
6.1	<i>Certificate Program Plan</i> —The certificate program shall be created and guided by an appropriate and aligned system of analysis, program design, development, implementation, and evaluation.
6.1.1	The certificate program plan shall be documented.
6.1.2	An oversight committee shall be formed to develop, monitor, and approve the certificate program plan.
6.1.2.1	The committee members shall represent a balance of interests and expertise from certificate program primary stakeholders.
6.2	<i>Analysis, Design, Development, Implementation, and Evaluation</i> —The analysis, design, development, implementation, and evaluation of the certificate program shall be responsible, effective, and congruent with the certificate program plan.
6.2.1	The target audience and purpose of the certificate program shall be identified and documented.
6.2.2.1	The process by which needs are identified and linked to the program scope and intended learning outcomes shall be documented.
6.2.3	The certificate requisites shall be defined and validated by the oversight committee.
6.2.3.1	The certificate requisites shall be aligned with the program purpose, scope, and intended learning outcomes.
6.2.3.2	The certificate requisites shall include: <ul style="list-style-type: none"> (1) Minimum requirements for participation in the certificate program learning event or events and (2) Minimum requirements for achievement on the evaluation of learner attainment of the certificate program intended learning outcomes.
6.2.9	If the certificate issuer grants academic or continuing education credit, it shall:
6.2.9.1	Adhere to a uniform system of measurement and granting of credits (if deploying its own credit system) or adhere to its chosen organization’s requirements for granting academic or continuing education credits (if using another organization’s credit system)
6.2.9	If the certificate issuer grants academic or continuing education credit, it shall:
6.2.9.2	Determine and publish the type and quantity of credits granted and requirements for earning credits in advance of offering the certificate program.
6.2.10	The certificate issuer shall conduct a comprehensive evaluation of the certificate program on a regular basis.
6.2.10.1	The evaluation shall measure the quality, effectiveness, and value of the certificate program against stated program performance objectives.

Exhibit 4-9: Requirements Associated with Program Development and Evaluation (Cont.)	
ASTM E2659	
6.2.10.2	The evaluation shall measure the quality and effectiveness of learner evaluation methods/instruments. (1) Evaluator or instrument performance or both, as applicable, shall be monitored for patterns and trends.
6.2.10.3	The evaluation shall provide primary stakeholders an opportunity to provide feedback on the certificate program design, content, delivery, and learning evaluations.
6.2.10.4	The evaluation shall include mechanisms to monitor and identify regularly the need for changes to the program's purpose, scope, or learning outcomes and include mechanisms to ensure that the program is revised in a timely manner to reflect needed changes.

According to ASTM E2659, SSA will need to form an oversight committee whose responsibility is to approve the certificate program plan as well as any certificate program requisites. This committee should be representative of various stakeholders' interests, meaning that SSA will need to identify important stakeholders and ensure that their opinions are represented by the committee.

Developing the certificate program should be well-documented. Specifically, ASTM E2659 requires that the certificate program plan, target audiences, and the processes by which needs are linked to the program's purpose and learning outcomes be documented. SSA will need to maintain detailed records of the development and implementation process for its certificate program.

To meet the ASTM E2659 standard, SSA will need to define certificate requisites, meaning SSA will need to determine minimum requirements for participation in the program and minimum requirements for performance on the assessment. As such, SSA will need to set minimum entry standards for participation in their training to become a job analyst. Some information to assist SSA in determining these requisites is presented in a later section of this report, while additional information is being gathered as part of another subtask of this Call Order.

The minimum requirements should be aligned with the purpose and scope of the certificate program, and will likely include requirements such as education (e.g., a bachelor's degree may be required) or experience in a related field. Further, the certificate program cannot include provisions for testing out of the learning course, which means SSA must require all potential job analysts to complete the training course. No exceptions can be made for this. For example, even if potential job analysts have completed training in another job analysis method and have previous experience as job analysts, they must still be required to attend SSA's job analysis training as well as meet the requirements to pass the assessment.

It is noted in ASTM E2659 that certificate programs do not track participants' competency after the training is completed, as the focus of certificate programs is to ensure that participants can demonstrate that they have mastered the intended learning outcomes of the certificate program. As such, a certificate program cannot have ongoing requirements for certificate renewal. If it is determined that the skills learned in SSA's job analysis training will become outdated, the certificate should expire after the determined timeframe. It may be more likely, in the case of job analysts for SSA, that knowledges and skills may need to be refreshed given that analysts may not perform analyses on a consistent and continuous basis. If a certificate does expire, participants would not be able to renew it, but rather they would have to go through the entire training and assessment process again. On the other hand, if SSA's job analysis method does not change and the certificate program's purpose, scope, and intended learning outcomes remain constant, the certificate does not have to expire. SSA will need to determine the valid time frame of the certificate before offering the training program.

Depending on the types of individuals that SSA decides to recruit for the job analysis training, offering continuing education credit may or may not be useful. For example, if recruiting individuals who are working towards a graduate degree, granting continuing education credits will likely not be necessary or beneficial as these individuals do not have an established career where they need to earn continuing education credits. If SSA does choose to offer continuing education credit, ASTM E2659 requires that the amount and type of credits be determined and published before the training is administered. The credits must be offered using a consistent system, which could either be developed by SSA or SSA could adhere to another organization's requirements.

ASTM E2659 requires that the certificate program be evaluated on a regular basis. Regular basis is not defined, but SSA should be prepared to evaluate the certificate program at least yearly. At minimum, this evaluation should be used to measure the quality and effectiveness of the training assessment as well as the training delivery, both in terms of materials and instructor(s). To meet this requirement, SSA will need to ensure that training participants are learning in accordance with the intended learning outcomes. If participants are not meeting these standards, the training or assessment may need to be changed to better meet the stated learning outcomes. Additionally, the evaluation should give primary stakeholders an opportunity to provide feedback regarding the certificate program, which means that there needs to be a system in place that can facilitate this process and allow for the collection of feedback. Finally, the evaluation should be used to determine if changes are needed to purpose, scope, learning outcomes, training, and/or assessment. In other words, SSA will need to continually evaluate its job analysis certificate program and if the purpose, scope, or learning outcomes no longer appear to be in line with SSA's organizational purpose or what SSA requires for the certificate program, they will need to be amended. Along these same lines, if the training or assessment no longer follows the purpose, scope, and learning objectives of the certificate program they will need to be updated.

4.5.9 Certificate Issuance and Use

This feature addresses requirements for issuing certificates in a responsible manner and ensuring that the certificates are used and interpreted appropriately. Exhibit 4-10 presents the requirements in the ASTM E2659 and ICE 1100 Standards for the Certificate Issuance and Use feature.

Exhibit 4-10: Requirements Associated with Certificate Issuance and Use	
ASTM E2659	ICE 1100: 2010(E)
	8.1 The certificate provider shall identify the requirements and procedures for granting the certificate.
	8.2 The certificate provider shall confine its requirements to those matters specifically related to the purpose and scope of the certificate program.
7.1 The certificate issuer shall issue certificates in a responsible manner and inform certificate holders and primary stakeholders about proper use and interpretation of the certificate issued. Policy and procedures shall be established to document certificate issuance and use.	2.5 The certificate provider shall publish and provide to certificate holders a statement explaining what inferences can properly be made regarding individuals who hold the certificate. These inferences shall be consistent with the stated purpose of the certificate and the assessment(s) and also other information the certificate provider makes public about the certificate and the assessment(s).
7.1.1 A certificate shall be issued to all certificate holders.	

Exhibit 4-10: Requirements Associated with Certificate Issuance and Use (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
7.1.1.1 The certificate shall be issued after all requisites for the certificate are fulfilled by learners and verified by the certificate issuer.	8.6 The certificate provider shall have a confirmation procedure in place by which the status of certificate holders can be verified.
7.1.1.2 The decision to issue a certificate shall be made by the certificate issuer based solely on the information gathered during the certificate program process.	8.3 The decision to issue a certificate shall be made by the certificate provider based solely on the information gathered by the certificate provider (i.e., application, education/training, assessment).
7.1.1.3 The certificate shall be issued to an individual and shall be nontransferable.	
7.1.1.4 The certificate issued shall be signed or otherwise authorized by an authority designated by the certificate issuer and shall include, as a minimum, the following information: (1) Name of the certificate holder; (2) Title and scope of the certificate program; (3) Name of the certificate issuer; (4) Designation and associated acronym granted, if applicable; and (5) Certificate issue date and term of validity. NOTE —Often, the title of the certificate program describes the scope. If the title is not descriptive, then the scope shall be described.	8.4 The certificate may take the form of a letter, card, or other medium, signed or authorized by a designated representative of the certificate provider. 8.5 The certificate document shall contain the following information: a) name of the certificate holder; b) name of the certificate provider; c) scope of the certificate (and title of certificate, if appropriate); and d) date on which the certificate was awarded.
7.1.1.5 The certificate issuer shall invalidate a certificate only if the person it was issued to is found to have not fulfilled the certificate program requisites. NOTE —Examples of circumstances that might lead to the certificate issuer’s invalidation of a certificate include a learner’s falsification or misrepresentation of identity or information to the certificate issuer or participation in activities that provided an unfair advantage in meeting the certificate program’s requirements.	8.8 The certificate provider shall have a policy stating that it maintains the right to recall or nullify the certificate document in the event certificate holders have violated program requirements or policies. The certificate provider shall maintain sole ownership of the certificate document.
7.1.2 A certificate issuer may grant a designation or designation acronym or both to certificate holders only under the condition that the designation and/or designation acronym granted shall not include the words “certified,” “certificated,” “licensed,” “registered,” or “accredited” or in any other way imply such statuses. NOTE —If a designation and/or designation acronym is granted, the following standardized format is encouraged: Designation: Certificate Holder in (subject matter) Designation Acronym: CH-(acronym representing the certificate designation) Example: Designation: Certificate Holder in Weight Management Designation Acronym: CH-WM	8.9 The certificate provider shall not award an acronym or letters to certificate holders for use after their names upon completion of the certificate program. 8.10 The certificate provider shall publish and provide to certificate holders a statement defining the appropriate ways in which to reference the certificate. This statement shall specify that certificate holders: a) may state that they hold a “Certificate in” b) shall not say that they are “Certified in ...” c) shall not use acronyms or letters after their names to reference the certificate they hold.

Exhibit 4-10: Requirements Associated with Certificate Issuance and Use (Cont.)	
ASTM E2659	ICE 1100: 2010(E)
<p>7.1.2.1 If a designation or designation acronym or both is granted, the certificate issuer shall establish an appropriate system to track and monitor use by certificate holders.</p>	
<p>7.1.2.2 The certificate issuer shall document, manage, and communicate to primary stakeholders the conditions for use of the certificate issued and any associated designations, designation acronyms, or other marks or logos.</p>	<p>8.11 The certificate provider shall publish and provide to certificate holders a statement defining the purpose and scope of the certificate. This statement shall specify that certificate holders shall not make:</p> <p>a) claims or imply that the certificate is a professional certification or that its purpose and scope are beyond that specified by the certificate provider; or b) any other statement regarding the certificate which the certificate provider may consider misleading or unauthorized.</p>
	<p>8.7 A certificate holder is generally not required to engage in activities to maintain the certificate; however, in some cases, providers may require additional education/training and/or assessment(s) for this purpose. When certificate maintenance is required, the maintenance procedure shall be fair and reasonable, and the requirements shall be confined to those matters specifically related to the purpose and scope of the certificate program.</p>

Clear specification of what the certificate means and how it can be appropriately used are critical to meeting the requirements of both standards. This specification will begin with SSA articulating what job analyst candidates must do or have to earn a certificate and how SSA will grant the certificates. The requisites or procedures for granting the certificate must be limited to those that are related to the scope and purpose of the certificate program. For example, SSA cannot require job analyst candidates to perform a task that was not taught in the job analysis training that SSA will provide.

Next, SSA will need to define and document what holding a certificate means for job analyst candidates and how job analyst candidates can use the certificate. This definition must make it clear that job analyst candidates cannot say the certificate is a professional certification. Job analyst candidates will only be able to say that they hold a certificate in SSA’s job analysis method, and SSA must provide statements that make it clear that job analyst candidates cannot say they are “certified,” “certified in,” “licensed,” “accredited” or anything else that would suggest such a status. While both standards are in agreement about these limitations to inferences, the two standards disagree regarding whether individuals can use designation acronyms. ASTM E2659 would allow SSA to grant designation acronyms as long as those acronyms did not suggest the job analyst candidate is “certified,” “certified in,” “licensed,” “accredited,” etc. ICE 1100, however, will prohibit SSA from issuing acronyms to certificate holders for use after their name.

The decision to issue a certificate to a job analyst candidate will rest with SSA and must be based only on the information SSA will gather on the candidate during the job analysis certificate program (i.e., performance in the education/training and performance on the assessment).

SSA will need to provide a certificate to all candidates who meet the defined criteria. Those certificates must be given only to the job analyst candidates, cannot be transferable, and must contain the following pieces of information:

- Name of the job analyst candidate
- SSA's name
- Scope and title (if appropriate) of the certificate
- Certificate award date
- Signature of a designated representative of the certificate issuer.

SSA must also have a policy regarding the recall or nullification of certificates in the case where the certificate holder has not fulfilled or has violated the program requirements. ICE 1100 will require SSA to be the sole owner of the certificate document.

4.6 Accredited Certificate Programs Used by Large Agencies

In order to gain a better understanding of how assessment-based certificate programs are used in organizations, interviews were conducted with two different federal organizations known to have successful, accredited certificate programs. Another organization was contacted but the representative was unavailable to participate in an interview. Because SSA will need to determine if they want to establish an accredited certificate program, one purpose of contacting these organizations was to learn why they chose to seek accreditation for their certificate programs. Additionally, we sought to gather information about the actual development and operation of these established certificate programs.

4.6.1 US Food and Drug Administration (FDA)

The US FDA has an accredited certificate program for new investigators called the New Hire Investigator Training program. The impetus for accrediting this certificate program was both external and internal to the organization. From an external perspective, the Office of Management and Budget (OMB) and the Office of Personnel Management (OPM) recognize the value of third-party evaluations of training and human resource development programs and compliance with established standards. Meeting these objective standards provides transparency and shows the OMB and other external agencies and the public that a national standard is being met. In terms of internal motivation to accredit the certificate program, the standards provide a framework against which management polices and documents can be developed. It also assists with the quality management system as the accreditation compares their credentialing practices with best practices in providing certificate programs.

Once the FDA determined the need to develop a certificate program, they decided that they wanted to develop a program based on the ASTM International standard. Because the department had not gone through this process before, they hired a consultant to assist in the development process for the certificate program and to help with the accreditation application for the New Hire Investigator Training program.

In terms of program operation, the New Hire Investigator Training Program is operated by the Division of Human Resource Development at the FDA, without assistance from contractors or other outsourcing. Because the Division of Human Resource Development operates the program as part of their regular business, there are not separate figures regarding the cost of this specific certificate program.

4.6.2 Federal Bureau of Investigation (FBI)

Because of a number of unfavorable news releases that questioned its programs, standards, and the competency of its personnel, the FBI chose to seek accreditation for a certificate program called the National Behavioral Science Research Certificate Program. They recognized that complying with national certificate standards was a good idea and a way to provide backup and substantiation for their training. Because some of their training programs are eligible for graduate credits, they thought that having the certificate program accreditation would help in achieving recognition for their graduate courses. Another reason for seeking accreditation was that the certificate program was extended to FBI “partners” (e.g., police departments, U.S. Marshal agency). The FBI feels that seeking accreditation was successful and ensured that their program followed best practices in the area of certificate programs by going through all of the program operations in detail, having an on-site visit, and receiving detailed feedback in terms of how to meet the standard requirements.

The FBI developed this certificate program internally, without outside assistance or help from consultants. Much like the FDA, the FBI runs their certificate program internally, without outsourcing any parts of the program. Because the program is run internally, the FBI does not have financial information for it as the program is considered the cost of doing business in terms of training personnel. When individuals participate in the certificate program and pass the assessment to receive their certificate, there is a five year limit on the certificate; after this they must take the course and pass the assessment again.

4.6.3 Outcomes of Accreditation

This section describes the key outcomes identified by the two featured agencies regarding accreditation of their certificate programs.

Both individuals interviewed said that accreditation had added value to their programs. In fact, they independently noted very similar benefits:

- Assures the public that personnel are qualified through a high quality training and assessment experience.

Both agencies have had to deal with scrutiny from the Federal government and the public regarding unfortunate lapses or issues in their departments that have been reported in the media and elsewhere. Accreditation has not only raised the bar on human resource training and assessment, but it also has had benefits in terms of public relations. It assures all stakeholders that the agency follows best practices, and, at the same time, supports the goal of transparency in agency and department operations.

- Provides process and documentation for quality management.

Both agencies/departments have quality management programs and accreditation is a powerful continuous improvement mechanism. It is the backbone for QM for these training and certificate programs.

Interviewees for both the FDA and the FBI certificate programs were very cooperative and would be willing to discuss their experiences in developing, implementing and operating their credentials and undergoing ANSI accreditation directly with SSA.

4.7 Types of Credentialing for Job Analysis Methods

For comparison purposes, we conducted searches to identify the credentialing practices associated with other current job analysis methods. This research provides SSA with tangible examples of how credentialing is being conducted for other job analysis methods. Internet searches were conducted for established job analysis methods. These methods were either identified by focus group participants as methods that they used for job analysis or identified in Call Order 0001's job analysis methods literature review.

The following job analysis methods were identified and researched for certification practices:

1. ErgoScience - Quantitative Job Demands Analysis (QJDA)
2. Position Analysis Questionnaire (PAQ)
3. Fleishman Job Analysis Survey (F-JAS)
4. McCroskey Vocational Quotient System (MVQS)
5. Threshold Traits Analysis (TTA)
6. Common Method Questionnaire (CMQ)
7. Functional Job Analysis
8. Certified Compensation Training program (offered through WorldatWork)
9. TruSight Training (Employer's Association)
10. Matheson
11. OccuCare Systems and Solutions
12. WorkAbility Systems
13. WorkWell (formerly called Isernhagen)
14. DACUM (Developing a Curriculum)
15. ErgoScience - Functional Capacity Evaluation (FCE) (not a job analysis method but closely related).

Six of the fifteen methods, which are listed in Exhibit 4-11, mentioned some type of certificate or credentialing associated with the method. Two of the identified job analysis methods are only administered by a specific organization (Threshold Traits Analysis and Common Method Questionnaire); therefore, no publically available training and certification is provided. The remaining seven job analysis methods do not provide any type of certificate or credentialing for the method. Some of these job analysis methods offer training courses but do not require an examination or assessment of learning outcomes. Exhibit 4-11 provides information about the requirements for receiving a certificate for the five job analysis methods. Exhibit 4-11 also provides information on the requirements for receiving a certificate in Functional Capacity Evaluation from ErgoScience as this analysis was mentioned often by focus group participants.

Exhibit 4-11: Job Analysis Training Programs Including Certificates		
Method	Certificate Requirements	Notes
Certified Compensation Training Program (offered through WorldatWork)	After completing a course on job analysis material either in a classroom setting or on the internet, participants must pass a computerized examination.	This is part of a professional certification for becoming a Certified Compensation Professional (CCP®). The test can be taken without actually taking the course.
ErgoScience Quantitative Job Demands Analysis (QJDA)	After completing an online training, participants take an online multiple-choice examination. The examination includes scenarios or examples that participants respond to through multiple-choice questions. Participants must get 85% of the questions correct to receive a certificate.	
Functional Job Analysis (FJA)	Participants should attend a 5-day training session, observe a trained FJA facilitator conducting a job analysis focus group, and conduct a job analysis focus group under the supervision of a trained facilitator. Participants can receive a certificate if they complete all three activities.	There is no organization or legal entity associated with this job analysis method or training. These requirements are provided as professional guidance in a book describing the job analysis method. ⁸⁶
WorkAbility Systems	Participants must demonstrate competency by submitting two job analyses that they completed on their own following the course. These are then reviewed by the instructor to ensure they contain adequate detail. If the job analyses are sufficient, participants are “certified” as WorkAbility therapists.	
DACUM	After completing a training, participants must perform two job analyses in the field using the DACUM method and submit their reports for those analyses to trainers at the Eastern Kentucky University.	
ErgoScience Functional Capacity Evaluation (FCE)	After completing a three-day classroom training, participants must score a video analysis. Participants must receive an 85% on their analysis to receive a certificate.	This is not a job analysis method, but is closely related and was mentioned in the focus groups with job analysis experts.

As can be seen in the exhibit, all five of the job analysis methods and the FCE require an individual to demonstrate that they have met the learning objectives of the training course by administering some type of assessment. Three of the job analysis methods and the FCE require individuals to demonstrate competence in the method by performing an actual or simulated analysis using the method. Two of the job analysis methods require individuals to complete a written examination to demonstrate their knowledge and skill. Additionally, all but one of the methods have a training course in which material is presented on the job analysis method before individuals are tested. More information about the training that is associated with these job analysis methods is provided in Chapter 3 of this report (pg. 3-9).

It is unclear, however, whether any of these job analysis methods would meet the requirements for an assessment-based certificate program. It seems that the Functional Job Analysis method would not as it is not contained within a legal entity. The Certified Compensation Training Program certainly would not as

⁸⁶ Fine, S. A., & Cronshaw, S. F. (1999). *Functional job analysis: A foundation for human resources management*. Mahwah, New Jersey: Lawrence Erlbaum

it is a professional certification. The others, on the other hand, do meet some requirements of assessment-based certificate programs. For example, ErgoScience, WorkAbility Systems, and DACUM provide information on the delivery format of their job analysis training. They specify whether the training will occur in a classroom or on the internet. The programs also list the learning outcomes of their training programs. While information is not known on the specific purpose and scope for each of these certificate programs, the learning objectives are all related to learning to successfully complete a job analysis, which is likely the main purpose for any job analysis certificate program.

Other information, though, that would be useful for determining whether the ErgoScience, WorkAbility Systems, and DACUM programs meet the standards is not readily available. We were unable to find the level of information that the ASTM E2659 and ICE 1100 require. For example, these programs do not have their development processes listed, so it is not possible to know whether the stakeholders were considered in the development of the course or if there is a structure set up to provide feedback to instructors. This finding suggests that the certificate programs of these job analysis methods may be unable to meet the ASTM E2659 or ICE 1100.

4.8 Credentialing for Data Entry

An important task for the SSA job analyst will be to enter the collected data into a database in a manner that ensures accuracy and consistency. While the training component of the certificate program will be important for teaching potential job analysts about SSA's job analysis process, it will also be essential for ensuring quality in the information received from the analysts and their data entry. The National Cancer Registrar's Association (NCRA) is responsible for educating and certifying individuals who enter data into the Cancer Registries. Due to the important nature of this information, it is crucial that quality is ensured for all database entries. Because of this, we contacted the NCRA to discuss how they ensure quality in their data entry and spoke with an NCRA certification and training expert and the NCRA Director of Credentialing.

One of the main ways that they ensure quality of data entry is by requiring a great deal of training⁸⁷. This training emphasizes consistency and accuracy of data entry and teaches trainees about interpreting data consistently. They also ensure that training materials are designed to help teach individuals about data entry and ensuring quality as well as to provide a resource for any questions that certified individuals may have while working on data entry. The NCRA has a document containing approximately 3,000 pages which is provided to each individual entering data into the database⁸⁸. This document helps to ensure quality by providing each certified registrar with all of the information that he or she needs to accurately enter data into the Cancer Registries. Other national databases that require accurate, high quality data also have manuals or guidebooks such as these. For example, the Traumatic Brain Injury Database⁸⁹ and the Spinal Cord Injury Database⁹⁰ have very detailed guidelines for entering data into their databases.

Beyond a credentialing process, SSA may also want to consider developing an audit process for checking the quality of job analysts' work after they have been in the field for awhile. Because SSA job analysts may not perform job analyses for SSA on a continual or routine basis, SSA may need to periodically assess the work of its job analysts to ensure the analyses are being conducted in an appropriate and consistent manner. Because a certificate program typically does not expire or require re-certification, this

⁸⁷ Personal communication with National Cancer Registry certification and training expert

⁸⁸ Personal communication with NCRA Director of Credentialing

⁸⁹ Traumatic Brain Injury Model Systems National and Statistical Center's Standardized Operating Procedure. Retrieved from www.tbindsc.org.

⁹⁰ The Spinal Cord Injury Model Systems' Data Collection Syllabus for the National Spinal Cord Injury Database. Retrieved from https://www.nscisc.uab.edu/public_content/nscisc_database.aspx

audit process would be in addition to and beyond the scope of the certificate program. Should SSA consider developing some type of audit process, it will need to develop clear policies and procedures for how that auditing process will occur, how often it will occur, who will be audited, how work will be evaluated, and what measure will be used.

The NCRA has developed a system involving audits to help ensure accuracy of data entered into the database. The first level of this is edit checks within the data entry program. The data entry programs for the National Cancer Registries include standardized edits, in which many of the data fields have pre-set limits on the data that can be entered so that attempts to enter incorrect data are not accepted by the software program⁹¹. For example, there is a specified set of acceptable locations for entering the location of a tumor. If someone tries to enter a location that is not correct, the database will not accept the entry. There are other data fields that will prompt the registrar entering the data when there is an inconsistency with other data that has been entered. These warnings say that the data entered is not likely and should be checked. While these warning messages will allow the data to be entered, they help to ensure that data entered is accurate.

Additionally, audits of the cancer registries are conducted by the National Program of Cancer Registries (NPCR), which is a part of the Centers for Disease Control and Prevention (CDC). While the previously mentioned quality control measures directly affect the quality of the data when it is entered, audits are used to assess the quality of data after it is entered into the database⁹². These audits are conducted on a regular, predetermined schedule (e.g., every five years), if a problem in data quality is identified, or if there are other triggers such as high turnover or inexperienced registrars. In an audit, discrepancies are identified and reconciled. Based on identified discrepancies, information needs to be provided to data collectors regarding errors and a plan for education and training to address the errors should be created. This step is perhaps the most important part of the audit process, as errors will not be likely to cease if data collectors are not informed that something is being done incorrectly.⁹³

4.9 Professional Certification by Discipline

While professional certification is not a recommended solution for SSA to use to credential its job analyst candidates, the certification requirements for professionals in the disciplines from which SSA may draw candidates is useful. This information can help SSA understand the types of experiences and education that professionals in these disciplines have and can be useful to SSA as SSA seeks to develop or identify minimum qualifications for its job analyst candidates. We have searched for and obtained information on the professional certification requirements disciplines most relevant to SSA's needs. These disciplines include:

- Occupational Therapy
- Rehabilitation Counseling
- Physical Therapists
- Disability Management
- Rehabilitation Science
- Vocational Rehabilitation/Counseling

⁹¹ Personal communication with National Cancer Registry certification and training expert

⁹² NPCR Education and Training Series: Module 3 Part 1 Section D: Audit Considerations. Retrieved from http://www.cdc.gov/cancer/npcr/training/nets/module3/nets3_1d.pdf

⁹³ NPCR Education and Training Series: Module 3 Part 1 Section D: Audit Considerations. Retrieved from http://www.cdc.gov/cancer/npcr/training/nets/module3/nets3_1d.pdf

- Ergonomics
- Occupational Health
- Industrial/Organizational Psychology
- Human Resources.

Professional certifying bodies provide candidates who meet pre-determined performance criteria with a certification that recognizes or acknowledges the candidates have the required knowledge, skills and abilities to proficiently perform within a particular specialty. These certifications are not affiliated with any particular training or course work. An internet search was conducted to find professional certifying bodies and the certification requirements of those professional certifying bodies within the aforementioned disciplines. Additionally, certifications in fields that perform tasks similar to those that will be performed by SSA job analysts were also examined. For example, organizations that are responsible certifying individuals to perform data entry and to ensure the quality of this data were researched. The professional certifying bodies found in this search are presented in Exhibit 5.1 below. Professional certifications are available in all of the aforementioned disciplines, except for Industrial/Organizational Psychology. Certificate programs are available in Industrial/Organizational Psychology but not professional certification.

In general, across the various professional certifying bodies found, the minimum qualifications required for candidates to receive certification include some form of experience in the given discipline. This form of experience is either field work within a graduate program, or full time employment. In addition to these experiences, candidates are required to have various degrees of education from high school diplomas to graduate level degrees. The certifications that have lower levels of education requirements typically have higher levels of experience requirements associated with those educational requirements.

Once a candidate has met the minimum requirements, the candidate has to submit an application fee which often includes an examination fee. For each of the professional certifications in Exhibit 4-12, candidates must achieve a passing score on the required examination to receive the certification. Examinations typically consist of written multiple-choice test questions. It should be noted that these certifications are for the entire set of knowledge, skills and abilities needed for practicing as a professional in these disciplines. These certifications are much broader in scope than SSA's focus as the knowledge, skills and abilities needed for job analysis are just a subset of the knowledge, skills and abilities needed for these professions.

Exhibit 4-12: Professional Certification Organizations			
Certifying Bodies	Minimum qualifications required to apply for certification	Requirements to Obtain Certification	Types of People who Obtain Certification
<p>National Board for Certifying Occupational Therapists (NBCOT) (http://www.nbcot.org/)</p>	<ul style="list-style-type: none"> Graduate from an accredited occupational therapy assistant or occupational therapist program recognized by NBCOT. Complete all fieldwork requirements. <p><i>For graduates without an NBCOT recognized entry-level post-baccalaureate degree:</i></p> <ul style="list-style-type: none"> Graduate from an occupational therapy program recognized by NBCOT Complete all fieldwork requirements 	<ul style="list-style-type: none"> Examination application and fees Authorization by NBCOT to take the exam Official final transcript If graduating from an NBCOT recognized entry-level post-baccalaureate degree program outside of the United States, passing English language proficiency examinations. Agree to abide by the NBCOT Candidate/Certificant Code of Conduct <p><i>Graduates without an NBCOT recognized entry-level post-baccalaureate degree also need prior to submitting an application:</i></p> <ul style="list-style-type: none"> OTED application A letter of approval from the OTED process that authorizes the submission of the OTR certification examination application <ul style="list-style-type: none"> Both types of graduates must receive a minimum passing score of 450 points out of 600 points on exam 	<ul style="list-style-type: none"> Professionals in Occupational Therapy
<p>American Board of Vocational Experts (ABVE) (http://www.abve.net/certoverview.htm)</p>	<ul style="list-style-type: none"> Be an active ABVE Associate Member. Hold a Master's or Doctorate degree from an accredited institution in human service field specializing in vocational rehabilitation, psychology, vocational counseling, etc. Have specific training and experience in such areas as assessment, functional capacity measures, psychological testing and measurement, job analysis, job placement, job surveys, and have experience providing testimony in these areas 	<ul style="list-style-type: none"> Display knowledge and expertise within a submitted forensic work product; and Submit application and fees of \$225 Attain a passing score on the ABVE examination. Sign and adhere to the ABVE Code of Ethics. 	<ul style="list-style-type: none"> Professionals in rehabilitation, psychology, economics and various aligned disciplines and in assessment, counseling and consulting who are associate or student members of ABVE

Exhibit 4-12: Professional Certification Organizations (Cont.)

Certifying Bodies	Minimum qualifications required to apply for certification	Requirements to Obtain Certification	Types of People who Obtain Certification
<p>Commission on Rehabilitation Counselor Certification (CRCC) (http://www.crccertification.com/pages/aboutcertification/46.php)</p>	<ul style="list-style-type: none"> • Master’s in Rehabilitation Counseling from an accredited or non-accredited program, OR a Master’s in Counseling that includes one graduate-level course on Theories and Techniques of Counseling from a college or university accredited by CHEA. • Doctorate in Counseling or Rehabilitation Counseling that includes one graduate-level course on Theories and Techniques of Counseling from a college or university accredited by CHEA - PLUS ONE graduate-level course on Medical or Psychosocial and Cultural Aspects of Disabilities. • Students enrolled in Master’s degree program accredited by CORE with 75% of coursework completed by February 1 for March test; by June 1 for July test; by September 1 for October test. • Former CRCs wishing to restore expired certification status. Master’s degree in counseling that includes one graduate-level course on Theories and Techniques of Counseling – college or university accredited by CHEA. • Master's, Specialist, or Doctoral degree in one of thirteen qualifying majors granted by a college or university accredited by CHEA - PLUS a post-graduate advanced certificate or degree that includes a minimum of 18 semester hours or 27 quarter hours granted by a college or university that also offers a CORE-accredited Master's degree in Rehabilitation Counseling. 	<ul style="list-style-type: none"> • Submit the CRC application packet and all required fees • Take the certification exam and achieve a passing score 	<ul style="list-style-type: none"> • Professionals in Rehabilitation Counseling

Exhibit 4-12: Professional Certification Organizations (Cont.)

Certifying Bodies	Minimum qualifications required to apply for certification	Requirements to Obtain Certification	Types of People who Obtain Certification
<p>Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) (http://resna.org/)</p>	<ul style="list-style-type: none"> • Bachelor Degree or higher in a Rehab Science + .50 FTE in AT direct consumer-related services for at least 2 years within the past 5 years. • Bachelor Degree or higher in a Rehab Science + .25 FTE in AT direct consumer-related services for at least 3 years within the past 5 years. • Associate Degree in a Rehab Science + 1 FTE in AT direct consumer-related services for at least 2 years within the past 5 years. • Associate Degree in a Rehab Science + .50 FTE in AT direct consumer-related services for at least 3 years within the past 5 years. • Bachelor Degree or higher in a Non-Rehab Science + .50 FTE in AT direct consumer-related services for at least 4 years within the past 5 years. • Associate Degree in a Non-Rehab Science + 1 FTE in AT direct consumer-related services for at least 4 years within the past 5 years. • Associate Degree in a Non-Rehab Science and .50 FTE in AT direct consumer-related services for at least 5 years within the past 6 years. • High School Diploma or GED or higher, and 1 FTE in AT direct consumer-related services for at least 2 years, and completion of at least 30 contact hours of training/education in AT. 	<ul style="list-style-type: none"> • Completion of ATP application and submission to RESNA, along with \$500 payment. • Review by RESNA office to verify eligibility. • Must pass a 200 item multiple choice test 	<ul style="list-style-type: none"> • Professionals in rehabilitation science

Exhibit 4-12: Professional Certification Organizations (Cont.)			
Certifying Bodies	Minimum qualifications required to apply for certification	Requirements to Obtain Certification	Types of People who Obtain Certification
<p>Board of Certification in Professional Ergonomics (BCPE) (http://www.bcpe.org)</p>	<p>Eligibility for professional practice designation:</p> <ul style="list-style-type: none"> • A master’s degree in human factors/ergonomics or an equivalent educational background in the life sciences, engineering sciences and behavioral sciences to comprise a professional level of ergonomic education. • Three (3) years of full-time professional practice in human factors/ergonomics. • A passing score on the CPE/CHFP/CUXP written examination. <p>Eligibility for associate practice designation:</p> <ul style="list-style-type: none"> • A bachelor’s degree from an accredited university. • At least 200 contact hours of ergonomics training. • Two (2) years of full-time practice in ergonomics. • A passing score on the CEA written examination.* <p>Eligibility for interim designation:</p> <ul style="list-style-type: none"> • Meets the education requirement for CPE/CHFP/CUXP certification (MS in human factors/ergonomics or related field). • Achieves a passing score on Part I ("Basic Knowledge" of human factors/ergonomics) of the CPE/CHFP/CUXP examination. • Is currently working toward fulfilling the requirement of three years full-time experience as a human factors/ergonomics professional. 	<ul style="list-style-type: none"> • Must submit an application and fees to take the examination four months prior to an examination date. • Must pass one of two written examinations for BCPE certification. One is for the CPE/CHFP/CUXP credential, (AEP/AHFP/AUXP candidates take part I of the CPE/CHFP/CUXP written examination). One is for the CEA credential. Both examinations include information spanning the categories and topics of the Ergonomist Formation Model, as well as the knowledge, skills, and experience identified by previously done job/task analyses. <p>The certification examination is designed to examine fundamental knowledge in ergonomics and application skills. The exam is comprised of multiple-choice questions and essay questions.</p>	<ul style="list-style-type: none"> • Practitioners of human factors or ergonomics • Engineering, cognitive, perceptual, and experimental psychologists

Exhibit 4-12: Professional Certification Organizations (Cont.)			
Certifying Bodies	Minimum qualifications required to apply for certification	Requirements to Obtain Certification	Types of People who Obtain Certification
<p>The American Board for Occupational Health Nurses (ABOHN) (http://www.abohn.org/)</p>	<p>For the Certified Occupational Health Nurse (COHN) certification:</p> <ul style="list-style-type: none"> • Must have a registered nurse license • Must have 3,000 hours of occupational health work experience in the past five years; OR completed a certificate program in occupational health nursing for academic credit. <p>For the Certified Occupational Health Nurse-Specialist (COHN-S) certification:</p> <ul style="list-style-type: none"> • Must have Bachelor's Degree or higher • Must have 3,000 hours of occupational health work experience in the past five years; OR completed a certificate program in occupational health nursing for academic credit; OR completed a graduate level education with a concentration in occupational health. <p>For the Case Management certification:</p> <ul style="list-style-type: none"> • Must be a current holder of either the COHN or COHN-S certification • Must have a registered nurse license or international equivalent • Must have 10 documented contact hours of occupational health nursing case management continuing education earned within the five-years prior to the application <p>For the Safety Management certification:</p> <ul style="list-style-type: none"> • Must be a current holder of either the COHN or COHN-S certification • Must have current position with at least 25% safety activities • Must have 50 contact hours of safety-related continuing education • Must have 1000 hours of safety experience in the most recent five years. 	<p>For the Certified Occupational Health Nurse (COHN) certification:</p> <ul style="list-style-type: none"> • Must submit a completed application for \$125 • Must pay examination fee of \$350 • Must receive passing score on the exam of 150 multiple choice questions <p>For the Certified Occupational Health Nurse-Specialist (COHN-S) certification:</p> <ul style="list-style-type: none"> • Must submit a completed application for \$125 • Must pay examination fee of \$350 • Must receive passing score on the exam of 150 multiple choice questions <p>For the Case Management certification:</p> <ul style="list-style-type: none"> • Must submit a completed application for \$125 • Must pay examination fee of \$150 • Must receive passing score on the exam of 100 multiple choice questions <p>For the Safety Management certification:</p> <ul style="list-style-type: none"> • Must submit a completed application for \$125 • Must pay examination fee of \$275 • Must receive passing score on the exam of 200 multiple choice questions 	<ul style="list-style-type: none"> • Occupational Health Nurse, Case Managers, Registered Nurses, Occupational Safety and Health Administration (OSHA) professionals, Occupational Therapists, Clinical Services Nurse, Licensed Practical Nurses (LPNs), or licensed vocational nurses (LVNs)

Exhibit 4-12: Professional Certification Organizations (Cont.)			
Certifying Bodies	Minimum qualifications required to apply for certification	Requirements to Obtain Certification	Types of People who Obtain Certification
<p>HR Certification Institute (http://www.hrci.org)</p>	<p>Professional in Human Resources Eligibility:</p> <ul style="list-style-type: none"> • 1 year of demonstrated professional HR experience with a Master’s degree or higher • 2 years of demonstrated professional HR experience with a Bachelor’s degree • 4 years of demonstrated professional HR experience with less than a Bachelor’s degree <p>Senior Professional in Human Resources Eligibility:</p> <ul style="list-style-type: none"> • 4 years of demonstrated professional HR experience with a Master’s degree or higher • 5 years of demonstrated professional HR experience with a Bachelor’s degree • 7 years of demonstrated professional HR experience with less than a Bachelor’s degree <p>Global Professional in Human Resources Eligibility:</p> <ul style="list-style-type: none"> • 2 years of demonstrated global professional HR experience with a Master’s degree or higher • 3 years of demonstrated professional HR experience (with 2 of the 3 being global HR experience) with a Bachelor’s degree • 4 years of demonstrated professional HR experience (with 2 of the 4 being global HR experience) with less than a Bachelor’s degree <p>Eligibility in California:</p> <ul style="list-style-type: none"> • To apply, you must have a current PHR or SPHR. 	<ul style="list-style-type: none"> • Must submit an exam application and fee. • Must receive passing score on the exam on the exam given for each of these certifications 	<ul style="list-style-type: none"> • Human Resource professionals
<p>Certification of Disability Management Specialists (CDMS) Commission (http://www.cdms.org/eligibility.php)</p>	<ul style="list-style-type: none"> • A bachelor’s degree in any discipline or a current state license as a Registered Nurse • A minimum of 12 months of acceptable full-time employment (or its equivalent) providing direct disability management services to individuals with disabilities receiving benefits from a disability compensation system. 	<ul style="list-style-type: none"> • Submit the application packet and fees of \$385 • Take the certification exam and receive a passing score 	<ul style="list-style-type: none"> • Disability Management Specialists

Exhibit 4-12: Professional Certification Organizations (Cont.)

Certifying Bodies	Minimum qualifications required to apply for certification	Requirements to Obtain Certification	Types of People who Obtain Certification
<p>American Board of Physical Therapy Specialties [ABPTS] (http://www.apta.org/AM/Template.cfm?Section=ABPTS1&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=42&ContentID=14391)</p>	<ul style="list-style-type: none"> • Certification is provided in 8 specialty areas of: Cardiovascular & Pulmonary, Clinical Electrophysiologic, Geriatrics, Orthopaedics, Pediatrics, Neurology, Sports, and Women’s Health • Must hold a current license to practice physical therapy in the United States, the District of Columbia, Puerto Rico, or the Virgin Islands • Evidence of a minimum of 2,000 hours of clinical practice in the specialty area, 25% of which must have occurred within the last 3 years. • Direct patient care must include activities in each of the elements of patient/client management applicable to the specialty area and included in the Description of Specialty Practice • Practice elements of patient/client management as defined in the <i>Guide to Physical Therapist Practice</i> <p>Other requirements specific to the specialty such as: Emergency care certification, ACLS certification, Patient reports, Case reflections</p> <ul style="list-style-type: none"> • Clinical Residency -A planned program of post-professional clinical and didactic education that is designed to advance significantly the physical therapist's <i>preparation</i> as a provider of patient care services in a defined area of clinical practice. Specialty councils may allow completion of an APTA-credentialed clinical residency to replace all or a portion of the practice eligibility requirements. 	<ul style="list-style-type: none"> • Must submit an application and pay an application review fee: \$845 or \$500 if you’re an American Physical Therapy Association (APTA) member • Must pay an examination fee: \$1,525 or \$800 if you are an APTA member • Must receive passing score on the exam 	<ul style="list-style-type: none"> • Physical Therapists

Exhibit 4-12: Professional Certification Organizations (Cont.)

Certifying Bodies	Minimum qualifications required to apply for certification	Requirements to Obtain Certification	Types of People who Obtain Certification
<p>National Cancer Registrars Association [NCRA] (http://www.ctrexam.org)</p>	<ul style="list-style-type: none"> • Obtain an Associate’s Degree or equivalent (60+ college-level credits) • Complete two semesters of Human Anatomy and/or Physiology • and One year (1,950 hours) of experience in the cancer registry field <li style="text-align: center;">OR • Completion of NCRA-Accredited formal education degree program • 160-hour practicum in a Certified Tumor Registrar(CTR)-staffed cancer registry <li style="text-align: center;">OR • Obtain an Associate’s Degree or equivalent (60+ college-level credits) • Completion of NCRA-Accredited formal education certificate program • 160-hour practicum in a CTR-staffed cancer registry 	<ul style="list-style-type: none"> • Must submit an application by application deadline • Must pay an examination application fee of \$255 for NCRA members or \$375 for non-NCRA members • Complete the computer-administered exam and receive a passing score of at least 175 items correct (out of a total of 250 questions) 	<ul style="list-style-type: none"> • Tumor Registrars (data entry)
<p>American Health Information Management Association [AHIMA] – Registered Health Information Technician [RHIT] (http://www.ahima.org/certification/)</p>	<ul style="list-style-type: none"> • Successfully complete the academic requirements, at an associate's degree level, of a Health Information Management (HIM) program accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) <li style="text-align: center;">OR ▪ Graduate from an HIM program approved by a foreign association with which AHIMA has a reciprocity agreement 	<ul style="list-style-type: none"> • Must submit an application along with necessary paperwork, such as transcripts • Must pay an examination fee: \$229 for AHIMA members and \$299 for non-members • Take the exam and receive a passing score 	<ul style="list-style-type: none"> • Health Information Technicians (data entry)

Here are a few definitions of the various types of professionals that often receive these certifications:

- **Occupational therapists** help patients improve their ability to perform tasks in living and working environments. They work with individuals who suffer from a mentally, physically, developmentally, or emotionally disabling condition. Occupational therapists use treatments to develop, recover, or maintain the daily living and work skills of their patients. The therapist helps clients not only to improve their basic motor functions and reasoning abilities, but also to compensate for permanent loss of function. The goal is to help clients have independent, productive, and satisfying lives.
- **Rehabilitation counselors** assist people with physical, mental, developmental, cognitive, and emotional disabilities to achieve their personal, career and independent living goals in the most integrated setting possible. They engage in a counseling process with those they assist, which includes communication, goal setting, and beneficial growth or change through self-advocacy, psychological, vocational, social and behavioral interventions. Rehabilitation counselors utilize many different techniques and modalities, including assessment, diagnosis and treatment planning, counseling, case management, and advocacy to modify environmental and attitudinal barriers, placement-related services, and utilization of rehabilitation technology.
- **A Vocational Expert** is an expert in the areas of vocational rehabilitation, vocational and earning capacity, lost earnings, cost of replacement labor and lost ability/time in performing household services. They perform evaluations for purposes of civil litigation, as an aspect of economic damages.
- **Disability Management Specialists** manage Disability Specialists. Disability Specialists determine whether an individual is eligible for disability services. Disability Specialists normally evaluate a person's medical records, psychological tests and other data during this determination process. A Disability Specialist is responsible for reviewing disability documentation to determine eligibility, maintaining and reviewing current cases, providing support and problem-solving assistance, helping people understand their disabilities and delivering formal training to staff.
- **An Assistive Technology Professional (ATP)** analyzes the needs of consumers with disabilities, assists in selection of appropriate assistive technology for the consumer's needs, and provides training in the use of the selected device(s).
- **An Ergonomist or Human Factors Expert** specializes in designing comfortable and efficient tools, equipment, and furniture for offices and factories. A professional considers human anatomy and the safety of workers to craft items that minimize physical strain.
- **Physical Therapists** diagnose and treat individuals of all ages who have medical problems or other health-related conditions, illnesses, or injuries that limit their abilities to move and perform functional activities as well as they would like in their daily lives. Physical therapists examine each individual and develop a plan using treatment techniques to promote the ability to move, reduce pain, restore function, and prevent disability. In addition, Physical therapists work with individuals to prevent the loss of mobility before it occurs by developing fitness and wellness-oriented programs for healthier and more active lifestyles.

- **Licensed practical nurses (LPNs), or licensed vocational nurses (LVNs)**, care for people who are sick, injured, convalescent, or disabled under the direction of physicians and registered nurses. LPNs care for patients in many ways. Often, they provide basic bedside care. Many LPNs measure and record patients' vital signs such as height, weight, temperature, blood pressure, pulse, and respiration. They also prepare and give injections and enemas, monitor catheters, dress wounds, and give alcohol rubs and massages. To help keep patients comfortable, they assist with bathing, dressing, and personal hygiene, moving in bed, standing, and walking. They might also feed patients who need help eating. Experienced LPNs may supervise nursing assistants and aides.
- **Registered nurses (RNs)**, regardless of specialty or work setting, treat patients, educate patients and the public about various medical conditions, and provide advice and emotional support to patients' family members. RNs record patients' medical histories and symptoms help perform diagnostic tests and analyze results, operate medical machinery, administer treatment and medications, and help with patient follow-up and rehabilitation.
- **Certified Tumor Registrars** are certified to enter data regarding cancer patients, their medical information, and their treatment into large databases. These individuals work in a medical setting, typically in a hospital, and are responsible for entering cancer-related information into the Cancer Registry. This certification is relevant to SSA because these individuals are trained to ensure the quality, completeness, and accuracy of database records. Job analysts for SSA will need to enter the job analysis data that they collect into a database with a very high level of quality and complete accuracy.
- **Health Information Technicians** are trained to enter medical records into databases. They are responsible for coding medical data and entering it into relevant databases. Often times, these are large, national databases that require a high level of accuracy and quality of information entered. Like with Certified Tumor Registrars, it is imperative that these individuals enter high quality, accurate data into the databases for which they work.

Chapter 5: Results of Recruitment Practices Research

5.1 Focus of Research

To uncover best practices and real-world tested solutions to the range of challenges that SSA will face in recruiting, selecting, training, and maintaining a cadre of qualified job analysts, ICF conducted case-study interviews with experienced HR personnel and/or managers at six partner organizations. These case studies were intended to gather information on the recruiting practices of these benchmarking partners to include information on the strategies used specifically for recruiting job analysts, conducting large-scale recruitment, conducting geographically dispersed recruitment, recruiting for temporary or on-call work, recruiting resources and logistics and compensation. The findings from interviews with the selected benchmarking partners are presented in this chapter.

5.2 Partner Selection

Partner organizations included:

- Unum, a private disability insurance organization
- SAIF, a non-profit worker's compensation insurance organization,
- BTE, an occupational service provider
- California State Personnel Board, a state government agency
- Jefferson County Personnel Board a state government agency

These organizations were selected based on their potential to offer insight into one or more of several challenging aspects of SSA's planned recruitment effort. Exhibit 5-1 below provides an overview of the breadth of expertise covered by the selected benchmarking partners.

Partner Organization	Recruit/train job analysts	Nationwide Recruiting/training	High volume recruiting/training	Quick turnaround recruiting/training	Temp/Seasonal/On-call recruiting	Maintain cadre of trained staff
US Census Bureau		✓	✓	✓	✓	
BTE Technologies	✓	✓		✓		✓
Unum	✓	✓	✓		✓	✓
SAIF Corporation	✓				✓	✓
California State Personnel Board	✓				✓	
Jefferson County Personnel Board	✓			✓		

In addition to interviews with these six organizations, we also gathered information through web searches on recruitment practices of OPM and the Department of Labor (DOL).

5.3 Review of Partner Practices

This section describes the recruitment practices, key findings and lessons learned from each of the benchmarking partners.

5.3.1 U.S. Census Bureau

The U.S. Census Bureau is responsible for undertaking the enormous challenge of counting every human being in the country. Although 74% of Americans returned their 2010 Census forms in the mail, the remaining 26% must be counted by more than 500,000 enumerators who go door to door to ask non-responders how many people are living in their homes. In total, Census hired more than one million people for the 2010 Census including supervisors, regional managers, and address canvassers (to ensure all the addresses actually exist). This effort, though conducted on a far greater scale to that of SSA's task, makes the Census Bureau the government agency with the most expertise in high-volume, quick-turnaround, nationwide recruitment for less than full-time positions.

ICF conducted a joint interview with several members of the Census Bureau's leadership involved in recruitment and selection. Some participants contributed to the development of the recruitment and selection practices used to recruit all positions needed for the 2010 Decennial Census. Others were more involved in planning and developing HR infrastructure and information systems. Their combined feedback is provided below.

5.3.1.1 Recruitment Process Overview

The recruitment process for the 2010 Census began in 2008 when the Bureau's 12 regional offices each established a Regional Census Center (RCC). Each RCC has Recruiting Coordinators who are responsible for recruitment in that area and are trained on the Bureau's processes and recruitment needs. These Recruiting Coordinators provided support for 494 Local Recruiting Offices (LRO) across the country. Each LRO had an Assistant Recruiting Manager who oversaw teams of Recruitment Assistants (about 8,000 FTEs nationwide) who used their local knowledge to recruit census workers in each area.

The Census Bureau's recruitment strategy depends upon a diverse marketing campaign with multiple points of impact. The Bureau placed a great deal of importance on recruiting locally because they felt that residents would be more willing to provide information to someone who seemed to share their local culture. They utilized partnerships with state and local entities (e.g. DOL, unemployment offices) and community-based organizations (e.g. churches). At the same time, they recognized the economies of scale gained from recruiting tools with a national reach. They had a jobs website with extensive information and features such as video vignettes on different types of jobs, information on the application process, and practice selection tests. They planned large national advertising campaigns as well, but when job applications poured in nationwide, much of this funding was diverted to local newspaper ads and even door-to-door recruitment in harder to reach areas.

For the 2010 Census, the Census Bureau expected a few million applicants to fill about 1 million positions. The recruitment process was broken up into two waves: Early Operations Recruiting (EOR) and Peak Operations Recruiting (POR). Their goal was to recruit approximately 700,000 people for 140,000 positions during the EOR period and up to 3.8 million applicants during the POR period to fill the remaining positions. However, due to high unemployment across the country at that time, they received about 1.2 million applicants during the EOR period and shut down EOR several weeks early.

All applicants for decennial census positions must take an assessment, which is then scored to determine who is hired. The test is designed to measure knowledge, skills, and abilities required to perform a variety of census jobs. The test comprises several parts including clerical skills, reading, number skills, evaluating alternatives, and organizational skills. It is estimated that the Census Bureau has tested about 1 in 60 adults in the nation.

5.3.1.2 U.S. Census Bureau Key Findings

The Census Bureau has learned that recruitment of a large number of people in a short period of time presents some unique challenges that demand targeted strategies to overcome them. One of the greatest challenges is created by their need to operate and recruit locally. While they had little trouble attracting a large number of applicants in a weak economy, it proved more challenging to recruit *local* applicants in every area. In order to track their progress, they established recruitment goals as specific as the tract level (a tract is about 4,000 homes). This allowed them to allocate resources to areas most in need. They also realized the importance of recruiting and hiring people in a short period (about 6 months); a longer recruitment process would mean many applicants would move on and find other jobs. To expedite the process, they targeted former government employees who would have already had background checks and other credentials to be hired quickly. It should be noted that background checks are dependent on the organization's requirements and are not tied to requirements for job analysts specifically. Another challenge with their demographic was that Census work would make many of their potential candidates ineligible for benefits such as TANF or Medicaid. Obtaining waivers with those agencies was integral to their ability to recruit in less populated and less affluent areas.

The participants emphasized that large-scale recruitment requires that an agency get the word out in whatever way it can, at as little cost as possible. Because they had the advantage of offering numerous low-skilled jobs in a time of high unemployment, much of their advertising came in the form of free press in newspaper or television features. They anticipated that people who saw these stories would share them with others they thought could be a fit for a census worker position, magnifying the impact of the message. The Census Bureau website was another marketing tool that provided detailed information to those interested in learning more. Though it can be costly to develop such a site, the broad reach of the site is often worth the expense. One affordable way to reach potential candidates is to partner with leaders and organizations, such as the Department of Labor, in communities around the country who can get the word out and help an agency target viable candidates. In rural areas where recruiting is more difficult, local media buys on radio stations, in newspapers, in "pennysavers" as well as direct mail post cards can be effective.

Another challenge facing Census Bureau—one potentially shared by SSA—is the need to recruit less than full-time employees. When targeting individuals amenable to temporary or intermittent work, the participants recommended pursuing professionals who are already employed or retired and would be interested in doing this for extra income. In their experience, these individuals are more likely to stay around for the length of the engagement as opposed to the unemployed who will likely continue to look for work and leave if they find a permanent opportunity. Surprisingly, people who are looking for supplemental work are often more engaged because they see the work as part of their civic duty, rather than simply a source of income. When advertising for these positions, the Bureau emphasizes competitive pay, flexible hours, paid training and travel, and working close to home.

When hiring less than full-time employees, it is important that employees understand the terms and restrictions under which they are hired. The participants stressed the importance of selecting the appropriate hiring authority for these recruitment efforts. Under the "Schedule A" authority used to hire census workers, the employees must sign a document acknowledging that the position is temporary (limited to a certain time period) and that they cannot legally work over a certain number of hours per

week. Regardless of which hiring authority is chosen, it is important to clearly articulate to employees if there is a fixed end date to their employment and whether there is an opportunity to move into a more permanent position.

The challenges inherent in recruiting large volumes of temporary workers are daunting enough, but hiring *professional level* staff on a temporary basis requires a more rigorous selection process. In each Local Census Office, they hired six Managers and one Administrative Assistant. Unlike with the enumerator positions, these positions were benefits eligible and had the possibility of being extended up to four years once the initial term of one year ended. They often posted these positions on local job sites and partner websites, but were later required to post them through USAJOBS. They staggered the job postings into multiple waves in order to manage the heavy volume of applications. Job announcements contained the specific KSAs for each position and questions that applicants had to answer to demonstrate that they possessed those KSAs. They utilized a decentralized evaluation process whereby Human Resource Managers and other SMEs at each RCC evaluated the applicants based on a rating scale developed by the Bureau.

For both the field staff and the professional staff, the logistical considerations involved in recruitment are immense. The Census Bureau has a dedicated logistical branch as well as a National Processing Center to process the selection tests given to applicants. They had to coordinate recruitment and testing with all of the regional managers and their assistants and provide them with thousands of tests in a number of languages. They had to hire someone to create advertising collateral and provided kits to the offices to advertise locally. Entering test data into the database proved to be an enormous undertaking as well—a task made more difficult by the fact that applicant information was often incomplete. According to the participants, the greatest logistical challenge was getting tests and supplies to the local offices so that testing could be completed on time.

Of course, recruitment and selection was not the only logistical challenge. Tracking candidates from application through termination required reliable software systems and processes. An integrated HR information system tracks a candidate's personal information (e.g. name, DOB, SSN, address, contact info, fingerprints) as well as his or her qualifications and scores on selection assessments. Once a candidate passes the background check and assessment, he or she can be selected for a position. A hiring manager will key in a geographic area and all the available candidates in that area are presented. The database maintains their information through employment and even after termination so that they might be called on again for future census operations. Despite the many challenges, there were no major issues with the system beyond data entry errors. Census did not have an online application process for most positions, but they are in the process of developing one. This online application will reduce data entry errors, reduce costs, save time, and allow them to conduct a timed selection test.

Compensation of census workers is another important consideration that required careful analysis. Because the Census Bureau hires locally, pay rates were based on an analysis of labor markets in each geographic area. To ensure rates were appropriate, they hired a contractor to research pay rates based on Bureau of Labor Statistics data. Employees were paid a flat hourly rate regardless of what tasks they did on any given day; however, some positions had a training pay rate and then a higher rate after employees completed training. Additionally, employees were reimbursed for expenses such as travel mileage (at GSA rate), phone calls, and limited incidental purchases (e.g. maps) if approved.

5.3.1.3 U.S. Census Bureau Lessons for SSA

As the civilian government agency with perhaps the most experience with large scale recruitment and selection, the Census Bureau was an obvious choice as a case study partner for SSA. At the same time, the scale of SSA's planned recruitment is a fraction of that required for the decennial census. It is

important to keep in mind that the Census Bureau's scale and funding allow them to pursue courses that might not be practical or affordable on a smaller scale. Nevertheless, the lessons they have learned from numerous iterations of the Census clearly hold value for SSA as it plans its own recruitment effort. However, a GAO report published in 2007 showed just how far the Bureau has to go to bring its recruitment, selection, and training practices in line with best practices in human capital management⁹⁴. Findings of that report are included here along with the lessons of the interview itself.

One notable aspect of the decennial census recruiting process is the ability of the Bureau to stand up a nationwide government bureaucracy to manage recruitment, selection, and training of a million or more people in a little over a year. However, their success in doing this is largely attributable to the fact that they have been using the same procedures for many years and they pilot test those procedures on a yearly basis.

SSA faces time pressure to move quickly to ramp up recruitment of job analysts to populate the Occupational Information System. The Census Bureau's results show that high volume, temporary recruitment can be accomplished on a national scale in a relatively short period of time. Their experience also demonstrates the logistical challenge of this process. To manage this decennial behemoth, the Census Bureau uses hierarchical management, standardized forms and processes, and clearly defined roles.

As discussed in more detail above, the Bureau establishes recruiting goals from the national level down to the tract level (about 4,000 homes) and builds a recruitment hierarchy in line with these goals. Recruiters in Local Recruiting Offices are supported by Regional Census Centers who then report to Census HQ. While SSA is likely to require a fraction of the Census Bureau's recruitment staff, there are good reasons to pursue a regionalized, and possibly even localized, recruitment strategy. As the job analyses will need to be implemented nationwide, having personnel around the country to perform the work would save the travel cost of sending people from a central location each time an analysis is required. Furthermore, as the Census Bureau has discovered, people are more likely to be forthcoming when speaking to someone they see as familiar in terms of culture and lifestyle. Sending a highly educated psychologist or vocational expert from a Northeastern city to a food processing plant in the rural Midwest might not elicit the most honest responses in a job analysis interview. In addition, as detailed in the preceding section, local recruiting will likely be more fruitful in attracting and maintaining a cadre of professionals who are looking for extra income through temporary or on-call work.

It might not be immediately obvious why the Census Bureau could not simply maintain one centralized recruitment office that posts job openings nationwide (similar to USAJOBS). There are two key reasons for this. First, posting an opening nationwide does not yield a uniform distribution of applications. Applications pour in from urban areas where population density is high, but more remote areas may see few, if any qualified applicants, which is clearly unacceptable to the Census Bureau as they must enumerate the populace regardless of where they live. The second reason is that the Census Bureau uses paper and pencil selection tools. Every decennial census jobseeker must find a Local Recruitment Office (or an auxiliary facility supplied by the LRO) to take the test by hand. This approach requires the Bureau to have a physical presence nationwide, adding to recruitment costs. The physical presence also helps them to engage local community-based organizations to facilitate recruitment.

⁹⁴ U.S. Government Accountability Office. 2007. 2010 Census: Census bureau should refine recruiting and hiring efforts and enhance training of temporary field staff (GAO Publication No. GAO-07-361). Washington, DC: Author. Retrieved from: <http://www.gao.gov/new.items/d07361.pdf>

If SSA elects to recruit an entirely new network of job analysts (as opposed to tapping into an existing network), they will have to consider whether to pursue a localized approach like the Census Bureau, or a more centralized approach. If SSA could avoid reliance on paper-based selection tools, the most efficient option may be to recruit centrally but to target specific areas of the country based on projected need. Postings could be made through Federal recruitment websites (e.g. USAJOBS), trade publications, as well as local newspapers or job boards in harder to reach areas. SSA's own website could help to get the word out as well given that many of the practitioners SSA is likely to target for recruitment are apt to visit the website regularly for professional purposes. As the Census Bureau learned during the most recent decennial census, it is never clear from the outset how difficult recruitment will be in any given area, so a flexible approach to management of recruitment resources is essential. SSA could potentially pursue a multi-wave recruitment effort, as the Bureau did, by recruiting broadly initially and then diverting resources to more challenging areas for the second wave.

Whether the final approach is centralized or regionally distributed, candidate tracking will be essential to the recruitment and maintenance of an analyst network. The Census Bureau's experience demonstrates the importance of having an automated tool for this purpose. In addition to holding basic personal information, the Bureau's tracking system contains selection test scores (to allow for candidate ranking) as well as information on a candidate's progress in completing background checks and any other processes to be hired. Once all of the requirements are met, it automatically adds their name to a searchable database for recruiters. Such a system would certainly make SSA's task easier, and one could imagine several potential improvements to tailor the system to their purposes. First, it could hold detailed qualifications on applicants (e.g. degrees, certifications, years of experience) to assist in selecting analysts. It could go even further by maintaining information on analysts as they progress through training and enter the field. The system could show what lessons they have completed, whether they have received their certificate, and how many analyses they have completed in the field. If SSA adopts an audit process, this could be integrated into this system by maintaining performance ratings on each analyst. One of the chief concerns of the GAO panel that evaluated the Census Bureau's recruitment practices was that they gave preference to prior employees when hiring but did not maintain details on the quality of their prior work⁹⁵. By tracking this information, SSA could ensure that analysts who do not achieve performance standards are not referred for further analyses. The draft Candidate Tracking Database that was developed as part of Call Order 002 includes many of these recommended features.

The Census Bureau effort also parallels SSA's challenge in the need to determine regionally appropriate compensation rates. The participants on the call did not have intimate knowledge of the analysis that was conducted to establish these rates, but they did indicate that a contractor analyzed national compensation figures from the Bureau of Labor Statistics. The case studies conducted by ICF for this report provide some anecdotal evidence of pay rates for professionals who perform work related to job analysis, but SSA may require a separate study to determine appropriate rates in areas across the country. The Census Bureau allows census offices to request higher pay rates in areas that are more difficult to recruit from, a strategy SSA could also employ to refine pay rates. The interview participants repeatedly emphasized that competitive pay was integral to their ability to recruit large numbers of employees in a short time.

The group did not have time to independently discuss their training efforts, but the GAO report contained some important suggestions for improvement that SSA should bear in mind as well if they pursue a regionally-based training approach. The report criticized the Bureau for utilizing essentially the same verbatim training approach they had used for decades in which crew leaders read from a script with little interaction on the part of the students. Prior research showed students dozing off during training and

⁹⁵ U.S. Government Accountability Office. 2007. 2010 Census: Census bureau should refine recruiting and hiring efforts and enhance training of temporary field staff (GAO Publication No. GAO-07-361). Washington, DC: Author. Retrieved from: <http://www.gao.gov/new.items/d07361.pdf>

failing to learn important concepts. The Bureau claims this approach is necessary to ensure consistency across 40,000 simultaneous training sessions conducted by crew leaders with little experience.

The report authors recommended including visual aids and other interactive elements to improve trainee engagement, but computers and audio/visual equipment are not always available at all of the training locations. To address this problem, the authors recommended providing DVDs for home study or utilizing web-based modules. Or, if only a few locations lack the required equipment, the trainees could be brought to a local census office to view the material. Above all else, the report recommended that the Bureau evaluate the effectiveness of its trainings and explore alternative approaches. This recommendation is perhaps the most important lesson for SSA on the subject. Whatever research might go into developing training, it does not eliminate the responsibility to evaluate its effectiveness and consider modifications when necessary.

Lastly, the authors of the GAO report emphasized the need for the training to focus more on the specific challenges facing the enumerators and to incorporate some flexibility for regional variations in these challenges⁹⁶. Census training placed little emphasis on important skills such as overcoming resistance to participation, a skill that could also benefit SSA analysts. Without preparation for these situations, staff could develop their own inconsistent and potentially detrimental methods. Similarly, training should address regional and industry-specific obstacles such as the availability of workers during different seasons.

5.3.2 BTE Technologies

BTE Technologies made its name in the evaluation and rehabilitation marketplace by developing advanced physical therapy, occupational therapy, and athletic training equipment to be used in a variety of settings to include hospitals, physiotherapy clinics, occupational therapy offices, and athletic training facilities. To complement and promote the use of their various systems and equipment for measuring body movements, they have instituted a separate line of business known as Employer Payer Services (EPS). The EPS division leverages BTE's web-based software and measurement technology to provide employers and insurers with integrated solutions to address injury prevention, functional baseline, recovery tracking and return-to-work.

ICF conducted a phone interview with two members of BTE's leadership: the Senior Vice President of Operations for the EPS division, and a Resident Government Specialist. The Senior Vice President of Operations oversees the EPS division, including the recruitment and management of internal clinical staff who perform the PDAs and the provider network responsible for FCEs. The role of the Government Specialist is to develop customized programs for insurance and disability assessment at government employers, such as the Veterans Administration. She does not perform job analyses directly in her current role, but performed them for several years in clinical settings during a prior role.

5.3.2.1 Job Analysis Overview

The EPS division of BTE has recruited and trained a clinical staff of occupational therapists (OTs) and kinesiologists who are experts in job evaluation and who work at the employer locations to define and measure job demands by Essential Function using BTE's systems and technologies. The first step in their overall model, the most important step as far as SSA is concerned, consists of a PDA using BTE's proprietary equipment and evaluation systems. A PDA is one type of job analysis that focuses on

⁹⁶ U.S. Government Accountability Office. 2007. 2010 Census: Census bureau should refine recruiting and hiring efforts and enhance training of temporary field staff (GAO Publication No. GAO-07-361). Washington, DC: Author. Retrieved from: <http://www.gao.gov/new.items/d07361.pdf>

quantifying ergonomic factors such as physical positions, movements and forces exerted by the human body, along with their frequency, during performance of the job. The goal of the PDA is to provide employers with reliable, objective measurements of the physical demand requirements of jobs in order to help them manage a safe and productive work environment through better employee candidate hiring, targeted ergonomic improvements, identified **Process** safety improvement opportunities, and early return-to-work programs⁹⁷.

Of further interest to SSA, BTE maintains a national network of about 300 clinics that perform FCEs, a later step in their overall EPS solution. Although this process focuses more on evaluation of the individual and his or her capacities to perform the work, the development and management of this clinician network has clear implications for SSA's efforts. Development of a referral network of independent clinicians who perform FCEs and job analyses is one approach SSA might take. It is also possible that SSA would contract with a firm such as BTE to make use of their provider network as well as their PDA technology.

5.3.2.2 Recruitment Process Overview

As discussed above, BTE not only recruits internal personnel to perform job analysis and other clinical functions, but they also maintain a provider network of about 300 independent clinics in the field with personnel who are trained to use BTE's technologies and methods. The recruitment process for the in-house clinical staff is relatively straightforward, as the staff is not very large and they typically have few openings. They often use job boards and other widely available web-based job posting sites. When they have identified several potential candidates, they have an internal team that screens the candidates based on each candidate's entire background. BTE typically leans more toward using OTs over physical therapists (PTs) since OTs have more training that focuses on functional assessment and job analysis.

As BTE's process for hiring the in-house staff was largely unremarkable, we elected to focus on the management of the provider network for most of the discussion. Although our contacts provided valuable insights into the challenges of managing such a network, once again, they emphasized that there is no "silver bullet" for recruiting network partners. They have a database of organizations they have sold equipment to, so they generally start there. If they cannot secure enough providers through that, then they search the web and yellow pages for providers in the town and who do the appropriate type of work. BTE's network contract group contacts potential providers and discusses the business opportunity. There is a standard provider agreement that is reviewed and executed. Then the contract group turns the provider organization over to the installation and training side of BTE to schedule an interview. If the clinic has personnel with the required credentials (e.g., PT/OT degrees, clinical experience), BTE negotiates purchase or rental of testing equipment and training of clinical personnel. The personnel must pass a proficiency exam before they receive any referrals for PDAs or FCEs.

5.3.2.3 BTE Technologies Key Findings

Although most of the interview focused on BTE's network of clinicians, the participants did provide some insight into the types of things they looked for in in-house experts who perform PDAs. Ideally, they pursue occupational therapists who have earned an advanced degree in which job analysis was part of the curriculum. Candidates should also have two to four years of clinical experience, preferably with some exposure to common occupational settings (e.g. factories, warehouses). They also consider certified ergonomists, physical therapists and kinesiologists. They point out that although some employees come from a vocational rehab background, a job analysis in a vocational rehab setting is typically performed

⁹⁷ This very clinical type of job analysis is quite different from one that might be conducted in a vocational rehabilitation setting where an evaluator is not so much measuring the demands of the job but soliciting feedback from the worker and employer on what tasks and KSAs are involved.

with nothing more than a checklist and perhaps a measuring tape, as opposed to the PDAs and FCEs that they perform which use sophisticated measuring equipment.

When asked about sources for individuals with qualifications needed to perform the various types of job analyses required, participants reported that there are independent vocational rehab firms or clinical practices with qualified personnel who could likely take four to five hours a week from their usual caseloads to perform job analyses for SSA, though firms would vary in their willingness to allow this. They suggested that SSA would have multiple considerations when deciding how to approach the task of recruiting these individuals, including contacting them individually, partnering with the individual clinics, employing large case management firms such as Coventry or Intracorp, or utilizing a network such as BTE's.

Regardless of the method chosen, there would need to be extensive quality management processes as skill level in job analysis can vary greatly among practitioners based on specialty and how frequently they perform this work. Moreover, ensuring all partners are performing the process the same way is a continuous process that can be resource intensive. For BTE's FCE providers, there is a front end training process, a test administration manual, and a proficiency exam to make sure clinicians understand the key aspects of how to administer the protocol. BTE's proprietary software also helps to ensure that clinicians administer the test in the appropriate order. Then there is a final layer of protection in which the data is uploaded through a secure web portal back to BTE for review. Of course, selecting providers with appropriate qualifications and credentials in the first place is essential. At BTE, providers must have credentials in their individual field (e.g. Master's degree in PT or OT) and must pass BTE's training and certification process.

Although it is rare for BTE to have to add large numbers of network partners in a short period of time, this situation does occur sometimes when they win business with a larger employer with multiple offices. For example, when they secured Canada Post as a client, they had to recruit, place and train upwards of 50 locations in a tight timeframe. In these instances, BTE utilizes teams in multiple offices to identify prospects that have the right credentials to become part of the provider network. They then have separate departments to handle contractual issues, training and deployment. In total, for Canada Post, they were able to establish 30-40 new locations in a two to three month timeframe. However, they had no special method for expediting this process except to allocate additional resources to focus on the effort. The contractual review is time consuming as the signing of the contracts goes through a different department and must be reviewed by attorneys, adding cost and time to the process. The interviewees pointed out that getting the network up and running in that area does not end the challenge, as there is still turnover in providers, and there must always be another person trained, certified, and waiting to take over if necessary.

BTE's training program integrates into a multi-tiered certification program that can span several months in order to ensure providers are performing the work correctly. Level 1 training and certification serves to familiarize the customer with the system and equipment and focuses on basic operation. It is usually conducted in one day at the provider site and combined with the installation process, which allows them to do the certification and perform calibrations and status checks required for some of the equipment. Level 2 certification generally lasts for three days and involves more in-depth tutorials of the equipment as well as discussion of clinical best practices and the scientific basis for the data collection methods. They offer training classes at two major training centers, though sometimes it is more practical for their clinicians to deploy the training at provider locations. Level 3 certification delves further into the nuances of specific tests, and calls on the provider to demonstrate that they can understand and reliably administer a particular test once in the field. They have the trainee perform a "dummy test" on some sample subjects and then advise them on what they did correctly and what they need to work on.

Because interfacing with the equipment is an important element of training, training is generally conducted face to face and hands on, but some of the software training and refresher training can be learned via web-based training or web streaming of the software. One training challenge, especially in remote areas, is that after training, it may be another three to four months before someone receives a case. Honing skills learned in training, possibly through refresher training, is important to ensure providers are well prepared.

As important as training and certification can be, building a competent and loyal network also requires incentives and other means to maintain partner engagement. At BTE, incentives are based on the volume of business the purchasers have coming in. If volumes are higher, purchasers are more willing to do it, so fewer incentives are required. When volumes are lower, as they often are in remote areas, they typically offer higher reimbursement rates. In addition to fees and incentives, there are other ways to keep the network engaged. BTE works to educate providers on how to develop their own business base by leveraging the equipment and the processes they have learned. They also try to provide them more support on the local level in order to help partners differentiate themselves in the market as the provider with the most objective measurements and capabilities.

Incentives can only go so far, however, so BTE uses a proprietary tracking system to monitor referrals from beginning to end. Tracking begins when the referral comes in from a company (employer company, insurance company, etc), and then all the details can be tracked at any given time. Tracked information includes: the type of test (post offer of employment, functional capacity evaluation, fitness for duty), time of appointment, test completed, and receipt of the test report. With the sheer volume of disability assessments they perform and the number of providers performing them, having an automated system can bring clarity, speed and quality to the entire process. They also have an audit system in which there is a clinical review of the test, a score is assigned, and then scores are aggregated to produce a rolling quarterly QA score for each clinician, which must stay above a certain level for them to remain certified. This score is computed using weighted means depending on which various factors are important in the evaluation. BTE reviews every FCE that is submitted, but with some of the tests that are performed in higher volumes, they may only grade a sample of the tests submitted.

Compensation for BTE varies based on a number of factors, including whether it is being performed by one of their in-house staff or a network provider. Depending on their experience, in-house personnel can make \$50,000-\$80,000 per year as a salary. Network providers make a flat fee per assessment and are reimbursed for related travel and business expenses. Fees typically range from \$450-\$750 in the industry. The participants pointed out that having a larger network is preferable from a cost perspective because providers will typically be closer to the job sites, thereby reducing travel reimbursement costs. Fees are typically higher on the coasts where demand is greater and cost of living is higher. They also mentioned that rates would likely be lower for individuals than for larger firms that have profitability built in. The type of the job can affect the cost of the assessment as well, with office jobs generally being fairly simple and more complex mechanical or technical work taking longer to observe the variety of activities performed.

5.3.2.4 BTE Technologies Lessons for SSA

There are lessons for SSA in both the recruitment and selection of BTE's internal clinical experts as well as the management of their network providers. First, from discussion of the internal clinical staff, it became clear that the group of practitioners to target for recruitment is highly dependent on the nature of the job analysis to be performed. As the participants highlighted, BTE's method is more clinical and requires a degree in OT or PT, whereas the vast majority of disability related "job analyses" are conducted for the purposes of vocational rehabilitation and are generally more qualitative and geared toward finding appropriate work for the individual. Though there is some overlap, the skill set involved

can be very different, and SSA will need to carefully consider the content model for their job analysis when targeting their recruitment.

Despite the fact that most of BTE's network clinicians perform a slightly different job function from what SSA might pursue for its job analyst positions, the management of their network holds countless lessons for SSA's own approach. Perhaps the most notable discovery is that it is possible and practical to do so. The report that there are large case management organizations as well as independent clinics that could likely spare some staff hours to perform job analyses for SSA is notable. Although BTE offers one approach to managing a national network, the challenges SSA faces are unique and they will have to consider the factors discussed herein when determining their approach.

One key lesson from BTE's process is that quality assurance (QA) must be integrated into every step of the process, from partner selection, through training, and long after providers are in the field. Given the high stakes involved in SSA's job analyses, it will be even more important for SSA to ensure that analysts have appropriate credentials and knowledge, skills and abilities (KSAs) to perform the job, thoroughly learn the job analysis methodology, and apply that methodology reliably once in the position. One of the unique aspects of BTE's approach is the use of specialized equipment and software to produce more accurate and consistent results, which translates to all aspects of quality assurance in that:

- Providers must have basic technical knowledge in order to operate the equipment,
- Initial and follow-up training ensure proper use of the equipment and software, and
- All evaluations are electronically submitted through the system to BTE for review.

Although BTE's approach to quality assurance involves using sophisticated software, SSA may not need to develop such software to accomplish its goals. SSA should first determine whether this level of detail and consistency is required for SSA's purposes, and secondly, whether it would be preferable to utilize an existing system or network to perform this work rather than developing something from scratch.

Regardless of whether SSA uses an existing network or develops their own, BTE offers some valuable lessons in terms of training, certification, and monitoring. A multi-tiered training and certification program such as BTE's could hold some key benefits for SSA's task, though it would likely look somewhat different. The principal benefit of such a training program is that it would allow SSA to get a large number of people up to speed quickly and performing the fundamental tasks of the analysis. Then one could imagine the top performers progressing on to more advanced training and perhaps mentoring junior analysts and eventually becoming regional trainers themselves. In addition to its efficiency, such an approach would offer job analysts the possibility of career progression, thereby enhancing engagement and motivating them to produce superior work. At the same time, individuals who are only interested in the part-time or as-needed job analyst work could remain in that role.

Of course, an evaluation and auditing system would be important to determine the top performers and also to ensure quality. BTE's approach demonstrates the value of automating this process as much as possible. By electronically tracking the job analysis from the point the referral is created, through each step of the process, and then to the completed report, SSA could streamline the entire referral process and integrate it into the review and audit process. One noteworthy feature of BTE's approach is that it tracks a rolling QA score for each clinician and requires them to stay above a certain level. SSA could conceivably develop such a score for its analysts to ensure that performance does not slip over time.

Lastly, BTE's comments on compensation highlight the complexity involved in minimizing cost and risk to SSA, while still appealing to qualified personnel. The lesson here is not so much which methods are preferable, but what must be weighed to determine appropriate compensation for job analysts. Important

considerations include whether analysts are independent or working for a contracted firm, whether to provide a flat fee or pay on an hourly basis, and how to adjust fees based on regional cost of living and competitiveness. Using a contracted firm may simplify the recruitment process and startup costs in the short term, but built in profit margins add cost over the long term. A flat fee reduces risk and simplifies payment, but does not account for the fact that different job analyses can require widely different amounts of time. Maintaining uniform pay rates across the country would simplify things as well, but it could make it difficult to attract talent in areas where cost of living is high or talent is in short supply. It should be noted that this is not a comprehensive list of considerations for job analyst compensation and the list could also include factors such as experience or educational level when potential candidates may vary on these factors. If all job analysts will have the same amount of experience or level of education, considerations do not have to be made for these factors as there will be no difference among the analysts.

5.3.3 Unum

Unum is the largest private long-term disability insurance provider in the country with offices throughout the US and the UK. In addition to long-term disability they provide short-term disability, life, and long-term care insurance. As a private insurance provider, Unum is a policy driven organization rather than a legal/regulation driven organization like SSA. Thus, their process of reviewing and paying disability claims is driven by the policies they write rather than the law alone, yet many of their methods could apply in SSA's case as well. In fact, SSA's situation may be simpler because they will not have to contend with the inconsistencies of state insurance regulations.

ICF conducted a phone interview with a Vocational Consultant at Unum who works primarily in the long-term disability line of business. Her role, as described above is to evaluate job descriptions and statements from employers and claimants in order to determine the nature of a claimant's occupation in support of disability determinations. She indicated that there are approximately 50 people across the country who perform this work within Unum.

5.3.3.1 Job Analysis Process Overview

Typically, Unum will establish a policy with an employer, who then offers disability insurance to employees as a benefit, often requiring a small paycheck deduction. The policy determines what is considered a disability and its specificity is frequently dependent on the occupation. For example, a factory worker may be part of a group policy that says he is only disabled if he cannot find other factory work due to a disability, whereas a doctor may specify in his policy that he must be able to find work in a particular specialty. When a claim is filed for disability insurance, Unum's vocational consultants will evaluate a claimant's occupation and determine what the individual was doing in the role. This finding is then used to support a disability determination based on the policy.

The disability determination process at Unum likely corresponds to SSA's approach, in that they do not conduct a job analysis for each claim, but instead consider how the occupation is normally performed in the national economy (under most policies). In contrast to BTE's work, there is rarely any measurement of the work performed by the employee. For most clients, Unum's vocational consultants simply review job descriptions and compare them to national data on occupations. This typically involves research in the Dictionary of Occupational Titles, the Enhanced Dictionary of Occupational Titles (EDOT, private software based on the DOT), O*NET, the Occupational Outlook Handbook and other internet sources for new emerging jobs research in order to compare them to existing jobs.

If the employer is a small company and does not have a detailed job description from which to identify the occupation or if there is disagreement over what the job entails, then Unum uses a standard job analysis form to capture the substantial duties and physical demands of the job. In most cases, a claimant

specialist has already asked the claimant standard questions about his or her job, but a vocational consultant may conduct an informal job analysis if this has not been performed. Once again, this typically does not require someone to enter the field, but rather they typically interview the claimant and a supervisor and attempt to use their best clinical judgment.

If there are inconsistencies between employee and management descriptions, the consultant may have to ask more specific questions with an eye toward determining whether a task is required for the *occupation* or is specific to this particular *job*. For instance, a claimant might say he lifts 100 lbs every day on the job, while the supervisor says he only lifts 20 lbs. Regardless of who is right, the consultant must determine whether this task is occupation specific or job specific. Lifting 100lbs may be required for this particular job but not necessarily for the occupation as it is performed in the national economy.

5.3.3.2 Recruitment Process Overview

Unum's recruitment process for vocational consultants is not appreciably different from their corporate recruiting process. The Human Resources department oversees the hiring process and posts positions through their corporate careers website; however, more often people are hired through references or word of mouth regarding their independent work or work for the state. Unum recruits nationwide from a central office, so once they find a viable candidate, they conduct a phone interview to determine whether to bring the candidate in for a face-to-face interview. They typically involve the clinical vocational directors in this interview in order to ask specific questions about a candidate's vocational knowledge. If the person seems capable of performing the work, they invite him or her to the office for a round of interviews that can last most of the day and involve four to five people in the organization. The candidate performs exercises to reveal how well he or she prioritizes work. The applicant meets with some vocational staff to demonstrate familiarity with some of the tools they use, which also provides an opportunity to observe how quickly the candidate can grasp the essence of a case file and make a decision regarding the occupation.

5.3.3.3 Unum Key Findings

As demonstrated by the above description, the job analysis approach taken at Unum adheres more to the vocational rehabilitation model than the more clinical and ergonomic focused PDA model of BTE. Consequently, the qualifications that Unum looks for in potential vocational consultants are consistent with rehabilitation positions. For instance, all consultants must have a Certified Rehabilitation Counselor (CRC) Certificate or have the necessary training and experience to take the exam. To qualify for the exam, a practitioner must have relevant field, internship or supervised experience, though most of Unum's vocational consultant staff has post CRC experience as well. In addition, staff members must have a Master's level degree in rehabilitation counseling, vocational counseling, general counseling, or a variety of other degree titles that pertain to this type of work. More general qualities they look for include the ability to analyze and gather data, ability to draw conclusions quickly from complex data, and a willingness to change one's mind based on new evidence. The participant indicated that professional associations such as the International Association of Rehabilitation Professionals (IARP) and the American Counseling Association (ACA), as well as the Commission on Rehabilitation Counselor Certification (CRCC), the certifying body for the CRC, are common sources for qualified professionals and may provide directories of their members.

Unum's vocational consultant staff consists of full-time employees only. They have not pursued an "on demand" model in the past, but the participant suggested they might be open to it, and could even partner with SSA to do this. She indicated that there are only about 135 people in the country who perform the same function she does, and 50 of them are at Unum, so they could be a good resource. They have pursued graduate students and interns who were preparing to take the CRC exam, but after investing time

and money to train them, they left Unum shortly after they passed the exam. The participant thought, however, that SSA might benefit from using graduate students and interns, though they would need a certain level of expertise before conducting a job analysis and would benefit from some knowledge about the labor market.

Of course, Unum does not have experience compensating “on demand” staff either. Fortunately, our contact provided insight from previous work with a vendor, indicating that they charged about \$85 per hour, though this was five years ago. She provided more detail regarding Unum’s practices for the full-time, salaried, vocational consultant position. Unum typically uses online salary assessors to determine appropriate salaries in various areas where they do business. For example, in the Maine area where their headquarters is located, an entry-level person would likely earn \$40,000 to \$55,000 annually, whereas in Los Angeles it would be \$7,000 more. In addition, they can offer incentives such as a signing bonus, relocation pay, and an additional week of vacation. Unum pays for job related traveling and will pay for re-certifications (e.g., for CRC, which can cost \$250) and for in-service trainings like conferences, etc. Peer recognition is important at the company as well, with one program sending a select few employees to Disney World each year.

Training is an important element in Unum’s process of managing its consultants. Training begins as soon as a new consultant comes on board. To guide the process, Unum sets out a formal calendar depicting what the person will do each day. Because the number of people in the role is fairly small, there is not a formal classroom component to the training. Instead, new hires work closely with a mentor who teaches them how to interpret Unum’s policies, how to use the proprietary database and computer system, and how to conduct a vocational assessment. They spend time observing roundtables and interacting with claims staff, nurses, physicians, and other vocational experts on the staff. They learn how to conduct a vocational assessment by using tools such as the DOT and the EDOT to determine the nature of a person’s occupation and evaluate that person’s transferable skills.

Unum’s training goes beyond teaching new hires about the specifics of their job. They also take courses on other functions throughout the organization such as contracts and claims in order to learn how their work fits into the overall picture of services Unum provides. This training is self-paced and there is a system to log time spent on these required trainings.

The length of the initial training varies depending on the experience of the individual, but the mentoring relationship allows the process to be customized to the progress of the trainee. People with similar experience can hit the ground running in only a few weeks. In contrast, if someone has no experience in long-term disability, it may take longer, perhaps three to four months, to train them. It can take this long because new employees often must learn the differences between work in long term disability (governed by definitions and policies based in contracts) versus workers compensation (governed by law). This training is self-paced, so if someone says they need more time to learn a certain part of the training material they are given that extra time.

In order to assess whether all of the effort put into training someone has transferred to job performance, Unum provides careful oversight and employees are required to undergo a roundtable review of some sample work. Prior to the roundtable, new employees are observed by a mentor, director or senior vocational staff member to confirm they are prepared for the pace of the roundtable. Then the employee will prepare the occupation identification or vocational assessment to be reviewed by a mentor, the director, and/or a senior vocational person in a roundtable format. Once they feel comfortable with the quality and accuracy of the work, they clear the person to work independently. This does not necessarily mean the mentoring ends, as many team members will mentor each other and request input from colleagues on challenging issues.

5.3.3.4 Unum Lessons for SSA

As perhaps the benchmarking partner whose function and methods are most closely aligned with SSA's, Unum offers several lessons regarding occupational analysis and disability insurance in general. One important concept they raised is the distinction between "occupational identification" and "job analysis." Although laymen may use occupation and job interchangeably, our Unum contact was quick to differentiate the two. *Occupation* refers to a common vocation that is performed across the economy, often as described in occupational databases such as the Dictionary of Occupational Titles. A *job* refers to a specific function within an individual organization. As such, one occupation (e.g., auto mechanic) can cover a number of distinct jobs at companies across the country.

Some aspects of the feedback received from the Unum participant suggest that such an approach, though somewhat more affordable, would still have significant costs. First, Unum hired highly qualified people to perform this work. Their vocational consultants must have CRC certifications, which itself requires at least a Master's degree and typically a year or longer supervised internship or work experience. They also highlighted the importance of complex reasoning skills and mental flexibility. All of these requirements are indicative of a well educated and experienced professional staff of independent thinkers rather than simple data collectors. Consequently, SSA should expect to face starting salaries in excess of \$40,000 if they adopt this approach, so they should compare this to expected costs of a "fee for service" model.

One approach to reduce labor costs is to employ graduate students or interns to perform the data collection. This approach would be a mutually beneficial arrangement that could save SSA money while offering experience to young professionals interested in the fields of disability, vocational rehab, occupational therapy, or I/O psychology. Unum had attempted to hire interns, though this did not prove fruitful for the organization as the students quickly moved on after they passed their CRC exams, but this may not be as great a concern to SSA for two reasons. First, the pace of job analyses is likely to be greatest at the outset in order to populate the OIS with the most common, existing occupations. Then, as future waves fill in less common, emerging occupations, a natural decline in the overall workload would mitigate the impact of any job analyst attrition. Secondly, unlike at Unum where vocational consultants are full-time employees, SSA could employ graduate students or interns on a contract or flexible employment basis. Consequently, there is no reason that students or interns who pass their exams and obtain appropriate certifications could not continue to perform analyses for SSA while they maintain other employment. On the contrary, working with SSA could be seen as valuable experience for a budding professional in the field. At the same time, SSA could maintain relationships with top performers and develop an increasingly qualified cadre of analysts.

The keys to Unum's training program are worth considering as SSA develops its own training for job analysts. The most noteworthy elements are its flexibility and the emphasis on beginning to end evaluation, including roundtable reviews. The training at Unum is structured (i.e. there is a daily calendar) but informal (i.e. no fixed curriculum, varying length). Although SSA will likely require a more formal process to ensure consistency throughout a nationwide training program, incorporating a more flexible approach to training could enhance both its efficiency and effectiveness. In the simplest terms, Unum provides more training to those who need more training. As in SSA's case, new employees will enter with widely ranging levels of prior training and experience in a variety of subjects. Training all new hires (or contracted consultants) in the basics of the disability framework and occupational analysis may not be necessary, but a pre-training assessment could determine who might need training on the fundamentals. On the other hand, some trainees may require additional training beyond the core curriculum. Rather than requiring someone who does not initially pass to repeat the training, providing those who need it with additional targeted training could be more efficient.

Integral to the success of such a program, as well as Unum's training, is assessment of the trainee's progress and how well the tasks and KSAs are being learned. Unum does not have a paper and pencil "knowledge" exam, but they do have a fairly rigorous process in which new employees are required to demonstrate their ability to perform the job through mock exercises and peer review. The employees are mentored throughout training in order to assess their progress and provide targeted training. A one-on-one mentoring process might be somewhat labor intensive for SSA, but at the very least, incorporating some assessment of progress could help to identify which trainees may require additional support in order to eventually be certified. SSA might also want to encourage the informal mentorship that takes place at Unum even after analysts complete training, possibly supplementing this with a more rigorous audit process.

5.3.4 SAIF Corporation

Headquartered in Salem, Oregon, SAIF Corporation is a state-chartered non-profit with the goal of helping to keep workers' compensation insurance costs low while maintaining workplace safety. As the largest issuer of workers compensation policies in Oregon, they maintain a network of contracted vocational rehabilitation providers across the state. In addition, they have a staff of internal vocational coordinators who review claims for rehabilitation services and refer them to the contracted providers as necessary. The functions of both of these groups have a bearing on the recruitment and management challenges facing SSA.

ICF conducted a phone interview with a Vocational Supervisor at SAIF Corporation. This individual is responsible for managing the in-house Vocational Coordinators, making referrals to contracted Vocational Rehabilitation Counselors, and searching for new contracted partners as necessary. She does not perform job analyses directly in her current role, but performed them for several years in a prior role.

5.3.4.1 Job Analysis Process Overview

As an insurance provider, SAIF's clients are companies across the state, which are required by law to purchase worker's compensation insurance. When an employee at a policy holder has a worker's compensation claim, the claim is referred to a Vocational Coordinator who makes a determination regarding whether the claimant is eligible for vocational rehabilitative services. If the claimant is deemed eligible, he or she is referred to a vocational rehabilitation counselor in their local area. The types of services the counselor may provide include:

- Job analysis to determine tasks, knowledge, skills, and abilities involved in performance of the job
- Evaluation to determine worker's abilities, skills, and interests for employment
- Employment services such as job-training, job-seeking skills, resume development, and other work readiness assistance
- Assistance finding and keeping a job, including the use of special employer incentives and job accommodations.

Although job analysis is only one of many responsibilities of the vocational rehab providers, they are generally qualified to perform this type of work as a course of their normal duties. Furthermore, use of a similar contractor network is one potential approach SSA could pursue to procure occupational analyses. Thus, SAIF's experiences with recruitment of contracted providers and the referral process could offer guidance and lessons learned on these subjects.

5.3.4.2 Recruitment Process Overview

The process of recruiting new Vocational Rehabilitation Counselors (VRCs) to contract with is a relatively straightforward process for SAIF. The State of Oregon maintains a list of professionals who are legally qualified to perform the work based on certifications and experience. When a new counselor must be recruited in a particular area to support a claimant, SAIF personnel can simply refer to the list in order to find someone qualified in that area. When hiring internal staff such as the Vocational Coordinators, they follow a more traditional approach to small scale recruitment involving a search by HR and interviews with management.

Although the process of recruiting external contractors is relatively straightforward for SAIF, they were able to provide some important insights on the challenges involved in managing these relationships across the state as well as recruiting for internal Vocational Coordinator positions. Key findings from the interview are discussed in the next section.

5.3.4.3 SAIF Corporation Key Findings

In contrast to other partners who have no need to hire job analysts on a regular basis, SAIF provided firsthand descriptions of their own efforts to hire and manage personnel with these qualifications. When considering candidates for either internal or contract positions involving vocational services such as job analysis, the minimum qualifications they consider are very clear, as they are regulated by the State of Oregon. In order to meet the requirements, a candidate must have one of the following:

- A Certified Rehabilitation Counselor (CRC) designation and six months of experience, certified by the Commission on Rehabilitation Counselor Certification (CRCC)
- A Masters degree in a related field (e.g. OT) and one year of experience
- A Bachelors degree and four years of experience

Given the strict requirements, finding qualified personnel is often a challenge, and the requirements alone often screen out many applicants for internal positions. In order to attract qualified candidates, SAIF personnel have attended college job fairs, posted on Oregon or national vocational rehab websites and job boards, and searched the State's Bulletin 151, which lists qualified vocational service providers. No methods have proven any more successful than any other, but SAIF normally ends up with five to seven candidates to interview for any given search. They would be very interested in having graduate student fellowships or internships in order to develop people to do this work, but due to the strict legal requirements, this is not possible.

The external parties that SAIF contracts with are still subject to these requirements, though they have more flexibility to hire interns or others who are not providing direct service. As mentioned previously, everyone legally able to provide these services is listed on Bulletin 151 issued by the Oregon Department of Consumer and Business Services (DCBS), Workers' Compensation Division. In addition to reviewing Bulletin 151, SAIF considers whether providers are certified and whether they seem familiar with the rules and statutes governing the profession. SAIF also requests redacted copies of past work to evaluate counselor abilities. The Vocational Supervisor and a contract attorney then collaborate to establish a contract, which is then renewed every two years, so they are not constantly looking for new counselors. As the largest workers' compensation insurer in the state, counselors often call them seeking referrals. Thus, they typically have little difficulty offering coverage in most areas in which they do business, but sometimes work in remote areas requires them to search for new providers. In these cases, finding candidates who meet minimum qualifications is typically the most challenging part of the process.

Once a counselor is part of the network, they are contacted as needed to perform vocational rehab services, including job analyses. SAIF does not have any special system for this purpose. The coordinator simply looks up who is in a specific area or has a specific expertise and contacts this person by phone or email. Most of the counselors have their own work to keep them busy, so SAIF does not need to maintain constant contact with them. However, they will contact them when there are rules changes or anything else that would affect everyone's work. They have also considered having an annual training workshop involving DCBS (the state regulatory agency) that would offer continuing education units (CEUs) to attendees while marketing SAIF in the vocational rehab community.

For SAIF, maintaining contact with contracted providers is especially challenging and even more important due to the geographic dispersion of the network across the state. Although many of the providers are located in major cities like Portland and Eugene in the West, SAIF insures companies in the more rural eastern part of the state as well. This difference in the eastern part of the state creates challenges because vocational counselors in these areas do not typically have a support system and are not accustomed to having much oversight. In addition, they may be familiar with employers and claimants on a social level, and may find it hard to be impartial or take a firm stance when action is required by one of the parties.

Another area where SAIF was well positioned to offer insight was on the issue of compensation for vocational services such as job analysis. SAIF pays the contracted providers a fee of \$85 per hour of work time, while travel time is paid at half that, and mileage is compensated at the GSA rate. No adjustments are made for regional differences in cost of living. For the internal Vocational Coordinator position starting annual salaries range from \$45,840 to \$61,080 depending on experience and education. The internal positions also include a full benefits package. There is an opportunity to transition to a slightly more advanced position involving critical claims such as Traumatic Brain Injury or Quadriplegia.

SAIF internal Vocational Coordinators are not trained specifically on job analysis. When new contractors are added to the network, they are informed on SAIF's general philosophy and the rules and statutes that govern their work, and they are encouraged to create open dialogue about requirements of the job and any issues that might arise. For instance, legal requirements call for the job analysis to be done on-site; therefore, the job analyst must witness the job being performed, detail his or her observations, and then get the employee and employer to sign off on it. If the contractor fails to do an on-site job analysis, the counselor notes this for SAIF to investigate further.

5.3.4.4 SAIF Corporation Lessons for SSA

While SAIF Corporation does not employ job analysts per se, the nature of their work and the methods they have employed to obtain vocational services for clients have clear implications for SSA.

First, the qualifications considered by SAIF have clear relevance to SSA's hiring of job analysts, since vocational rehab professionals are likely to share many of the same KSAs as job analysts. It is important to note that the standards and minimum qualifications that SAIF abides by are established by the State of Oregon. Thus, while states may not regulate job analysts specifically, understanding legal requirements for vocational service providers may provide a strong foundation for SSA's own minimum qualifications. The flexibility of the standards is noteworthy as well, as certification, education, and experience all play a part and are largely interchangeable. It may not make sense then for SSA to mandate that job analysts have a Master's degree, for instance, if capable candidates with Bachelor's degrees have been performing job analysis (or something similar to it) for many years.

At the same time, strong minimum qualifications have proven to be one of several effective means to thin the field of applicants and select capable employees or contractors. SAIF mentioned certifications and

familiarity with appropriate rules and statutes as other essential considerations, both of which are likely to be important to SSA as well. While SSA will likely create their own job analysis certification, developing a list of relevant certifications to target when recruiting and selecting candidates might help to find people with applicable skill sets. It will still be important to assess whether these candidates are familiar with the practices and concepts specific to job analysis and the disability framework, however. SAIFs practice of reviewing prior work offers one promising approach to accomplish this, though expert review of these works would add to the time and expense of the selection effort.

Of course, a large part of what makes SAIF an interesting case study is their use of a network of contracted providers to perform vocational services. In general, SAIF appears to use a laissez-faire approach toward the existing network. Many of the contracts have been in place for some time and are only renewed every two years, so they do not face the same challenge SSA will face in starting from scratch. For SAIF, the traditional commercial contracting apparatus is sufficient to manage existing as well as new relationships. A simple phone call to a counselor on a state provided bulletin is all that is typically required to begin the process, and contact is infrequent once a contract is established unless work is required. It is questionable whether SSA could adopt a hands-off approach such as this. SAIF provides rule updates and hopes to establish annual training sessions, but SSA may require even more frequent engagement in order to ensure analysts are prepared and up to date when called upon. A more engaged approach would be especially important given the reported difficulties inherent in managing remote personnel in more rural areas where independence is prized and local community ties may hold more sway than administrators at headquarters. Maintaining careful oversight while encouraging dialogue and information sharing with headquarters and other partners is a challenge SSA will like have to address if they pursue the contract-based approach.

Lastly, SAIF was able to provide data on fees paid to external vocational counselors for their services. While the actual numbers involved may serve as a reference point, the most important takeaway is the tiered compensation structure involving an hourly fee for labor, a reduced rate for travel time, and mileage compensation. SAIF's compensation is in contrast to a model pursued by other states in which a flat fee for service is offered along with mileage reimbursement. Given the length of job analyses depends on the type of job, the SAIF model could more accurately compensate analysts for the level of effort required, especially if there are lengthy periods of downtime that are out of the analyst's control. However, this approach could increase SSA's costs if employers are uncooperative, other unforeseen delays arise, or analysts are dishonest about their hours.

5.3.5 California State Personnel Board and Jefferson County Personnel Board

The California State Personnel Board (SPB) is responsible for ensuring that departments and agencies within the state of California have a diverse, talented, and highly qualified workforce. The individuals employed in this department perform a variety of functions to achieve this goal, such as overseeing selection test development and assisting with employee discipline, providing training and consultation to various state departments, enforcing equal employment opportunity and non-discrimination employment practices within the state, providing accessible on-line examinations for applicants, as well as investigating alleged violations of employment laws. With regards to recruitment, the SPB recruits employees for its own department in addition to supporting and training other departments to recruit and hire their own employees.

Similarly, the Personnel Board of Jefferson County (PBJC), located in Birmingham, Alabama, is responsible for various human resources functions for Birmingham, smaller cities within the county, and the health department. The PBJC provides services such as recruitment, training, employee compensation, job analysis, test construction and validation, and employee testing and assessment centers. They also establish and enforce rules and regulations to ensure non-discrimination and equal employment

opportunities within the county. The PBJC works to provide a fair process for all individuals applying for positions within their jurisdiction. Jefferson County's Personnel Board recruits individuals to serve as personnel analysts, who complete job analyses for the department.

These two Personnel Boards were chosen as benchmarking partners with the purpose of diversifying the partners from which information was gathered and to gain input from state-level agencies in addition to the federal agencies and private firms also interviewed. In addition, both the California SPB and the PBJC perform functions that are aligned with those that SSA will need to accomplish, specifically recruiting and training job analysts. Because of the similarity in the background and function of these two agencies, they were combined into one interview. This also enabled them to share ideas and build on their shared experiences to offer creative insights for SSA.

ICF conducted a phone interview with a manager of Test Validation and Construction (TV&C) at the California SPB. Her job comprises overseeing job analyses and applicant testing as well as auditing other departments that conduct job analyses within the state. Also included in this interview was an analyst from the PBJC, whose job entails conducting job analyses and assessing applicants during assessment centers. Additionally, two personnel selection consultants from the California SPB participated in the call.

5.3.5.1 Job Analysis Process Overview

The California SPB contracts with other state departments to provide job analyses and testing products and services. They are responsible for customized, legally defensible, and valid products to state departments. In addition to conducting job analyses for their own department as well as other departments and agencies across the state of California, the California SPB also provides certification courses in employee selection to individuals in other departments. This training program includes a two-day course on job analysis as well as courses in topics such as creation of selection tests and scoring applicants on these tests. As a way to further their mission to apply validated human resource practices across the state, California SPB also provides job analysis consultation services to departments or individuals who do not have experience in this area with the intention that these departments will then be able to conduct their own legally compliant job analyses.

Much like the California SPB, the PBJC conducts job analyses and testing for jobs within its jurisdiction. While job analysis is only one of the many duties that analysts at the PBJC perform, it is a function that they are very qualified to do and forms the basis for other parts of their job. For example, when a job becomes available within the county, the PBJC performs a job analysis to determine job requirements, then develops testing measures for the job and tests applicants, providing the jurisdiction in which the job is available with a list of the top ten ranked applicants.

For each job analysis conducted at the PBJC, there are always two analysts who work together to complete the process. Typically, one will be designated as the primary analyst, but the second analyst is part of the project to help with observation or other types of data collection, to serve as a sounding board to discuss the project or its analyses, and to act as a checks and balance system to ensure that the job analysis is accurate and of high quality. It is important that the two individuals assigned to each job analysis project are able to work well together to complete the project. In addition to the full time analysts that work for the PBJC, the department often uses experts in the job being analyzed or assessed to help with test development or applicant assessment. For example, when creating a selection test for firefighters, retired firefighters or successful firefighters from other locations are brought in to provide their expertise and knowledge of the job in question.

5.3.5.2 Recruitment Process Overview

Both the California SPB and the PBJC typically recruit analysts and other employees to fill full-time positions. The California SPB recruits in two different ways: they recruit for positions in their own department as well as recruiting employees for other agencies within the state. When recruiting for jobs within their own department, the California SPB typically recruits potential candidates out of Industrial/Organizational (I/O) Psychology graduate programs or other state departments, where individuals have gained experience in job analysis and related topics. Because the California SPB has a small staff with a great deal of responsibility, it is important for them to hire employees who have relevant knowledge and experience. When recruiting, the California SPB uses the same process as the rest of the state. They send out a vacancy announcement that delineates the specific skills sets that they desire in a potential employee.

As mentioned previously, the California SPB also recruits candidates for other departments in the state. Sometimes, this recruitment will be for individuals who will conduct job analyses for their department or agency as part of their job; other times the recruitment is for any type of job within the state. When seeking candidates for positions which will require job analysis, they do not necessarily look for an individual who has job analysis experience before coming into the job because there is not a large enough base of I/O graduate students or other experienced individuals to fill all of the available positions. Therefore, it is necessary to recruit individuals who have skills that will help them be successful when learning and conducting job analyses. Specifically, they look for candidates with strong analytical skills, possibly an HR background, and for someone who will be able to easily learn the job analysis process. When the California SPB has been faced with the need to recruit a large number of people for a state position at one time, they often set up a “recruitment day” for the position. They will accept applications for a set period of time, for example from 8am-4pm, on a specified day at a large location such as the fairgrounds. While accepting applications, they complete immediate reviews of applications to see if candidates meet the minimum qualifications for the job. If candidates do meet the minimum qualifications, there is an on-the-spot written test for the position. This process has been successfully used to go through thousands of applications and find qualified candidates in a single day.

At the PBJC, recruitment of job analysts typically involves posting position openings on the Society for Industrial and Organizational Psychology website (SIOP; siop.org) as well as the PBJC website. Often times, analysts are recruited directly out of I/O Psychology or related graduate school programs. Additionally, there are times when seasoned professionals who have careers in selection are recruited. When seeking individuals to fill job analyst positions, the PBJC looks for candidates with knowledge of I/O Psychology topics, strong interview abilities, as well as solid background knowledge of adverse impact.

In addition to full-time employees, the PBJC will sometimes recruit and hire interns to help with their job analysis process and assessment centers. These interns are usually graduate students who are recruited directly out of I/O Psychology, Human Resource, or Organizational Behavior graduate school programs. Letters are sent directly to graduate programs for distribution to graduate students who might be interested in applying for the intern position. When these graduate students come in to assist, any open positions are announced and some of the interns have then gone on to full-time positions within the PBJC.

5.3.5.3 State Personnel Board of California and Jefferson County Personnel Board Key Findings

In addition to job analyses, there are many other functions that job analysts perform at the California SPB. These functions differ based on whether the analyst is part of the SPB or if they work for a different department within the state. For example, for non-SPB employees who conduct job analyses, it is

typically a very small part of their position. These individuals would also be responsible for other tasks such as budgeting, training, and planning for their department. Due to the limited amount of job analyses being conducted as well as an insufficient number of job analysts applying for the job, individuals in these positions typically do not have experience in job analysis before being hired into the positions.

The employees within the California SPB who conduct job analyses are also responsible for tasks beyond the scope of just conducting job analyses. However, many of the functions they perform are related to job analysis and helping California to have a legally defensible job analysis system. For example, the SPB is responsible for audits of other departments' job analyses to ensure that the rest of the state is following the Uniform Guidelines and correctly conducting their job analyses. The SPB is also responsible for examining any selection tests based on departments' job analyses that have been challenged.

While SSA may seek to recruit and hire employees on a part-time basis, the California SPB does not typically recruit for positions of this nature; they usually only hire for full-time positions. If a need does arise for a temporary or "as needed" position, the California SPB utilizes the California Boomerang program, which is an established program that provides a list of retired employees of the state of California who are willing to work on a temporary basis for the state. The benefit of hiring these retired employees is that they have a wealth of knowledge that they gained during their working years and they are able to work on a temporary basis when additional work is needed but will not require an ongoing, full-time position.

The California SPB was able to provide information about the salaries of employees who conduct job analyses for the state. Staff Services Analysts typically have salaries that start around \$2,800 per month, but these individuals are employees of a separate state department, likely have little to no experience in job analysis, and perform many tasks in addition to job analysis as a part of their jobs. A personnel selection consultant, on the other hand, would have a salary that starts around \$4,800 per month. The personnel selection consultant is an employee of the California SPB who likely has an advanced degree in a field such as I/O Psychology. The pay in this position is higher due to the experience of the employees as well as a greater level of decision making authority associated with the position. Additionally, the state has a high quality benefits plan, which helps employees and increases the value of the state positions.

As mentioned previously, the California SPB teaches various courses that are geared towards individuals without experience in relevant areas. Because there are many jobs that need to be analyzed in the state and the SPB department responsible for job analysis is small, this training program ensures that job analyses can be completed correctly and in compliance with standards in all state departments and agencies. As a part of the courses, the SPB employees take trainees step-by-step through the job analysis process. The goal of these training sessions is to guarantee that other departments that need to conduct job analyses would be capable of withstanding an audit or appeal of the job analysis or hiring process. The training involves extensive role playing where the trainees play the role of the analyst and the trainers from the SPB play the role of the job incumbents or subject matter experts. Additionally, they have job analysis templates and manuals to help those unfamiliar with job analysis become proficient. For the California SPB, education in the area of job analysis is a very important and large part of their jobs, with training being given to hundreds of people each year. This education and training is the tool that ensures job analysis is done properly within the state.

Other important information can also be gained from the PBJC, some of which is similar to and some of which is different from what was learned from the California SPB. When considering job candidates to perform human resources functions, such as job analysis, the PBJC requires that candidates have at least a Master's degree in I/O Psychology or a related field. In order to recruit candidates with specialized skills from a wide geographic area, the PBJC tends to recruit individuals from professional organizations, specifically from SIOP and the Society for Human Resource Management (SHRM). By recruiting

individuals from these nationwide organizations, PBJC ensures that it is able to find qualified applicants and is not limited to only the individuals in nearby areas. This widespread recruiting effort has been successful, as evidenced by the fact that very few of the Personnel Board's employees are from the Birmingham area.

While PBJC does not recruit employees on a contract or part-time basis, they do sometimes bring in experts to help with test development. To capitalize on experience in the field and create tests that are well suited to the jobs for which they are meant to select employees, the PBJC hires subject matter experts with experience in jobs that are being analyzed and assessed. For example, fire fighters and police officers who are retired or from another part of the country are often called upon to assist with tests for these positions. These individuals bring valuable experience and expertise about how jobs should be performed and the knowledge and skills necessary to be successful. It is necessary that these individuals do not have a vested interest in the county or anyone being assessed to ensure that no bias is introduced into the process. To ensure that there are a sufficient amount of experts to complete the needed tasks and assessments, the PBJC maintains a pool of assessors that they can invite back to participate in future assessments or test development.

When training new hires in job analysis, one of the main resources is a training manual that is specific to the PBJC and its job analysis procedures. This manual provides all of the information that a new analyst would need to know to complete the job analysis process. Another key component of training for new employees at the PBJC is a mentor who is assigned to each new employee.

In regards to the compensation of job analysts, individuals in the Assessment and Development Specialist position have a starting pay of about \$24 per hour, which equates to approximately \$50,000 per year. This position requires incumbents to have at least a Master's degree. The PBJC offers its employees flexible work schedules, meaning they do not have to work a typical nine-to-five work day but rather they can vary their hours to meet personal needs or preferences, while still working a full eight-hour day. The PBJC contact suggested that this flexibility has helped to create a very worker-friendly environment and build morale among employees.

The PBJC has a unique approach to utilizing interns to assist with their testing process. Interns who assist with the PBJC's assessment centers are not paid for their work, but are reimbursed for their travel, food and lodging. Many times graduate students are eager to gain experiences such as those offered as an intern for the Personnel Board. Because the interns hired are from graduate programs related to the work that the PBJC does, they highlight benefits of the internship such as the experience gained and training provided as well as the opportunity to assist a governmental agency and see the selection process first hand, rather than focusing on pay.

5.3.5.4 California State and Jefferson County Personnel Boards Lessons for SSA

To reduce costs, SSA could hire graduate students to serve as job analysts. As noted earlier, the PBJC hires graduate students as interns to assist when needed, for example when there is a high volume assessment center that needs to be conducted. To reduce costs, these interns are not paid, although all of their expenses are reimbursed. A positive aspect of hiring job analysts from related graduate programs, such as I/O Psychology, Human Resources, or Vocational Rehabilitation, is that these individuals are typically looking to gain job-related experience that will teach them about the field, improve their skills, and strengthen their resume. Graduate students who are looking to gain experience, specifically in job analysis, may be willing to work for a lower fee than professionals in a field that conducts job analyses. As such, SSA could hire job analysts who have background knowledge in a relevant content area and are qualified to conduct job analyses, but who are willing to work for a reasonable price. An additional benefit of hiring graduate students, as suggested by our contact at the PBJC, is that if a large pool of

people is needed quickly, this recruitment can be accomplished fairly easily if a relationship has been established with different graduate programs. These programs would be able to identify qualified students in a timely fashion.

While graduate students have been suggested as a potential source of candidates for SSA job analyst positions, it might be the case that this is not a viable option. One recruiting issue faced by the California SPB is a lack of a sufficient number of experienced job analysts to fill all of the positions in which employees conduct job analyses. The contact at the California SPB noted that with the number of employees that SSA will likely need, it is doubtful that they will be able to pull all of the analysts that they need from an I/O Psychology or another related graduate program. Therefore, it will be necessary to determine the number of analyst positions that need to be filled and determine if these individuals can be recruited from graduate programs.

Another potential source of candidates for the job analyst positions within SSA could be retirees. While there may not be a great number of retirees from which to recruit, they could have qualities that would be beneficial for SSA's purposes. Specifically, retirees would not be employees looking for full-time or long term employment opportunities; the temporary, part-time work offered for the job analyst position would likely fit the type of work that retirees would be interested in finding. Furthermore, if it were possible to recruit retirees with job analysis or related experience, it would be possible to hire individuals with experience relevant to the duties they would be required to perform as job analysts for SSA as well as a wealth of work experience in general.

Because SSA will likely need qualified individuals from across the country to serve as job analysts, it will be necessary to employ a recruitment strategy that can easily access individuals from across the country. One lesson from the PBJC that has been successful in widespread geographic recruiting has been to recruit from professional organizations. By targeting recruitment towards relevant occupations' professional organizations, SSA would be able to locate and recruit potential job analysts with relevant background knowledge and a likely interest in conducting job analyses. Professional organizations that could be targeted for recruitment should include individuals with the skills that SSA determines are important for their job analysts to possess.

With regards to the training of job analysts, lessons can be taken from both the California SPB and the PBJC. Training is especially important for the California SPB as many of the employees who conduct job analyses in the state of California do not have a background in job analysis. For SSA, this finding could mean that not all analysts need an advanced degree such a Master's degree or a doctorate in a field related to job analysis. The California SPB successfully trains individuals without a job analysis background to conduct legally sound job analyses that follow the Uniform Guidelines. Thus, if SSA has a well-developed and high quality training program, they may not need to recruit individuals with a background in job analysis, which would likely greatly expand the applicant pool.

Our contact at the PBJC noted that they rely heavily on a manual for training new job analysts. The California SPB also has a comprehensive manual associated with their job analysis training course. SSA may want to consider having a detailed handbook or manual that is provided to job analysts as a part of their training. A handbook or manual would ensure that analysts have materials to assist them when they are out in the field and would be especially important given that the analysts may not have consistent work. The manual ensures that each analyst can refresh his/her memory on SSA's specific JA process or go back over specific parts of the job analysis process about which they have questions. Having a detailed and specific manual guarantees that the job analysts have a place to go at all times for any questions about the process.

As previously mentioned, all new job analysts at the PBJC are given a mentor to ensure that they know how the Personnel Board performs job analysis and to make sure that analysts are never on their own when completing their first job analysis. For SSA, this finding demonstrates the importance of making sure that candidates see the job analysis process in training, are familiar with it, and that when they are alone out in the field conducting a job analysis, it is not the first time they are completing the process. It speaks to the importance of providing realistic, high fidelity experience in the job analysis training program. While it may not be feasible to have a mentor go out with each analyst to assist in their first actual job analysis, a mentor-type relationship could be developed with trainers during training sessions.

While the California SPB and the PBJC provided information on the salary paid to its analysts, caution should be taken in using these numbers as reference points for determining compensation for the job analysts hired by SSA. The salary provided to full-time employees is not indicative of their actual cost. For example, full time employees of both of these agencies receive a very good benefits package and other perks of full-time employment. If SSA hires independent contractors or consultants, these individuals will have to pay their own taxes and provide benefits for themselves, which could make the level of pay necessary to encourage analysts to stay with SSA higher than the salary received in these full-time positions.

5.3.6 Office of Personnel Management

Although OPM was not a benchmarking partner due to the fact that we were unable to recruit someone from the organization to participate in an interview, information regarding their processes for job analysis and recruitment were researched and are included here. The OPM uses classifiers to complete their Desk Audit Process. We conducted an internet search for job announcements of the classifier position for OPM but were unsuccessful in locating any such announcements. We broadened our search terms to include human resources and identified several job announcements for other agencies within the Federal Government. These agencies hire Human Resources Specialists who perform work that can include job analyses or job classification. Typical job titles for these employees include Human Capital Specialist, Human Resources Specialist, Operations Specialist, Workforce Resource Specialist, or Lead/Supervisory Human Resources/Capital Specialist. These positions are found in most federal agencies across the U.S. and are likely to be highly similar to the positions in OPM.

5.3.6.1 Job Analysis Process Overview

The Desk Audit Process is used by the Office of Personnel Management to categorize jobs based on the similarities and differences of each job's duties, responsibilities, and required qualifications.⁹⁸ Typically, the OPM Desk Audit Process is initiated at a supervisor's request or if an incumbent believes that the job tasks have changed and are different from those listed in the position description. This process involves first reviewing any background information about the job being classified. Additionally, it involves interviewing both the job incumbent and the supervisor in order to gain a detailed description of the position being audited, with interviews lasting approximately one hour (U.S. Department of the Interior, 2007).⁹⁹ During the interview, incumbents are asked to provide various pieces information about their position, such as:

^{98, 2} U.S. Department of the Interior (2007). Employee's Guide to the Classification Process. Retrieved online from <http://www.doi.gov/hrm/pmanager/classfaq.html>.

- A description of the tasks performed on the job
- The amount of time spent on various tasks
- Changes that have occurred to the job in the past year
- Examples of work completed for the job

This information is then combined in order to determine whether the job is classified correctly based on the tasks that are being performed and the work completed on the job.

5.3.6.2 Recruitment Process Overview

Employees are recruited to fill HR Specialist using job announcements posted on USAJOBS which typically target internal employees. In fact, for some positions consideration will only be given to internal candidates. When recruiting employees into these types of positions, key requirements for applicants are that they are U.S. citizens and they must pass a background check. Additionally, when recruiting and hiring for supervisory positions, a 30-day probationary period is required as well as the completion of a financial disclosure statement.

5.3.6.3 Office of Personnel Management Key Findings

In addition to the requirement that job candidates be a U.S. citizen and pass a background check, there are other common qualifications that are required to fill HR Specialist positions. One typical requirement for lower level HR Specialist positions is that the candidate have one year of specialized experience that is directly related to the work that will be performed in the position. Alternatively, as a substitute for this experience requirement, candidates could have a Ph.D. or equivalent doctoral degree or 3 full years of higher level graduate education leading to such a degree. For higher level positions as HR Specialists, at least one year of specialist experience at a lower grade level is required (e.g., applicants for a GS-12 or GS-13 level position would be required to have at least one year of specialized experience at a GS-11 or GS-12 level). Additionally, most applicants for these positions must complete an Assessment Questionnaire that tests the knowledge, skills, and abilities directly related to the position for which they are applying. It is very important that individuals applying for these positions have appropriate knowledge and experience as the classification standards prepared by OPM are created based on the assumption that the people using them will be trained in how to classify positions and be knowledgeable about the job classification process.¹⁰⁰ As such, individuals without training as personnel specialists or similar educational experiences will likely not be qualified to use the classification standards.

In terms of the compensation of HR Specialists, all of these employees are full-time and therefore paid as salaried employees rather than on an hourly basis. Salaries range from approximately \$60,000 per year for the lowest level positions up to \$155,000 per year for HR Specialists in supervisory roles. As previously noted, these positions require a graduate degree or specialized experience.

5.3.7 DOL's Occupational Information Network (O*NET)

Given the DOL's experience with a similar effort, SSA specifically requested that we gather information from DOL. The DOL developed the Occupational Information Network (O*NET), which contains occupational information on over 900 occupations in the U.S. labor force. Information regarding the analysts who create ratings for O*NET is included here to provide some information about the process of recruiting and utilizing O*NET analyst. Information was gathered from a short discussion with the

¹⁰⁰ U.S. Office of Personnel Management (1991). *The Classifier's Handbook*. Retrieved from <http://www.opm.gov/fedclass/clashnbk.pdf>.

Technical Officer of the National Center for O*NET Development as well as from published reports about O*NET and its analysts.

5.3.7.1 Job Analysis Process Overview

In order to ensure that O*NET is kept up-to-date, occupational data is continually collected on jobs in groups of approximately 100 occupations. Occupational analysts provide importance and level information regarding the abilities and skills necessary for analyzed occupations in O*NET while job incumbents provide information regarding job tasks, Generalized Work Activities, knowledge, education and training, work styles, and work context.¹⁰¹ Human Resources Research Organization (HumRRO), which is a subcontractor to the DOL's National Center for O*NET Development, has contracts with 16 occupational analysts who provide the skill and ability ratings for O*NET.¹⁰²

Before making their ratings for the skills in a group of occupations, analysts receive information about the occupations they are rating including:

- Title and definition of the occupation
- Level of vocational preparation needed
- Task importance ratings
- Important knowledge domains
- Important Generalized Work Activities (GWAs)
- Relevant Work Context (WC) statements.

The occupational analysts were trained by the National Center for O*NET Development to interpret this data in order to make the importance and level ratings of skills for each occupation. Analysts are given a set number of hours in which to complete ratings for each occupation grouping and are paid based on an hourly rate.

5.3.7.2 Recruitment Process Overview

Because there is very little turnover in the occupational analysts, recruitment to fill these positions does not occur frequently. When a position does become available, requirements for occupational analysts are that they have:

- At least two years of experience
- Two years of education in Industrial/Organizational Psychology, Vocational Psychology, Human Resources, or Industrial Relations
- Completed a job analysis course
- Completed a research methods course

Analysts for the DOL are not recruited for full-time positions. Most of the analysts have other full-time work and provide O*NET ratings as additional work.

¹⁰¹ Tsacoumis, S., & Willison, S. (2010). O*NET Analyst Occupational Skill Ratings: Procedures. *Prepared for HumRRO.*

¹⁰² Personal communication with the Director of the National Center for O*NET Development.

5.3.7.3 Department of Labor O*NET Key Findings

To ensure that occupational analysts could make reliable and valid ratings of occupational skills, the National Center for O*NET Development provided intensive training to all analysts. The training included modules on the history of O*NET, an overview of the materials that are provided to analysts when making ratings, a step-by-step description of the rating process, and an introduction to the electronic rating form. A manual was also provided to analysts that included these materials. A hands-on exercise and quizzes were used in the training to assist in analyst learning.

Each of the O*NET occupational analysts enter their ratings into a software program. This software program has limits on the data than can be entered as a step in ensuring the quality of data entry. Additionally, the National Center for O*NET Development conducts reliability checks and reviews the ratings. If issues are noted in this audit process, analysts are retrained to ensure that ratings are being made and entered correctly. Ratings are first reviewed for errors, such as missing ratings. If errors are detected, the forms are returned to the occupational analyst for correction. Ratings are also examined for common rating errors such as leniency or severity biases (i.e., rating too easily or too harshly across items). Analysts are informed if they exhibit these common errors, such as consistently rating skills higher than other analysts, so they can keep this in mind when making future ratings.

O*NET occupational analysts are paid a set rate of \$25 per hour. Again, these positions are not full-time and are often performed in addition to another, full-time job. As previously mentioned, there is a limit to the number of hours that can be used to rate occupations. This set number of hours was initially established based on pilot testing and has been modified over the years based on analysts' feedback of how long the ratings were taking to complete.

Chapter 6: Candidate Tracking Database

6.1 Purpose and Description of Database

SSA requires the ability to locate and communicate with its job analyst candidates regarding potential work assignments. SSA also needs to maintain records and documentation of job analyst training and certificate completion. A Microsoft (MS) Access database was created to serve as a means to record and track information about job analyst candidates, as well as their progress through the recruitment, training, and certification process. In addition to the Master table, the database contains four forms for entering data and information on a job analyst candidate that address the following purposes:

- Information, Screening, Hiring and Terminating
- Track Training and Certifications
- Job Analyst Assignments
- Field Work Evaluation and Payroll

The user of the database can use the forms to enter information on a particular job analyst candidate. The database also has been set up to provide four reports, one for each of these listed purposes. These reports will output information for each candidate entered into the database. For any data fields that have check boxes in the form for data entry, the data displayed in the accompanying report is a numerical value, with a one representing the first option up to the number of options listed. Each of the forms are described below, with screenshots of each provided.

The first data entry form is presented in Exhibit 6-1. This form is used to record information about candidates' personal information, and the screening, hiring, and termination information for each candidate. Specifically, candidate personal and contact information is entered. Additionally, there are spaces to enter reference information and verification questions for each of the references. There are check boxes to indicate if the candidate passed any screening that may be conducted. Finally, information can be entered about the employment offer as well as the candidates exit from SSA, when in the process they left, and the reason.

Exhibit 6-1: MS Access Data Entry Form 1 Information, Screening, Hiring, and Terminating

ID:

Job Analyst Candidate Information

Candidate Name: Address (Street, City, State, Zip): Email Address:

Phone # (Home): Phone # (Mobile): Phone # (Alternate):

Best Phone # to be Reached: Home Mobile Alternate

Awareness of Job
 USAJOBS A Friend/Family Member
 Internet SSA Employee/Contractor
 Advertisement Other
Other, please specify:

Available Start Date:
Availability per Week (in Hours): 0

Highest Level of Education High School
 Associate's Degree
 Bachelor's Degree
 Some Graduate Work
 Master's Degree
 Doctoral Degree
College Major:

Relevant Certification(s) No Yes
Areas of Certification(s):

Relevant Professional Affiliations:
Relevant Work Experience (in years):

1st Reference Name: Verification of Employment Tenure No Yes
1st Reference Address:
1st Reference Phone #: Reason for Exit Involuntary Voluntary
1st Reference Email:

2nd Reference Name: Verification of Employment Tenure No Yes
2nd Reference Address:
2nd Reference Phone #: Reason for Exit Involuntary Voluntary
2nd Reference Email:

3rd Reference Name: Verification of Employment Tenure No Yes
3rd Reference Address:
3rd Reference Phone #: Reason for Exit Involuntary Voluntary
3rd Reference Email:

Screen Job Analyst Candidate

Reference Checks Did Not Pass Passed
Scheduled Interview Date: Scheduled Interview Time:
Assigned Interviewer: Interview Ratings:

Pre-Employment Test Results Did Not Pass Passed
Background Check Did Not Pass Passed
Background Check Notes:

**Exhibit 6-1: MS Access Data Entry Form 1 (Cont.)
Information, Screening, Hiring, and Terminating**

Hire Job Analyst Candidate

Recommend Candidate for Employment
 No Yes

Correspondence with Candidate:

Date Employment Offer Given:

Conditions of Offer:

Acceptance or Rejection of Employment Offer
 Rejected Offer Accepted Offer

Date of Acceptance/Rejection of Employment Offer:

Pay Rate (Hourly):

Track Candidates Exit from SSA Job Analyst Position

Date of Exit/Termination:

Point in Process of Exit/Termination
 During Candidate Pre-Screening
 During Candidate Screening
 During Candidate Hiring
 During Training
 After Training
 After Certification
 During Job Analysis Assignments
 After All Assignments Were Completed

Reason for Leaving:

Additional Information

Notes/Comments:

Quality Control/File Review:

Exhibit 6-2 presents the second data entry form. This form is used to enter information about the training and certification of job analyst candidates. It includes spaces to enter the scheduled times for required trainings as well as completion dates and a record of attendance. Additionally, there are places to enter if the certification test was passed, the score, and the information about certificate issuance and expiration.

Exhibit 6-2: MS Access Data Entry Form 2
Track Training and Certifications

ID:

Track Training of Job Analyst

Online Basic JA Course Required
 No Yes

Deadline for Completing Online Basic JA Course:

Online Basic JA Course Completion Date:

Deadline for Completing Mandatory Online SSA JA Course:

Mandatory Online SSA JA Course Completion Date:

Scheduled Date of Instructor-Led Courses:

Scheduled Time of Instructor-Led Courses:

Scheduled Location of Instructor-Led Courses:

Attendance at Instructor-led Courses
 Did not attend all required instructor-led sessions
 Attended all required instructor-led sessions

Practice Field Work Due Date:

Completion Date of Practice Field Work:

Practice Field Work Results Did Not Pass Passed

Practice Field Work Notes:

Track Certificate Program

Certificate Assessment Taken
 No Yes

Certificate Assessment Score:

Certificate Issued No Yes

Date Certificate Issued:

Expiration Date of Certificate:

Data entry form 3 is presented in Exhibit 6-3. This data entry form includes information about the job analysis assignments given to each analyst. It includes places to record the assignment, when it should be and is completed, the number of hours taken to complete the assignment, and contact information for the point of contact at the assigned organization.

**Exhibit 6-3: MS Access Data Entry Form 3
Job Analyst Assignments**

ID:

Make Job Analyst Assignments

Assignment #1:

Expected Completion Date of Assignment #1: Actual Completion Date of Assignment #1:

Total Hours to Complete Assignment #1:

Point of Contact at Organization

Assignment #1 Contact Name: Assignment #1 Contact Number:

Assignment #2:

Expected Completion Date of Assignment #2: Actual Completion Date of Assignment #2:

Total Hours to Complete Assignment #2:

Point of Contact at Organization

Assignment #2 Contact Name: Assignment #2 Contact Number:

Assignment #3:

Expected Completion Date of Assignment #3: Actual Completion Date of Assignment #3:

Total Hours to Complete Assignment #3:

Point of Contact at Organization

Assignment #3 Contact Name: Assignment #3 Contact Number:

Assignment #n:

Expected Completion Date of Assignment #n: Actual Completion Date of Assignment #n:

Total Hours to Complete Assignment #n:

Point of Contact at Organization

Assignment #n Contact Name: Assignment #n Contact Number:

Exhibit 6-4 presents the final data entry form. This form includes information about audits of the job analyses conducted by the analyst as well as information about payroll. The payroll information boxes are calculated by Excel; total hours worked is equal to the total sum of all hours entered for the job analyses in form 3. Total amount paid is the hourly wage multiplied by the total number of hours.

Exhibit 6-4: MS Access Data Entry Form 4 Field Work Evaluation and Payroll Information		
ID: <input type="text"/>		
Evaluation of Field Work		
Has Field Work Been Audited? <input type="checkbox"/> No <input type="checkbox"/> Yes	Auditor Name: <input type="text"/>	Date of Audit: <input type="text"/>
Did Field Work Pass Audit? <input type="checkbox"/> No <input type="checkbox"/> Yes		
Audit Comments: <input style="width: 100%; height: 40px;" type="text"/>		
Payroll Information		
Total Hours Worked: <input type="text"/>		
Total Amount Paid: <input type="text"/>		

6.2 Parameters for Sample Database

The draft Candidate Tracking Database provides an example of what a candidate tracking database for SSA's purposes may look like and how it could function. Given that this draft database has been developed in advance of having a defined business strategy for recruiting, training and certifying job analysts, many of the data fields that are currently included in the database are simply placeholders. So, where aspects of the process have not yet been determined, we have provided example data fields. Those data fields will need to be revised and likely made more specific once the business strategy is finalized.

For example, the draft Candidate Tracking Database currently includes a data field for entering whether a candidate has passed or not passed pre-employment tests. This data field is just a placeholder because we do not yet know what specific pre-employment tests may be included in the process. Once those pre-employment tests are identified, if there are any, then the database could and should contain data fields for each pre-employment test and their respective scores.

6.3 Additional Database Considerations

In developing the draft Candidate Tracking Database, some issues were identified that have not necessarily been raised in previous reports or discussions so we thought it would be useful to note here as SSA continues to move forward in developing its business strategy.

Should SSA want to conduct reference checks, meaning obtaining references from candidates and contacting those references to verify information about the candidate, it is important to consider what information is appropriate to ask of a reference. There are legal risks for references in providing information. Likely questions would or should be limited to verification of employment and tenure and whether the candidate's termination was voluntary or involuntary.

For any pre-employment tests, consideration will need to be given on whether or not to have a cutoff score for eligibility or to simply target the candidates with the highest scores for hire.

Assuming that background checks will likely be an important and necessary step in the screening and hiring process, SSA will need to consider the type of background checks that would be most appropriate. There are Federal, state, multiple state (if less than 3 years), Domestic Violence/Abuse Checks, Criminal History, and DMV violations. The necessary checks will largely be based on the requirements of SSA. There are no specific checks required to conduct job analysis per se. Background checks may lead to questions that recruiters or screeners need to follow-on with the candidate.

Regarding once a candidate is hired and job analysis assignments are given, SSA will need to consider whether analysts will be given a certain number of hours in which to conduct the analysis or allow that to be flexible. As discussed in Chapter 5, SSA will need to make compensation decisions prior to finalizing the pay fields in this database. For example, SSA will need to determine if analysts should be paid on an hourly rate or a flat fee and then whether or not those hourly rates or flat fees will vary by location or assignment.

SECTION 3: Project Summary and Recommendations

Section 3 provides information summarizing the project and providing recommendations. It includes the following two chapters:

Chapter 7: General Conclusions

Chapter 8: Next Steps and Decisions

These two chapters provide information regarding overall conclusions and strategies that should inform the training, certification, and recruitment of job analysts for SSA.

Chapter 7: Conclusions and Recommendations

7.1 Overview of Conclusions and Recommendations

At this stage in the OIS project development, the need was for a comprehensive investigation and review of existing job analysis training, certificate and recruitment practices. From this review, key components for training, certifying and recruiting job analysts have emerged. These key components should be integrated into the development of practices that SSA will implement upon completion of the work analysis instrument and selection of a corresponding job analysis methodology. Thus, our conclusions and recommendations are broad in nature and do not indicate a single approach but rather considerations for when the content model and taxonomy have been fully articulated.

7.2 Relationships among Training, Certification, and Recruitment

The practices used for training, certification, and recruitment must be effective in their own right, and they must work together effectively. The reason for this is that each component affects, and is affected by the other two. For example, the certificate program needs to be well integrated with the training to ensure the assessment process is measuring specific KSAs associated with the training and not more generalized capabilities. At a minimum, to ensure compatibility, each component needs to be based on the content of the SSA analyst job as determined by a job analysis. When SSA changes any component, SSA should re-evaluate the alignment of that component with the other two.

7.3 Training Recommendations

In chapter 3 of this report (pg. 3-1), we presented the research, findings and recommendations for the training of job analyst candidates. These findings included presenting a list of the knowledge, skills, and abilities (KSAs) that will be important for SSA job analysts; describing the minimum qualification standards for job analyst candidates who will attend the training; presenting an overview of existing job analysis training programs; describing recommended training practices, including training design and structure, as well as training content and materials, and providing an overview and recommendations for training delivery format. Exhibit 7-1 presents a summary of the primary conclusions and recommendations on each of these topics.

Exhibit 7-1: Summary of Training Conclusions and Recommendations	
SSA Job Analyst Knowledge, Skills and Abilities	
SSA Job Analyst Knowledge, Skills and Abilities	<ul style="list-style-type: none"> ▪ The SSA Job Analyst role will require a broad set of KSAs because these individuals must use a variety of tools and methods to gather, analyze, and report data. ▪ Of highest importance to the role will be knowledge of SSA's work analysis instrument and job analysis practices (e.g., coding procedures, rating scales). Since job analysts will not have previous knowledge or experience with SSA's work analysis instrument or practices, training will be essential. ▪ <i>Recommendation: Refine the SSA Job Analyst KSAs based on the final SSA job analysis methodology and work analysis instrument.</i>

Exhibit 7-1: Summary of Training Conclusions and Recommendations	
Minimum Qualifications	
Minimum Qualifications	<ul style="list-style-type: none"> ▪ KSAs were identified for MQ development if they were rated as both necessary at entry and extremely important for performing work as an SSA job analyst. Three KSAs met these criteria: <ul style="list-style-type: none"> ♦ Ability to understand written materials. ♦ Ability to visually perceive objects (e.g., job equipment), people and environments. ♦ Ability to adapt to situational circumstances. ♦ MQs are intended to serve as an initial hurdle to identify those who are minimally acceptable and eligible to apply, while screening out individuals that will absolutely not be able to perform the job successfully. ▪ <i>Recommendation: SSA’s MQs should address specific and relevant course work or experience performing specific types of job activities, which can more easily be linked to job relevant knowledge, skills and abilities (KSA) that are required to perform the job.</i> ▪ <i>Recommendation: Based upon the three KSAs identified above, SSA should use MQs such as the following:</i> <ul style="list-style-type: none"> ♦ <i><u>Education</u>: Completed high school degree and college-level technical writing course.</i> ♦ <i><u>Personal/Education/Work Experience</u>: Maintained employment for a period of at least six months that involved collecting visual data; <u>or</u> Participated in personal or educational activities for at least six months where visual cues had to be gathered and interpreted to conduct the activity successfully.</i> ♦ <i><u>Personal/Education/Work Experience</u>: Conducted education, professional or volunteer activities involving interactions with professionals from different occupations or disciplines; <u>or</u> Engaged in collecting job information from career fields that vary in work environment, function and services performed.</i>
Existing Job Analyst Training	
Existing Job Analyst Training	<ul style="list-style-type: none"> ▪ Typical characteristics of existing job analyst trainings include: <ul style="list-style-type: none"> ♦ Classroom-based ♦ Anyone can participate (no pre-requisites) ♦ Content focuses on data collection skills particular to the job analysis method ♦ Opportunities for practice ♦ No summative assessment ▪ <i>Recommendation: Once the job analysis methodology has been determined, SSA should review the existing trainings to identify those that use similar job analysis methods and explore the possibility of using these existing materials in training development.</i>

Exhibit 7-1: Summary of Training Conclusions and Recommendations	
Recommended Training Practices: Training Design and Structure	
Critical Design Considerations	<ul style="list-style-type: none"> ■ Critical design considerations were determined by asking training experts about the most important elements to consider when designing a training program. ■ <i>Recommendation: SSA should follow the below guidance when designing the job analyst training:</i> <ul style="list-style-type: none"> ◆ <i>All of the training activities should be linked to specific, measurable and observable learning objectives.</i> ◆ <i>The background and experience levels of the participants must be considered during training design.</i> ◆ <i>The training should first address the concepts to create a general understanding of the material. Subsequently, the participants should be allowed the opportunity to perform the relevant behaviors.</i> ◆ <i>Each session should be kept relatively short and should include review questions or an interactive component to help keep participants' attention.</i> ◆ <i>Budgetary concerns should impact features such as the sophistication of materials and the range of activities that can be offered, but should not dictate the material that can be taught.</i>
Instructional Design Models	<ul style="list-style-type: none"> ■ Training experts noted that the Instructional Systems Design (ISD) ADDIE is one of the most well known and widely applied training design models due to its flexibility and strong emphasis on evaluation. ■ <i>Recommendation: The ISD ADDIE model is recommended for use in designing the SSA job analyst training. This model includes the following phases:</i> <ul style="list-style-type: none"> ◆ <i>Analysis</i> ◆ <i>Design</i> ◆ <i>Development</i> ◆ <i>Implementation</i> ◆ <i>Evaluation</i> ■ <i>Recommendation: Evaluation should be conducted during each phase, as well as at the conclusion of training design.</i>

Exhibit 7-1: Summary of Training Conclusions and Recommendations	
Training Features	<ul style="list-style-type: none"> ▪ Training features recommended for use by SSA were identified by reviewing the literature and gathering input from experts on practices that increase the likelihood participants will fully understand the material and will be able to apply it on the job. ▪ <i>Recommendation: The training should include the following features:</i> <ul style="list-style-type: none"> ♦ <i>Lecture – to provide information on content</i> ♦ <i>Discussion – to provide an opportunity for clarification and reflection</i> ♦ <i>Practice – to provide participants an opportunity to try the behaviors and build their skills</i> ♦ <i>Feedback – to inform participants on their progress and help them improve</i> ♦ <i>Resource Materials – to provide participants with materials to which they can refer after the training has concluded</i> ▪ <i>Recommendation: To increase participant engagement, the training should include a variety of activities, communicate the importance of the training, and highlight how the training can benefit the participant beyond the SSA context (e.g., building their resume, giving them experience with assessing other job requirements that they may not typically capture).</i> ▪ <i>Recommendation: To enhance transfer of training, the training should emphasize the expectation to adhere strictly to the process taught, incorporate significant time for practice, provide feedback, use knowledgeable instructors, and encourage a network of peer support. After training, an auditing system should be used, and a support network should be implemented.</i>
Training the Trainers	<ul style="list-style-type: none"> ▪ All trainers must have a deep understanding of the content taught in the training to ensure that they are communicating the accurate information to participants and are able to answer questions and provide guidance. ▪ When multiple trainers are being used, it is important to work toward consistency and standardization in training delivery to ensure that all participants are receiving the same quality of training, regardless of their training location and instructor. ▪ <i>Recommendation: SSA should develop train-the-trainer sessions that address the course content, as well as delivery guidelines and expectations.</i>
Training Assessment/ Integration with Certificate Process	<ul style="list-style-type: none"> ▪ Because an assessment-based certificate program is most appropriate for SSA’s needs, a training assessment will need to be developed and integrated with the certificate process. ▪ <i>Recommendation: The assessment should be tied to specific training objectives, which must be well defined and outline what the participants need to accomplish from the training to be successful on the job.</i> ▪ <i>Recommendation: The training should include a knowledge assessment (e.g., multiple-choice) as well as a behavioral component that includes realistic job analysis scenarios.</i>

Exhibit 7-1: Summary of Training Conclusions and Recommendations	
Evaluation of Training	<ul style="list-style-type: none"> ▪ Kirkpatrick’s four levels of criteria represent a well-known and widely used model of training evaluation. It was the primary training evaluation model discussed by the training experts who were interviewed. ▪ Training experts noted that, because of the obvious need for training on SSA’s specific job analysis process, it may not be necessary to evaluate the training at the organizational results level (fourth level in Kirkpatrick’s model); instead, behavior may be the highest necessary level of analysis for the job analyst training. ▪ <i>Recommendation: Evaluation of SSA training should include at least three of the four levels of training evaluation criteria in Kirkpatrick’s model:</i> <ul style="list-style-type: none"> ♦ <i>Reactions – what participants thought of the training</i> ♦ <i>Learning – whether participants learned the training objectives</i> ♦ <i>Behavior – whether participants transferred the training material to job performance</i>
Recommended Training Practices: Training Content and Materials	
Training Content	<ul style="list-style-type: none"> ▪ Important job analyst KSAs that were rated most difficult to learn include the following: <ul style="list-style-type: none"> ♦ Ability to judge/make decisions. ♦ Ability to recognize ambiguous, conflicting, or incomplete information to seek clarification. ♦ Skill in discerning the KSAs required to perform a task. ♦ Skill in observing the performance of a job to gather information about the job. ♦ Ability to estimate the value or worth of something (e.g., make ratings of the importance of KSAs; make rating of the amount of an ability needed). ▪ <i>Recommendation: KSAs that need to be addressed in the job analyst training should be reassessed after the job analysis methodology has been finalized.</i>
Data Collection Procedures	<ul style="list-style-type: none"> ▪ Training experts highlighted the importance of focusing on data collection procedures as a major component of the SSA job analyst training. ▪ <i>Recommendation: A significant portion of the training should be dedicated to training the specific data collection processes they will need to follow.</i> ▪ <i>Recommendation: The training must also emphasize the importance of ensuring the quality of data that are collected.</i> ▪ <i>Recommendation: The training should also address how to respond to challenges or accommodate situational differences that necessitate some flexibility in the standard job analysis methodology.</i>

Exhibit 7-1: Summary of Training Conclusions and Recommendations	
Security of Data	<ul style="list-style-type: none"> ▪ Security of data is a primary concern, as SSA job analysts will be collecting data from a variety of organizations in all industries. ▪ <i>Recommendation: Data security issues must be addressed during the training, including a discussion about ethics and issues with data confidentiality and sensitive information.</i> ▪ <i>Recommendation: The training should emphasize the consequences of failing to adhere to data security requirements.</i> ▪ <i>Recommendation: The training should include practice scenarios or case studies that highlight these concerns, so that participants have the opportunity to practice identifying sensitive information, using ethical conduct, and taking appropriate action.</i> ▪ <i>Recommendation: The training also needs to address how to communicate about confidentiality and data security issues to job analysis participants.</i>
Training Materials	<ul style="list-style-type: none"> ▪ The importance of including opportunity for comprehensive practice during training was strongly emphasized by experts and throughout the training literature. ▪ <i>Recommendation: During training, participants should have the opportunity to use all types of materials that they will need to use on-site during a job analysis.</i>
Training Delivery Methods	
Classroom-Based Training	<ul style="list-style-type: none"> ▪ Classroom-based training refers to traditional training led by an instructor. All trainees attend the training in-person, and the material is taught face-to-face to all trainees at once. ▪ Large scale classroom trainings may be administered centrally or regionally. ▪ Advantages: <ul style="list-style-type: none"> ♦ Allows for maximum interaction between instructor and trainees ♦ Instructors can actively monitor participant reactions and provide clarification and feedback ♦ Classmates may serve as a network of support for one another ♦ Allows participants the opportunity for hands-on practice ▪ Disadvantages: <ul style="list-style-type: none"> ♦ Classroom training results in a high administration cost when conducting large-scale training with geographically dispersed trainees ♦ The effectiveness of classroom training depends largely on the effectiveness of the instructor ♦ Inconsistencies between training sessions are likely ▪ <i>Recommendation: Classroom-based training should not be used as the sole delivery method for SSA job analyst training.</i>

Exhibit 7-1: Summary of Training Conclusions and Recommendations

E-Learning	<ul style="list-style-type: none"> ▪ E-learning refers to a broad range of training delivery methods that use technology to deliver training to participants, who do not meet face-to-face. ▪ Variations include self-paced online training, instructor-led distance learning, webcasts, and multi-media training (e.g., CD-ROM; audio/video) ▪ Advantages: <ul style="list-style-type: none"> ♦ Low administration cost due to elimination of costs for participant travel, classroom, and instructors ♦ Ensures consistent, standardized delivery ♦ Convenient for participants, as they do not have to travel ♦ Training can be delivered more efficiently due to lack of time spent on breaks or discussion ♦ Participants are able to go through the training at their own pace ▪ Disadvantages: <ul style="list-style-type: none"> ♦ Participants receive limited feedback ♦ Participants may not feel that they have a community of support ♦ Participants cannot be observed to ensure they are learning the material ♦ Does not afford participants the opportunity for hands-on practice ♦ Because participants will take the training from different locations, technological problems are a potential concern (e.g., amount of bandwidth available, firewalls) ♦ Training content is difficult to update ▪ <i>Recommendation: E-learning should not be used as the sole delivery method for SSA job analyst training.</i>
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Exhibit 7-1: Summary of Training Conclusions and Recommendations	
Blended Training	<ul style="list-style-type: none"> ▪ Blended methods combine traditional classroom training with e-learning in an effort to take advantage of the benefits of both of these delivery methods. ▪ Blended methods could involve any combination of the classroom and e-learning variations described previously. The recommended approach involves self-paced online training, followed by classroom-based training. ▪ Advantages: <ul style="list-style-type: none"> ♦ Combines the best of classroom and web-based training, as participants can learn the content online and practice their skills in person ♦ Administration costs are reduced in comparison to pure classroom-based training ▪ Disadvantages: <ul style="list-style-type: none"> ♦ Significant development effort is required, as both the web-based and classroom components will need to be designed and developed ▪ While online training may be more cost effective when training a large number of geographically dispersed participants, online training alone would not allow participants the opportunity for hands-on practice or to receive an appropriate amount of feedback. ▪ Including an online training component as the first hurdle of the training would help to reduce administration costs and would allow participants to arrive at the classroom training with a stronger knowledge base from which they can build their skills. ▪ Although the development of a blended training approach may be more involved, we believe this initial effort will be worth the benefits the blended method will afford during training administration. ▪ <i>Recommendation: Blended training delivery is recommended for the SSA job analyst training.</i>

The training experts who were interviewed largely recommended using a blended training delivery for the SSA job analyst training. While online training may be more cost effective when training a large number of geographically dispersed participants, the nature of the data collection procedures that will be involved as well as the strong importance of being able to perform these procedures correctly when working independently led the experts to believe that online training alone would not be sufficient, as it would not allow participants the opportunity for hands-on practice or to receive an appropriate amount of feedback. However, including an online training component as the first hurdle of the training would help to reduce administration costs and would allow participants to arrive at the classroom training with a stronger knowledge base from which they can build their skills. Although the development of a blended training approach may be more involved, we believe this initial effort will be worth the benefits the blended method will afford during training administration.

7.4 Certificate Program Recommendations

In chapter 4 of this report (pg. 4-1), we have presented the research and findings for credentialing job analyst candidates for the development of SSA’s OIS. We have examined and presented current industry practices and standards related to credentialing and presented the current credentialing practices of known job analysis methods. SSA requires a credentialing process that will enable SSA to ensure the job analysts who will be collecting data for their OIS have the required knowledge, skills and competence to

use their job analysis instrument and procedure. Based on these requirements, our research finds that an assessment-based certificate program would fully satisfy SSA’s needs. An assessment-based certificate program is designed to attest that individuals have received a specified training, that those individuals have met the learning outcomes of that training and that individuals are competent in the knowledge and skills covered in the training.

Less than half of the job analysis methods we researched provide some form of credentialing for users. Of those methods that do have some form of credentialing, the process involves completing a specific training on the method, completing an assessment, which takes the form of either a multiple-choice examination or work samples of job analyses, and meeting a pre-determined passing score on the assessment. The credentialing process of these known job analysis methods follows the general approach laid out in industry standards for assessment-based certificate programs; however their practices appear to fall short of fully meeting industry standards. Given that SSA’s OIS may need to stand up to legal scrutiny, SSA needs a credentialing process that is of the highest quality and can be recognized by an outside third party as valid and rigorous.

There are two approved industry standards for assessment-based certificate programs that if followed would enable SSA to seek accreditation with a certified accrediting body, such as ANSI or ICE. Both of these industry standards lay out a number of features and requirements for an assessment-based certificate program. We have presented these features and requirements and discussed what SSA will need to do to meet those requirements to ensure its assessment-based certificate program is fully compliant. If SSA follows these standards, it will have a quality certificate program that can be accredited by an outside third party, if that is SSA’s wish, and as such will be able to have confidence in its job analysts and the legal defensibility of the data collected.

Exhibit 7-2 provides the conclusions and recommendations that we have drawn from our research on credentialing practices.

Exhibit 7-2: Summary of Certification Conclusions and Recommendations	
Established Industry Certificate Program Standards	<ul style="list-style-type: none"> ▪ Given the legal scrutiny that SSA will likely face, SSA needs a credentialing process that is of the highest quality and can be recognized by an outside third party as valid and rigorous. ▪ <i>Recommendation: SSA should follow one of two approved industry standards for assessment-based certificate programs, either ANSI or ICE.</i> ▪ <i>Recommendation: Even if SSA is either not prepared to undergo the accreditation process in the near future or does not wish at this time to have the certificate program ever accredited, it is recommended that the program be “built” to comply with these standards from the outset.</i>

Exhibit 7-2: Summary of Certification Conclusions and Recommendations	
Accreditation of Certificate Program	<ul style="list-style-type: none"> ▪ Accreditation and third party validation for assessment-based certificate programs appear to have significant value to agencies similar to SSA. ▪ The public and the Federal government and its agencies have become familiar with certification and program standards and are increasingly requesting third party validation of the credentialing, training, etc. work of federal agencies. ▪ <i>Recommendation: SSA should follow-up with ANSI, FBI, and the FDA to answer any specific questions that SSA might have concerning development and operations of a certificate program and the importance of standards and accreditation.</i> ▪ <i>Recommendation: While seeking accreditation is recommended, if the certificate program is only administered short-term (less than two years), it may not be feasible. Even so, it is recommended that the program be “built” to comply with the standards from the outset.</i>
Creating a Certificate Program	<ul style="list-style-type: none"> ▪ Adherence to the standards will require that SSA’s certificate program include policies, procedures and communications, quality control checks, record maintenance and control, and program evaluation. ▪ The standards are very particular about how certificates can be issued and used and that must be well-communicated to participants. ▪ A comprehensive assessment-based certificate program includes both formative and summative evaluative components where the candidate is required to demonstrate application of training concepts throughout the training program. ▪ The requirements for assessment-based certificate programs are quite extensive and could be difficult to implement for someone unfamiliar with them. ▪ <i>Recommendation: SSA should develop clear policies and procedures for program operation and administration and information about the program that can be communicated to stakeholders.</i> ▪ <i>Recommendations: On an annual basis, SSA should conduct a quality control check or evaluation of the program, including the administrative functions as well as the training and assessments.</i> ▪ <i>Recommendation: Both formative and summative assessments are advised for this program.</i> ▪ <i>Recommendation: SSA should maintain both participant records and records on how the program was developed and administered.</i> ▪ <i>Recommendation: SSA should have a designated authority to oversee, manage and be responsible for the program</i> ▪ <i>Recommendation: An assessment specialist should be involved early in the design process.</i>

Exhibit 7-2: Summary of Certification Conclusions and Recommendations	
Certificate Program Training Development	<ul style="list-style-type: none"> ▪ Certificate program standards require training programs to be developed and delivered by qualified individuals, following accepted standards. Additionally, the training content must be based on the purpose and learning goals. ▪ <i>Recommendation: Certificate program training should be based on learning objectives, follow generally accepted training guidelines and models, and use delivery methods that are appropriate for the learning objectives.</i> ▪ <i>Recommendation: When developing the content of the assessment-based certificate program, the training recommendations laid out in this report should be considered and incorporated. For example, recommendations regarding the training delivery method should be incorporated into the development of the assessment-based certificate program.</i> ▪ <i>Recommendation: An assessment specialist should be involved when the learning objectives are being developed.</i>
Certificate Program Materials	<ul style="list-style-type: none"> ▪ Detailed training and program materials can help to ensure quality by providing each analyst with all of the information that he or she needs to accurately collect data. ▪ <i>Recommendation: Providing certificate program participants with detailed materials or guidelines will help to ensure accuracy in their data collection.</i>
Existing Job Analysis Credentialing	<ul style="list-style-type: none"> ▪ The process for certifying job analysts for other job analysis methods typically involves completing a specific training on the method, completing an assessment which takes the form of either a multiple-choice examination or work samples of job analyses, and meeting a pre-determined passing score on the assessment. ▪ Existing job analyst certifications do not meet SSA's need nor do they fully meet the requirements of an assessment-based certificate program. ▪ <i>Recommendation: Because exiting job analysis credentialing is based on the specific method being trained, SSA will not be able to use an existing program and should develop its own certificate program based on the method, instrument, and content model selected.</i>
Credentialing for Data Entry	<ul style="list-style-type: none"> ▪ Certificate program training should emphasize consistency and accuracy of data entry and teach trainees about interpreting data consistently, as these are essential for ensuring quality in the information received from the analysts and their data entry. ▪ Existing large-scale databases use a combination of training, providing very detailed resources, and set limits in developed databases to ensure the quality of data entered. ▪ <i>Recommendation: SSA should develop a software program to enter data that can limit the types of data entered into various fields and can provide warnings regarding suspect entries.</i> ▪ <i>Recommendation: A detailed data entry instruction handbook or guidebook should be provided to participants to ensure that they are able to correctly enter data regarding their completed job analyses.</i>

Exhibit 7-2: Summary of Certification Conclusions and Recommendations	
Audit Process	<ul style="list-style-type: none"> ▪ Audits can be used to assess the quality of data and identify any discrepancies or inconsistencies after data is entered. ▪ Audits can be conducted on a pre-determined schedule, if a problem in data quality is identified, or if certain triggers (e.g., new analyst, analyst who has not performed an analysis for a long time) are met. ▪ If SSA uses independent consultants or professional job analysts, these individuals will likely have experience in other job analysis methods, which may impact how they perform SSA’s methodology. ▪ <i>Recommendation: Beyond a credentialing process, SSA should consider developing an audit process for checking the quality of job analysts’ work after they have been in the field for awhile, as SSA job analysts may not perform job analyses for SSA on a continual or routine basis and SSA may need to periodically assess the work of its job analysts to ensure quality.</i> ▪ <i>Recommendation: SSA should develop clear policies and procedures for how the auditing process will occur, how often it will occur, who will be audited, how work will be evaluated, and what measure will be used.</i>

7.5 Recruitment Recommendations

The benchmarking partners chosen for this study were selected to provide a broad overview of recruitment, selection, compensation, and training practices at organizations that in some way mirror SSA’s planned effort to build a network of job analysts. None of the partners completely parallel SSA, and they sometimes differ greatly from each other, but the sum total of their experiences suggests a way forward for SSA. Before recommending a potential course for SSA’s recruitment process, we review the trends and contrasts that emerged from the case study interviews.

Exhibit 7-3 illustrates the similarities and differences in the practices of the various benchmarking partners with respect to SSA’s planned recruitment effort. Note that this table focuses on their methods and practices as reported in the interviews.

Exhibit 7-3: Comparison of Practices of Benchmarking Partners						
	US Census Bureau	BTE Technologies	Unum Group	SAIF Corporation	California State Personnel Board	Jefferson County Personnel Board
Staffing Method						
Hire full-time professionals		✓	✓	✓	✓	✓
Hire part-time professionals	✓					
Use a network of external professionals/clinics/organizations		✓		✓	✓	
Degree Required for Job Analysts						
Bachelor’s	NA ¹			✓ ²	✓ ³	
Master’s or above	NA ¹	✓	✓	✓ ²	✓ ³	✓

Exhibit 7-3: Comparison of Practices of Benchmarking Partners (Cont.)						
	US Census Bureau	BTE Technologies	Unum Group	SAIF Corporation	California State Personnel Board	Jefferson County Personnel Board
Certification Required						
Independent/External			✓	✓		
Internal/Proprietary	✓	✓				
Recruiting Structure						
Centralized		✓	✓	✓		
Decentralized	✓				✓	✓
Tracking Systems						
Candidate Tracking	✓	✓	✓		✓	
Work Product Tracking	✓	✓				
Compensation						
Hourly Rate	✓			✓ ⁵		✓
Annual Salary		✓ ⁴	✓	✓ ⁵	✓	
Flat Fee for Service (Lump Sum)		✓ ⁴				
Training Delivery Method						
Instructor-led Classroom	✓	✓			✓	
On-site/Demonstration		✓				
Informal / On-the-Job			✓	✓		✓
Recruitment Methods and Modes						
Partnerships with Local Organizations	✓					
Organizational Jobs Website	✓		✓		✓	✓
Web-Based Job Site/Job Boards		✓				✓
Newspaper Ads	✓					
Door-to-Door Recruitment	✓					
Existing Network of Providers		✓		✓		
References/Word of Mouth			✓			
Targeted Graduate Programs					✓	✓
Web Searches		✓				

¹ U.S. Census Bureau does not hire job analysts.

² Varies depending on prior experience

³ A Master's degree is required for CSPB's internal staff of I/O experts, but many of the HR personnel performing analyses at each department do not have advanced degrees.

⁴ BTE pays its internal experts an annual salary and its external network providers a flat fee for service.

⁵ SAIF pays its internal Vocational Coordinators a salary and pays its external Vocational Rehab Consultants an hourly fee.

The first and probably most important decision SSA will make regarding the recruitment of job analysts will be whether to hire full-time or part-time analysts, or to contract out this work to individual analysts or firms that perform this work. Interestingly, all of the partners that perform work related to job or vocational analysis hire full-time experts in this work. Even so, many of them also had a network of contract staff to perform much of the work, with the internal staff generally serving as reviewers, trainers,

coordinators or subject matter experts. The network approach was pursued by organizations that spanned whole states or even the entire nation. Somewhat surprisingly, Unum did most of their Occupational Analysis work in-house; however, Unum's work does not require the analyst to actually be on-site, unlike at BTE or SAIF. The Census Bureau was the only partner to recruit part-time employees, but the work performed by those individuals is less complex than that of the other partners.

Degree requirements were fairly consistent among the partners hiring job analysts, with most requiring a graduate degree in a related field to perform analytical work. BTE, with more of a physical demands focus, preferred Occupational and Physical Therapy degrees whereas Unum and SAIF sought vocational counseling or similar degrees. The requirements set for SAIF by the State of Oregon allowed individuals with Bachelor degrees to perform the work if they have sufficient experience. Many of the human resource professionals analyzing jobs in the State of California do not have advanced degrees, but CSPB hires experts with advanced degrees in I/O Psychology to train them. The U.S. Census Bureau does not hire job analysts and most employees recruited for the 2010 Census did not need to have a college degree.

Testing and certification was important for several of the partners, but they differed in how they accomplished this. Large insurance providers such as Unum and SAIF relied on external entities such as the Commission on Rehabilitation Counselor Certification (CRCC) to certify that candidates were qualified to perform the work. Employees are required to be certified prior to being hired, though Unum would pay employees to renew their certifications. BTE and the Census Bureau elected to independently verify the ability of their employees or network providers to perform the work. Census assesses candidates before they are hired, whereas BTE tests and certifies them after they have completed training.

Another key differentiator among the partners was the degree of centralization of their recruiting processes. An example of a highly decentralized process is the Census Bureau, which produces materials and processes at the HQ level, but leaves much of the work of recruiting staff up to regional and local recruitment offices. Even advertising, a function one might assume is more efficiently accomplished centrally is frequently delegated to local offices in hard to reach locations. The Personnel Boards of California and Jefferson County, AL follow a similar model of providing centralized expertise to government organizations across the state or county to make recruitment and selection decisions. In contrast, the organizations affiliated with the insurance industry all recruited from a central location, despite having network or office locations across the state or country. This approach may be more efficient when there is no need to hire large numbers at one time.

Keeping track of candidates through the hiring process and monitoring work products (e.g. job analyses) was deemed important by most of the partners, but their systems to track this information varied in sophistication. Relatively small organizations like SAIF and JCPB had little infrastructure to track candidates or work products. Larger, more established organizations such as BTE and Unum had basic corporate systems for candidate tracking, while CSPB was integrated into California's system. The most sophisticated candidate tracking system was described by the Census Bureau who kept extensive details on candidates including personal information, test scores, and results of background checks. This information stayed with the candidates even after they left the organization in case they applied to later iterations of the Census. In contrast, their performance measurement system was less highly regarded by the GAO who criticized the fact that it tracked productivity data, but not work quality data. BTE led the field in terms of work product tracking, with an automated tracking and review system that allows them to see where in the process any evaluation is (i.e. request, referral, in-progress, completed) and feeds them the results for review when it is completed.

BTE was also unique in that they were the only ones to compensate practitioners with a flat fee per analysis. This fee was negotiated with each individual provider and stayed the same regardless of the job. However, like most other firms we interviewed, they had at least some salaried employees performing

this type of work in-house, even if they also contracted some work out. In contrast, SAIF had salaried employees to do internal coordination and make referrals, but paid outside contractors an hourly rate to do the evaluations. The contractors were also compensated at a reduced rate for time spent traveling and for mileage. JCPB reported an hourly rate for its employees, but it was not clear whether or not they are exempt employees. As previously stated, the Census Bureau was the sole participant to use part-time employees, and they were paid an hourly wage plus mileage reimbursement. All of the partners agreed that offering a competitive wage was essential to any recruiting effort.

The benchmarking partners were in less agreement over how to approach employee training, with some preferring more formal classroom training and others adopting an on-the-job learning approach. There are clear reasons for their choices. Organizations like the Census Bureau and BTE both have complicated and precise systems and processes to follow; these lend themselves to more rigorous classroom training. The Census Bureau utilizes a verbatim script reading approach, while BTE focuses on offering hands-on use of the equipment and systems. They will even go on site to their network providers' clinics in order to demonstrate and calibrate the equipment. CSPB had to train people across the state, many without an I/O Psychology or Vocational Rehab background, to perform job analysis. JCPB trains its internal staff using a manual on their processes, but the lynchpin of their approach was a mentoring relationship rather than classroom training alone. The two insurance organizations, Unum and SAIF had relatively small internal staffs of vocational professionals, so formal classroom training does not make sense for them. Unum did create some structure around its training, however, providing new employees with a training calendar and a mentor to guide them through the first few months. Their training culminated in a roundtable where an employee must demonstrate his or her competence before operating on their own.

As can be seen in Exhibit 7-3, most of the benchmarking partners used more than one method to recruit potential job analysts and these methods can vary greatly from one another. Web-based job postings, either on the organization's own website or on a wider scale site, are the most commonly used means for recruiting employees among the benchmarking partners. When this does not supply enough candidates to fill necessary positions, organizations may turn to other recruitment methods in order to increase the number of potential job candidates.

7.5.1 Lessons and Recommendations for SSA from Recruitment Benchmarking

As demonstrated by the diversity of approaches seen above and throughout this report, it is clear that SSA will find few universal truths regarding solutions to its human resource challenges. Moreover, the limited sample of partners engaged by ICF does not provide reliable statistical evidence on the superiority of one approach over another when it comes to hiring job analysts for the OIS project. Yet there are some valuable lessons to be learned from the experiences of the partners. In rare cases, these lessons take the form of fundamental principles that SSA should adhere to as it plans and implements its recruitment effort. In general, the following recommendations represent our assessment of the strategies most likely to be successful for SSA based on our analysis of our findings and our knowledge of SSA's needs. Ultimately, SSA will need to consider its own capabilities, incorporate feedback from SSA's internal and external experts, and possibly conduct further research to validate the methods suggested by this benchmarking process.

7.5.1.1 Sources of Job Analyst Candidates

One of the key decisions that SSA will need to make in developing their business strategy for recruiting, training and hiring job analysts is to determine the type of individual that would be most ideal for them to target in their recruitment efforts. This decision is one that has been touched on in previous reports delivered under this Call Order and is highly dependent on the KSAs needed to perform the work, which is highly dependent on the final job analysis methodology and instrument chosen by SSA. Because those

pieces are still under development, a clear recommendation for the type of individual and thus, sources of job analysts candidates, cannot be made at this time; however, we can lay out the most likely options.

The benchmarking partners for this study typically recruited graduate level experts in fields such as vocational rehabilitation, physical and occupational therapy, and I/O Psychology. Although targeting these individual would likely lead to a highly qualified candidate pool, they are likely to be the most expensive and the most likely to be fully engaged in another permanent position. Thus, ICF asked partners about other sources SSA might pursue, and suggestions included graduate students, retirees, and HR generalists. Graduate students would have much of the classroom knowledge needed for this type of work and would probably be happy to gain the practical experience offered by this effort for less pay than a practicing professional. However, they would require careful supervision and practical training to ensure a quality work product. Retired professionals were another group targeted by Census and CSPB. They have the added benefit of having decades of experience, but the flexibility to accept less than full-time work. CSPB's work also demonstrates that general HR professionals could likely perform much of this work with adequate training due to their preexisting knowledge of various occupations and the basics of analyzing jobs.

Ultimately, the numbers in each of these groups may be insufficient to support the scale of SSA's job analysis program, so pursuing multiple sources may be the approach that is needed. Each of these sources would meet the minimum requirements that were identified during other research for this Call Order; however, the practicality of each source is undetermined. To make a recommendation regarding this issue requires a better understanding of the number of job analysts that will be needed. We recommend further research in this area to determine the number of qualified individuals within each of these groups and the likely interests within each of these sources for working with SSA.

7.5.1.2 Recruiting Framework

One of the most important questions which will impact SSA's recruitment strategy is as follows: What should be the employment framework for this type of work? Should SSA recruit for internal employee positions or external contract positions? Should SSA recruit individuals or provider organizations? The case studies included in this report offer several potential frameworks to implement the entire recruitment, training, and management effort, each with their strengths and limitations, but none distinctly superior to any other.

One possibility is the approach taken by Unum and JCPB of recruiting internal staff who exclusively perform this work. A benefit of this approach is that it allows them to closely monitor the work being performed due to the nature of the employee-supervisor relationship. Furthermore, the recruitment process is simplified due to the fact that recruitment and selection of job analysts seamlessly integrates into the HR systems and processes already in place at the organization. On the other hand, SSA will face an enormous challenge in attempting to source and recruit the number of qualified personnel required for this effort. Creating job postings, poring over applications, conducting interviews, and hiring staff could place a heavy burden on SSA resources (e.g., funding and recruiting staff time), especially as the project ramps up. If the staff is full-time as they are at Unum, they would require competitive salaries and benefit payments, which would need to be paid regardless of fluctuations of demand for job analysis services in a particular area. Additionally, SSA would likely have to let some people go or transition them to part-time status once the initial surge subsides. As demonstrated by the experience of the Census Bureau, it is important to clearly delineate from the outset any term length limitations and any other conditions of the employment agreement.

An alternative approach taken by BTE, SAIF, and CSPB is to maintain a staff of internal experts and coordinators, but to rely on a network of independent providers to perform the actual analyses (N.B.

BTE's network generally conducts FCEs while most JAs are conducted by their internal experts). The chief benefit of this approach is flexibility. Whether the network consists of individual consultants or established vocational rehab practices, the contracting framework would allow SSA to access analysis services as needed depending on volume in a particular area, reducing the need to pay and support employees during slower periods or in remote regions requiring fewer analyses. At the same time, managing a national network of providers is no simple task, and it would likely require development of a system to manage and monitor the performance of each of these providers. While SAIF might simply call around for providers when they need coverage in a certain area, the scrutiny under which SSA operates suggests it will be necessary to develop reliable systems and protocols to assess contractor qualifications, arrange their training, and audit their performance on a regular basis. SSA might encounter reluctance on the part of contract partners to give up some of their own practices and accept SSA's prescribed methodology. Ensuring consistency and compliance may prove more difficult than with internal employees due to the nature of the contractor-client relationship. BTE uses a proprietary system for this purpose, but SSA should evaluate whether there are off-the-shelf systems for this purpose and whether they would be preferable to developing a new system.

A third approach not pursued by any of the partners would be to contract with one or more organizations that have a pre-existing network of providers with the skill sets that SSA requires. For example, SSA could contract with organizations similar to BTE that already have the infrastructure in place to refer job analyses to providers across the country. This approach may be the simplest overall approach from SSA's perspective, but it would require further analysis to determine how many organizations like this exist, whether their network providers have all of the required skill sets to perform the analyses required by SSA, and what costs would be involved in gaining access to this network. BTE mentioned large case management organizations like Coventry or Intracorp, but it is not presently clear if these organizations would be capable of providing the necessary expertise, so follow-up would be required if SSA elects to pursue this course. Additionally, while the startup costs of contracting out this work would almost certainly be less than developing everything internally, the budget impact over the long term cost is less clear given the profit margin built into any contracting organization.

Additional research and cost/benefit analysis is called for to determine the best recommendation. Each of the approaches described has its benefits and drawbacks, but without an understanding of the project lifespan costs of each strategy and the capabilities within SSA, it is not immediately clear which path is preferable. It is also important to ensure that whichever approach is chosen, it must integrate with and reflect the demands of the job analysis methodology and the training process for analysts.

7.5.1.3 Recruitment Logistics

Should SSA determine to recruit individuals for either internal or contract positions, the next decision that will need to be addressed is how to recruit those individuals. The problem with graduate students, retirees, HR professionals, and indeed any professional specialty SSA elects to target is that they are not evenly distributed across the country. And while the workforce distribution is similarly asymmetrical, SSA must be capable of capturing occupational data throughout the country to ensure their disability determinations are justifiable nationwide. Considering the importance of hiring locally (see Section 2: Census Bureau), SSA will need the capability to target its recruiting to areas where the concentration of qualified professionals is lower. Achieving the high level of recruitment intensity expected as SSA ramps up recruitment across the country could be challenging from a centralized location. However, maintaining hundreds of recruiting offices across the country as Census did is similarly impractical from SSA's perspective. Instead, based on our current understanding of the OIS project, we recommend that SSA consider establishing a few temporary regional recruitment offices, each with several recruitment experts familiar with the challenges of recruiting in their regions. This would provide the manpower to handle the high initial recruitment volume as well as the flexibility to divert resources to areas where recruitment

proves most difficult. Once the initial wave of recruitment is complete, the offices can be closed and subsequent recruitment can be coordinated by headquarters or contracted to locally based recruitment services providers if necessary.

We also recommend that the recruitment and hiring process be as short as possible. The longer the practice drags on, the more likely applicants are to move on and find other work by the time they are brought on board. This recommendation will require SSA to develop a streamlined process for timely recruitment, selection, and hiring, or at least ensure their selected contractors possess such a process.

7.5.1.4 Compensation

As noted by all of the benchmarking partners, a key element of a successful high-volume, quick turnaround hiring is a competitive pay structure. The knowledge, skills, and abilities required to perform job analysis can be highly technical depending on the methodology, and attracting qualified applicants to this task will require pay rates comparable to those found in private sector. Compensation could vary based on the education level or experience of job analysts as well as the discipline in which they are employed. In addition, these pay rates will need to be consistent with rates in each area where job analyses will be performed. This could be accomplished by negotiating contracts individually or by establishing pay bands depending on region, population density, or some other factor. To be fully confident that pay rates are appropriate, it would be helpful for SSA to access a national source of compensation data as the Census Bureau did with BLS data. By determining what people in similar fields earn in different areas, SSA could more accurately target its compensation package.

Based on the compensation information gathered from the benchmarking partners, we attempted to determine salary recommendations based on discipline, education level, experience level, and location of the job analyst. This information is presented in Exhibit 7-4.

Exhibit 7-4: Annual Salaries by Discipline*			
	Vocational Rehabilitation	Occupational/Physical Therapy	Industrial/Organizational Psychology
Education Level			
Master’s Degree	\$45,840	\$50,000	\$50,000 - \$57,600
Doctorate Degree	\$61,080		
Experience Level			
0-1 years	\$40,000 - \$55,000		
2-5 years	\$61,080	\$50,000	
5+ years		\$80,000	
Location			
East Coast	\$40,000-\$55,000		
West Coast	\$47,000 – \$62,000		\$57,600

*This table is based on the small number of case studies conducted during the recruitment benchmarking task. A comprehensive compensation study is needed to accurately estimate compensation rates and to complete all of the cells of this table.

As can be seen in this exhibit, there is a great deal of information unavailable to determine the appropriate level of compensation for job analysts. Additionally, the situations and pay levels examined are very different situations and it is difficult to make comparisons across these. For example, some employees performed job analysis as only a small part of their job while other organizations paid consultants specifically to perform job analyses. Performing a comprehensive salary survey would enable SSA to gain a fuller understanding of appropriate compensation rates for the types of individuals that are hired as job analysts. A comprehensive salary survey would ensure that the below table could be fully completed and accurate.

The nature of compensation is perhaps as important as the actual amount that is paid. Partners studied here either paid a flat-fee per analysis or an hourly rate, and most paid for travel, expenses, and sometimes training as well. Once again, there are risks and benefits to either approach. Paying a flat fee per analysis simplifies invoicing and payment processing and reduces the risk of cost overruns due to certain analyses taking longer than expected. However, contractors might balk at the idea of a flat fee due to the fact that different types of jobs can require vastly different amounts of time to thoroughly observe (consider a repeatable factory job vs. a truck driver). It could also result in paying more in the long run if the flat rate is set too high for the average level of effort. On the other hand, an hourly rate would more accurately compensate employees or contractors for the time put into the analysis. Yet, because SSA would not have direct oversight of analysts in the field, it would be difficult to ensure analysts are not artificially inflating their hours. Hourly payments would also require additional documentation and review to validate the appropriateness of the hours spent. Of the two approaches, we recommend that SSA institute an hourly payment, at least initially, because it will be hard to gauge the average level of effort required for these job analyses until they are put into wide practice. In order to guard against abuse, SSA could institute hourly caps for various categories of jobs (e.g., industrial, office, managerial), and require justification if additional hours are required.

7.5.1.5 Candidate Tracking

A candidate tracking system should be an integral component in this process in order to ensure that SSA is not losing qualified candidates due to delays or hiccups in the recruitment and selection process. A draft database has been submitted by ICF under this Call Order for this purpose. In line with the Census Bureau's system, it should provide access to personal details, qualifications, results of any selection assessments and required background or reference checks. We would also echo the GAO Report on the Census Bureau's system by recommending that SSA incorporate performance tracking for those individuals it does eventually hire. The system should maintain data on not only the number of analyses performed but the quality as judged by SSA's own experts. Whether SSA elects to hire employees or contract out the analyses, SSA will need a legally defensible auditing process to ensure the analyses provided can be reliably used to make disability determinations. BTE's system offers a prime example of the benefits of automatically tracking analyses from conception through completion. By integrating the tracking of individual analyses with the performance tracking of analysts, SSA could significantly reduce the expense and logistical challenges of managing a program of this scale.

7.5.1.6 Training

The feedback from the partners suggests that training should likewise exhibit flexibility in order to accommodate the broad range of experience levels and backgrounds from which SSA can expect to draw. In this respect, the partners confirmed many of the findings that emerged in ICF's separate review of job analysis training under this Call Order. In that report, ICF discusses the actual content areas we recommend for inclusion in SSA's training. Here, we focus on general principles such as the recommendation to go beyond the fundamentals of job analytical theory and target the training to the specific challenges job analysts are likely to face, such as engaging reluctant incumbents and supervisors. Another consideration that emerged from the GAO report on the Census Bureau's training practices is that different locations may require training in different skills. Beyond that, SSA will need to train people with experience ranging from graduate coursework to a career in job analysis and expertise ranging from I/O Psychology to Physical Therapy. While this diversity is to be prized in some respects, the challenge involved in training all of these individuals to perform a single, consistent process should not be underestimated. It could be difficult to maintain consistent interest and engagement of all of these groups when knowledge and experience will vary so greatly. Sections of the course could be obvious and redundant for some, but completely over the head of others. Thus, ICF recommends utilizing a modular structure to training in order to offer trainers the flexibility to adapt the training to the needs of their

students. There could be a core component that all trainees will have to learn, but additional modules could be added to address perceived needs of certain students. SSA could also consider developing tiered certifications as BTE does, so that all students must demonstrate basic competency, but some could pursue additional coursework to improve their expertise and take on more challenging analyses.

Exhibit 7-5 presents a summary of the primary conclusions and recommendations on each of these topics.

Exhibit 7-5: Summary of Recruitment Recommendations	
Sources of Job Analyst Candidates	<ul style="list-style-type: none"> ▪ The benchmarking partners for this study typically recruited graduate level experts in fields such as vocational rehabilitation, physical and occupational therapy, and I/O Psychology. ▪ Graduate level experts are likely to be the most expensive and the most likely to be fully engaged in another permanent position. ▪ Graduate students would have the knowledge needed and the interest and could be compensated for less pay than a practicing professional, but they would require careful supervision and practical training to ensure a quality work product. ▪ Retired professionals could be another potential candidate source from which SSA could draw. ▪ The numbers in each of these potential candidate sources may be insufficient to support the scale of SSA’s job analysis program, so pursuing multiple sources may be the approach that is needed and the practicality of each source is undetermined. ▪ <i>Recommendation: Focus recruiting on candidates with training or experience in job analysis.</i> ▪ <i>Recommendation: Conduct research to determine the number of qualified individuals within each of these groups and the likely interests within each of these sources for working with SSA.</i>
Recruiting Framework	<ul style="list-style-type: none"> ▪ Recruiting for internal staff who exclusively perform this work would provide greater control over the work and would simplify recruitment and selection, but would be a large effort and would result in a large workforce. ▪ Recruiting a network of independent providers to perform the job analyses would provide great flexibility, but would require careful management and quality controls. ▪ Contracting with organizations like BTE that already have existing networks would be the simplest overall approach for SSA, but it would require further analysis to determine how many organizations like this exist, whether their network providers have all of the required skill sets to perform the analyses required by SSA, and what costs would be involved in gaining access to this network. ▪ <i>Recommendation: Conduct a cost-benefit analysis of various recruiting frameworks such as recruiting for internal employee positions, recruiting for external contract positions, or contracting with an organization that has a pre-existing network of providers to determine the best recruitment framework for SSA’s needs.</i>

Exhibit 7-5: Summary of Recruitment Recommendations	
Recruitment Logistics	<ul style="list-style-type: none"> ▪ SSA must be capable of capturing occupational data throughout the country to ensure their disability determinations are justifiable nationwide. ▪ Achieving the high level of recruitment intensity expected as SSA ramps up recruitment across the country could be challenging from a centralized location. However, maintaining hundreds of recruiting offices across the country as Census did is similarly impractical from SSA’s perspective. ▪ The longer the recruitment and selection process takes, the more likely applicants are to move on and find other work by the time they are brought on board. ▪ <i>Recommendation: Consider establishing a few temporary regional recruitment offices for the initial wave of recruitment.</i> ▪ <i>Recommendation: Develop a recruitment and hiring process that moves candidates through the process as quickly as possible. For full-time hires, targeting candidates who have worked for other government agencies may help to expedite the on-boarding process.</i>
Compensation	<ul style="list-style-type: none"> ▪ A key element of a successful high-volume, quick turnaround hiring is a competitive pay structure. ▪ Competitive compensation will vary based on education level, experience, discipline, and location. ▪ While useful, the information on compensation gathered from the benchmarking partners is not enough to determine a competitive compensation rate. ▪ An hourly rate would more accurately compensate employees or contractors for the time put into each job analysis. ▪ <i>Recommendation: A compensation study is recommended to determine a competitive hourly rate, which should then be adjusted by location, and evaluate cost reimbursement practices.</i> ▪ <i>Recommendation: Compensation should be competitive and provided as an hourly rate with caps on the total hours that can be spent based on various categories of jobs.</i>
Candidate Tracking	<ul style="list-style-type: none"> ▪ The Census Bureau tracks personal information, test scores and results of candidate background checks. ▪ BTE’s audit system offers a prime example of the benefits of automatically tracking analyses from conception through completion. ▪ <i>Recommendation: The candidate tracking system should log candidate information, along with screening and selection data, and should be integrated with performance auditing.</i> ▪ <i>Recommendation: SSA should maintain data on not only the number of analyses performed by an analyst but the quality of the analyses as judged by SSA’s own experts.</i>

Exhibit 7-5: Summary of Recruitment Recommendations

Candidate Training	<ul style="list-style-type: none"> ▪ SSA may need to train people with experience ranging from graduate coursework to a career in job analysis and expertise ranging from I/O Psychology to Physical Therapy. ▪ Keeping individuals with such a range of backgrounds engaged in a training could be challenging. ▪ <i>Recommendation: Develop and use a modular training structure if the experience and educational backgrounds of participants will vary.</i>
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The findings from this benchmarking effort are an important first step toward establishing a business strategy for recruiting, selecting, and training a nationwide team of expert job analysts. Next steps include analyzing the specific requirements for SSA's job analysts, once those are determined, and conducting feasibility testing of the potential strategies to recruit, train and certify job analysts. In the next chapter, we discuss some of the considerations and decisions that SSA may need to make in moving forward with next steps.

Chapter 8: Strategic Decisions

As discussed throughout this report, there is a complex web of information that must be considered prior to selecting a single strategy for training, certify, or recruiting job analysts for SSA. In fact, the decisions made in each area lead to a series of other decisions. In this chapter, we call out some of the decisions that SSA needs to make in order to initiate actions in training, certifying, recruiting and tracking candidates. The decisions listed here are not exhaustive. At the end of the chapter, we also identify potential resource needs for SSA to either assist in the decision-making process or to assist in implementing the recommendations.

8.1 Training

- 1. Select the instruments and methods for job analysis.** The training curriculum should be tied directly to the work requirements and performance expected of analysts, which will be based on the methodology and instrument. The work requirements will determine the knowledges, skills, and abilities (KSAs) that are needed and the extent to which those KSAs can be taught or will be needed at entry (prior to training). The cadre of job analysis tools (e.g., surveys, measures) and methods that SSA could use vary in complexity and the level of discretion required of job analysts and would therefore lead to different work requirements. While experts rated KSAs according to what would likely be needed for candidates prior to participating in the training, the determination of the minimum qualifications was based upon a generalized description of what SSA job analysts will likely be expected to do. The complexity of the work analysis instrument, sophistication of the job analysis method selected, extent to which job analysis approach is well prescribed or requires discretion of the analyst, and the degree of autonomy expected of analysts will all dictate the level of prior experience or education that is needed of job analysts.
- 2. Establish learning objectives.** The design and structure of a training program should be determined based upon the learning objectives, so that the end goal dictates the process of teaching that goal. During interviews with training experts, this recommendation was widely noted as the most critical factor in determining how a training program should be designed.¹⁰³ Thus, the first step in designing the job analyst training should be for SSA to clarify the learning objectives, which should be measurable and observable. The primary objective is likely for participants to be able to successfully apply SSA's job analysis methodology. The specific sub-components of that objective will need to be determined and refined as SSA finalizes its job analysis practices. All of the training activities should then be linked back to the specific learning objectives. This step is particularly important when an assessment-based certificate program will be implemented, as the participants will need to demonstrate that they have accomplished all of the learning objectives.
- 3. Determine the size of the candidate pool.** The size of the candidate pool SSA desires may impact the level of experience SSA can expect at entry for analysts and subsequently demand different levels of training. Specifically, it will be easier for SSA to identify analysts with a more advanced skill set if SSA seeks a smaller pool of analysts whereas a need for a larger candidate pool may require SSA to accommodate candidates with more diversified types and levels of experience and training.

¹⁰³ This information was acquired in interviews with training experts in 2011.

- 4. Identify the amount of time available to train analysts and collect all job analysis information.** The amount of time that SSA has available to recruit, select and train job analysts will impact how the training program can be implemented. In our recommendations, we suggest SSA consider a blended training model but the way this model is implemented will depend on the timeframe available for training. SSA has indicated that the lag time between recruitment and deployment of analysts may only be one year. This one year time period is relatively short if presumably candidates will be geographically dispersed and thus, travel to a centralized classroom setting may be challenging. SSA may wish to consider hiring a large number of trainers to be dispersed to regions where large candidate populations are anticipated. SSA may also want to consider a less optimal but still interactive training delivery component if classroom training is not feasible. This interactive method could involve the use of software that allows participants to visually share exercises they complete on the computer screen through a dashboard approach or even use Web cameras to role play different scenarios. Video-based simulations may also be created to demonstrate and assess application of the learning objectives.

8.2 Certificate Program

While the certificate program will be impacted by the decisions made for training listed in the previous section, there are a few additional decisions that must be made to initiate work on the certificate program.

- 5. Identify the length of time over which SSA will recruit, train and certify job analysts.** We have recommended that SSA develop an assessment-based certificate program and to potentially seek accreditation through ANSI or ICE. Seeking accreditation is a lengthy process requiring significant resources. Thus SSA should consider whether the timeframe for ongoing recruitment, training, and certification actually warrants seeking accreditation. The determination to seek accreditation should also be influenced by the extent to which accreditation will verify job analysts share a common understanding of SSA's chosen job analysis method, the resources SSA has available, and the extent to which accreditation may speak to the defensibility of the OIS. If the process of accreditation requires more time than SSA plans to administer the program, SSA may wish to create a program that just aligns with the standards required for accreditation but not seek accreditation.
- 6. Estimate the expected tenure and experience levels of analysts.** We have recommended that a quality review or formal auditing process be considered. The characteristics of that auditing process should be based, in part, on the expected tenure and experience levels of analysts. While it will be difficult for SSA to estimate turnover rates, factors such as the employment status (e.g., temporary, rotational, full-time), candidate type, number of job analyses analysts will conduct, and deployment strategy will help predict how long analysts will be retained to perform the job analysis work for the SSA. SSA must also weigh whether an audit process is cost efficient based on the number of job analyses expected by the typical analyst. Additionally, the lag time in between analysis assignments should be factored into the decision regarding an audit process. For example, if job analysts are expected to conduct multiple job analyses over a 5 year period of time with months in between each data collection, SSA may wish to invest in an audit process that checks the accuracy and consistency of analysts over time. The selection strategy implemented by SSA should also impact the audit process considered. If candidates with less experience are recruited, SSA may find it valuable to have an audit process in place that automatically checks data quality each time data is entered as opposed to a process that conducts periodic evaluations.

8.3 Recruitment

- 7. Determine deployment strategy.** SSA will need to decide how many job analyses will be conducted (i.e., number of jobs to be analyzed), when job analysis assignments will occur, location of job analysis assignments, and the frequency of assignments. The decision regarding when analysts will need to be deployed will provide insight into the best selection strategy and training approach for SSA. For example, if only a few jobs require immediate analysis, SSA may start by targeting a small number of candidates within one centralized region and deploying those candidates to collect the necessary data. SSA could then establish an iterative schedule that allows for mid-term reviews of data collected and quality checks. While we strongly recommend a pilot of the OIS and each of the strategies identified, a gradual approach to deployment would allow for further testing of each process. However, if SSA does not have the luxury of time, working with existing networks of job analysts for initial hiring and deployment to assignments may be an option.
- 8. Articulate selection strategy.** As a next step, SSA needs a detailed selection strategy that identifies how many job analysts will be needed to collect data for the OIS, the region(s) where candidates should be targeted, and the skill level required at entry for candidates. Then, SSA needs to determine whether it is cost efficient to train and deploy recruiters nationally to target candidates as opposed to maintaining a centralized recruitment base which may require candidates to travel. SSA should also consider whether it is best to hire full or part-time staff, form their own network of job analysts, leverage existing networks like BTE or some combination of these. This strategy should also specify the source for candidates based on the requirements of the job analysis method selected. For example, if the job analysis requires survey administration in which the process of administration is well prescribed, students such as those from graduate programs may serve as a valuable source for candidates. Yet, if job analysis is intended to occur on a frequent and long-term basis, graduate programs may not prove beneficial and graduate students are likely to have a higher turnover as their education and career plans change. SSA may also want to consider identifying multiple sources for candidates and create modular training or training pathways that differ based on the level of skills and experiences the candidates hold. Furthermore, SSA may find it valuable to establish a mentoring program whereby less experienced staff are supervised and encouraged by more seasoned analysts. This decision about whether to establish a mentoring program would likely be impacted by the number and deployment requirements for analysts. The decision regarding sources for candidates and the factors either influenced by candidate source or that will influence the decision about candidate sources are provided in Exhibit 8-1. The amount of time available to recruit and train analysts may also impact SSA's selection strategy. For example, if quick deployment post-hire is needed and SSA chooses to employ job analysts full-time, SSA may want to target current government employees to expedite the on-boarding process. Once SSA has articulated a specific selection strategy, it will be time to begin identifying specific local sources for candidates such as graduate programs in some of the disciplines mentioned (e.g., I-O psychology, vocational rehabilitation), professional associations, local unemployment offices, temporary employment agencies, organizations that maintain current networks of job analysts (e.g., BTE), and state and local workforce boards.

Exhibit 8-1: Candidate Sources by Training, Recruitment and Certification Factors

Candidate Source	Experience	Training Needs	Certification ¹	Management	Compensation ²	Availability	Turnover	Ease of Recruitment ⁵
Professionals	2-30 years	Training on SSA methodology	May hold external certifications	Routine audit checks of work	\$22.00 - \$38.00 ³	Low	Moderate	Moderate
Graduate Students	0 years	Training on job analysis; data collection methods; and SSA methodology	Unlikely to hold external certifications	Direct oversight; careful reviews of initial analyses; mentorship; routine audit checks of work	\$19.00	High	High	High
Professional Retirees	30+ years	Training on SSA methodology	May no longer maintain external certifications	Routine audit checks of work	\$38.00	High	Low	Moderate
Established network of clinicians/consultants	1-30 years	Training on SSA methodology	May hold external certifications	Compliance reviews of job analyses	\$70.00 - \$125.00 ⁴	Moderate	Low	High
Combination of sources	0 – 30+ years	Modular training on job analysis; data collection methods; and SSA methodology	May or may not hold external certifications	Direct oversight; careful reviews of initial analyses; mentorship; routine audit checks of work; compliance reviews	\$19.00 - \$125.00	Moderate	Moderate	Moderate

¹All Candidates should participate in an assessment-based certificate program on SSA’s job analysis methodology.

² Compensation is listed as an hourly rate. These hourly rates are rough estimates based on small number of case studies conducted during the Recruitment benchmarking task. A comprehensive compensation study is needed to accurately estimate compensation rates.

³ These hourly rates were calculated by taking annual salary information provided by benchmarking partners and dividing it by 2080 hours; therefore, these rates do not take into account additional compensation that analysts would receive for benefits.

⁴ One practitioner on the SSA Ad Hoc Group noted that hourly rates for job analysis services could range from \$70 - \$125 per hour. Our benchmarking partners quoted rates of \$85.00 per hour.

⁵ Ease of Recruitment refers to how easy it would be to reach candidates with job announcements and how eager or receptive candidates will be to work as SSA job analysts.

- 9. Identify employment status for analysts.** The status of employment SSA chooses to maintain with these candidates may also influence the extent to which the employment is attractive to candidates of different experience levels. For example, while more advanced candidates may be attracted to temporary or rotating positions as a result of having other sustained employment, these candidates will also be in higher demand and thus likely turnover faster than less experienced candidates. We have recommended that SSA set hourly caps on job analysis assignments. These caps should be based upon pilot testing of the job analysis method SSA adopts. The number of hours expected to conduct an assignment, the number of assignments that will likely be allocated to each job analyst, and the number of analysts SSA intends to contract with (i.e., selection strategy) will help determine whether it is most advantageous to establish part-time, full-time or contractor employment status for analysts.
- 10. Specify selection test battery.** Once the taxonomy and job analysis method have been fully developed and the necessary KSAs identified, SSA will need to develop a battery of selection tests that will be used to select candidates. Several factors contribute to the selection tests SSA should consider such as KSAs to be measured, costs, number of analysts needed, candidate accessibility (e.g., geographically dispersed), efficiency needed, and administration format (e.g., online; paper-pencil). We recommend SSA contracts with test experts to ensure the assessment(s) are legally defensible and result in the skills needed. Given that time and cost will likely be important considerations for SSA, we would recommend that SSA incorporate a realistic job preview to prepare candidates for the type of work they will perform. RJP's help candidates self select out of the process if they are not comfortable with the work environment and requirements, thereby saving SSA from training a candidate who is likely to leave soon.
- 11. Select a compensation approach.** Prior to initiating a recruitment strategy, we encourage SSA to fully articulate the compensation approach to include pay and benefits (if provided) since these are key elements in any recruitment strategy. The compensation approach should be directly tied to the candidate SSA is targeting and the candidate's likely interests. For example, younger workers may prefer flexible work arrangements while more seasoned workers may prefer family benefits above other benefits. While the case studies conducted under this project scope provide some insight into what other companies compensate analysts, we suggest that SSA conduct a comprehensive study of national and local compensation practices. This study should articulate pay and benefit considerations according to factors such as skill and experience levels, regional differences, and job requirements (e.g., survey administration versus job observation). While the Bureau of Labor Statistics provides some compensation data, it is important that SSA identify pay strategies based on the precise job description for SSA job analysts, unique work requirements, regional differences, and current market conditions. The compensation study should also consider the impact of SSA's deployment plan (e.g., frequency of job analysis; number of assignments) and employment status (e.g., temporary, full-time) that will be offered to candidates. For example, if SSA seeks candidates with advanced experience and skills in job analysis yet only few periodic assignments are available to those candidates, SSA may have to provide higher compensation to incentivize those candidates to continue their affiliation with SSA while waiting for assignments. We have recommended SSA seek candidates with prior job analysis experience and thus, compensation needs to be commensurate with this experience. The job analysis method will also dictate the number of hours anticipated in the conduct of assignments which should also be considered in identifying compensation. This study should also identify reimbursement factors such as travel, mileage, and incidentals. The goal of this study should be to identify competitive and equitable compensation that is cost effective for SSA.

8.4 Candidate Tracking

- 12. Choose an approach for auditing job analysts.** As noted from our case studies with recruitment benchmarking partners, an important component to monitoring and assessing performance quality of job analysts is the use of an auditing system. Since quality and consistency are so critical to the soundness and defensibility of the job analysis data collected, SSA may find it valuable to conduct a comprehensive study of auditing systems available in the marketplace. It is important that SSA understand the process and software compatibility requirements of the data auditing systems that existing. An effective auditing process for SSA may include an auditing system that easily dumps information into the candidate tracking database but also includes a feedback system for job analysts so they can improve their performance in real time. The auditing process should include not only a data review but also an evaluation component that provides insight into some of the process and data collection challenges analysts encounter. The software used for auditing may have its own use requirements, costs and training needs that SSA should consider prior to purchase or implementation.

The focus of this chapter is on the more immediate decisions SSA needs to make prior to selecting and implementing specific training, certificate program, recruitment, and tracking strategies. Exhibit 8-2 provides some of the potential resources that SSA may need or may want to consider to assist in addressing some of these decisions or in implementing some of the recommendations.

Exhibit 8-2: Potential Resources Needed

Potential Resource	Purpose	Recommendation and/or Strategic Decision for which Resource is Needed
<p>Contractor with occupational and job analysis expertise</p>	<ul style="list-style-type: none"> ▪ Assist with developing OIS prototype ▪ Develop and pilot test work analysis instrument ▪ Provide guidance on how to prioritize job analysis assignments ▪ Conduct a comprehensive compensation study ▪ Determine the type of recruiting framework that will best meet needs 	<ul style="list-style-type: none"> ▪ Strategic Decision 1: Select the instruments and methods for job analysis ▪ Strategic Decision 7: Determine deployment strategy ▪ Strategic Decision 11: Select a compensation approach ▪ Recommendation: Conduct a comprehensive compensation study ▪ Recommendation: Conduct a cost-benefit analysis of various recruiting frameworks ▪ Recommendation: Conduct research to determine the number of qualified individuals within each of the potential candidate sources (i.e., professionals, graduate students, retirees).
<p>Assessment specialist or consultant with experience developing and implementing assessment-based certificate programs</p>	<ul style="list-style-type: none"> ▪ Ensure that the certificate program aligns with the training objectives ▪ Assist with preparing for certificate program accreditation process ▪ Guarantee that credentialing process is of the highest quality and can be recognized by an outside third party as valid and rigorous 	<ul style="list-style-type: none"> ▪ Recommendation: SSA should follow one of two approved industry standards for assessment-based certificate programs, either ANSI or ICE. ▪ Recommendation: Assessment should be tied to specific training objectives ▪ Recommendation: An assessment specialist should be involved when the learning objectives are being developed. ▪ Recommendation: Assessment-based certificate programs should be followed in the development of certificate program

Exhibit 8-2: Potential Resources Needed		
Potential Resource	Purpose	Recommendation and/or Strategic Decision for which Resource is Needed
Contractor with training design expertise	<ul style="list-style-type: none"> ▪ Ensure that participants are learning necessary components of SSA’s job analysis process ▪ Assist in ensuring industry-accepted training design principles are followed ▪ Develop and design training 	<ul style="list-style-type: none"> ▪ Strategic Decision 2: Establish learning objectives ▪ Recommendation: All of the training activities should be lined to specific, measurable, and observable learning objectives ▪ Recommendation: The Instructional Systems Design (ISD) ADDIE model is recommended for training design ▪ Recommendation: Develop and use a modular training structure if the experience and educational backgrounds of participants will vary. ▪ Recommendation: Certificate program training should be based on learning objectives, follow generally accepted training guidelines and models, and use delivery methods that are appropriate for the learning objectives. ▪ Recommendation: Evaluation of SSA training should include at least three of the four levels of training evaluation criteria in Kirkpatrick’s model
Headhunter agencies, professional organizations or societies, credentialing organizations	<ul style="list-style-type: none"> ▪ Help identify talent when candidates with advanced skills are needed 	<ul style="list-style-type: none"> ▪ Recommendation: Focus on recruiting candidates with training or experience in job analysis
Existing networks of providers or organizations like BTE	<ul style="list-style-type: none"> ▪ Assist in recruiting independent consultants who are interested in performing job analyses for SSA 	<ul style="list-style-type: none"> ▪ Recommendation: Focus on recruiting candidates with training or experience in job analysis

Exhibit 8-2: Potential Resources Needed

Potential Resource	Purpose	Recommendation and/or Strategic Decision for which Resource is Needed
Unemployment agencies or temporary staffing agencies	<ul style="list-style-type: none"> ▪ Assistance in finding candidates who will serve on a rotational or short-term basis ▪ Assistance in administering pay to large numbers of staff 	<ul style="list-style-type: none"> ▪ Recommendation: Conduct a cost-benefit analysis of various recruiting frameworks
Technology vendor that can provide information technology services	<ul style="list-style-type: none"> ▪ Create or provide training using computer-based technology if software is not readily available to SSA ▪ Provide training using multiple delivery methods, specifically online components ▪ Develop software for audit process, if needed 	<ul style="list-style-type: none"> ▪ Recommendation: Implement a blended training delivery that includes online components ▪ Recommendation: Develop an audit process to ensure quality in data entry
Contractor with knowledge of existing audit software packages	<ul style="list-style-type: none"> ▪ Conduct a market study of data collection evaluation processes and available audit software packages 	<ul style="list-style-type: none"> ▪ Strategic Decision 12: Choose an approach for auditing job analysts ▪ Recommendation: SSA should develop clear policies and procedures for how the auditing process will occur, how often it will occur, who will be audited, how work will be evaluated, and what measure will be used.
Software compatible with the OIS database that can be used for quality control	<ul style="list-style-type: none"> ▪ Conduct regular quality checks of information entered into the OIS database ▪ Set limits on data that can be entered or provide warnings for suspect data 	<ul style="list-style-type: none"> ▪ Recommendation: Develop an audit process to check the quality of job analysts' work
Auditors who can evaluate OIS database entries	<ul style="list-style-type: none"> ▪ Provide assistance in ensuring the quality of data entered into the OIS database by evaluating analysts in person or via electronic media 	<ul style="list-style-type: none"> ▪ Recommendation: Develop an audit process to check the quality of job analysts' work

Exhibit 8-2: Potential Resources Needed

Potential Resource	Purpose	Recommendation and/or Strategic Decision for which Resource is Needed
Contractor with expertise and experience in testing	<ul style="list-style-type: none"> ▪ Ensure that pre-employment testing is conducted in a legally defensible manner ▪ Develop a selection test battery ▪ Assist in designing a hiring process 	<ul style="list-style-type: none"> ▪ Strategic Decision 10: Specify selection test battery ▪ Recommendation: Develop a recruitment and hiring process that moves candidates through the process as quickly as possible.

Appendix A

Detailed Methodology

1. Call Order 002 Overview

The purpose of Call 002 was to perform the research needed to provide SSA with data and information that will enable SSA to identify a business strategy for recruiting, training and certifying job analysts. The Call 002 approach included a review of relevant literature (e.g., reports, white papers, technical and scientific journals), consultation with experts in related fields (e.g., job analysis trainers, training experts, certification experts), and the identification and examination of various processes and programs currently used to train, certify, and recruit job analysts.

Results of Call Order 002 provide data and information on various training, certification and recruitment practices and processes that might best meet SSA's needs. Historically, job analysis is performed in a number of disciplines by individuals with various background and expertise including vocational rehabilitation counselors, physical and occupational therapists, human resource professionals, ergonomists, occupational health nurses, occupational health physicians, safety professionals, industrial psychologists, disability managers, job placement specialists, neuropsychologists, exercise physiologists, athletic trainers, case managers, risk managers, return-to-work specialists, and claims, or insurance, adjusters. Call Order 002 results provide information on current job analysis training, certification and recruitment practices across related disciplines. Results also include information on industry standards for certificate programs, training design and delivery research, and case studies of recruitment practices of benchmark organizations. The results provide SSA with the information needed to identify the appropriate business strategy for training, certifying and recruiting job analysts.

Call Order 002 consisted of two main tasks: 1) Task Meetings/Discussions and 2) Business Strategy for the Training, Certifying and Recruitment of Job Analyst Candidates. Task 2 is further broken down into seven subtasks:

- Documentation of Detailed Methodology (this appendix)
- Research and Recommended Strategy for Training of Job Analyst Candidates
- Research and Recommended Strategy for Certification of Job Analyst Candidates
- Research and Recommended Strategy for Recruitment of Job Analyst Candidates
- Documentation for SSA – Literature Reviews and Expert Interviews
- Development of Candidate Tracking Database for Potential Job Analysts
- Final Report of Business Strategy for the Training, Certifying and Recruitment of Job Analysts

In the remainder of this detailed methodology document, a detailed description of Task 1 and the activities under each subtask of Task 2 is provided.

All planning, development and data collection procedures are comprehensively described for each topic.

2. Call Order 002 Tasks

Task 1 – Task Meetings/Discussions

Given the high stakes of the OIS project and Call Order 002, SSA and ICF have been committed to partnership and frequent communication through regular summary progress reports, telephone conference calls, and meetings. This dialogue started at the Project Kick-Off Meeting on October 20, 2010. SSA project stakeholders and key ICF personnel met at the SSA Headquarters building in Baltimore, Maryland to discuss of the scope of work and review the proposed approach and timetable to complete the services requested. During the meeting, SSA provided an overview of the project background as well as key stakeholder groups. ICF presented an overview of the approach for Call Order 002 and provided a list of potential topic areas and examples of potential participants for each of the different types of data collections proposed for Call Order 002.

Subtask 1.1 Contacts with the SSA Project Officer

Since the Kick-Off Meeting, SSA and ICF have had regular and candid discussions regarding SSA's vision of the Call 002 deliverables, ICF's project plan, the research timeline, and final results. These discussions have typically occurred in weekly or bi-weekly meetings. The consistent and open communications have been beneficial and have facilitated ICF's progress on Call Order 002. For example, the conception of Call Order 002 deliverables has been refined since the original proposal. Originally, the project plan was designed to develop recommended solutions for training, certifying and recruiting job analysts for SSA's specific job analysis method and work analysis instrument; however, given that SSA's job analysis methodology and work analysis instrument are still under development, the focus of Call Order 002 deliverables was on s providing data and information on the practices, processes and programs used currently to train, certify and recruit job analysts in related disciplines, which will better meet SSA's current needs. Our findings will be used by SSA to then create a business strategy for training, certifying and recruiting job analysts once the comprehensive data collection approach and work analysis instrument SSA are developed.

In addition to regular meetings, the ICF team has provided SSA with meeting minutes and monthly project updates. The meeting minutes record main points, action items as well as challenges discussed during meetings with SSA. The monthly progress reports have outlined:

- Work accomplished during the reporting period
- Major milestones met in the project
- Anticipated activities for the next reporting period
- Overall technical assessment of the project to date
- Shortfalls or outstanding issues
- Proposed corrective actions to keep the project on schedule, if needed.

These reporting procedures, along with frequent contact with the project management team, ensured that SSA was well-informed of task completion, and any challenges or issues which required immediate attention.

Task 2 – Business Strategy for the Training, Certifying and Recruitment of Job Analyst Candidates

Subtask 2.2—Research and Recommended Strategy for Training of Job Analyst Candidates

The purpose of this subtask was to provide an analysis of the education and experience required for individuals who conduct job analysis and to identify techniques for training SSA job analysts. For this subtask, seven activities were completed. The steps performed in each of the seven following activities are detailed in the following sections:

- Conduct a literature search
- Conduct focus groups with job analysis professionals
- Conduct interviews with job analysis trainers and training experts
- Identify existing training for various job analysis methodologies
- Collect ratings on SSA job analyst knowledge, skills, abilities & other characteristics (KSAOs)
- Analyze training data
- Prepare draft training strategies report.

Activity 2.2.1 Conduct a Literature Search

The purpose of reviewing the training literature was to fully understand the benefits of various types of training, factors that influence transfer of training, and training environments that are most conducive to preparing analysts to become experts on the rigorous process of job analysis. Additionally in the literature review, the research team captured effective practices and resources used to facilitate the recruitment of staff, including for short-term, rotating and temporary employment, and literature discussing the standards and assessment for certificate programs. The methodologies performed in each of the four following steps to conducting the literature search are detailed below:

- Create literature review database
- Develop search strategy
- Screen literature sources
- Train data entry team and enter articles.

2.2.1.1 Create Literature Review Database

We began this activity by developing 1) the framework for categorizing training, recruitment, and certification literature and 2) the criteria for evaluating literature sources (i.e., screening criteria). The goal of the framework was to help organize and categorize relevant training, recruitment, and certification literature reviewed. An ICF staff member drafted the literature review framework based on the needs of SSA and the current effort. The draft framework was then reviewed and revised by various team members. The final framework is found in Appendix B.

The framework for categorizing training, recruitment, and certification literature was used as the underlying structure for a Microsoft Access database. This database was used as a tool to categorize literature sources and document relevant information found in sources. An Access form (see Appendix C) was created that contained check boxes and text boxes associated with the framework categories to aid the ICF literature review team in entering relevant training, recruitment, and certification information into the database in a user-friendly way.

As part of developing the framework for categorizing training, recruitment, and certification literature, the ICF team decided the most appropriate and useful way to organize and enter the information collected in the literature review was by literature source (i.e., the framework categories would be completed only one time for each source, no matter the extent of information that was described in that source). In this type of arrangement, the database functions similar to an annotated bibliography, such that the data output would present the source reference followed by content described in that source.

In addition to the framework for categorizing training, recruitment, and certification literature, the ICF team developed criteria for evaluating literature sources. These screening criteria were eventually used to evaluate the appropriateness of each source collected during the literature review for entering into the Access database. The screening criteria were drafted based on our expert knowledge of what a quality research source is: that is one that is relevant to the topic of interest, provides enough information to understand and evaluate the information, is published through a reputable mechanism, and provides information that is either timeless or current. The final screening criteria are listed in Exhibit A-1.

Exhibit A-1 Literature Review Screening Criteria	
<p>Relevancy of Topic to Project</p> <ul style="list-style-type: none"> ▪ Not at all relevant ▪ Somewhat relevant ▪ Relevant ▪ Very relevant 	<p>Sufficient Level of Detail Related to Topic</p> <ul style="list-style-type: none"> ▪ No related detail ▪ Some related detail ▪ Adequate related detail ▪ Significant related detail
<p>Quality of Article</p> <ul style="list-style-type: none"> ▪ Unknown publishing source/Questionable writing quality ▪ Non-expert publishing source ▪ Non-peer reviewed, but reputable/expert source ▪ Peer-reviewed source 	<p>Up-To-Date Information</p> <ul style="list-style-type: none"> ▪ Information is outdated and no longer useful ▪ Information is outdated and somewhat useful ▪ Information is outdated but still useful ▪ Information is current (2000 or later)

2.2.1.2 Develop Search Strategy

Our search strategy's goal was to identify a set of relevant training, recruitment, and certification literature from diverse disciplines to ensure we have foundational information. Because our team includes professionals from diverse fields, including instructional system design, certification, and industrial/organizational psychology, we first solicited a list of the best literature sources from each of our team members.

We then performed searches to locate industry book chapters, training handbooks, peer-reviewed journal articles, trade publications and other materials using research-based search engines (e.g. EBSCO), online bibliographic resources, governmental resources, World Wide Web searches, and direct communications with the training, recruitment, and certification communities. Within each of these search mediums, we performed searches on the following topic areas:

- Training of job analysts
- Training people that perform data collection (e.g., test administrators, train the trainer)
- Effective training strategies/training best practices
- Training related to disability/physical ability determinations
- Training of temporary employees

- Large-scale data collection considerations
- Articles that compare various training methods
- Certification of job analysts or similar
- Effective certification strategies/certification best practices

To further ensure we gathered literature from a variety of disciplines, the literature review team members were each assigned one to two relevant disciplines for which they were responsible for searching and gathering articles on the previously outlined topic areas. The full text of all sources identified were gathered in electronic format or in hard copy when the electronic copies were not available.

2.2.1.3 Screen Literature Sources

To maximize the quality and usefulness of each source entered into the literature review Access database, each literature source was reviewed by an ICF team member and evaluated for appropriateness to the current effort. If a literature source was evaluated as appropriate, it was entered into the database. For each source, ratings on each of the four criteria were made and documented in the Access database. For a source to pass evaluation and the source content to be fully entered into the database, it had to be rated in the top two options (e.g., “relevant” or “very relevant”) on *all* screening criteria. If a source was rated in either of the bottom options (e.g., “somewhat relevant” or “not at all relevant”) on any of the four criteria, the source was rejected. These rejected literature sources, but not their content, were entered into the database along with their ratings on the screening criteria. The screening of two articles can be found in Exhibit A-2 as an example of this process.

Exhibit A-2 Literature Review Screening Example	
<p>1080 Group, LLC. (2008). Five keys to getting started with interactive online training. Troutdale, OR: Author.</p> <p>Screening Ratings:</p> <ul style="list-style-type: none"> ▪ Very relevant ▪ Significant methodological detail ▪ Non-peer-reviewed, but reputable/expert source ▪ Information is current <p>Result: RETAINED</p> <p><i>Note: This source was retained because it was rated in the top two options on all screening criteria.</i></p>	<p>Westerman, A. (2001). The relation between corporate training and development expenditures and the use of temporary employees. Ethics & Behavior, 11(1).</p> <p>Screening Ratings:</p> <ul style="list-style-type: none"> ▪ Relevant ▪ Some related detail ▪ Peer-reviewed source ▪ Information is current <p>Result: REJECTED</p> <p><i>Note: This source was rejected because it was rated as having “some related detail”, which falls in the bottom two options of the “Level of Detail” criterion.</i></p>

2.2.1.4 Train Data Entry Team and Enter Literature

Once the first set of literature sources that were retained for full entry was identified, the literature review team was trained on the framework for categorizing training, recruitment, and certification literature and the Access database. This training had two overarching goals: 1) ensuring the team understood each of the framework categories and options listed in the literature review database, and 2) ensuring the team understood and felt comfortable using the Access form to enter source information. The content of the training, which includes definitions of all framework categories and options, can be found in Appendix D.

To establish inter-rater reliability and consistency, each team member independently reviewed and fully entered one literature source into his/her own practice database after the initial literature review training session. The source used as a training entry was selected to provide a typical article in terms of content,

article type, and level of detail provided. The teams' entries were compared and discrepancies between entries were used as the basis for further discussion and refinement of the framework definitions. This process allowed each literature review team member to adequately understand each framework category and option and agree on the information that should be entered in order to maximize consistency in source entries across team members.

After each team member was sufficiently trained on the framework and Access database and the training articles were completed, the first set of sources for full entry were split up and assigned to team members. Each team member fully entered each source according to the framework categories and options outlined in Appendices B and D.

Activity 2.2.2 Conduct Focus Groups with Job Analysis Professionals

Focus groups were conducted with job analysis experts from a variety of disciplines to discuss the features of a sound job analysis methodology, minimum qualifications needed to perform job analysis, and recommended strategies, methods, and practices to deliver job analyst training. The focus group technique was chosen for this activity because focus groups provide an opportunity for group discussion and can be an incentive for professionals to participate as it gives them a chance to share with and learn from others. Because input from job analysis experts was required for both Call Order 0001 and Call Order 002, a single set of focus groups was conducted to address the relevant issues for both Call Orders. Additionally, all of the focus group sessions were conducted over the phone. Using this method helped to reduce the resources needed to conduct the focus groups, as well as to maximize the number of experts who would be available to contribute to the discussion for each Call Order. Across the focus group process, ICF engaged in the following steps:

- Develop Protocol
- Recruit Focus Group Participants
- Schedule Focus Groups
- Conduct Focus Group Sessions
- Analyze Focus Group Data.

Details of these steps as well as the rationale behind the selected methods are described in the following sections.

2.2.2.1 Develop Protocol

ICF began the protocol development process by identifying the major topics to be covered during the focus groups for both Call Order 0001 and Call Order 002. For Call Order 0001, the aim was primarily to identify and to determine how to evaluate varying job analysis methodologies, while in Call Order 002, the aim was to gather insight on job analyst qualifications and approaches to training. Based on the purposes of each of the two Call Orders, the following draft list of topics for the focus groups was developed:

- Call Order 0001:
 - ◆ Selection of Occupations & Participants
 - ◆ Job Analysis Data
 - ◆ Job Analysis Procedures
 - ◆ Methodology Evaluation Criteria
- Call Order 002:

- ◆ Job Analyst Qualifications
- ◆ Job Analyst Training Approaches

After this draft topic list was developed and submitted to SSA for review, ICF created a draft set of questions related to each of the identified topics. For each topic area, consideration was made regarding what information we needed to address the purposes of the Call Orders and what information we could likely collect from the participants. Based on that, questions were written that would solicit the desired information during the focus groups. The questions and topic areas were refined as the nature of the project was clarified through discussion with SSA during the first few weeks of the project. In particular, it was determined that the selection of occupations and participants was outside the scope of the SSA job analyst role; thus, this topic was removed from consideration. All other topics were retained, although the job analysis data and job analysis procedure questions were combined under a single topic area in an effort to streamline the protocol and reduce its overall length. Thus, the final Call Order 0001 topics included job analysis procedures and methodology evaluation criteria, while the Call Order 002 topics remained unchanged from the draft list and included job analyst qualifications and training approaches.

Over a period of several weeks, the draft protocol underwent a series of additional revisions based on reviews by the leads of both Call Orders. In general, these revisions aimed to ensure that the questions would uncover all of the information that the team desired to gather from the job analysis experts, that the wording of the questions was clear and easy to understand, and that no unnecessary questions were being asked that did not pertain specifically to the job analysis needs of SSA.

After the major questions were established, introductory material, information on the project background, and a list of ground rules were added to the beginning of the protocol, while a summary was added as a closing statement. Where applicable, probe questions were added to the primary questions to assist the facilitators in drawing out more information from participants. Because the focus groups were intended to last only one hour, the final revision involved streamlining the protocol and removing any non-key questions. Finally, a participant version of the protocol was created, which involved removing the probe questions and introductory material intended for the facilitator's use.

To assist participants in clarifying the qualifications of a job analyst, ICF developed a draft list of knowledge, skills, and abilities (KSAs), as well as a description of the SSA job analyst role to clarify the extent of this position. This document was distributed to participants prior to the focus groups for their review, so that during the focus group, they could comment on the job analyst KSAs and suggest any changes. This draft list was developed by a member of the Call Order 002 team, revised by a second team member, and reviewed by the team lead. This document then served as a supplement to the protocol.

The final topic areas and focus group questions are presented in Exhibit A-3. The full facilitator protocol is presented in Appendix E. It should be noted that not all probes in the facilitator version were asked in every focus group. The probes were used only when needed to draw out additional information.

Exhibit A-3
Final Focus Group Protocol Questions**1. Introduction**

- In 30 seconds, please briefly introduce yourself and briefly describe what you do in your job.
- Please briefly describe the types of data that you typically collect, or have collected, during job analyses.

2. Job Analysis Procedure

- Which procedures do you typically use to gather job analysis data?
- How do you know which method(s) are appropriate for a given situation and what types of tools do you use to collect the data?
- What are some key considerations when conducting job analyses for the purpose of making disability determinations?
- What procedures should be in place to ensure that consistent and reliable data are being collected across analysts and locations?

3. Methodology Evaluation Criteria

- What are the most important criteria to consider when evaluating different job analysis methods and data collection techniques?

4. Job Analyst Qualifications

- As part of the data collection process, SSA will need to hire job analysts around the U.S. If you have not already done so, please take a moment to look over the draft list of knowledge, skills, and abilities needed to be an effective job analyst. Broadly speaking, do you suggest making any additions, changes, or deletions to this list?
- What certification, certificate and/or training programs does your field require in order to conduct job analysis?
- What should the minimum qualifications be for a job analyst, considering all analysts will receive job training from SSA?

5. Job Analyst Training Approaches

- In training candidates to conduct job analysis, what are some key factors that need to be emphasized during the training?
- What training programs, practices or strategies are available for training job analysts, considering the training would need to be replicated in various geographical locations?
- What resources should be introduced in a training to prepare individuals, possibly with no prior experience, to conduct job analysis at a national level?
- What are the benefits and disadvantages to consider with the use of each of the following training approaches for a large-scale training initiative?

6. Summary

- Thank you very much for your time today. Are there any additional resources that you can recommend before we end the focus group?

2.2.2.2 Recruit Focus Group Participants

Given the diverse nature of job analysis methods, it was important to gather perspectives of experts from a broad range of fields that perform job analysis. The fields from which SSA and ICF felt it was important to gather feedback included:

- Vocational Rehabilitation
- Physical and Occupational Therapy
- Human Resource
- Industrial/Organizational Psychology
- Ergonomics
- Occupational Health

Although practitioners in each of these fields may have very different perspectives on the purpose and practice of job analysis, ICF's efforts to gather feedback from all of them enable us to present the most comprehensive review of effective practices in job analysis and training methods that would serve SSA's purposes.

In order to recruit a diverse sample of experts for the focus groups, ICF employed a three-pronged approach to establish the list of potential participants.

1. We leveraged the connections of ICF team members within the I/O Psychology and HR community, as well as the connections of our partners within Vocational Rehabilitation, Physical and Occupational Therapy, Ergonomics, and Occupational Health. Many of these experts had served as subject matter experts on previous projects with ICF.
2. We performed internet searches to obtain contact information for distinguished researchers and practitioners of various forms of job analysis. We targeted experts in each field based on the relevance of their publications, their academic or corporate affiliations, their professional certifications, and their involvement in professional organizations. After some initial searching, a list of potential participants and rationale for their selection was provided to SSA for review and approval.
3. The final component of the sample was provided by SSA based on recommendations of their own staff and the members of the OID Advisory Panel (OIDAP). ICF placed high priority on these recommended experts when attempting to recruit participants. ICF then performed additional searches as previously described to ensure a sufficient number of potential participants.

Contact information and other pertinent details for each of the potential participants were combined in an Excel spreadsheet to facilitate the recruitment of participants and the scheduling of focus groups. Within the database, tabs were created for each of the target fields (see bulleted list above), and participants were listed within the tab that represented their respective field.

2.2.2.3 Schedule Focus Groups

ICF made efforts to schedule participants from similar fields together in a focus group, rather than mixing experts in different fields. Although mixing expertise within focus groups might have provided for some interesting dialogue, we made the decision not to mix expertise to ensure the dialogue would be more focused and to ease the delineation of how job analysis is performed within each field. ICF also limited the phone-facilitated focus groups to 2 to 3 participants to ensure manageability of the conference call within the one-hour timeframe.

To schedule the participants, ICF team members called the expert directly, explaining the purpose of the project, the reason we selected them, and what participation would involve. Example talking points used to recruit participants are provided in Exhibit A-4.

Exhibit A-4 Talking Points for Focus Group Scheduling

1. Greet the person using their name and title (“Hello Dr. Smith”).
2. State your name slowly and that you work for ICF International, a research-based consulting firm headquartered in Fairfax, VA.
3. Right off state how you received their name or why we are seeking their participation so the person doesn’t think you are a sales call (e.g., provide the name of the person who referred them to us; they wrote a book chapter entitled...; participated in another ICF project).
4. State that you are working on a project for Social Security Administration (SSA) where we are trying to gather the perspectives of different fields of study, including “*their field of study*,” on the topic of analyzing and measuring components of jobs (referred to commonly as “job analysis”). If they say they do not conduct or teach job analysis or do not know what it is, ask them if they conduct or teach any evaluation of jobs, positions, work environments or work tools.
5. Explain that we (the ICF team) are conducting this project for SSA as part of a larger effort by SSA to development an Occupational Informational System that SSA will eventually use to make disability determinations. The first step in this larger effort is to determine what expertise individuals will need to analyze jobs and collect the relevant job information for the OIS database.
6. For this SSA project will be collecting data from multiple sources including interviews, literature reviews, benchmarking and these focus groups which is why we are contacting them now. State that the reason you are calling is that you would like them to be part of one of these short, phone-based focus groups. Explain the focus groups will consist of 2-3 other experts from *their field* or a closely related discipline (e.g., vocational rehab/industrial rehab). Acknowledge that you know their time is valuable and that we really appreciate them considering our request. These phone-based focus groups should take less than an hour and provide an opportunity to meet others in their field while contributing to our research.
7. Ask if they have any questions.
8. If they ask about topics covered in the focus group, explain we will be looking to gather their thoughts on important components or considerations in the conduct of job analysis and the qualifications an individual should have before becoming a job analyst. Also, let them know that we will send them a copy of the protocol questions in advance of the focus group along with a draft list of knowledges, skills and abilities for job analysts for which we will ask them to comment in the focus group.
9. Explain that in addition to meeting other experts in their field, to show our appreciation and as a benefit to participate, we will provide a summary report of our findings across all of the focus groups.
10. Ask them if they would be interested in giving us an hour of their time over the phone, within the next week. Provide a list of 2-3 dates and timeslots. If none of those work, then provide others.
11. Confirm their email and contact information. State that you will send them an email by tomorrow confirming the date and time they selected and providing the toll-free conference line, protocol questions, and other materials to provide context to the call.
12. If they state that they do not have time, ask if it would be okay to consider them for a short interview in two weeks.
13. Send the email confirming their date and time of participation. Include the conference line and passcode. Attach the protocol and KSA list to the email. Add a read receipt to every correspondence.

When an individual agreed to participate, he or she was scheduled for a one-hour time slot. Microsoft Outlook invites were then sent with the meeting time, the facilitator's name, and toll-free conference line information. An example of the invite language is provided in Exhibit A-5. The invite was sent to the participants and to the SSA client so that representatives of SSA could listen to the call. Two documents were also attached to the invite: the participant version of the focus group protocol and a worksheet with a draft list of KSAs/qualifications for job analysts. Participants were asked to review the KSA/qualifications list and propose revisions based on what is required within their field to perform job analysis.

Exhibit A-5

Sample Email Invitation for Focus Group Participants

Hello Participants,

Thank you for agreeing to participate in ICF's focus groups on Job Analysis for the Social Security Administration. Attached to this invitation you will find two documents. The first is the protocol we will be using for the call. Feel free to read it ahead of time and follow along on the call. It is not necessary that you prepare answers, but you can if you wish. The second document is a draft list of Knowledge, Skills, and Abilities that we believe are relevant to SSA's Job Analyst positions. Please take some time to review it in advance of the call. If you are interested in providing detailed revisions to the document, please make those directly in the document and email it back to me, as we likely won't have time to discuss them in the focus groups.

[Name of facilitator] will be facilitating the call. He/She can be reached at [phone number] or by email at [\[email\]@icfi.com](mailto:[email]@icfi.com). We will use a conference line for the focus group. The toll-free number is provided below:

Toll-free number:

Passcode:

We look forward to speaking with you on [day of call].

Thank you,

[Name and Contact Information of Coordinator]

In total, 12 focus group sessions were scheduled with 31 total participants. In our original proposal for this Call Order, we had planned to conduct a total of 4-5 focus group with 4-6 participants per group for a total of 16-20 participants; however, once the protocol was developed and we realized the amount of information we wanted to cover in an hour-long interview, we decided to reduce the number of participants to 2-3 per group and increase the number of focus groups. We also increased the number of focus groups that we conducted to ensure we had a representative set of participants from all related disciplines. We stopped conducting focus groups when most of the information collected was redundant with information collected in previous focus groups. A summary of the focus group sessions, including the primary disciplines of participants, the date and time of the session, and the number of participants, is presented in Exhibit A-6.

Exhibit A-6 Summary of Focus Group Sessions			
Primary Discipline	Date	Time	Number of Participants
Occupational Therapy/ Vocational Rehabilitation	November 19, 2010	11:00 AM EST	2
Ergonomics	November 19, 2010	2:00 PM EST	3
Vocational Rehabilitation	November 24, 2010	3:00 PM EST	3
Physical & Occupational Therapy/Ergonomics	November 29, 2010	1:00 PM EST	3
Vocational Rehabilitation	November 29, 2010	3:00 PM EST	3
Vocational Rehabilitation	November 30, 2010	3:00 PM EST	2
Human Resources	December 1, 2010	1:30 PM EST	4
Human Resources	December 1, 2010	5:00 PM EST	2
Industrial/Organizational Psychology	December 2, 2010	4:30 PM EST	2
Industrial/Organizational Psychology	December 9, 2010	10:00 AM EST	3
Physical Therapy	December 9, 2010	11:00 AM EST	1
Vocational Rehabilitation/ Occupational Therapy/Ergonomics	December 13, 2010	1:30 PM EST	3
Total Participants			31

2.2.2.4 Conduct Focus Groups Sessions

Each focus group session had an assigned facilitator and recorder. Prior to the call, these team members reviewed the available background information on participants (e.g., names, disciplines, organizations, and positions), confirmed the conference call information, and gathered the documents to be used on the call, including the protocol and job analyst KSA worksheet.

Facilitators began the calls by introducing themselves and the project and explaining the ground rules of the session, which are presented in Exhibit A-7. The facilitators then used the protocol to guide the calls, asking each of the major questions contained in the protocol and using the probes as necessary to gather more information. Due to the large amount of information to be covered in an hour-long session, the facilitators had to ensure that the discussion stayed on track and did not center on any single question for too long. As noted in the ground rules, participants were reminded that they could contact the facilitator later if they had additional information they wished to discuss.

Exhibit A-7 Focus Group Ground Rules

- To keep this focus group to 1 hour, please be concise in providing your responses to allow for everyone to participate. Please note that as the facilitator, I may have to interrupt at times to move us to the next questions. If that occurs, I may ask you to send your further thoughts to me via email.
- Respect each other's opinions. I ask that you withhold your judgments about others comments.
- Avoid interrupting other participants.
- Keep information shared here confidential. We intend to remove individuals' names and other identifying information from our notes.
- Please stay on topic and provide responses that relate directly to the question asked.
- Participants were then asked if they had any additional ground rules they would like to add to the list that was provided.

The recorders typed their capture of the dialogue in the participant version of the protocol. This document served as an ideal template for the dialogue, since it contained all of the focus group questions without the suggested probes and additional information intended for the facilitator's use. The recorders were asked to focus on typing all of the major points that were discussed. They did not attempt to capture everything that was said verbatim; instead, they recorded all of the key points of discussion so that the dialogue represented a concise and accurate portrayal of the focus group session. In addition, the conference call was recorded using the recording function available from the conference call line, so that an audio file of the full conversation would be available as a backup source of information.

Any materials, forms, and tools mentioned by participants during the focus groups were requested by the facilitators. The facilitators also indicated to the participants that follow-up calls may be conducted if additional information was needed regarding any concepts that were discussed in the focus groups. Facilitators concluded the sessions by thanking participants for their time and input, as well as reminding participants that they could contact them if they had any questions, comments, or additional information to share.

2.2.2.5 Analyze Focus Group Data

2.2.2.5.1 Identification of Individual Focus Group Themes. Our team analyzed participant responses by protocol question to identify the key findings that were discussed. Important points made in the focus group that addressed the respective protocol question were recorded following the dialogue for that given question. Prior to beginning the analysis process, a practice session was held to establish clarity and consistency in the analysts' approach. First, each team member independently reviewed and identified important points in the documentation from the same focus group. After this initial review, the team members met to discuss the key findings that were identified for each question. Discrepancies in the identified important points were discussed and resolved, and further clarification was provided to remove ambiguity in the process. For example, the focus groups were intended to capture trends and current practices used by job analysis professionals and were not intended to measure the strength or quantification of the findings. Thus, the team decided to use an inclusive approach to recording the important points, so that even if a single participant made a particular comment, it could be recorded as an important point if it provided a point that was pertinent to the protocol question. Due to the nature of the discussion in some of the sessions, participants occasionally addressed a different protocol question than

the one most recently asked by the facilitator. For example, if the facilitator asked about the types of job analysis data that participants usually collect, the participants may have also provided some information on the procedures for how those data are collected. When this occurred, important points were moved to the most relevant protocol question to ensure all findings were grouped in an organized and easily interpretable manner. During the analysis, if a recorder saw a typographical error or an incomplete thought in the dialogue, the recorder corrected the error or completed the thought. The documents including both the dialogue and identified themes were saved as the analyzed version of the document. The analyzed documents were distributed to the facilitator of each session to review the identified themes and ensure they accurately reflected all of the key findings from the focus groups.

2.2.2.5.2 Documentation of Themes across Focus Groups. To identify the relevant themes across individual focus groups, the important points from all of the focus groups were compiled into a single document organized by protocol question. Similar points were edited or deleted to remove redundancies, resulting in a comprehensive and streamlined list of all points identified across all of the focus groups. After all points were documented for a protocol question, the analyst then reviewed the points and wrote a summary paragraph to describe the overall findings. Thus, for each question, the document contains the protocol question as a heading, a brief summary of the findings, and a bulleted list of all of the identified points across the 12 focus groups. After the full document was compiled, it was sent to the full focus group team for review.

2.2.2.5.3 Discussion of Focus Group Findings. The final step of the data analysis process involved conducting a meeting with all facilitators and recorders who participated in the focus groups to jointly examine and refine the collective findings. While each facilitator/recorder team was well versed in the issues of their respective sessions, no one team had complete knowledge of overarching themes throughout the focus groups conducted with participants from varying disciplines.

Prior to the meeting, all participants were asked to review the analyzed documents from each of their calls to remind them of the findings from their individual sessions. Additionally, they were asked to review the document containing the aggregated points across calls to familiarize themselves with the findings across all of the focus groups.

During the one and a half hour meeting, a facilitator led the discussion so that the findings from each of the protocol questions were addressed. Participants discussed points from their calls, shared interesting findings, provided suggestions for changes to the document of combined themes, and noted recommendations or issues to keep in mind for the remaining project tasks. To ensure that the recorder could focus fully on capturing the discussion, a recorder who had not been involved in the focus groups took notes throughout the session. The notes contained the major points that were discussed and highlighted all identified action items.

Following the call, the recorder cleaned the notes and sent them to the facilitator to review. Based upon feedback gathered during the meeting, the facilitator made revisions to the document of themes across focus groups. Overall, this focus group data analysis method resulted in an effective, straightforward procedure for aggregating and documenting the qualitative data gathered through the focus groups.

Activity 2.2.3 Conduct Interviews with Job Analysis Trainers and Training Experts

To gather information on the different training approaches used for preparing job analysts, critical training components, best training delivery methods, and participant engagement, we conducted interviews with subject matter experts (SMEs). The interview technique was chosen for this activity because we wanted to be able to focus on each individual SME's specific expertise and experience. All of the interview sessions were conducted over the phone in order to reduce the resources needed to conduct

the interviews, as well as to maximize the number of experts who were available to contribute to the discussion. Across the interview process, ICF engaged in the following steps:

- Develop Protocol
- Recruit Interview Participants
- Schedule Interviews
- Conduct Interview Sessions
- Analyze Interview Data

Details each of these steps as well as the rationale behind the selected methods are described in the following sections.

2.2.3.1 Develop Protocol

ICF began the protocol development process by identifying the major topics to be covered during the interviews. Overall, the interviews were intended to gather information on training structure, delivery, and participant engagement; accordingly, the draft list of topics included the following areas:

- **Key elements of Training Structure**
 - ◆ Design principles (e.g., Instruction Systems Design ADDIE model)
 - ◆ Integration with certificate process (e.g., periodic formative assessments)
- **Training Delivery: Logistical Considerations in Large-Scale Training**
 - ◆ Coordination and means of delivery (e.g., when geographically dispersed; large number of participants)
 - ◆ Consistency in training
 - ◆ Process of large-scale data collection
 - ◆ Keeping materials secure
- **Engagement of participants**
 - ◆ Transfer of training principles
 - ◆ Training of non-employees (e.g., contractor staff)

After this draft topic list was developed and submitted to SSA for review, ICF created a draft set of questions related to each of the identified topics. For each topic area, consideration was made regarding what information we needed to address the purpose of Call Order 002 and what information we could likely collect from the participants. Based on that, questions were written that would solicit the desired information during the interviews. Where applicable, probe questions were added to the primary questions to assist the facilitators in drawing out more information from participants. The questions and probes were designed to facilitate discussion of specific training content, the effectiveness of various types of instructional design in structuring training, modes of training delivery demonstrated to be the most effective for job analysts, and techniques used to evaluate and document competency. The questions and topic areas were refined as the nature of the project was clarified through discussion with SSA during the first few weeks of the project. Over a period of several weeks, the draft protocol underwent a series of additional revisions based upon the Call Order 002 lead's review. In general, these

revisions aimed to ensure that the questions would uncover all of the information that the team desired to gather from the training experts, that the wording of the questions was clear and easy to understand, and that no unnecessary questions were being asked that were not pertinent to the training needs of SSA.

Introductory material and information on the project background were also included at the beginning of the protocol. Just prior to beginning the recruiting of interview participants, the protocol was reviewed once more. Because the interviews were intended to last only one hour, final revisions involved streamlining the protocol. Because the potential participants for the training interviews included a mix of individuals with different backgrounds (to be explained in the next section), final revisions also included providing alternate question wording to some questions to make the questions more appropriate and tailored for the participants who conduct job analysis training. Finally, a participant version of the protocol was created, which involved removing the probe questions and introductory material intended for the facilitator's use.

The full interviewer and participant protocols are presented in Appendix F. It should be noted that not all questions and/or probes in the interviewer version were asked in every interview. The probes were used only when needed to draw out additional information and if time became limited, the interviewer focused on those questions most relevant to the participant's area of expertise.

2.2.3.2 Recruit Interview Participants

To identify participants that would have the most relevant input for training SSA job analysts, ICF gathered a list of individuals who have experience training job analysis as well as those who have experience designing or conducting large-scale training. In particular, ICF identified potential participants in the following categories:

- Trainers of Job Analysts
- Instructional Systems Design Experts
- Leaders of Large Scale Training Initiatives
 - ◆ Training and Talent Development Managers from large corporations, utilities, and government agencies
 - ◆ Training Coordinators with expertise in training non-employee (temp, contractor) staff
- Other Training and Job Analysis Experts/Academics

To recruit a diverse sample of experts for the interviews, ICF employed a four-pronged approach to establish the list of potential participants.

1. We leveraged the connections of ICF team members within the job analysis and training communities.
2. We performed internet searches to obtain contact information for leaders of large-scale training initiatives and job analysis trainers.
3. We contacted the potential participants provided by SSA based on recommendations of their own staff and the members of the OIDAP.
4. In some cases during the job analysis focus group recruitment process, potential participants were identified that were better suited to participate in the training interviews. These participants were added to the list of potential interview participants. Similarly, some of the focus group participants were also suited for the training interviews and so were added to the list of potential interview participants as well.

Contact information and other pertinent details for each of the potential participants were combined in an Excel spreadsheet to facilitate the recruitment of participants and the scheduling of interviews. Within the database, tabs were created for each of the target categories (see bulleted list above), and participants were listed within the tab that represented their experience.

2.2.3.3 Schedule Interviews

To schedule the participants, ICF team members called each expert directly, explaining the purpose of the project, the reason we selected them, and what participation will involve. Example talking points that were used to recruit participants are provided in Exhibit A-8.

Exhibit A-8 Talking Points for Interview Scheduling	
1.	Greet the person using their name and title (“Hello Dr. Smith”).
2.	State your name slowly and that you work for ICF International, a research-based consulting firm headquartered in Fairfax, VA.
3.	Right off state how you received their name or why we are seeking their participation so the person doesn’t think you are a sales call (e.g., provide the name of the person who referred them to us; they wrote a book chapter entitled...; participated in another ICF project).
4.	State that you are working on a project for Social Security Administration (SSA) where we are trying to gather the perspectives of recognized experts on various aspects of training, including “their area of expertise.”
5.	Explain that we (the ICF team) are conducting this project for SSA as part of a larger effort by SSA to development an Occupational Informational System that SSA will eventually use to make disability determinations. An important step in this larger effort is to train large numbers of analysts to analyze jobs and collect the relevant job information for the OIS database.
6.	For this SSA project, we will be collecting data from multiple sources including focus groups, literature reviews, benchmarking and these interviews which is why we are contacting you now. State that the reason you are calling is that you would like them to participate in a one hour phone-based interview to discuss essential principles and practices of training. Acknowledge that you know their time is valuable and that we really appreciate them considering our request.
7.	Ask if they have any questions.
8.	If they ask about topics covered in the interview, explain we will be looking to gather their thoughts on important components or considerations involved in training, such as training structure and design, training for data collection and job analysis, training implementation, learner engagement, and training evaluation. Also, let them know that we will send them a copy of the protocol questions in advance of the interview.
9.	Explain that we will provide a summary report of our findings across all of the interviews.
10.	Ask them if they would be interested in giving us an hour of their time over the phone, within the next week . Work with the person to find a time that works for them.
11.	Confirm their email and contact information. State that you will send them an email by tomorrow confirming the date and time they selected and providing the toll-free conference line and protocol questions to provide context to the call.
12.	Send the email confirming their date and time of participation. Include the conference line and passcode. Attach the protocol to the email. Add a read receipt to every correspondence. (Note: Each

Exhibit A-8
Talking Points for Interview Scheduling

interviewer should have his/her own conference line so request that from the designated interviewer. Make sure the interviewer and note-taker are cc'ed on this email.)

When an individual agreed to participate, he or she was scheduled for a one-hour time slot. Microsoft Outlook invites were sent with the meeting time, the facilitator's name, and toll-free conference line information. An example of the invite language is provided in Exhibit A-9. The invite was sent to the participant and to the SSA client so that representatives of SSA had the opportunity to listen to the call. The participant version of the interview protocol was attached to the invitation.

Exhibit A-9
Sample Email Invitation for Interview Participants

Hello [Name of Participant],

Thank you for agreeing to participate in ICF's interviews on a training strategy for job analysts for the Social Security Administration. The attached document is the protocol we will be using for the call. Feel free to read it ahead of time and follow along on the call. It is not necessary that you prepare answers, but you can if you wish.

[Name of facilitator] will be facilitating the call. He/She can be reached at [phone number] or by email at [\[email\]@icfi.com](mailto:[email]@icfi.com). We will use a conference line for the interview. The toll-free number is provided below:

Toll-free number:

Passcode:

We look forward to speaking with you on [day of call].

Thank you,

[Name and Contact Information of Coordinator]

Overall, we scheduled 13 one-hour interviews with training experts, which is in line with our original proposal to conduct 12 to 15 interviews. We believed this number of interviews would be sufficient to enable us to collect the information needed, evaluate the amount of consistency in the information, and obtain a representative sample of job analysis trainers and training experts. After 13 interviews, most of the information we were collecting was redundant with information collected during prior interviews; thus, we determined that it was not necessary to schedule additional interview sessions. A summary of the interview participants, including name, organization, and position, organized by type of participant (based on the four categories described previously), is presented in Exhibit A-10.

Exhibit A-10 Training Interview Participants		
Name	Organization	Position
<i>Trainers of Job Analysts and Data Collectors</i>		
Patricia Meglich	University of Nebraska, Omaha	Assistant Professor of Management
Dr. Jonas Johnson	PAQ Services, Inc.	Product Manager
Dr. David Klien	Univ. of Iowa Law, Health Policy & Disability Center	Associate Director of Technology
Dr. Dawn Snyder	Franklin University	Chairperson for masters program for instructional designers and performance development professionals
Carin Shuler, DPT	ErgoScience	Physical Therapist
Kathy Maltchev, OT	Chevron Services Company	Advisor, Health and Productivity
Dr. Rick Wickstrom	WorkAbility Systems	President of WorkAbility Systems, Physical Therapist
<i>Instructional System Design (ISD) Experts</i>		
Alice Hirzel	ICF International	Expert Consultant
Richard Clark	USC Rossier School of Education	Co-Director, Center for Cognitive Technology
Stephanie Spinapolice	ICF International	Expert Consultant
<i>Leaders of Large Scale Training Initiatives</i>		
Dr. Irwin N. Jankovic	Metro Water District of Southern California	Director, Training/Organizational Effectiveness
Dr. B. Alan Echtenkamp	Time Warner	People Development
<i>Other Training/Job Analysis Experts</i>		
Dr. Kevin Ford	Dept. of Psychology, Michigan State Univ.	Professor

2.2.3.4 Conduct Interview Sessions

Each interview session had an assigned facilitator and recorder. Prior to the call, these team members reviewed the available background information on the participant (e.g., name, discipline, organization, and position), confirmed the conference call information, and gathered the protocol documents.

Facilitators began the calls by introducing themselves and the project. The facilitators then used the protocol to guide the calls, asking each of the major questions contained in the protocol and using the probes as necessary to gather more information. Due to the large amount of information to be covered in an hour-long session, the facilitators needed to ensure that the discussion stayed on track and did not center on any single question for too long.

The recorders typed their capture of the participant's responses in the participant version of the protocol. This document served as an ideal template for the participant's responses, since it contained all of the interview questions without the suggested probes and additional information intended for the facilitator's use. The recorders were asked to focus on typing all of the major points that were discussed. They did not attempt to capture everything that was said verbatim; instead, they recorded all of the key points of the discussion so that the noted responses represented a concise and accurate portrayal of the interview session. In addition, the conference calls were recorded using the recording function available from the

conference call line, so that an audio file of the full conversation was available as a backup source of information.

The facilitators also indicated to the participants that follow-up calls may be conducted if additional information was needed regarding any concepts that were discussed. Facilitators concluded the sessions by thanking participants for their time and input, as well as reminding participants that they could contact them if they have any questions, comments, or additional information to share.

2.2.3.5 Analyze Interview Data

2.2.3.5.1 Documentation of Themes across Interviews. Because the interviews contained only one participant per session, we determined that it was not necessary to conduct an analysis of each individual set of notes prior to analyzing the themes across sessions as we had for the focus groups. Instead, the analyst conducted a brief review to ensure that each set of notes was complete and that important points were recorded under the most relevant protocol question. To identify the relevant themes across individual interviews, the important points from all of the calls were then compiled into a single document organized by protocol question. Similar points were edited or deleted to remove redundancies, resulting in a comprehensive and streamlined list of all points identified across all of the interviews. After all points were documented for a protocol question, the analyst reviewed the points and wrote a summary paragraph to describe the overall findings. Thus, for each question, the document contained the protocol question as a heading, a brief summary of the findings, and a bulleted list of all of the identified points across the interviews. After the full document was compiled, it was sent to the full interview team for review.

2.2.3.5.1 Discussion of Interview Findings. The final step of the interview data analysis process involved conducting a meeting of all facilitators and recorders who participated in the interviews in order to jointly examine and refine the collective findings. While each facilitator/recorder team was well versed in the issues of their respective sessions, no one team had complete knowledge of overarching themes throughout the interviews conducted with participants from different backgrounds.

Prior to the meeting, all participants were asked to review the notes from each of their calls to remind them of the findings from their individual sessions. Additionally, they were asked to review the document containing the aggregated points across calls to familiarize themselves with the findings across all of the interviews.

During the meeting, a facilitator lead the discussion so that the findings from each of the protocol questions was addressed. Participants discussed points from their calls, shared interesting findings, provided suggestions for changes to the document of combined themes, and noted recommendations or issues to keep in mind for the remaining project tasks. To ensure that the recorder could focus fully on capturing the discussion, a recorder who did not participate in the interviews took notes throughout the session. The notes contained the major points that were discussed and highlighted all identified action items.

Following the call, the recorder cleaned the notes and sent them to the facilitator to review. Based upon feedback gathered during the meeting, the facilitator made revisions to the document of themes across interviews. Overall, this interview data analysis method resulted in an effective, straightforward procedure for aggregating and documenting the qualitative data gathered through the interviews.

Activity 2.2.4 Identify Existing Training for Various Job Analysis Methodologies

For this activity we used multiple means of identifying existing job analysis training programs. First, we used the notes from the focus groups and the literature review from Call Order 0001 to identify existing

job analysis methods for which we could conduct a search for any training or certification practices associated with these methods. We began searching for two commonly mentioned job analysis methods: the PAQ and ErgoScience.

This search consisted of going to ErgoScience’s website and looking for any information on the training or certification available for this method. Next, we conducted an internet search for training and certification practices available for the PAQ by using “PAQ” as a search term. We conducted similar searches for the other job analysis methods that we identified from the focus group notes and Call Order 0001 literature review. If the website of various training programs did not include some of the desired information, emails were sent to the contact person in order to try to obtain more information.

Additionally, internet searches were conducted to identify job analysis training programs independent from the previously identified job analysis methods. Search terms such as “job analysis training” were used to identify any of these additional job analysis training programs.

Finally, one job analysis training program that was identified by SSA was also researched. This training, the King Country job analysis training, was first researched using King County’s website. After examining King County’s job analysis website, it was clear that the information we were searching for was not available via this means of research. Therefore, an email was sent to the employee responsible for job analyses within King County, and this email was followed up with a phone call to obtain relevant information regarding the training program, which is actually no longer conducted by King County.

Combining the results of each of these research strategies, Exhibit A-11 provides a list of the job analysis methods or training programs for which we searched for training and certification practices.

Exhibit A-11	
Job Analysis Methods Used in Training and Certification Search	
16.	ErgoScience - QJDA (Quantitative Job Demands Analysis)
17.	ErgoScience - FCE (Functional Capacity Evaluation)
18.	Position Analysis Questionnaire (PAQ)
19.	Fleishman Job Analysis Survey (F-JAS)
20.	McCroskey Vocational Quotient System (MVQS)
21.	Threshold Traits Analysis (TTA)
22.	Common Method Questionnaire (CMQ)
23.	Functional Job Analysis
24.	Certified Compensation Training program (offered through WorldatWork)
25.	TruSight Training (Employer's Association)
26.	Matheson Essential Function Job Analysis Training
27.	OccuPro Systems and Solutions
28.	WorkAbility Systems
29.	WorkWell (formerly called Isernhagen)
30.	Developing a Curriculum (DACUM)
31.	Society for Human Resource Management Job Analysis Module
32.	King Country Job Analysis Training

For each job analysis method, we documented a description of the training provided and topics covered, the length of the training, the method by which the training was delivered, course pre-requisites, if the training includes practice in conducting job analyses, whether a certificate was provided, what the certificate involved and any additional information, such as the costs of the training or certificate, contact information, etc. If no trainings are available for a given method, this finding was noted as well. All of this information was recorded in an Excel spreadsheet.

Activity 2.2.5 Collect Ratings on SSA Job Analyst Knowledge, Skills, and (KSAs)

Once all of the training data was collected, we analyzed the data across our various data sources (i.e., literature database, focus group notes, interview notes, and existing job analysis training). We began by extracting the KSAs that were identified for job analysts in our focus group notes and compared those to the KSAs we identified from our literature review. We then created a draft list of KSAs needed by job analysts. Two criteria were used to determine whether a KSA was included in the list. A KSA needs to meet only one of the two criteria to be included. The first criterion consists of whether the KSA was identified by multiple sources, which could mean if multiple focus groups or literature sources identified the KSA or if the KSA was identified in a focus group and in the literature, for example. The second criterion consists of our expert opinion that the KSA is relevant for the SSA job analyst role.

Next, we compared the minimum qualification (MQ) standards that were identified in the focus groups, literature review and certification standards (see section 2.3.2) to identify the lowest common denominator of education, work experience and training requirements for job analysts, and potential MQs that SSA may want to require.

After this initial review of KSA and MQ data, we determined that it would be more defensible to gather ratings of the KSAs to inform the MQ development. As a first step in a selection process, MQs can be subject to legal challenges and as such, they must be defensible and supported by evidence that shows their relevance to the job. Thus, we conducted an expert rating activity to gather a more objective set of data. This rating activity served several purposes: 1) verify the list of important job analyst KSAs, 2) collect data on the difficulty of learning the KSAs to inform training content and emphasis, 3) determine which KSAs should be used as a basis for the development of MQs.

To conduct the rating activity, the draft list of KSAs was sent to a panel of seven subject matter experts (SMEs) to gather ratings for each KSA. The SMEs had an average of 15 years of job analysis experience and represented a variety of disciplines that frequently conduct job analyses. A list of the SMEs who participated in the rating activity along with a description of their relevant experience is presented in Exhibit A-12.

Exhibit A-12 SME Descriptions

Dr. Lance Anderson has been conducting occupational and job analysis research for over 20 years. He has directed or played a leading role in several projects pertaining to occupational analysis and disability. Dr. Anderson has conducted or supervised over 100 job analyses. He played a key role in evaluating occupational information for SSA, and in developing methods for using occupational information to determine disability. This work started over 15 years ago and has involved examining all existing occupational information systems to identify alternatives, working to reengineer the way SSA uses occupational information to determine disability, and assessing the occupational information products offered by private vendors. Dr. Anderson also played an important role in the development of the O*NET occupational information system and though it is not for the purpose of making disability determinations; it is often used by analysts in the conduct of job analysis. Dr. Anderson's degree is in Industrial/Organizational Psychology.

Dr. Brian Cronin has over 10 years of experience conducting job analysis in various industries. He has performed job analyses for technical, trade and professional jobs. He is well versed in the legal defensibility requirements for job analysis and has served as a subject matter expert for projects conducted in highly litigious environments (e.g., for clients under consent decree). Dr. Cronin's degree is in Industrial/Organizational Psychology.

Dr. Paul Davis is an Exercise Physiologist and internationally recognized authority on the subject of fitness standards. Dr. Davis has been conducting job analysis for over 35 years. He is the president of the First Responder Institute (FRI), which is dedicated to enhancing First Responder job readiness, performance, survivability, health and wellness by delivering education, training and financial assistance to First Responders

Exhibit A-12 SME Descriptions

across the nation. In support of its public safety missions, FRI researches the human performance requirements and characteristics of First Responder job tasks. Based on these analyses, FRI designs training programs and competitive events that improve First Responder capabilities, performance, health, wellness and physical fitness. The hallmark of FRI's programs is a steadfast commitment to establishing awards-based programs that reward excellence and stimulate improved and repeated performance of First Responder essential skills.

Sanford Goldstein is a Physical Therapist and Certified Disability Management Specialist (CDMS). He has been conducting job analysis for 12 years. Mr. Goldstein has served as a non-attorney representative in over 50 disability claims before the SSA. He is very knowledgeable of various training programs available for training job analysts and specifically the KSAs that PTs acquire through training.

Dr. Beth Heinen has served as a subject matter expert (SME) in job analysis. She has 5 years of experience in conducting job analysis and holds a unique perspective as a literature review specialist in the area of job analyses since the conduct of SSA's Call Order 1. For Call Order 1, Dr. Heinen led a team of analysts in identifying various methods used to conduct job analysis. She developed the criteria by which to analyze the job analysis methods for SSA and catalogued the job analyses methods used across different disciplines. Dr. Heinen's degree is in Industrial/Organizational Psychology.

Kathy Maltchev is employed by Health Fitness Corp., and contracted full-time by Chevron as a subject matter expert on fitness for duty. She has 12 years of experience conducting job analysis and 5 years of experience in training job analysts. Ms. Maltchev coordinates Job Demands Analysis for 56,000 jobs worldwide. She is a demonstrated leader in work-related injury prevention and treatment programs. She has specialty training and certificates in ergonomics, job analysis, functional capacity evaluations, work hardening/conditioning, and corporate health and wellness. She has written numerous articles and book chapters on related topics and has been a featured speaker at state and national occupational health, safety, and therapy conferences.

Dr. Leonard Matheson is a leading scholar and practitioner in the area of industrial rehabilitation. He has 15 years of experience conducting job analysis and 10 years of experience implementing training of job analysis. Dr. Matheson is the originator of work hardening and has participated in setting national standards of practice for work hardening and functional capacity evaluation. He has designed many of the tests and treatment models that are in use in Occupational Rehabilitation today. Dr. Matheson has been a consultant to several Fortune 100 employers and insurance carriers, the Social Security Administration, the United States Congress, the American Medical Association, and hundreds of rehabilitation centers and governmental agencies in the United States, Canada, and other countries. He has testified before the United States House of Representatives in Washington, DC. His doctoral work at the Andrus Gerontology Center at the University of Southern California focused on cognitive function and aging.

The panel of experts rated the job analyst KSA list on the importance and difficulty of each KSA, as well as when the KSA should be acquired. These questions were designed to gather empirical evidence of the relevance of the KSAs identified and inform the development of job relevant MQs and training content. Exhibit A-13 lists the rating questions that were presented to the SMEs.

Exhibit A-13 KSA Rating Scales		
Q1: How important will this KSA be for an SSA Job Analyst?	Q2: When should this KSA be acquired?	Q3: How difficult is it to learn this KSA?
1 = Not important 2 = Slightly important 3 = Important 4 = Very important 5 = So important that an individual could not perform the job without it, even with other KSAs	0 = N/A (This KSA is not necessary) 1 = On the job 2 = During training 3 = Before selection (needed at entry)	1 = Very easy 2 = Easy 3 = Average 4 = Difficult 5 = Very difficult

After the KSA ratings were collected, three separate sets of analyses were performed. First, KSAs were reviewed based upon their importance ratings. KSAs were deemed important to the position of SSA Job Analyst if they had a mean rating of 3 (“important”) or higher for Q1 across all raters. Using this cutoff criterion, all KSAs from the original list were retained, verifying the strength of the draft list that was developed and refined using data collected during the literature review and focus groups. This verified list represents a comprehensive list of the KSAs SSA Job Analysts should possess based upon the current vision for this position.

Second, KSAs were reviewed to determine the difficulty of learning the KSAs that should be taught during training. KSAs that should be trained were identified using the criterion that 67% of SMEs must have selected a rating of “2” to Q2, indicating that the majority of SMEs believed the KSA should be acquired during training. Using the reduced set of KSAs that should be trained, the KSAs were then analyzed by determining the mean rating for Q3, the difficulty of learning the KSA. KSAs were sorted by mean difficulty rating and grouped into three categories representing those that were most difficult, moderately difficulty, and least difficult to learn. This information was then used to inform which KSAs should be taught during training and the amount of emphasis that needs to be placed on teaching them based upon their difficulty.

The last step of analysis involved analyzing the KSA ratings to identify MQs. The KSAs had to meet two criteria to be considered for an MQ: 1) over two-thirds of the SMEs (67%) had to provide a rating of “5” to Q1 indicating the KSA is so important that an individual could not perform the job without it, and 2) 67% of SMEs provided a rating of “3” for Q2 indicating this KSA is needed at entry (prior to selection) on the job, thus, prior to subsequent training or job experience. The third question was not considered in the identification of MQs because we deemed that difficult to learn KSAs are not necessarily required KSAs, nor an indicator of whether the KSA might be acquired on the job. However, we reviewed the ratings to Q3 to determine if any KSAs might be considered preferred qualifications due to their difficulty to be learned. Such KSAs would be identified if the KSA met the first criterion for being considered an MQ (i.e., over two-thirds of the SMEs had to provide a rating of “5” to Q1) and had over two-thirds of the SMEs (67%) rate it a “4” or “5” on Q3 indicating the KSA was difficult or very difficult to learn. Based on the outlined criteria, three KSAs were identified for MQs.

For KSAs to which SMEs provided a “5” for Q1 or “3” for Q2, we asked SMEs to “provide examples of relevant courses or prior job experience where this KSA could be acquired.” These examples were then used to create behavioral statements that indicate the minimum qualifications candidates need to apply and be considered for subsequent hurdles in the selection process. Based on those examples, MQs were identified for the retained KSAs. No KSAs met the preferred qualification criteria and thus, no preferred qualifications were identified. Overall, we identified the MQs that demonstrated a direct link to the KSAs

deemed by experts as important and required to perform the SSA job analyst role. The methodology the ICF team used to develop the MQs provides content validation evidence for the selection of the MQs.

Activity 2.2.6 Analyze Training Data

With the identified minimum qualification standards in mind, we compared our KSA list, the areas of training identified in the focus group notes, and the topic areas of existing job analysis trainings to identify key content areas for job analysis training. Next, we compared and analyzed 1) the notes for training delivery from the focus groups and training interviews, 2) the training delivery methods of existing job analysis trainings, and 3) the training delivery and training principles literature in our literature database to identify training approaches that would be most appropriate for the key job analysis training content areas.

Activity 2.2.7 Prepare Draft Training Strategies Report

Once we completed our analysis of the training data, we prepared a draft of our training strategies report. In this report, we presented the results of the activities we completed for this subtask. We presented a list of the KSAs deemed important for SSA job analysts; described the minimum qualification standards for job analyst candidates who will attend the training; presented an overview of existing job analysis training programs; described recommended training practices, including training design and structure, as well as training content and materials, and provided an overview and recommendations for training delivery format. Our draft report was created in Microsoft Word and submitted in Adobe PDF format.

Subtask 2.3—Research and Recommended Strategy for Certification of Job Analyst Candidates

The purpose of this subtask was to provide an analysis of current processes, techniques, and procedures that could be used to effectively evaluate and certify a candidate's achievement of proficiency in all recommended course material and training regimens provided for SSA job analysts. We searched for and obtained information on certification practices that address the issues most applicable to SSA's needs. For this subtask, seven activities were completed. The steps performed in each of the seven following activities are detailed in the following sections:

- Identify certificate program standards
- Identify professional credentialing organizations and requirements
- Identify existing certificate practices for various job analysis methodologies
- Analyze certificate standards and practices
- Conduct interviews with organizations that have sought accreditation
- Identify data entry credentialing and training
- Prepare draft certificate strategies report.

Activity 2.3.1 Identify Certificate Program Standards

We began our search for certificate program standards using the information provided to us by our certification expert, Dr. Joan Knapp, for our original proposal. When preparing the proposal for Call Order 002, our certification expert informed us of the differences between certificate programs and professional/personnel certification and strongly stated that professional/personnel certification did not sound appropriate for SSA needs and would be beyond the scope of what SSA was requesting in the Statement of Work. As such, Dr. Knapp, provided us with the standard set forth by the American Society for Testing and Materials International (ASTM) for certificate programs and a background document on

the standard set forth by the National Organization for Competency Assurance (NOCA), now referred to as the Institute for Credentialing Excellence (ICE), for certificate programs. The standards set forth by both of these credentialing associations have been approved as American National Standards by the American National Standard Institute (ANSI). Through an internet search, we were able to obtain a copy of the ICE Standard (ANSI/ICE 1100: 2010 (E) Standard for Assessment-Based Certificate Programs). We documented the defining features, standards (and feature definitions if available) for certificate programs provided by these two credentialing associations in an Excel spreadsheet.

In the background document on the ICE Standard, a crosswalk was provided that illustrated the linkage of the ICE Standard with related standards, guidelines and accreditation requirements from other organizations and associations. This crosswalk provided a useful list of other organizations and associations that may have relevant information for our objective for SSA so we conducted an internet search for information regarding the standards, guidelines and accreditation requirements of these organizations and associations. These organizations and associations are listed in Exhibit A-14. We looked at the websites of these organizations and associations and searched for any articles or published literature related to certificate program standards, guidelines or requirements. We documented the standards, guidelines or requirements in an Excel spreadsheet for each organization or association and the source from which we obtained the information.

Exhibit A-14	
Organizations and Associations Listed in Crosswalk of ICE Standard Background Document	
1. AAHE: American Association for Higher Education, <i>9 Principles of Good Practices for Assessing Learning</i>	2. ACCST: Accrediting Commission for Career Schools/Colleges of Technology, <i>Standards of Accreditation</i>
3. ACE: American Council on Education, <i>ACE Quality Assessment Questionnaire</i>	4. ACE: American Council on Education, <i>Course Evaluation Handbook</i>
5. ACICS: Accrediting Council for Independent Colleges and Schools, <i>Accreditation Criteria, Policies, Procedures, and Standards</i>	6. AERA/APA/NCME: American Educational Research Association/American Psychological Association/National Council on Measurement in Education, <i>Standards for Educational and Psychological Testing</i>
7. Code: Joint Committee on Testing Practices, <i>Code of Fair Testing Practices in Education (Test Developers)</i>	8. CAEL: The Council for Adult and Experiential Learning, <i>Principles of Effectiveness for Serving Adult Learners</i>
9. IACET: International Association for Continuing Education and Training, <i>ANSI/IACET Standards for Continuing Education and Training</i>	10. COE: Council on Occupational Education, <i>Handbook of Accreditation</i>

We also received two potential organizations to research from our focus group discussions:

- Commission on Rehabilitation Counselor Certification (CRCC)
- American Board of Vocational Experts.

Activity 2.3.2 Identify Professional Credentialing Organizations and Requirements

We then provided our Excel spreadsheet to our certification expert, Dr. Joan Knapp, for her to review and provide any additional organizations or associations that she thought we were missing and would be relevant to SSA's needs. Dr. Knapp noted that our list was thorough in terms of standards and accreditation. She also recommended that we include the following organizations and certifying bodies in our search to identify the standards for specialties within the Medical, Nursing and Engineering fields, and certification requirements for disciplines relevant to our specific project (e.g., vocational rehabilitation; occupational therapy):

- American Board of Medical Specialties
- American Board of Nursing Specialties
- Council on Engineering Specialty Boards
- Certification of Disability Management Specialists Commission
- Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)
- Association for Driver Rehabilitation Services.
- National Council for Recreational Therapy Certification
- National Board for Certifying Occupational Therapists, etc.

We searched the websites of these additional certifying organizations to identify what they had to offer. We documented a summary of the mission of these certifying organizations. Based on the summaries of these organizations' missions, we identified the organizations that seemed most relevant. Our criteria for most relevant was if it mentioned any standards or guidelines for certificate programs or if it provided certification for professionals in the disciplines that are the focus of this project. Those organizations that met our criteria were then further researched to identify the specific standards or certification requirements that they set forth. The information gathered from our additional research on these organizations was documented in a table for further analysis.

Once that information was documented, we reviewed the information to determine for which disciplines any potential certifying organizations had not been found. We noted that we had not yet identified any potential certifying organizations for the disciplines of Ergonomics, Human Resources, Physical Therapy, Occupational Health, and Industrial/Organizational Psychology. We conducted additional internet searches for any potential certifying organizations for these disciplines and found the following organizations:

- Board of Certification in Professional Ergonomics (BCPE)
- The American Board for Occupational Health Nurses (ABOHN)
- HR Certification Institute
- American Board of Physical Therapy Specialties (ABPTS).

We added the additional information for these organizations to the table. We were able to identify professional certifications in all disciplines, except Industrial/Organizational Psychology. Certificate programs are available in Industrial/Organizational Psychology but not professional certification.

Activity 2.3.3 Identify Existing Certificate Practices for Various Job Analysis Methodologies

For this activity, we used the data collected during Activity 2.2.4 (pg. A-21) on the training and credentialing practices of existing job analysis methods, but focused on the certificate programs of these methods. We looked for similarities and patterns in the credentialing practices of existing job analysis methods to identify common practices.

Activity 2.3.4 Analyze Certificate Standards and Practices

For the certificate program standards that were identified (ASTM and ICE), we created a crosswalk to compare the two standards. This crosswalk identified where the two standards are similar between the two credentialing associations and where there are differences. This crosswalk identified the core requirements that a certificate program will need to meet.

Next, we analyzed the certification requirements of the relevant certifying bodies, and the standards that are required by the standard-setting organizations for occupational specialty areas. We looked for

commonalities (e.g., most organizations require at least a Bachelor’s degree in a field of study relevant to the occupation) and patterns in the format of the certification requirements or standards (e.g., all organizations list a required education level, work experience, and training(s)). We also examined the certification requirements for the occupations relevant to our project to determine the lowest common denominator for the minimum qualifications of these occupations.

Activity 2.3.5 Conduct Interviews with Organizations that have sought Accreditation

Because we recommended that SSA seek accreditation for its certificate program, we looked into agencies that have already successfully implemented assessment-based certificate programs and sought accreditation. Specifically, we sought to identify their motivations for seeking accreditation, resources needed to create a program that meet standards, and costs associated with developing said programs. The topic areas that were covered in the discussions regarding certificate programs are provided in Appendix G. A list of organizations that had either attained ANSI accreditation or had submitted accreditation applications to ANSI was reviewed. Since SSA is a federal agency, only certificates sponsored by federal or quasi-federal agencies were targeted. These included the FDA Administration, the US Army and the FBI, each of which have achieved accreditation. Those contacted and the certificate programs for which they were responsible are displayed in Exhibit A-15:

Exhibit A-15 Agencies Contacted that have Certificate Programs		
Name	Agency	Certificate
Kirk Kennedy	FBI Academy	National Behavioral Science Research Certificate Program
Thomas Hughes	US FDA, Division of Human Resource Development	New Hire Investigator Training Program
Brenda Miller	US Army Combat Readiness/Safety Center	Safety Professional Certificate

Of this list, Mr. Kennedy and Mr. Hughes were interviewed; however, Ms. Miller was not available to participate in an interview. The interviews were conducted over the phone and notes from each interview were recorded.

Activity 2.3.6 Identify Data Entry Credentialing and Training

Due the importance of accuracy in data entry of job analysis information by SSA job analysts, we researched various credentialing, training, and existing practices for data entry. Internet searches were conducted to identify certifications or accreditations relevant to data entry. Internet searches were also conducted regarding various national databases, such as the Traumatic Brain Injury (TBI) database, the Spinal Cord Injury (SCI) database, and the National Cancer Registry because data accuracy and quality is of utmost important in these databases. These databases were researched to determine necessary qualifications for data entry personnel as well as training provided before individuals enter data into the databases.

Additionally, representatives from large national databases were contacted via email to ask about their processes for training individuals for data entry and ensuring data accuracy in their databases. Two individuals from the National Cancer Registrars Association (NCRA) participated in short phone interviews to share their knowledge of and experience with training for data entry, database accuracy, and auditing database entries.

Activity 2.3.7 Prepare Draft Certificate Strategies Report

After completing our analysis of the certificate program standards and practices, we prepared a draft of our certificate strategies report. In this report, we presented the results of the activities we completed for this subtask. We outlined the key components that must be included in SSA's certificate program to meet published standards and be eligible for accreditation. We presented and summarized common certification practices within related disciplines and for existing job analysis methods. Our report also presented any unique practices that SSA may find interesting and relevant. This report was a Microsoft Word document.

Subtask 2.4—Benchmarking Methodology

The primary purpose of the benchmarking task was to identify and address factors that may facilitate or inhibit the recruitment and retention of job analysts that are trained and certified by SSA. It was also intended to identify compensation and other incentives that may enhance recruitment efforts. Finally, it also shed light on effective training strategies for organizations that operate on a similar scale as SSA, with staff at varying degrees of skill upon entry.

Activity 2.4.1 Conduct Benchmark Interviews with Subject Matter Experts

The benchmarking task consisted of six in-depth case studies that focus on specific agencies or organizations that have either 1) recruited job analysts, or 2) faced similar challenges and needs in terms of hiring workers with varying skill levels for potentially temporary positions and maintaining a cadre of trained and certified individuals who can be accessed as needed. The specific agencies or organizations chosen for the benchmarking study have experienced workforce challenges similar to those faced by SSA regarding the job analyst positions and were known to have effective solutions to these challenges. To collect information on the benchmarking organizations, we conducted interviews with representatives of each organization. The interview technique was chosen for this activity because it would enable us to gather detailed information on the specific situation and actions of the benchmarking organization and allow us to probe to gain greater clarification and understanding.

As part of the benchmarking case studies, ICF engaged in the following steps:

- Develop Protocol
- Recruit Benchmarking Partners
- Schedule Interviews
- Conduct Benchmarking Interviews
- Analyze Benchmarking Data.

Details of steps as well as the rationale behind the selected methods are described in the following sections.

2.4.1.1 Develop Protocol

ICF developed a protocol for the benchmarking interviews in order to focus participants on the specific topics of interest to SSA and to enable ICF to compare aspects of different strategies across the benchmarking partners. ICF began the protocol development process by identifying the major topics to be covered during the benchmarking interviews. The draft list of topics included the following areas:

- Sources for Talent
- Recruiting Techniques (i.e., specific strategies and implementation steps)
- Resource Needs

- Processes for Candidate Tracking
- Incentives/Compensation Considerations
- Lessons Learned

After this draft topic list was developed and submitted to SSA for review, ICF created a draft set of questions related to each of the identified topics. For each topic area, consideration was made regarding what information we needed to address the purpose of Call Order 002 and what information we could likely collect from the benchmark partners. Based on that, questions were written that would solicit the desired information during the interviews. Where applicable, probe questions were added to the primary questions to assist the facilitators in drawing out more information from the partners. The questions and probes were designed to facilitate discussion of recruiting, recruiting large pools of candidates, screening practices, recruitment practices for temporary/“on-call” or geographically-dispersed candidates, logistical and resource considerations, candidate tracking, compensation practices and training rotational or seasonal staff. The questions and topic areas were refined as the nature of the project was clarified through continual project discussions with SSA. For example, our original thinking was that recruitment efforts for job analysts would be too narrow and that the contextual and situational challenges of SSA’s recruitment effort, such as the variable volume of the work, and the geographic dispersion of candidates would be of greater concern. Thus, we originally sought to identify benchmarking partners that faced similar recruiting challenges rather than partners who specifically recruited job analysts. However, after discussions with SSA, we increased our focus on recruitment practices for job analysts specifically. We sought partners who specifically recruited job analysts or similar professionals and revised our benchmarking interview protocol to include more questions about recruitment of job analysts.

Introductory material and information on the project background is included in the beginning of the protocol. Because the interviews were intended to last no more than one and a half hours, the final revisions involved streamlining the protocol and removing any non-key questions. Finally, a participant version of the protocol was created, which involved removal of the probe questions and introductory material intended for the facilitator’s use.

The interviewer protocol for the recruitment benchmarking interviews is presented in Appendix H.

2.4.1.2 Recruit Benchmark Partners

When recruiting benchmark partners, ICF targeted agencies and other organizations that have recruited job analysts and/or have experienced workforce challenges similar to those faced by SSA and have implemented creative solutions to these challenges. Specifically, ICF considered organizations that:

- Commonly recruit and hire job analysts
- Commonly recruit and hire large numbers of seasonal or temporary staff,
- Recruit staff from wide geographical areas,
- Experience unpredictable fluctuations in staffing needs from year to year,
- Provide training and certificates to quickly get personnel up-to-speed on new processes and technologies, or
- Retain a qualified pool of specialists who can be called upon as needed.

In order to recruit a diverse sample of experts for the interviews, ICF employed a two-pronged approach to establish the list of potential participants.

1. We leveraged the connections of ICF team members within various Federal and State agencies. Colleagues within ICF have worked with agencies such as IRS and the Bureau of the Census to help them overcome similar challenges to those faced by SSA. ICF contacted individuals at these agencies to identify experts with first-hand experience of the recruitment processes at these agencies to serve as subject matter experts for the benchmarking task.
2. We performed internet searches to uncover case studies of agencies and organizations who either recruit job analysts or who encounter recruiting challenges similar to those facing SSA.

After providing SSA with some initial suggestions for benchmarking organizations, SSA provided suggestions for additional partners. This process resulted in the identification of six benchmarking partners. A summary of the expertise of each of our proposed benchmarking partners is provided in the following. This list of organizations and the summary of their expertise were provided to SSA for their review and approval of the benchmarking partners.

US Census Bureau (www.census.gov):

The Census Bureau recruits for approximately 1.2 million part-time positions to conduct the decennial census across the entire country and maintains a smaller staff to conduct the American Community Survey annually. Many of those openings are for enumerators — people who go door to door to collect information from the roughly 35 million households that do not return their Census forms by mail. There is a 28-question test involved in obtaining one of the temporary positions, which pay between \$10 and \$25 per hour depending on where the applicant lives and entail plenty of evening and weekend shifts, since that is when people tend to be at home. Four days of training teach everything from interviewing and personal safety to the history and importance of the Census. They employ a targeted recruiting strategy that aims to put enumerators in the communities where they live, thereby saving transportation costs and increasing the chances that someone will be willingly counted.

BTE Technologies (www.btetech.com):

For 30 years, BTE Technologies has provided advanced physical therapy equipment and occupational therapy equipment for evidence-based physical/physio therapy and occupational therapy. Employers and insurance providers leverage BTE's complete programmatic solutions for maintaining a safe and productive workforce with pre-hire testing, injury prevention, managing impact of injury/disability, and expedited return-to-work, for maximum cost savings. They perform Physical Demands Analysis (PDA) of jobs, Post Offer of Employment Testing of new hires, Functional Capacity Evaluations (FCEs) and manage functional recovery and return to work. BTE's clinical staff contains experts in job evaluation and work onsite at the employer location(s) to define and measure the specific job(s) demands using BTE's proprietary technology and process. In addition, BTE maintains a national network of clinics that utilize BTE's EvalTech™/ER™ functional demand assessment technology and a proprietary FCE process.

Unum (www.unum.com):

Unum is a leading provider of employee benefits, including disability, long term care, life and voluntary insurance. Nearly one in five U.S. employers who provide group long term disability benefits and more than 38 percent of the Fortune 500 do business with Unum. Their more than 10,000 employees deliver benefits that help protect 25 million working people and their families in the event of an illness or injury. As part of their extensive disability insurance business, Unum performs job analysis on a regular basis to make disability determinations. For large, national clients, they may task an internal expert with performing the job analysis. For smaller accounts, they would likely vend them out. Both of these processes have implications for SSA and how they might implement job analysis on a national scale.

SAIF Corporation (www.saif.com):

SAIF Corporation is Oregon's not-for-profit, state-chartered workers' compensation insurance company. Oregon companies are required to carry workers compensation insurance, and SAIF is the market leader in the state, issuing almost half of the policies in Oregon and providing coverage to more than 600,000 workers. With nine regional offices across the state, SAIF is equipped to provide workers compensation coverage to both large and small businesses across the state. As a large workers compensation insurer, they are one of the largest referral sources for job analysis in the state. The job analyses are sometimes done internally by their return-to-work coordinators, but others are referred to external experts who are certified by the Commission on Rehabilitation Counselor Certification (CRCC) to do work in the Oregon workers' compensation system.

California State Personnel Board - Test Validation and Construction Unit (<http://spb.ca.gov/programs/tvc/index.htm>):

The California State Personnel Board (SPB) was created to administer the civil service system for the most populous state in the nation. As of 2010, the State of California civil service workforce population totaled 220,079, accounting for 1.4 percent of the state's employed population. The Test Validation and Construction Unit (TV&C) within SPB provides professional expertise to decentralized departments in the development and validation of job-related selection procedures in accordance with the federal Uniform Guidelines on Employee Selection Procedures, the Civil Rights Acts of 1964 and 1991, California Government Code, the Americans with Disabilities Act and the professionally accepted standards of the American Psychological Association. TV&C also offers technical and customized training, consultation, and a wide variety of recruitment and selection-related products and services such as job analyses and exam development. TV&C has recruited and trained a highly qualified staff of Industrial/Organizational (I/O) Psychologists to perform job analysis for government organizations across the state. They have also developed a manual for the performance of job analysis.

Jefferson County Personnel Board (www.pbjcal.org):

The Personnel Board of Jefferson County (PBJC) was established in 1935 by the Enabling Act of the Alabama Legislature. For counties with a population of at least 400,000, this act established Personnel Boards to manage the county's Civil Service Systems, provide human resource functions to jurisdictions within the county, and to ensure that departments comply with rule and requirements laid out in the Enabling Act and any updates to the Act. The main responsibility of the PBJC is to recruit and assess candidates for employment and to refer qualified candidates to departments within the county. Additionally, the PBJC maintains employee records, manages job classes and salary structures, and facilitates employee development within the county. The PBJC is responsible for ensuring that hiring policies do not create adverse impact for any groups and that all processes for which they are responsible follow legal and ethical standards. If there are complaints against a jurisdiction within the county, the PBJC is responsible for coordinating the adjudication process. The PBJC employs full-time I/O Psychologists who perform the department's functions, such as job analysis. Additionally, the PBJC utilizes graduate student interns for short-term high demand jobs as well as experts in the fields for which analyses or assessments are being conducted.

Contact information and other pertinent details for each of the potential interview participants were combined in an Excel spreadsheet to facilitate the recruitment of participants and the scheduling of interviews.

2.4.1.3 Schedule Interviews

To schedule the interview participants, ICF team members first requested an introduction from the internal colleague who had previously worked with that organization, if applicable. We believe that this increased our chances of securing the agency's participation. It also simplified the process of determining who at the agency was best qualified to describe the recruiting challenges faced by the agency and their strategies for overcoming them. Following the initial introduction, a team member called the expert directly, reiterating the purpose of the project, the reason we selected them, and what participation would involve. Example talking points used to recruit participants are provided in Exhibit A-16.

Exhibit A-16
Talking Points for Interview Scheduling

1. Greet the person using their name and title (“Hello Dr. Smith”).
2. State your name slowly and that you work for ICF International, a research-based consulting firm headquartered in Fairfax, VA.
3. Right off state how you received their name or why we are seeking their participation so the person doesn’t think you are a sales call (e.g., provide the name of the person within ICF who referred them to us or how we discovered them on the internet).
4. State that you are working on a project for Social Security Administration (SSA) where we are trying to gather the perspectives of different agencies, including “*their agency*,” on strategies for recruiting and hiring workers with varying skills, for potentially temporary positions, and maintaining acadre of trained and certified individuals who can be accessed as needed. If they say they have not been involved in this type of effort, ask them if they know of someone else within their agency who would have more insight and be interested in speaking with us.
5. Explain that we (the ICF team) are conducting this project for SSA as part of a larger effort by SSA to develop an Occupational Informational System that SSA will eventually use to make disability determinations. To do this, SSA will need to recruit, hire, train, and certify large numbers of job analysts to gather job information to populate the database. Before undertaking this task, SSA is working with us to collect data from multiple sources involving interviews, focus groups, literature reviews, and benchmarking case studies.
6. One step in this larger effort is to conduct case study interviews with agencies that have faced similar challenges in terms of recruiting, hiring, training, and certifying large numbers of professionals to determine what obstacles they encountered and how they overcame them. State that the reason you are calling is that you would like them to be part of one of these short, phone-based interviews. Acknowledge that you know their time is valuable and that we really appreciate them considering our request. These interviews should take about an hour and provide an opportunity for them to share their experience with another Federal agency.
7. Ask if they have any questions.
8. If they ask about topics covered in the interviews, explain we will be looking to gather their thoughts on strategies to recruit and hire job analysts or large numbers of seasonal or temporary staff from wide geographical areas, manage unpredictable fluctuations in staffing needs, provided training and certificates in a short period of time, and retain a qualified pool of specialists over time. Also, let them know that we will send them a copy of the protocol questions in advance of the interview.
9. Explain that to show our appreciation and as a benefit of participation, we will provide a summary report of our findings across all of the interviews, so they will be able to learn what other agencies are doing to confront similar challenges.
10. Ask them if they would be interested in giving us an hour of their time over the phone, within the next week. Provide a list of 2-3 dates and timeslots. If none of those work, then request others.
11. Confirm their email and contact information. State that you will send them an email by tomorrow confirming the date and time they selected and providing the toll-free conference line, protocol questions, and other materials to provide context to the call.
12. If they state that they do not have time in the next week, ask if they think they would have more time in the coming weeks, and try to schedule something farther out.
13. Send the email confirming their date and time of participation. Include the conference line and passcode. Attach the protocol to the email. Add a read receipt to every correspondence.

When an individual agreed to participate, he or she was scheduled for a one and a half hour time slot. Microsoft Outlook invites were sent with the meeting time, the facilitator's name, and toll-free conference line information. An example of the invite language is provided in Exhibit A-17. The participant version of the interview protocol was also attached to the invite.

Exhibit A-17 Sample Email Invitation for Benchmarking Participants
<p>Hello [Name of participant],</p> <p>Thank you for agreeing to participate in ICF's benchmarking interviews for the Social Security Administration. Attached to this invitation you will find the protocol we will be using for the call. Feel free to read it ahead of time and follow along on the call. It is not necessary that you prepare answers, but you can if you wish.</p> <p>[Name of facilitator] will be facilitating the call. He/She can be reached at [phone number] or by email at [email]@icfi.com. We will use a conference line for the focus group. The toll-free number is provided below:</p> <p style="padding-left: 40px;">Toll-free number: Passcode:</p> <p>We look forward to speaking with you on [day of call].</p> <p>Thank you,</p> <p>[Name and Contact Information of Coordinator]</p>

2.4.1.4 Conduct Benchmarking Interviews

ICF initially planned to conduct four to five case studies with benchmarking partners, but this was eventually extended to six partners. This sample size allowed us to go into more depth with each partner while still obtaining a variety of perspectives.

Each interview had an assigned facilitator and recorder to ensure the call proceeded efficiently while allowing the participant responses to be accurately documented. Prior to the call, these team members reviewed the available background information on participants (e.g., names, organizations, and positions), confirmed the conference call information, and gathered the documents to be used on the call such as the protocol.

Facilitators began the calls by introducing themselves and the project and explaining the purpose of the call. The facilitators then used the protocol to guide the calls, asking each of the major questions contained in the protocol and using the probes as necessary to gather more information. Due to the large amount of information to be covered in an hour and a half session, the facilitators strived to ensure that the discussion stayed on track and did not linger on any single question for too long.

The recorders typed their capture of the participant's responses in the participant version of the protocol. This document served as an ideal template for the participants' responses, since it contained all of the interview questions without the suggested probes and additional information intended for the facilitator's use. The recorders focused on typing all of the major points that were discussed. They did not attempt to

capture everything that was said verbatim; instead, they recorded all of the key points of discussion so that the responses represented a concise portrayal of the interview. In addition, the calls were recorded using the recording function available from the conference call line so that an audio file of the full conversation would be available as a backup source of information.

The facilitator indicated to the participants that follow-up calls may be conducted if additional information was needed regarding any concepts discussed in the interviews or documents that were provided. Facilitators concluded the sessions by thanking participants for their time and input, as well as reminding participants that they can contact the facilitator if they have any questions, comments, or additional information to share.

For organizations that did not have representatives available to participate in an interview, information was located via web searches about recruitment processes and the types of individuals that are hired into positions responsible for conducting job analyses.

2.4.1.5 Data Analysis

2.4.1.5.1 Identification of Individual Case Study Findings. Our team analyzed participant responses by protocol question to identify the important points that are discussed and determine their relevance to SSA. By analyzing important points within each case study, we could place each strategy or outcome in its respective context. Important points were identified that address the respective protocol question and were recorded for each question under the participant responses so that all of the information is grouped together and easy to review. Due to the nature of the discussion in some of the sessions, participants could occasionally address a different protocol question than the one most recently asked by the facilitator. When this occurs, the important points were moved to the most relevant protocol question to ensure all findings are grouped in an organized and easily interpretable manner. The documents including both the participant responses and important points were saved as the analyzed version of the document. The facilitator of each session reviewed the important points and ensured they accurately reflect all of the key findings from the call.

Once the important points from each interview were identified, they were reorganized into a case study format that clearly laid out each partner agency's context, the specific recruiting challenges they faced, the strategies they employed to overcome these challenges, and which ones were successful. Finally, the case was evaluated for its relevance to SSA's mission, and key lessons learned were extracted. This format enabled the various strategies to be compared and contrasted.

2.4.1.5.2 Comparison across Case Studies. Because each case study involved a unique challenge and solution, it was important to identify themes across case studies in order to present SSA with common elements of successful strategies to carry out recruitment, selection, and training. A table was created to provide a simple visual tool to compare the methods and strategies used by each of the partners as they pertain to SSA's requirements. An analyst compared and contrasted the partners on each of the dimensions relevant to SSA, and highlighted the themes and overall findings.

2.4.1.5.2 Discussion of Benchmarking Findings. Because the benchmarking team was smaller than on the other subtasks (two people leading interviews), it was not necessary to conduct a large meeting of the team members to discuss findings. Instead, small discussions were conducted with the project manager to evaluate the findings of the individual case studies, elicit patterns and themes across partners, draw conclusions, and propose recommendations. These discussions also ensured that the findings and recommendations provided in the benchmarking report benefited from the lessons learned from the other subtasks under this call order. Overall, this method resulted in an effective, straightforward procedure for aggregating and documenting the qualitative data gathered through the benchmarking interviews.

Activity 2.4.2 Gather Information on the Office of Personnel Management and the Department of Labor Practices

At the request of SSA, we gathered information on the recruitment practices of the Office of Personnel Management (OPM) and the Department of Labor (DOL). The Desk Audit Process used by OPM categorizes jobs based on the similarities and differences of each job's duties, responsibilities, and required qualifications.¹⁰⁴ An OPM classifier completes this process. While we attempted to include OPM as a benchmarking partner, we were unable due to the fact that we were unable to recruit someone from the organization to participate in an interview. Thus, we conducted an internet search for job announcements of the classifier position for OPM, but were unsuccessful in locating any such announcements. We broadened our search terms to include human resources and identified several job announcements for other agencies within the Federal Government. These agencies hire Human Resources Specialists who perform work that can include job analyses or job classification. Typical job titles for these employees include Human Capital Specialist, Human Resources Specialist, Operations Specialist, Workforce Resource Specialist, or Lead/Supervisory Human Resources/Capital Specialist. These positions are found in most federal agencies across the U.S. and are likely to be highly similar to the positions in OPM. We examined the requirements, the recruitment and selection process, and the compensation practices for these positions and summarized the findings.

The DOL developed the Occupational Information Network (O*NET), which contains occupational information on over 900 occupations in the U.S. labor force. The occupational information is maintained in a database that is continually updated by the National Center for O*NET Development. To gather information on the occupational raters that were involved in the development of O*NET and the occupational raters that assist the National Center for O*NET Development in updating the database, we reviewed publically available reports on O*NET and contacted the Directors of the National Center for O*NET Development. From these sources, we identified the recruitment practices for occupational analysts for O*NET and summarized the findings.

Activity 2.4.3 Prepare Draft Recruitment Strategies Report

Once we completed our analysis of the themes across the case studies, we prepared a draft of our recruitment strategies report. In this report, we presented the results of the case studies we completed for this subtask. We outlined common elements of successful strategies to carry out recruitment, selection, and training of job analysts or within contexts similar to the context that SSA will face. We presented and summarized the specific recruiting challenges faced by the benchmark partners, the strategies they employed to overcome these challenges, and which ones were successful. The findings were evaluated for their relevance to SSA's mission, and key lessons learned were extracted. The findings were summarized by comparing and contrasting the partners and presenting relevant themes. Finally, recommendations for SSA's own recruiting efforts were made based on the findings from the interviews. The report was provided as a Microsoft Word document and a PDF.

Subtask 2.5—Documentation for SSA – Literature Reviews and Expert Interviews

To ensure SSA has documentation of all sources of information that were gathered and used in the completion of Call Order 002, we provided SSA with the complete training literature review database and notes from all qualitative data collections (i.e., focus groups, training interviews, benchmark interviews). It is important to note that the training literature review database is for documentation purposes only and was provided to SSA "as is," meaning the database was not created as a polished

^{104, 2} U.S. Department of the Interior (2007). Employee's Guide to the Classification Process. Retrieved online from <http://www.doi.gov/hrm/pmanager/classfaq.html>.

deliverable that is suitable for use in the public domain or for use in future assessment of the same literature.

Notes from all of the qualitative data collections conducted during the course Call Order 002 were documented and provided to SSA. All notes collected as part of each type of data collection (i.e., focus groups, training interviews and benchmarking interviews) were organized together by protocol question. The notes were not verbatim transcripts but provided an overall summary of what was said by the participant(s). The recordings of the focus groups, training interviews and benchmarking interviews are being stored by ICF.

Subtask 2.6—Development of Candidate Tracking Database of Potential Job Analysts

The purpose of this subtask was to develop a database that SSA can use to track and manage its job analyst candidates. This database will provide SSA with the ability to monitor candidates as they progress through the training and certification program, and then once they are certified, to manage their assignments. To begin this subtask, we created a draft list of all the potential uses for which SSA may want to use this candidate tracking database. Based on this draft list of potential uses, we then identified potential database fields necessary for the intended uses (e.g., if SSA wanted to use the database to determine how many people are currently registered for training, the database will need to include a field that will provide this information).

After the draft list of potential uses and database fields was created, we submitted the list to SSA for the SSA team's review and comment. SSA provided feedback with the fields that they would like included in the database as well as suggesting additional fields for inclusion that were not on our original list. These fields were added to the list of items to include in the database.

It is our understanding that SSA does not need this database to be accessible by individuals outside the SSA team and that there will be one location where the database is stored and accessed. Thus, we developed the candidate tracking database in Microsoft Access. The candidate tracking database was created using the database fields that were identified. The database was reviewed for quality by our project director and then submitted to SSA for review.

Subtask 2.7—Final Report of Business Strategy for the Training, Certifying and Recruitment of Job Analysts

The purpose of this subtask was to provide a full report of our research, methodology, findings and conclusions from the previous subtasks to assist SSA in determining how to operationalize an effective strategy for training, certifying, and recruiting job analysts. Once all other subtasks were completed, we prepared a draft of our final report (this document). Our report presented the results of all the activities we completed for this Call. The final report compiles the training strategies, certification strategies and recruitment strategies reports. Thus in the final report, we have:

- Outlined potential minimum qualifications for job analysts
- Listed the KSAs needed by job analysts
- Identified the key content areas for job analysis training
- Presented and summarized various training practices that could be used in effectively training job analysts
- Outlined the key components that must be included in SSA's certificate program to meet published standards and be eligible for accreditation.

- Presented and summarized common certification practices within related disciplines and for existing job analysis methods
- Outlined common elements of successful strategies to carry out recruitment, selection, training, and certification of job analysts or within contexts similar to the context that SSA will face.

In this Appendix to the final report, we have presented a detailed methodology documenting the steps we took to collect and analyze the data.

Appendix B

Framework for Categorizing Training, Recruitment, and Certification Literature

Appendix B Call Order 2 Framework for Categorizing Training, Recruitment, and Certification Literature <i>Underlying Structure for Access Database</i>	
Column Title	Data Entry Options
Overview Information	
Article APA Citation	[Fill in]
Discipline	[Select One] <ul style="list-style-type: none"> ▪ Vocational Rehabilitation ▪ Physical and Occupational Therapy ▪ Human Resources ▪ I/O Psychology (<i>i.e., training related to work</i>) ▪ Ergonomics ▪ Occupational Health ▪ Instructional Systems Design ▪ Education ▪ General Psychology ▪ Other Discipline
<i>Description of 'Other Discipline':</i>	[Fill in]
Recruiting Job Analysts	[Select All That Apply] <ul style="list-style-type: none"> ▪ KSAOs of Job Analysts ▪ Qualifications Standards of Job Analysts (<i>e.g., education, previous work experience, current credentials</i>) ▪ Recruitment Effective Practices (<i>e.g., appropriate compensation</i>) ▪ Recruitment Strategy (<i>e.g., who is targeted, message</i>) ▪ Recruitment Method (<i>e.g., print materials, social media</i>) ▪ Large-Scale Recruitment ▪ Temporary Assignment/On-Call Recruitment

Appendix B Call Order 2 Framework for Categorizing Training, Recruitment, and Certification Literature <i>Underlying Structure for Access Database</i>	
Column Title	Data Entry Options
Training Job Analysts	<p>[Select All That Apply]</p> <ul style="list-style-type: none"> ▪ Training Delivery Method (<i>e.g., in-person instructor led, self-paced online training</i>) ▪ Training Length ▪ Training Principles (<i>e.g., feedback, practice</i>) ▪ Training Materials (<i>e.g., pedometer, MS Word</i>) ▪ Existing Job Analysis Training Content/ Curricula ▪ Transfer of Training (<i>e.g., factors that influence</i>) ▪ Participant Engagement (<i>e.g., getting participants to pay attention</i>) ▪ Training Effective Practices ▪ Common Errors for Job Analysts ▪ Training for Large-Scale Data Collection (<i>e.g., training on how to collect data</i>) ▪ Training for Security of Data ▪ Training Costs (<i>i.e., development or delivery</i>)
Certifying Job Analysts	<p>[Select if applicable]</p> <ul style="list-style-type: none"> ▪ Training Testing (<i>e.g., written exam, observing behavior, relating test to training</i>) ▪ Certificate Standards
Summary of Recruiting Important Points	<i>[Fill in]</i>

Appendix B Call Order 2 Framework for Categorizing Training, Recruitment, and Certification Literature Underlying Structure for Access Database	
Column Title	Data Entry Options
Summary of Training Important Points	[Fill in]
Summary of Certifying Important Points	[Fill in]
Usefulness of Article	[Select One and then Describe] <ul style="list-style-type: none"> ▪ Not Useful. Article is low quality, not detailed, unrelated, or otherwise not useful. ▪ Somewhat Useful. May be worth further review. ▪ Very Useful. Article is high quality, has sufficient detail and relevant content.
Notes	[Fill in]

Appendix C

Microsoft Access Literature Review Database Form

Relevancy of TOPIC to Project

- Not at all relevant
- Somewhat relevant
- Relevant
- Very relevant

Sufficient LEVEL OF DETAIL Related to Topic

- No related detail
- Some related detail
- Adequate related detail
- Significant related detail

QUALITY of Article

- Unknown pub. source/Questionable writing qual
- Non-expert publishing source
- Non-peer-reviewed, but reputable/expert source
- Peer-reviewed source

UP-TO-DATE Information

- Information is outdated and no longer useful
- Information is outdated and somewhat useful
- Information is outdated but still useful
- Information is current

Overview Information

Article APA Citation

Usefulness of Article

- Very Useful
- Somewhat Useful
- Not Useful

Discipline

- Vocational Rehabilitation
- Physical and Occupational Therapy
- Ergonomics
- Instructional Systems Design
- Occupational Health
- General Psychology
- I/O Psychology
- Human Resources
- Education
- Other Discipline

Description of 'Other Discipline':

Recruiting Job Analysts

- KSADs of Job Analysts
- Qualifications Standards of Job Analysts
- Recruitment Effective Practices
- Recruitment Method
- Recruitment Strategy
- Large-Scale Recruitment
- Temporary Assignment/On-Call Recruitment

Training Job Analysts

- Training Delivery Method
- Training Length
- Training Principles
- Training Materials
- Existing Job Analysis Training Content/ Curricula
- Transfer of Training
- Participant Engagement
- Training Effective Practices
- Common Errors for Job Analysts
- Training for Large-Scale Data Collection
- Training for Security of Data
- Training Costs

Certifying Job Analysts

- Training Testing
- Certificate Standards

Summary of Recruiting Important Points

Summary of Training Important Points

Summary of Certifying Important Points

Notes

Appendix D

Literature Review Training

General Guidance

** Reread your own entry and QC each record before you move onto the next record.

General Formatting

- Use full sentences and grammar (spell out “and” instead of using “&”, but only spell out “percent” if it does not follow a number; The percent of vs 30%)
- Spell out any acronyms, except if it is used more than once in the same description box.
- When inserting a Name (e.g., Technique Name, Name of Other Procedure Type, Name of Other Data Documenting Tool), use Title Case (i.e., Capitalize The First Letter of Each Word).
- Avoid bulleted lists as much as possible. To get around this use lists that are separated by commas. If you are describing the items in the list use (e.g., or i.e., xxxxx). *Note: “e.g.,” is used to provide an example whereas “i.e.,” is used to describe definitive items or to clarify the item).
- Descriptions should not include any citations.
- **Using Own Words VS Words From the Source.** Both are ok, BUT make sure if you copy directly from the source that you use quotation marks. This is ABSOLUTELY necessary because it will alert us when developing our recommendations so we do not plagiarize.
 - If you copy and paste from the PDF, make sure the text is formatted appropriately in the description box.
 - Do not have to say, “According to the manual...” since all the information presented on the record will be from the same source.

Framework Definitions

APA Citation – Fill in the APA-style reference of literature source.

Usefulness of Article – Is the literature source a valuable source for the current effort (i.e., is this entry worth further consideration?)

- Yes
- Maybe
- No

Discipline –If unsure, check the source (e.g., journal title) to see if the type of journal, book, or website can indicate. Should categorize every literature source, so may have to use an educated guess. Try to only select the *best* discipline (i.e., try to not check more than one unless specifically mentioned).

- Vocational Rehabilitation– Trying to identify where people can perform so they can stay in job force.
- Physical and Occupational Therapy – Similar to vocational rehabilitation, but it is not their goal to get individuals into different positions.
- Ergonomics – The way the physical body interacts with work environment. How much time spent sitting, standing, walking; the weight of objects lifted, etc.
- Instructional Systems Design (ISD) – Maximizing the effectiveness, efficiency and appeal of training; the ADDIE (Analysis, Design, Development, Implement, Evaluate) model.
- Occupational Health – Safety in the workplace, employee well-being, environmental elements, stress (mental and physical).

- General Psychology – Any psychology source outside of I/O Psychology.
- I/O Psychology – Industrial/Organizational Psychology. Training, selection, job descriptions, performance appraisals, analyzing people at work. More focused on research than HR.
- Human Resources – More logistics-oriented than I/O Psychology (i.e., may be more practitioner-oriented articles).
- Education – Looking at training in an educational/school setting (e.g., comparing web-based vs. in-person classroom learning in college).
- Other Discipline – Indicate if the source mentions a discipline that is not in our current options.
 - Description of Other Discipline – Include any noteworthy information on discipline.

Recruiting Job Analysts [Select All That Apply]

- **KSAOs of Job Analysts** – Knowledge (e.g., knowledge of instructional system design principles); skills (e.g., creating queries in Access); abilities (e.g., cognitive, physical, can't be taught); and other things that an individual possesses.
 - For description, include some examples if the list is long or all if the list is shorter. Use paragraph form, not bullets.
- **Qualifications Standards of Job Analysts** – Experience, degrees
- **Recruitment Effective Practices** – Specific practices that are considered effective to achieve desired outcomes (e.g., using multi-pronged approach)
- **Recruitment Method** – How the recruitment message is disseminated; venues and modes of recruitment (e.g., college fairs, monster.com)
- **Recruitment Strategy** – Goes beyond just the method to include who are you recruiting, what types of methods, goal numbers of applicants, etc.
- **Large-Scale Recruitment** – Best practices or examples or special considerations on how to effectively recruit large numbers of applicants.
- **Temporary Assignment/On-Call Recruitment** – Best practices or examples or special considerations when recruiting temporary or on-call staff.

Training Job Analysts [Select All That Apply]

- **Training Delivery Method** – E.g., classroom v. e-learning; how is it delivered
- **Training Length** – Any sources that discuss how long or how many sessions of training.
- **Training Principles** – Feedback, practice, needs assessment, development, etc. Specific practices within training that produce a desired outcome.
- **Training Materials** – Specific materials, equipment, programs you may need for trainings (e.g., may need a web conferencing software to do certain type of e-learning).
- **Existing Job Analysis Training Content/Curricula** – Any trainings that currently exist on job analysis; any documentation of content that should be addressed in job analysis training.
- **Transfer of Training** – Participants taking what they learned and applying it to the job; it is important to maximize this.
- **Participant Engagement** – How to make people pay attention and better absorb and learn from the training content.
- **Training Effective Practices** – Training best practices, making training most effective.
- **Common Errors for Job Analysts** – Anything that may be difficult in job analysis; Something we would want to point out in our training.
- **Training for Large-Scale Data Collection** – Best practices or examples or special considerations on how to effectively train for large-scale data collection.

- **Training for Security of Data** – Ways to train or factors to consider when trying to keep the recording, handling, and transfer of data secure.
- **Training Costs** – Costs (i.e., both monetary and time/labor) to develop and deliver training (e.g., webcasts are expensive to develop, but cheap to deliver).

Certifying Job Analysts [Select All That Apply]

- **Training Testing** – How to train for testing in a certification program.
- **Certificate Standards** – Setting up a certification program, making sure all needs are met.

Summary of Important Points – For *every* box checked, should have a 1-3 sentence description in the appropriate fill-in box (i.e., recruiting fill-in box for recruitment method description) of the important points discussed on that topic. The goal is to reduce need to go back to every article, unless it has a lot more rich information than can be captured in a few sentences. Within the appropriate fill-in summary box, type the topic, followed by a dash before the description (e.g., “Recruitment method – Web-based learning...”).

Notes – Use for any other information to include (e.g., how else this article might be useful; why the article is not useful). Any relevant information not captured by the listed topics.

Appendix E

Focus Group Protocol

FACILITATOR VERSION

Facilitator Name: _____ Recorder Name: _____

Date: _____ Time: _____ No. of Participants: _____

Introduction:

Hello, I am (*your name*) from ICF International and I will be the facilitator for our phone focus group today. ICF is based in Fairfax, Virginia and we provide a variety of workforce development and human capital management consulting services. We have been contracted by the Social Security Administration to conduct this study. For a brief overview of the study:

Project Background:

The Social Security Administration (SSA) is undertaking a project to develop a new occupational information system (OIS) tailored specifically for the SSA's disability programs and adjudication process. To collect the job data for its OIS, SSA must train individuals as job analysts to analyze work using a variety of techniques and processes that will allow them to obtain detailed descriptions, specifications, measurements and requirements for jobs throughout the labor market of the United States. The job analysts will then use that data to make ratings using a work analysis instrument developed by SSA. Our focus for this study is how to best collect the data to inform those ratings and on training candidates in the conduct of job analysis—not the design of the work analysis instrument itself.

Our team at ICF International is currently working with SSA on two initiatives related to this project: (1) Developing the job analysis methodology that job analysts will use to collect occupational data and (2) Designing a business strategy for the training, certifying, and recruiting of job analysts across the U.S. As a part of this effort, we are developing content to describe the systematic process required for conducting job analysis as well as a detailed description of the job analyst qualifications, roles and procedures. In addition, we are determining the training needs and certificate specifications required for successful accomplishment of the analyst's tasks.

During our discussion today, we will be asking for your perspective on a number of related topics. Do you have any questions before we begin? Please note this meeting is being recorded to ensure accuracy of data collected. We also have an individual on the phone (*state recorder's name*) who will be taking notes throughout the call. Do you have any concerns with this? (*As part of informed consent, ensure you get a verbal confirmation from all on the phone.*)

1. Ground Rules

- Before we get started with introductions, I think it is important to take a minute to discuss some general ground rules to make sure we are all on the same page. These include:
 - To keep this focus group to 1 hour, please be concise in providing your responses to allow for everyone to participate. Please note that as the facilitator, I may have to interrupt at times to move us to the next questions. If that occurs, I may ask you to send your further thoughts to me via email.
 - Respect each other's opinions. I ask that you withhold your judgments about others comments.
 - Avoid interrupting other participants.
 - Keep information shared here confidential. We intend to remove individuals' names and other identifying information from our notes.
 - Please stay on topic and provide responses that relate directly to the question asked.
 - Any others you would like to add to this?

2. Introduction

- In 30 seconds, please briefly introduce yourself and briefly describe what you do in your job. *(Note to interviewer: State that for introductions, you will call on participants in alphabetical order.)*
- Please briefly describe the types of data that you typically collect, or have collected, during job analyses.
 - Probes:
 - Potential types of data that SMEs may mention they have collected: Tasks, worker functions, KSAs, physical demands, cognitive demands, personality characteristics, environmental conditions, training & educational requirements, minimum entry qualifications, tools/equipment/work aids, importance/frequency of activities

2. Job Analysis Procedure

- Which procedures do you typically use to gather job analysis data?
 - Probes:
 - Which of the following procedures do you use: review of written materials, surveys, interviews, focus groups, job observation, measurement of physical demands
 - Are your methods related to a particular job analysis model?
- How do you know which method(s) are appropriate for a given situation and what types of tools do you use to collect the data?
 - Probes:
 - Who/where is data collected from? For example, which of the following sources do you use: incumbents, direct supervisors, executive leadership, HR, customers/clients, organizational materials?

- What are some key considerations when conducting job analyses for the purpose of making disability determinations?
 - Probes:
 - How do you collect data on the physical demands of the job?
 - How do you collect data on the mental demands of the job?
- What procedures should be in place to ensure that consistent and reliable data are being collected across analysts and locations?
 - Probes:
 - How should analysts transfer data back to central database?
 - Should the data be subject to an auditing process? If so, what are the recommended specifications for auditing (e.g., what percentage of data should be reviewed; how should data be identified for auditing)?

4. Methodology Evaluation Criteria

- What are the most important criteria to consider when evaluating different job analysis methods and data collection techniques?
 - Probes:
 - Objective of the job analysis?
 - Standardization to ensure that minimal error is introduced?
 - Flexibility to consider a variety of organizational and occupational circumstances?
 - Monetary Cost?
 - Time to execute procedures?
 - Data security to protect the rights and interests of employers and employees providing information?
 - Detail of data collected?
 - Invasiveness?
 - Ability of method to aggregate geographically diverse data?

5. Job Analyst Qualifications

- As part of the data collection process, SSA will need to hire job analysts around the U.S. If you have not already done so, please take a moment to look over the draft list of knowledge, skills, and abilities needed to be an effective job analyst. Broadly speaking, do you suggest making any additions, changes, or deletions to this list? (Note: The draft KSA list was provided in their confirmation email.)
- What certification, certificate and/or training programs does your field require in order to conduct job analysis?
- What should the minimum qualifications be for a candidate to be hired as job analyst, considering all incoming analysts will receive job training from SSA?
 - Probes:
 - What educational background should be required?
 - What types of previous work experience should be required?

6. Job Analyst Training Approaches

- In training candidates to conduct job analysis, what are some key factors that need to be emphasized during the training?
 - Probes:
 - What are some of the most complex aspects of conducting job analysis?
 - What are some of the most common challenges that emerge in the conduct of job analysis?
 - What are some of the key decisions that analysts need to make?
 - *(Keep in mind that these analysts will be given assignments of which jobs to study and who to contact so they will not need to make those decisions.)*
 - What are some procedural considerations or standard that can impact the quality of data collected?
- What training programs, practices or strategies are available for training job analysts, considering the training would need to be replicated in various geographical locations?
- What resources should be introduced in a training to prepare individuals, possibly with no prior experience, to conduct job analysis at a national level?
- What are the benefits and disadvantages to consider with the use of each of the following training approaches for a large-scale training initiative?
 - In-person instructor led
 - Self-paced online training
 - Distance learning (instructor led)
 - Webcasts
 - Multi-media training (e.g., CD-ROM; audio/video)
 - Blended/Mixed method delivery
 - Reference documentation (ongoing training source)
 - Group Discussion Forums
 - Others?

7. Summary

- Thank you very much for your time today. Are there any additional resources that you can recommend before we end the focus group?
 - Probes:
 - Can you point us to key literature or technical reports?
 - Do you have examples of similar projects that have required the conduct of job analysis on a national level?
 - Are there other experts we should interview? Do you have their contact information?

Thank you for your time. If we have follow-up questions, are you comfortable with us contacting you with those? If you have any questions or would like to share more information, please do not hesitate to contact me. My contact information is (*provide phone and email*). As for next steps, we are very early in the project at this point. Within the next 6 months, we will be collecting additional data from various sources and integrating that data to provide strategies and effective practices to SSA.

Appendix F

Training Interview Protocol

(Interviewer and Participant Versions)

TRAINING INTERVIEW PROTOCOL – INTERVIEWER VERSION

Interviewee Name: _____ Interviewer Name: _____

Interviewee Title: _____ Interviewee Organization: _____

Date: _____ Time: _____

Introduction: The Social Security Administration (SSA) is undertaking a project to develop a new occupational information system (OIS) tailored specifically for the SSA's disability programs and adjudication process. This occupational information system will need to contain detailed information on worker requirements for performing each job in the system, to include physical and mental requirements. To collect the job data for its OIS, SSA must train individuals as job analysts to analyze work using a variety of techniques and processes that will allow them to obtain detailed descriptions, specifications, measurements and requirements for jobs throughout the labor market of the United States.

Our team at ICF International is currently working with SSA on two initiatives related to this project: (1) Developing the job analysis methodology that job analysts will use to collect occupational data and (2) Designing a business strategy for the training, certifying, and recruiting of job analysts across the U.S. As a part of this effort, we are determining a strategy to train and certify individuals to serve as job analysts for the SSA. These individuals will be recruited and trained throughout the U.S.

In our interview today, we will be asking for your perspective on a number of topics related to training. Please note that this meeting is being recorded to ensure accuracy of data collected. We also have an individual on the phone (*state recorder's name*) who will be taking notes during the call. Do you have any concerns with this? Do you have any questions before we begin?

****Note to INTERVIEWER:** The wording of some questions depends on the type of participant. Questions and question wording that should be used for JA Trainers are provided in blue underlined font, where appropriate.

Introduction

- In 30 seconds, please briefly introduce yourself and describe your background related to training. Probe (*if not a JA Trainer*):
 - How familiar are you with job analysis?

Key Elements of Training Structure and Design

1. What do you consider to be the most critical factor in determining how a training program should be designed?
Probes:
 - For example, to what extent should the ISD ADDIE model or other principles of training design be considered?
 - In general, what are the most effective ways to structure training? (e.g., mentor-based; criterion-based; lecture only)
 - (For those familiar with job analysis) What do you think is the most critical factor for designing a training on job analysis?

- How does the training budget impact training design and how can the budget be maximized?
 - What are the parameters around technology that should be considered and how does it impact training design?
2. [\(For JA Trainers\) How is the job analysis training that you conduct structured?](#) *(For non-JA Trainers)* What would be the best way to train a specific process, especially for processes in which strict guidelines need to be followed? What elements do you think would be critical to include in this type of training? (i.e., to train candidates in how to analyze jobs.)
- Probes:
- i. Please provide details on the following elements:
 - Design features or types of training (e.g., Frame-of-Reference is a training type)
 - Activities to help participants learn the steps of the process
 - Method of training delivery
 - Length of the training
 - Pros and cons of the approach
3. How should the training be structured if participants may have varying skill levels and experience?
- Probe:
- i. [\(For JA Trainers only\) What is the expected background and experience level of the participants in your JA training?](#)

Training for Data Collection

4. For SSA, analysts will need to learn about the physical and mental demands of each job by observing, using measuring devices (e.g., light meters, rulers), and interviewing people doing the job. What factors [\[are included in your JA training\]](#) / do you think need to be integrated in the training] to teach analysts how to collect data?
- Probes:
- i. What needs to be considered in designing a training about collecting data?
 - ii. What type of activities [\[does your JA training include\]](#) / should be included] to teach the different ways that data can be collected?
 - iii. [\[How much of your JA training is spent on data collection?\]](#) / How long do you estimate a training for this topic might need to be?]
5. Analysts for SSA may need to draw out potentially-sensitive information from individuals (e.g., interviewees) and uphold the principles of confidentiality and data security. [\(For JA Trainers\) How is this addressed in your JA training?](#) *(For non-JA Trainers)* How should this be addressed in a training? ?
- Probes:
- i. What would be the best way to teach this?
 - ii. What types of activities would be useful?
 - iii. [\(For JA Trainers\) How does your JA training help participants understand the types of information that should be kept confidential?](#)
 - iv. [\(For JA Trainers\) In terms of interviewing, what types of techniques should be trained to help analysts learn how to de-identify or collect data in such a way that is non-attributable?](#)

Training Assessment

6. SSA would like to certify that participants have learned the training objectives at the completion of the training. What are some things that should be considered in designing the training to ensure participants can be certified?

Probes:

- i. [\(For JA Trainers\) Does your JA training include a certificate program? If so, what are participants required to do to be certified?](#)
- ii. What components are necessary to ensure the certificate program is directly linked to the training and assesses skills taught in the training?
- iii. What types of assessments should be presented? At what intervals in the training should those be presented? What content should be included in the assessments?

7. What are some effective ways to assess candidate retention of skills taught in training?

Probes:

- What are specific types of written tests that could be conducted?
- What are examples of interactive or mock trial assessments that could be conducted?
- What are other effective ways to evaluate training effectiveness?

Training Implementation

8. For a large-scale, national training, what are some effective methods for training delivery?

Probes:

- i. What is the best method for ensuring training is delivered in a consistent manner across trainers?
- ii. What are some effective train-the-trainer models?
- iii. What resources should be provided to trainers and participants to help ensure consistency in what is taught and applied?

9. What are the benefits and disadvantages to consider with each of the following training delivery methods?

- In-person instructor led
- Self-paced online training
- Distance learning (instructor led)
- Webcasts
- Multi-media training (e.g., CD-ROM; audio/video)
- Blended/Mixed method delivery
- Reference documentation (ongoing training source)
- Group Discussion Forums
- Others?

10. If the training is to be implemented on a national scale and potentially at various times during the year, how might various aspects of training be impacted?

Probes:

- i. Training structure?
- ii. Training design?
- iii. Training delivery?
- iv. Transfer of training/Application of training by participants?
- v. Consistency in training?

- vi. Assessment of training?
 - vii. Certificate program tied to the training?
11. What type of resources would be needed to develop and implement the type of training for job analysts that we have been discussing?
- (For example, features of the training that may consist of: candidates with varying skill sets; collecting data via face-to-face interviews and surveys; potentially administering at different points in time across geographic locations; data analysts collecting data independently via interviews, observations and focus groups; the data collected to inform an occupational database used to make disability determinations; could be up to 1000 participants.)
- Probes:
- i. How much time do you estimate it will take to develop the type of training with the features we have been discussing?
 - ii. How can cost of the training be accurately estimated? What factors help determine cost? What do you suspect it will cost to develop and administer training for job analysts? Per participant when administered?

Participant Engagement

12. What should be included in the training to ensure that participants can successfully transfer or apply what they learn in training to real-life job setting?
13. How should the training be developed to maximize participant engagement during the training?
- Probes:
- i. Given that participants may not be SSA employees but may be contractors or temporary hires, what can be included in the training or how can the training be structured to increase participant motivation and commitment?

TRAINING INTERVIEW PROTOCOL – PARTICIPANT VERSION

Interviewee Name: _____ Interviewer Name: _____

Interviewee Title: _____ Interviewee Organization: _____

Date: _____ Time: _____

Introduction: The Social Security Administration (SSA) is undertaking a project to develop a new occupational information system (OIS) tailored specifically for the SSA's disability programs and adjudication process. This occupational information system will need to contain detailed information on worker requirements for performing each job in the system, to include physical and mental requirements. To collect the job data for its OIS, SSA must train individuals as job analysts to analyze work using a variety of techniques and processes that will allow them to obtain detailed descriptions, specifications, measurements and requirements for jobs throughout the labor market of the United States.

Our team at ICF International is currently working with SSA on two initiatives related to this project: (1) Developing the job analysis methodology that job analysts will use to collect occupational data and (2) Designing a business strategy for the training, certifying, and recruiting of job analysts across the U.S. As a part of this effort, we are determining a strategy to train and certify individuals to serve as job analysts for the SSA. These individuals will be recruited and trained throughout the U.S. The interview will ask for your perspective on some of the key elements that should be considered in training structure/design, assessment, delivery, and transfer of training.

Introduction**Key Elements of Training Structure and Design**

1. What do you consider to be the most critical factor in determining how a training program should be designed?
2. What would be the best way to train a specific process, like job analysis, in which strict guidelines need to be followed? What elements do you think would be critical to include in this type of training? (i.e., to train candidates in how to analyze jobs.)
3. How should the training be structured if participants may have varying skill levels and experience?

Training for Data Collection

4. For SSA, analysts will need to learn about the physical and mental demands of each job by observing, using measuring devices (e.g., light meters, rulers), and interviewing people doing the job. What factors do you think need to be integrated in the training to teach analysts how to collect data?
5. Analysts for SSA may need to draw out potentially-sensitive information from individuals (e.g., interviewees) and uphold the principles of confidentiality and data security. How should this be addressed in a training?

Training Assessment

6. SSA would like to certify that participants have learned the training objectives at the completion of the training. What are some things that should be considered in designing the training to ensure participants can be certified?
7. What are some effective ways to assess candidate retention of skills taught in training?

Training Implementation

8. For a large-scale, national training, what are some effective methods for training delivery?
9. What are the benefits and disadvantages to consider with each of the following training delivery methods?
 - In-person instructor led
 - Self-paced online training
 - Distance learning (instructor led)
 - Webcasts
 - Multi-media training (e.g., CD-ROM; audio/video)
 - Blended/Mixed method delivery
 - Reference documentation (ongoing training source)
 - Group Discussion Forums
 - Others?
10. If the training is to be implemented on a national scale and potentially at various times during the year, how might various aspects of training be impacted?
11. What type of resources would be needed to develop and implement the type of training for job analysts that we have been discussing?

Participant Engagement

12. What should be included in the training to ensure that participants can successfully transfer or apply what they learn in training to real-life job setting?
13. How should the training be developed to maximize participant engagement during the training?

Appendix G

Certificate Program Talking Points

CERTIFICATE PROGRAM TALKING POINTS

Interviewee Name: _____

Interviewee Organization: _____

Certificate Program: _____

1. What were your drivers for seeking accreditation for your certificate program?
2. How was the program developed?
3. How is the program operated (e.g., internally, outsource functions, etc.)?
4. What is the cost of program operation?
5. Are there time limits on the certificate?

Appendix H

Recruitment Benchmarking Interview Protocol

BENCHMARK INTERVIEW PROTOCOL QUESTIONS

Interviewee Name: _____ Interviewee Title: _____

Interviewee Organization: _____ Interviewer Name: _____

Date: _____ Time: _____ Recorder Name: _____

Introduction: The Social Security Administration (SSA) is undertaking a project to develop a new occupational information system (OIS) that will be used to make determinations regarding disability claims and the adjudication process. To collect the job data which will be used to build this OIS, SSA must recruit and train individuals across the U.S. to serve as job analysts. These individuals will be used on an as-needed basis.

Our team at ICF International is currently working with SSA to design a business strategy for recruiting, training and certifying these job analysts. As a part of this effort, we are speaking with professional associations, federal agencies and other organizations who engage in similar efforts to recruit and train large numbers of geographically dispersed and potentially temporary employees or contractors. It is our understanding that your organization has had to engage in similar efforts. Even if your agency retains workers throughout the year, despite drops in workload, we are still interested in hearing how your agency handles recruitment when there are sudden peaks in the work performed. *(Note to interviewer: You may need to trigger their understanding with examples. For example, with Census, offer the example of Census workers who are brought on in masses to conduct the Census. For IRS, mention the workers brought in during tax season.)*

In our interview today, we will be asking for your experience and recommendations on a number of topics related to recruitment, compensation and training for these workers. Do you have any questions before we begin?

Is it ok if we record this call? *(Note to interviewer: If participant is ok with recording the call, please press *22 to begin the recording.)*

Background

1. What is your role or title and how long have you worked with this organization?
2. Can you give us a high-level overview of the recruitment process for [insert particular positions or situations of interest] at your organization?

Recruitment of Job Analysts

1. [JA Only] What practices have you found to be most effective in recruiting Job Analysts?
2. [JA Only] What qualifications do you look for when selecting or screening job analyst candidates?

Probes:

- i. What is their typical education level?
- ii. How many years of experience do they have?

- iii. What types of experience do they have?
 - iv. What certifications or licenses do they have?
3. [JA Only] What are the best ways to attract job analysts with the above qualifications? What are some good sources for candidates with these qualifications (e.g. universities, companies)?
 4. [JA Only] What practices have been used effectively to select/screen job analyst candidates?

Probes:

- i. Do you use a selection tool?
- ii. What are the critical elements to include in a selection tool for job analysts?

Large Scale Recruitment

5. What practices has your agency found most beneficial for recruiting large numbers of employees or contractors at one time to address sudden peaks in amount of work to be conducted?

Probes:

- i. What are some of the most effective sources for identifying a large pool of candidates at once?
 - Which are the most costly? Which are the most cost effective?
 - ii. What sources would you recommend SSA tap to identify candidates with more advanced skill sets? (e.g., These will be individuals who may independently collect data on different types of jobs.)
 - iii. What are some of the challenges of hiring a large number of candidates at once?
 - iv. What are some of the challenges of training a large number of new hires at once? What techniques have worked well?
6. When time is limited and staffing needs are great, what types of screening practices does your organization use to quickly screen candidates who may be needed to conduct work almost immediately upon hire? (e.g., temp agencies; headhunters; internal practices)

Probes

- i. What are the pros and cons of those practices?

Recruitment for Temporary or As-Needed Work

7. What practices are effective for recruiting temporary workers and/or maintaining a list of “as needed” professional employees?

Probes:

- i. What sources have you found effective for recruiting candidates willing to serve on an “as needed” basis (e.g., temp agencies, unemployment offices, professional associations)?
- ii. How should a temporary or “on call/as needed” position be advertised?
- iii. What type of incentives would you recommend be used?
- iv. What are the best ways to maintain candidate interest and participation when the candidate is only employed on an as-needed basis?

8. What practices or techniques has your organization found to be ineffective for recruiting temporary or on-call staff?

Probes

- i. What are some lessons your organization has learned from recruiting temporary or on-call candidates?
- ii. Are there any additional things that we should consider in designing a recruiting strategy for hiring temporary or on-call candidates?

Geographically Dispersed Recruitment

9. What practices have you found to be most beneficial for recruiting geographically dispersed candidates?

Probes:

- i. What are the pros and cons of those practices?
- ii. What are some lessons your organization has learned from recruiting geographically dispersed candidates?
- iii. Are there any additional things that we should consider in designing a recruiting strategy for geographically disperse staff?

Professional Recruitment

10. What are some challenges and best practices for recruiting professionals?

Probes:

- i. In what ways would you need to adjust your recruiting approach for professionals if the work was as-needed or part-time?

11. What practices or techniques would be useful for recruiting graduate students or college interns?

Recruitment and Screening Resources and Logistics

12. What type and level of resources are needed for a large-scale national recruitment and screening campaign?

Probes

- i. Who is involved in your organization's recruitment and screening process?
- ii. What types of equipment or materials are needed?
- iii. Where does your recruitment and screening occur? (e.g., headquarters or recruitment offices across the country)
- iv. For the rotational-type projects, how far in advance of the time when you need the first employee does your agency's recruitment and screening process typically begin?
- v. What is the most time-consuming aspect of recruiting candidates? Screening candidates?

13. What logistical aspects should be considered when planning a large-scale national recruitment and screening campaign?

Probes:

- i. What part of the process is the most challenging to implement?
- ii. What logistical problems or issues have occurred in the past for your organization?

Candidate Tracking

14. How does your organization track candidates through the recruitment and screening process?

Probes:

- i. What key information should be tracked for candidates?
- ii. When should candidate tracking begin? At what stage in the process?
- iii. What is the best method for housing and storing the information?
- iv. Who should have access to the candidate tracking information?
- v. What issues or problems should be expected when tracking candidates?

Compensation

15. [JA only] What is the current pay scale for job analyst positions in your organization?

Probes:

- i. What is the hourly rate for job analysts?
- ii. What additional incentives may be provided?

16. What factors does your agency consider in determining compensation for workers who will be used on an “as needed” basis?

Probes:

- i. How is compensation structured? To what extent does it depend on when work is performed?
- ii. What additional incentives may be provided?

17. How does your organization account for regional cost-of-living differences in compensating staff?

18. How does your organization compensate individuals who are required to travel either in-state or out-of-state?

Probes:

- i. To what extent does it depend on where the work is to be performed?
- ii. What additional incentives may be provided?

Training

19. How does your organization train staff who are brought in to perform work that rotates or varies by season?

Probes

- i. How is the training delivered?
- ii. How does your organization ensure that participants have learned the training material and are able to perform the job?
- iii. How long does the training process take?
- iv. What are the pros and cons of your organization's approach?

20. What methods does your organization use to maintain a pool of trained and certified workers that the agency can draw from as needed?