

Appendix A

Sample Interagency Delegated Examining Agreement

Introduction The interagency agreement is how OPM delegates examining authority to agencies. The following is the standard interagency agreement currently being used. This document has been previously modified and may be modified again in the future.

Interagency Agreement Number
Between the
Office of Personnel Management (OPM)
And the
[Agency]

This document is a three-part agreement between the above-named parties which contains a delegation of examining authority, sets forth the terms and conditions for reimbursable services when the [agency] has requested such services from OPM, and establishes special terms and conditions for agency use of OPM examining instruments covered by the Luevano consent decree.

I. The Delegation Agreement

A. Authority

Under the provision of 5 U.S.C. § 1104, as amended by Public Law 104-52 (1995), this Delegation Agreement authorizes the [agency] to examine applicants for the positions indicated for its own agency, or for positions at another Federal agency. OPM delegates examining authority at the headquarters level. While agencies may decide which activity carries this authority out and the extent to which the activity exercises it, the authority itself may not be redelegated.

B. Positions Covered

Title 5 competitive service positions for all series and grade levels nationwide except Administrative Law Judge positions. Competitive examining for positions covered under the Luevano consent decree is subject to Section III of this agreement.

C. Effective Date of the Agreement

This agreement will become effective upon execution by both parties.

D. Applicable Laws and Regulations

All examining activities initiated under this agreement must conform with the requirements of Federal laws, rules, regulations, Executive Orders, applicable court orders and, where applicable, specific operational procedures prescribed in the Delegated Examining Operations Handbook to ensure compliance with these requirements.

E. Responsibilities of the Parties

1. OPM Responsibilities

OPM will:

- a. Provide operating guidelines and basic technical assistance through training and the Delegated Examining Operations Handbook.
- b. Perform initial certification and periodic recertification training of staff.
- c. Provide job seekers with up-to-date information about job opportunities and application procedures through the USAJOBS government-wide automated employment information systems.
- d. Make final decisions on:
 - (i) Adverse suitability determinations, unless OPM has delegated to the head of the [Agency] authority to adjudicate such determinations, in accordance with OPM's suitability regulations at 5 CFR part 731 et seq. If such delegation to the agency has occurred, an individual delegation agreement for suitability will be issued separately.
 - (ii) All adverse medical determinations of preference eligibles (5 CFR 339.306).
 - (iii) All objections based on qualifications which would result in the passover of a compensable preference (CP) eligible with a disability of 30% or more. (5 U.S.C. § 3318).
- e. Establish and maintain an oversight program to ensure that activities including any competitive examining work performed for the agency through the use of contractors under any authority delegated under 5 U.S.C. § 1104(a) are in accordance with the merit system principles and the standards established under 5 U.S.C. § 1104(b)(1) and support mission accomplishment. Any actions contrary to any law, rule, regulation, or any OPM established standard shall be corrected as required by OPM (5 U.S.C. § 1104 (c)).

2. Agency Responsibilities

The [Agency] will:

- a. Ensure adequate competition for positions in the competitive service by recruiting sufficient numbers of well-qualified candidates for consideration.
- b. Provide public notice of the opportunity to compete. As required under 5 U.S.C. § 3327 and 3330, all jobs must be listed in the USAJOBS government-wide automated employment information system.

- c. Determine appropriate public notice and length of open periods for receipt of applications by considering the nature of the positions covered by the examination, their career potential and the mobility/availability characteristics of the appropriate labor market. Notice periods of less than five calendar days must be documented in the examining file to show the examining office's rationale. OPM transmits public notice material electronically to State employment service offices nationwide.
- d. Establish policies and procedure on the acceptance and processing of applications from all candidates including status applicants. Filing instructions and conditions must be specified clearly in the vacancy announcement.
- e. Develop applicant assessment procedures (5 CFR part 300, subpart A).
- f. Not modify Standards in the Operating Handbook, Qualification Standards for General Schedule Positions, without prior OPM approval unless otherwise authorized in the General Policies and Instructions section of the Handbook.
- g. Rate applications, notify applicants of the status of their applications, including assigned ratings if and when requested, and provide a procedure for applicants to request reconsideration of their ratings. The same procedure may be incorporated into the agency administrative grievance system or alternative dispute resolution system and used for agency employed applicants who grieve an assigned rating.
 - (i) Refer issues involving ineligibility based on suitability consideration to OPM for review and final approval, unless OPM has delegated to the head of the [agency] authority to adjudicate suitability determinations, in accordance with OPM's suitability regulations at 5 CFR part 731 et seq.
 - (ii) Refer ineligible determinations on preference eligibles based on medical considerations to OPM for review and final approval.
 - (iii) Make determinations on veteran preference claims, including claims for spouse or mother preference based on the service-connected disability of a veteran.
- h. Administer and score written tests. Individuals administering OPM tests must be trained and certified by OPM.
- i. Issue certificates of eligibles, audit certificates, and establish objection/passover procedures. OPM will retain final approval authority on:
 - (i) Objections/Passovers based on suitability considerations as provided in item g.(i) above.
 - (ii) Objections/Passovers based on medical considerations of preference eligibles (5 CFR 339.306).

- (iii) Objections based on qualifications which would result in the passover of a Compensable Preference eligible with a disability of 30% or more.
(5 U.S.C. § 3318)

- j. Apply veterans preference provisions of title 5, United States Code, including, but not limited to:
 - 5 U.S.C. § 3305 (competitive service; examinations; when held)
 - 5 U.S.C. § 3309 (additional points for examinations)
 - 5 U.S.C. § 3311 (examining credit for military service)
 - 5 U.S.C. § 3313 (register order of eligibles)
 - 5 U.S.C. § 3314 (restoration to the register of preference eligibles who resign)
 - 5 U.S.C. § 3315 (restoration to the register of preference eligibles who have been furloughed or separated)
 - 5 U.S.C. § 3317 (certification and selection from top-three register eligibles)

- k. Approve selective and quality-ranking factors identified and documented through analysis of the position.

- l. Make determinations on conversion to career or career-conditional appointment.

- m. Make determinations on exceptions to the time-in-grade restriction when an employee is within reach on a register for competitive appointment to the position to be filled (5 CFR 300.603).

- n. Make determinations on exceptions to time-after-competitive appointment restriction (5 CFR 330.501).

- o. Operate examining activities in conformance with the agency's career transition assistance plan.

- p. Provide for a procedure whereby staff involved in delegated examining activities notify their supervisor in writing when they intend to apply for a position covered by this agreement which is handled by the delegated examining organization where they work. Employees must give similar notice if they know that a relative, or a member of their household intends to apply. Such employees should be appropriately monitored or segregated from the examining and certification process. This includes subject matter experts who participate in the development of assessments or ranking of candidates.

- q. Develop and print any forms necessary for examining operations. Forms that collect information directly from the public must be cleared with the Office of Management and Budget (OMB). (See 5 CFR part 1320 or Standard Form 83-A.)

- r. Ensure that maintenance of the records used to implement the delegation of authority, that are maintained as a system of records subject to the Privacy Act, is consistent with OPM's Government-wide system of records (OPM/GOVT-5) and the Privacy Act. Any request for changes to the OPM system notices or regulations may be submitted, through the agency headquarters, to the Associate Director for Employment Service, Office of Personnel Management, Washington, DC 20415.
- s. Adhere to OPM's schedule of records retention/disposition.
- t. Provide quarterly reports to OPM on such measures as will be required by OPM to fulfill its oversight and program management responsibility.
- u. Take such corrective action as OPM may require. (5 U.S.C. § 1104(c)).
- v. Establish and maintain an internal accountability system designed to assure that the use of delegated examining authorities is in compliance with law and merit system principles. This system will be subject to regular periodic management review by OPM.
- w. Conduct annual audits of delegated examining activities using staff not associated with delegated examining activities and certify completion of the audit to OPM. The [agency] must maintain a list of all discrepancies and corrective actions for a period of three years after the audit. Annual audit procedures may be incorporated into the agency's internal accountability system.
- x. Comply with the data collection and reporting requirements under the Luevano Consent Decree.
- y. Notify OPM of changes in delegated examining offices, including new delegated examining offices, termination, etc.
- z. Ensure that individuals responsible for delegated examining activities, including those conducting the annual audits have completed initial certification training and are currently certified to perform this work.

F. Termination, Suspension or Revocation

- 1. This agreement may be terminated at any time by either party with 90 days advance notice to OPM. In such cases, the [agency] would not be able to fill positions using competitive examining procedures.
- 2. Certification of delegated examining activity may be revoked or suspended at any time by OPM.

G. Amendment or Modification

Any amendment or modification of this agreement must be in writing and agreed by both OPM and the [agency]. This agreement will automatically be renewed each fiscal year unless a termination notice is provided by one party to the other.

II. Terms and Conditions for OPM Providing Examining Services and Other Staffing Related Services on a Reimbursable Basis

Should the [agency] request OPM to provide any examining and/or other staffing related services on a reimbursable basis, the following terms and conditions apply. Signature of this delegation agreement constitutes agreement with these terms in the event that the [agency] requests OPM to perform reimbursable services.

A. Authority

OPM may provide any examining and/or other staffing related services on a reimbursable basis. (5 U.S.C. §§ 1104 and 1304 and 31 U.S.C. § 1535).

1. Services Covered

Under this agreement OPM agrees to provide examining and/or other staffing-related services as specified on OPM Form 1616, or other funding document, for the prices listed in the official OPM Service and Pricing Guide for the current fiscal year.

2. Funding for the Agreement

Upon execution of a funding document, an agreed upon dollar amount will be obligated to OPM. OPM will notify the [agency] in writing on a monthly or other agreed upon basis of the costs incurred.

3. Disputes and Termination

Termination of an agreement for reimbursable services by either party must be provided to the other party in writing. If termination of an agreement is to occur prior to the end of the fiscal year, OPM will be entitled to retain sufficient funds as necessary to cover the expenses incurred for terminating the agreement and will provide a final accounting of those expenses to the [agency] 60 days after receipt of the termination notice. Upon termination of the agreement prior to the end of the fiscal year, all of the [agency]'s funds not obligated prior to the termination notice will be returned to the [agency] 30 days after the termination.

4. Amendments or Modifications of Reimbursable Agreements

Any amendments or modifications of reimbursable agreements must be in writing and agreed to by both OPM and the [agency].

(Signature)
U.S. Office of Personnel Management

(Signature)
[agency]

(Date)

(Date)

The **[agency]** contact for the Luevano consent decree examining program under this agreement is:

Name: _____

Title: _____

Telephone Number: _____

Address: _____

E-Mail Address:

Appendix B

Vendor Criteria List

Introduction

The following list outlines criteria that you may want to consider when choosing a contractor.

Vendor Criteria	
1	Determine the length of time that the vendor has been administering and/or distributing selection assessments.
2	Determine the largest applicant pool the vendor has assessed.
3	Determine if the vendor has ever had legal action taken against it for an assessment that it developed or administered. <ul style="list-style-type: none"> • If it has, determine the nature of the actions taken and the outcome of those actions.
4	Determine the number of individuals with advanced Psychometrics training and/or experience that the vendor has on staff.
5	Request documentation and evidence that demonstrate the security of the vendor's testing environments, applicants' data and information, test information, etc.
6	Request technical and non-technical reports that detail the vendor's progress in delivering the contracted services and/or goods. The length, depth, frequency, and necessity of these reports should be mutually agreed upon prior to the engagement of contractual activities.
7	Request information detailing the typical cost for using one of the vendor's assessments (both per applicant and set-up costs).
8	Insure that the vendor has validation evidence for each of the assessments it administers, and request these materials as appropriate.
9	Request a summary detailing application reaction data for each of the vendor's assessments (i.e., the perceived fairness and validity of the test by test takers), if obtainable and applicable.
10	Request information summarizing the adverse impact of each of the vendor's assessments, as appropriate.

Continued on next page

Vendor Criteria List, Continued

Vendor Criteria List (continued)

Vendor Criteria	
11	Insure that the vendor's assessments are adaptable for individuals requiring assistance, as outlined in the Americans with Disabilities Act of 1990.
12	Determine the vendor's ability to construct/develop new assessments.
13	Determine the vendor's ability to administer and score multiple forms of the same assessment.
14	Determine the vendor's ability to administer and score essay and short-answer examinations.
15	Determine if the vendor administers assessments in languages other than English. <ul style="list-style-type: none"> • If yes, request evidence demonstrating the comparability of these assessments with the English versions, as appropriate.
16	Determine the average data delivery, scoring time needed by the vendor for a typical assessment (e.g., multiple-choice format).
17	Request information detailing the typical costs incurred for changes made to an assessment once it has been put into the vendor's delivery platform.
18	Determine whether the vendor has ever used third parties or ever anticipates using third parties (i.e., outside consultants, sub-contractors) to fulfill contractual obligations. <ul style="list-style-type: none"> • If the vendor has or does anticipate using third parties, request a detailed list specifying the parties used and the (fulfilled/current/anticipated) nature of the scope of the parties' roles.

Appendix C

Records Retention and Disposition Schedule

**Records
Retention and
Disposition
Schedule**

The following schedule provides guidance regarding the length of time that specific types of documents generated by delegated examining offices (DEOs) must be retained.

Item	Title and Description of Records	Disposition
GENERAL:		
1.	Examining delegation agreements under the authority of 5 U.S.C. § 1104.	Destroy three (3) years after termination of agreement.
2.	Reports of internal annual reviews of delegated examining operations.	Destroy three (3) years after date of report.
3.	<p>Correspondence concerning:</p> <ul style="list-style-type: none"> ▪ Applications, ▪ Certification of eligibles, and ▪ All other examining and recruiting operations. <p>Such correspondence includes, but is not limited to, correspondence from the Congress, White House, and the general public.</p>	Break annually. Destroy one (1) year after break.
TESTING:		
4.	Correspondence relating to the shipment of examination papers and test material.	Break annually. Destroy one (1) year after break.
5.	Stock control records of examination test material , including running inventory of test material in stock.	Destroy when test is superseded or obsolete.

Records Retention and Disposition Schedule, *continued*

Item	Title and Description of Records	Disposition
Testing (continued):		
6.	Written test answer sheets for both eligibles and ineligibles.	Destroy six (6) months after date of processing.
7.	Lost or exposed test material case files showing the circumstances of loss, the nature of the recovery and corrective actions taken.	Break closed files annually. Destroy five (5) years after break.
8.	Correspondence concerning accommodations for holding examinations.	Break annually. Destroy one (1) year after break.
REGISTER/STANDING INVENTORY:		
9.	Certificate Control/Log System: Records of information (e.g., receipt date, series and grade of position, duty station) pertaining to requests for lists of eligibles from a register or standing inventory.	Break annually. Destroy two (2) years after break.
10.	Register of Eligibles (Documents the eligibility of an individual for Federal jobs).	Destroy two (2) years after the date on which the register is terminated.
11.	Documentation File consisting of <ul style="list-style-type: none"> ▪ correspondence regarding examination, ▪ final version of the announcement(s) issued, ▪ subsequent amendments to the announcement(s), ▪ USAJOBS posting documentation, ▪ rating schedule, ▪ job analysis documentation, ▪ record of selective and quality rating factors used, ▪ rating procedures, ▪ transmutation tables, and ▪ other documents associated with the job announcement(s) and the development of the register or standing inventory. 	Destroy two (2) years after termination of the related register.

Records Retention and Disposition Schedule, *continued*

Item	Title and Description of Records	Disposition
REGISTER/STANDING INVENTORY (continued):		
12.	<p>Eligible Applications on registers or standing inventories.</p> <p>(a) Active applications</p> <p>(b) Inactive applications</p>	<p>(a) Destroy 90 days after termination of the register. Retain all applications that may be brought forward to a new register.</p> <p>(b) Break annually. Destroy one (1) year after break.</p>
13.	<p>Certificate Case File consisting of</p> <ul style="list-style-type: none"> ▪ SF-39, Request for a Referral of Eligibles, ▪ SF-39A (or equivalent documents), ▪ vacancy announcement (if applicable), ▪ list of eligible candidates screened for the vacancy, ▪ rating sheet with the assignment of ratings, ▪ availability statements, ▪ the certificate of eligibles issued to the selecting official, ▪ the annotated certificate of eligibles returned from the selecting official, and ▪ other documentation upon which the certificate of eligibles was based. <p>NOTE: The certificate case file should be arranged to permit reconstruction or validation of actions taken in the event of appeal or legal action.</p>	<p>Break annually. Destroy two (2) years after break.</p> <p>NOTE: If the examination upon which a certificate is based is under litigation, then the certificate case file must be retained indefinitely. See “Examinations Under Litigation,” below.</p>
14.	<p>Cancelled and ineligible applications including the application, supplemental forms, and attachments submitted with the applications.</p>	<p>Break annually. Destroy one (1) year after break.</p>
15.	<p>Correspondence or notices received from eligibles indicating a change in name, address, or availability.</p>	<p>Destroy 90 days after updating the appropriate record in the register.</p>

Records Retention and Disposition Schedule, continued

Item	Title and Description of Records	Disposition
CASE EXAMINING:		
16.	<p>Certificate Control/Log System: Records of information (e.g., receipt date, series and grade of position, duty station) pertaining to requests for lists of eligibles.</p>	Break annually. Destroy two (2) years after break.
17.	<p>Certificate Case File consisting of</p> <ul style="list-style-type: none"> ▪ SF-39, Request for a Referral of Eligibles, ▪ SF-39A (or equivalent documents), ▪ vacancy announcement with Supplemental Qualifications Statement (if applicable), ▪ public notice documentation (for example, a printed copy of the job listing from the USAJOBS database), ▪ position description, ▪ rating schedule, ▪ record of selective and quality ranking factors used, ▪ job analysis documentation, ▪ list of eligibles screened for the vacancy ▪ rating sheet with the assignment of ratings, ▪ processing documents (e.g., OPM Forms 1203), ▪ availability statements, ▪ the certificate of eligibles issued to the selecting official, ▪ the annotated certificate of eligibles returned from the selecting official, and ▪ other documentation upon which the certificate of eligibles was based. <p>NOTE: The certificate case file should be arranged to permit reconstruction or validation of actions taken in the event of appeal or legal action.</p>	<p>Break annually. Destroy two (2) years after break.</p> <p>NOTE: If the examination upon which a certificate is based is under litigation, then the certificate case file must be retained indefinitely. See “Examinations Under Litigation,” below.</p>

Records Retention and Disposition Schedule, continued

Item	Title and Description of Records	Disposition
18.	<p>Eligible Applications that are not referred to the selecting official must be retained in the case examining file.</p> <p>Eligible applications that are returned to the DEO by the selecting official must also be retained in the case examining file.</p> <p>Materials to be retained include OF-612, resume, or equivalent, and Forms 1203-AW (Form C).</p>	Break annually. Destroy two (2) years after break.
19.	<p>Ineligible Applications consisting of the OF-612, resume, or equivalent and OPM Forms 1203-AW (Form C) with rating sheet are included in the case examining file.</p>	Break annually. Destroy two (2) years after break.
20.	<p>Incomplete Applications consisting of the application, supplemental forms or attachments submitted with the application are included in the case examining file.</p>	Break annually. Destroy two (2) years after break.
EXAMINATIONS UNDER LITIGATION:		
21.	<p>All examination materials associated with positions covered by the <i>Luevano</i> Consent Decree (including Administrative Careers with America, Outstanding Scholar and Bilingual/bicultural positions) including vacancy announcement files, applications, supplemental forms, certificate case files, etc.</p>	Break annually. Retain until further notice from OPM.
22.	<p>All materials associated with examinations under litigation, including vacancy announcement files, applications, supplemental forms, certificate case files, etc.</p>	Break annually. Retain until further notice from OPM.

Appendix D

Positions Covered By the *Luevano* Consent Decree (Commonly Referred to as ACWA Positions)

**Positions
covered by the
Luevano
Consent Decree**

Below is the list of positions covered by the *Luevano* Consent Decree.
Updated as of November 2002.

Series	Position Titles
0011	Bond Sales Promotion
0018	Safety and Occupational Health Management
0020	Community Planning*
0023	Outdoor Recreation Planning
0025	Park Ranger
0028	Environmental Protection Specialist
0080	Security Administration
0101	Social Science* **
0105	Social Insurance Administration
0106	Unemployment Insurance
0107	Health Insurance Administration
0110	Economics*
0130	Foreign Affairs*
0131	International Relations*
0132	Intelligence
0140	Manpower Research and Analysis*
0142	Manpower Development
0150	Geography*
0170	History*
0180	Psychology*
0184	Sociology*
0187	Social Services
0190	General Anthropology*
0193	Archeology*
0201	Human Resource Management Formerly covered title and series: <ul style="list-style-type: none"> • Personnel Management (0201); • Military Personnel Management (0205); • Personnel Staffing (0212); • Position Classification (0221); • Occupational Analysis (0222); • Salary and Wage Administration (0223); • Employee Relations (0230); • Labor Relations (0233); and • Employee Development (0235).

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Positions Covered By the *Luevano* Consent Decree, Continued

Positions covered by the Luevano Consent Decree (continued)

Series	Position Titles
0244	Labor Management Relations Examining
0249	Wage and Hour Compliance
0301	Miscellaneous Administration and Program**
0341	Administrative Officer
0343	Program Management and Program Analysis
0346	Logistics Management
0391	Telecommunications Specialist
0501	Financial Administration and Programs**
0526	Tax Technician (Series renamed Tax Specialist)
0560	Budget Analysis
0570	Financial Institution Examining
0673	Hospital Housekeeping Management
0685	Public Health Program Specialist
0901	General Legal and Kindred Administration Formerly covered title and series: <ul style="list-style-type: none"> • Federal Retirement Benefits (0270); • Contact Representative (Two-grade interval position) (0962); and • General Claims Examining (Two-grade interval position) (0990).
0950	Paralegal Specialist
0958	Pension Law Specialist
0965	Land Law Examining
0967	Passport and Visa Examining
0987	Tax Law Examining
0991	Worker's Compensation Claims Examining
0993	Railroad Retirement Claims Examining
0994	Unemployment Compensation Claims Examining (Series cancelled August 2002)
0996	Veterans Claims Examining
1001	General Arts and Information**
1015	Museum Management (Curator)*
1035	Public Affairs
1082	Writing and Editing
1083	Technical Writing and Editing
1101	General Business and Industry** Formerly covered title and series <ul style="list-style-type: none"> • Contractor Industrial Relations (0246)
1102	Contracting Series*
1103	Industrial Property Management
1104	Property Disposal
1130	Public Utilities Specialist

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Positions Covered By the *Luevano* Consent Decree, Continued

Positions covered by the Luevano Consent Decree (continued)

Series	Position Titles
1140	Trade Specialist
1145	Agricultural Program Specialist
1146	Agricultural Marketing
1147	Agricultural Market Reporting
1150	Industrial Specialist
1160	Financial Analysis
1163	Insurance Examining
1165	Loan Specialist
1169	Internal Revenue Officer
1170	Realty
1171	Appraising
1173	Housing Management Specialist
1176	Building Management
1412	Technical Information Services
1420	Archivist*
1421	Archives Specialist
1654	Printing Management Specialist*
1701	General Education and Training * **
1715	Vocational Rehabilitation
1720	Educational Program*
1801	General Inspection, Investigation, and Compliance Restricted to following positions and agencies: <ul style="list-style-type: none"> • Civil Aviation Security Specialist (FAA Only), • Center Adjudication Officer (INS Only), • District Adjudication Officer (INS Only)
1810	General Investigator**
1811	Criminal Investigator**
1812	Game Law Enforcement
1816	Immigration Inspection
1831	Securities Compliance Examining
1854	Alcohol, Tobacco, and Firearms Inspection
1864	Public Health Quarantine Inspection
1889	Import Specialist
1890	Customs Inspection
1910	Quality Assurance Specialist
2001	General Supply**

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Positions Covered By the *Luevano* Consent Decree, Continued

Positions covered by the Luevano Consent Decree (continued)

Series	Position Titles
2003	Supply Program Management
2010	Inventory Management
2030	Distribution Facilities and Storage Management
2032	Packaging
2050	Supply Cataloging
2101	Transportation Specialist**
2110	Transportation Industry Analysis
2125	Highway Safety
2130	Traffic Management
2150	Transportation Operations
2210	Information Technology Management Formerly covered title and series: <ul style="list-style-type: none"> • Computer Specialist (Trainee, Alternative B Qualifications) (0334)

Description of Symbols (*, **)

Each symbol stands for:

- * = Series have specific educational requirements
 - ** = For positions formerly covered under the Professional and Administrative Careers Examination (PACE)
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Appendix E

Handbook for Agency Test Administrators and Test Control Officers

Purpose

The purpose of this handbook is to provide test administration procedures to be followed by your agency personnel when using OPM test materials. The authority to use OPM test materials and administer written tests is delegated to you under the provisions of Title 5 U.S.C. § 1104 and 5 CFR Part 300.

**In this
appendix**

This appendix will cover the following topics:

Topic	See Page
Responsibilities	E-2
Test Materials	E-5
Administering the Test	E-8
Test Security Procedures	E-19
Test Security Agreement	E-23

Responsibilities

How to nominate candidates

If you want to nominate candidates for test administrators and test control officers, you are required to submit three copies of OPM Form 1660-B (Attachment) to your local OPM Services Branch. After OPM action, we keep the original copy, and two copies are returned to you for your records.

OPM personnel acting upon Federal agencies' nominations should be satisfied that the nominees have the necessary competencies/KSAs to independently administer written tests, and secure test material before approving such requests.

Responsibilities of an agency test administrator

Your agency test administrator conducts OPM written tests in accordance with OPM guidelines and directions provided by your test control officer.

The agency test administrator should:

- Be trained and approved by OPM;
 - Be thoroughly familiar with the procedures and instructions in this Handbook;
 - Notify your agency test control officer when a family household member or a personal acquaintance is scheduled for a test he/she is to administer; and
 - Notify your agency test control officer if he/she is scheduled to take either a competitive or noncompetitive OPM test.
-

Continued on next page

Responsibilities, Continued

**Responsibilities
of an agency test
control officer**

An Agency Test Control Officer has overall responsibility for assuring that agency test administrators who are conducting tests follow OPM guidance. The Test Control Officer is responsible for requesting written test material, and for the security and control of test material while it is in your agency's possession.

The Agency Test Control Officer should:

- Ensure that agency test administrator nominees complete the required training conducted by OPM before they administer a written test;
- Ensure that agency test administrators do not administer tests to members of their family or household, or to personal acquaintances;
- Obtain a series of a test not previously used by an agency test administrator when that individual's family member, household member or personal acquaintance is scheduled for the test;
- Notify OPM when an agency test administrator is scheduled to take a competitive or noncompetitive test for purposes of reassignment or promotion, and arrange for a test series not previously used by the test administrator;
- Requisition and safeguard test material in accordance with the procedures set forth in this Handbook;
- Receive test material, immediately open the package and inventory the material. If the package is incomplete, immediately notify the appropriate OPM Services Branch;
- Notify the appropriate OPM Services Branch when test material is lost or compromised. Coordinate and/or conduct an investigation and prepare a report of finding as directed by OPM;
- Be trained and approved by OPM if he/she intends to also serve as an agency test administrator;

Continued on next page

Responsibilities, Continued

**Responsibilities
of an agency
test control
officer**
(continued)

- Instruct agency mailroom staff to deliver the unopened test material envelopes and packages containing test material (identified by the X label) directly to the agency test control officer/assistant; and
 - Ensure test material is returned to the Denver Distribution Center (DDC) within established time limits.
-

Initial Training

Contact your local OPM Services Branch to obtain training as test administrators and test control officers prior to approving agency nominations. Training will include test material control/security and test administration practices and processes.

**Refresher
Training**

It is required that refresher training for your agency test administrators and test control officer occur at least every two years.

Test Materials

Ordering test materials

You can order materials, for each location you want test materials to be shipped directly, by submitting an:

- OPM Form 1291 (Requisition, Transmittal, and Receipt for Assembled Examination); and
- Master Requisition Form.

Note: You can obtain OPM Form 1291 and Master Requisition Form through your local OPM Services Branch, who will then contact OPM's Denver Distribution Center (DDC). You should keep four copies of OPM Form 1291 for your records.

To order test materials conduct the following steps:

Step	Action
1	You should submit to your local OPM Services Branch: <ul style="list-style-type: none"> • Part 1 and four copies of part 2 from OPM Form 1291; and • One copy of the Master Requisition Form.
2	Your local OPM Services Branch will: <ul style="list-style-type: none"> • Review, approve, sign, and date the Master Requisition Form; • Retain a copy of each form; and • Forward the remainder to the DDC within two days of receipt.
3	You will: <ul style="list-style-type: none"> • Retain Part 3 of OPM Form 1291 (Blue Copy); and • A copy of the Master Requisition for your records.
4	DDC ships: <ul style="list-style-type: none"> • The test material directly to your test control officer along with part 1 and two copies of Part 2 from OPM Form 1291. Part 1 of OPM Form 1291 is used as the mailing label and is affixed to the package containing the test material. A large "X" in the left hand corner signifies test material in the package.
5	Upon receipt of the test material, your test control officer should: <ul style="list-style-type: none"> • Immediately open the package and inventory the material. • If the package is incomplete, your local OPM Services Branch should be promptly notified. The Services Branch will, in turn, contact the DDC to correct the discrepancy.

Continued on next page

Test Materials, Continued

When to order test materials	You should allow 15 working days before the test date for receipt of material from DDC. If materials are not received within three days prior to the scheduled test session, immediately contact your local OPM Services Branch.
<hr/>	
Restrictions on ordering	<p>You can only order test material for a specific test, and cannot use that material for any other test. You should not hold test material longer than 30 days after the test is administered.</p> <p>The DDC will follow-up with you on materials not returned within 45 days of the test date and will contact the appropriate local OPM Services Branch about material not returned within 60 days of the test date.</p>
<hr/>	
Securing test material	<p>Test materials must be stored in a locked cabinet: :</p> <ul style="list-style-type: none"> • Without outside labeling; • With a metal bar run through all cabinet drawer handles; • Secured with a clasp and a combination lock or heavy-duty padlock. If padlocks are used the number of keys must be limited to test control officers and/or assistants and locked in secure areas; • Locked at all times except when material is being removed or returned; and • Never left opened or unattended.
<hr/>	
Limit access	Access to the cabinets must be limited to test control officers and/or assistants, who will also be the only authorized personnel to know lock combination numbers.
<hr/>	
Transporting test materials	Test materials must be transported from the storage cabinet to the test room in a locked container, and must <u>never</u> be left unattended. Contact your local OPM Services Branch if the test materials are not returned within 60 days of the test date.

Continued on next page

Test Materials, Continued

Returning test material

When returning both used and unused test material directly to DDC (via Federal Express), you must include a copy of Part 2 from OPM Form 1291 with the material and send the remaining copy of Part 2 to your local OPM Services Branch. Both copies of Part 2 should fully identify the used and unused material going back to the DDC, and should be signed and dated.

Envelopes or packages containing test material received from the DDC are identified by a large "X" on the package, as described above. Such packages must not be opened by mailroom personnel or distributed with your agency's regular mail. You must notify your mailroom personnel about these requirements prior to making your first order for test material.

Administering the Test

Introduction

Administering the written test is perhaps the most important aspect of the examining process. The atmosphere the test administrator creates in the test room and the attitude the test administrator displays in performing his/her duties is extremely important. The test administrator's manner, bearing, and attitude may well inspire confidence in competitors and put them at ease while participating in the testing process.

Test administrators should make certain that they and their monitors are well prepared to administer the test. There is an understandable tendency on the part of some test administrators to develop their own style of conducting tests because they have conducted the same test many times and are certain that they can do it correctly. While we encourage the creation of a personal style in establishing a good relationship with competitors, we consider it equally important that test administrators not deviate from the directions for conducting the test. The following material should serve as a reminder of decisions to be made before, during, and after each test. In addition, it should eliminate confusion and uncertainty that sometimes arises when administering tests.

Preparation for the test

It is important for test administrators to understand the nature and purpose of the particular test. What type of test is being given? What job(s) is it used to fill? What is the reason for giving this particular test? Is it a regularly scheduled or a special test situation?

To the extent possible, test administrators should:

Prepare...	Why Important...
Room Arrangement	<ul style="list-style-type: none"> • To ensure that the room is large enough to accommodate all competitors comfortably with adequate light and ventilation and that the noise level will be such that competitors will not be distracted.

Continued on next page

Administering the Test, Continued

Preparation for the test (continued)

Prepare...	Why Important...															
Room Arrangement (continued)	<ul style="list-style-type: none"> • Seating arrangements are such that all competitors will be able to see any instructions written on a blackboard such as time the test will end, etc. • To ensure that a clock is in the room. 															
Scheduling of test	<ul style="list-style-type: none"> • To ensure that there is no conflict with other scheduled tests or with other functions- the test must not be interrupted. • Monitors know they are to be in the examination room in advance of the scheduled time. A minimum of 30 minutes is recommended; for some situations where more specific advance preparations are required, more time will be needed. 															
Test monitors	<ul style="list-style-type: none"> • Arrangements should be made for the proper number of test monitors. There should be one test monitor for every 30 competitors. The ratio of test administrators/monitors should be as follows: <table border="1" data-bbox="716 1272 1333 1455"> <thead> <tr> <th><u>Competitors</u></th> <th><u>Test Administrators</u></th> <th><u>Monitors</u></th> </tr> </thead> <tbody> <tr> <td>1 - 30</td> <td>1</td> <td>0</td> </tr> <tr> <td>31 - 60</td> <td>1</td> <td>1</td> </tr> <tr> <td>61 - 90</td> <td>1</td> <td>2</td> </tr> <tr> <td>91 - 120</td> <td>1</td> <td>3</td> </tr> </tbody> </table> • Since only OPM trained test administrators may conduct tests, it is advisable to have an alternate, OPM trained test administrator, available in the event the scheduled test administrator is unable to conduct the test as planned. 	<u>Competitors</u>	<u>Test Administrators</u>	<u>Monitors</u>	1 - 30	1	0	31 - 60	1	1	61 - 90	1	2	91 - 120	1	3
<u>Competitors</u>	<u>Test Administrators</u>	<u>Monitors</u>														
1 - 30	1	0														
31 - 60	1	1														
61 - 90	1	2														
91 - 120	1	3														

Continued on next page

Administering the Test, Continued

Preparation for the test (continued)

Prepare...	Why Important...
Order test materials	<ul style="list-style-type: none"> • The test administrator should be certain that they have the correct tests and related materials, including the Directions for Conducting the Test (DFC), # 2 pencils, a timer (or stopwatch), a "Testing--Do Not Disturb" sign, and other supplies (scratch paper, etc.) as required by the DFC. Test administrators should count the number of test booklets at least twice to verify that they have received the correct number.
Study directions for conducting test	<p>The test administrator should study the Directions for Conducting the Test (DFC) carefully before the examination. He/she should be familiar with:</p> <ul style="list-style-type: none"> • The general make-up of the test; • Time limits involved; • Special directions; • Method of indicating answers; • Any sample questions (if they are to be answered in the test room); and • Any changes to the instructions in the DFC. These instructions will be provided by the appropriate OPM Services Branch.
Review with monitors how materials are to be handled	<p>The test administrator should review with the monitors the order in which materials are to be handed out and collected. He/she should also discuss how doors of the room are to be covered during entrance by competitors before the test and exit following the test.</p> <p>(Note: Advance preparation can help preclude potential for compromise of test material by competitors leaving through unattended doors, taking test material with them - one of the more common reasons for reported test material losses).</p>

Continued on next page

Administering the Test, Continued

Guarding against fraud or cheating

These steps can help reduce fraud or cheating in the test room:

- Physical seating arrangements and proper stationing of monitors are essential for the proper administration of a test;
- Careful adherence to the DFC, accurate timing and guarding against disturbing interruptions, all contribute to suitable test environment;
- Monitors should always be on alert to detect wrongdoing. Monitors should be stationed at the side or rear of the test room. Test administrators and monitors must never be occupied in reading or other distracting activities. Any observations of apparent cheating should be recorded immediately. Do not wait until the test is over. Notify your local OPM Services Branch immediately after the test of any instances of cheating, fraud or test compromise/loss.
- Alertness in the test room should be tempered with a positive, helpful attitude. While the test must be carried out in a thorough and fair manner, test administrators should not become so extreme as to give the appearance that they trust no one.

Guarding against competitor impersonation in the test room

Impersonation can result in debarment of a competitor from Federal employment.

Methods of detecting possible impersonation:

- Comparing date of birth with obvious age, sex, name or known personal identity; and
- Observing a competitor's behavior will help in detecting possible impersonation.

Continued on next page

Administering the Test, Continued

**Guarding
against
competitor
impersonation
in the test room
(continued)**

Persons suspected of impersonation should be requested to sign in a second time. If the competitor refuses to cooperate, the test administrator should allow the competitor to take the examination. Test administrators should not outwardly accuse any competitor of impersonation. Any discussion with persons suspected of impersonation should be carried on without disturbing other competitors.

After the test session, the test administrator should collect the competitor's test material and keep it separate from other competitors' answer booklets. The test administrator must attach a full detailed report to the test papers of any competitor suspected of impersonation and send them to your local OPM Services Branch.

**When fraud or
cheating occurs**

When fraud or cheating occurs:

- Your local OPM Services Branch will review reports of cheating or fraud submitted by test administrators and send copies of the report to the OPM Test Security Officer;
 - In all cases, an investigation of the incident must be conducted by your test control officer. If the test administrator suspects cheating or fraud has occurred, void the examination, even if the investigation is inconclusive;
 - OPM will then notify the competitor that his/her test is canceled and the reason for such cancellation. The competitor will be notified that he/she may continue to participate in future tests, but he/she should be cautioned about his/her future conduct in the test room; and
 - If the results of the investigation definitely establish the existence of cheating or fraud, the OPM Test Security Officer will prescribe additional action.
-

Continued on next page

Administering the Test, Continued

Instructions for conducting the test

These instructions should be followed when conducting the test:

Step	Action
1	<ul style="list-style-type: none"> • A "Testing--Do Not Disturb" sign must be posted outside the room's primary entrance.
2	<ul style="list-style-type: none"> • Test administrators will collect admission notices or complete other registration procedures. • All competitors must sign and print their names on a sign-in roster, as well as present a picture ID before admission to the test room.
3	<ul style="list-style-type: none"> • Desks should be cleared of all personal items.
4	<ul style="list-style-type: none"> • Sufficient test booklets, answer sheets, pencils, and scratch paper should be on hand. • Test booklets must be counted (at least twice) before being distributed to competitors.
5	<ul style="list-style-type: none"> • Materials should be distributed according to predetermined order. To avoid test security problems, the test administrator and/or monitor should hand distribute test material personally to each individual competitor. • After the tests are distributed, a check should be made to ensure that each person has a test. If there is a discrepancy, the test administrator must stop and immediately resolve it; the test cannot proceed until this has been accomplished. • After test booklets have been distributed to the competitors, the number of remaining test booklets must be counted. If multiple versions of a test are to be used, an equal number of all versions should be distributed by being passed out alternately.
6	<ul style="list-style-type: none"> • Competitors are to be cautioned not to begin until told to do so.
7	<ul style="list-style-type: none"> • No competitors will be permitted to leave the room until they have turned in all test materials including scratch paper. • Procedures of collection should be briefly outlined, assuring that materials are received individually from all competitors.
8	<ul style="list-style-type: none"> • All identifying information is to be written on the answer sheet only. • Competitors must be instructed that they do not write any information on the test booklets (OPM reuses test material).

Continued on next page

Administering the Test, Continued

Instructions for conducting the test (continued)

Step	Action
9	<ul style="list-style-type: none"> • Instructions should be given as directed. Included in each test package is a booklet containing the DFC • The DFC should be studied before the test begins • The directions are to be read exactly as shown – test administrators must not improvise. Just as poor physical conditions may affect the performance of some competitors, so will a test administrator who stumbles through the reading of the directions.
10	<p>It is important for test administrators to remember that many competitors have not tested before and are not familiar with the forms or what is expected of them. Test administrators may find the following points helpful:</p> <ul style="list-style-type: none"> • A copy of the form should be shown to the competitors or clearly described to them as the directions for completing it are being read. • Competitors should always be given enough time to fully answer all preliminary questions on the forms and answer sheets. • If the directions are printed on the form or booklet, competitors should be instructed to read along silently.
11	<ul style="list-style-type: none"> • The test room should be scanned regularly to check for signs of competitors with puzzled looks or a lack of understanding. • Competitors should frequently be asked before the test if they have any questions. • Questions are to be encouraged and answers given which are short and easily understood. • Answers should be repeated as many times as necessary for complete understanding. • Answers should be given in a manner that makes the competitors feel that their question is justified, even if it seems simple to the test administrator. • Directions should be read in a warm, friendly, well-modulated voice.

Continued on next page

Administering the Test, Continued

Instructions for conducting the test (continued)

Step	Action
12	<ul style="list-style-type: none"> • If practice questions are to be answered in the test room, the test administrator should circulate among the competitors to make certain that each competitor understands the directions.
13	<ul style="list-style-type: none"> • The signal to begin should be given in a matter-of-fact way • The words of the DFC must be used exactly; a test administrator must not trust his/her memory. Substitution of a word - even one with the same literal meaning - may alter the tone of the direction. • A test administrator should not insert exclamation marks in the reading. When the DFC says "READY, BEGIN the test," the test administrator should not read "READY, BEGIN!" This may stimulate speed and nervousness. Rather, the test administrator should say, "Ready," then glance around the room to be sure all competitors have pencils and materials in order. The words, "Begin the test," should be delivered clearly, but not so sharply as to suggest a violent push.
14	<p>Test administrators should move quietly about the test room and, if necessary, make suggestions to individuals to make sure that:</p> <ul style="list-style-type: none"> • Competitors are marking answers in the proper manner; for example, applying appropriate pressure, within the lines on the proper section of the answer sheet. • Competitors are continuing to go on to the next page of each section after finishing the previous page. • Competitors stop at the end of each section as required. • There is no copying from other competitors or other unfair practices.

Continued on next page

Administering the Test, Continued

Instructions for conducting the test (continued)

Step	Action
14 (cont)	In addition, no outside interruptions will be permitted; this includes distracting activity by test administrators or monitors such as unnecessary conversation, reading newspapers, or receiving telephone calls during the test. Monitors should be stationed at the side or rear of the test room, and must always be on the alert to detect wrongdoing. Any observations of apparent cheating should be recorded immediately.
15	<ul style="list-style-type: none"> • Time limits must be observed precisely. • Those competitors still working when time is called must be instructed to stop immediately. • If competitors finish ahead of time, the test administrator may decide whether the papers may be turned in when finished, or whether they must wait until the group has finished. • The test administrator should normally cover this before the test starts by telling the group what the "ground rules" are.
16	<ul style="list-style-type: none"> • Normally, no one will be released during the last ten minutes of the test so that no last minute confusion poses a test security problem. • Early departures should not be permitted when there is any question on accounting for all test material. • If anyone abandons his or her test, the answer sheet should be noted in pencil at the top "ABANDONED." The answer sheet should be put on the top of the stack for processing.

Continued on next page

Administering the Test, Continued

Giving examinations to persons with disabilities

It is OPM's policy to offer individuals with disabilities equal consideration for any job for which they can perform all duties efficiently and safely. In line with this policy, OPM arranges special examinations to ensure that the disabled have a fair chance to demonstrate their abilities.

You should be familiar with the most common of these special arrangements:

- An interpreter for the deaf;
- Larger print test booklets for the partially sighted;
- Readers for the test, tapes, and Braille for the blind;
- Enlarged answer sheets and/or test administrator assistance in marking answers for persons with motor-coordination disabilities.

The specific modified testing *procedures* will depend upon the individual competitor's disability. While method of administration can be modified for persons with disabilities, **do not** attempt to modify any examination.

You should contact your local OPM Services Branch to discuss specific areas, as well as refer to OPM's "Guide for Administering Written Employment Examinations to Persons with Disabilities."

Disposition of materials

- Materials, including scratch paper, are collected, according to predetermined order. Any missing material must be obtained from the competitor(s) if possible. If necessary, competitors **MUST** be confronted with the fact that their test booklets are missing.
 - Used and unused booklets and answer sheets are counted (at least twice), and the tally is recorded on the OPM 1291. Competitors are not to be dismissed from the test room until all test booklets are accounted for.
 - A record should be made of any incidents observed that may tend to invalidate competitors' scores.
 - Competitors may not be allowed to wait in the test room for friends, test results, or for any other reason, after they have completed the test and turned in their test material.
-

Continued on next page

Administering the Test, Continued

Answer sheets After competitors are dismissed, answer sheets should be carefully checked to verify that the test identification data (name, social security number, test number, test series, and test part) are properly entered and coded.

Typically, answer sheets should be packaged and sent (via Federal Express) to your local OPM Services Branch. The package should include:

- An identification of the test administered; and
 - Instructions for providing test results to the agency.
-

Processing answer sheets The local OPM Services Branch will batch and send the answer sheets to OPM's Macon Technology Support Center for scoring. When the scores are received in the OPM Services Branch from Macon, they will be forwarded to you. The answer sheets will be maintained in Macon.

FOIA requests for answer sheets If you receive a request to review OPM test materials (including answer sheets) under the Freedom of Information Act, the Privacy Act, or as part of a court request, you should contact your local OPM Services Branch for appropriate instructions. In those cases where you have assumed responsibility for the scanning and scoring of the answer sheets, your local OPM Services Branch will provide separate instructions.

Performance tests If you provide performance tests, you may obtain rating instructions from your local OPM Services Branch when needed.

Test Security Procedures

Test security procedures

The security of the OPM test material is the personal responsibility of each individual authorized to conduct tests. The test administrator should use every possible means to safeguard confidential test materials. The primary security precautions should be that:

- All tests and test papers not required for the test being administered are locked in a secure place.
- Only OPM authorized test administrators or test control officers are allowed in the test room with the competitors.
- Each competitor receives the specified set of papers--no more and no less.
- Proper tests have been distributed—this is especially important when more than one basic test is to be administered (e.g., Tests 800 and 801A).
- Every paper sent in the test package is accounted for after the test.
- Only competitors and authorized test administrators see the test materials.
- Competitors do not take or pass notes or communicate with one another during the actual test.
- OPM is notified immediately in the event discrepancies are found.
- Agency mailroom personnel are informed to expect test material, and that they are not to open it.

Continued on next page

Test Security Procedures, Continued

Test security procedures (continued)

Most test room security requirements can be met in an unobtrusive manner. Counting materials as they are given out and as they are collected is natural; so is banning interruptions. By treating these security measures as a matter of course, test administrators can safeguard test materials without projecting a hostile, suspicious attitude. Any additional security measures specified in the DFC for a particular examination should be carried out with the same alert but matter-of-fact approach.

Test security procedures under emergency conditions

If, during the administration of a test, it is necessary to evacuate a building, the following guidelines should be followed:

- Give primary consideration to the competitors' physical safety.
- During emergency exercises, first give primary consideration to the competitors and then secure the test material. If a practice alert is short in duration, the test administrator can resume testing at the point where it was discontinued.
- In any emergency that requires competitors to leave the test room, the test administrator should, if time permits, instruct the competitors to leave all test material on their desks. The test administrator will lock the test room, or, if this is not possible, collect the test material before departing.
- If the emergency is a bomb threat or actual fire, evacuate the test room as quickly as possible. Do not remove the test material if doing so will delay the evacuation. Safety of the competitors and test administrators is the prime consideration.

If a test is canceled due to an emergency situation, competitors should be rescheduled and instructed to report on a subsequent test date within a period of two to four weeks. A different series of the test material should be used for the rescheduled test. If the test administrator has test material and test space available in a nearby building, he/she may begin the test again at that location, using new test material.

Continued on next page

Test Security Procedures, Continued

Test loss

If, during the administration of the test, test material is found to be missing (e.g., an applicant runs out of the room with the test booklet), the test administrators should record the circumstances and details surrounding the loss/compromise of test material (include a seating chart, if appropriate). Test administrators should not undertake any physical action to obtain the missing test material. A full report of any incident should be included with the competitor's test papers whether the missing material is secured or not.

Competitors should be asked whether they still have any test material in their possession, and should be reminded that failure to turn in all test material before leaving the test room may result in cancellation of their test papers and denial of future testing, in addition to facing possible Federal prosecution.

If the test administrator observes a competitor withholding test material or strongly suspects a specific competitor of having withheld test material, the test administrator should not confront the competitor in the presence of other competitors, but request the competitor remain when other competitors are allowed to leave the test room. Remind the individual that his/her papers may be canceled and he/she cannot take future tests if he/she has withheld test material. In addition, inform him/her that he/she may be subject to prosecution for theft against the U.S. Government.

When the loss of test material is discovered after competitors have left the test room, the test administrator should not attempt to contact competitors, but should report details to OPM immediately. Before leaving the test room, the test administrator should make a thorough search of the area, including all trash cans, restrooms, and hallways.

Reporting a test loss/compromise

- Whenever test material is lost or missing, the test administrator will notify the agency test control officer at the end of the business day, and will follow-up by submitting a written incident report within 24 hours of the incident.
- The test control officer will notify your local OPM Services Branch by telephone within 24 hours of the initial notification, to be followed by a written report within one week of the incident.

Continued on next page

Test Security Procedures, Continued

**Reporting a test
loss/
compromise
(continued)**

The report must include:

- Date, time, and location where incident occurred;
 - Name of the test administrator in charge;
 - A description of the test material, the test and series number, test book number (when applicable) and the number of copies missing;
 - An explanation of the circumstances involved, and actions taken by the test administrator (include any involvement by other participants such as monitors, teachers, and competitors);
 - Steps taken to recover the material;
 - How the material became lost and recommendation for an investigation, if appropriate;
 - Analysis of the incident (why loss/compromise occurred, procedures the test administrator failed to follow, etc); and
 - Steps taken to prevent a recurrence of the incident.
-

TEST SECURITY AGREEMENT

(For all Test Materials Received from the US Office of Personnel Management)

1. *Purpose of Agreement*

This agreement intends to protect the mutual interests of the United States Office of Personnel Management (OPM) and the Federal agency using OPM developed test materials. It also protects the interests of persons who take such tests, in order that no person may gain special advantage by having improper access to the material. For purposes of this agreement, test materials include written tests, rating schedules, proficiency skill tests and scoring keys for each examining assessment whether it is in an automated (electronic) or manual (paper copy) format.

2. *Terms and Conditions*

Under this agreement, the signer accepts, personally and on behalf of the <AGENCY>, responsibility for carrying out its terms and conditions. The signer further agrees that all necessary administrative steps will be taken to assure that persons who have access to OPM test materials will be informed of this agreement and will be required to comply with it. Specifically, it is agreed that:

- a. Test materials obtained from OPM will be used only for the official purposes of the <AGENCY> in testing or rating candidates for employment and/or promotion. Under no circumstances will test materials be made available for purposes of study, copying, or publication. Despite agency regulations or union agreements, the <AGENCY> shall not permit any person who has taken a written test or was rated to review his/her answer sheet /Supplemental Qualification Statement (SQS) along with the test booklet/rating schedule. Individuals that took a test or were rated prior to this agreement may not come back to study their answer sheets and test booklets.
- b. Any agency research efforts for which OPM test materials will be used must be cleared by the Personnel Resources and Development Center, Employment Service Division, through the servicing OPM Services Branch.
- c. The OPM test materials in the possession of the <AGENCY> must be handled and stored in a manner that prevents unauthorized persons from having access to them and in compliance with Chapter 300.201 of Title 5 Code of Federal Regulations and any other guidance provided the <AGENCY>.
- d. No official, staff member, consultant, or other employee of the <AGENCY> will loan, give, sell, or otherwise make available OPM test material to any other agency or unauthorized person, nor knowingly permit others to do so, without written permission of OPM's Strategic Human Resources Policy Division.
- e. The agency headquarters' Test Security and Control Officer designated the signer of this agreement. The signer serves as the agency's Test Security and Control Officer (TSCO) at the designated site where the test materials are located. The local TSCO is responsible for the control and/or use of test materials.
- f. The agency headquarters' TSCO must be notified when the signer to this agreement vacates his/her position. In turn, the agency headquarters' TSCO must notify OPM's Strategic Human

Resources Policy Division of a replacement. If a replacement is not identified, OPM must request the return of the OPM materials. Additional test materials will not be issued to the agency until a successor has been approved by OPM. The new successor must submit an OPM Form 1660-B to the servicing OPM Services Branch for test security training.

- g. OPM reserves the right to terminate this agreement, or to withhold access to its test materials, if it has reason to believe that the terms of the agreement are not being fulfilled. OPM also reserves the right to withdraw any or all of its test material at any time.
- h. If any OPM test materials become involved in a legal proceeding conducted by a court or others vested with legal authority, the <AGENCY> must promptly inform the OPM's Office of the General Counsel, through the servicing OPM Services Branch. The agency must request that the OPM test materials be covered by a protective order that safeguards their confidentiality.

On behalf of <AGENCY>, I accept the responsibility of serving as a Test Security Control Officer for this site. I agree to comply with the terms and conditions of this agreement:

Test Security and Control Officer

_____ (Signature) _____ (Date)

Please Type: Name: _____
Title: _____
Agency: _____
Address: _____
Telephone: _____

OPM Responsible Authority for this Agreement:

_____ (Signature) _____ (Date)

Please Type: Name: _____
Title: _____
Address: _____
Telephone: _____

Appendix F

Multipurpose Occupational Systems Analysis Inventory - Close-Ended (MOSAIC) Competencies

Background

OPM has been conducting Governmentwide occupational studies using its *Multipurpose Occupational Systems Analysis Inventory - Close-Ended* (MOSAIC) methodology for more than 10 years. MOSAIC, a multipurpose, survey-based occupational analysis approach, is used to collect information from incumbents and supervisors on many occupations for a wide range of human resource management functions.

A key component of the MOSAIC approach is an extensive literature review of relevant organizational and psychological literature and occupational information (for example, job analyses, position descriptions, classification standards, training plans, crediting plans, competency models) from public and private sector organizations.

Through these studies, we have identified the critical competencies and tasks employees need to perform successfully in nearly 200 Federal occupations, as well as for leadership positions.

The foundation of the MOSAIC approach is the common language, (that is, common tasks and competencies) used to describe all occupations included the study. This approach allows for comparisons both within and across occupations, which is particularly important for restructuring, broadbanding and career transitioning. Furthermore, it provides agencies with a basis for building integrated human resource management systems that use a common set of tasks and competencies to structure job design, recruitment, selection, performance management, training, and career development so that employees receive a consistent message about the factors on which they are selected, trained, and evaluated.

Continued on next page

Multipurpose Occupational Systems Analysis Inventory - Close-Ended (MOSAIC) Competencies, Continued

**In this
appendix**

This appendix lists covered occupations and competencies for the following MOSAIC studies:

- Professional/Administrative Study, 1996-1997
- Clerical/Technical Study, 1993-1994
- Leadership Effectiveness Study, 1992
- High-Performance Leaders – A Competency Model, 1999
- Information Technology Study, 2000-2001
- Trades and Labor Occupational Study (TLOS), 2000-2002
- Science and Engineering Occupational Study, 2000-2002

The clerical/technical study and the two leadership studies did not distinguish specific technical competencies. The two leadership studies cover full range of occupations for supervisors, managers and executives.

Continued on next page

Professional/Administrative Study Occupations

0011 Bond Sales Promotion	0501 Financial Admin. and Programs	1420 Archivist
0018 Safety and Occupational Health Management	0510 Accountant	1421 Archives Specialist
0020 Community Planning	0511 Auditor	1530 Statistician
0023 Outdoor Recreation Planning	0560 Budget Analysis	1701 General Education and Training
0025 Park Ranger	0570 Financial Institution Examining	1715 Vocational Rehabilitation
0028 Environmental Protection Specialist	0685 Public Health Program Specialist	1720 Education Program
0080 Security Administration	0801 General Engineer	1801 Civil Aviation Security Specialist
0101 Social Science	0905 General Attorney	1810 General Investigator
0105 Social Insurance Administration	0950 Paralegal Specialist	1811 Criminal Investigator
0106 Unemployment Insurance	0962 Contact Representative	1812 Game Law Enforcement
0110 Economist	0965 Land Law Examining	1816 Immigration Inspection
0130 Foreign Affairs	0987 Tax Law Specialist	1831 Securities Compliance Examining
0132 Intelligence	0990 General Claims Examining	1910 Quality Assurance Specialist
0142 Manpower Development	0991 Worker's Compensation Claims Examining	2001 General Supply
0150 Geography	0993 Railroad Retirement Claims Examining	2003 Supply Program Management
0170 History	0996 Veterans Claims Examining	2010 Inventory Management
0180 Psychology	1001 General Arts and Information	2030 Distribution Facilities and Storage Management
0184 Sociology	1015 Museum Curator	2032 Packaging
0187 Social Services	1035 Public Affairs	2050 Supply Cataloging
0190 General Anthropology	1082 Writing and Editing	2101 Transportation Specialist
0193 Archaeology	1083 Technical Writing and Editing	2110 Transportation Industry Analysis
0201 Personnel Management	1101 General Business and Industry	2125 Highway Safety Management
0205 Military Personnel Management	1102 Contract Specialist	2130 Traffic Management
0212 Personnel Staffing	1103 Industrial Property Management	2150 Transportation Operations
0221 Position Classification	1104 Property Disposal	
0222 Occupational Analysis	1130 Public Utilities Specialist	
0223 Salary and Wage Administration	1140 Trade Specialist	
0230 Employee Relations	1145 Agricultural Program Specialist	
0233 Labor Relations	1146 Agricultural Marketing	
0235 Employee Development	1147 Agricultural Market Reporting	
0244 Labor Management Relations Examining	1150 Industrial Specialist	
0246 Contractor Industrial Relations	1160 Financial Analysis	
0249 Wage and Hour Compliance	1163 Insurance Examining	
0270 Civil Service Retirement	1165 Loan Specialist	
0301 Miscellaneous Administration and Programs	1170 Realty	
0334 Computer Specialist (Trainee)	1171 Appraising and Assessing	
0341 Administrative Officer	1173 Housing Management	
0343 Management Program Analysis	1176 Building Management	
0346 Logistics Management	1301 Physical Scientist	
0360 Equal Opportunity Specialist	1412 Technical Information Services	
0391 Telecommunications		

MOSAIC Competencies: Professional & Administrative Occupations 1996-1997

General Competencies

Reading - Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.

Writing - Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material, that is appropriate for the intended audience.

Arithmetic - Performs computations such as addition, subtraction, multiplication, and division correctly using whole numbers, fractions, decimals, and percentages.

Mathematical Reasoning - Solves practical problems by choosing appropriately from a variety of mathematical and statistical techniques.

Oral Communication - Expresses information (for example, ideas or facts) to individuals or groups effectively, taking into account the audience and nature of the information (for example, technical, sensitive, controversial); makes clear and convincing oral presentations; listens to others, attends to nonverbal cues, and responds appropriately.

Creative Thinking - Uses imagination to develop new insights into situations and applies innovative solutions to problems; designs new methods where established methods and procedures are inapplicable or are unavailable.

Information Management - Identifies a need for and knows where or how to gather information; organizes and maintains information or information management systems.

Decision Making - Makes sound, well-informed, and objective decisions; perceives the impact and implications of decisions; commits to action, even in uncertain situations, to accomplish organizational goals; causes change.

Reasoning - Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions.

Problem Solving - Identifies problems; determines accuracy and relevance of information; uses sound judgment to generate and evaluate alternatives, and to make recommendations.

Mental Visualization - Sees things in the mind by mentally organizing and processing symbols, pictures, graphs, objects, or other information (for example, sees a building from a blueprint, or sees the flow of work activities from reading a work plan).

Learning - Uses efficient learning techniques to acquire and apply new knowledge and skills; uses training, feedback, or other opportunities for self-learning and development.

Self-Esteem - Believes in own self-worth; maintains a positive view of self and displays a professional image.

Teamwork – Encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit; works with others to achieve goals.

Integrity/Honesty - Contributes to maintaining the integrity of the organization; displays high standards of ethical conduct and understands the impact of violating these standards on an organization, self, and others; is trustworthy.

Self-Management - Sets well-defined and realistic personal goals; displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner; works with minimal supervision; is motivated to achieve; demonstrates responsible behavior.

Interpersonal Skills - Shows understanding, friendliness, courtesy, tact, empathy, concern, and politeness to others; develops and maintains effective relationships with others; may include effectively dealing with individuals who are difficult, hostile, or distressed; relates well to people from varied backgrounds and different situations; is sensitive to cultural diversity, race, gender, disabilities, and other individual differences.

Professional & Administrative Occupations General Competencies (continued)

Planning and Evaluating - Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes.

Attention to Detail - Is thorough when performing work and conscientious about attending to detail.

Financial Management - Prepares, justifies, and/or administers the budget for program areas; plans, administers, and monitors expenditures to ensure cost-effective support of programs and policies; assesses financial condition of an organization.

Managing Human Resources - Plans, distributes, coordinates, and monitors work assignments of others; evaluates work performance and provides feedback to others on their performance; ensures that staff are appropriately selected, utilized, and developed, and that they are treated in a fair and equitable manner.

Leadership - Influences, motivates, and challenges others; adapts leadership styles to a variety of situations.

Teaching Others - Helps others learn through formal or informal methods; identifies training needs; provides constructive feedback; coaches others on how to perform tasks; acts as a mentor.

Customer Service - Works with clients and customers (that is, any individuals who use or receive the services or products that your work unit produces, including the general public, individuals who work in the agency, other agencies, or organizations outside the Government) to assess their needs, provide information or assistance, resolve their problems, or satisfy their expectations; knows about available products and services; is committed to providing quality products and services.

Organizational Awareness - Knows the organization's mission and functions, and how its social, political, and technological systems work and operates effectively within them; this includes the programs, policies, procedures, rules, and regulations of the organization.

External Awareness - Identifies and understands economic, political, and social trends that affect the organization.

Vision - Understands where the organization is headed and how to make a contribution; takes a long-term view and recognizes opportunities to help the organization accomplish its objectives or move toward the vision.

Influencing/Negotiating - Persuades others to accept recommendations, cooperate, or change their behavior; works with others towards an agreement; negotiates to find mutually acceptable solutions.

Conflict Management - Manages and resolves conflicts, grievances, confrontations, or disagreements in a constructive manner to minimize negative personal impact.

Stress Tolerance - Deals calmly and effectively with high stress situations (for example, tight deadlines, hostile individuals, emergency situations, dangerous situations).

Flexibility - Is open to change and new information; adapts behavior or work methods in response to new information, changing conditions, or unexpected obstacles; effectively deals with ambiguity.

Technology Application - Uses machines, tools, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.

Technical Competence - Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Memory - Recalls information that has been presented previously.

Perceptual Speed - Quickly and accurately sees detail in words, numbers, pictures, and graphs.

Agility - Bends, stretches, twists, or reaches out with the body, arms, or legs

Stamina - Exerts oneself physically over long periods of time without tiring (which may include performing repetitive tasks such as data entry or coding).

**Professional & Administrative Occupations
General Competencies (continued)**

Physical Strength - Exerts maximum muscle force to lift, push, pull, or carry objects; performs moderately laboring work.

Eye-Hand Coordination - Accurately coordinates one's eyes with one's fingers, wrists, or arms to perform job-related tasks (for example, to move, carry, or manipulate objects).

Spatial Orientation - Knows one's location in relation to the environment; determines where other objects are in relation to one's self (for example, when using a map).

Visual Identification - Accurately identifies people, animals, or objects based on knowledge of their characteristics.

Peripheral Vision - Sees objects or movement of objects to one's side when the eyes are focused forward.

Depth Perception - Accurately judges which of several objects is closer or farther away from the observer, or the distance between an object and the observer.

Visual Color Discrimination - Accurately matches or detects differences between colors, including shades of color and brightness.

MOSAIC Competencies: Professional & Administrative Occupations 1996-1997

Technical Competencies

Administration and Management - Knowledge of planning, coordination, and execution of business functions, resource allocation, and production.

Clerical - Knowledge of filing, typing, entering data, maintaining records, taking shorthand, and using and completing forms.

Economics and Accounting - Knowledge of economic and accounting principles and practices, tax laws and practices, the financial markets, banking, and the analysis and reporting of financial data.

Auditing - Knowledge of generally accepted auditing standards and procedures for conducting financial and compliance, economy and efficiency, and program results audits.

Insurance - Knowledge of various types of insurance, insurance regulations, claims processing, examination, adjudication, or adjustment.

Sales and Marketing - Knowledge of showing, promoting, and selling products and services.

Personnel and Human Resources - Knowledge of hiring, classification, benefits, labor relations, negotiation, and Federal, state, and local employment regulations.

Production and Processing - Knowledge of inputs, outputs, raw materials, waste, quality control, costs, maintaining inventory, and techniques for maximizing the manufacture and distribution of goods.

Food Production - Knowledge of planning, growing, and harvesting of food for consumption using appropriate equipment and techniques.

Computers and Electronics - Knowledge of electric circuit boards, processors, chips, and computer hardware and software, including applications and programming.

Engineering and Technology - Knowledge of engineering concepts, principles, and practices, and of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications.

Design - Knowledge of developing, producing, understanding, and using plans, blueprints, models, and maps, including the use of tools and instruments to produce precision technical drawings.

Building and Construction - Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings.

Mechanical - Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance.

Physics - Knowledge and prediction of physical principles, laws, and applications including air, water, material dynamics, light, atomic principles, heat, electric theory, earth formations, and meteorological and related natural phenomena.

Chemistry - Knowledge of chemicals, including hazardous materials, and their uses, interactions, dangers, production, and disposal.

Biology - Knowledge of the environment, plant and animal living tissue, cells, organisms, and entities, including their functions, interdependencies and interactions with each other and the environment.

Psychology - Knowledge of human behavior and performance in various contexts, mental processes, or the assessment and treatment of behavioral and affective disorders.

Sociology and Anthropology - Knowledge of group behavior and dynamics, societal trends and influences, cultures, their history, migrations, ethnicity, and origins.

Geography - Knowledge of geographical locations, their relationships and characteristics.

Medicine and Dentistry - Knowledge of the diagnosis and treatment of injuries, diseases, and deformities, including preventive health-care measures.

Therapy and Counseling - Knowledge of diagnosis and treatment of physical and mental ailments, and career guidance.

Professional & Administrative Technical Competencies (continued)

Education and Training - Knowledge of teaching, training, research, making presentations, lecturing, testing, and other instructional methods.

Foreign Language - Knowledge of sign language or of the structure and content of a foreign (non-English) language, including the meaning and spelling of words, rules of composition, and grammar.

Fine Arts - Knowledge of theory and techniques required to produce, compose, and perform works of music, dance, visual arts, drama, and sculpture.

History and Archeology - Knowledge of historical events and their causes, indicators, and impact on particular civilization and cultures, and of preservation and archival techniques.

Philosophy - Knowledge of different philosophical systems, including their basic principles, values, ethics, ways of thinking, customs, religions, and practices, and their impact on human culture.

Public Safety and Security - Knowledge of the military, weaponry, and intelligence operations; public safety and security operations; occupational health and safety; investigation and inspection techniques; or rules, regulations, precautions, and prevention techniques for the protection of people, data, and property.

Legal, Government and Jurisprudence - Knowledge of laws, legal codes, court procedures, precedents, legal practices and documents, Government regulations, executive orders, agency rules, Government organization and functions, and the democratic political process.

Telecommunications - Knowledge of transmissions, broadcasting, switching, control, and operation of telecommunications systems.

Communications and Media - Knowledge of the production, communication and dissemination of information and ideas to inform and entertain via written, oral, and visual media.

Transportation - Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including costs and limits.

Contracting/Procurement - Knowledge of various types of contracts, techniques for contracting or procurement, and contract negotiation and administration.

Real Estate - Knowledge of real estate principles, practices, markets, and values.

Public Planning - Knowledge of functions, principles, practices, and techniques of public planning, including those related to community planning, outdoor recreation planning, and natural resource management, such as demand forecasting, environmental impact analysis, financial forecasting, and land use planning and zoning.

Clerical/Technical Study Occupations

Clerical

GS-0072 Fingerprint Identification	GS-0530 Cash Processing
GS-0086 Security Clerical and Assistance	GS-0540 Voucher Examining
GS-0134 Intelligence Aid and Clerk	GS-0544 Civilian Pay
GS-0203 Personnel Clerical And Assistance	GS-0545 Military Pay
GS-0204 Military Personnel Clerical and Technician	GS-0561 Budget Clerical and Assistance
GS-0302 Messenger	GS-0592 Tax Examining
GS-0303 Miscellaneous Clerk and Assistant	GS-0679 Medical Clerk
GS-0304 Information Receptionist	GS-0963 Legal Instruments Examining
GS-0305 Mail and File	GS-0986 Legal Clerk and Technician
GS-0309 Correspondence Clerk	GS-0998 Claims Clerical
GS-0312 Clerk-Stenographer and Reporter	GS-1001 General Arts and Information
GS-0313 Work Unit Supervising	GS-1046 Language Clerical
GS-0318 Secretary	GS-1087 Editorial Assistance
GS-0319 Closed Microphone Reporting	GS-1101 General Business and Industry
GS-0322 Clerk-Typist	GS-1106 Procurement Clerical and Assistance
GS-0326 Office Automation Clerical and Assistance	GS-1107 Property Disposal Clerical and Technician
GS-0335 Computer Clerk and Assistant	GS-1421 Archives Technician
GS-0344 Management Clerical and Assistance	GS-1531 Statistical Assistant
GS-0350 Equipment Operator	GS-1802 Compliance Inspection and Support
GS-0351 Printing Clerical	GS-1897 Customs Aid*
GS-0356 Data Transcriber	GS-2001 General Supply
GS-0357 Coding	GS-2005 Supply Clerical and Technician
GS-0382 Telephone Operating	GS-2091 Sales Store Clerical
GS-0394 Communications Clerical	GS-2102 Transportation Clerk and Assistant
GS-0503 Financial Clerical and Assistance	GS-2131 Freight Rate
GS-0525 Accounting Technician	GS-2132 Travel
	GS-2134 Shipment Clerical and Assistance
	GS-2151 Dispatching

Technical

GS-0019 Safety Technician*	GS-0992 Loss and Damage Claims Examining*
GS-0029 Environmental Protection Assistant	GS-1016 Museum Specialist and Technician
GS-0119 Economic Assistant*	GS-1105 Purchasing
GS-0189 Recreation Aid and Assistant*	GS-1152 Production Control
GS-0332 Computer Operations	GS-1411 Library Technician
GS-0361 Equal Opportunity	GS-1521 Mathematics Technician*
GS-0390 Telecommunications Processing	GS-1702 Education and Training Technician
GS-0392 General Telecommunications	GS-1862 Consumer Safety Inspection*
GS-0593 Insurance Accounts*	GS-1981 Agricultural Commodity Aid*
GS-0675 Medical Records Technician	GS-2135 Transportation Loss and Damage Claims Examining
GS-0962 Contact Representative	GS-2144 Cargo Scheduling*
GS-0990 General Claims Examining	

*Data were not analyzed or reported for this occupation due to an insufficient number of respondents.

MOSAIC Competencies: Clerical/Technical Study 1993-1994

Reading - Learns from written material by determining the main idea or essential message. Recognizes correct English grammar, punctuation, and spelling.

Writing - Uses correct English grammar, punctuation, and spelling to communicate thoughts, ideas, information, and messages in writing.

Listening - Receives, attends to, interprets, and responds to verbal messages and other cues such as body language in ways that are appropriate to listeners and situations.

Speaking - Uses correct English grammar to organize and communicate ideas in words that are appropriate to listeners and situations; uses body language appropriately.

Arithmetic/Mathematical Reasoning - Performs computations such as addition, subtraction, multiplication, and division correctly; solves practical problems by choosing appropriately from a variety of mathematical techniques such as formulas and percentages.

Reasoning - Discovers or selects rules, principles, or relationships between facts and other information.

Decision Making - Specifies goals and obstacles to achieving those goals, generates alternatives, considers risks, and evaluates and chooses the best alternative in order to make a determination, draw conclusions or solve a problem.

Creative Thinking - Uses imagination to combine ideas or information in new ways.

Mental Visualization - Sees things in the mind by mentally organizing and processing symbols, pictures, graphs, objects, or other information. For example, sees a building from a blueprint, or sees the flow of work activities from reading a work plan.

Memory - Recalls information that has been presented previously.

Eye-Hand Coordination - Accurately coordinates one's eyes with one's fingers, wrist, or arms to move, carry, or manipulate objects, or to perform other job-related tasks.

Perceptual Speed - Sees detail in words, numbers, pictures, and graphs, quickly and accurately.

Physical Strength and Agility - Ability to bend, lift, climb, stand, and walk for long periods of time; ability to perform moderately heavy laboring work.

Stamina - Performs repetitive tasks effectively over a long period of time, for example, data entry and coding.

Applies Technology to Tasks - Selects and understands procedures, machines, or tools that will produce the desired results; identifies or solves problems in machines, computers, or other technologies as they are related to performing tasks.

Technical Competence - Knowledge of how to perform one's job. Refers to specialized knowledge that is acquired through formal training or extensive on-the-job experience.

Organizational Awareness - Knows how social, political, organizational, and technological systems work and operates effectively within them. This includes the policies, procedures, rules, and regulations of the work or organization.

Manages and Organizes Information - Identifies a need; gathers, organizes, and maintains information; determines its importance and accuracy, and communicates it by a variety of methods.

Manages Resources - Selects, acquires, stores, and distributes resources such as materials, equipment, or money.

Manages Human Resources - Plans, distributes, and monitors work assignments; evaluates work performance and provides feedback to others on their performance.

Conscientiousness - Displays a high level of effort and commitment towards performing work; demonstrates responsible behavior.

Integrity/Honesty - Displays high standards of ethical conduct and understands the impact of violating these standards on an organization, self, and others; chooses an ethical course of action; is trustworthy.

Clerical/Technical Study
MOSAIC Competencies (continued)

Interpersonal Skills - Shows understanding, friendliness, courtesy, tact, empathy, cooperation, concern, and politeness to others; relates well to different people from varied backgrounds and different situations.

Self-Esteem - Believes in own self-worth, maintains a positive view of self, and displays a professional image.

Self-Management - Sets well-defined and realistic personal goals; monitors progress and is motivated to achieve; manages own time and deals with stress effectively.

Flexibility - Adapts quickly to changes.

Leadership - Interacts with others to influence, motivate, and challenge them.

Teaches Others - Helps others learn; identifies training needs; provides constructive reinforcement; coaches others on how to perform tasks; acts as a mentor.

Teamwork - Encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit; works with others to achieve goals.

Negotiation - Works with others towards an agreement that may involve exchanging specific resources or resolving differences.

Customer Service - Works and communicates with clients and customers (e.g., any individuals who use or receive the services or products that your work unit provides, including individuals who work in your agency or in other agencies or organizations outside the Government) to satisfy their expectations. Committed to quality services.

MOSAIC Competencies: Leadership Effectiveness Study 1992

Written Communication – Expresses facts and ideas in writing in a succinct and organized manner.

Oral Communication - Expresses ideas and facts to individuals or groups effectively; makes clear and convincing oral presentations; listens to others; facilitates an open exchange of ideas.

Problem Solving - Identifies and analyzes problems; uses sound reasoning to arrive at conclusions; finds alternative solutions to complex problems; distinguishes between relevant and irrelevant information to make logical judgments.

Interpersonal Skills - Considers and responds appropriately to the needs, feelings, and capabilities of others; adjusts approaches to suit different people and situations.

Managing Diverse Workforce - Is sensitive to cultural diversity, race, gender, and other individual differences in the workforce; manages workforce diversity.

Vision - Takes a long-term view and initiates organizational change for the future; builds the vision with others; spots opportunities to move the organization toward the vision.

Creative Thinking - Develops new insights into situations and applies innovative solutions to make organizational improvements; designs and implements new or cutting-edge programs/processes.

Flexibility - Is open to change and new information; adapts behavior and work methods in response to new information, changing conditions, or unexpected obstacles; effectively deals with pressure and ambiguity.

Decisiveness - Makes sound and well-informed decisions; perceives the impact and implications of decisions; commits to action, even in uncertain situations, in order to accomplish organizational goals; causes change.

Leadership - Inspires, motivates and guides others toward goal accomplishment; coaches, mentors, and challenges subordinates; adapts leadership styles to a variety of situations; models high standards of honesty, integrity, trust, openness, and respect for the individual by applying these values to daily behaviors.

Conflict Management - Manages and resolves conflicts, confrontations, and disagreements in a positive and constructive manner to minimize negative personal impact.

Self-Direction - Demonstrates belief in own abilities and ideas; is self-motivated and results-oriented; recognizes own strengths and weaknesses; seeks feedback from others and opportunities for self-learning and development.

Influencing/Negotiating - Persuades others; develops networks and coalitions; gains cooperation from others to obtain information and accomplish goals; negotiates to find mutually acceptable solutions; build consensus through give and take.

Planning and Evaluating - Determines objectives and strategies; coordinates with other parts of the organization to accomplish goals; monitors and evaluates the progress and outcomes of operational plans; anticipates potential threats or opportunities.

Financial Management - Prepares, justifies, and/or administers the budget for program area; plans, administers and monitors expenditures to ensure cost-effective support of programs and policies.

Human Resources Management - Empowers people by sharing power and authority; develops lower levels of leadership by pushing authority downward and outward throughout the organization; shares rewards for achievement with employees; ensures that staff are appropriately selected, utilized, appraised, and developed, and that they are treated in a fair and equitable manner.

Client Orientation - Anticipates and meets the needs of clients; achieves quality end-products; is committed to improving services.

External Awareness - Identifies and keeps up-to-date on key agency policies/priorities and economic, political, and social trends which affect the organization; understands where the organization is headed and how to make a contribution.

Team Building - Manages group processes; encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit; works with others to achieve goals.

**Leadership Effectiveness Study
MOSAIC Competencies (continued)**

Technology Management - Integrates technology into the workplace; develops strategies using new technology to manage and improve program effectiveness; understands the impact of technological changes on the organization.

Internal Controls/Integrity - Assures that effective internal controls are developed and maintained to ensure the integrity of the organization.

Technical Competence - Understands and appropriately applies procedures, requirements, regulations and policies related to specialized expertise, e.g., engineering, physical science, law, or accounting; maintains credibility with others on technical issues.

MOSAIC Competencies: Leadership Update Study 1998

LEADING CHANGE

Vision - Takes a long-term view and acts as a catalyst for organizational change; builds a shared vision with others. Influences others to translate vision into action.

External Awareness - Identifies and keeps up-to-date on key international policies and economic, political, and social trends that affect the organization. Understands near-term and long range plans and determines how to best be positioned to achieve a competitive business advantage in a global economy.

Creativity and Innovation - Develops new insights into situations and applies innovative solutions to make organizational improvements; creates a work environment that encourages creative thinking and innovation; designs and implements new or cutting-edge programs/processes.

Strategic Thinking - Formulates effective strategies consistent with the business and competitive strategy of the organization in a global economy. Examines policy issues and strategic planning with a long term perspective. Determines objectives and sets priorities; anticipates potential threats or opportunities.

Continual Learning - Grasps the essence of new information; masters new technical and business knowledge; recognizes own strengths and weaknesses; pursues self-development; seeks feedback from others and opportunities to master new knowledge.

Resilience - Deals effectively with pressure; maintains focus and intensity and remains optimistic and persistent, even under adversity. Recovers quickly from setbacks. Effectively balances personal life and work.

Flexibility - Is open to change and new information; adapts behavior and work methods in response to new information, changing conditions, or unexpected obstacles. Adjusts rapidly to new situations warranting attention and resolution.

Service Motivation - Creates and sustains an organizational culture which permits others to provide the quality of service essential to high performance. Enables others to acquire the tools and support they need to perform well. Shows a commitment to public service. Influences others toward a spirit of service and meaningful contributions.

LEADING PEOPLE

Conflict Management - Identifies and takes steps to prevent potential situations that could result in unpleasant confrontations. Manages and resolves conflicts, and disagreements in a positive and constructive manner to minimize negative impact.

Leveraging Diversity – Recruits, develops, and retains a diverse high quality workforce in an equitable manner. Leads and manages an inclusive workplace that maximizes the talents of each person to achieve sound business results. Respects, understands, values and seeks out individual differences to achieve the vision and mission of the organization. Develops and uses measures and rewards to hold self and others accountable for achieving results that embody the principles of diversity.

Team Building - Inspires, motivates, and guides others toward goal accomplishments. Consistently develops and sustains cooperative working relationships. Encourages and facilitates cooperation within the organization and with customer groups; fosters commitment, team spirit, pride, trust. Develops leadership in others through coaching, mentoring, rewarding and guiding employees.

Integrity/Honesty - Instills mutual trust and confidence; creates a culture that fosters high standards of ethics; behaves in a fair and ethical manner toward others, and demonstrates a sense of corporate responsibility and commitment to public service.

Leadership Update Study MOSAIC Competencies (continued)

BUILDING COALITIONS/COMMUNICATION

Oral Communication - Makes clear and convincing oral presentations to individuals or groups; listens effectively and clarifies information as needed; facilitates an open exchange of ideas and fosters atmosphere of open communication.

Written Communication - Expresses facts and ideas in writing in a clear, convincing and organized manner.

Influencing/Negotiating - Persuades others; builds consensus through give and take; gains cooperation from others to obtain information and accomplish goals; facilitates “win-win” situations.

Partnering - Develops networks and builds alliances, engages in cross-functional activities; collaborates across boundaries, and finds common ground with a widening range of stakeholders. Utilizes contacts to build and strengthen internal support bases.

Political Savvy - Identifies the internal and external politics that impact the work of the organization. Approaches each problem situation with a clear perception of organizational and political reality, recognizes the impact of alternative courses of action.

Interpersonal Skills - Considers and responds appropriately to the needs, feelings, and capabilities of different people in different situations; is tactful, compassionate and sensitive, and treats others with respect.

RESULTS DRIVEN

Accountability - Assures that effective controls are developed and maintained to ensure the integrity of the organization. Holds self and others accountable for rules and responsibilities. Can be relied upon to ensure that projects within areas of specific responsibility are completed in a timely manner and within budget. Monitors and evaluates plans, focuses on results and measuring attainment of outcomes.

Problem Solving - Identifies and analyzes problems; distinguishes between relevant and irrelevant information to make logical decisions; provides solutions to individual and organizational problems.

Decisiveness - Exercises good judgment by making sound and well-informed decisions; perceives the impact and implications of decisions; makes effective and timely decisions, even when data are limited or solutions produce unpleasant consequences; is proactive and achievement oriented.

Customer Service - Balancing interests of a variety of clients; readily readjusts priorities to respond to pressing and changing client demands. Anticipates and meets the need of clients; achieves quality end-products; is committed to continuous improvement of services.

Entrepreneurship - Identifies opportunities to develop and market new products and services within or outside of the organization. Is willing to take risks; initiates actions that involve a deliberate risk to achieve a recognized benefit or advantage.

Technical Credibility - Understands and appropriately applies procedures, requirements, regulations, and policies related to specialized expertise. Is able to make sound hiring and capital resource decisions and to address training and development needs. Understands linkages between administrative competencies and mission needs.

BUSINESS ACUMEN

Financial Management - Demonstrates broad understanding of principles of financial management and marketing expertise necessary to ensure appropriate funding levels. Prepares, justifies, and/or administers the budget for the program area; uses cost-benefit thinking to set priorities; monitors expenditures in support of programs and policies. Identifies cost-effective approaches. Manages procurement and contracting.

Human Resources Management - Assesses current and future staffing needs based on organizational goals and budget realities. Using merit principles, ensures staff is appropriately selected, developed, utilized, appraised and rewarded; takes corrective action.

Technology Management - Uses efficient and cost-effective approaches to integrate technology into the workplace and improve program effectiveness. Develop strategies using new technology to enhance decision making. Understands the impact of technological change on the organization.

Information Technology Study Occupations and Specialty Titles

Occupations

0334 Computer Specialist
 0391 Telecommunications
 0854 Computer Engineer
 1550 Computer Scientist

Specialty Titles

Network Services - This specialty covers the planning, analysis, design, development, testing, quality assurance, configuration, installation, implementation, integration, maintenance, and/or management of networked systems used for the transmission of information in voice, data, and/or video formats.

Customer Support - This specialty covers the planning and delivery of customer support services at the point of computer user/specialist interface, including installation, configuration, troubleshooting, user assistance, and/or training.

Data Management - This specialty covers the planning, development, implementation, and administration of systems for the acquisition, storage, and retrieval of data.

Information Systems Security - This specialty ensures the integrity, availability, and confidentiality of information systems through the planning, analysis, development, implementation, maintenance, and enhancement of systems, programs, policies, procedures, and tools.

Internet - This specialty covers technical planning, design, development, testing, implementation, and management of Internet, Intranet, and extranet activities, including systems/applications development and technical management of web sites.

Policy, Planning, and Management - This specialty covers a wide range of activities that typically extend and apply to an entire organization or major components of an organization. This includes strategic planning, capital planning, workforce planning, policy and standards development, budgeting, resource management, knowledge management, information architecture management, infrastructure planning and modeling, investment analysis, auditing, and information security management.

Software Engineering, Applications - This specialty covers the design, development, modification, testing, installation, implementation, and support of new or existing applications software.

Software Engineering, Systems - This specialty covers the planning, installation, configuration, testing, implementation, and management of the systems environment.

Systems Administration - This specialty covers planning and coordination of the installation, testing, operations, troubleshooting, and maintenance of large-scale hardware and software systems.

Systems Analysis - This specialty covers the analysis of processes leading to the planning, design, and implementation of new and improved information systems to meet the requirements of the organization.

General - This covers positions not classifiable in any of the other specialties, for example, positions in new and emerging specialty areas.

MOSAIC Competencies: Information Technology Study 2000-2001

General Competencies

Administration and Management - Knowledge of planning, coordination, and execution of business functions, resource allocation, and production.

Arithmetic - Performs computations such as addition, subtraction, multiplication, and division correctly using whole numbers, fractions, decimals, and percentages.

Attention to Detail - Is thorough when performing work and conscientious about attending to detail.

Computers and Electronics – Knowledge of electric circuit boards, processors, chips, and computer hardware and software, including applications and programming.

Conflict Management - Manages and resolves conflicts, grievances, confrontations, or disagreements in a constructive manner to minimize negative personal impact.

Contracting/Procurement - Knowledge of various types of contracts, techniques for contracting or procurement, and contract negotiation and administration.

Creative Thinking - Uses imagination to develop new insights into situations and applies innovative solutions to problems; designs new methods where established methods and procedures are inapplicable or are unavailable.

Customer Service - Works with clients and customers (that is, any individuals who use or receive the services or products that your work unit produces, including the general public, individuals who work in the agency, other agencies, or organizations outside the Government) to assess their needs, provide information or assistance, resolve their problems, or satisfy their expectations; knows about available products and services; is committed to providing quality products and services.

Decision Making - Makes sound, well-informed, and objective decisions; perceives the impact and implications of decisions; commits to action, even in uncertain situations, to accomplish organizational goals; causes change.

Economics and Accounting - Knowledge of economic and accounting principles and practices, tax law and practices, the financial markets, banking, and the analysis and reporting of financial data.

Education and Training - Knowledge of teaching, training, research, making presentations, lecturing, testing, and other instructional methods.

Engineering and Technology - Knowledge of engineering concepts, principles, and practices, and of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications.

External Awareness - Identifies and understands economic, political, and social trends that affect the organization.

Financial Management - Prepares, justifies, and/or administers the budget for program areas; plans, administers, and monitors expenditures to ensure cost-effective support of programs and policies; assesses financial condition of an organization.

Flexibility - Is open to change and new information; adapts behavior or work methods in response to new information, changing conditions, or unexpected obstacles; effectively deals with ambiguity.

Information Management - Identifies a need for and knows where or how to gather information; organizes and maintains information or information management systems.

Influencing/Negotiating - Persuades others to accept recommendations, cooperate, or change their behavior; works with others towards an agreement; negotiates to find mutually acceptable solutions.

Integrity/Honesty - Contributes to maintaining the integrity of the organization; displays high standards of ethical conduct and understands the impact of violating these standards on an organization, self, and others; is trustworthy.

Information Technology Study General Competencies (continued)

Interpersonal Skills - Shows understanding, friendliness, courtesy, tact, empathy, concern, and politeness to others; develops and maintains effective relationships with others; may include effectively dealing with individuals who are difficult, hostile, or distressed; relates well to people from varied backgrounds and different situations; is sensitive to cultural diversity, race, gender, disabilities, and other individual differences.

Leadership - Influences, motivates, and challenges others; adapts leadership styles to a variety of situations.

Learning - Uses efficient learning techniques to acquire and apply new knowledge and skills; uses training, feedback, or other opportunities for self-learning and development.

Legal, Government and Jurisprudence - Knowledge of laws, legal codes, court procedures, precedents, legal practices and documents, Government regulations, executive orders, agency rules, Government organization and functions, and the democratic political process.

Managing Human Resources - Plans, distributes, coordinates, and monitors work assignments of others; evaluates work performance and provides feedback to others on their performance; ensures that staff are appropriately selected, utilized, and developed, and that they are treated in a fair and equitable manner.

Mathematical Reasoning - Solves practical problems by choosing appropriately from a variety of mathematical and statistical techniques.

Memory - Recalls information that has been presented previously.

Mental Visualization - Sees things in the mind by mentally organizing and processing symbols, pictures, graphs, objects, or other information (for example, sees a building from a blueprint, or sees the flow of work activities from reading a work plan).

Oral Communication - Expresses information (for example, ideas or facts) to individuals or groups effectively, taking into account the audience and nature of the information (for example, technical, sensitive, controversial); makes clear and convincing oral presentations; listens to others, attends to nonverbal cues, and responds appropriately.

Organizational Awareness - Knows the organization's mission and functions, and how its social, political, and technological systems work and operates effectively within them; this includes the programs, policies, procedures, rules, and regulations of the organization.

Perceptual Speed - Quickly and accurately sees detail in words, numbers, pictures, and graphs.

Planning and Evaluating - Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes.

Problem Solving - Identifies problems; determines accuracy and relevance of information; uses sound judgment to generate and evaluate alternatives, and to make recommendations.

Public Safety and Security - Knowledge of the military, weaponry, and intelligence operations; public safety and security operations; occupational health and safety; investigation and inspection techniques; or rules, regulations, precautions, and prevention techniques for the protection of people, data, and property.

Reading - Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.

Reasoning - Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions.

Self-Esteem - Believes in own self-worth; maintains a positive view of staff and displays a professional image.

Self-Management - Sets well-defined and realistic personal goals; displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner; works with minimal supervision; is motivated to achieve; demonstrates responsible behavior.

Information Technology Study General Competencies (continued)

Strategic Thinking - Formulates effective strategies consistent with the business and competitive strategy of the organization in a global economy. Examines policy issues and strategic planning with a long-term perspective. Determines objectives and sets priorities; anticipates potential threats or opportunities.

Stress Tolerance - Deals calmly and effectively with high stress situations (for example, tight deadlines, hostile individuals, emergency situations, dangerous situations).

Teaching Others - Helps others learn through formal or informal methods; identifies training needs; provides constructive feedback; coaches others on how to perform tasks; acts as a mentor.

Teamwork - Encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit; works with others to achieve goals.

Technical Competence - Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Technology Application - Uses machines, tools, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.

Vision - Understands where the organization is headed and how to make a contribution; takes a long-term view and recognizes opportunities to help the organization accomplish its objectives or move toward the vision.

Writing - Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material, that is appropriate for the intended audience.

MOSAIC Competencies: Information Technology Study 2000-2001

Technical Competencies

Accessibility - Knowledge of tools, equipment, and technologies used to help individuals with disabilities use computer equipment and software.

Artificial Intelligence - Knowledge of the principles, methods, and tools used to design systems that perform human intelligence functions.

Business Process Reengineering - Knowledge of methods, metrics, tools, and techniques of Business Process Reengineering.

Capacity Management - Knowledge of the principles and methods for monitoring, estimating, or reporting actual performance or the performance capability of information systems or components.

Capital Planning and Investment Assessment - Knowledge of the principles and methods of capital investment analysis or business case analysis, including return on investment analysis.

Computer Languages - Knowledge of computer languages and their applications to enable a system to perform specific functions.

Computer Forensics - Knowledge of tools and techniques used in data recovery and preservation of electronic evidence.

Configuration Management - Knowledge of the principles and methods for planning or managing the implementation, update, or integration of information systems components.

Cost-Benefit Analysis - Knowledge of the principles and methods of cost-benefit analysis, including the time value of money, present value concepts, and quantifying tangible and intangible benefits.

Data Management - Knowledge of the principles, procedures, and tools of data management, such as modeling techniques, data backup, data recovery, data dictionaries, data warehousing, data mining, data disposal, and data standardization processes.

Database Administration - Knowledge of the principles, methods, and tools for automating, developing, implementing, or administering database systems.

Database Management Systems - Knowledge of the uses of database management systems and software to control the organization, storage, retrieval, security, and integrity of data.

Distributed Systems - Knowledge of the principles, theoretical concepts, and tools underlying distributed computing systems, including their associated components and communication standards.

Electronic Commerce (e-Commerce) - Knowledge of the principles, methods, and tools for conducting business online, including electronic data interchange.

Embedded Computers - Knowledge of specifications and uses of specialized computer systems used to control devices (for example, automobiles, helicopters), including the appropriate programming languages.

Encryption - Knowledge of procedures, tools, and applications used to keep data or information secure, including public key infrastructure, point-to-point encryption, and smart cards.

Hardware - Knowledge of specifications, uses, and types of computer or computer-related equipment.

Hardware Engineering - Knowledge of the principles, methods, and tools for designing, developing, and testing computer or computer-related equipment.

Human Factors - Knowledge of the principles, methods, and tools used to identify and apply information about human behavior, abilities, limitations, and other characteristics to the design of tools, machines, systems, tasks, jobs, and environments for effective human use.

Information Assurance - Knowledge of methods and procedures to protect information systems and data by ensuring their availability, authentication, confidentiality, and integrity.

Information Technology Study Technical Competencies (continued)

Information Resources Strategy and Planning -

Knowledge of the principles, methods, and techniques of information technology (IT) assessment, planning, management, monitoring, and evaluation, such as IT baseline assessment, interagency functional analysis, contingency planning, and disaster recovery.

Information Systems Security Certification -

Knowledge of the principles, methods, and tools for evaluating information systems security features against a set of specified security requirements. Includes developing security certification and accreditation plans and procedures, documenting deficiencies, reporting corrective actions, and recommending changes to improve the security of information systems.

Information Systems/Network Security -

Knowledge of methods, tools, and procedures, including development of information security plans, to prevent information systems vulnerabilities, and provide or restore security of information systems and network services.

Information Technology Architecture - Knowledge of architectural methodologies used in the design and development of information systems, including the physical structure of a system's internal operations and interactions with other systems.

Information Technology Performance Assessment -

Knowledge of the principles, methods, and tools (for example, surveys, system performance measures) to assess the effectiveness and practicality of information technology systems.

Information Technology Research and Development -

Knowledge of scientific principles, methods, and tools of basic and applied research used to conduct a systematic inquiry into a subject matter area.

Infrastructure Design -

Knowledge of the architecture and typology of software, hardware, and networks, including LANS, WANS, and telecommunications systems, their components and associated protocols and standards, and how they operate and integrate with one another and with associated controlling software.

Knowledge Management - Knowledge of the value of collected information and the methods of sharing that information throughout an organization.

Logical Systems Design - Knowledge of the principles and methods for designing business logic components, system processes and outputs, user interfaces, data inputs, and productivity tools (for example, CASE).

Modeling and Simulation - Knowledge of mathematical modeling and simulation tools and techniques to plan and conduct test and evaluation programs, characterize systems support decisions involving requirements, evaluate design alternatives, or support operational preparation.

Multimedia Technologies - Knowledge of the principles, methods, tools, and techniques of developing or applying technology using text, audio, graphics, or other media.

Network Management - Knowledge of the operation, management, and maintenance of network and telecommunication systems and linked systems and peripherals.

Object Technology - Knowledge of the principles, methods, tools, and techniques that use object-oriented languages, analysis, and design methodologies.

Operating Systems - Knowledge of computer network, desktop, and mainframe operating systems and their applications.

Operations Support - Knowledge of procedures to ensure production or delivery of products and services, including tools and mechanisms for distributing new or enhanced software.

Organizational Development - Knowledge of the principles of organizational development and change management theories, and their applications.

Process Control - Knowledge of the principles, methods, and procedures used for the automated control of a process, including the design, development, and maintenance of associated software, hardware, and systems.

Information Technology Study Technical Competencies (continued)

Product Evaluation - Knowledge of methods for researching and analyzing external products to determine their potential for meeting organizational standards and business needs.

Project Management- Knowledge of the principles, methods, or tools for developing, scheduling, coordinating, and managing projects and resources, including monitoring and inspecting costs, work, and contractor performance.

Quality Assurance - Knowledge of the principles, methods, and tools of quality assurance and quality control used to ensure a product fulfills functional requirements and standards.

Requirements Analysis - Knowledge of the principles and methods to identify, analyze, specify, design, and manage functional and infrastructure requirements; includes translating functional requirements into technical requirements used for logical design or presenting alternative technologies or approaches.

Risk Management - Knowledge of methods and tools used for risk assessment and mitigation of risk.

Software Development - Knowledge of the principles, methods, and tools for designing, developing, and testing software in a given environment.

Software Engineering - Knowledge of software engineering design and development methodologies, paradigms, and tools; the software life cycle; software reusability; and software reliability metrics.

Software Testing and Evaluation - Knowledge of the principles, methods, and tools for analyzing and developing software test and evaluation procedures.

Standards - Knowledge of standards that either are compliant with or derived from established standards or guidelines.

Systems Integration - Knowledge of the principles, methods, and procedures for installing, integrating, and optimizing information systems components.

Systems Life Cycle - Knowledge of systems life cycle management concepts used to plan, develop, implement, operate, and maintain information systems.

Systems Testing and Evaluation - Knowledge of the principles, methods, and tools for analyzing and developing systems test and evaluation procedures and technical characteristics of IT systems, including identifying critical operational issues.

Technical Documentation - Knowledge of procedures for developing technical and operational support documentation.

Technology Awareness - Knowledge of developments and new applications of information technology (hardware, software, telecommunications), emerging technologies and their applications to business processes, and applications and implementation of information systems to meet organizational requirements.

Telecommunications - Knowledge of transmissions, broadcasting, switching, control, and operation of telecommunications systems.

Web Technology - Knowledge of the principles and methods of web technologies, tools, and delivery systems, including web security, privacy policy practices, and user interface issues.

TRADES AND LABOR STUDY OCCUPATIONS

5306 Air Conditioning Equipment Mechanic	3603 Masonry
2892 Aircraft Electrician	6912 Materials Examining and Identifying
8602 Aircraft Engine Mechanic	6910 Materials Expediting
8852 Aircraft Mechanic	6907 Materials Handler
8840 Aircraft Mechanical Parts Repairing	7407 Meatcutting
6652 Aircraft Ordnance Systems Mechanic	3832 Medal Making
8268 Aircraft Pneudraulic Systems Mechanic	3869 Metal Forming Machine Operating
5048 Animal Caretaking	6501 Miscellaneous Ammunition, Explosives and Toxic Materials Operating
5823 Automotive Mechanic	7401 Miscellaneous Food Preparing and Serving
5402 Boiler Plant Operating	4801 Miscellaneous General Equipment Maintenance
3727 Buffing and Polishing	4701 Miscellaneous General Maintenance & Operations
4607 Carpentry	5301 Miscellaneous Industrial Equipment Maintenance Mechanic
3513 Coin/Currency Checking	5401 Miscellaneous Industrial Equipment Operating
7404 Cooking	4201 Miscellaneous Plumbing and Pipefitting
5484 Counting Machine Operating	3701 Miscellaneous Metal Processing
5725 Crane Operating	3801 Miscellaneous Metal Work
3566 Custodial Working	3401 Miscellaneous Tool Working
2608 Digital Computer Mechanic	5801 Miscellaneous Transportation/Mobile Equipment Equipment Mechanic
2854 Electrical Equipment Repairing	6901 Miscellaneous Warehousing and Stock Handling
5407 Electric Power Controlling	3809 Mobile Equipment Metal Mechanic
2805 Electrician	5703 Motor Vehicle Operating
2810 Electrician (High Voltage)	6641 Ordnance Equipment Mechanic
2606 Electronic Industrial Controls Mechanic	7002 Packing
2610 Electronic Integrated Systems Mechanic	5440 Packaging Machine Operating
2602 Electronic Measurement Equip Mechanic	4102 Painting
2604 Electronics Mechanic	5026 Pest Controlling
3711 Electroplating	4204 Pipefitting
5716 Engineering Equipment Operating	4206 Plumbing
7009 Equipment Cleaning	8255 Pneudraulic Systems Mechanic
6502 Explosives Operating	5378 Powered Support Equipment Mechanic
3105 Fabric Working	5350 Production Machinery Mechanic
7408 Food Service Working	5210 Rigging
5704 Fork Lift Operating	5706 Road Sweeper Operating
5413 Fuel Distribution Systems Operating	3806 Sheet Metal Mechanic
5003 Gardening	3820 Shipfitting
4737 General Equipment Mechanic	5786 Small Craft Operating
3712 Heat Treating	6914 Store Working
5309 Heating and Boiler Plant Equipment Mechanic	3416 Toolmaking
5803 Heavy Mobile Equipment Mechanic	6904 Tools and Parts Attending
5352 Industrial Equipment Mechanic	5705 Tractor Operating
3359 Instrument Mechanic	3833 Transfer Engraving
3610 Insulating	5406 Utility Systems Operating
3502 Laboring	4742 Utility Systems Repairing-Operating
7305 Laundry Machine Operating	5408 Wastewater Treatment Plant Operating
7304 Laundry Working	5409 Water Treatment Plant Operating
5426 Lock and Dam Operating	5424 Weighing Machine Operating
5318 Lock and Dam Repairing	3703 Welding
3431 Machine Tool Operating	4604 Wood Working
3414 Machining	
4749 Maintenance Machinery Mechanic	
5334 Marine Machinery Mechanic	

MOSAIC Competencies: Trades & Labor Occupational Study (TLOS) 2000-2002

General Competencies

Reading - Understands and interprets written material, including technical materials, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.

Writing - Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a brief, clear, and organized manner; produces written information, which may include technical material, that is appropriate for the intended audience.

Arithmetic - Performs computations such as addition, subtraction, multiplication, and division correctly using whole numbers, fractions, decimals, and percentages.

Mathematical Reasoning - Solves practical problems by choosing appropriately from a variety of mathematical and statistical techniques.

Oral Communication - Expresses information (for example, ideas or facts) to individuals or groups effectively, taking into account the audience and nature of the information (for example, technical, sensitive, controversial); makes clear and convincing oral presentations; listens to others, attends to nonverbal cues, and responds appropriately.

Creative Thinking - Uses imagination to develop new insights into situations and applies new solutions to problems; designs new methods where established methods and procedures are not suitable or are unavailable.

Information Management - Identifies a need for and knows where or how to gather information; organizes and maintains information or information management systems.

Decision Making - Makes sound, well-informed, and objective decisions; perceives the impact and implications of decisions; commits to action, even in uncertain situations, to accomplish organizational goals; causes change.

Reasoning - Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions.

Problem Solving - Identifies problems; determines accuracy and relevance of information; uses sound judgment to generate and evaluate alternatives, and to make recommendations.

Mental Visualization - Sees things in the mind by mentally organizing and processing symbols, pictures, graphs, objects, or other information (for example, sees a building from a blueprint, or sees the flow of work activities from reading a work plan).

Learning - Uses efficient learning techniques to acquire and apply new knowledge and skills; uses training, feedback, or other opportunities for self-learning and development.

Self-Esteem - Believes in own self-worth; maintains a positive view of self and displays a confident, capable image.

Teamwork - Encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit; works with others to achieve goals.

Integrity/Honesty - Contributes to maintaining the integrity of the organization; displays high standards of ethical conduct and understands the impact of violating these standards on an organization, self, and others; is trustworthy.

Self-Management - Sets well-defined and realistic personal goals; displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner; works with minimal supervision; is motivated to achieve; demonstrates responsible behavior.

Trades & Labor Occupational Study (TLOS) General Competencies (continued)

Interpersonal Skills - Shows understanding, friendliness, courtesy, tact, empathy, concern, and politeness to others; develops and maintains effective relationships with others; may include effectively dealing with individuals who are difficult, hostile, or distressed; relates well to people from varied backgrounds and different situations; is sensitive to cultural diversity, race, gender, disabilities, and other individual differences.

Planning and Evaluating - Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes.

Attention To Detail - Is thorough when performing work and conscientious about attending to detail.

Financial Management - Prepares, justifies, and/or administers the budget for program areas; plans, administers, and monitors expenditures to ensure cost-effective support of programs and policies; assesses financial condition of an organization.

Managing Human Resources - Plans, distributes, coordinates, and monitors work assignments of others; evaluates work performance and provides feedback to others on their performance; ensures that staff are appropriately selected, utilized, and developed, and that they are treated in a fair and equitable manner.

Leadership - Influences, motivates, and challenges others; adapts leadership styles to a variety of situations.

Teaching Others - Helps others learn through formal or informal methods; identifies training needs; provides constructive feedback; coaches others on how to perform tasks; acts as a mentor.

Customer Service - Works with clients and customers (that is, any individuals who use or receive the services or products that your work unit produces, including the general public, individuals who work in the agency, other agencies, or organizations outside the Government) to assess their needs, provide information or assistance, resolve their problems, or satisfy their expectations; knows about available products and services; is committed to providing quality products and services.

Organizational Awareness - Knows the organization's mission and functions, and how its social, political, and technological systems work and operates effectively within them; this includes the programs, policies, procedures, rules, and regulations of the organization.

External Awareness - Identifies and understands economic, political, and social trends that affect the organization.

Vision - Understands where the organization is headed and how to make a contribution; takes a long-term view and recognizes opportunities to help the organization accomplish its objectives or move toward the vision.

Influencing/Negotiating - Persuades others to accept recommendations, cooperate, or change their behavior; works with others towards an agreement; negotiates to find mutually acceptable solutions.

Conflict Management - Manages and resolves conflicts, grievances, confrontations, or disagreements in a constructive manner to minimize negative personal impact.

Stress Tolerance - Deals calmly and effectively with high stress situations (for example, tight deadlines, hostile individuals, emergency situations, dangerous situations).

Flexibility - Is open to change and new information; adapts behavior or work methods in response to new information, changing conditions, or unexpected obstacles; effectively deals with uncertainty.

Technology Application - Uses machines, tools, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.

Technical Competence - Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Technical Problem Solving - Troubleshoots, diagnoses, analyzes, and identifies system malfunctions to determine the source and cause of the problem.

Memory - Recalls information that has been presented previously.

Perceptual Speed - Quickly and accurately sees detail in words, numbers, pictures, and graphs.

**Trades & Labor Occupational Study (TLOS)
General Competencies (continued)**

Agility - Bends, stretches, twists, or reaches out with the body, arms, or legs.

Stamina - Exerts oneself physically over long periods of time without tiring (which may include performing repetitive tasks such as hammering or lifting objects).

Physical Strength - Exerts maximum muscle force to lift, push, pull, or carry objects; performs moderately laboring work.

Eye-Hand Coordination - Accurately coordinates one's eyes with one's fingers, wrists, or arms to perform job-related tasks (for example, to move, carry, or manipulate objects).

Spatial Orientation - Knows one's location in relation to the environment; determines where other objects are in relation to one's self (for example, when using a map).

Visual Identification - Accurately identifies people, animals, or objects based on knowledge of their characteristics.

Peripheral Vision - Sees objects or movement of objects to one's side when the eyes are focused forward.

Depth Perception - Accurately judges which of several objects is closer or farther away from the observer, or the distance between an object and the observer.

Visual Color Discrimination - Accurately matches or detects differences among colors, including shades of color and brightness.

MOSAIC Competencies: Trades & Labor Occupational Study (TLOS) 2000-2002

Technical Competencies

Animal Husbandry - Knowledge of the care and handling of animals, including feeding, controlling, restraint, health, and reproduction.

Horticulture - Knowledge of cultivating flowers, plants, and trees.

Food Production - Knowledge of planning, growing, and harvesting of food for consumption using appropriate equipment and techniques.

Food Service - Knowledge of preparing and serving food for consumption.

Cutting - Knowledge of meat cutting, including the grades and structure of meat, fish, or poultry.

Electronics - Knowledge of electronic theory, circuits, components, and material properties (excluding computers).

Computers - Knowledge of circuit boards, processors, chips, and computer hardware and software, including applications and programming.

Mechanical - Knowledge of machines and tools, including their designs, installation, uses, repair, and maintenance.

Building and Construction - Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings.

Carpentry/Woodworking - Knowledge of materials, methods, and the appropriate tools to construct, install, finish, or repair wooden objects or structures.

Plumbing and Pipefitting - Knowledge of materials, methods, and the appropriate tools to install, maintain, or repair pipelines, pipe systems, and fixtures, including water, air, steam, gas, chemicals, or sewage.

Electrical - Knowledge of electrical equipment, components, instruments, and systems, including their design, installation, testing, uses, repair, or maintenance.

Painting - Knowledge of materials, methods, and appropriate tools to apply paint and other protective coating materials on drywall, wood, metal, glass, and other surfaces.

Pest Control - Knowledge of pest species and the methods and materials, including chemicals, for control or prevention.

Road Work and Pavement - Knowledge of materials, methods, and appropriate tools to construct, maintain, or repair road surfaces, including sidewalks, parking lots, runways, etc.

Toolmaking - Knowledge of materials, methods, and appropriate tools to make or repair metal parts, tools, gauges, models, patterns, and machines.

Metal Processing and Metalworking - Knowledge of materials, methods, and appropriate tools to process, treat, form, or shape metal.

Industrial Equipment Operation - Knowledge of principles and methods for operating industrial equipment.

Ammunition and Explosives - Knowledge of ammunition and explosives and their uses, interactions, dangers, production, handling, storage, and disposal.

Hazardous Materials - Knowledge of hazardous materials and waste and their uses, interactions, dangers, production, handling, storage, and disposal.

Transportation - Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including costs and limits.

Vehicle Operation - Knowledge of procedures for operating motor vehicles, including cars, trucks, or watercraft.

Vehicle Maintenance - Knowledge of motor vehicle engines, parts, and systems, including their designs, uses, repair, and maintenance.

Aircraft Maintenance - Knowledge of aircraft engines, parts, and systems, including their designs, uses, repair, and maintenance.

Textiles - Knowledge of materials, methods, and appropriate tools to make and repair items made of fabric or leather.

Trades & Labor Occupational Study (TLOS) Technical Competencies (continued)

Public Safety and Security - Knowledge of the military, weaponry, and intelligence operations; public safety and security operations; occupational health and safety; investigation and inspection techniques; or rules, regulations, precautions, and prevention techniques for the protection of people, data, and property.

Legal, Government and Jurisprudence - Knowledge of laws, legal codes, court procedures, precedents, legal practices and documents, Government regulations, executive orders, agency rules, Government organization and functions, and the democratic political process.

Foreign Language - Knowledge of sign language or of the structure and content of a foreign (non-English) language, including the meaning and spelling of words, rules of composition, and grammar.

Administration and Management - Knowledge of planning, coordination, and execution of business functions, resource allocation, and production.

Contracting/Procurement - Knowledge of various types of contracts, techniques for contracting or procurement, and contract negotiation and administration.

Sales and Marketing - Knowledge of showing, promoting, and selling products and services.

Production and Processing - Knowledge of inputs, outputs, raw materials, waste, quality control, costs, maintaining inventory, and techniques for maximizing the manufacture and distribution of goods.

Biology - Knowledge of the environment, plant and animal living tissue, cells, organisms, and entities, including their functions, interdependencies and interactions with each other and the environment.

Chemistry - Knowledge of chemicals, including hazardous materials, and their uses, interactions, dangers, production, storage, and disposal.

Physics - Knowledge and prediction of physical principles, laws, and applications including air, water, material dynamics, light, atomic principles, heat, electric theory, earth formations, and meteorological and related natural phenomena.

Telecommunications - Knowledge of transmissions, broadcasting, switching, control, and operation of telecommunications systems.

Communications and Media - Knowledge of the production, communication and dissemination of information and ideas to inform and entertain via written, oral, and visual media.

Engineering and Technology - Knowledge of engineering concepts, principles, and practices, and of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications.

Design - Knowledge of developing, producing, understanding, and using plans, blueprints, models, and maps, including the use of tools and instruments to produce precision technical drawings.

SCIENCE & ENGINEERING STUDY OCCUPATIONS

Science & Engineering Professional Occupations

0401 General Biological Science
0408 Ecology
0414 Entomology
0430 Botany
0454 Rangeland Management
0457 Social Conservation

0460 Forestry
0470 Soil Science
0480 General Fish and Wildlife Administration
0482 Fishery Biology
0485 Wildlife Refuge Management
0486 Wildlife Biology

0801 General Engineering
0803 Safety Engineering
0806 Materials Engineering
0807 Landscape Architecture
0819 Environmental Engineering
0830 Mechanical Engineering

0840 Nuclear Engineering
0850 Electrical Engineering
0855 Electronics Engineering
0861 Aerospace Engineering
0880 Mining Engineering
0881 Petroleum Engineering

1301 General Physical Science
1306 Health Physics
1310 Physics
1313 Geophysicist
1315 Hydrology
1320 Chemistry

1321 Metallurgy
1330 Astronomy and Space Science
1350 Geology
1370 Cartography
1373 Land Surveying

Science & Engineering Technician Occupations

0404 Biological Science Technician
0455 Range Technician
0458 Soil Conservation Technician
0462 Forestry Technician

0802 Engineering Technician
0817 Surveying Technician
0856 Electronics Technician

1311 Physical Science Technician
1316 Hydrologic Technician
1371 Cartographic Technician

MOSAIC Competencies: Science and Engineering Occupational Study 2000 - 2002

General Competencies

Reading - Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.

Writing - Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material, that is appropriate for the intended audience.

Mathematical Reasoning - Solves practical problems by choosing appropriately from a variety of mathematical and statistical techniques.

Oral Communication - Expresses information (for example, ideas or facts) to individuals or groups effectively, taking into account the audience and nature of the information (for example, technical, sensitive, controversial); makes clear and convincing oral presentations; listens to others, attends to nonverbal cues, and responds appropriately.

Creative Thinking - Uses imagination to develop new insights into situations and applies innovative solutions to problems; designs new methods where established methods and procedures are inapplicable or are unavailable.

Information Management - Identifies a need for and knows where or how to gather information, organizes and maintains information or information management systems.

Decision Making - Makes sound, well-informed, and objective decisions; perceives the impact and implications of decisions; commits to action, even in uncertain situations, to accomplish organizational goals; causes change, accomplish goals; monitors progress and evaluates outcomes.

Interpersonal Skills - Shows understanding, friendliness, courtesy, tact, empathy, concern, and politeness to others; develops and maintains effective relationships with others; may include effectively dealing with individuals who are difficult, hostile, or distressed; relates well to people from varied backgrounds and different situations; is sensitive to cultural diversity, race, gender, disabilities, and other individual differences.

Reasoning - Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions.

Problem Solving - Identifies problems; determines accuracy and relevance of information; uses sound judgment to generate and evaluate alternatives, and to make recommendations.

Mental Visualization - Sees things in the mind by mentally organizing and processing symbols, pictures, graphs, objects, or other information (for example, sees a building from a blueprint, or sees the flow of work activities from reading a work plan).

Learning - Uses efficient learning techniques to acquire and apply new knowledge and skills; uses training, feedback, or other opportunities for self-learning and development.

Self-Esteem - Believes in own self-worth; maintains a positive view of self and displays a professional image.

Teamwork - Encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit; works with others to achieve goals.

Integrity/Honesty - Contributes to maintaining the integrity of the organization; displays high standards of ethical conduct and understands the impact of violating these standards on an organization, self, and others; is trustworthy.

Self-Management - Sets well-defined and realistic personal goals; displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner; works with minimal supervision; is motivated to achieve; demonstrates responsible behavior and determines

Attention to Detail - Is thorough when performing work and conscientious about attending to detail.

Financial Management - Prepares, justifies, and/or administers the budget for program areas; plans, administers, and monitors expenditures to ensure cost-effective support of programs and policies; assesses financial condition of an organization.

Science & Engineering Occupations General Competencies (continued)

Planning and Evaluating - Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization.

Managing Human Resources - Plans, distributes, coordinates, and monitors work assignments of others; evaluates work performance and provides feedback to others on their performance; ensures that staff are appropriately selected, utilized, and developed, and that they are treated in a fair and equitable manner.

Leadership - Influences, motivates, and challenges others; adapts leadership styles to a variety of situations.

Strategic Thinking - Formulates effective strategies consistent with the business and competitive strategy of the organization in a global economy; examines policy issues and strategic planning with a long term perspective; determines objectives and sets priorities; anticipates potential threats or opportunities.

Teaching Others - Helps others learn through formal and informal methods; identifies training needs; provides constructive feedback; coaches others on how to perform tasks; acts as a mentor.

Customer Service - Works with clients and customers (that is, any individuals who use or receive the services or products that your work unit produces, including the general public, individuals who work in the agency, other agencies, or organizations outside the Government) to assess their needs, provide information or assistance, resolve their problems, or satisfy their expectations; knows about available products and services; is committed to providing quality products and services.

Organizational Awareness - Knows the organization's mission and functions, and how its social, political, and technological systems work and operate effectively within them; this includes the programs, policies, procedures, rules, and regulations of the organization.

External Awareness - Identifies and understands economic, political, and social trends that affect the organization.

Vision - Understands where the organization is headed and how to make a contribution; takes a long-term view and recognizes opportunities to help the organization accomplish its objectives or move toward the vision.

Influencing/Negotiating - Persuades others to accept recommendations, cooperate, or change their behavior; works with others towards an agreement; negotiates to find mutually acceptable solutions.

Conflict Management - Manages and resolves conflicts, grievances, confrontations, or disagreements in a constructive manner to minimize negative personal impact.

Stress Tolerance - Deals calmly and effectively with high stress situations (for example, tight deadlines, hostile individuals, emergency situations, dangerous situations).

Flexibility - Is open to change and new information; adapts behavior or work methods in response to new information, changing conditions, or unexpected obstacles; effectively deals with ambiguity.

Technology Application - Uses machines, tools, instruments, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.

Technical Competence - Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Administration and Management - Knowledge of planning, coordination, and execution of business functions, resource allocation, and production.

Project Management - Applies principles, methods, or tools for developing, scheduling, coordinating, monitoring, evaluating, and managing projects and resources, including technical performance.

Contracting/Procurement - Knowledge of various types of contracts, techniques or requirements (for example, Federal Acquisitions Regulations) for contracting or procurement, and contract negotiation and administration.

Science & Engineering Occupations General Competencies (continued)

Memory - Recalls information that has been presented previously.

Perceptual Speed - Quickly and accurately sees detail in words, numbers, pictures, and graphs.

Agility - Bends, stretches, twists, or reaches out with the body, arms, or legs.

Stamina - Exerts oneself physically over long periods of time without tiring (which may include performing repetitive tasks such as data entry or coding).

Physical Strength - Exerts maximum muscle force to lift, push, pull, or carry objects; performs moderately laboring work.

Eye-Hand Coordination - Accurately coordinates one's eyes with one's fingers, wrists, or arms to perform job-related tasks (for example, to move, carry, or manipulate objects).

Spatial Orientation - Knows one's location in relation to the environment; determines where other objects are in relation to one's self (for example, when using a map).

Visual Identification - Accurately identifies people, animals, or objects based on knowledge of their characteristics.

Peripheral Vision - Sees objects or movement of objects to one's side when the eyes are focused forward.

Depth Perception - Accurately judges which of several objects is closer or farther away from the observer, or the distance between an object and the observer.

Visual Color Discrimination - Accurately matches or detects differences between colors, including shades of color and brightness.

MOSAIC Competencies: Science and Engineering Occupational Study 2000 - 2002

Technical Competencies

Accounting – Knowledge of traditional accounting practices including accrual, obligations, and costs methods.

Aerospace Engineering – Knowledge of the concepts, principles, and theories of aerodynamics or space environments related to the design, development, testing, analysis, application, and utilization of aerospace and aeronautical devices, vehicles, systems, and equipment.

Architecture - Knowledge of the concepts, principles, theories, and practices used in the planning, design, construction, and maintenance of buildings or other structures, taking into consideration aesthetic and functional concerns.

Astronomy - Knowledge of the concepts, principles, and theories of the physical processes leading to the emission of electromagnetic radiation or particles from celestial bodies, the measurement and physical characteristics of celestial bodies, including cosmic microwave background, submillimeter technology, galaxies, star formations, and planetary science.

Biology - Knowledge of plant and animal living tissue, cells, organisms, and entities, including their functions, interdependencies, and interactions with each other.

Botany - Knowledge of the concepts, principles, and theories of plants, including structures and functions, classification, taxonomy, plant communities, distribution, habitat requirements, life histories, reproduction, conservation, and care of plant species.

Building and Construction - Knowledge of the materials, methods, systems, and the tools used to construct objects, structures, and buildings.

Cartography - Knowledge of the concepts, principles, theories, and methods related to the research, design, development, or revision of maps, charts, and related cartographic products, and photogrammetric and cartographic processing.

Chemical Engineering: Knowledge of the concepts, principles, and theories related to the chemical composition or physical characteristics of materials for the design, construction, operation, and improvement of processes or systems.

Chemistry - Knowledge of the concepts, principles, and theories of the composition, structure, and properties of substances, and of the chemical processes and transformations, including uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

Civil Engineering - Knowledge of the concepts, principles, theories, and methods required to plan, design, construct, operate, and maintain facilities such as buildings, transportation systems, water and sanitary systems, and other public works systems.

Computers and Electronics - Knowledge of the design and operation of electric circuit boards, processors, chips, and computer hardware or software systems, including applications and programming.

Cost-Benefit Analysis - Knowledge of the principles and methods of cost-benefit analysis, including the time value of money, present value concepts, and quantifying tangible and intangible benefits.

Data Systems – Knowledge of computer hardware and software development and systems as they apply to the conception, specification, analysis, planning, development, installation, test, modification and use of data handling and computing systems in support of aerospace flight and ground systems.

Design – Knowledge of conceptualizing, developing, producing, understanding, and using plans, models, blueprints, and maps, including the use of tools and instruments to produce precision technical drawings, working prototypes, components, or systems.

Earth Science – Knowledge of interdisciplinary disciplines associated with the earth's composition, structure, or other physical aspects, including atmosphere.

Science & Engineering Occupations Technical Competencies (continued)

Ecology - Knowledge of the concepts, principles, and theories of the interrelationships among organisms and their environment, including competition and predation, evolution and natural selection, population dynamics, and the impact of natural phenomena or human actions on natural systems, processes, and biota.

Economics - Knowledge of economic policy, principles, and practices, market and non-market values, and the analysis and reporting of economic data.

Education and Training - Knowledge of the concepts, principles, and theories of instructional methods such as teaching, training, research, making presentations, lecturing, and testing.

Electrical Engineering - Knowledge of the concepts, principles, theories, and methods related to the design, analysis, test, and integration of electrical systems; energy conversion; electrical power generation; and energy transmission, control, distribution or use.

Electronics Engineering - Knowledge of the concepts, principles, theories, and methods related to the design, analysis, test, fabrication, or verification of analog or digital electronic systems.

Entomology - Knowledge of the concepts, principles, and theories of insects, including taxonomy, morphology, behavior, life cycles, population dynamics, host-insect interactions, the role of insects in natural and managed ecosystems, and the regulation, prevention, and control of pest-related problems.

Environmental Engineering - Knowledge of the concepts, principles, theories, and methods to protect and improve the quality of the environment and its resources; and to monitor, control, abate, and prevent pollutants.

Facilities – Knowledge of the physical, engineering, and experimental equipment and operational characteristics of facilities, and safety and equipment development designed to support aerospace activities.

Fire Management - Knowledge of the concepts, principles, and theories of fire management, including the characteristics, behavior, and ecology of fire; methodologies, strategies, and equipment used in prescribed fires; fire detection, prevention, and suppression strategies; and integration of fire with natural resource management.

Fishery Biology - Knowledge of the concepts, principles, and theories of aquatic life, including classification, taxonomy, population dynamics, distribution, habitat requirements, life histories, reproduction, behaviors, conservation, and care of aquatic species.

Flight Systems - Knowledge of the concepts, principles, and theories related to the development, design, test, and evaluation of aerospace flight vehicles and their component subsystems, or their related external systems.

Fluid Dynamics and Mechanics – Knowledge of the concepts, principles, and theories of computational fluid dynamics, fluid mechanics, flight dynamics, flight structures, the force and motion mechanics of vehicles in various atmospheric and celestial environments, aerothermodynamics, and the characteristics of electrically conducting fluids under the action of magnetic and electric fields.

Forensics - Knowledge of procedures of civil, criminal, or administrative hearings, evidence collection, including the delivery and receipt of evidence, classes of evidence, and rules of evidence and legal procedures.

Forest Management - Knowledge of the concepts, principles, and theories of silviculture and forest ecology, forest use, management, harvesting, conducting inventories, regeneration, sustainability, and conservation; and the role of disturbances in timberland resources.

General Engineering - Knowledge of the concepts, principles, and theories of engineering and their practical applications.

Genetics - Knowledge of the concepts, principles, and theories of genetics, including the biochemistry of DNA, gene interaction, gene expression, gene inheritance, population genetics, adaptation, and evolution.

Science & Engineering Occupations Technical Competencies (continued)

Geography – Knowledge of the concepts, principles, theories, and methods for describing the location and distribution of land, sea, and air masses, including their physical locations, relationships, characteristics, and what the land supports.

Geology - Knowledge of the concepts, principles, and theories of the origins and structure of the earth, including the physical forces that have shaped it and its physical and organic history.

Geophysics - Knowledge of the concepts, principles, and theories related to solid earth structure, global seismic patterns, lithosphere, atmosphere, and the behavior of the earth's gravitational, magnetic, and electrical fields, and other forces affecting the earth and its environment.

Geotechnical Engineering- Knowledge of the concepts, principles, theories, and methods related to the investigation and evaluation of subsurface soil or geologic conditions and properties for the purpose of designing stable foundation systems, earthen structures, or the remediation of subsurface conditions.

Health Physics - Knowledge of the concepts, principles, theories, and methods pertaining to the protection of people, their environment, and equipment from hazards (for example, radiation or hazardous chemicals) and the control of radioactive material.

Horticulture – Knowledge of the concepts, principles, theories, and practices of cultivation or crop management, physiological processes in plant growth and crop yield.

Hydraulic Engineering - Knowledge of the concepts, principles, theories, and methods applicable to analysis of the flow of fluids (open channel and pressure flow), estimation of river stages, and design of hydraulic structures, drainage structures, pipes, navigation facilities, reservoirs, locks, and dams.

Hydrology - Knowledge of the concepts, principles, theories, and methods related to the magnitude, distribution, and quality of water resources including watershed management, climatology, geomorphology, groundwater hydrology, water quality, water resource management, and groundwater/surface water interactions.

Landscape Architecture - Knowledge of the concepts, theories, and practices used in the planning, designing, construction, and adaptation of outdoor features, taking into consideration recreation planning, requirements, aesthetic value, and compatibility with other developments and resources.

Legal, Government and Jurisprudence - Knowledge of laws, legal codes, court procedures, precedents, legal practices and documents, Government regulations, executive orders, agency rules, Government organization and functions, and the democratic political process.

Life Sciences and Systems – Knowledge of life sciences that involve the theoretical and experimental research of life systems.

Manufacturing - Knowledge of the specifications, tools, inputs, raw materials, outputs, and waste related to the manufacture of prototypes, models, systems, or other products.

Materials Engineering - Knowledge of the concepts, principles, theories, and methods related to the composition, structures, and properties of materials, their use, behavior and performance under environmental influences, and the identification, processing, and manufacture of optimal materials for various applications.

Measurement and Instrumentation – Knowledge of electronics and related electrical engineering disciplines necessary for the research and development of sensors, electronic measurement devices, and instrumentation systems for aerospace systems and components.

Mechanical Engineering - Knowledge of the concepts, principles, theories, and methods related to planning, designing, developing, testing, or evaluating thermodynamic, mechanical, electro-mechanical, pneumatic, hydraulic, or structural equipment, systems, models, tools, or specialized mechanical devices.

Mechanics - Knowledge of machines and tools, including their design, use, benefits, repair, operation, and maintenance.

Science & Engineering Occupations Technical Competencies (continued)

Metallurgy - Knowledge of the concepts, principles, and theories related to the study of extracting, refining, alloying, and preparing metals for use; and their properties and behavior as affected by the composition, treatment in manufacture, and conditions of use.

Mining Engineering – Knowledge of the concepts, principles, theories, and methods related to rock mechanics; the exploration, excavation, extraction, processing and transporting of mineral resources; and the conservation and development of mineral lands, materials, and deposits.

Modeling and Simulation - Knowledge of the tools and techniques used to develop functional, physical, or prototype models and simulations for test and evaluation programs, the prediction of behavior and phenomena, and to visually communicate concepts.

Nuclear Engineering – Knowledge of the concepts, principles, theories, and application of nuclear technologies including research, development, construction, operation, testing, and maintenance of nuclear reactors, radiation generating devices, and associated systems and equipment.

Nuclear Physics - Knowledge of the concepts, principles, theories, and methods related to the prediction of nuclear interactions and reactions, including practices and methods used to produce, measure, use, or observe such reactions in stars, nuclear weapons systems, and radiation shielding.

Operations – Knowledge of engineering or physical science disciplines to support space flight operations, training or planning; serving as an astronaut or mission specialist.

Pathology - Knowledge of the concepts, principles, and theories of plant, insect, or animal diseases and host/pathogen relationships, including effects on natural and managed ecosystems.

Petroleum Engineering – Knowledge of the concepts, principles, theories, and methods related to the exploration, development, extraction, recovery, processing, and conservation of fluid minerals, geothermal resources, organic compounds, or natural gas resources.

Physics - Knowledge of the concepts, principles, theories, and methods to investigate and apply the relations between space, time, matter, and energy in the areas of gravity, atomic principles, mechanics, heat, light, sound, electricity, magnetism, and related natural phenomena.

Propulsion and Power - Knowledge of the concepts, principles, and theories of liquid, solid, electrical, chemical, electrochemical, or nuclear propulsion and power generation systems, their component parts and subsystems, and the direct and indirect conversion of energy into power for various applications.

Psychology – Knowledge of the concepts, principles, and theories of human behavior and performance in various contexts, mental processes, or the assessment and treatment of behavioral and affective disorders.

Public Planning - Knowledge of functions, principles, methods, and techniques of public planning, including those related to community planning, outdoor recreation planning, and natural resource management, such as demand forecasting, environmental impact analysis, financial forecasting, and land use planning and zoning.

Public Safety and Security - Knowledge of intelligence operations; public safety and security operations; occupational health and safety; investigation and inspection techniques; or rules, regulations, precautions, and prevention techniques for the protection of people, data, and property.

Quality Management - Knowledge of the principles, methods, and tools of quality assurance, quality control, and reliability used to ensure that a project, system, or product fulfills requirements and standards.

Rangeland Management - Knowledge of the concepts, principles, and theories of non-forested or forested land ecosystems, including rangeland use, management, and monitoring; conducting inventories; and the role of disturbances in rangeland ecosystems.

Remote Sensing - Knowledge of the concepts, principles, theories, and methods necessary to obtain, use, and interpret data from remote sensing sources, including aircrafts and satellites.

Science & Engineering Occupations Technical Competencies (continued)

Research - Knowledge of the scientific principles, methods, and processes used to conduct a systematic and objective inquiry; including study design, collection, analysis, and interpretation of data; and the reporting of results.

Risk Management - Knowledge of the principles, methods, and tools used for risk assessment and mitigation, including assessment of failures and their consequences.

Safety Engineering - Knowledge of the concepts, principles, theories, and methods to identify, control, mitigate, and eliminate safety hazards in the design and use of facilities, equipment, operations, and work processes.

Sociology and Anthropology – Knowledge of the concepts, principles, and theories of group behavior and dynamics; societal trends and influences; and cultures, their history, migrations, ethnicity, and origins.

Soil Science - Knowledge of the concepts, principles, or theories of soil composition, formation, classification, mapping, testing, and management, including erosion, pollution, conservation, and watershed management.

Space Science – Knowledge of physical science and engineering necessary to conduct research or study the solar system and beyond.

Structural Engineering - Knowledge of the concepts, principles, theories, and methods related to the design and analysis of complex structures using a variety of materials. Structures may include aerospace systems or structures, and other determinate or indeterminate systems.

Surveying – Knowledge of the concepts, principles, theories, and methods used in the measurement or determination of land boundaries, distances, elevations, areas, angles, and other features of the earth's surface.

Telecommunications - Knowledge of the concepts, principles, and theories of transmissions, broadcasting, switching, control, construction, or operation of telecommunications systems.

Transportation Engineering- Knowledge of the concepts, principles, theories, and methods applicable to planning, designing, and constructing of transportation systems including traffic analysis, signal analysis, highway capacity, pavement design, bridge construction, planning of transportation projects, environmental analysis of transportation facilities, and transportation network analysis.

Wildlife Biology - Knowledge of the concepts, principles, and theories of wildlife, including classification, taxonomy, population dynamics, distribution, habitat requirements, life histories, reproduction, behaviors, conservation, and care of wildlife.

Appendix G

OPM's Job Analysis Methodology

Introduction

There are a number of valid approaches to job analysis. The method described below provides one model. You are free to choose any method, provided that it is consistent with the *Uniform Guidelines on Employee Selection Procedures* (see www.uniformguidelines.com).

OPM's Job Analysis Methodology

OPM has been conducting Governmentwide occupational analyses for more than 10 years. Through these studies, we have identified critical competencies for more than 200 Federal clerical, technical, professional, and administrative occupations. By the end of 2002, critical competencies will have been identified for a total of more than 400 Federal occupations, including trade and labor occupations.

Our methodology establishes a “common language” for analyzing and describing jobs at all levels within an occupational field, and provides a more realistic basis for matching persons with jobs.

For example, rather than focusing on narrow indicators, such as years of experience or number of credit hours of education, our methodology looks at the full range and quality of an applicant’s education and experience in terms of how well it prepared him or her to perform the job.

Continued on next page

OPM's Job Analysis Methodology, Continued

How competencies should be written

You should define competencies simply and clearly and make sure that they embody a single, readily identifiable characteristic. Avoid stating a competency in way that would confuse it with a task - as frequently happens when competency statements begin with a statement such as "Ability to (perform a task)." Make the competency definitions behaviorally-based to the extent that an individual possessing that competency can be assessed through measurable behaviors. One way to do this to incorporate action verbs into the competency definitions (except for definitions of knowledge areas).

Qualifiers such as "Thorough Knowledge, Considerable Skill, or Basic Understanding," are unnecessary. These qualifiers should not be part of the competency definition - they do not provide meaningful information to distinguish examples of performance clearly.

See the MOSAIC Competencies, in Appendix F, for OPM's competencies.

Task and competency linkages

According to the *Uniform Guidelines*, tasks should be rated on importance for job performance and on the time spent/frequency. Competencies should be rated on importance, need at entry, and distinguishing value (between superior and barely acceptable performance). Examples of additional scales that can be used in the job analysis process are at the end of this appendix.

The *Uniform Guidelines* also require that the tasks and competencies be linked to demonstrate the respective job-relatedness of competencies. The linkage also ensures that there is a clear relationship between the tasks performed on the job and the competencies required to perform those tasks.

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OPM's Job Analysis Methodology, Continued

OPM's Job Analysis Methodology

The following table provides an overview of OPM's job analysis methodology. The methodology is illustrated through an example of developing a crediting plan/rating schedule. (The crediting plan/rating schedule is just one of many assessment tools available.) As you conduct the following steps, you will need the worksheets found in this appendix.

Step	Action
1	<p>First, develop a comprehensive list of tasks and competencies to describe the job. Next, collect information about the job. A good place to start is by reviewing existing materials that describe the work that is performed on the job. Such materials include:</p> <ul style="list-style-type: none"> • Position descriptions, • Classification standards, • Subject matter expert (SME) input, • Performance standards, and • Occupational studies. <p>The tasks and competencies, Appendix F, developed through OPM's Governmentwide occupational studies are also a good source of information. Since these studies are based on a comprehensive review of job information and are very broad in scope, you may not need to develop many additional tasks and competencies beyond those included in these studies.</p>
2	<p>Use the Job Analysis Worksheet for Tasks to list the tasks that are required to perform successfully on the job based on the information and/or SME input (along with the source of that information) collected in Step 1.</p>
3	<p>On the same worksheet:</p> <ol style="list-style-type: none"> a) Have the SMEs individually rate the tasks on the importance and frequency scales provided on the worksheet. (Note the scales shown on the worksheets are examples of scales that have been used in past job analyses. Alternative scales are provided at the end of this appendix);

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OPM's Job Analysis Methodology, Continued

OPM's Job Analysis Methodology (continued)

Step	Action
3	<p>b) Eliminate tasks that were rated as “Not Performed” on either the importance or frequency scale by at least half of the SMEs. Of the tasks that remain, compute an average rating (excluding any “0=Not Performed” ratings from the average) across SMEs for each task on each scale; and</p> <p>c) Then identify which tasks are critical for the job. This involves determining cutoffs for both the importance and frequency scales. A recommended cutoff is 3.0 or above for both scales. (This will vary by the scale used, depending on the anchors associated with each scale rating). That is, tasks that, on average, were rated 3.0 or above on both importance and frequency are considered critical for the job.</p>
4	<p>Use the Job Analysis Worksheet for Competencies to list competencies that are required to perform successfully in the job based on the job information collected and/or SME input, along with the source of that information (see Chapter 2, Section C, for how competencies should be stated).</p>
5	<p>On the same worksheet:</p> <p>a) Have the SMEs individually rate the competencies on the importance, need at entry, and distinguishing value scales. (Again, these scales are examples of scales used in past job analyses. Alternative scales are provided at the end of this appendix);</p> <p>b) Then average the SME ratings to produce an overall rating for each competency for each scale; and</p>

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OPM's Job Analysis Methodology, Continued

OPM's Job Analysis Methodology (continued)

Step	Action
5	<p>c) Once you have determined the SME average ratings, identify which competencies are critical for the job, based on importance and need at entry. This involves determining cutoffs for each of these scales. Recommended cutoffs for the scales shown on the worksheet are 3.0 or above for importance and 2.0 or below on need at entry. Competencies with average ratings that meet these cutoffs are considered critical for the job. Then, the ratings on the distinguishing value scale may be used to guide your decision on which of the critical competencies to include in the assessment process. A recommended cutoff on the distinguishing value scale shown on the worksheet is 3.0 or above. (Again, this will vary by the scale used, depending on the anchors associated with each scale rating).</p>
6	<p>Use the Worksheet for Task and Competency Linkages to make the linkage ratings by:</p> <p>a) In the Task No. column, write the numbers of the tasks that were identified as critical in Step 1;</p> <p>b) Write the competency numbers of the critical competencies, identified in Step 5, across the top row;</p> <p>c) Next, have each SME work independently to rate the extent to which each competency is important for effective task performance. Again, SME ratings should be averaged to come up with an overall rating for each task-competency linkage. It is recommended that a cutoff of 3.0 be used for this scale to determine which competencies are linked to each task. (Note: If any tasks/competencies are not linked, you should reconsider whether all critical tasks and competencies have been considered); and</p> <p>d) You and SMEs should then eliminate any tasks not linked to one or more competencies and competencies that are not linked to at least one task.</p>

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OPM's Job Analysis Methodology, Continued

OPM's Job Analysis Methodology (continued)

Step	Action
7	Of the competencies remaining at the end of Step 6, eliminate competencies that cannot be reasonably assessed via a rating schedule. The resulting competencies will be considered for assessment at a later time.
8	<p>Determine which competencies will be used as selective and quality ranking factors (if any).</p> <p>Note: Selective factors must be documented. To document any selective factors, use a SF-39A, <i>Request and Justification for Selective and Quality Ranking Factors</i> (see Records Retention and Disposition Appendix C)</p>
9	<p>Use the Accomplishments Worksheet to record example accomplishments and SME level ratings.</p> <p>Potential sources of accomplishments include:</p> <ul style="list-style-type: none"> • SMEs, • Job information, and • Past applications. <p>Accomplishments may come from both work and nonwork related experiences.</p>
10	<p>On the same worksheet, have:</p> <ol style="list-style-type: none"> a) SMEs rate the accomplishments as demonstrating a “high, medium, or low” level of the writing competency, which is typically done using a 1 to 3 rating. When making these ratings, SMEs should keep in mind that applicants should possess more in-depth, extensive, varied, and difficult experience at each successive level. Accomplishments incorporated in rating schedule items or benchmark descriptions should help differentiate these levels; and b) Then average the SME ratings to produce an overall level rating for each accomplishment.

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OPM's Job Analysis Methodology, Continued

OPM's Job Analysis Methodology (continued)

Step	Action
11	<p>If you are going to have applicants respond to multiple choice or yes/no questions, use the Multiple Choice/Yes-No Worksheet to develop and record rating schedule items for each competency based on the accomplishments generated in Steps 9 and 10.</p> <p>If candidates provide written responses to open-ended questions that have to be manually scored, use the Rating Schedule Benchmark Worksheet to develop and record benchmark level descriptions and examples for each competency that will be assessed.</p>
12	<p>After the rating schedule is developed, the maximum number of points an applicant may receive for each response must be determined.</p> <p>The SME high/medium/low ratings can be used to help determine the number of points associated with each item/benchmark level.</p> <p>Example: You may assign 5 points for a “high” response, 3 points for a “medium” response, and 1 point for a “low” response. If there are five competencies and the maximum number of points that can be awarded for each competency is 5, the maximum number of points an applicant can receive is 25. Therefore, 25 points transmutes to a rating of 100.</p> <p>Note: Appendix H provides a variety of different transmutation tables for your use. Determine the raw score and then transmute the raw score to a score that falls within 70 to 100 (see 5 CFR Part 337). Veterans’ preference points are then added to those candidates who meet qualification requirements.</p>

Special note

To help you fill out the worksheets needed to complete the job analysis, we have provided sample worksheets of each.

JOB ANALYSIS WORKSHEET FOR TASK AND COMPETENCY LINKAGE

Linkage Scale

How important is this competency for effective task performance?

- 1 = Not Important
- 2 = Somewhat Important
- 3 = Important
- 4 = Very Important
- 5 = Extremely Important

Competency Number														
Task Number														

Signature: _____ Title: _____ Date: _____

ACCOMPLISHMENTS WORKSHEET

Competency Title/Definition:

Accomplishments	Level Rating (High, Medium, Low)
1	
2	
3	
4	
5	
6	
7	
8	

Signature: _____

Signature: _____

Title: _____

Title: _____

Date: _____

Date: _____

MULTIPLE CHOICE/YES-NO RATING SCHEDULE WORKSHEET

Competency Title/Definition:
1
2
3
4
5
6
7
8
9
10

Signature: _____

Title: _____

Date: _____

Signature: _____

Title: _____

Date: _____

RATING SCHEDULE BENCHMARK WORKSHEET

Competency Title/Definition:
HIGH Description: Examples:
MEDIUM Description: Examples:
LOW Description: Examples:

Signature: _____

Title: _____

Date: _____

Signature: _____

Title: _____

Date: _____

SAMPLE JOB ANALYSIS WORKSHEET FOR TASKS

<i>Task</i>	Source	Importance	Frequency
1. Contacts others orally to obtain information.	OPM'S MOSAIC Study		
2. Reads and understands nontechnical materials (e.g., letters, memoranda, electronic mail, simple instructions).	OPM'S MOSAIC Study		
3. Serves as primary point of contact for a specific subject area.	OPM'S MOSAIC Study		
4. Interprets and applies laws, regulations, policies, standards, or procedures to specific issues.	Position Description		
5. Promotes or develops and maintains good working relationships with key individuals or groups.	Position Description		
6. Acquires and maintains a working knowledge of relevant laws, regulations, policies, standards, or procedures.	Position Description		
7. Provides technical advice in subject matter area to others.	Classification Standard		
8. Collaborates with others or works on teams to accomplish work-related activities.	Classification Standard		
9. Uses computer systems or applications to access, create, edit, print, send, retrieve, or manipulate data, files, or other information.	Classification Standard		
10. Discusses results, problems, plans, suggestions, terms, or conditions with others.	Subject Matter Experts		
11. Uses addition, subtraction, division, or multiplication.	Subject Matter Experts		
12. Enters data or other information into computer.	Subject Matter Experts		

Importance Scale

How important is this task to the job?

- 0 = Not Performed
- 1 = Not Important
- 2 = Somewhat Important
- 3 = Important
- 4 = Very Important
- 5 = Extremely Important

Frequency Scale

How often is this task performed?

- 0 = Not Performed
- 1 = Every few months to yearly
- 2 = Every few weeks to monthly
- 3 = Every few days to weekly
- 4 = Every few hours to daily
- 5 = Hourly to many times each hour

Signature: _____ Title: _____ Date: _____

SAMPLE JOB ANALYSIS WORKSHEET FOR COMPETENCIES

Competency	Source	Importance	Need At Entry	Distinguishing Value
1. Reading	OPM'S Mosaic Study			
2. Writing	OPM'S Mosaic Study			
3. Interpersonal Skills	Position Description			
4. Oral Communication	Position Description			
5. Reasoning	Classification Standard			
6. Decision Making	Classification Standard			
7. Customer Service	Classification Standard			
8. Arithmetic	Subject Matter Experts			
9. Mathematical Reasoning	Subject Matter Experts			
10. Personnel and Human Resources	Subject Matter Experts			

Importance Scale

How important is this competency for effective job performance?

- 1 = Not Important
- 2 = Somewhat Important
- 3 = Important
- 4 = Very Important
- 5 = Extremely Important

Need At Entry Scale

When is this competency needed for effective job performance?

- 1 = Needed the first day
- 2 = Must be acquired within the first 3 months
- 3 = Must be acquired within the first 4-6 months
- 4 = Must be acquired after the first 6 months

Distinguishing Value Scale

How valuable is this competency for distinguishing superior from barely acceptable employees?

- 1 = Not Valuable
- 2 = Somewhat Valuable
- 3 = Valuable
- 4 = Very Valuable
- 5 = Extremely Valuable

Signature: _____ Title: _____ Date: _____

SAMPLE JOB ANALYSIS FOR TASK AND COMPETENCY LINKAGE

Linkage Scale

How important is this competency for effective job performance?

- 1 = Not Important
- 2 = Somewhat Important
- 3 = Important
- 4 = Very Important
- 5 = Extremely Important

Competency Number

Competency Number															
Task Number	1	2	3	4	5	6	7	10							
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															

Signature: _____ Title: _____ Date: _____

SAMPLE ACCOMPLISHMENTS WORKSHEET

Competency Title/Definition: Writing

Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material, that is appropriate for the intended audience.

Accomplishments	Level Rating (High, Medium, Low)
1. I wrote a resource booklet explaining the rules and regulations on reinstatement after retirement. I received a lot of positive feedback from customers on the booklet.	High
2.	
3.	
4.	
5.	
6.	
7.	
8.	

Signature: _____

Signature: _____

Title: _____

Title: _____

Date: _____

Date: _____

SAMPLE MUTLIPL E CHOICE/YES-NO RATING SCHEDULE WORKSHEET

Competency Title/Definition: Writing
Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material, that is appropriate for the intended audience.
1. Have you successfully done work that involved translating technical or complex language (e.g., laws, regulations) into language that was more easily understood?
2.
3.
4.
5.
6.
7.
8.
9.
10.

Signature: _____

Title: _____

Date: _____

Signature: _____

Title: _____

Date: _____

SAMPLE RATING SCHEDULE BENCHMARK WORKSHEET

Competency Title/Definition: Writing

Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas or messages) in a succinct and organized manner; produces written information, which may include technical material, that is appropriate for the intended audience.

HIGH

Description: Composes documents or correspondence involving complex or technical information, and adapts writing to the audience's level of knowledge. Proofreads or edits complex or technical writing of others.

Examples: -Composes complex correspondence or other written work
 -Explains, in writing, the application of laws, regulations, precedents, and practices
 -Writes and publishes articles on program direction and content.

MEDIUM

Description:

Examples:

LOW

Description:

Examples:

Signature: _____

Title: _____

Date: _____

Signature: _____

Title: _____

Date: _____

Occupational Analysis Scales

(We developed these scales for use in our MOSAIC surveys.
They are available for you to use in your job analysis process).

Task Scales:

Importance

How important is this task to the job?

- 0 = Not performed
- 1 = Not important
- 2 = Somewhat Important
- 3 = Important
- 4 = Very Important
- 5 = Extremely Important

Frequency

How often is this task performed?

- 0 = Not Performed
- 1 = Every few months to yearly
- 2 = Every few weeks to monthly
- 3 = Every few days to weekly
- 4 = Every few hours to daily
- 5 = Hourly to many times each hour

Frequency

Compared to all other tasks you perform,
how much time do you spend performing
this task?

- 0 = Not Performed
- 1 = Considerably Less Than Most Tasks
- 2 = Somewhat Less Than Most Tasks
- 3 = Same As Most Tasks
- 4 = Somewhat More Than Most Tasks
- 5 = Considerably More Than Most Tasks

Competency Scales:

Importance

How important is this competency performance?

- 1 = Not Important
- 2 = Somewhat Important
- 3 = Important
- 4 = Very Important
- 5 = Extremely Important

Distinguishing Value

How valuable is this competency for
distinguishing superior
from barely acceptable employees?

- 1 = Not Valuable
- 2 = Somewhat Valuable
- 3 = Valuable
- 4 = Very Valuable
- 5 = Extremely Valuable

Need at Entry

When is this competency required for
effective job performance?

- 1 = Needed the first day
- 2 = Must be acquired within the first 3 months
- 3 = Must be acquired within the first 4-6 months
- 4 = Must be acquired after the first 6 months

Need At Entry

To what extent is it necessary that
the employee possess this competency
when entering the job?

- 1 = Essential at Entry because those
who do not possess it will not
acquire it through training or experience
- 2 = Desirable at Entry because those who
possess it develop competence more
readily
- 3 = Not Need at Entry because it is acquired
through training or experience

Appendix H

Model Agency-Based Accountability Coverage Agenda

**In this
appendix**

The information in this appendix was provided by OPM's Human Capital Leadership and Merit System Accountability's (HCLMSA), Merit Systems Compliance Group. This appendix provides information on the following topics.

Topic	See page
Model Agency-Based Accountability Coverage Agenda	H-2
Merit Principle Assessment	H-5

Merit Principles and Law

**Model Agency-
Based
Accountability
Coverage Agenda**

OPM’s HCLMSA, Merit Systems Compliance Group ensures that agencies comply with the following merit principles or laws when reviewing Delegated Examining Offices.

Merit Principle or Law	Expected Results
<p>“Recruitment should be from qualified individuals from appropriate sources in an endeavor to achieve a work force from all segments of society, and selection and advancement should be determined solely on the basis of relative ability, knowledge, and skills, after fair and open competition which assures that all receive equal opportunity.” 5 U.S.C. § 2301(b)(1)</p>	<ul style="list-style-type: none"> • Selectees are qualified. • Recruitment activities yield a balanced pool of quality applicants. • Issues of diversity manifest imbalance in the work force or (past) applicant pools are considered in planning recruitment. • Valid selection criteria are documented and applied to each recruitment action. • Competition is open: the application process complies with Merit System Principles and other related legal requirements. • Qualification requirements used are job-related and are applied equitably. • Applicants with comparable qualifications receive comparable treatment; the examining process does not introduce or reinforce inappropriate biases in rating, referral, selection, placement, or compensation. • Application acceptance, candidate referral, and interview and placement practices are “neutral”—they do not arbitrarily favor or disfavor specific candidates or type of applicants.

Continued on next page

Merit Principles and Law, Continued

Model Agency-Based Accountability Coverage Agenda (continued)

Merit Principle or Law	Expected Results
<p>Agency policies and procedures for accepting late applications are in accordance with 5 U.S.C. § 3305 and 5 CFR Part 332, Subpart C.</p>	<ul style="list-style-type: none"> • Applicants entitled to file late applications are identified and given appropriate opportunities and considerations. • Late applications received from 10 point veterans for case exams are maintained, and appropriate notification is provided for future case examinations.
<p>Veterans' Preference Act of 1944 (as amended)</p>	<ul style="list-style-type: none"> • Determinations regarding eligibility for veterans' preference (VP) are properly made, and individuals with VP are afforded their legal rights in recruitment, referral, consideration, and selection.
<p>“All employees and applicants for employment should receive fair and equitable treatment in all aspects of personnel management without regard to political affiliation, race, color, religion, national origin, sex, marital status, age, or handicapping condition, and with proper regard for their privacy and constitutional rights.” 5 U.S.C. § 2301(b)(2)</p>	<ul style="list-style-type: none"> • Information is released under the Freedom of Information and Privacy Acts in a way that does not violate the privacy of any employee or applicant. • Information is maintained in a way that does not violate the privacy of any employee or applicant. • Delegated examining process is monitored to ensure applicants who are entitled to lost consideration benefits, due to erroneous certification or out-of-order selection, receive the priority considerations to which they are entitled.

Continued on next page

Merit Principles and Law, Continued

Agency-Based Accountability Coverage Agenda (continued)

Merit Principle or Law	Expected Results
<p>“The Federal work force should be used efficiently and effectively.” 5 U.S.C. § 2301(b)(5)</p>	<ul style="list-style-type: none"> • The delegated examining process produces quality candidates in a timely manner at a reasonable cost. • Delegated examining activities support public policy on placement of surplus and displaced employees.

Merit Principle Assessment

Purpose of merit principle assessment

The following questions should be used in conjunction with the Agency-Based Accountability Coverage Agenda. These questions are used to determine whether the action under review adheres to Merit System Principles and law.

Merit Principle	Question
Recruitment is from qualified individuals, from appropriate sources	<ul style="list-style-type: none"> • Is recruitment appropriately targeted (e.g., toward under-represented groups and/or veterans)? • Does recruitment produce a sufficient number of high quality applicants? • Do appointees/selectees meet appropriate qualification requirements? • Were sufficient numbers of eligibles referred on this certificate for the number of vacancies (considering possible failure to reply, lack of interest, and candidate unavailability?)
Fair and Open Competition	<ul style="list-style-type: none"> • Does the length of the open period provide applicants a reasonable opportunity to compete, considering such factors as the volume of applications expected and the area of publicity? • Are jobs publicized through OPM's USAJOBS? • Can applicants readily obtain sufficiently detailed information on application procedures/materials, qualifications, and job requirements? • Are procedures in place to insure that applicants entitled to file late applications receive appropriate consideration? • Are late applications from 10 point veterans' preference eligibles appropriately maintained for positions filled under case examining procedures?

Continued on next page

Merit Principle Assessment, Continued

Purpose of merit principle assessment (continued)

Merit Principle	Question
Selections are based on relative ability, knowledge, and skills	<ul style="list-style-type: none"> • Are selection criteria resulting in selections of high quality? • Are KSAs and crediting plans based on job requirements, and appropriate to the level of competition?
Employees and applicants receive fair and equitable treatment	<ul style="list-style-type: none"> • Does correspondence indicate that the agency responds to Freedom of Information Act requests and inquiries in a timely and open manner, while insuring the privacy of applicants and employees? • Do the agency records of the audit of certificates and the annual audits of delegated examining units indicate that appropriate corrective action is taken to resolve cases of erroneous certification and out-of-order selection?
Efficient and effective use of the Federal work force	<ul style="list-style-type: none"> • Was this certificate issued in a timely manner? • Is there appropriate use of automation? • Is “well-qualified” defined to provide opportunities for surplus and displaced employees? • Are CTAP/ICTAP candidates receiving proper consideration for all appropriate vacancies?
Veterans’ Preference Act of 1944 (as amended) and other laws and regulations	<ul style="list-style-type: none"> • Were eligibles listed in the correct order, by score, veterans’ preference etc.? • If there were any objections or passover requests, were they properly handled? • Is the selection consistent with the rule of three?

Appendix I

CTAP/ICTAP Charts

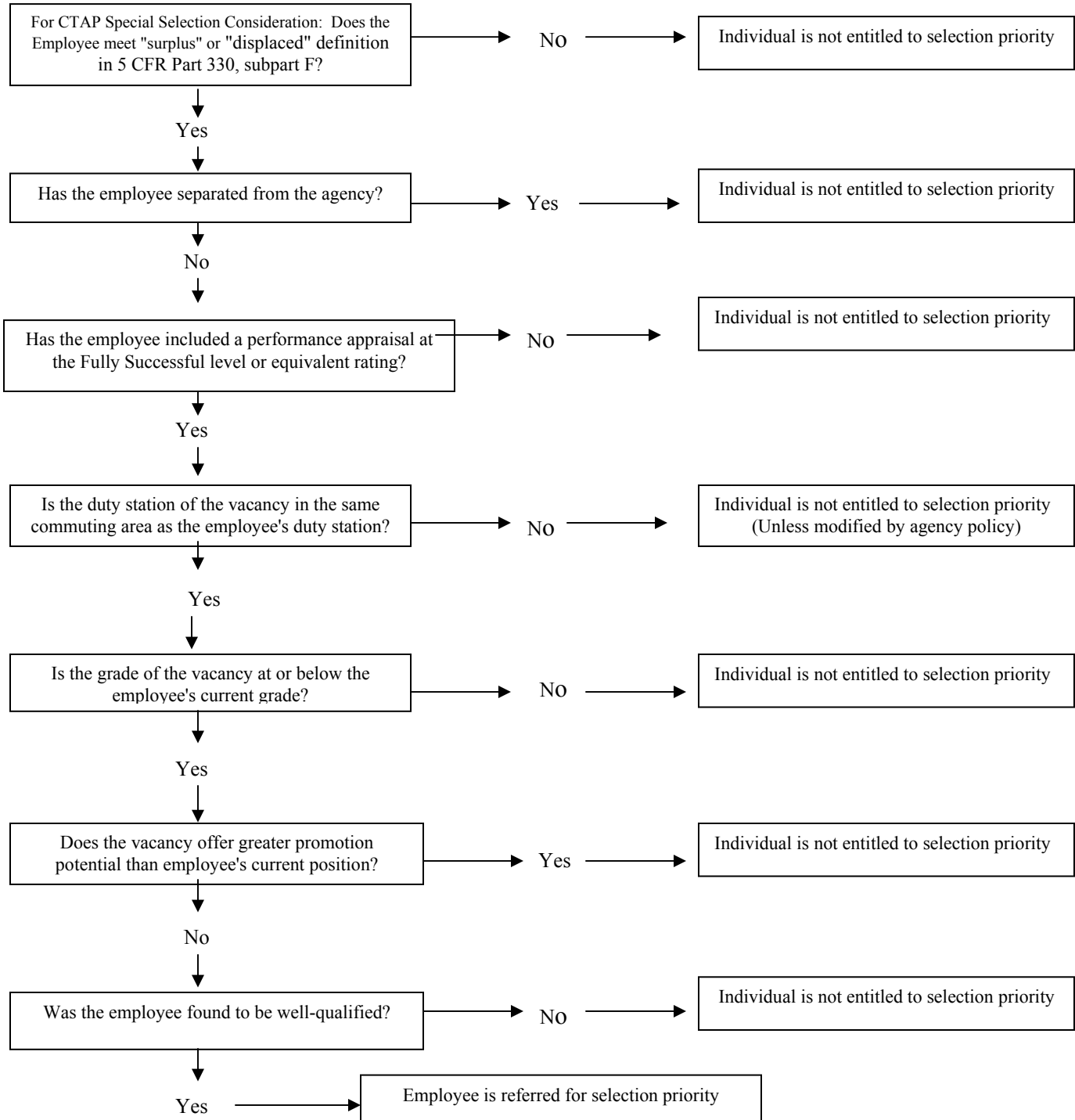
Introduction

The two charts in this appendix are to be used as a quick reference for you to follow in filling positions in compliance with CTAP/ICTAP. External competitive examining is subject to ICTAP, as are other types of external placements (e.g., transfers and reinstatements). If CTAP/ICTAP clearance is done outside the Examining Office, the Examining Office must document the case file that CTAP/ICTAP requirements were met.

NOTE: These charts are not to be used exclusively as the determining factor for selection priority. (see 5 CFR Part 330)

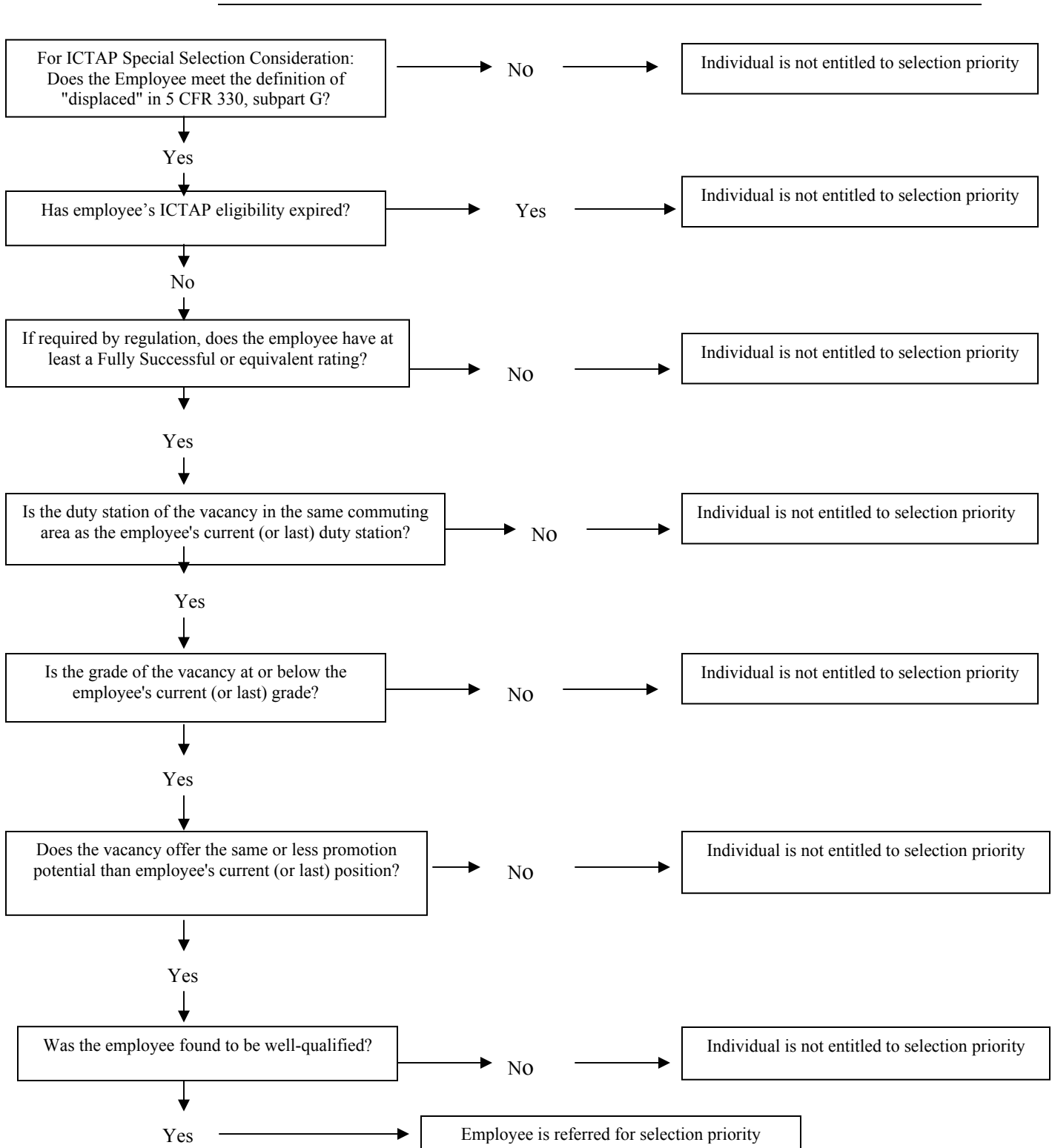
CTAP Special Selection Consideration

(This chart is not to be used exclusively as the determining factor for selection priority, please see 5 CFR 330, subpart F).



ICTAP Special Selection Consideration

(This chart is not to be used exclusively as the determining factor for selection priority, please see 5 CFR 330, subpart G).



Appendix J

Transmutation Tables for General Schedule Positions

Determining number of points an applicant can receive

Once the rating schedule has been developed, you have to determine the number of points an applicant can receive.

The first column in each table below represents the number of points. The second column is the transmuted rating, not including veterans' preference (VP). Use the transmutation table which begins with the number matching the maximum number of points. Applicants who meet OPM qualification requirements and any selective factors, but show no evidence of possession of any other experience, will be assigned a transmuted score of 70.

Number of Points	Equals (=)	Transmuted Rating (not including VP)
6	=	100
5	=	95
4	=	90
3	=	85
2	=	80
1	=	75
0	=	70

Number of Points	Equals (=)	Transmuted Rating (not including VP)
7	=	100
6	=	96
5	=	91
4	=	87
3	=	83
2	=	79
1	=	74
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
8	=	100
7	=	96
6	=	93
5	=	89
4	=	85
3	=	81
2	=	78
1	=	74
0	=	70

Number of Points	Equals (=)	Transmuted Rating (not including VP)
9	=	100
8	=	97
7	=	93
6	=	90
5	=	87
4	=	83
3	=	80
2	=	77
1	=	73
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
10	=	100
9	=	97
8	=	94
7	=	91
6	=	88
5	=	85
4	=	82
3	=	79
2	=	76
1	=	73
0	=	70

Number of Points	Equals (=)	Transmuted Rating (not including VP)
11	=	100
10	=	97
9	=	95
8	=	92
7	=	89
6	=	86
5	=	84
4	=	81
3	=	78
2	=	75
1	=	73
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
12	=	100
11	=	98
10	=	95
9	=	93
8	=	90
7	=	88
6	=	85
5	=	83
4	=	80
3	=	78
2	=	75
1	=	73
0	=	70

Number of Points	Equals (=)	Transmuted Rating (not including VP)
13	=	100
12	=	98
11	=	95
10	=	93
9	=	91
8	=	88
7	=	86
6	=	84
5	=	82
4	=	79
3	=	77
2	=	75
1	=	72
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
14	=	100
13	=	98
12	=	96
11	=	94
10	=	91
9	=	89
8	=	87
7	=	85
6	=	83
5	=	81
4	=	79
3	=	76
2	=	74
1	=	72
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
15	=	100
14	=	98
13	=	96
12	=	94
11	=	92
10	=	90
9	=	88
8	=	86
7	=	84
6	=	82
5	=	80
4	=	78
3	=	76
2	=	74
1	=	72
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
16	=	100
15	=	98
14	=	96
13	=	94
12	=	93
11	=	91
10	=	89
9	=	87
8	=	85
7	=	83
6	=	81
5	=	79
4	=	78
3	=	76
2	=	74
1	=	72
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
17	=	100
16	=	98
15	=	96
14	=	95
13	=	93
12	=	91
11	=	89
10	=	88
9	=	86
8	=	84
7	=	82
6	=	81
5	=	79
4	=	77
3	=	75
2	=	74
1	=	72
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
18	=	100
17	=	98
16	=	97
15	=	95
14	=	93
13	=	92
12	=	90
11	=	88
10	=	87
9	=	85
8	=	83
7	=	82
6	=	80
5	=	78
4	=	77
3	=	75
2	=	73
1	=	72
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
19	=	100
18	=	98
17	=	97
16	=	95
15	=	94
14	=	92
13	=	91
12	=	89
11	=	87
10	=	86
9	=	84
8	=	83
7	=	81
6	=	79
5	=	78
4	=	76
3	=	75
2	=	73
1	=	72
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
20	=	100
19	=	99
18	=	97
17	=	96
16	=	94
15	=	93
14	=	91
13	=	90
12	=	88
11	=	87
10	=	85
9	=	84
8	=	82
7	=	81
6	=	79
5	=	78
4	=	76
3	=	75
2	=	73
1	=	72
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
21	=	100
20	=	99
19	=	97
18	=	96
17	=	94
16	=	93
15	=	91
14	=	90
13	=	89
12	=	87
11	=	86
10	=	84
9	=	83
8	=	81
7	=	80
6	=	79
5	=	77
4	=	76
3	=	74
2	=	73
1	=	71
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
22	=	100
21	=	99
20	=	97
19	=	96
18	=	95
17	=	93
16	=	92
15	=	90
14	=	89
13	=	88
12	=	86
11	=	85
10	=	84
9	=	82
8	=	81
7	=	80
6	=	78
5	=	77
4	=	75
3	=	74
2	=	73
1	=	71
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
23	=	100
22	=	99
21	=	97
20	=	96
19	=	95
18	=	93
17	=	92
16	=	91
15	=	90
14	=	88
13	=	87
12	=	86
11	=	84
10	=	83
9	=	82
8	=	80
7	=	79
6	=	78
5	=	77
4	=	75
3	=	74
2	=	73
1	=	71
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
24	=	100
23	=	99
22	=	98
21	=	96
20	=	95
19	=	94
18	=	93
17	=	91
16	=	90
15	=	89
14	=	88
13	=	86
12	=	85
11	=	84
10	=	83
9	=	81
8	=	80
7	=	79
6	=	78
5	=	76
4	=	75
3	=	74
2	=	73
1	=	71
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
25	=	100
24	=	99
23	=	98
22	=	96
21	=	95
20	=	94
19	=	93
18	=	92
17	=	90
16	=	89
15	=	88
14	=	87
13	=	86
12	=	84
11	=	83
10	=	82
9	=	81
8	=	80
7	=	78
6	=	77
5	=	76
4	=	75
3	=	74
2	=	72
1	=	71
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
26	=	100
25	=	99
24	=	98
23	=	97
22	=	95
21	=	94
20	=	93
19	=	92
18	=	91
17	=	90
16	=	88
15	=	87
14	=	86
13	=	85
12	=	84
11	=	83
10	=	82
9	=	80
8	=	79
7	=	78
6	=	77
5	=	76
4	=	75
3	=	73
2	=	72
1	=	71
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
27	=	100
26	=	99
25	=	98
24	=	97
23	=	96
22	=	94
21	=	93
20	=	92
19	=	91
18	=	90
17	=	89
16	=	88
15	=	87
14	=	86
13	=	84
12	=	83
11	=	82
10	=	81
9	=	80
8	=	79
7	=	78
6	=	77
5	=	76
4	=	74
3	=	73
2	=	72
1	=	71
0	=	70

=Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
28	=	100
27	=	99
26	=	98
25	=	97
24	=	96
23	=	95
22	=	94
21	=	93
20	=	91
19	=	90
18	=	89
17	=	88
16	=	87
15	=	86
14	=	85
13	=	84
12	=	83
11	=	82
10	=	81
9	=	80
8	=	79
7	=	78
6	=	76
5	=	75
4	=	74
3	=	73
2	=	72
1	=	71
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
29	=	100
28	=	99
27	=	98
26	=	97
25	=	96
24	=	95
23	=	94
22	=	93
21	=	92
20	=	91
19	=	90
18	=	89
17	=	88
16	=	87
15	=	86
14	=	84
13	=	83
12	=	82
11	=	81
10	=	80
9	=	79
8	=	78
7	=	77
6	=	76
5	=	75
4	=	74
3	=	73
2	=	72
1	=	71
0	=	70

Continued on next page

Transmutation Tables for General Schedule Positions, Continued

Determining number of points an applicant can receive (continued)

Number of Points	Equals (=)	Transmuted Rating (not including VP)
30	=	100
29	=	99
28	=	98
27	=	97
26	=	96
25	=	95
24	=	94
23	=	93
22	=	92
21	=	91
20	=	90
19	=	89
18	=	88
17	=	87
16	=	86
15	=	85
14	=	84
13	=	83
12	=	82
11	=	81
10	=	80
9	=	79
8	=	78
7	=	77
6	=	76
5	=	75
4	=	74
3	=	73
2	=	72
1	=	71
0	=	70

Appendix K

Professional and Scientific Positions

**Professional
and scientific
positions**

Below is the list of professional and scientific positions.

Series	Position Titles
0020	Community Planning
0060	Chaplain
0095	Foreign Law Specialist
0101	Social Science
0110	Economist
0130	Foreign Affairs
0131	International Relations
0135	Foreign Agricultural Affairs
0140	Manpower Research & Analysis
0150	Geography
0170	History
0180	Psychology
0184	Sociology
0185	Social Work
0190	General Anthropology
0193	Archeology
0401	General Biological Science
0403	Microbiology
0405	Pharmacology
0406	Agricultural Extension
0408	Ecology
0410	Zoology
0413	Physiology
0414	Entomology
0415	Toxicology
0430	Botany
0434	Plant Pathology
0435	Plant Physiology
0436	Plant Protection and Quarantine
0437	Horticulture
0440	Genetics
0454	Range Conservation
0457	Soil Conservation
0460	Forestry

Continued on next page

Professional and Scientific Positions, Continued

Professional and scientific positions (continued)

Series	Position Titles
0470	Soil Science
0471	Agronomy
0475	Agricultural Management (Cancelled)
0480	General Fish and Wildlife Administration
0482	Fishery Biology
0485	Wildlife Refuge Management
0486	Wildlife Biology
0487	Animal Science
0493	Home Economics
0510	Accounting
0511	Auditing
0512	Internal Revenue Agent
0601	General Health Science
0602	Medical Officer
0610	Nurse
0630	Dietitian & Nutritionist
0631	Occupational Therapist
0633	Physical Therapist
0635	Corrective Therapist
0637	Manual Arts Therapist
0638	Recreation/Creative Arts Therapist
0639	Educational Therapist
0644	Medical Technologist
0660	Pharmacist
0662	Optometrist
0665	Speech Pathology & Audiology
0668	Podiatrist
0680	Dental Officer
0690	Industrial Hygiene
0696	Consumer Safety
0701	Veterinary Medical Science
0801	General Engineering
0803	Safety Engineering
0804	Fire Prevention Engineering
0806	Materials Engineering
0807	Landscape Architecture
0808	Architecture
0810	Civil Engineering
0819	Environmental Engineering

Continued on next page

Professional and Scientific Positions, Continued

Professional and scientific positions (continued)

Series	Position Titles
0830	Mechanical Engineering
0840	Nuclear Engineering
0850	Electrical Engineering
0854	Computer Engineering
0855	Electronic Engineering
0858	Biomedical Engineering
0861	Aerospace Engineering
0871	Naval Architecture
0880	Mining Engineering
0881	Petroleum Engineering
0890	Agricultural Engineering
0892	Ceramic Engineering
0893	Chemical Engineering
0894	Welding Engineering
0896	Industrial Engineering
0904	Law Clerk
0905	General Attorney
1015	Museum Curator
1102	Contracting ¹
1220	Patent Administration
1221	Patent Advisor
1222	Patent Attorney
1223	Patent Classifying
1224	Patent Examining
1226	Design Patent Examining
1301	General Physical Science
1306	Health Physics
1310	Physics
1313	Geophysics
1315	Hydrology
1320	Chemistry
1321	Metallurgy
1330	Astronomy & Space Science
1340	Meteorology
1350	Geology
1360	Oceanography

Continued on next page

¹ Note: 10-point compensably disabled veterans continue to float at grade GS-9 and above in the GS-1102 occupation.

Professional and Scientific Positions, Continued

Professional and scientific positions (continued)

Series	Position Titles
1370	Cartography
1372	Geodesy
1373	Land Surveying
1380	Forest Products Technology
1382	Food Technology
1384	Textile Technology
1386	Photographic Technology
1410	Librarian
1420	Archivist
1510	Actuary
1515	Operations Research
1520	Mathematics
1529	Mathematical Statistician
1530	Statistician
1540	Cryptography
1550	Computer Science
1701	General Education & Training
1710	Educational and Vocational Training
1720	Education Program
1725	Public Health Educator
1730	Education Research
1740	Education Services
1750	Instrumental Systems

Appendix L

Random Number Referral Instructions

When is a random number referrals used?

The random number referral procedure is used when all job-related methods for breaking ties have been exhausted. It is used to rank tied eligibles by matching the last digit of the identification number, such as the Social Security Number (SSN), against a randomly chosen number sequence which is changed daily.

What is a random number list?

A Random Number List is a computer generated list of random numbers (see page L-4) used in the tie breaking process. The list identifies a random number and provides a blank space for a date when it will be used. The date indicates the day you issued a certificate with tied ratings.

Dates entered in the **Random Number List** should be only those dates on which at least one certificate was issued. For example, if a certificate was issued on October 9, 1995, and the next one was not issued until October 13, 1995, those dates would follow in sequence on the List.

However, we recommend that each time you use a new Random Number List page that you fill out the whole page with consecutive business-day dates. This will help ensure that the process is truly random.

Basic rule to random number lists

Within a tied-rating group, the ties are broken by using the last digits of the identification numbers or SSN. You use the numbers from the last number working inward or right to left. The numbers are compared with the random number sequence in order to determine the rank order of the eligibles.

What is a random number sequence?

A random number sequence is an order of numbers starting with the random number. The normal number sequence is 0123456789. When you have a random number, the sequence begins with the random number. For example, with a random number of 5, the sequence is 5678901234.

The rule to remember is for a random number sequence the numbers are written out from left to right.

Continued on next page

Random Number Referral Instructions, Continued

Example 1

Today is the 10th day of the month and you have a tied-rating group. You write the current date on the random number list. The random number for today is 9. You write out the random number sequence first and the sequence for today is **9012345678**. The tied eligibles and order of certification will be:

Identification # of Tied Eligibles	Order of Certification
970863	415239
415239	067112
954416	970863
067112	954416

All tied eligibles with identification numbers ending in 9 are certified first; those ending in 0, second; those ending in 1, third; etc.

Example 2

If more than one identification number in a tied rating group ends with the same digit, the same procedure is applied to the next to the last digit and so on until the necessary ties are broken. Each digit (next to the last, second to the last, etc.) is compared to the first number in the sequence, and so on until all necessary eligibles are ranked. The random number for this example is 9. The random number sequence is: 9 0 1 2 3 4 5 6 7 8.

Identification # of Tied Eligibles	Order of Certification
431888	872149
894671	914989
914989	505070
872149	391741
934812	894671
505070	371112
391741	934812
371112	431888

- When using the random number sequence, begin with the random number moving in the direction of left to right and ending with the number 8. When applying the random number sequence to the identification (ID) number, you move in the direction of right to left.
- In this example, the first number in the random sequence is 9; therefore, any ID number ending in 9 is considered first.

Continued on next page

Random Number Referral Instructions, Continued

Example 2 (continued)

- When using the random number sequence, begin with the random number moving in the direction of left to right and ending with the number 8. When applying the random number sequence to the identification (ID) number, you move in the direction of right to left.
 - In this example, the first number in the random sequence is 9; therefore, any ID number ending in 9 is considered first.
 - There are two ID numbers that ends in 9, i.e., 914989 and 872149. Since the numbers are tied, you need to break the ties by considering the next digit to the left of the number, i.e., 8 and 4. Since the number 4 is closer to 9 than 8 in the random number sequence, the tie is broken as 872149 then 914989. If a tie continues, repeat the above steps until the tie is broken.
 - After the tie is broken for the first set of ID numbers, begin again with the next ID number. The random number sequence continues with the next number in the sequence which is "0" then "1" then "2", and so forth.
 - The next ID number is 505070. There is no other ID number that ends with a "0"; therefore, this ID number is third on the list.
 - Continue this procedure until enough eligibles have been ranked to fill the requests.
-

Maintaining random lists

You may maintain one **Random Number List** to be used by the entire office. When all the numbers on the **Random Number List** have been used, start over at the beginning of the list.

Automated competitor inventory random numbers are system-generated, and a manual list should not be used.

How to handle random lists

Your office may make copies of the list for internal use, but the random number material is to be treated as **confidential** and should not be released to agencies or the general public (see next page for Random Number List).

Random Number List

Random Number List									
Date	Number	Date	Number	Date	Number	Date	Number	Date	Number
—	0	—	0	—	1	—	2	—	8
—	3	—	4	—	5	—	7	—	2
—	1	—	3	—	6	—	3	—	9
—	6	—	7	—	3	—	4	—	7
—	2	—	9	—	2	—	9	—	4
—	4	—	1	—	8	—	8	—	0
—	8	—	5	—	9	—	6	—	1
—	7	—	6	—	0	—	1	—	3
—	5	—	2	—	4	—	5	—	5
—	9	—	8	—	7	—	0	—	6
—	7	—	2	—	1	—	6	—	7
—	3	—	8	—	5	—	2	—	4
—	2	—	3	—	7	—	0	—	5
—	6	—	0	—	3	—	5	—	1
—	0	—	7	—	4	—	8	—	9
—	8	—	6	—	8	—	4	—	3
—	1	—	1	—	2	—	9	—	2
—	5	—	5	—	6	—	7	—	0
—	9	—	4	—	9	—	3	—	8
—	4	—	9	—	0	—	1	—	4
—	3	—	5	—	5	—	9	—	4
—	6	—	4	—	9	—	2	—	7
—	7	—	7	—	4	—	0	—	9
—	9	—	2	—	1	—	4	—	6
—	8	—	9	—	8	—	8	—	5
—	2	—	3	—	3	—	6	—	2
—	4	—	8	—	0	—	3	—	3
—	1	—	6	—	7	—	7	—	1
—	0	—	1	—	2	—	1	—	0
—	5	—	0	—	6	—	5	—	8
—	2	—	7	—	0	—	6	—	3
—	7	—	5	—	9	—	5	—	5
—	8	—	3	—	5	—	0	—	0
—	5	—	9	—	7	—	7	—	6
—	6	—	1	—	1	—	9	—	1
—	4	—	8	—	2	—	3	—	2
—	3	—	6	—	8	—	4	—	4
—	1	—	2	—	3	—	8	—	8
—	9	—	4	—	6	—	2	—	7
—	0	—	0	—	4	—	1	—	9

*From statistical Analysis for Managerial Decisions, John C.G. Boot and Edwin B. Cox, 1970.

Appendix M

Instructions for Completing the Delegated Examining Quarterly Workload Report Form

Introduction Under delegated examining with OPM, you agreed to report your delegated examining activities on a quarterly basis. The Delegated Examining Quarterly Workload Report helps you to meet this requirement. Instructions for completing the report form are below.

When report is due This report is **due by the 15th of the month following the end of the reporting quarter** (i.e., January 15, April 15, July 15, and October 15). If your delegated examining unit (DEU) did not have any delegated examining activities for the quarter, you must still submit a negative report.

You must submit your report to your local OPM Services Branch.

Materials needed for completing report When completing the Quarterly Workload Reporting form, found at the end of this appendix, count all applications and selections, including those for temporary and term appointment, that were processed under delegated examining. Count only the workload actually produced by your DEU, including work accomplished for another Federal agency.

Do not include:

- Applications and selections that occurred under either Outside-the-Register hiring authority or noncompetitive authority;
 - Applications collected or selections made under the Outstanding Scholar hiring authority; or
 - Work produced by OPM under a reimbursable contract or by another Federal agency.
-

Continued on next page

Instructions for Completing the Delegated Examining Quarterly Workload Report Form, Continued

Completing the quarterly workload reporting form

These instructions will help you complete the Quarterly Workload Reporting form. You will need to provide:

Completing Quarterly Workload Reporting Form	
Line #	Information to be provided...
	Delegated Examining Unit Identification Number (DEUIDNO). A DEUIDNO is assigned to each delegated examining office. This number is used to identify the examining office in OPM's automated tracking system. If you know your DEUIDNO, please complete. If you do not know your DEUIDNO, you can either leave this line blank or contact your local OPM Services Branch.
1	Name and Location of Examining Office Please provide your agency/subagency name and address.
2	Contact Person Preparing Report Please provide the name of your staff member responsible for completing this report.
3	Phone Number Please provide the telephone number where the contact person can be reached.
4	FY and Quarter Please indicate the fiscal year and quarter in which the delegated examining work was completed.
5	Number of applications processed Count the total number of applications, eligibles and ineligibles, processed during the reporting quarter.
6	Number of selections made Count the total number of selections made from certificates audited during the reporting quarter. How many selections were made on the audited certificates shown on Line 8?
7	Number of preference eligibles selected Count the total number of preference eligibles selected from the number of selections reported on Line 6. How many of the selectees on Line 6 were preference eligibles.
8	Number of certificates audited Count the total number of certificates audited during the reporting quarter. These are certificates that were audited (returned by the selecting official and closed-out by the Examining Office) during the quarter, rather than the number of certificates that were issued.

Continued on next page

Instructions for Completing the Delegated Examining Quarterly Workload Report Form, Continued

Completing the quarterly workload reporting form (continued)

Lines 9-16 Refer to Certificates Audited During the Reporting Quarter	
Line #	Information to be provided...
9	Number of certificates in (8), which had preference eligibles at the top. Total number of audited certificates on Line 8, which had preference eligible(s) at the top of the list. "At the top" refers to the first three eligibles listed on a certificate of eligibles.
10	Number of certificates in (9), which were used Total number of audited certificates on Line 9, which had one or more selections, reported.
11	Number of certificates in (9), which were unused Total number of audited certificates on Line 9 in which no selection was made.
NOTE: The numbers reported on Line 10 and Line 11 must equal Line 9.	
12	Number of certificates in (11) unused because of CTAP/ICTAP referral Total number of audited certificates on Line 11 in which the selecting official reported making no selection because of CTAP/ICTAP referral(s).
13	Number of certificates in (8) which preference eligibles were <u>not</u> at the top Total number of audited certificates on Line 8 in which no preference eligible(s) was within the first three eligibles on the list. This includes all the remaining certificates audited during the reporting quarter not reported on Line 9.
NOTE: The numbers reported on Line 9 and Line 13 must equal Line 8.	
14	Number of certificates in (13) which were used Total number of audited certificates on Line 13 which had one or more selections reported.
15	Number of certificates in (13) which were unused Total number of audited certificates on Line 13 which no selection was made.
NOTE: The numbers reported on Line 14 and Line 15 must equal Line 13.	

Continued on next page

Instructions for Completing the Delegated Examining Quarterly Workload Report Form, Continued

Completing the quarterly workload reporting form (continued)

Lines 9-16 Refer to Certificates Audited During the Reporting Quarter	
16	Number of certificates in (15) above unused because of CTAP/ICTAP referral Total number of audited certificates on Line 11 in which the selecting official reported making no selection because of CTAP/ICTAP referral(s).
17	Internal self-evaluation of delegated examining operations Fill in the date your annual internal delegated examining operations self-evaluation was completed. Complete Line 17 only for the fiscal quarter during which the self-evaluation was completed.

Delegated Examining Quarterly Workload Reporting Form (05/01/02)

When To Use this Form Your Delegated Examining Office should make copies of this form in order to provide workload information to your local OPM Services Branches. Reports cover examining activity for the previous fiscal quarter and are due to OPM by the 15 of the month following the end of the quarter (Example: The report for the 1st quarter, October 1 through December 31, will be due on January 15).

What to include in Report Count only workload items, including those for temporary and term appointments that were processed under your delegated examining authority. Do not include workload that occurred outside-the-register hiring authority, merit promotion or other noncompetitive authority, or excepted service-hiring procedures.

Count only the workload actually produced by your Examining Office, including work accomplished for another Federal agency. Do not count work produced by OPM under a reimbursable contract, or by another Federal agency.

Delegated Examining Offices are responsible for collecting the reasons for not using the certificates they issue, analyzing the reasons provided, and looking for trends of non-use.

DEUIDNO:

(1) Name and Location of Examining Office _____

(2) Contact Person Preparing Report _____

(3) Phone Number _____

(4) FY _____ Quarter _____

(5) Number of applications processed: _____

(6) Number of selections made: _____

(7) Number of preference eligibles selected: _____

(8) Number of certificates audited²: _____

(9) No. of certificates in (8) which had preference eligibles at the top: _____

(10) No. of certificates in (9) which were used: _____

(11) No. of certificates in (9) which were unused: _____

(12) No. of certificates in (11) unused because of CTAP and ICTAP referral: _____

(13) No. of certificates in (8) which preference eligibles were not at the top: _____

(14) No. of certificates in (13) which were used: _____

(15) No. of certificates in (13) which were unused: _____

(16) No. of certificates in (15) above unused because of CTAP/ICTAP referral: _____

(17)³ We certify that an internal self-evaluation of our delegated examining operations was completed on _____ (Enter date)

² Count certificates that were audited (returned by the selecting official and closed-out by the EO) during the quarter, rather than the number of certificates that were issued.

³ Complete Line 17 only for the fiscal quarter during which the self-evaluation was completed.

Appendix N

Oversight Review Guide

**Oversight
review guide**

This guide can be used by your agency to conduct its internal review audit or for your delegated examining office to prepare for an OPM audit. Focus is on four major categories described as:

- I. Organization and Jurisdiction
- II. Recruitment
- III. Application Processing
- IV. Certification/Selection

Category	Questions
<p>Organization and Jurisdiction</p>	<ul style="list-style-type: none"> • Identify examining coverage: position titles, grades, and geographic jurisdiction. • If the agency has published procedures covering DE operations, are they in compliance with legislation, OPM regulations and instructions? • Is the agency furnishing the quarterly reports on selections and applications processed as required by the delegated examining agreement? • Is the agency adhering to the records retention/disposal schedule in accordance with OPM requirements? • Is competitive examining only being conducted by installation staff trained and certified by OPM’s Human Capital Leadership and Merit System Accountability Division? • Has the installation implemented its internal accountability system as required by the delegation agreement? • Did the installation conduct the required annual review of DEO operations utilizing non-DEO staff? Did the report of the annual review reflect significant deficiencies in operations? Was a copy of the quarterly workload report sent to the local OPM Services Branch?

Continued on next page

Oversight Review Guide, Continued

Oversight review guide, (continued)

Category	Questions
Recruitment	<ul style="list-style-type: none"> • Are jobs publicized through OPM's USAJOBS? • Does the public notice indicate: specific job(s), and qualifications required, including experience, education, selective and/or quality ranking factors? • Is there reasonable opportunity to compete based on: length of open periods, areas of publicity, and use of productive recruitment sources? • Are application procedures clear regarding qualifications required, bases for rating, and identification of application forms and filing address? • Do vacancy announcements contain required notifications to CTAP/ICTAP eligibles and definition of well-qualified? • Are replies to inquiries accurate, responsive, and timely (written and verbal)? • Is recruitment appropriately targeted (toward under-represented groups, veterans)? • Does recruitment produce a sufficient number of high quality applicants?

Continued on next page

Oversight Review Guide, Continued

Oversight review guide (continued)

Category	Questions
<p>Application processing</p>	<ul style="list-style-type: none"> • Are applications from persons entitled to file late applications processed appropriately? • Are KSAs and crediting plans based on job requirements, and appropriate to the level of competition? Are KSAs and crediting plans consistently applied? • Has the agency established a formal rating reconsideration procedure? If so, review the procedure and the levels of review provided. • Review a sampling of rated and processed applications (eligible and ineligible). Is the date of receipt (or postmark) indicated? Does application meet criteria for receipt (exam open)? Is the rating correct? Was veterans' preference correctly awarded and recorded? Were reconsiderations processed according to procedures/documented/applicant notified? • How are incomplete applications treated? Are all incomplete applications processed the same? • Is there evidence of non-merit factors such as unwarranted consideration of name requests, conversions of temporary and/or excepted employees without open competition, etc.? • Is there documentation supporting determinations that an otherwise eligible CTAP/ICTAP candidate is not well-qualified? • Are court approved rating instruments (either the Individual Achievement Record (IAR) or the IAR with the appropriate written test) being used to fill positions that are subject to the provisions of the Luevano consent decree? • Is the agency requesting applicants for positions that are subject to the provisions of the Luevano consent decree complete OPM Form 1386B. Note: This form is voluntary on the part of the applicant.

Continued on next page

Oversight Review Guide, Continued

Oversight Review Guide, (continued)

Category	Questions
Certification and selection	<ul style="list-style-type: none"> • Review a sampling of audited certificates for technical accuracy. • Were eligibles selected from the appropriate register for certification?⁴ • Were eligibles listed in the correct order, by score, veterans' preference, etc.? • Were objections or passover requests, if any, handled properly? • Is the selection within the "rule of three"? • Does the selection meet CTAP/ICTAP regulatory requirements? • Assess whether veterans are receiving bona fide consideration (review patterns of non-use of certificates and objections/passovers). • Are certification procedures uniform for all eligibles? • Were applicants who were not selected appropriately returned to the register?¹ (Assess whether register eligibles lose consideration due to untimely or inaccurate return of eligibles to registers). • Were returned certificates audited within three workdays of their return from selecting officials? • Are changes requested by register eligibles made quickly and accurately?¹ (Assess whether requested changes are delayed in such a manner that applicants lose consideration). • Are selecting officials satisfied with the quality and timeliness of certificates?

⁴ Register based examining only.