

CENTER FOR VETERINARY MEDICINE

EVALUATION PLAN
FOR RESEARCH SCIENTIST POSITIONS
IN THE CENTER FOR VETERINARY MEDICINE

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EVALUATION PLAN
FOR RESEARCH POSITIONS

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CENTER FOR VETERINARY MEDICINE (CVM)

EVALUATION PLAN FOR RESEARCH POSITIONS

I. PURPOSE

This Evaluation Plan establishes the responsibilities, procedures and standards which will be followed in evaluating the scientific qualifications and contributions of: (1) candidates for vacant research scientist positions in the CVM; (2) CVM research scientists proposed for mandatory classification review every five years (Cyclical Review); (3) research scientists proposed for promotion to the GS-11 level and above; and/or (4) Staff Fellows when they are to be converted to a research scientist at the GS-11 level and above.

This plan does not cover the evaluation of Senior Executive Service positions, supervisory personnel, support or service personnel, Commissioned Corps Officers, Visiting Scientists, IPA's or similar positions of a temporary nature.

Under this Plan, the grade of a position is based on the Aperson-in-the-job@ concept. Promotions made under the Plan are Career Promotions and are not subject to competitive promotion procedures.

II. POSITIONS COVERED

A. Identification of Research and Mixed Positions

There are two types of research scientist positions that function in a research environment. The differences between the types of positions need to be clearly understood, because these positions are treated differently from the standpoint of career advancement and methods of evaluation for classification purposes.

1. Research Position

The first type of position is the research scientist position. A research scientist position in the Food and Drug Administration (FDA) is predominantly (more than 50 percent of the time) **engaged in performing or leading all elements of research (as defined below)**, and the Research Grade-Evaluation Guide (RGEN) is the classification standard used to determine its grade level. A Research position meets the following criteria:

- a. The position is characterized by systematic investigation of theory, experimentation, or

simulation of experiments directed toward the development of (a) new or (b) expanded scientific knowledge of the subject studied.

- b. The work is characterized by a scientific process, including problem exploration and definition, planning of the approach and sequence-of steps, execution of experiments or studies, interpretation of findings and documentation or reporting of findings.
- c. There is a clear requirement for the exercise of creativity and critical judgment.
- d. The qualifications, stature, and contributions of the incumbent have a direct, major impact on the level of difficulty and responsibility of the work performed.
- e. Research capability, as demonstrated by research experience and/or graduate education, is a significant requirement in the selection of candidates.

2. Mixed Positions

The second type of position is a mixed position. This type of position is unique to the regulatory environment found in FDA and encompasses a combination of research activity coupled with review, analytical, compliance, or other similar scientific regulatory activity. This position differs from fulltime review, analytical, compliance or regulatory review scientist positions found throughout FDA in that it includes basic or applied research duties that are performed less than a majority of time. These positions are rare in the FDA; however, each position of this type will need to be independently analyzed to determine the most appropriate method of evaluation and classification. The decision as to whether the peer review process, using the Research Grade-Evaluation Guide, or the traditional classification process, using appropriate classification standards, is applicable may depend on several variables including: percentage of time spent in research vs regulatory activities, management intent as to how the position should function, relative level of duties performed in a regulatory capacity in comparison to complexity of research assignment, and level of the incumbent's qualifications, scientific stature, recognition, and impact. Since research position classification is based heavily on the impact of the person-in-the-job, and traditional classification places primary emphasis

on the level of duties and responsibilities assigned to the position by management, the decision as to which classification approach to use is critical because the final classification decision may be different depending on which criteria are applied.

Research duties that occupy less than the majority of an employee's time and are of higher grade value than the work that occupies most of his/her time, may control the grade of the position and meet the definition of a research position, if all four of the following criteria are met.

- a. The research duties must be "paramount in influence and weight.@ This means the duties must relate to the basic purpose and reason for the very existence of the position.
- b. The research duties must occupy a 'substantial' part of the employee's time. Substantial is considered to be 25 percent, 20 percent may be acceptable; however, less than 20 percent is unacceptable.
- c. The research duties must be assigned on a "reasonably frequent and recurring basis." This requirement excludes one-time duties often of "emergency, incidental, or temporary nature."
- d. The research duties must be so different from the other work that they require a "materially higher" level of qualifications. To meet the requirement of "materially higher," the qualifications must be different in "kind" rather than different in degree of "difficulty."

Qualifications are different in "kind" and therefore "materially higher" when the work performed for less than a majority of the time requires specific training, education, and/or specialized experience. An example of the "materially higher" qualifications criteria most applicable to FDA may be found in some scientific research organizations which are responsible for both applied research and regulatory review work. On occasion, an employee, because of an established expertise in a specialty field, may come to the point of spending a majority of his/her time working on reviewing industry applications for approval to manufacture and market regulated products. In this situation, the qualifications to perform the research work which has come to occupy less than a majority of the

scientist's time have been considered to be "materially higher," and therefore different in "kind." These situations are rare in the FDA; however, if and when they occur, the employee's research work will be evaluated through the peer review process prescribed in the CVM Evaluation Plan for Research Scientists, whereas the employee's non-research work will be evaluated through the normal classification process, rather than the peer review process.

B. Management of Scientific Professional Positions

This plan covers the evaluation of non-supervisory research positions and mixed positions where the research qualifications are of paramount importance. ***How a position is designated, i.e., research, mixed, or support will be determined based on program needs and requirements (not the incumbent's qualifications) as determined by managers and supervisors.*** The designation of a particular position(s) should be made known prior to it being filled. Encumbered positions will generally not be changed from one type to another. In order for an individual to move from one type of position to another, the individual will have to be reassigned or compete through merit promotion, if promotion potential exists in the new position. In order to assure equitable classification for all positions, it is imperative that they be properly designated so that appropriate classification standards and procedures are applied.

If a supervisor determines that an employee's current "Research Scientist" position no longer meets the definition of a "Research Scientist", as defined in this Plan, the supervisor should prepare a non-research position description. The new description should be submitted, along with an SF-52, "Reassignment," the employee's current performance plan, and a memorandum, through the Director, CVM; to the OHRMS, stating that the duties and responsibilities of the employee's position have changed, the reason(s) for the change, and that "research" is no longer a part of (or occupies ___% of) the position. The employee's non-research work will subsequently be evaluated through the normal classification process, rather than the peer review process.

In the event of a disagreement between the supervisor and the employee regarding his/her position meeting the definition of a "Research Scientist," as defined in this Plan, the supervisor should discuss and attempt to resolve

the disagreement with the employee. If the disagreement cannot be resolved, the supervisor should refer the employee's non-research position description through supervisory channels, to the Chairperson of the CVM, Research Scientist Peer Review Committee. The Committee Chair should identify positions which, in his opinion, do not meet the minimum requirements of a research position and submit those cases to the OHRMS Classification Specialist for a final classification determination. With the advice of the Chair, the Classification Specialist will determine the inclusion/exclusion of the case. If excluded from peer review, the case will be remanded to OHRMS for classification through the normal classification process.

III. STRUCTURE OF THE PEER REVIEW COMMITTEE

The Committee shall consist of the Committee Chair, Executive Secretary (non-voting), and three permanent members. These members will be research scientists, regulatory scientists or managers at the GS/GM-14 or above level. The Committee Chair and members will be appointed by the Center Director for a three year term (the term of the initial committee will be staggered so only one new member is appointed each year). The scientists may come from FDA organizations (including CVM), other government agencies, or academia; must have the ability to make valid judgments on research methodology, available literature, and the significance and impact of research findings-in their various fields; and may represent diverse scientific programs and disciplines. No more than one of these three may be a regulatory scientist. If a regulatory scientist is selected, that scientist must be in the employ of CVM, must be qualified to and have successfully conducted or managed scientific research, and must have remained current with scientific research as demonstrated by membership in appropriate professional organizations and by informed knowledge of scholarly publications. At least one of the scientists must be from the same scientific discipline represented in the case under consideration, and that scientist will act as the in-depth reviewer. Ad Hoc member(s) for a particular meeting may be appointed by the Committee Chair and may serve (if needed) as the in-depth reviewer.

A Position Classification Specialist from the Office of Human Resources Management (OHRMS) will, as the fifth Committee member, be a full voting member and offer guidance in the review of cases.

IV. RESPONSIBILITIES

- A. Director, CVM (or Designee)

1. Appoints Committee Chair and Executive Secretary for Center committee.
2. Reviews and appoints committee members following recommendation of Committee Chairs.
3. Approves transmittal of package to the committee except for self-nomination
4. Reviews the Center-level Committee reports and approves or disapproves the recommendation.

B. Director, OR

1. Forwards cases to the Director, CVM.
2. Approves or disapproves responses by sponsoring supervisors to any preliminary Career Evaluation Reports received from the Committee Chair.
3. Ensures that SF-52's and any other-documents necessary to implement final classification decisions are prepared and submitted to OHRMS in a timely manner.

C. Candidate's Supervisor

1. Recommends candidates for promotion review at shorter time intervals than the mandatory cycles or new employees, when appropriate.
2. Reviews and assures by signature that to the best of his/her knowledge the package accurately reflects and depicts the accomplishments and responsibilities of the candidates.
3. Meets with candidate to discuss endorsement of candidate.
4. Discusses Committee report with employee and prepares response to the report.

D. Candidate

1. Prepares the package and assembles all exhibits.
2. Discusses the package with the supervisor.

3. Provides the Executive Secretary and Committee Chair with an electronic copy of package by the due date.

E. Committee Chair

1. Establishes the yearly calendar for committee meetings and coordinates committee calendar with the Associate Commissioner for Science to include due dates for submission of packages for consideration at each scheduled meeting in conjunction with the Committee Executive Secretary.
2. Provides advice to candidates and supervisors relative to preparation and submission of package for peer review.
3. With Committee Executive Secretary, receives and reviews package for format, timeliness, and completeness. When late or not subscribing to the prescribed format or incomplete, returns package to supervisor and advises of status.
4. Advises Center Director or Associate Commissioner for Science, as appropriate, to ensure committee composition sufficient in number and expertise to ensure a fair review of all potential candidates.
5. Assigns packages to appropriate Committee members for in-depth review at time of notification to Committee members that the package has been posted to e-room.
6. Identifies Committee members with potential conflicts of interest (i.e., immediate supervisor) and recluses them from participation in the review process.
7. Orients Committee members in the evaluation process prior to serving on the Peer Review Committee. Stresses importance of discussions with the candidate and candidate's supervisor.
8. Chairs Committee meetings and participates as full voting member.
9. As appropriate, invites persons with special knowledge about a specific package to the peer review meeting or contacts them to aid or assist in the review process.
10. Ensures the confidentiality of Committee discussions and recommendations.
11. Along with the Executive Secretary, ensures that the Career Evaluation Report (CER) for each package is

prepared at each committee meeting and submitted to the Position Classification Specialist for review and approval.

12. Speaks for the Committee in communication with the Associate Commissioner for Science and/or Center Director on issues associated with the review process.
13. Recommends changes in the peer review process as appropriate.
14. Calls special meetings for such purposes as orienting and training new Committee members and handling unexpectedly large number of packages, etc. and ad hoc packages.
15. Along with the Executive Secretary, ensures that supervisors are appropriately notified 60 calendar days in advance of package due date for scheduled cyclical review.

F. Committee Executive Secretary

1. Receives packages from supervisors. Packages submitted after the published due date for each scheduled meeting will be returned to the supervisor and advised to re-submit in accordance with the next scheduled meeting.
2. Advises the Associate Commissioner for Science of scheduled dates and package submission dates for entry on the FDA web site.
3. Coordinates and schedules meeting dates and meeting room with the Chair and confirms the dates with Committee members in accordance with previously published schedule.
4. Manages Committee membership at the direction of the Committee Chair.
5. Enters tracking information on each package into Science FIRST.
6. Notifies candidate's supervisors of scheduled cyclical review and suspense date for submission of package at least 60 calendar days in advance of the due date.

G. Peer Review Committee

1. Each Committee will consist of the appropriate number of members sufficient in number and expertise to ensure a fair review of all potential candidates.

2. Meets in accordance with prescribed schedule.
3. Reviews package and evaluates each case on the basis of the criteria described in the Research Grade Evaluation Guide.
 - a. The evaluation of each package will be based on scientific merit, and achievements and contributions of the candidate. All appropriate information prescribed in the format for submission will be included in the evaluation.
 - b. When serving as the primary reviewer for a package, interviews or meets with the candidate, recommending supervisor and or persons with knowledge of the candidate's achievements and contributions.
 - c. A simple majority of those present will determine the final recommendation of the Committee on the disposition of a case.
 - d. A Committee member who is also the recommending supervisor should be recused from the package under consideration.

H. Position Classification Specialist

1. Receipt of candidate's completed peer review package from the Committee Chair.
2. Review and analysis of proposed promotions (re: classification criteria) prior to peer review meeting (includes using reference materials such as: Classifiers Handbook, significant classification appeals decisions, center peer review policy and procedures, etc.)
3. Provide classification advisory services to Chair and Committee members.
4. Attend all Peer Review committee meetings.
5. Respond to appeals, grievances, congressional inquiries, etc.
6. Prepare final peer review position reports and evaluations.
7. Advise employees of appeal rights and peer review procedures.

8. Train new committee members in the application of classification criteria.
9. Train Executive Secretaries re: position descriptions, etc.
10. Respond to candidate inquiries.
11. Maintain administrative records for candidates.

V. COMMITTEE OPERATING PROCEDURES

A. Prior to the Committee Peer Review Meeting

1. The candidate, with concurrence the immediate supervisor, will prepare the package (case material) according to the format in section VI of this Plan for the concurrence of the Director, OR and the Director, Center for Veterinary Medicine.
2. All packages must be received by the Committee Chair at least 60 calendar days before the Committee meeting. All candidates scheduled for mandatory review will be notified, through their supervisor, in writing by the Chair and/or Executive Secretary and will be allowed at least 60 calendar days to prepare their package.
3. The immediate supervisor will thoroughly review the case material for adequacy, accuracy, and format.
4. If the supervisor concurs, the package is forwarded through the Director, OR and the Center Director to the Committee Executive Secretary
5. If the immediate supervisor does not concur, the supervisor and candidate will discuss and attempt to resolve differences in the package prior to forwarding it to the Committee Executive Secretary.
6. If differences cannot be resolved, the package will be forwarded to the next supervisory level for resolution of the package. If still unresolved the candidate may submit a self-nomination.
7. The Executive Secretary will thoroughly review the case material for format and completeness.
8. If the case material is acceptable, the Executive Secretary forwards all complete packages to the Committee Chair.
9. If the case material is not acceptable, the Executive

Secretary returns all material to the supervisor for correction within 5 days of receipt. The case may be resubmitted to the Executive Secretary for review at the next meeting in which the package meets the timeframes for submission.

10. The Committee Chair will provide the package to Committee members for each scheduled meeting a minimum of 45 calendar days prior to each meeting. In-depth reviewers should review their assigned case and begin scheduling interviews within 5 days of receipt or request reassignment of case.
11. Prior to the Committee meeting, each member will review each case and reach a tentative opinion and rating based on the criteria in the Research Grade Evaluation Guide (RGEG).
12. Each candidate and the recommending supervisor will be interviewed by at least one assigned in-depth reviewer assigned by the Committee Chair. Additional interviews may be scheduled with other officials, employees, or other persons with knowledge of a candidate's achievements and contributions. When the work of the candidate is directly related to or impacts the program of another distinct organizational entity, an effort should be made to interview the Consumer Safety Officer, scientist, or manager responsible for or associated with the program. The in-depth reviewer will also obtain any additional information that will help the full Committee to better understand and evaluate a case.

B. During the Committee Peer Review Meeting

1. Attendance at committee meetings will be limited to committee members, the Chair, and the Executive Secretary. A committee member who is the recommending supervisor may not be present during the discussion of his/her candidate. The Chair, Position Classification Specialist, and two committee members (permanent or ad hoc) will constitute a quorum.
2. Committee meetings will be conducted in accordance

with the procedures outlined in this Plan. Committee discussions are considered to be confidential, and all members will have signed a confidentiality statement, recognizing the importance of confidentiality of Committee actions and discussions. Committee recommendations and decisions will be distributed through official channels only.

3. Discussion of a case at a Committee meeting should begin by **listing** the scores of individual panel members after which the in-depth reviewer will present findings.
4. After thorough discussion, the Committee will attempt to reach a unanimous score, using the RGEG. However, if this is not possible after lengthy debate, a majority of those Committee members present at the meeting, including the Position Classification Specialist, will determine the final disposition of a package.
5. The Committee score will result in a recommendation to classify a position to a higher grade, the same grade, a lower grade, or in the appropriate grade for a new position. The Committee may also recommend that action not be taken pending receipt of additional documentation, or recommend reclassification to a non-research position.
6. If the Committee scores a position in the gap between the current grade and the next higher grade level, the position will be classified at the lower grade level. This policy is based on OPM guidance that a position cannot be classified at a higher level, unless a position substantially meets that level.
7. If the Committee scores a position below the current grade level, the Committee will identify the deficiencies in the research scientist and/or in the position in a **preliminary** Career Evaluation Report and provide management with suggestions for resolving the problem. The Career Evaluation Report will be completed by the Committee Chair, and will be forwarded to the recommending supervisor through the Director, OR for a written response to the Committee findings and suggestions. The recommending supervisor's response will be addressed and forwarded, within 30 days, to the Director, CVM for review and approval. Upon approval by the Director, CVM, the response will be sent to the Executive Secretary for inclusion in the final Career Evaluation Report.

C. After the Peer Review Meeting

1. The in-depth reviewer(s) will provide thorough written evaluations to the Committee Chair in electronic format, as well as a signed hard copy within two days of the meeting (segments added to the original review based on Committee discussions should be noted).
2. The Committee Chair will ensure the preparation of the Career Evaluation Report (CER) of the findings for final approval by the Center Director.
3. The Career Evaluation Report will include Committee decisions and recommendations and a brief summary clearly stating the reasons for the Committee decision and other pertinent information agreed to at the meeting.
4. The Committee Chair will forward the Career Evaluation Report for each employee reviewed to the Center Director for review and approval within 15 days of the Committee meeting.
5. The Center Director reviews recommendations and the Career Evaluation Report from the Peer Review Committee and approves or disapproves with a cc to the Position Classification Specialist within 15 days of receipt. Upon approval by the Director, CVM, the Committee Chair will then distribute the Career Evaluation Report through the Director, OR to the candidate's supervisor within 5 days of approval by the Center Director.
6. The Position Classification Specialist completes case files (documentation, evaluation reports, etc.) and forwards to personnel within 30 days from receipt of the Career Evaluation Report and the Center Director's memorandum of approval or disapproval.
7. The candidate's supervisor is required to discuss the Career Evaluation Report with the employee and respond to the Committee Chair in writing, through the Director, OR that the discussion has taken place and what understandings were reached, particularly regarding constructive suggestions or recommendations by the Committee.
8. The Committee Executive Secretary will ensure follow-up of any required personnel action through submission of SF-52s and accompanying documents.

VI. PEER REVIEW PACKAGE

The Committee review will be based on case material prepared as specified below, and will include an analysis and evaluation of:

1. The assigned area of research in terms of the scope of responsibility and inherent difficulty and complexity.
2. The quality of the scientist's performance as measured by demonstrated originality, competency, accomplishments, and standing in the research field, and importance of research to CVM and the Agency as prescribed in the Research Grade-Evaluation Guide.

Cyclical review packages must be submitted within 60 days upon notification from the Committee Executive Secretary that mandatory review is due. Packages may also be submitted by the supervisor (voluntarily or at the employee's request) at any time after a research scientist has been in grade for one year; or, whenever management decides to fill a vacant research scientist position. In the latter case, the proposed candidate selected to fill the vacant position may be peer reviewed by an Ad Hoc Committee in order to expedite the recruitment process. In such cases, the Position Classification Specialist may serve as the OMP representative. The plan will govern and the OMP representative will obtain any necessary classification concurrences required by existing OMP delegations of authority. It should be noted that individual's selection cannot become final (and the individual cannot enter on duty) until the evaluation process has occurred and the classification of the position has been finalized. A position should be evaluated whenever significant changes occur in the level of a research scientist=s assignment(s), recognition or contributions.

The candidate prepares the review package, and the supervisor reviews and assures that the material accurately reflects and depicts the accomplishments and responsibilities of the candidate. The candidate will ensure that the package is presented to the Committee Chair at least 60 days prior to the scheduled meeting date in electronic format (CD) along with an original (paper copy), signed OF-8.

Performance plans, evaluations, or letters of reference will not be required as part of a package for consideration of any candidate for promotion.

The package must contain, in the order shown, the following:

- A. A transmittal memo from the research scientist's immediate supervisor, through the Division Director, Director of the Office of Research, and the Center Director, to the Committee Chair (See Supplement 1). This memorandum should not restate the position description but should amplify the

research scientist's accomplishments and cover the following points:

1. Basis for Promotion or Review.
 2. Qualifications.
 3. Contributions to the Laboratory, OR, CVM, FDA, scientific community and/or the state-of-the-art.
 4. Present position and grade, last promotion date (only necessary for promotion actions), proposed position, and grade.
- B. Curriculum Vitae (see Supplement 2).
- C. Bibliography (see Supplement 3).
- D. OF-8 cover sheet and proposed position description (see Supplement 4). Information on the Research Evaluation Guide may be found at:
<http://www.opm.gov/fedclass/html/gsfunctn.asp>
- E. Current position description of record.
- F. Career evaluation committee report from last peer review (Cyclical review only).

VII. CYCLICAL REVIEW

By establishing a peer review program with FDA, the Agency has provided for a uniform and consistent way to evaluate, establish and fill certain scientific research positions at the GS-14 and GS-15 grade levels. Concurrent with this program is the mandatory, cyclical review of those research scientists who occupy positions at these levels. This process also applies to those supervisors at GS-14 or 15 whose grades are based on the individual duties which they perform rather than upon their supervisory responsibilities. In order to ensure that individuals continue to perform the duties that originally supported the assigned grade, OPM requires a cyclical review of accomplishments. This review will be performed every five years. If the candidate is promoted between reviews, a new review cycle begins.

The peer review committee, based upon the members' findings, may recommend the following:

Certification - that the incumbent was found to be performing work which satisfies the requirements to sustain the GS-14 or GS-15 grade level;

Further review of the position within a prescribed timeframe

(usually 6 months), due to incomplete or inaccurate information that prevents the committee from making a final determination as to the appropriate grade level;

Inform the supervisor that the incumbent is not performing the duties as outlined in their position description of record, and direct the supervisor(s) to assign the duties that was the basis of the promotion;

Inform the supervisor that the incumbent is not performing the duties as outlined in their position description of record, and recommend an appropriate course of action (reassignment, downgrade, etc.).

The candidate prepares the cyclical review package, and the supervisor reviews and assures that the material accurately reflects and depicts the accomplishments and responsibilities of the candidate in the past five years, in support of the current grade level. The Executive Secretary will notify the candidate's supervisor 60 calendar days in advance of the required submission date to have the candidate prepare the package. The candidate will ensure that the package is presented to the Committee Chair at least 60 days prior to the scheduled meeting date in electronic format (CD) along with an original (paper copy), signed OF-8.

Performance plans, evaluations, or letters of reference will not be required as part of a package for consideration of any candidate for cyclical review.

The package should contain the following:

- A. Transmittal memo from the immediate supervisor to the Committee Chair (Supplement 1). This memorandum should not restate the position description but should amplify the research scientist's accomplishments and cover the following points:
 - 1. Name, title, series, and current grade of candidate.
 - 2. List of accomplishments and contributions to the Agency, regulated industry, scientific community, and the regulatory process, including scientific achievements (research and regulatory), originality, and quality and reputation in the local, national and/or international scientific/regulatory community. Only those accomplishments since the last review should be presented.
- B. Description of special expertise, if any.

- C. Career evaluation committee report from last peer review.
- D. Curriculum Vitae (CV) (Supplement 2).
- E. Bibliography (Supplement 3).
- F. Current position description of record.

VIII. SELF-NOMINATION

Self-nomination is a request to reconsider the classification of a position covered by the peer review process. The self-nomination process begins only after an employee has contacted his or her immediate supervisor and has requested a management nomination for peer review. If the supervisor declines to make the nomination, the employee who meets the minimum qualifications for promotion has the option of either: 1) initiating a self-nomination, or 2) filing a formal position classification appeal. (See Article 32.) As part of the self-nomination process, the employee must document the meeting with the supervisor, to include the supervisor's name and the date of the meeting.

To proceed with a self-nomination, the employee applies for peer review through established procedures to the appropriate Committee Chair. The employee must submit all items that are required by the peer review plan, including scientific and/or technical information, and in accordance with the published schedule. The accuracy and adequacy of information provided to a peer review committee will be verified as part of the normal peer review process. Failure to provide the necessary documentation will result in the return of the nomination package.

IX. APPEALS

Any candidate dissatisfied with the final classification of his/her position, may resubmit a package. However, a resubmitted package must specifically address the deficiencies identified in committee reports as well as any changes in the employee's position. All resubmissions will be treated as a new package and scheduled for peer review accordingly.

FDA employees have the right to formally appeal the classification of their positions (5 CFR, Part 511, Subpart F). They may appeal directly to the Rockville Human Resources Center (RHRC), or to the Department of Health and Human Services, but not to both. If dissatisfied with the RHRC or DHHS appellate decision, the employee may file a subsequent appeal to the U.S. Office of Personnel Management (OPM). OPM classification appeal decisions are final within the Federal government and are binding on the Agency.

Classification appeals directed to OPM should be addressed as follows:

U.S. Office of Personnel Management
OPM Center for Merit Systems Compliance
1900 E Street N.W., Room 6484
Washington, D.C. 20415-0006

Questions concerning appeal rights and procedures should be directed to the Chief, Classification Services Staff, HFA-406, Office of Human Resources and Management Services, Food and Drug Administration.

X. SUPPLEMENTAL INFORMATION

The attached Supplements address specific case material and the proper format required for submission to the Executive Secretary. They include:

Supplement 1. Memorandum of Recommendation
Example, Supplement 1.
Supplement 2. Curriculum Vitae
Example, Supplement 2.
Supplement 3. Bibliography
Example, Supplement 3.
Supplement 4. Position Description Format
Example, Supplement 4.
Supplement 5. Research Grade Evaluation Factors

SUPPLEMENT 1
MEMORANDUM OF RECOMMENDATION

The content of this memorandum should be restricted to actual accomplishments, not future plans or problems. The memorandum may begin with a brief paragraph summarizing the scientist's research career by listing total years in research, total number of publications and presentations, and, if deemed appropriate by the supervisor, a general statement about the researcher's scientific reputation and recognition.

Following the introductory paragraph, the most significant research accomplishments over the scientist's total career should be selected and listed in chronological order. **Accomplishments since the last promotion should be identified with an asterisk.** Up to ten accomplishments may be listed. Since the emphasis is on significant research accomplishments, scientists at lower grades or with shorter research careers may not have had sufficient time to produce a large number of significant accomplishments.

Each significant accomplishment should be described as concisely as possible with the primary emphasis on **what was accomplished and why the accomplishment was significant.** In the case of a team effort, it will be necessary to explain exactly what the scientist contributed to the total accomplishment. Since the significance of an actual accomplishment sometimes changes with time, these statements should be carefully written.

To aid in selecting accomplishments, at least five types have been identified. To help judge the quality of an accomplishment, the five types and an indication of levels of quality are listed below:

1. Literature review and analysis: Ranges from "restated with essentially no change, or reported conclusions from previously published material" to "reviewed, analyzed, interpreted, and synthesized scientific knowledge of broad scope with significant additions to established knowledge."
2. Development of knowledge using scientific principles in theoretical or experimental investigations: Ranges from "corroborated existing knowledge in a new situation using new and innovative procedures" to "made a major advance in a scientific field, or provided new technology that opened the way for extensive further development."
3. Application of knowledge to an unknown or previously unexplored area: Ranges from "applied known concepts and/or techniques to deal with a new situation" to "solved a problem of major importance to science, CVM, the Agency, industry, or the public."

4. Methods development: Ranges from "used known concepts to modify and/or develop facilities, equipment or techniques of some importance to research and/or industry methodology" to "extensively developed facilities, equipment or techniques of considerable importance to research and/or industry methodology."
5. Research Leadership: Ranges from "maintained the quantity and quality of productivity of a research team" to "caused an extensive increase in the quantity and quality of productivity of a research team" by "better coordination of research, changing the direction of a research program to a more significant area of exploration with resultant impact on science or technology, improving the scientific environment or atmosphere in which the research team functions, increasing the efficiency of the team's research capabilities, or improving the research capability of scientific personnel on the research team."

These types of accomplishments are not meant to be all inclusive, but are merely illustrative of kinds of accomplishments by FDA research scientists. More important than the type of accomplishment is the quality of that accomplishment.

Each selected accomplishment should be documented by exhibits and/or publications. Exhibits should be chosen with the following in mind:

- * the significance of a particular accomplishment may have increased with time,
- * while past accomplishments may be important, recent accomplishments show maintenance of research competence, and
- * for most situations, one or two carefully selected exhibits will be sufficient to support a well-stated accomplishment.

Exhibits should be referenced to the particular accomplishments which they support and to the publication list. When more than one publication is used to document an accomplishment, all the publications must support the one accomplishment, and no more than three should be provided.

Whenever an accomplishment cannot be supported by an exhibit or a publication, statement signed by a knowledgeable authority (such as the supervisor or Division Director) will be acceptable. The statement should elaborate on the accomplishment to provide evidence to support its significance. In addition, **the statement should indicate why the accomplishment was not or could not be published.**

A sample format for presenting significant research accomplishments of scientists is attached to this Supplement.

Many research positions include duties and responsibilities that are

not specifically research. Work of this nature which is performed on a regular and recurring basis should be documented in the position description. This includes work such as the preparation of handbooks, special assignments, review and inspection work, etc. Accomplishments of this kind which are extensions of research may help to support the significance and impact of the research. These accomplishments may be seen as activity similar to research which assures maintenance of research competence.

EXAMPLE, SUPPLEMENT 1
MEMORANDUM OF RECOMMENDATION

(FOR PROMOTION OR MANDATORY REVIEW)

Division Director: _____

THRU: Director, OR _____

Director, CVM _____

Review of Dr. _____ Research _____, GS- _____
(or)

Promotion of Dr. _____ to Research _____ GS- _____

Classification Services Staff, OHRMS (HFA-406)

Dr. Adams completed her Ph.D; in psychology from New Mexico State University in 1990. Since that time she has worked as a research scientist in the Division of Animal Research. During these 6 1/2 years, she has effectively served as the principal investigator on the pilot study for the CBTS, and has played a critical role in the development of the MON for the CBTS and in over-seeing the performance of the collaborative laboratories. In the remaining half of her time, she has been engaged in independent research with a strong methods development focus. Her work has resulted in 5 published articles, 4 additional articles now submitted or in review, 11 published abstracts, 4 final reports, and 19 presentations or lectures.

- *1. After coming to DAR, OR in 1990, Dr. Adams served as a Project Officer on contract #222-80-2000(C), "Microprocessor Based Systems to Control and Collect Data from Behavioral Studies". Under this contract, two prototype laboratory systems and a developmental system were developed for use in the pilot for the Collaborative Behavioral Teratology Study. As project officer, Dr. Adams was responsible for the technical direction given to the contractors, and for all debugging and verification of the function of these systems. Upon acceptance, the contractors then fabricated 10 additional systems, 2 for each collaborative laboratory. Development of these systems resulted in a sophisticated, efficient behavioral teratology laboratory. (Exhibit 1, #18; and #20 and #25).

- *2. Dr. Adams conducted a review of the literature on methods now in use in comparative developmental psychobiology studies as well as studies in developmental toxicology. This resulted in a synthesis and integration of the literature which was published as a chapter entitled 'Behavioral Assessment of the Postnatal Animal: Testing and Methods Development'. (Exhibit 2, \$11; and \$4).

- *3. The incumbent's major research focus is on the development or application of new methods for use in studies of developmental toxicology. This focus is critical at this time since behavioral teratology is a newly emerging discipline, and critical issues are the validity, reliability, and sensitivity of behavioral data. Dr. Adams' work is directed at the validation of behavioral techniques used in young animals and at establishing a historical data base on normal response values. She also has focused on the development of more sensitive techniques for measuring behavioral deficits in young animals. Her work on the ultrasonic vocalization of young rodents as diagnostic indicators of developmental toxicity is very important because this response is one of the few quantitative behaviors emitted by neonatal rodents. (Exhibit 3A, fly; Exhibit 3B, `21; Exhibit 3C, #15; and #19, f26, and #28).
- *4. Dr. Adams has served as a member of the PAG for the Collaborative Behavioral Teratology Study, and as principal investigator on the pilot study. This role led her to play a critical part in the early preparation of the MON for the collaborative study which provided the PAG with a working document for discussion and finalization. Dr. Adams was also primarily responsible for designing the study protocol, writing the SOP's for the conduct of the study, and developing the schedule of work. She also organized and conducted a workshop at the DVMR to train the technicians from each laboratory. These tasks have been essential for the successful accomplishment of the ongoing collaborative study. This study is important in providing regulatory information to the FDA on the status and/or necessity of behavioral screening systems. (Exhibit 4).
- *5. Dr. Adams has served as the principal investigator for the pilot studies for the COTS. This role involved the scientific direction and management of both conventional teratology and postnatal studies. Due to the long-term nature of this work, it has resulted in one published paper and two posters presented at the Teratology Society meetings. This work has been carefully followed by scientists in industry, academia, and government. (Exhibit 5A, #16; Exhibit 5B, #22; Exhibit 5C, #23; and #29).

Branch Chief or Team Leader=s Name

Entered on Duty OR: _____

Last Promotion: _____
(or)

Last Review: _____

Current Position and Grade: Research, _____ GS- _____

Proposed Position and Grade: Research, _____ GS- _____

SUPPLEMENT 2

CURRICULUM VITAE

Each of the following headings must be listed and addressed. Even if there is nothing to report under a heading include the title of the heading and state "nothing to report." The reviewers will then know that the heading was not overlooked or inadvertently omitted.

Scientist's Name (Last, First, Middle Initial)

1. Educational Background - List the name of each institution and the dates attended, majors and minors, and degrees awarded.
2. Additional Training - List part-time or short term training not included in Educational Background. Any Government-sponsored training must be listed under this heading. Give dates and duration of courses, credit hours, course hours, etc.
3. Professional Experience - List professional positions held in chronological order giving titles, grade or salary, and dates in each grade or position. Include present position.
4. Honors and Awards - List dates and a brief but sufficient description to enable the reader to determine significance and prestige. If a cash award was involved, list the amount.
5. Special Invitations - These are usually specific invitations to present a paper before scientific or industry groups, prepare a paper or a chapter for a book, conduct a seminar, etc. Be selective since the stature of the group which made the invitation is as important as the receipt of the invitation. For each invitation, list the title of the presentation, date, location, and organization or purpose of gathering. Indicate which invitations were made to you personally and which ones were requested of the FDA/Center to send a representative. If a paper was subsequently published, cross reference it to the publication list.
6. Licenses and Certifications - List professional licenses and certifications showing kind, licensing authority, year granted, current or expired, and brief description of special significance, if appropriate.
7. Membership in Professional or Honorary Societies - List each and show dates of membership and whether invited or elected.
8. Offices, Committee Assignments, or Special Assignments Held in Professional and Honorary Societies - List each and give dates.
9. Participation in National/International Scientific Meeting Technical Conferences, Workshops, Seminars, etc. - List each, give date, Location, type of meeting, title of talk or paper if one was presented, or brief description of role or reason for attendance if no paper was presented. Do not include items already listed under Special Invitations. If a paper was presented, cross reference it to

the publication list. If the same meeting or conference has been attended a number of times, summarize the information rather than listing individually.

10. Outside Professional Advisory and Consulting Activities - List each, give dates, name and type of organization or situation, and type or significance of contribution. Generally, these should be activities outside of FDA which are not part of the regular work assignment. If there are numerous activities summarize information or list activities in recent years only.
11. FDA Special Assignments and Advisory Activities - These should be of a technical or professional nature within FDA but outside of the immediate work assignment or organization. Include items such as participation in hearings or testimony preparation, P.L. 480 Special Foreign Currency Program involvement, science advisor to General Counsel Office, Agency level task force assignments, etc. List each, give dates, and briefly describe the role and significance.

EXAMPLE, SUPPLEMENT 2
CURRICULUM VITAE

ADAMS, JANE R.

1. Educational Background:

1981-85 Kansas State University; major, Chemistry; minor,
Statistics; B.S. 1985
1986-88 Kansas State University; major, Biochemistry; minor,
Endocrinology; M.S. 1988

2. Additional Training:

1990 Michigan State University; 3 credit hours of toxicology
1991 Beckman Instruments; 20-hour short course on radiochemistry

3. Professional Experience:

1988-90 GS-9 Chemist, FDA, CFSAN, Washington, D.C.
1990-92 GS-11 Chemist, FDA, CFSAN, Washington, D.C.
1992-94 GS-12 Research Chemist, NIH, Bethesda, Maryland
1994-96 GS-13 Research Chemist, NIH, Bethesda, Maryland
1996-Present GS-13 Research Chemist, FDA, CVM, OR, Washington, D.C.

4. Honors and Awards:

Member, Phi Kappa Phi
Member, Sigma Xi
NIH Quality Step Increase 1994
Elected Fellow, American Chemical Society, 1996

5. Special Invitations:

(1) Invited to present a talk on "Relay Toxicity and
Bioavailability of Residues," August, 1994, at the annual meeting
of ACS, Chicago, Illinois. (Publication #15).

(2) Invited to chair a seminar on "Drug Residues in Animal
Tissues," May 1995, for AOAC, Washington, D.C. (Publication #18).

6. Licenses and Certifications:

None

7. Membership in Professional or Honorary Societies:

1992-present Behavioral Teratology Society (elected)
1992-present Animal Behavior Society (elected)
1992-present International Society for Developmental Psychobiology
(elected)
1987-present Psi-Chi - honorary society in Psychology (invited)

8. Offices, Committee Assignments or Special Assignments Held in
Professional and Honorary Societies:

1990 Participated in the work group on "Neurological
Effects/Behavioral Toxicology for the Evaluation of
Current Environmental Research" sponsored by EPA and
Penn State University, April 23-24.

1992-1995 Council Member for the Behavioral Teratology Society.
This involves serving as a liaison to the Teratology
Society and other societies.

1998 Nominated for position of Conference Coordinator for the
International Society for Developmental Psychobiology
(election will be in November).

9. Participation in National/International Scientific Meetings,
Technical Conferences, Workshops, Seminars, etc.:

1988 Attended and presented a paper at the annual meeting of the
Rocky Mountain Psychological Association held in Denver,
Colorado in May. (Publication #1)

1991 Attended and presented a paper at the Teratology meetings held
in Sugar Loaf, Michigan in June. (Publication #5)

1992 Attended the annual meeting of the International Society for
Developmental Psychobiology held in Atlanta, Georgia in
November.

1993 Attended and presented a poster at the Teratology meetings held
in Wentworth, New Hampshire in June. (Publication #17).

1994 Attended and presented 2 papers at the meeting of the Interna-
tional Society for Developmental Psychobiology held in
Cincinnati, Ohio in November. (Publication #8 and 9).

1995 Attended and presented a poster at the Teratology meetings held
in Palo Alto, California in June.

1996 Attended and presented a poster at the meetings of the
International Society for Developmental Psychobiology held in
New Orleans, Louisiana in November.

1997 Attended and presented a paper at an organizational meetin
for the Neurobehavioral Toxicology Society held in Baltimore,

Maryland in May. (This meeting was held as a satellite of the Behavioral Pharmacology Society meetings which were also attended.) 1997 Attended and presented 2 posters at the Teratology meetings held in French Lick, Indiana in June. (Publication #23).

10. Outside Professional Advisory and Consulting Activities:

None

11. FDA Special Assignments and Advisory Activities

None

SUPPLEMENT 3
BIBLIOGRAPHY

List publications in chronological order with names of all authors, and number sequentially. Give full reference including journal, volume, complete pagination, date, and type of publication. If the information was previously published as an abstract, so indicate by referring to the appropriate abstract. To be listed, a scientific article should have been accepted by the publishing agent and the acceptance or publication date given.

Publications other than refereed articles in scientific journals or bulletins should be identified as one of the following:

- o Thesis
- o Abstract
- o Review Article
- o Book
- O Book Chapter
- O Conference or Society Proceedings
- O Patent
- o Popular Publication
- o Technical Research Report (a written report that requires clearance for public release)
- O Other (give specific identification)

EXAMPLE, SUPPLEMENT 3
BIBLIOGRAPHY

1. Adams, J.R. and Baker, T.C. Observations on Eimeria mohavensis from the kangaroo rat. Jour. Parasitol. 36:59:117-124. 1990.
2. Adams, J.R. Studies on coccidiosis in the pocket gopher. Proc. Amer. Sac. Protozool. 2:16. 1991. (Abstract)
3. Dow, S.N. and Jones, J.H. Rabbit feeding on demand. (Accepted by Rabbit Growers Journal, November 17, 1992.) (Popular Publication)
4. Adams, J.R., Anderson, S.J., and Jones, J.H. Physiologic response of pocket gophers to climatic change. Proc. VI Int. Biometerological Congress, page 30. 1994. (Review Article)
5. etc.

SUPPLEMENT 4
POSITION DESCRIPTION FORMAT

The following format must be followed.

I. Introduction

Begin the position description with an introductory paragraph describing the organizational relationships and general characteristics of the position.

II. Duties and Responsibilities

A. Research Assignment

1. Identify the field of research.
2. Outline in specific terms:
 - a. the objectives and scope of the research;
 - b. the research approach and methodology;
 - c. the extent and complexity of the research required to validate hypotheses or expected conclusions;
 - d. the necessity to convert abstract concepts to hardware and/or easily understood statements of theories;
 - e. the variety and intensity of the knowledge which must be brought to bear on the solution of problems;
 - f. the expected end results. (These results do not refer to the specific outcome of individual experiments, but to the potential impact on scientific theory or problem solutions.)
3. If the assignment includes research leadership, indicate the broad objectives of the research group led; however, be specific in describing your participation, not the team' s.

B. Supervisory and Team Leadership

1. Describe the type of technical leadership exercised by the scientist in selecting problems, defining objectives, organizing, planning, evaluating and reporting, either as an active member of a cooperative research team or by directly supervising research scientists.
2. Indicate the number, titles, range of grades and location of the scientists and other employees supervised.
3. Outline the scientist's supervisory responsibilities

of an administrative nature, including those involving EEO.

4. If appropriate, describe how the team leader caused a significant or extensive increase in the quantity or quality of productivity of the research team led.

C. Guidelines and Originality

1. Describe the extent and nature of the written guides available.
2. Describe the intrinsic difficulty encountered by the scientist in applying guides, in terms of their ready adaptability to current situations.
3. Describe the degree of judgment required in selecting, interpreting and adapting guides.
4. Describe the position's requirement for original and independent creation, analysis, reasoning, evaluating, judging and choosing between alternative methodologies.
5. Describe the position's requirement for interpreting findings, translating findings into a problem solution, and recording findings and interpretations in a form usable by others, as well as in the application to specific end products.
6. Describe the impact of theories, principles, concepts, techniques and approaches developed by the scientist upon the scientific field.

D. Other Duties

Many research positions include duties and responsibilities which are not research in nature. However, because they reflect the mission of the Agency as officially delegated to scientists in research positions, they are properly documented in the position description when performed on a regular and recurring basis. This includes work such as preparation of handbooks, special assignments, applications review, consultation on compliance cases, etc. Non-research accomplishments which are extensions of research may help to support the significance and impact of the research.

III. Supervision Received

Identify the supervisor by title or working responsibility. Describe the nature and purpose of the supervision over the assignment. If technical supervision is received from someone other than the immediate supervisor, identify that person by

title and show the kind of responsibility for the work. The description should clearly define:

1. the degree of responsibility which the scientist has for selecting problems, defining specific objectives, organizing, planning, executing, interpreting, and reporting research,
2. the kinds of actions that require approval of the supervisor or technical leader, and
3. the nature and extent of commitment authority when dealing with professional, nonprofessional, or other cooperating or interested groups.

EXAMPLE, SUPPLEMENT 4
POSITION DESCRIPTION

I. Introduction

This position is located in the Division of Developmental Biology, Office of Research (OR). The mission of the Division is to develop new and improved methods for assessing developmental abnormalities resulting from prenatal chemical exposure.

II. Duties and Responsibilities

A. Research Assignment

The incumbent works as a Junior Staff Fellow in the Division of Developmental Biology, OR. The incumbent has two major areas of responsibility: 1) developing and maintaining the laboratory for behavioral teratology testing (50%), and 2) improving and/or developing new methods for assessing behavioral dysfunctions resulting from developmental exposures (50%). The first of these responsibilities involve the setting up of the behavioral teratology laboratory at OR which consists of equipment purchasing and verification of test functions. The laboratory is controlled by two microprocessor systems which are being developed under contract for which the incumbent serves as project officer. This laboratory is used solely for conducting pilot work to verify and further specify the protocol being used by five collaborative laboratories participating in the NTP-sponsored Collaborative Behavioral Teratology Study. The incumbent serves as principal investigator for the pilot study.

The incumbent is involved in a team approach with members of the Project Advisory Group (PAG) for the Collaborative Behavioral Teratology Study (CbTS), and with Dr. Carole A. Kimmel and Judy Buelke-Sam, the project officers on the collaborative study contracts. In the early stages of planning and designing the CBTS, the incumbent is to serve as a member of the PAG and play a critical role in developing the MON and schedule of work for the study. Upon the enactment of the contracts to the participating laboratories, the incumbent is responsible for organizing and conducting a workshop at OR to train the technicians at each laboratory. The incumbent functions as a "liaison" to the labs in regard to answering questions about equipment function or clarifying the experimental protocols.

The incumbent's second area of responsibility is to conduct research on the development and validation of behavioral approaches to the study of postnatal dysfunction. These studies involve the treatment of pregnant animals and

evaluation of offspring, including routine teratology, growth and development of the young, and in particular, behavioral assessment of the offspring. The latter includes the assessment of the developmental behavior of the animals at young, juvenile, and adult ages using a lifespan, longitudinal approach.

The incumbent is responsible for designing and carrying out these studies, often in collaboration with other members of a project team. Only limited inspection and supervision is provided by a senior staff member. The incumbent must keep abreast of new areas of research related to teratology, and developmental psycho biology, psychology, and toxicology. She must maintain contact with her scientific colleagues and societies, and present to her colleagues well-prepared oral and written reports of her scientific work.

The incumbent must respond to the needs and requests of the OR and other government agencies for review of manuscripts, technical reports, and protocols.

B. Supervisory and Team Leadership

The incumbent provides technical supervision to two behavioral technicians who work on the pilot study for the CBTS. She must be able to effectively direct the efforts of these individuals toward implementing the collection and synthesis of data attained from both the pilot study and from the participating laboratories. The incumbent must also collaborate with personnel in chemistry, biometry, and animal care in order to effectively conduct the pilot study. The incumbent is responsible for monitoring the performance of the laboratories involved in the CBTS. This role primarily concerns interacting with the principal investigators and technicians at each laboratory in answering questions regarding equipment function and details of conducting the behavioral tests. She is also responsible for directing the shipments of necessary equipment and supplies to each of the laboratories. This role requires the successful collaboration with personnel in the procurement and property divisions of the OR.

C. Guidelines and Originality

The incumbent's guidelines consist of behavioral evaluation studies, Z-80 and S-100 computer manuals, BASIC and FORTRAN programming guides and technical reports relevant to biopsychology and developmental psychology. These guidelines are generally applicable to the work to be performed and require only minor adaptations; however, they do require an extensive amount of judgment relative to their proper selection. An extensive amount of originality, creativity, analysis, reasoning and judgment is also required in

choosing between alternative methodologies. In addition, the incumbent is required to interpret findings, translate them into solutions and-record these solutions in a manner for others in the DVMR to follow. The incumbents- end products are used solely for conducting pilot work to verify and further specify protocols being used at OR.

D. OTHER DUTIES

None.

III. Supervision Received

The incumbent is directly responsible to the Director, Division of Developmental Biology, OR. She is solely responsible for overseeing the conduct of the pilot study for the CBTS, and for other research projects for which she serves as principal investigator. The incumbent independently develops the theoretical basis for her work in methods development and evaluation, determines the methods and protocols needed to explore a particular problem, and defines the resources needed to carry out the research effort. The incumbent is responsible for obtaining, analyzing, interpreting, and communicating results and has complete authority to speak on matters that relate to her area of professional expertise and research.

Supplement 5
 SUPPLEMENT TO
RESEARCH GRADE-EVALUATION GUIDE DEGREE DEFINITIONS

SUPPLEMENT TO
RESEARCH GRADE-EVALUATION GUIDE DEGREE DEFINITIONS
 (This supplement should be used only in conjunction with the Research Grade-Evaluation Guide)

FACTOR I – Research Situation

Degree

Element	A (2)	B (4)	C (6)	D (8)	E (10)	Excess E
1) Assigned Responsibility	Participates responsibly in all phases of research of limited scope or as a member of a team makes significant contributions in some phases regarded as equivalent to limited independent research.	Responsible for all phases of an identifiable area of research or participates as a professionally responsible member of a team in substantive aspects of research.	Responsible for an area requiring a systematic attack with a series of conceptually related studies or leads a small team of scientists or as a team member provides unique and highly specialized skill in a significant subject matter area.	Responsible for leading a team of scientists in an area requiring systematic attack on problems recognized as difficult or is independently responsible for attacking difficult research problems or provides technical guidance in broad subject matter areas.	Responsible for leading a team of scientists or providing technical guidance or independently conducting exceptionally difficult research in attacking critical problems.	Leads a broad-scale attack in frontier areas so complex they must be subdivided into areas some of which are E level.
2) Research Objectives and Methodology	Specific objectives are readily defined and approaches are conventional.	Either specific objectives are hard to define or slightly unusual methods are required.	Specific objectives are hard to define and novel or sophisticated methods are required.	The research approach is not easily determined and modification of existing techniques is required.	Existing hypotheses, concepts and techniques need to be significantly extended before substantial progress can be made.	<u>New</u> hypotheses, concepts and techniques are required before substantial progress can be made.
3) Expected Results	A documentable addition to knowledge or a comparable contribution to technology.	A series of documentable additions to knowledge or comparable contributions to technology.	A series of documentable additions to knowledge or comparable contributions to current technology that are of considerable interest.	Documentable modification of existing theories or current technology.	Significant documentable modifications of existing theories or current technology.	Major documentable developments and/or important extensions of existing theory.

FACTOR II – Supervision Received

Degree

Element	A (2)	B (4)	C (6)	D (8)	E (10)	Excess E
1) Assigned Authority	Specific area is assigned with scope and objectives given.	An identifiable area is assigned with some freedom.	Either a broad area is assigned or substantial freedom is given to select specific problems for study.	A broad area is assigned and the general research approach is decided by the incumbent.	The assigned area is so broad that the incumbent must locate the most fruitful lines of attack within existing funding constraints.	Areas so broad and freedom so large that incumbent's decisions will influence agency goals and the plans of numerous other scientists in government, academic institutions, or private industry.
2) Research Guidance Given	Problem jointly defined and specific approach jointly planned but execution decided by incumbent.	Problem jointly defined but specific approach and execution decided by incumbent.	Technical supervision limited to jointly developing broad hypotheses and research attack.	Technical supervision limited to reviewing broad hypotheses and research attack.	Essentially no technical supervision given other than consultative.	No technical supervision given. Incumbent is recognized as a distinguished and brilliant scientist.
3) Review of Results	Incumbent interprets own work but method, procedures, and results are reviewed for adequacy, clarity completeness, and technical accuracy.	Incumbent interprets own work but only interpretations are reviewed for technical accuracy.	Incumbent's technical judgment generally relied upon and completed reports and papers are reviewed primarily to evaluate overall results.	Interpretations are reviewed but are generally accepted as technically accurate subject to validation or modification by the scientific community.	Interpretations are considered technically authoritative and used as a basis for administrative action.	Interpretations, recommendations, and conclusions are furnished to other agencies and professional organizations without references to any higher authority.

Supervision Received (continuation)

Element	Degree					
	A (2)	B (4)	C (6)	D (8)	E (10)	Excess E
4) General Supervision	Supervisor is regularly consulted and decisions changing the nature of the work often originate with the supervisor	Supervisor is intermittently consulted and decisions changing the nature of work usually originate with the incumbent.	Supervisor is kept informed and supervisory approval is required only for changes in plans involving a considerable investment in time and money.	Supervisor is kept informed and only broad changes in the direction of work requires clearance.	Supervisor is kept informed but incumbent has full responsibility for formulating research plans and carrying them through.	Essentially no supervision of any kind given.

SUPPLEMENT TO
RESEARCH GRADE-EVALUATION GUIDE DEGREE DEFINITIONS

FACTOR III – Guidelines and Originality

Degree

Element	A (2)	B (4)	C (6)	D (8)	E (10)	Excess E
1) Available Literature	Existing theory and/or methods available in the literature are generally applicable.	Some required theory and/or methods are not available in existing literature.	Existing literature is of limited usefulness and/or is lacking for significant portions of the research.	Existing theory and methods are of limited usefulness and/or are lacking for major portions of the research.	Existing literature of no usefulness without significant modifications and interpretations.	High degrees of abstraction are required to make existing literature relevant.
2) Originality Required	Primarily to develop a complete and adequate experimental design.	Problem definition and/or approach require some creativity.	A high degree of originality required In defining problems, developing hypothesis, and developing new approaches.	In addition to factors In C, a high degree of originality in interpreting results and relating them to other findings.	Creative extension of existing theory and/or methodology.	Creative extension of fundamental principles or the nature of phenomena.
3) Demonstrated Originality	Adapted standard techniques to a new situation.	Ability to isolate critical aspects of a problem or adapt existing principles into new combinations.	A high degree of insight in defining critical aspects of a problem and/or in adapting, extending, and synthesizing existing principles into new non-obvious combinations.	Made significant modifications of existing theory and methodology.	A creative extension of existing theory and methodology.	A Creative extension of fundamental principles or the nature of phenomena.

SUPPLEMENT TO
RESEARCH GRADE-EVALUATION GUIDE DEGREE DEFINITIONS

FACTOR IV – Qualifications & Contributions

Element	Degree					
	A (2)	B (4)	C (6)	D (8)	E (10)	Excess E
1) Demonstrated Research Responsibilities	Has co-authored one or more technical publications of considerable interest or is primary author of one or more technical publications of minor interest or has participated at a comparable level in developing new concepts, techniques, materials, or product.	Has authored technical publications or developed new concepts, techniques, materials, or products some of which have considerable importance to the assigned research situation.	Has authored a number of publications or developed new concepts, techniques, materials, or products some of which have considerable interest to science, technology, regulatory policy, and/or solution of important applied problems.	Has authored a number of publications or developed new concepts, techniques, materials, or products some of which have had significant impact on science, technology, regulatory policy or have solved problems of significant importance to the scientific field, to the agency, or to the public.	Has authored a number of important publications or developed new concepts, techniques, materials, or products some of which are recognized as having had major impact on science, technology, regulatory policy, or have solved problems of great importance to the scientific field, to the agency or to the public.	Has made numerous contributions to new knowledge, concepts, techniques, products, or materials recognized as having led to major advances in science, technology, regulatory policy, or the solution of applied problems of great importance.
2) Research Stature, Recognition, and Impact on Science. and Technology	Satisfactorily participated in one or more studies covering all phases of research.	Satisfactorily demonstrated ability to independently conduct research or significantly contributed to a research team.	Demonstrated ability as a mature, competent, productive, worker by personal performance of or participation in a team in research and is recognized as a significant contributor to a professional field; or is recognized for leadership in the conception and formulation of productive research ideas that are the basis for productive studies by others or regulatory policy.	Is recognized as a significant contributor to a professional field and as a leader of a productive research team or a leader in the conception and formulation of productive research ideas or regulatory policy.	Demonstrated outstanding attainment (through personal research, team leadership, or formulation of productive research ideas) with contributions of such magnitude that they move either science, technology, or regulatory policy significantly forward.	Is a recognized leader and authority in an area of widespread scientific interest or applied problems of great importance.

Qualifications & Contributions (continuation)

Element	Degree					
	A (2)	B (4)	C (6)	D (8)	E (10)	Excess E
3) Advisory and Consultant Activities	Serves as a source of information only in own area of work.	Deals directly with others but only on technical matters in own area of work.	Deals responsibly with others concerning full area of responsibility and/or serves on important committees of professional societies or regulatory policy and is beginning to be sought out for consultation	Is recognized as an expert in own field and is regularly sought for consultation and/or takes leadership on important committees dealing with technical matters or regulatory policy.	Is sought by colleagues who themselves are experts in own field and has received special invitations to address professional organizations and/or honors and awards illustrating scientific or regulatory recognition.	Is sought as advisor and consultant on scientific and technical programs and problems well beyond own field.