REPORT OF MEETING OF TASK GROUPS ON THE CAREER REFERRAL SYSTEM FOR CHEMISTS, CHEMICAL ENGINEERS, BIOLOGISTS, MICROBIOLOGISTS, AND ENTOMOLOGISTS HELD 22-23 JUNE 1971

Compiled by
Edward J. Poziomek, Ph.D.

July 1971

DEPARTMENT OF THE ARMY
EDGEOWOOD ARSENAL
Office of the Technical Director
Edgewood Arsenal, Maryland 21010

Reproduced By
NATIONAL TECHNICAL INFORMATION SERVICE
Springfield, Va. 22151
REPORT OF MEETING OF TASK GROUPS ON THE CAREER REFERRAL SYSTEM FOR CHEMISTS, CHEMICAL ENGINEERS, BIOLOGISTS, MICROBIOLOGISTS, AND ENTOMOLOGISTS HELD 22-23 JUNE 1971

A Meeting of Task Groups on the Career Referral System for Chemists, Chemical Engineers, Microbiologists, Biologists, and Entomologists was held at Edgewood Arsenal, Maryland, on 22 and 23 June 1971. The purpose was to study the Career Referral System for Engineers and Scientists and to recommend improvements. This document records tasks, results, and observed trends. Recommendations reflect a need to make the present career system simpler and more flexible. A number of proposals were made to provide additional information and a better utilization of data.

14. KEYWORDS

Army training Personnel Development
Training Career Development
Personnel Career Management
Chemists Training Programs
Chemical Engineers Personnel Management
Entomologists Referrals
Microbiologists Appraisals
Biologists Manpower Utilization
Scientists Career Referrals
Engineers
Distribution Statement

Approved for public release; distribution unlimited.

Disclaimer

The findings in this report are not to be construed as an official Department of the Army position unless so designated by other authorized documents.

Disposition

Destroy this report when no longer needed. Do not return it to the originator.
REPORT OF MEETING OF TASK GROUPS ON THE CAREER REFERRAL SYSTEM
FOR CHEMISTS, CHEMICAL ENGINEERS, BIOLOGISTS, MICROBIOLOGISTS,
AND ENTOMOLOGISTS HELD 22-23 JUNE 1971

Compiled by
Edward J. Poziomek, Ph.D.

July 1971

Approved for public release; distribution unlimited.
FOREWORD

This is the finalized version of this report. It incorporates the comments made by all Task Group members who received copies of a draft for their review.

Reproduction of this document in whole or in part is prohibited except with permission of the Commanding Officer, Edgewood Arsenal, ATTN: SMUEA-TS-TIT, Edgewood Arsenal, Maryland 21010; however, DDC is authorized to reproduce the document for United States Government purposes.
DIGEST

A Meeting of Task Groups on the Career Referral System for Chemists, Chemical Engineers, Microbiologists, Biologists, and Entomologists was held at Edgewood Arsenal, Maryland, on 22 and 23 June 1971. The purpose was to study the Career Referral System for Engineers and Scientists and to recommend improvements. This document records tasks, results and observed trends. Recommendations reflect a need to make the present career system simpler and more flexible. A number of proposals were made to provide additional talent information and a better utilization of data.
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. BACKGROUND AND PURPOSE</td>
<td>7</td>
</tr>
<tr>
<td>II. ATTENDANCE</td>
<td>7</td>
</tr>
<tr>
<td>III. AGENDA</td>
<td>7</td>
</tr>
<tr>
<td>IV. APPROACH</td>
<td>8</td>
</tr>
<tr>
<td>V. DISCUSSION</td>
<td>8</td>
</tr>
<tr>
<td>A. General</td>
<td>8</td>
</tr>
<tr>
<td>B. Task A - Career Referral Rosters</td>
<td>8</td>
</tr>
<tr>
<td>C. Task B - Experience Codes</td>
<td>12</td>
</tr>
<tr>
<td>D. Task C - Mandatory Referral Level</td>
<td>16</td>
</tr>
<tr>
<td>E. Miscellaneous</td>
<td>17</td>
</tr>
<tr>
<td>VI. OVERVIEW</td>
<td>19</td>
</tr>
<tr>
<td>Appendix A - Listing of Participants</td>
<td>21</td>
</tr>
<tr>
<td>Appendix B - Roles of Participants and Composition of Task Groups</td>
<td>25</td>
</tr>
<tr>
<td>Appendix C - Meeting Agenda</td>
<td>27</td>
</tr>
<tr>
<td>Appendix D - Listing of Reference Material Available to Participants</td>
<td>29</td>
</tr>
<tr>
<td>Appendix E - General Criteria and Procedures for the Establishment and Operation of Career Referral Rosters</td>
<td>33</td>
</tr>
<tr>
<td>Distribution List</td>
<td>37</td>
</tr>
</tbody>
</table>

Preceding page blank
I. BACKGROUND AND PURPOSE.

The requirement for Task Groups to study the Career Referral System for Engineers and Scientists and to recommend improvements, evolved from recommendations contained in a recent report by the Deputy Chief of Staff for Personnel, Department of the Army.* USAMC was tasked by the Department of the Army to develop an improved DA Career Referral System for Engineers and Scientists. In turn, USAMC allocated the various occupational series to Area Managers. Dr. Benjamin L. Harris, Technical Director, Edgewood Arsenal, was designated as Area Manager for Chemists, Chemical Engineers, Microbiologists, Biologists, and Entomologists. In carrying out his appointment, Dr. Harris proposed that a Task Group covering each of the five occupational series be convened to study and recommend improvements for their career referral system. A meeting of the Task Groups was held at Edgewood Arsenal on 22 and 23 June 1971.

This document records the meeting proceedings with respect to tasks, results, and observed trends.

II. ATTENDANCE.

A listing of attendees is given in Appendix A. Appendix B provides a breakout of attendees by role and/or Task Group membership.

III. AGENDA.

The Agenda for this meeting is provided in Appendix C.

---

IV. APPROACH.

In the letter of invitation to the participants dated 4 June 1971, three specific tasks were to be accomplished by each task group as follows.

A. To study and recommend criteria and procedures for the establishment and operation of career referral rosters.

B. To renew and update experience codes.

C. To examine career progression patterns and occupational distribution to determine the appropriate mandatory referral level.

In order to provide the needed background, the first part of the meeting consisted of a short course in personnel management of scientists and engineers with emphasis on the career referral system operations. Pertinent references were cited and made available to the participants (see Appendix D). Several prototype solutions to the three assigned tasks were then presented and discussed (see Appendix E). After that, the individual groups met for more detailed discussion and the development of recommendations. The meeting concluded with presentations by Task Group Chairmen.

V. DISCUSSION.

A. General.

This report addresses the three objectives (designated as Tasks A, B, and C) given to the Task Groups and provides the recommendations of each Task Group under each of the three Tasks. Finally, under each Task, the trends noted from the Task Group recommendations are recorded.

B. Task A - Career Referral Rosters.

1. Statement of Tasks. To study the referral program and recommend criteria and procedures for the establishment and operation of career referral rosters.
2. Results.

a. Occupation Series: Chemistry.

The Chemistry Task Group members were divided in their opinions as to whether career referral procedures should retain and improve ad hoc screening panels or incorporate the use of semi-permanent screening panels.

It was recommended that one of the occupation series in science and engineering be used in a pilot experiment to establish the feasibility of using a procedure (such as given in Appendix E) involving referral rosters and semi-permanent screening panels.

b. Occupation Series: Chemical Engineering.

It was recommended that career referral rosters be established according to factors included in Appendix E. It was also recommended that local screening panels be established for grades being referred locally.

c. Occupation Series: Microbiology.

It was recommended that a screening panel be appointed by the Area Manager to operate according to the general principles set forth in Appendix E. It was indicated that the screening panel itself should develop the finer details of procedures and meet at least semiannually.

d. Occupation Series: Biology.

Because of the small number of biologists, it was recommended that a ranked career referral roster not be maintained. Furthermore, it was recommended that when placement was desired, selection be made from entries in the AMC Talent Bank according to broad specialty codes and other criteria such as willingness to move, grade, etc.

e. Occupation Series: Entomology.

It was recommended that a single roster be prepared, composed of only highly qualified individuals. Since the number of participants in the entomology roster is small, it was recommended that all highly qualified individuals be referred to the selecting official.
3. Trends

a. General

Each Task Group presentation reflected a desire to simplify the present career referral system. Among those groups favoring the use of semi-permanent rosters, there was agreement as to general criteria and procedures for establishing the rosters (Appendix E). Many of the specific details, such as assignment of weights for ranking purposes, were not finalized but were relegated to the screening panels themselves. Task Groups representing the occupations containing small numbers of registrants saw little need for ranking.

b. Improvement of either DA Form 2302 or AMC Form 1320

Instead of concentrating on operational details of screening panels, the Task Groups tended to examine ways in which current and/or future use of either Form 2302 (Qualification Record) or Form 1320 (Career Program Referral Listing) might be improved. The recommendations made by the various groups differ but could easily apply to any of the occupation series. For credit purposes the group which made the recommendation is identified in parentheses.

It was recommended that:

1. One code instead of two be used to describe the general occupation. Currently, DA Form 2302, section 20, has two blocks (c. and first three digits of g.) and two codes for the same occupation. The current procedure leads to confusion and possible mistakes. (Chemistry).

2. The narrative appearing in 20 h. (DA Form 2302) be eliminated. The usefulness of the narrative job description with the small amount of space but high cost of data storage was questioned. (Chemistry).

3. A series of code numbers be used in lieu of the narrative in 20 h. (DA Form 2302) to describe work. An instruction sheet would have to be provided to give the categories, e.g. 381 = performs statistical analysis of data, 731 = presents graduate-level lectures to university or military students, 468 - evaluates grant and contract proposals submitted from higher levels of command, etc. (Entomology).

4. The registrant be given the option of using up to three specialties in describing general experience in each position (current and past). Therefore, the experience code would consist of three digits for occupation, two digits each for the three possible specialties, one
digit for functional area and one digit for functional level. It was indicated that the expanded use of specialties would give the registrant a better opportunity to describe experience, especially in multidisciplinary cases. (Chemistry).

(5) AMC Form 1276 (Career Program Referral Listings Request) be modified to include five of the most important items which have been coded under 20 h. of DA Form 2302. (Entomology). (Editor's note: Essentially, this is the same as (4). The Task Groups are recommending mechanisms whereby the employee could be considered for referral under several specialties instead of only one.)

(6) The registrant be allowed to code secondary and tertiary occupation description (current position) for referral purposes in the same manner as described in (4) for the primary occupation. This would allow further opportunity for the registrant to describe the job. (Chemistry).

(7) Items 17-19 (primary, secondary and tertiary specialties) DA Form 2302 be redefined with use of additional code lists. (Entomology). (Editor's note: Recommendations (2)-(7) are closely related. It is thought that the narrative job description should be replaced. The Chemistry Task Group recommended use of additional specialty codes from existing lists, while the Entomology Task Group recommended a much expanded new code list).

(8) Supervisor comments which appear in AMC Form 1320 should be agreed on by both employee and his immediate supervisor and this information should be included for the past three years. (Chemical Engineering). (Editor's note: The current practice is to include the immediate supervisor's comments from Section III. 1. of the most recent Employee Career Appraisal (DD Form 1559). The employee has an opportunity to respond in DD Form 1559 but his comments do not appear in AMC Form 1320).

(9) All seven digits of the experience code be utilized in referral request. It was thought that this would reduce considerably the work for the ad hoc screening committee. (Chemical Engineering). (Editor's note: The most common procedure now is to ask for a referral on the basis of five digits of the experience code i.e., occupation and specialty. Taking the largest occupation, Chemistry (Army-wide) as an example, the maximum possible number of referrals currently under a five digit request for GS-14 and GS-15 would be 30 (code 32907) and 11 (code 32901), respectively.)

* The importance of this recommendation was brought out later by Mr. Richard T. Reppert (Biology Task Group Chairman). He referred to the Corps of Engineers where a substantial number of technical personnel are classified under multidisciplinary occupations such as Series 301 (Recreation Resource Specialist). These personnel might also qualify under other series. Mr. Reppert offered the opinion that the number of Corps of Engineers scientists qualified as biologists could actually be twice that classified currently by the Corps of Engineers in Series 401 (Biology).
(10) AMC Form 1910 (AMC Talent Bank. Additional Personnel Data) ultimately be combined with DA Form 2302 and be replaced by a yearly supplementary revision form. (Entomology).

(11) Item 10 (currently blank) in AMC Form 1910 be used for information taken from DA Form 1498 (Research and Technology Work Unit Summary). Types of information desirable would be: Principal investigator on DA Form 1498; yes or no; if yes, how many subtasks? Associate investigator on DA Form 1498; yes or no; if yes, how many subtasks? The thought was that the DA Form 1498 may provide the best indicator of who is actually conducting the research, the objectives of the program and the accomplishments. It is conceivable that the AMC Talent Bank could be fed information from the data tapes of the 1498 forms. Also, employee participation in interdepartmental or interagency affairs should be included as an item in AMC Form 1910. (Entomology).

c. Task B - Experience Codes.


2. Results.

Occupation Series: Chemistry

<table>
<thead>
<tr>
<th>Current Specialties</th>
<th>Specialties Recommended by Task Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 General</td>
<td>Several models were set forth subject to later review by the Area Manager. There was agreement with the specialties</td>
</tr>
<tr>
<td>02 Inorganic</td>
<td>01 - 14. There is no significance intended with respect to the order in which the specialties appear.</td>
</tr>
<tr>
<td>03 Organic</td>
<td>Chemistry Model No. 1 01 Inorganic</td>
</tr>
<tr>
<td>04 Agricultural and Food</td>
<td>02 Theoretical</td>
</tr>
<tr>
<td>05 Analytical</td>
<td>04 Physical</td>
</tr>
<tr>
<td>06 Assaying</td>
<td>06 Biochemistry</td>
</tr>
<tr>
<td>07 Physical</td>
<td>07 Water, Wastes, and/or Pollution</td>
</tr>
<tr>
<td>08 Pharmaceutical</td>
<td>08 Polymer</td>
</tr>
<tr>
<td>09 Biochemistry</td>
<td>09 Instrumental</td>
</tr>
<tr>
<td>10 Other</td>
<td>10 Nuclear - Radiochemistry</td>
</tr>
<tr>
<td></td>
<td>11 Management</td>
</tr>
<tr>
<td>12</td>
<td>Fuels and/or Lubricants</td>
</tr>
<tr>
<td>13</td>
<td>Explosives, Propellants, Pyrotechnics</td>
</tr>
<tr>
<td>14</td>
<td>Other</td>
</tr>
<tr>
<td>15</td>
<td>Organic</td>
</tr>
<tr>
<td>16</td>
<td>Organic Synthesis</td>
</tr>
<tr>
<td>17</td>
<td>Propellants</td>
</tr>
<tr>
<td>18</td>
<td>Pyrotechnics</td>
</tr>
<tr>
<td>19</td>
<td>Lubricants</td>
</tr>
<tr>
<td>20</td>
<td>Chemical Agent Defense and/or Weapons</td>
</tr>
<tr>
<td>21</td>
<td>Materials: Textiles, Plastics, Paper, etc.</td>
</tr>
<tr>
<td>22</td>
<td>Metallurgy</td>
</tr>
<tr>
<td>23</td>
<td>Coatings</td>
</tr>
</tbody>
</table>

**Chemistry Model No. 2**

| 01 | Inorganic                      |
| 02 | Theoretical                    |
| 03 | Analytical                     |
| 04 | Physical                       |
| 05 | Medicinal                      |
| 06 | Biochemistry                   |
| 07 | Pollution                      |
| 08 | Polymer                        |
| 09 | Instrumental                   |
| 10 | Nuclear - Radiochemistry       |
| 11 | Management                     |
| 12 | Fuels and Combustion           |
| 13 | Explosives                     |
| 14 | Other                          |
| 15 | Agricultural and Food          |
| 16 | Clinical                       |
| 17 | Pharmaceutical                 |
| 18 | Synthetic Organic             |
| 19 | Physical Organic               |
| 20 | Literature                     |
| 21 | Structural                     |

13
**Occupation Series: Chemical Engineering**

<table>
<thead>
<tr>
<th>Current Specialties</th>
<th>Specialties Recommended by Task Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 General</td>
<td>01 Biochemical Processes</td>
</tr>
<tr>
<td>02 Biochemical Processes</td>
<td>02 Electrochemical Processes</td>
</tr>
<tr>
<td>03 Electrochemical Processes</td>
<td>03 Inorganic Chemistry</td>
</tr>
<tr>
<td>04 Inorganic Processes</td>
<td>04 Nuclear Chemistry</td>
</tr>
<tr>
<td>05 Isotope Separation</td>
<td>05 Organic Processes</td>
</tr>
<tr>
<td>06 Extraction, Solvent Recovery, Reprocessing</td>
<td>06 Heat Transmission</td>
</tr>
<tr>
<td>07 Heat Transmission</td>
<td>07 Fluid Dynamics</td>
</tr>
<tr>
<td>08 Materials Handling, Chemical</td>
<td>08 Process Design and Development</td>
</tr>
<tr>
<td>09 Measure and Control of Process Variables</td>
<td>09 Munitions Filling and Assembly</td>
</tr>
<tr>
<td>10 Fluid Dynamics</td>
<td>10 Pyrotechnics</td>
</tr>
<tr>
<td>11 Nuclear Processes</td>
<td>11 Pollution Control</td>
</tr>
<tr>
<td>12 Organic Processes</td>
<td>12 Waste Disposal</td>
</tr>
<tr>
<td>13 Mechanical Separation</td>
<td>13 Propellants</td>
</tr>
<tr>
<td>14 Mixing, Kneading, and Agitating</td>
<td>14 Explosives</td>
</tr>
<tr>
<td>15 Phase Change Separation</td>
<td>15 Cost Analysis</td>
</tr>
<tr>
<td>16 Size Reduction Processes</td>
<td></td>
</tr>
<tr>
<td>17 Process Design and Development</td>
<td></td>
</tr>
<tr>
<td>18 Product Packaging, Potting</td>
<td></td>
</tr>
<tr>
<td>19 Petroleum Processing</td>
<td></td>
</tr>
<tr>
<td>20 Zone Refining</td>
<td></td>
</tr>
<tr>
<td>21 Other</td>
<td></td>
</tr>
</tbody>
</table>

**Occupation Series: Microbiology**

<table>
<thead>
<tr>
<th>Current Specialties</th>
<th>Specialties Recommended by Task Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Antibiotics</td>
<td>01 Antimicrobials</td>
</tr>
<tr>
<td>02 Metabolism of Micro-organisms</td>
<td>02 Bacteriology</td>
</tr>
<tr>
<td>03 Physiology of Micro-organisms</td>
<td>03 Bacteriophage</td>
</tr>
<tr>
<td>04 Bioassay</td>
<td>04 Biologicals</td>
</tr>
<tr>
<td>05 Clinical Microbiology</td>
<td>05 Cell Culture</td>
</tr>
<tr>
<td>06 Epidemiology</td>
<td>06 Clinical and Diagnostic</td>
</tr>
<tr>
<td>07 Immunology</td>
<td>07 Cytology</td>
</tr>
<tr>
<td>08 Other</td>
<td>08 Epidemiology</td>
</tr>
</tbody>
</table>
### Occupation Series: Biology

<table>
<thead>
<tr>
<th>Current Specialties</th>
<th>Specialties Recommended by Task Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 General</td>
<td>01 Systematic Biology</td>
</tr>
<tr>
<td>02 Research</td>
<td>02 Developmental Biology</td>
</tr>
<tr>
<td>03 Anthropology</td>
<td>03 Molecular Biology</td>
</tr>
<tr>
<td>04 Other</td>
<td>04 Environmental Biology</td>
</tr>
</tbody>
</table>

### Occupation Series: Entomology

<table>
<thead>
<tr>
<th>Current Specialties</th>
<th>Specialties Recommended by Task Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Agricultural</td>
<td>01 Medical and Veterinary</td>
</tr>
<tr>
<td>02 Taxonomy</td>
<td>02 Physiology and Biochemistry</td>
</tr>
<tr>
<td>03 Control Techniques</td>
<td>03 Ecology - Behavior</td>
</tr>
<tr>
<td>04 Animal Insect Pests</td>
<td>04 Toxicology</td>
</tr>
<tr>
<td>05 Plant Insect Pests</td>
<td>05 Pathology</td>
</tr>
<tr>
<td>06 Insect Physiology, Morphology</td>
<td>06 Pest Control</td>
</tr>
<tr>
<td>07 Medical</td>
<td>07 Agricultural Pests</td>
</tr>
<tr>
<td>08 Other</td>
<td>08 Equipment Development</td>
</tr>
<tr>
<td></td>
<td>09 Biological Control</td>
</tr>
<tr>
<td></td>
<td>10 Other</td>
</tr>
</tbody>
</table>

09 Fermentation Products
10 Food Products
11 Genetics
12 Immunology
13 Metabolism
14 Mycology
15 Mycoplasmology
16 Parasitology
17 Rickettsiology
18 Safety
19 Serology
20 Soil
21 Taxonomy
22 Veterinary
23 Virology
24 Other
3. Trends.

Each group in reviewing and updating experience codes concentrated on redesigning the specialties category, i.e., digits 4 and 5 of the 7 digit experience code. There was also a consensus that classification of supervision (Functional level, digit 7) requires redefinition.

D. Task C - Mandatory Referral Level.

1. Statement of Task. Examine career progression patterns and occupational distribution to determine the appropriate mandatory referral level.

2. Results.

<table>
<thead>
<tr>
<th>Occupation Series</th>
<th>Recommended Mandatory Referral Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>Divided vote as follows:</td>
</tr>
<tr>
<td></td>
<td>No change in present policy, 1/6</td>
</tr>
<tr>
<td></td>
<td>GS-13 Local Referral</td>
</tr>
<tr>
<td></td>
<td>GS-14 Command-wide</td>
</tr>
<tr>
<td></td>
<td>GS-15 Army-wide</td>
</tr>
<tr>
<td></td>
<td>* Management option through GS-15 under local career referral system, 3/6</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>GS-13 Local Referral (if five or more local candidates are available)</td>
</tr>
<tr>
<td></td>
<td>GS-14 and GS-15 Army-wide</td>
</tr>
<tr>
<td>Microbiology</td>
<td>GS-14 Local Referral</td>
</tr>
<tr>
<td></td>
<td>GS-15 Command-wide</td>
</tr>
<tr>
<td>Biology</td>
<td>GS-13 Local Referral</td>
</tr>
<tr>
<td></td>
<td>GS-14 Command-wide</td>
</tr>
<tr>
<td></td>
<td>GS-15 Army-wide</td>
</tr>
<tr>
<td>Entomology</td>
<td>No change in present policy</td>
</tr>
</tbody>
</table>

* The proposal by three members of the Chemistry Task Group for a management option was meant to provide flexibility especially at laboratories where a number of qualified candidates are available. However, it was agreed that utilization of local referral should be subject to conditions such as the following: a) There are no available qualified candidates under the latest DOD Priority Placement Program stopper list. b) The area of consideration is installation-wide. c) There are at least three highly qualified local candidates. d) Selection is based strictly on the merit principle. e) Selection is approved by the installation Career Program Manager and the Commanding Officer.
3. Trends

Variations in the recommendations among the groups and particularly within the largest group (Chemistry) indicate the need for flexibility in the mandatory referral level. No correlation was evident between number of employees in an occupation and recommended mandatory referral level.

In cases where local referral was recommended, the area of consideration could be expanded if there were not enough well-qualified local candidates. It was further indicated that if the screening panels become operative, selection and career progression patterns should continue to be studied. Several Task Groups recommended that if review shows continued immobility of career registrants, consideration should be given towards eliminating mandatory referral for GS-14 and/or GS-15 positions.

E. Miscellaneous

1. AMC Talent Bank and AMC Form 1320 (Career Program Referral Listing).

The Microbiology Task Group in their presentation indicated that the greatly increased effectiveness provided by the Tobyhanna portion of the Talent Bank operation should soon become apparent to AMC personnel and gradually result in increased confidence and utilization of the Career Referral System.

Several of the Task Groups in reviewing the AMC Form printouts for their occupation saw that apparently not all eligible employees were registered. Also, there were numerous errors. It is suspected that changes submitted by many employees in past years never reached the Talent Bank computer. Consequently, much of the data is inaccurate.

The Tobyhanna computer portion of the Talent Bank system appears to be operating more efficiently than previous computer operations. The AMC Form 1320, which is printed whenever a change is submitted and also for yearly review by each person at the time of career appraisal, is being sent to the responsible Civilian Personnel Office. However, in a substantial number of cases it never reaches the employee. This is evident because several of the Task Groups recommended that the AMC Form 1320 be updated yearly. Also, the Chemical Engineering Task Group recommended that the DA Form 2302 (input to Form 1320) be prepared in combination with and approved by the immediate supervisor. The mechanism exists for employee-supervisor review of Form 1320 yearly at the time of career appraisal but apparently is not being used in many cases.
As a result of the various comments during the meeting several general recommendations concerning the Talent Bank and/or AMC Form 1320 were identified:

a. It was recommended that efforts be made to ensure that the career registrant has an opportunity to review AMC Form 1320 yearly.

b. It was recommended that intermediate channels between the referral requestor and the AMC Talent Bank be decreased to a minimum. The possibility of direct contact with the computer system should be investigated. Furthermore, it was recommended that telephone contact between the AMC Talent Bank operator and referral requestor be encouraged in order to ensure understanding of the request, and the identification of possible alternatives or variations.

2. DD Form 1559 (Employee Career Appraisal).

There was general agreement that the numeric rating system used to appraise the employee’s potential capability as judged against established characteristics and skill requirements for progression in the career field was of little value for the purpose of relative ranking in the career referral system. Alternatives should be sought, but the groups did not address the task.

3. Management Aspects.
   a. General

Dr. Ronald A. Ward, Chairman of the Entomology Task Group and a member of the Biology Task Group offered several suggestions on management aspects of the career system. These follow below.

b. Civilian Career Advisor.

It was suggested that civilian career advisors (GS-14 or higher) be established for each of the occupation series. These individuals would be engineers and scientists drawn from various commands and activities and placed under the direct supervision of the Area Manager. The advisor would aid in establishing professional career patterns within his occupation, furnish standards for various grade levels, assist in the recruitment of qualified personnel and coordinate the assignment of all civilian personnel within his specialty.

c. Civilian Scientific Administrator.

It was thought worthwhile to establish a scientific administrator program which would operate across various occupation specialties. The emphasis here is to encourage use of technical
expertise at higher levels of command. This would serve to assist in directing in-house and extramural programs and to coordinate work with other governmental agencies.

d. Department of Defense Referral.

In the interests of meeting the requirements of the Department of Defense for civilian scientists and engineers, a unified referral and career system is recommended that will encompass the separate talent banks of the individual services.

VI. OVERVIEW.

The three tasks identified in IV. APPROACH were accomplished. Results, trends and specific recommendations by each Task Group are detailed in the text. Without question, the recommendations reflect a need to make the present career system simpler and more flexible.

A general procedure for the use of screening panels and the establishment of career referral rosters was developed easily. However, there are many difficult details which the screening panels will need to work out. The greater the number of registrants in a particular occupation series, the more complex appears the problem of establishing useful procedures.

In order to test the usefulness of any major change in referral policy, it would appear feasible to use only one or possibly two occupations (with significant difference in the numbers of registrants in the latter instance). On the other hand, immediate and significant improvement to current operations could be obtained for all occupations by rapid implementation of the recommended changes to specialty codes and by ensuring that the careerist indeed does have an opportunity to review his Talent Bank printout on a yearly basis.

A distinctive consensus of recommendations was that Form 2302 (Qualification Record) and its use need to be improved. Simply revising experience specialty codes does not alone answer the problem of better being able to identify careerists who qualify for consideration in a particular referral. Several excellent recommendations were made with respect to expanded use of specialties coding in Form 2302 for referral input; these deserve careful study.

There was considerable variation in recommendations among the groups and particularly within the largest group in regard to mandatory referral level. The need for flexibility is evident; one of the groups proposed a management option. It is not completely clear whether the high degree of immobility of scientists and engineers is due primarily to skill specialization effects, lack of realistic opportunity because the local candidate usually wins out, or difficulties associated with relocation.
## APPENDIX A

### LISTING OF PARTICIPANTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Mailing address</th>
<th>Office phone</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Picatinny Arsenal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robert Heineman</td>
<td>Commanding Officer</td>
<td>Autovon 880-Ext or (201) 328-Ext 5450</td>
</tr>
<tr>
<td></td>
<td>Picatinny Arsenal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attn: SMUPA-DW</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dover NJ 07801</td>
<td></td>
</tr>
<tr>
<td>Francis R. Taylor</td>
<td>Picatinny Arsenal</td>
<td>Ext 6363</td>
</tr>
<tr>
<td></td>
<td>Attn: SMUPA-VLI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dover, NJ 07801</td>
<td></td>
</tr>
<tr>
<td><strong>Frankford Arsenal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>George C. White Jr.</td>
<td>Frankford Arsenal</td>
<td>Autovon 234-1800 Ext 5131</td>
</tr>
<tr>
<td></td>
<td>Attn: Code L1000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bridge &amp; Tacony Sts.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Philadelphia, PA 19138</td>
<td></td>
</tr>
<tr>
<td>Frank Gulba</td>
<td>Civil Pers Ofc</td>
<td>Ext 6119</td>
</tr>
<tr>
<td></td>
<td>Frankford Arsenal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Philadelphia, PA 19137</td>
<td></td>
</tr>
<tr>
<td>James Kowalick</td>
<td>J8600 Pyrotechnics Dev Br</td>
<td>Ext 2224</td>
</tr>
<tr>
<td></td>
<td>Frankford Arsenal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Philadelphia, PA 19137</td>
<td></td>
</tr>
<tr>
<td><strong>Walter Reed Army Institute of Research</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Howard E. Noyes</td>
<td>Hqrs. WRAIR</td>
<td>Autovon 851-Ext or (202) 576-Ext 3061</td>
</tr>
<tr>
<td></td>
<td>Walter Reed Army Medical Center</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Washington, DC 20012</td>
<td></td>
</tr>
</tbody>
</table>
Dr. Ronald A. Ward
Dept of Entomology
Walter Reed Army Institute of Res
Washington, DC 20012
Ext 2553
Ext 3719

Robert T. Lofberg
Walter Reed Army Institute of Res
Washington, DC 20012
Ext 2653

Fort Detrick

Dr. Henry T. Eigelsbach
Medical Bacteriology Div
Fort Detrick
Frederick, Maryland 21701
Autovon 343-2261
or 343-2183

Natick Laboratories

Dr. Gerard Florentine
US Army Natick Labs
PRL - D-312
Appl Entomology
Natick Mass 01760
Autovon 955-1000
or (617) 653-1000
Ext 2485

Dr. Gerald Silverman
US Army Natick Lab
Microbiology
Natick Mass 01760
Ext 2900

Dr. Durwood B. Rowley
Microbiology Division
Food Laboratory
US Army Natick Laboratories
Natick, Mass 01760
Ext 2383

Mr. Roy Laible
US Army Natick Labs
CTPLSE Labs
Natick Mass 01760
Ext 2179

Appendix A 22
Corps of Engineers

Mr. Richard T. Reppert
Corps of Engineers
Board of Engineers for Rivers and Harbors TEMPO C
2nd & Q Sts., S.W.
Washington, D.C. 20003
(202) 693-0612

HQ AMC

Mr. Marvin Sykes
Commanding General
USA Materiel Command
ATTN: AMCDL, Bldg T-7
Washington, D.C. 20315

Edgewood Arsenal

Dr. Benjamin L. Harris
Technical Director
Edgewood Arsenal, Md. 21010
Ext 4363

Mr. Gerald Fleming
Chief, Commodity Mgt Ofc
Hq
Edgewood Arsenal, Md. 21010
Ext 2038

Dr. Edward Pozioinek
Research Labs
Physical Res Lab
Edgewood Arsenal, Md. 21010
Ext 2369

Dr. Arthur McCreeh
Research Labs
Chemical Res Lab
Edgewood Arsenal, Md. 21010
Ext 3578

Mr. Alfred Gordon
WDEL
Chemical Process Lab
Edgewood Arsenal, Md. 21010
Ext 2268

Mr. Robert D. Armstrong
Research Labs
Medical Res Lab
Edgewood Arsenal, Md. 21010
Ext 3749

Appendix A

23
Mr. Harry L. Wilson  Ofc of Comptroller
Data Systems Div
Edgewood Arsenal, Md. 21010
Ext 2237

Mr. Terrance Chambers Civilian Personnel Div
Bldg 310, Wing 11
Attn: Actg Chief
Recruits & Placement Br
APG, Md. 21005
Ext 3134

Mrs. Mettah Kollmann Civilian Personnel Div
Recruitment & Placement Br
Edgewood Arsenal, Md. 21010
Ext 2314

Mr. John W. Reusing Research Labs
PP&A Ofc
Edgewood Arsenal, Md. 21010
Ext 2603

Mrs. Catherine K. Breedon Civilian Personnel Ofc
Edgewood Arsenal, Md. 21010
Ext 2136

Mr. John Sternberg Civilian Personnel Ofc
Edgewood Arsenal, Md. 21010
Ext 3326

Mr. Steve Arnold Civilian Personnel Ofc
Edgewood Arsenal, Md. 21010
Ext 2327 or 2370

Mrs. Pat Riemenschneider Civilian Personnel Ofc
Edgewood Arsenal, Md. 21010
Ext 2327 or 2370

Appendix A
APPENDIX B

ROLES OF PARTICIPANTS AND COMPOSITION OF TASK GROUPS

Personnel Career Advisor: Mr. Marvin Sykes, AMC

Area Manager: Dr. Benjamin L. Harris, Technical Director, Edgewood Arsenal

Meeting Chairman: Mr. Gerald J. Fleming, Edgewood Arsenal

Coordinators: Mr. Terrance S. Chambers and Dr. Edward J. Poziomek, Edgewood Arsenal

Arrangements: Mr. John W. Reusing, Edgewood Arsenal

Consultants: Mrs. Catherine K. Breeden, Mr. John Sternberg and Mr. Harry L. Wilson, Edgewood Arsenal

TASK GROUPS

<table>
<thead>
<tr>
<th>Chemistry</th>
<th>Distribution</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Edgewood Arsenal</td>
<td>232</td>
<td>Dr. Edward J. Poziomek GS-14 Chairman</td>
</tr>
<tr>
<td>Picatinny Arsenal</td>
<td>133</td>
<td>Dr. Frank R. Taylor GS-14</td>
</tr>
<tr>
<td>Natick Laboratories</td>
<td>116</td>
<td>Dr. Roy C. Laible GS-13</td>
</tr>
<tr>
<td>Walter Reed</td>
<td>71</td>
<td>Dr. Robert Lofberg GS-14</td>
</tr>
<tr>
<td>Frankford Arsenal</td>
<td>63</td>
<td>Mr. George C. White, Jr. GS-14</td>
</tr>
<tr>
<td></td>
<td>615</td>
<td>615/1157</td>
</tr>
</tbody>
</table>

Civilian Personnel (Frankford) Mr. Francis S. Gulba

<table>
<thead>
<tr>
<th>Chemical Engineering</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Picatinny Arsenal</td>
<td>160</td>
<td>Mr. Robert Heinemann GS-14 Chairman</td>
</tr>
<tr>
<td>Edgewood Arsenal</td>
<td>123</td>
<td>Mr. Alfred J. Gordon GS-13</td>
</tr>
<tr>
<td>Frankford Arsenal</td>
<td>28</td>
<td>Dr. James F. Kowalick GS-13</td>
</tr>
<tr>
<td></td>
<td>311</td>
<td>311/443</td>
</tr>
</tbody>
</table>

Civilian Personnel (Edgewood) Mrs. Metiah Kollmann

* This column gives the number of employees in the occupation at the installation or laboratory represented. Also given is the total number represented over the total number Army-wide.
Microbiology

Fort Detrick 148 Dr. Henry T. Eigelsbach GS-15 Chairman
Walter Reed 49 Dr. Howard L. Noyes GS-15
Natick Laboratories 17 Dr. Gerald Silverman GS-13
214 214/301

Civilian Personnel (Edgewood) Mr. Terrance S. Chambers

Biology

Corps of Engineers 41 Mr. Richard T. Reppert GS-14 Chairman
Edgewood Arsenal 49 Mr. Robert D. Armstrong GS-12
Walter Reed 22 Dr. Ronald Ward GS-14
Natick Laboratories 21 Dr. Durwood B. Rowley GS-14
92 92/182

Civilian Personnel (Edgewood) Mr. Steve Arnold

Entomology

Walter Reed 2 Dr. Ronald Ward GS-14 Chairman
Natick Laboratories 4 Dr. Gerard J. Florentine GS-12
6 6/19

Civilian Personnel (Edgewood) Mrs. Pat Riemenschneider

*Representing Walter Reed in Biology and Entomology

Appendix B 26
APPENDIX C

MEETING AGENDA

STUDY OF ENGINEERS AND SCIENTISTS REFERRAL SYSTEM
TASK GROUP MEETING
22-23 June 1971

LOCATION: Stark Hall Service Club
Bldg 4140; Corner of Wisc and Austin Rds
Edgewood Arsenal, MD 21010 (see attached map)

TUESDAY - 22 June

0830 Coffee available

0900 Introductory Remarks - Mr. Gerald J. Fleming, Edgewood Arsenal

0905 General Purpose and Goals - Dr. Benjamin L. Harris, Technical Director, Edgewood Arsenal

0915 Orientation and Review - Dr. Edward J. Pozlonick, Edgewood Arsenal

a. Report of Personnel Management, Scientists, and Engineers in USAMC R&D Laboratories
b. USAMC Plan of Action
c. Inter-relationship of Tasks
d. Basic Regulations and Policies
e. Available Reports and Information

0930 Career Referral Rosters - Mr. Terrance S. Chambers, Edgewood Arsenal

Existing Procedures

a. Basic Provisions
b. Mandatory Referral Levels
c. Exceptions
d. Screening Processes
e. Experience Codes
0950 The Talent Bank - Mr. Harry Wilson, Edgewood Arsenal
   a. Data Elements
   b. How the System is Being Used
   c. What the System Can Do

1010 Break

1025 Group Assignments and Appointment of Task Group Chairmen -
Mr. Gerald J. Fleming

1030 General Work Session - All Task Groups
   a. Review Objectives - Mr. Gerald J. Fleming
   b. Establish Approach - Mr. Gerald J. Fleming
   c. Discussion on Career Referral Rosters - Mr. Terrance Chambers
      How to develop a viable roster
      General factors to be considered
      How many rosters per occupation series
      Methods of obtaining and weighing information
      Methods of administration
   d. Models for Establishing Career Referral Rosters and Updating
      Experience Codes - Dr. Edward J. Pozionek

1130 Lunch

1300-1600 Individual Task Group Work Sessions

WEDNESDAY - 23 June

0830 Coffee Available

0900 Reports by Task Group Chairmen (including submission of written reports)

1100 Overall Summary and Concluding Remarks

Appendix C 28
APPENDIX D

LISTING OF REFERENCE MATERIAL AVAILABLE TO PARTICIPANTS


b. DA Form 2302, Qualification Record. (Blank form).

c. AMC Form 1320, Career Program Referral Listing. (Individual printout of each registrant in occupations chemistry, chemical engineering, microbiology, biology and entomology.)

d. DA Form 1559, Employee Career Appraisal. (Blank form and numeric code level distribution by grade.)

e. CPR 950-1, Career Management Basic Policies and Requirements.

f. Revised CPR 950-1: portion on referral.

g. Civil Service definitions of occupation series.

h. Army-wide distribution of chemists, chemical engineers, microbiologists, biologists and entomologists by grade and location.

i. CPR 950-18, Army Civilian Career Program for Engineers and Scientists.

j. Experience Codes, Information sources and/or models.

(1) Corps of Engineers proposed system.


(6) Specialties List for Use with National Register of Scientific and Technical Personnel.

(7) Lists of Engineering Curricula, Areas of Technology and Science, Products or Services, and Functions for use with National Engineers Register.


l. Example of Procedures for Operation of Career Referral Roster.

m. Worksheets:

Mandatory Referral Level

Ranking Criteria

Experience Codes


o. Reports:

A Career Development Program for ADP Personnel AD681772

A Biographical Information Retrieval Program AD646845

Personnel Management for R&D AD666544

Appendix D 30
Examples of other referral and selection programs in the Army

Intelligence

Procurement

Comptroller

Supply Management and Equipment Specialist
APPENDIX E

GENERAL CRITERIA AND PROCEDURES FOR THE ESTABLISHMENT AND OPERATION OF CAREER REFERRAL ROSTERS

Semi-permanent career referral rosters shall be established by screening panels. Candidates will be selected for referral in response to a Request for Referral List.

I. Composition of Screening Panels.

1. Membership on panels will include activity or command representatives having a major interest in the occupation or specialty being considered. To assure proper representation among commands, Department of the Army will place a levy on major commands for representatives, as required, to serve on panels.

2. Each member preferably should hold a grade higher than the grade for which the promotion and placement list is being prepared. No member will be of a lesser grade.

3. Each panel will be composed of at least three technical members and may be larger depending upon requirements. A quorum will be three members.

4. Personnel management specialists will be made available to advise panels on technical personnel matters and to assist in developing evaluation and ranking methods. The personnel management specialist may be of lower grade than the vacancy.

5. Membership on panels should, insofar as possible, be representative of the agencies and commands having employees in the grade and occupation for which screening is being made. Insofar as the circumstance can be anticipated, individuals who later may be included in a referral list resulting from the panel action should not sit as a member of this panel.

6. An executive secretary (non-voting) will be provided each panel to assist in the screening process, maintain a record of screening actions, and perform related functions. Ordinarily, the personnel management specialist will serve in this capacity.

Preceding page blank

33
2. **Information Policy.** Deliberations of a screening panel, insofar as they relate to the discussion of the performance, ability, personal characteristics, potential, and evaluation of any individual employee, are to be regarded as privileged information. The names of the panel members and the place and date of panel meetings also should remain privileged information until after the screening operation has been completed. Any career employee, however, who wishes to know in which grouping he appears on a promotion and placement list (that is, highly qualified, qualified for lateral referral, and all others, whether or not recommended for training or for inclusion in the career executive group), will be given the information as well as the guidelines which will enable him and his supervisors to improve, or to take meaningful steps to improve, his qualifications.

3. **Qualification Screening.** The procedures and standards set forth below will be observed in identifying candidates for inclusion on promotion and placement lists. Selection of the best qualified candidates for referral to vacant positions will be made on the broadest possible selection base and in consonance with the standards and requirements indicated in the several occupational career sections. Selection criteria will be designed to facilitate the identification and selection of persons who have the education, training, experience, and personal qualities which are essential in a corps of highly qualified personnel. Preliminary, secondary, and final screening processes will assure that all pertinent factors are considered and that overly restrictive or narrow requirements, unless definitely proven, do not preclude consideration of persons of broad experience and education. The screening panel should ensure that employee records (AMC Form 1320) are updated.

4. **Preliminary Screening.** During this process, which is normally performed by a personnel specialist, all candidates will be eliminated who:

   (1) Do not meet minimum qualification requirements for the category.

   (2) Do not meet the time-in-grade requirements for promotion as of the anticipated date the promotion and placement list is to become effective.

5. **Development of Promotion and Placement Lists by Screening Panels.**

   Screening panels will be guided by the following in the development of promotion and placement lists:

   (1) **Meetings -** Screening panels will be convened by the chairman as required.
(2) Ranking - Candidates who meet eligibility requirements will be ranked into one of two categories, qualified or highly qualified.

(3) Criteria - Each screening panel will identify and record the criteria which will be used to group individuals on the particular promotion and placement list to be prepared. While criteria will vary, the following are illustrative of the factors which will be considered by screening panels in establishing screening criteria:

(a) About employees -

(1) Evaluation of employee's educational level attained and major field of concentration.

(2) Experience in specialty.

(3) Experience in related fields.

(4) Breadth of experience (staff-operating, mix and variety of commands, mission groups worked in).

(5) Length of expected continued Government service and health.

(6) Past performance, including awards, publications and patents.

(7) Time in last three grades.

(8) Supervisor's and command's evaluation of potential.

(9) Training courses completed.

(10) Past mobility.

(11) Present extent of mobility.

(12) Personal characteristics and goals.
Training and self-development activities, past and present, which indicate interest in and desire to increase professional knowledge and skill.

Expressed interest and/or successful try-out experience in the work represented by the category, backed up with evidence or preparation therefor and supervisory recommendation.

(b) Management requirements and resources - -

(1) Number of anticipated vacancies to be filled.

(2) Kinds of skills required.

(3) Trainee resources.

(4) Developmental resources.

(c) Additions to lists - - As a general rule, no additions will be made to a list. Persons whose records were not completed or for whom current appraisal information was missing at the time the list was established, may be added upon receipt of current data and completion of the screening panel evaluation.

6. Referral of Candidates. Only the candidates appearing in the highly qualified list will be considered for referral. Recommendations as to the number of candidates to be referred should be made by the screening panel after analysis of factors such as number of eligible, significance of ranking criteria, etc.

7. Number of Rosters per Occupation. A roster will be established for each experience specialty of the occupation by grade levels.