

U.S. Office of Personnel Management
Office of Merit Systems Oversight and Effectiveness
Classification Appeals and ELSA Programs



Washington Oversight Division
1900 E Street, NW
Washington, DC 20415

Classification Appeal Decision
Under Section 5112 of Title 5, United States Code

Appellant: (Name)

Agency Classification: Mechanical Engineer, GS-830-11

Position Number: MI05190001

Organization: Public Works Department
Engineering Division
(Naval installation)

OPM Decision: Mechanical Engineer, GS-830-11
(Appeal Denied)

OPM Decision Number: C-0830-11-01

Richard Quasney
Classification Appeals Officer

Date 12/8/97

As provided in section 511.612 of title 5, Code of Federal Regulations, this decision constitutes a certificate that is mandatory and binding on all administrative, certifying, payroll, disbursing, and accounting officials of the government. The agency is responsible for reviewing its classification decisions for identical, similar, or related positions to ensure consistency with this decision. There is no right of further appeal. This decision is subject to discretionary review only under conditions and time limits specified in the Introduction to the Position Classification Standards, appendix 4, section G (address provided in appendix 4, section H).

Decision sent to:

(Appellant's name and address)

Office of Civilian Personnel Management
Director for Classification, Staffing,
and Compensation (OCPM Code C20)
800 North Quincy Street
Arlington, VA 22203-1998

(Civilian Personnel Officer)
(Naval installation)

Defense Civilian Personnel Management Service
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INTRODUCTION

On June 13, 1997, the U.S. Office of Personnel Management (OPM) Dallas Oversight Division accepted a position classification appeal from (appellant). The appellant is employed as a Mechanical Engineer, GS-830-11 in the Engineering Division, Public Works Department, (Naval installation). The appellant requested that his position be classified at the GS-12 Level. The appellant has included with his appeal descriptions of engineering projects and his involvement in them. We conducted telephone interviews with the appellant and supervisor. In reaching our classification decision, we have carefully reviewed all relevant information furnished by the appellant and the agency, including the appellant's official position description (PD). We have accepted and decided the appeal under section 5112 of title 5, United States Code.

GENERAL ISSUES

The appellant has certified the position description as accurate. The appellant has cited another, since abolished position, Electrical Engineer, that had been classified at the GS-12 Level. The appellant maintains that the duties and responsibilities in his specialty are the same as those that had been in the abolished position. By law, positions must be classified on the basis of their current duties, responsibilities, and qualification requirements, and by the application of standards published by OPM. Since comparison to standards, not to other positions, which may or may not be correctly classified, is the exclusive method for classifying positions, we may not consider the classification of other positions as a basis for deciding an appeal.

POSITION INFORMATION

The function of the Engineering Division is to provide architectural and engineering support and services to host and tenant activities of the (Naval installation). This includes accomplishing the architecture and engineering design, construction, and modification work.

In addition to the appellant, three other individuals, including the supervisor, provide expertise in their specialties of civil engineering, architectural, and electrical engineering in accomplishing the work. They function as a team in accomplishing projects and projects are typically assigned to individuals (in charge) based on their specialty and the preponderant engineering requirements of the project. Under this approach, the individual assigned a project utilizes their knowledge of their specialty and general knowledge of the other engineering specialties along with consultation with other team members on matters involving more in-depth or complex technical issues in the other specialties. The individual in charge administers the project from inception to final completion with most of the actual work of the project being done by contract with commercial architecture and engineering entities.

As the in charge engineer or Project Design Engineer for assigned projects, the appellant manages the project by conducting such aspects as scope definition, cost estimate, project documentation fund request, and plan review. He meets with contractors to resolve problems, corrects design deficiencies, incorporates new requirements, approves recommended solutions, and makes architect/engineer performance recommendations. The appellant also serves as the facility's Energy Conservation Program Manager. He coordinates with energy conservation representatives and implements Navy program and policies. He makes periodic inspections and develops a plan of action and new concepts for energy conservation.

SERIES AND TITLE DETERMINATION

The appellant does not contest his title or series. The Mechanical Engineering, GS-830, series includes professional positions in the field of mechanical engineering typically requiring the application of thermodynamics, mechanics, and other physical, mathematical, and engineering sciences to problems concerned with the production, transmission, measurement, and use of energy, especially heat and mechanical power. Their work is typically concerned with facilities, systems, equipment, and instruments for productions, transmission, measurement, control, and use of heat and mechanical power. The appellant provides professional mechanical engineering services for the mechanical systems on a military installation which includes buildings, plants, shops, and other facilities. These duties are properly covered by the GS-830 series. The series standard prescribes the title of Mechanical Engineer.

GRADE LEVEL DETERMINATION

The classification standard for the GS-830, Mechanical Engineering Series is directly applicable to the work performed and is used to evaluate the grade level of the position. The standard is written in the Factor Evaluation System (FES) which consists of nine evaluation factors. Under the FES, each factor level description in a standard describes the minimum characteristics needed to receive credit for the described level. Therefore, if a position fails to meet the criteria in a factor level description in any significant aspect, it must be credited at a lower level. Conversely, the position may exceed those criteria in some aspects and still not be credited at a higher level. A point value is assigned to each factor level, and the total points assigned are converted to a grade by use of the grade conversion table in the standard.

The appellant did not provide an analysis of his appeal based on a factor comparison with the classification standards and did not dispute the information in his official position description. Therefore, a full analysis of the position by each of the nine factors is provided in this appeal decision.

Factor 1 - Knowledge Required by the Position

This factor covers the nature and extent of information or facts which a worker must understand in order to do acceptable work and the nature and extent of the skills needed to apply these knowledges. To be used as basis for selecting a level under this factor, a knowledge must be required and applied.

Level 1-7 requires professional knowledge and abilities applicable to a wide range of duties in a specialty area; the ability to modify standard practices and adapt equipment or techniques to solve a variety of engineering problems; the ability to make significant departures from previous approaches to similar projects in order to provide for specialized requirements; and the ability to apply the concepts of related engineering disciplines to the specialty area.

This is comparable to the demands of the appellant's position. His position requires knowledge and application of mathematics, physics, mechanics, thermodynamics, and heat transfer concerned with the design and layout of a variety of mechanical and energy conservation systems such as plumbing, heating, ventilating, air conditioning, utility, and other systems. The appellant must also be generally knowledgeable of related engineering disciplines in reviewing and evaluating the work of architect/engineer firms. The appellant develops conceptual designs and cost estimates, researches previous project designs, and coordinates the work with other engineering disciplines as the Project

Design Engineer in an operating engineering function. The appellant must be able to adapt precedent or make departures from previous approaches to similar projects in order to meet specialized requirements of a project. Illustrative of this level are knowledges and skills necessary to develop design features and plans for both repair and improvement projects and complete designs of new mechanical systems for a variety of structures and equipment, such as multi-story office buildings, hospitals, or a variety of specialized floating plant. Also illustrative of Level 1-7, described in Benchmark 11-5 at the GS-11 grade level, is preparing original designs and preliminary and final layouts and specifications for mechanical systems, machinery, and equipment in large industrial and office buildings. This is comparable to the work of the appellant's position.

The appellant's position does not meet Level 1-8, where the engineer's knowledge requires mastery of a specialty field to the extent that the engineer applies **new** developments and experienced judgment to solve **novel** or **obscure** problems, and where, typically, the engineer is a recognized expert in the specialty field. For example, as illustrated in Benchmark 13-1, such knowledge would be required in a position where the engineer serves as a regional technical authority on civil works and constructions projects throughout a seven state region. This level of expertise would be required and applied in wide range of systems for buildings of many sizes, various types of hospital mechanical equipment, fire protection systems, safety service and communications systems for missile assembly control and satellite launching facilities and rocket propellant fuel systems. The work entails serving as consultant to operating level engineers who are responsible for the actual design functions through oversight of architect/engineer concerns or direct performance. Clearly, the work of the appellant's position does not reach this level.

Therefore, this factor is evaluated at Level 1-7 and credited with 1250 points.

Factor 2 - Supervisory Controls

This factor covers the nature and extent of direct or indirect controls exercised by the supervisor, the engineer's responsibility for carrying out assignments, and how completed work is reviewed. Supervisory Controls are exercised by the supervisor in the way assignments are made, instructions are given to the employee, priorities and deadlines are set, and objectives and boundaries are defined. The responsibility of the employee depends upon the extent to which the employee is expected to develop the sequence and timing of various aspects of the work, to modify or recommend modification of instructions, and to participate in establishing priorities and defining objectives.

At Level 2-4, the supervisor sets the overall objectives and resources available, and the employee and supervisor, in consultation, develop the deadlines, projects, and work to be done. The employee, having developed expertise in the specialty area is responsible for planning and carrying out the assignment; resolving most of the conflicts which arise; coordinating the work with others as necessary; and interpreting policy on own initiative in terms of established objectives. The employee keeps the supervisor informed of progress. Completed work is reviewed only from an overall standpoint in terms of feasibility, compatibility with other work, or effectiveness in meeting requirements or expected results. This is descriptive of the appellant's position. The appellant works within the overall parameters set by the supervisor. The appellant is assigned projects as the Project Design Engineer and is expected to plan and carry out the project from start to finish. The appellant makes decisions and recommendations on engineering matters involving architect/engineer firms, and coordinates the work with other engineering disciplines. The appellant's work is reviewed only in terms of meeting the need for which the project was established. This is considerably short of Level

2-5, however, where assignments are made in terms of broadly defined missions or functions and the engineer is responsible for the full program or functional area including final authority over all technical aspects of the work. In contrast, the appellant is assigned discreet assignments, e.g., engineering design projects, and, while the appellant is expected to independently plan and carry out the work, competent engineering personnel, including the immediate and higher level supervisors, are present in the organization and are ultimately responsible for the engineering work in the division. This precludes reaching Level 2-5.

This factor is evaluated at Level 2-4 and credited with 450 points.

Factor 3 - Guidelines

This factor covers the nature of guidelines for the work and judgment needed to apply them. Individual jobs vary in the specificity, applicability, and availability of the guidelines for performing assignments. Consequently, the constraints and judgmental demands placed upon employees also vary. For example, the existence of specific instructions, procedures, and policies may limit the opportunity of the employee to make or recommend decisions or actions. However, in the absence of procedures or under broadly stated objectives, employees may use considerable judgment in researching literature and developing new methods. Guidelines refers to standard guides, precedent, methods, and techniques including agency manuals of instructions and operations, standard textbooks, manufacture's catalogs and handbooks, standard designs developed and prescribed by the central engineering staff of the agency, master or guide specifications developed and prescribed by the central engineering staff of the agency, files of previous projects undertaken by the agency, standard work practices in the area of application as taught in engineering courses or generally accepted by engineers as a result of experience, codes and standards published by recognized engineering societies and organizations including regulatory and enforcement agencies, and governing policies and procedures of the agency.

At Level 3-3, guidelines include standard instructions, technical literature, agency policies and regulations, manufacturer's catalogs and handbooks, precedents and standard practices in the area of assignment or specialization. The engineer independently selects, interprets, and applies the guides, modifying, adapting, and making compromises to meet the requirements of the assignment. In addition, the engineer must exercise judgment in applying standard engineering practices to new situations and relating new work situations to precedent ones.

The guidelines at Level 3-3 are similar those in the appellant's position. Guidelines governing the work of the appellant's position include federal, DOD, Navy, and Command technical publications and standards, manufacture's literature, previous projects designs and precedents, standard engineering practices, and state and local laws and regulations. The appellant must use discretion in selecting and determining the applicability of the guidelines, and adapting and modifying them, when necessary, in order to meet special requirements of project designs. In contrast to the guidelines in the appellant's position, guidelines at Level 3-4 are more broadly stated and are often inadequate in dealing with the more complex or unusual problems. They typically require deviation from or extension of traditional engineering methods and practices in developing solutions where precedents are not applicable such as in the development of material to supplement and explain agency headquarters guidelines. The guidelines in the appellant's position do not reach this level.

This factor is evaluated at Level 3-3 and credited with 275 points.

Factor 4 - Complexity

This factor covers the nature and variety of tasks, steps, processes, methods, or activities in the work performed; and the degree to which the engineer must vary the work, discern interrelationships and deviations, or develop new techniques, criteria or information. The basic unit for measuring this factor is the complex feature. A complex feature is an individual engineering problem, broadly defined, which requires (1) modification or adaptation of, or compromise with, standard guides, precedents, methods, or techniques; or (2) special considerations of planning, scheduling, and coordination.

At Level 4-4, assignments typically contain combinations of complex features. Work at this level typically involves the application of standard engineering practices to new situations and relating new work situations to precedent ones and, in addition, the modification or adaptation of and making compromises with standard guidelines. This is characteristic of the appellant's work. His assignments are diverse and he must adapt and modify conventional practices, when necessary, and apply design criteria to the projects. His work requires recognition of the relationship of problems and practices of other engineering disciplines in order to resolve engineering problems presented by the assignment. In contrast, the appellant's assignments are not of such breadth, diversity, and intensity that they involve many, varied complex features, characteristic of Level 4-5. The kind of assignments illustrative of this level of complexity include designing, modifying, and performing engineering evaluations on the different mechanical systems and equipment found in large civil works construction projects such as multi-purpose dams and river navigation structures. The appellant's assignments do not reach to this level.

This factor is evaluated at Level 4-4 and credited with 225 points.

Factor 5 - Scope and Effect

This factor covers the relationship between the nature of the work, i.e., the purpose, breadth, and depth of the assignment, and the effect of work products or services both within and outside the organization.

Effect measures such things as whether the work output facilitates the work of others, provides timely services, or impacts on the adequacy of research conclusions. The concept of effect alone does not provide sufficient information to properly understand and evaluate the impact of the position. The scope of the work completes the picture, allowing consistent evaluations. Only the effect of properly performed work is to be considered.

At Level 5-3, the purpose of the work is to investigate and analyze any of a variety of problems or conditions and to provide or recommend ways of dealing with them. The engineering determinations affect the design or operation of equipment or facilities with regard to economy, efficiency and safety of the system involved.

At Level 5-4, the purpose of the work is to provide expertise as a specialist in a particular specialty field by furnishing advisory, planning or reviewing services on specific problems, projects, programs and functions. This work may include developing criteria, procedures or instructions for **major agency** activities. Work products impact on a wide range of the **agency's** engineering program.

The appellant's position description states that the purpose of the work "is to provide technical expertise in the design of mechanical and energy conservation systems, perform complex design work, and advise or review work performed by A/E contract...The work efforts affect the efficiency, economy, and safety of mechanical, energy conservation, and utility systems involved." This meets and exceeds, in some respects, Level 5-3. However, the appellant's position does not fully meet Level 5-4. Typically, work at Level 5-4 involves developing engineering guidance for wide use. In addition, unlike the work of the appellant's position, work at Level 5-4 affects a wide range of the agency's engineering program.

Therefore, this factor is evaluated at Level 5-3 and credited at 150 points.

Factor 6 - Personal Contacts

This factor measures face-to-face contacts and telephone and radio dialogue with persons not in the supervisory chain. Levels described under this factor are based on what is required to make the initial contact, the difficulty of communicating with those contacted, and the setting in which the contact takes place. Above the lowest levels, points are credited only for contacts which are essential for successful performance of the work and which have demonstrable impact on the difficulty and responsibility of the work performed.

At Level 6-3, contacts include a variety of officials, managers, professionals or executives of other agencies and outside organizations. Typical of these contacts are manufacturers' representatives, private architect-engineer firms, specialists at contractors' plants, and engineers and architects from other Federal agencies.

This level is comparable to the appellant's position. The appellant deals with managers of the buildings he is constructing or renovating, architects, other engineers and representatives in government and in the private sector, contracting representatives, officials from A/E firms, and similar contacts. The appellant does not regularly make the type of contacts required in accomplishing the work as at Level 6-4, which include high-ranking officials from outside the agency, including key officials and top engineering and scientific personnel of other agencies, State and local governments, private industry and public groups.

Therefore, Factor 6 is evaluated at Level 6-3 and credited with 60 points.

Factor 7 - Purpose of Contacts

The contacts identified in Factor 6 are evaluated in Factor 7 for the purpose of those contacts. The purpose of personal contacts ranges from factual exchanges of information to situations involving significant or controversial issues and differing viewpoints, goals, and objectives.

At Level 7-2, the purpose of contacts is to plan and coordinate work efforts with co-workers, discuss technical requirements of equipment with manufacturers and resolve any problems in its use, resolve questions of field personnel, discuss contract requirements and generally clarify problems and reach agreement on overall plans and schedules. The persons contacted are usually working toward a common goal and generally are cooperative.

This is comparable to the level of contacts required in the appellant's position. The appellant must make contacts to exchange engineering or contract information, determine engineering requirements and problems of serviced organizations, gather current information on guidelines and standards, discuss designs and drawings, resolve project problems, and coordinate work efforts. Unlike the appellant's position, the purpose of contacts at Level 7-3 is to negotiate agreements with agencies and contractors where there are conflicting interests and opinions among organizations or among individuals who are also experts in the field, influence or persuade other engineers to adopt technical points and methods about which there are conflicts, or to justify the feasibility and desirability of work proposals to top agency officials.

This factor is evaluated at Level 7-2 and is credited at 50 points.

Factor 8 - Physical Demands

This factor covers the requirements and physical demands placed on the engineer by the work assignment. This includes the physical characteristics and abilities and the physical exertion involved in the work.

Most of the work is completed in an office setting. However, the work also requires considerable walking, climbing, and bending to, for example, inspect construction activity.

Therefore, this factor is evaluated at Level 8-2 and credited with 20 points.

Factor 9 - Work Environment

This factor considers the discomforts and risks in physical surroundings or job situations and the safety regulations required.

Beyond the appellant's office setting, the appellant is exposed to the elements, dust, chemicals, and moving equipment while inspecting construction activity.

This factor is evaluated at Level 9-2 and credited with 20 points.

Summary of Factor Levels

The following table summarizes the factor levels credited to the appellant's position.

SUMMARY OF FACTOR LEVELS		
FACTOR	LEVEL	POINTS
1. Knowledge Required by the Position	1-7	1250
2. Supervisory Controls	2-4	450
3. Guidelines	3-3	275
4. Complexity	4-4	225
5. Scope and Effect	5-3	150
6. Personal Contacts	6-3	60
7. Purpose of Contacts	7-2	50
8. Physical Demands	8-2	20
9. Work Environment	9-2	20
Total		2500

The point total for the nine factors is 2500. According to the grade conversion table in the GS-830 standard, this point value falls within the range of 2355 to 2750 points and converts to a grade of GS-11.

DECISION

This position is properly classified as Mechanical Engineer, GS-830-11.