



**Copy of Decision Sent To:**

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## **Background**

On May 22, 1997, the Atlanta Oversight Division, Office of Personnel Management, accepted two separate appeals for the position of Biomedical Engineering Technician, GS-802-10, [organizational location] at a Veterans Affairs Medical Center. The appellants are requesting that their position be changed to grade GS-11. Since both appellants are assigned to the same position description, their appeals are being handled as one.

The appeal has been accepted and processed under section 5112(b) of title 5, United States Code. This is the final administrative decision on the classification of the position subject to discretionary review only under the limited conditions and time outlined in part 511, subpart F, of title 5, Code of Federal Regulations.

## **Sources of Information**

This appeal decision is based on information from the following sources:

1. [Appellant's] letter of May 19, 1997, and [second appellant's] letter of May 19, 1997, appealing the classification of their position and providing position information.
2. The agency's administrative report, dated June 11, 1997, providing position and organizational information.
3. Additional workload information provided by the appellants on June 24, and June 25, 1997.
4. A telephone interview with the appellants' immediate supervisor on June 16, 1997.
5. A telephone interview with [first appellant] on July 15, 1997.
6. A telephone interview with [second appellant] on July 21, 1997.

## **Position Information**

The appellants are assigned to [Position Number]. The appellants, supervisor, and agency have certified to the accuracy of the position description.

The appellants' duties, according to the job description, include maintenance, installation, modification, inspection, and user training of complex electronic medical equipment requiring a knowledge of the principles and techniques of operation of the equipment, an understanding of the medical parameters and related sciences, and knowledge of the latest electronic theory. The appellants perform inspections of equipment to ensure compliance with manufacturer's specifications and electrical safety standards; calibrate equipment; conduct ongoing preventive maintenance; maintain spare parts stock and inventory control for assigned equipment; and conduct training programs for operators to increase operator efficiency and reduce down-time.

The appellants receive direction from the Supervisory Biomedical Engineering Technician who provides general guidelines. The appellants establish their own priorities and work independently. They discuss maintenance problems with other technicians and manufacturers' representatives and keep the supervisor apprised as required.

## **Standards Referenced**

Engineering Technician Series, GS-802, June 1969.

Medical Equipment Repairer Job Grading Standard, WG-4805, June 1974.

Introduction to the Position Classification Standards, Section IV.

## **Pay System Determination**

The appellants request a higher grade in the General Schedule (GS). Our review found it necessary to determine, first, whether the position is properly covered by the GS or the Federal Wage System (FWS). Section 5102(c)(7), title 5, United States Code, exempts from coverage under the GS those "employees in recognized trades or crafts, or other skilled mechanical crafts, or in unskilled, semi-skilled, or skilled manual-labor occupations, and other employees including foremen and supervisors in positions having trade, craft, or laboring experience and knowledge as the paramount requirement."

The "paramount requirement" of a position refers to the essential, prerequisite knowledge, skills, and abilities needed to perform the primary duty or responsibility for which the position has been established. Whether particular types of positions are trades, crafts, or manual labor occupations within the meaning of title 5 depends primarily on the facts of duties, responsibilities, and qualification requirements, i.e., the most important, or chief, requirement for the performance of a primary duty or responsibility for which the position exists. If a position clearly requires trades, crafts, or laboring experience and knowledge as a requirement for the performance of its primary duty, and this requirement is paramount, the position is under the FWS regardless of its organizational location or the nature of the activity in which it exists.

The GS-802 series includes technical positions that require primarily application of a practical knowledge of the methods and techniques of engineering and the construction, application, properties, operation, and limitations of engineering systems, processes, structures, machinery, devices, and materials. This series includes positions performing nonprofessional technical work in functions such as research, development, design, evaluation, construction, inspection, production, application, standardization, and test or operation of engineering facilities, structures, systems, processes, equipment, devices, or materials. The GS-802 series was not intended to cover positions in which the primary duties are repair, maintenance, and hands-on modification.

In comparison, the standard for Medical Equipment Repairer, WG-4805, is used to grade nonsupervisory work involved in the installation, maintenance, overhaul, repair, and testing of various medical and dental equipment used in patient diagnosis and treatment and in research laboratories. This work requires a knowledge and application of mechanical, electrical, and electronic principles and circuitry, the ability to determine malfunctions, and the skill to repair and maintain a variety of medical, laboratory, and dental equipment.

Maintenance and repair work is typically regarded as trade or FWS work and usually performed in or from a shop, while evaluation and design work is typically regarded as technician or GS work and usually performed in a laboratory or under the direction of an individual with professional training in the appropriate field of work. For example, the Medical Equipment, WG-

4805, job grading standard states: "Medical Equipment Repairers install, modify, troubleshoot, maintain, test, calibrate, adjust, overhaul, and repair a wide variety of medical, laboratory, and dental equipment (electronic, electrical, and mechanical)." The standard excludes such work, however, when it is performed by technicians incidental to the development and evaluation of medical equipment. Development and evaluation are engineering functions and, therefore, when such work is performed by nonprofessionals, it is often to support a professional engineer who actually directs the work.

As indicated in the agency's evaluation of the appellants' position, the majority of duties and responsibilities assigned to the position include medical equipment maintenance, installation, evaluation, minor modification, inspection, testing, and training. In addition, the appellants' performance plan lists four elements to be evaluated: preventive maintenance, electrical safety, and incoming inspections; maintenance and repair; general duties (which includes responding to equipment failures on an emergency basis, conducting inservice training to equipment users, following medical center policies, and acting in the supervisor's absence); and communication and work habits. Design, development, major modification, fabrication, and other technical functions typical of engineering technician positions are clearly not found in the appellants' position.

Engineering technician positions and FWS positions sometimes involve overlapping activities. A skilled trades person should possess many of the same knowledges, skills, and abilities as a technician. In some cases, the contribution to design and development or other technical aspects of the work of a position requiring competence in a trade may be significant in evaluating the level of difficulty, responsibility, and qualifications required for the work, but these technical features do not automatically place the positions under the GS.

The difference between the technician (GS) and the repair (FWS) positions is not so much in types of skills, knowledges and abilities possessed as in the degree to which they are possessed and the manner in which they are used. A basic difference is in the mental approach to the problems faced. For example, the technician uses his/her knowledge to solve practical engineering problems. By comparison, the person repairing the equipment uses his/her knowledge to follow and understand the design concepts of others and the

purpose and operations of parts and circuits in order to tune the equipment for optimum performance and to locate and correct malfunctions. In practice, this distinction may become blurred somewhat by innovative mechanics who have the ability to develop shortcut procedures to make their work faster and easier, to recognize and recommend the correction of errors in documentation, to recommend design or methods changes to remedy a deficiency, etc. In such cases, it is important to be mindful that the random performance of such work should not be construed as reflecting the paramount requirement for a position's existence.

The regular and recurring work of the appellants' position requires a knowledge of mechanics, electronics, pneumatics, electromechanics, optical repair, and of electrical, mechanical, and solid state circuitry. They must be familiar with a variety of test equipment such as analog and digital multimeters, storage oscilloscopes, integrated circuit testers, pneumatic analyzers, defibrillator testers, etc. Work orders and preventive maintenance logs indicate that the appellants average 30 percent of their time performing preventive maintenance and 45 percent of their time repairing equipment. The remaining time is spent assisting other technicians, training staff, and performing various miscellaneous work. The appellants test and repair a wide variety of medical equipment such as radiographic units, electrocardiographs, blood gas analyzers, film processors, defibrillators, laser imagers, ventilators, telemetry systems, computer monitors, beds, patient monitors, CT scanners, audiometers, radios, etc. None of the specific work examples provided illustrate significant use of specialized complicated techniques such as technicians would employ in assessing unusual equipment applications or devices and in analyzing considerable and conflicting technical data. Also, although the appellants indicate the need for occasional modification of equipment, less than 2 percent of the 557 repair orders they completed between June 1996 and June 1997 involved equipment modification, redesign, or fabrication which are typically engineering technician responsibilities. The modifications performed by the appellants involved such things as: changing out the capacitors and plugs on Hewlett Packard patient monitors using kits furnished by the manufacturer and installing a different, heavier transistor that could withstand more heat; modifying the Phantom bars in a nuclear camera to fit into a different holding device in order to get a more accurate calibration; installing antistatic mats for the floor and computer keyboard to prevent static electricity from locking the keyboard

when technicians walk up to the console; and modifying the waste recovery system on a surgical instrument to replace one recovery tank with two canisters and a check valve to prevent overflow and pump damage. The fabrication involved adding a plumbing connection to X-ray film processing equipment to route recovered silver from the chemical fixer to a holding tank located away from the equipment. The appellants' usual and recurring work assignments and the limited degree to which they perform modification and fabrication work do not provide an opportunity to apply the type of knowledge typically necessary in an engineering technician position.

Although the appellants note that they are required to take the international certification exam for Biomedical Technicians, that requirement does not prove that their position functions in an engineering technician capacity. Such training may improve their performance on tasks where their trade duties overlap technician work; however, their regular and recurring assignments determine the job's classification, and such training is compatible with trade work.

### **Summary**

We conclude that the paramount requirement for this position's existence is the performance of work which requires the application of knowledge and experience typical of the FWS. Therefore, the position is excluded from the GS.

### **Decision**

This position is properly classified by the FWS. The proper occupational series, title, and grade are to be determined by the agency. This decision constitutes a classification certificate which is mandatory and binding on all administrative, certifying, payroll, disbursing, and accounting officials of the Government.