

OFFICE OF PERSONNEL MANAGEMENT
ATLANTA OVERSIGHT DIVISION
ATLANTA, GEORGIA

JOB GRADING DECISION

Under section 5346(c) of title 5, United States Code

Appellants: [the appellants]

Position: **Air Conditioning Equipment Mechanic
WG-5306-10**

Organization: Air Conditioning and Refrigeration Shop
Maintenance and Operations Section
Engineering Service
Department of Veterans Affairs Medical Center
[location]

Decision: Air Conditioning Equipment Mechanic
WG-5306-10
(Appeal denied)

OPM Decision Number: C-5306-10-01

Kathy W. Day
Classification Appeals Officer

Date: May 30, 1997

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COPY OF DECISION SENT TO:

[Ccs]

Background

On March 4, 1997, the Atlanta Oversight Division, Office of Personnel Management, accepted an appeal for the position of Air Conditioning Equipment Mechanic, WG-5306-10, [VA]. The appellants are requesting that their position be changed to WG-5306-11.

The appeal has been accepted and processed under section 5346(c) 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. The appellants' letter delivered to [VA], on September 30, 1996, and forwarded to this office on February 24, 1997, appealing the classification of their position, as well as additional position information received from the appellants on May 21, 1997.
2. The agency's letter dated February 24, 1997, providing position and organizational information.
3. A telephone interview with Mr. Scott Catledge, the servicing classifier, on May 7, 1997.
4. A telephone interview with the appellants on May 7, 1997.
5. A telephone interview with [the appellants' supervisor], the appellants' immediate supervisor, on May 8, 1997.

Information on Position

The appellants are assigned to Position Number 6006A. The appellants, supervisor, and agency have certified to the accuracy of the position description.

The appellants maintain, repair, modify, troubleshoot, install and operate all heating, ventilation, air conditioning and refrigeration systems throughout the medical center. They work with engineering personnel to plan and modify systems to meet specific conditions, design and layout supplementary air conditioning systems, and reconstruct existing systems to meet specific requirements and critical climatic conditions. They test, repair and overhaul equipment in the shop, as well as calibrate numerous controls and valves using sophisticated test and balance equipment to maintain critical design conditions in the medical center's Computerized Energy Management System.

The appellants inspect newly constructed areas for poor or improper construction of HVAC systems. They assist resident engineers by attending pre-construction meetings and overseeing the work that is being done during a project in order to assure that the work is performed according to

specifications and guidelines. They report discrepancies, ensure safety requirements are met and prevent faulty workmanship.

The appellants receive direction from the Maintenance Foreman. The supervisor issues job assignments in the form of work orders, oral instructions or memoranda in terms of priorities, sequences and results expected. The appellants independently plan and carry out the work determining the most economical and efficient methods to accomplish work and resolve technical problems. The supervisor provides advice on complex and unique assignments or administrative problems such as the need for additional equipment. The most important maintenance and repair work is occasionally spot checked in progress and upon completion. Completed work is reviewed to ensure deadlines and production schedules are met and to ensure normal operations are maintained without causing delay or inconvenience to the operating unit where refrigeration and air condition equipment is located.

The appellants believe that the knowledge and skill required to operate the facility energy management systems is equivalent to the WG-11 level.

Standards Referenced

Job Grading Standard (JGS) for Air Conditioning Equipment Mechanic, WG-5306, June 1971.

Series and Title Determination

The agency placed the appellants' position in the Air Conditioning Equipment Mechanic, WG-5306, job series. The appellants do not contest the agency's determination.

The WG-5306 JGS covers nonsupervisory work that is performed to repair and modify a variety of equipment and systems that achieve regulated climatic conditions. This work requires knowledge of the principles of air conditioning, the ability to recognize and determine the best method for correcting malfunctions, and the skill to make repairs to a variety of air conditioning and cooling unit systems.

The appellants control and monitor climatic conditions throughout the medical center.

The work requires knowledge of solid state devices, schematics, logic and pneumatic controls; skill and knowledge of air and water balancing; and skill in the use of equipment such as anemometers; barometers, magnehelics, digital/aline psychrometers for humidity, digital carbon dioxide analyzers for indoor air quality checks, and tachometers for fan speeds; skill in sheet metal works; familiarity with computer maintenance and repair operations; knowledge and skill in using test procedures for all types of systems and components, as well as skill in the calibration of controls, equipment and valves. The position is properly classified in the WG-5306 job series.

The position is properly titled and coded as Air Conditioning Equipment Mechanic, WG-5306.

Grade Determination

The WG-5306 JGS describes work at each grade level and uses a general description and four factors to differentiate between grade levels: Skill and Knowledge; Responsibility; Physical Effort; and Work Conditions. The appellants' air conditioning equipment mechanic duties are evaluated as follows:

General Description:

Work at the WG-10 level involves installing, recognizing the cause of faulty equipment and making repairs on large systems that provide for a variety of air conditioning functions such as heating, cooling, humidifying, dehumidifying, cleaning, filtering, and circulating. The systems that the WG-10 mechanic installs and repairs are used to condition the air for different kinds of structures such as warehouses, ships, hangars, hospitals, submarines, and large office buildings and complexes including those with areas that have special requirements such as communication centers, electronic data processing centers, operating rooms, laboratories, and other areas with sensitive equipment.

The appellants install, troubleshoot, and repair a variety of large air conditioning and refrigeration systems at the medical center. This is comparable to the systems described at the WG-10 level which are used to condition the air for hospitals, data processing centers, operating rooms, and laboratories.

Work at the WG-11 level involves installing equipment, recognizing the cause of faulty equipment, and repairing, modifying, and relocating equipment on various special-purpose air conditioning units and systems that are frequently modified to provide specific and critical climatic conditions in laboratories and other experimental or test activities.

The appellants install, repair, modify, and relocate a variety of air conditioning and refrigeration equipment, some of which services special facilities such as laboratories and operating rooms. The appellants believe their work with such systems, i.e., controlling the air temperature and humidity in the hospital labs and various clinical units, is comparable to the extreme and critical conditions described at WG-11. Although the appellants are required to maintain the air conditioning systems in the various laboratories, clinics, and other areas where temperature and condition of the air are critical, that in itself does not meet the WG-11 level. The important difference between the WG-10 and WG-11 is the variety of critical climatic conditions needed during different stages of experimentation in a short period of time. The conditions needed for the various hospital laboratories, clinics, etc., are within a constant range maintained over time. There is no frequent change of conditions from one extreme to another at various critical stages of experimentation. The appellants' work is not comparable to the general description of the WG-11 level.

Skill and Knowledge:

The WG-10 mechanic uses a knowledge of the refrigeration cycle of a variety of commercial and industrial systems to locate and check elements such as those which control low side and high side pressure; the temperature of the cooling units; the temperatures of the liquid and suction lines; and

the running time of the various mechanisms. He checks for the probability of leaks by visual and audible examination of equipment components; by application of prescribed test procedures and equipment; and by exploration of probable reasons for equipment failure. He knows principles and theories of air conditioning and refrigeration such as the refrigeration cycle, heat transfer laws, the use of refrigerant tables; how to calculate airflow, and the pressure-temperature characteristics for the different systems in order to locate and repair faulty equipment swiftly and to reduce inoperative time to a minimum. He knows how to locate trouble before dismantling and how to make repairs which ensure proper functioning after assembly. Malfunctions of larger, more varied and complex systems are more difficult to locate than those described at the WG-8 level because the controls are more difficult to balance. For example, the systems which the WG-10 mechanic knows may include those with a variety of compressors such as gear, reciprocating, centrifugal, or rotary pump, and a variety of refrigerant controls such as those with low and high pressure side floats, automatic thermostatic expansion valves, capillary or choke types, and those based on volume or quantity changes. A variety of complicated motor controls are also used such as hermetically sealed motors and pressure controls, thermostatic motor controls (remote and double remote), full and semi-automatic defrosting controls relays, and other controls to protect against overload or overheating. Various types of power sources are used with various combinations of pulleys, belts, horse power capacity, and tensioners.

In comparison with the WG-8 mechanic who primarily replaces major units and items, the WG-10 mechanic uses more skills to make more complete repairs. For example, he may dismantle, repair and reassemble units such as pumps, impellers, compressors, chillers, receivers, and evaporators. When making repairs of this nature, he performs more complex repairs such as installing and fitting connecting rods, crank shafts, piston rings, bearings, and bushings; overhauling valves by adjusting or replacing gaskets, springs, floats, diaphragms, valve fittings, seals, and couplings; and aligning motors and flywheel drives. The WG-10 mechanic uses more skill than the WG-8 mechanic to install or replace pipes and ducts where the areas to be conditioned are a considerable distance from the compressors.

Comparable to the WG-10 level, the appellants operate a centralized air conditioning plant consisting of a variety of commercial and industrial systems including 6 large compressors, 75 air handling units, 51 water pumps, 5 condenser water pumps, 5 cell cooling towers, 15 air compressors, 39 ice machines, 39 nourishment centers, 40 visible frequency drivers, 65 water coolers, 10 heat converters, 95 floor converters, and 24 fume hoods. They take compressors, pumps, air handlers, cooling towers and fans off-line or place additional ones on-line to maintain precise conditions for critical care areas (e.g., Linear Accelerator, MRI Unit, Nuclear Medicine, chemistry labs, isolation rooms, hemodialysis units, environmental growth chambers, operating rooms, intensive care units, animal labs, etc.). They must have knowledge of the principles and theories of air conditioning and refrigeration in order to troubleshoot, maintain and operate complete air conditioning and refrigeration systems composed of 225 refrigeration compressors, low temperature and high temperature walk-in coolers, supplementary centralized air conditioning systems, 24 package units and split systems, and approximately 148 circulating fans. They direct the temperature in various parts of the building by adjusting thermostats from computer aided controls and numerous electronic and pneumatic controls. They operate and

maintain the kitchen, canteen and all other refrigeration systems, ice machines, refrigerators, blood banks, refrigerated centrifuges and hypothermia units and maintain and direct the operation of the pneumatic electronic and computer controls, valves, mixing boxes, thermostats and related items in the building air conditioning system and building ventilation system. They are responsible for major repairs and overhauls similar to the complex repairs described at the WG-10 level.

At WG-11, repair and overhaul work requires a knowledge of the construction characteristics of a variety of types and models of systems that are designed to reach and maintain critical and extreme conditions under a variety of circumstances. The systems are more complex in design and physical layout than those described at the WG-10 level, and the details of construction are more complicated than commercial and industrial systems that are designed to provide a constant set of conditions. Thus, the WG-11 mechanic uses more skill than the WG-10 mechanic to plan and lay out his work to meet a variety of critical requirements. For example, test procedures may call for a motor or engine to be running in a test chamber during an experiment. In this case, the WG-11 mechanic determines the size, shape, and the location of close fitting ducts and installs or plans the installation of them so that the heat and exhaust is directed outside the test chamber without affecting the critical conditions. External icing may be a part of the test. In this case, icing spray frames are made and installed to direct moisture on critical parts of the equipment which is being tested. The WG-11 mechanic determines the size, shape, and location of the icing spray frames and installs or plans the installation of them to meet the conditions of the experiment or test.

Modification work at this level requires greater skill and knowledge than the repair work described at the WG-10 level. For example, components of the systems may be inadequate to produce or react to the conditions needed for a specific test or experiment. In this case, the WG-11 mechanic modifies, alters, or substitutes components and elements of the system in order to meet the specified pressure-temperature characteristics.

The WG-11 level is not met. The appellants do not operate, repair, overhaul or install the various types and models of systems that are designed to reach and maintain a variety of critical and extreme conditions. They do, however, operate, modify, repair and install a variety of systems to meet specific climatic requirements for different critical care units and special areas throughout the medical center. According to the immediate supervisor, the appellants work on commercial systems in critical care units where different climatic conditions must be maintained. These systems are modified to meet current standards or have been upgraded/replaced with state-of-the art technology equipment and components. Systems installed, modified or upgraded include the Liebert DataTec microprocessor control system, the Johnson Metasys system and the Robert Shaw Energy Management System (used to control the operations at the facility). However, the appellants do not modify and balance various elements of these systems to meet the kind of frequently changing critical and extreme climatic conditions found in experimental or test sites as described at the WG-11 level. The appellants furnished several examples of what they consider to be critical climatic conditions they must maintain: 1) In the catheterization lab, the room temperature is maintained at 68 degrees F to 76 degrees F and relative humidity maintained between 50 and 60 percent; 2) Post operative recovery room temperature is maintained at 75 degrees and relative humidity at 50 to 60 percent; 3) Isolation

rooms have specialized filtering systems which have been modified to improve the air quality in the room and to monitor constant air changes and negative air pressure in the room; 4) Animal laboratories and quarters have a special control system which can be modified by adjusting the chillers to ensure the room temperature maintains a constant setting and temperature, e.g., temperature is controlled through the computer aided system at 64-85 degrees F, plus or minus 2 degrees within the set point control; and, 5) The data center is kept at temperature tolerances of plus or minus 72 degrees F. Additionally, there are a total of four Ultra-Cold Systems located throughout the medical center. Some are portable and some are stationary. They are used in laboratories for biopsies, cultures, and other special medical testing purposes. Temperatures range from 0 - 80 degrees F, however, systems such as the 20 DX refrigeration system used in the laboratories were modified to meet current standards and do not require repair and overhaul work requiring a knowledge of the construction characteristics. The special systems described by the appellants are maintained within a constant range and do not require the kind of frequent modifications associated with critical climatic conditions in an experimental situation that are a regular and recurring part of the WG-11 mechanic's duties. Therefore, the WG-11 level is not met.

This factor is evaluated at WG-10.

Responsibility:

At WG-10, the supervisor assigns work orally and through work orders accompanied by building plans, shop sketches, or blueprints. The WG-10 Air Conditioning Equipment Mechanic plans his test procedures, determines the proper kind and type of parts and equipment he needs and installs and repairs a variety of systems with little or no check during the progress of the assignment. Completed work is checked to ensure that it meets accepted practices. The responsibility is greater at the WG-10 level than at the WG-8 level because the systems are more complex and therefore more difficult. This requires more frequent and more difficult determinations concerning the location of faulty equipment and the kind and type of supplies and repairs needed to repair and balance the systems. Because there is a greater variety of equipment in the more complex systems, repairs are more numerous and complex.

The WG-10 level is met. The appellants receive their assignments from the Maintenance Foreman who establishes priorities and sequences of work, distributes projects to balance workload, and prescribes preventive maintenance schedules. Construction and installation work is accompanied by schematics, blueprints or design drawings. Maintenance is performed on a weekly, monthly, quarterly, semi-annual, and annual basis. The appellants' work is performed independently and reviewed to ensure all repair or maintenance work is properly installed or repaired in accordance with requirements.

The WG-11 mechanic receives his assignments with a minimum of accompanying instructions concerning the work methods or the materials to be used. He may work directly with engineering or testing personnel while planning and modifying a system to meet specific conditions. During the course of the projects, he is expected to do repair and modification to meet conditions which are

required by technical personnel. His supervisor is available for advice on very difficult problems, but the WG-11 mechanic is expected to complete his work without undue interruption to the project. He consults with his supervisor on problems which are unique, or on administrative problems such as the need for additional equipment. The responsibility is greater at the WG-11 level than at the WG-10 level because more frequent judgments and more difficult decisions are made concerning the kind and type of work that must be done to modify the equipment in a manner that will meet the requirements of specific and critical climatic conditions.

The WG-11 level is not met. The appellants' supervisor states that construction work does require the appellants to inspect work being performed for workmanship and deficiencies. Modification and repair work is performed in accordance with established guidelines such as the central office facilities design criteria; local building, fire, safety and environmental codes; manufacturers' equipment specifications; American Society of Heating and Ventilation and Air Conditioning codes; and national hospital standards. While the appellants routinely work with a level of independence, they are not required to routinely make the kind of decisions and judgments associated with the WG-11 level, i.e., those associated with frequent modifications of equipment to meet specific and critical climatic conditions.

This factor is evaluated at WG-10.

Physical Effort:

The physical effort found at WG-10 and WG-11 is essentially the same. At WG-10, equipment in the system is usually larger and must be maneuvered into and out of specific locations while dismantling and reassembling. The WG-10 mechanic frequently carries and sets up parts and equipment that weigh up to 50 pounds. Hoists, holders, and pulleys are operated when removing units such as large compressors, condensers, and chillers. The WG-10 Air Conditioning Equipment Mechanic makes repairs and installations from ladders, scaffolding and platforms where the parts of systems worked on are frequently in hard-to-reach places; therefore, stooping, stretching, bending, and kneeling are frequently for longer periods of time than that described at the WG-8 level.

The physical demands placed upon the appellants meet this level. They work in confined and hard to reach places; lift, bend, stoop and crawl; and climb ladders to reach ceilings and ducts.

This factor is evaluated at WG-10.

Working Conditions:

Working conditions at the WG-10 and WG-11 level are generally similar. The WG-10 mechanic is occasionally required to work outside, on top of tall buildings, in drafty attic spaces, and in cramped areas with low overheads. Uncomfortable face masks and protective clothing may be occasionally worn when there is a possibility of exposure to toxic refrigerants. The systems are large at the WG-

10 level, and refrigerants are used in large amounts; therefore, the WG-10 mechanic is subject to large amounts of escaping gases when making emergency repairs.

The WG-10 level is met. The appellants work inside and outside of the medical center, occasionally wear protective clothing when performing work inside laboratories or special isolation units or when working with CFCs, and may be exposed to toxic fumes or irritants caused by harmful gases or fumes in the morgue or other units where chemicals are used.

This factor is evaluated at WG-10.

Summary

All factors evaluate at the WG-10 level, therefore, that is the correct grade level for this position.

Decision

This position is properly classified as Air Conditioning Equipment Mechanic, WG-5306-10. This decision constitutes a job grading certificate issued under the authority of section 5346(c) of title 5, United States Code. This certificate is mandatory and binding on all administrative, certifying, payroll, disbursing, and accounting officials of the Government.