Evaluation of Position Description

Labor Category/FLSA: Nonexempt

_____**Current Position Description**
___X___**Proposed Position Description**

Date Prepared: 06/24/03

Approving Official: **Name:** Sheryl A. Wheeler **Signature:** S. A. W
Title: HR Specialist

Position Title/Series/Grade: Maintenance Mechanic, WG-4749-09

ORGANIZATION: Division of Property Management

This position has been reviewed using the following Federal Wage System, Job Grading Standards: Maintenance Mechanic Series, WG-4749, 5/74; Painter Series, WG-4102, 11/69; Electrician Series, WG-2805, 6/89; Pipefitting Series, WG-4202, 3/69;Plummer Series, WG-4206, 3/69; Carpenter Series, WG-4607, 4/91; Air Conditioning Equipment Mechanic Series, WG-5306, 6/91; Motor Vehicle Operator, WG-5703, 4/91.

TITLE AND SERIES DETERMINATION: This position requires kills and knowledge of various blue collar trades utilized in performing maintenance, repair and operation of a large volume of difference equipment, materials, and maintenance items requiring separate trades knowledge. Job is included in the WG occupational family, coded and titled as Maintenance Mechanic WG-4749 in accordance with standard application principles. This position is established to perform a variety of nonsupervisory maintenance work at the DHHS, NIH. Based on this requirement, the Maintenance Mechanic standard was used. This standard is used to grade non-supervisory work involved in the maintenance repair of grounds, exterior structures, buildings, and related fixtures and utilities, requiring the use of a variety of trade practices associated with occupations such as carpentry, pipefitting, Painting, plumbing, electrical, etc meets the specific needs of this position. Based on this standard it shows that when there are more than one occupation being performed at the same grade level, then the 4749 series and title are to be used, however, if one of the occupations is graded higher than the other occupations then the higher graded occupation would determine the title and series of the position. Based on this review, the title and series, Maintenance Mechanic, WG-4749 is the appropriate title and series for this position.

GRADE DETERMINATION: Work requirements entails a number of trades applications, of which the predominant work is several series at journeyman grade level WG-09 explained in job description. Remaining trades are predominantly at other levels and not above WG-09. In application of grading criteria for Maintenance Mechanic positions, WG-4749, job is graded at WG-09 based on the performance of journeyman level.

CONCLUSION: Work depicted in the duties are properly considered in accordance with the WG-4749, Maintenance Mechanic series. Duties are described at the WG-9, none being above WG-9. In accordance with the classification practices and titling prescribed in the WG-4749 Series standard. The proper classification for subject job is therefore determined to be Maintenance Mechanic, WG-4749-09.

Installation: National Institutes of Health, Bethesda, MD
Title: MAINTENANCE MECHANIC
Occ Series: 4749
Pay Plan: WG
Grade: 09

Introduction: The Division of Property Management (DPM) serves all of the NIH Community by providing support for renovations, new construction and maintenance of existing facilities, utilities and grounds. The Division provides professional leadership for the engineering programs of the Department of Health and Human Services (DHHS), National Institutes of Health (NIH). The scope of DPM operations is such that the effectiveness with which they are carried out has a major and direct effect on the worldwide biomedical research programs of the NIH. In addition to the main facilities at the Bethesda Campus and in Poolesville, MD, NIH has facilities at Research Triangle Park, North Carolina, Rocky Mountain Laboratory in Montana and the Gerontology Research Center in Baltimore, MD.

This position is organizationally located within the DPM in one or more of the subordinate organizational components responsible for the provision of operations and maintenance of NIH facilities. The position is multi-disciplinary and requires the incumbent to be multi-skilled and flexible in the types and complexity of work performed. The position requires that the incumbent be able to work independently and take the initiative to complete the work assigned with a minimum of direct supervision regardless of the nature of the work thus requiring that specific trade skills be shared between staff members.

Duties:

MAJOR DUTIES

Responds to service calls requiring, servicing, and repairing buildings and related fixtures and performs inspections on both routine and emergency type basis requiring the use of trade practices associated with occupations in the mechanical, electrical, carpentry, pipefitting, plumbing, and associated trades. Operates a motor vehicle with gross vehicle weight of up to 10,000 pounds to transport tools, materials, equipment and self to work

site. Appropriate state CDL may be required. Performs the following typical, but not all inclusive duties:

1. Carpentry: Works alone or as a member of a work crew, either in a shop situation or at the work site, and applies the full range of carpentry skills and techniques in repairing, construction, remodeling, and maintaining a variety of wooden structures, laboratory and clinical space, administrative and office buildings, warehouses and storage sheds, technical and shop structures, and industrial related facilities. Plans and lays out work in accordance with drawings, sketches, blueprints, and own knowledge of construction or needed repairs. Selects lumber, materials, and supplies. Measures and cuts materials to the required lengths and dimensions. Installs rafters, studs, sills, plates, braces, joists, floors, subfloors, panels (including sheetrock, pre-fabricated metal, plywood, and veneers), siding, sheathing, roofing, building paper, insulating materials, door and window frames, and interior and exterior trim. Installs structural and trim items by nailing, bolting, mortising, doweling and gluing. Planes, sands, and finishes completed work when necessary. Installs sheet, roll, and shingle roofing ensuring proper alignment and overlap. Fabricates and installs frames or casings for windows, doors, transoms, and ventilators, shelves, counters, plywood duct-work, bulletin boards, cabinets, bookcases, and related features having built-in characteristics. Ensures that installed components are level and accurately aligned with other parts of the structure. Installs doors and window sashes. Trims, mortises, drills and prepares items for attachment of hardware. Applies caulking compound or other filler material around door and window casings and at other points where tight seal is required. Fabricates concrete forms, scaffolds, storage pallets, storage bins, tables, work benches, and related items. Installs wood and metal partitions. Replaces and installs floor and ceiling tile. Constructs and repairs various types of fencing and gates.

2. Plumbing: Performs the full range of journeymen plumbing tasks including installing and maintaining supply and disposal systems and equipment such as: sewage, water, oil, and gas distribution systems, hydrants, water fixtures, lavatories, showers, sinks, dishwashing machines, etc. Typical tasks include but are not limited to: locating and tapping main lines, planning and laying out the routing, placement, slant, fall and proper location of systems and equipment, installing valves, traps and unions where needed for proper functioning of the system, assembling of pipe and fittings, hanging or laying assemblies into position, testing for leaks, clearing difficult stoppages in drain pipes, disassembling and repairing damaged sections, including fabricating replacement parts when necessary. Performs a variety of plumbing maintenance and repair work such as that which involves removing, cleaning, replacing, packing, and sealing defective parts of utility, supply, and disposal systems such as dirty traps, sections of broken pipe and tile, clogged pipe and fixtures, and leaky faucets and drains. Repairs sprinkler system. Hooks up to installed systems such devices as water heaters, disposal units, and faucets. Installs/repairs pressure producing valves, hot water heaters and/or storage tanks, circulating pumps, drinking fountains, laundry tubs, urinals, dish-washers, sump pumps, and water closets. Uses hand and pager tools common to the trade.

3. Pipefitting: Performs a variety of tasks involved with the maintenance, repair, and installation of piping, valves, fittings, radiators, heaters, storage and condensate tanks, low pressure steam-distribution lines, and similar equipment associated with the pipefitting trade. Inspects lines and equipment for leaks, corroded pipes, frozen pop valves, missing insulation and faulty pressure controls. Overhauls systems which involve replacing or repairing valves, traps, air vents, radiators, and steam and return lines. Does soldering and brazing as appropriate in work operations.

4. Special Equipment: Visually inspects and from results of diagnostic tests and general mechanical knowledge, locates the cause of malfunction and makes necessary adjustments or repairs to restore to working order various types of industrial, commercial and residential equipment and systems. Repairs, adjusts, or replaces worn or broken parts, and restores to operating condition. Test runs to be sure equipment will function properly.

5. Electrical: Diagnoses trouble and makes repairs that can be accomplished by removing, replacing, tightening, splicing, soldering and insulating defective wiring, controls, equipment and fixtures such as broken and bare wiring, burned out switches and relays, loose connections and fittings, damaged light fixtures and poorly operating thermostats, Tests equipment by use of voltmeters, ammeters, wattmeters.

6. HVAC Equipment: Makes repairs to a variety HVAC equipment, both industrial and residential. These include oil and gas burning units, chilled water and steam units operating with centrally supplied utilities, low pressure hot water and steam boilers and coils, air-handing units and ducting of various size and design and other equipment of similar complexity. Observes and tests heating and cooling units and systems in cases of malfunction to trace and locate defects to determine the extent and type of repairs necessary. Replaces fixtures such as safety devices, thermostats, heating elements, overload switches, heater strips, valves, and magnetic coils. Services units by cleaning heat exchanges, filters, strainers, ignition, electrodes, and adjusting dampers. Performs air balancing, adjustment, calibration and checking operations to assure proper operation of HVAC systems

7. Painting: Performs painting tasks. Uses standard coating methods, such as brushing, rolling, and spraying; uses coating materials that are prepared according to specific directions, and applies coating techniques that ensure that surfaces are fully coated, protected, and free from drips and runs. Prepares surfaces by such methods as sanding, wire brushing, scraping, plastering, speckling and puttying. Thins, stirs, and mixes coating materials according to specific directions. Applies various coating materials (i.e., paint, varnishes, shellacs) with brushes, rollers, spray guns, and other related methods and techniques, and sees that the coating finish meets surface protection requirements.

8. Miscellaneous: Performs a variety of minor maintenance/repair tasks involved in the upkeep of installation buildings, structures, fixtures, and utilities. Tightens or replaces loose floor boards or steps; repairs broken wood railing; frees sticking doors and windows; repairs or replaces cracked/broken sheetrock; tacks loose wood /aluminum

siding; removes and replaces window panes; repairs/replaces door latches and locks; replaces broken floor and ceiling tiles; replaces/caulks wall tiles; points up loose brick and stone work; reattaches loose metal gutters /downspouts; paints.

Operates a motor vehicle with gross vehicle weight of up to 10,000 pounds to transport tools, materials and self to work site. Loads and unloads vehicle.

Completes trip tickets; completes driver's accident report, in case of accident. Performs driver's maintenance in accordance with established rules and regulations.

Performs other duties as assigned.

Skill and Knowledge:

1. Is knowledgeable and skilled in the use of carpentry methods and techniques. Is knowledgeable of simple arithmetic and advanced shop mathematics to plan and compute complex and exact projects with features such as arcs, tangents, and circles. Possesses the knowledge of how to set up, adjust and adapt hand and power tools to accomplish difficult tasks. Has the ability to sharpen saws and saw blades, tools and accessories, to read, interpret and apply building plans, specification, blueprints, sketches and building codes which are complicated and are not easily understood. Utilizes skill in using tools and equipment common to the trade, such as chalklines, plumbbobs, grinders. Ability to plan and layout complete projects from start to finish. Produces finished products with precise fits, accurate dimensions and acceptable appearance.

2. Plumbing repair work requires a knowledge of how various supply, disposal, and utility systems and equipment, such as water and gas systems, fire sprinkler equipment, and water closets, are installed and operated. Must know plumbing methods and techniques including how to measure, cut, bend and thread pipe and tile, and how to caulk and seal such elements as elbows, union joints, tile pipe, faucets and shower drains. Must have the skill to remove, clean, reinstall or replace joints and fixtures, e.g., traps, faucets and unions; to hook up equipment, e.g., water heaters and disposal units, to installed systems and to replace sections of pipe and tile by following previously used routes, hangers and levels. Must have the ability to add, subtract, multiply, divide and work with simple fractions. Must have skill in the use of tools and equipment such as tapes, rules, hacksaws, hand and power pipe threaders and cutters, packing and caulking irons and pipe wrenches.

3. Knowledge of how various low pressure steam distribution lines and equipment, such as piping, valves, fittings, radiators, heaters, storage and condensate tanks, and similar equipment associated with the pipefitting trade are maintained, repaired, and installed. Skill in the use of tools and equipment such as plumb bobs, drills, torches, pipe threaders, drain augers, etc.

4. Incumbent must have general mechanical knowledges, a basic knowledge of the common trades, and ability to use a variety of test equipment such as voltmeters,

micrometers and ammeters as a basis for locating the cause of malfunctioning equipment. Must be able to read and utilize manufacturers manuals, wiring diagrams, blueprints, etc., and to identify materials and replacement parts from a knowledge of symbols, color codes, schematics, and manufacturer's terminology. In order to troubleshoot electronic controls, such as on steam boilers, must have a knowledge of the basic principles of electronics. In addition, the repairer must be able to determine those cases which can be corrected, and those which must be referred to the appropriate craft shop.

5. Electrical work requires the skill to remove and replace fixtures and controls, and to make repairs such as tightening connections, wrapping exposed wiring with insulating tape, and soldering loose wire leads to contact points. Must have the ability to read and follow wiring diagrams. Must have the skill to install new outlets, relays, switches and light fixtures in existing systems and to test circuits to see if they are complete after making repairs. Must have the skill needed to measure, cut, and bend such things as wire and conduit to specified lengths and angles, and to use handtools and some test equipment, such as screw drivers, pliers, wirecutters, soldering irons, test lamps and ammeters.

6. Knowledge of standard surface preparation and coating methods and techniques. Knowledge of application of coating materials; skill to sand, wire brush, spackle and putty surfaces. Ability and skill to brush out, roll on and spray coating materials, and other application techniques. Ability to read and follow directions. Skill in use of tools of the trade.

7. Applies a basic knowledge of the techniques and procedures associated with carpentry, tile setting, and masonry work. Applies skill in the use of common power and hand tools of the trade.

8. Must be skilled in handing the controls for starting, stopping, backing, and driving the vehicle. Must know the height, width, length, and weight of vehicles driven to judge overhead and side clearance, turning radius, braking distance, and the safest distance to be maintained from a preceding vehicle. Must know safety rules and regulations and other posted rules for moving vehicles, and how to load cargo onto the vehicle, arranging it in such a way as to provide the best support and to prevent its shifting or falling.

Responsibility:

Receives assignments from supervisor or work leader orally or in the form of written or electronic service orders. Generally receives radio dispatched trouble calls while on call and makes emergency repairs. Incumbent determines the type and extent of repairs needed, methods and techniques to use, parts or components required, and completes work typically with no check in progress. Ensures the end product meets all specified requirements.

Incumbent is responsible for the safe operation of the vehicle following all safety rules, regulations, and traffic signs. Assures that cargo is arranged properly for best support. Incumbent s ability is regularly observed and evaluated, and trip tickets are checked for compliance with regulations and completeness.

Physical Effort:

Work requires walking, standing, stooping, bending, kneeling, climbing, and working in tiring and uncomfortable positions. Frequently lifts and carries parts and equipment weighing up to 40 pounds; occasionally handles items weighing up to 100 pounds.

Working Conditions:

Position may be subject to shift or irregular work hours.

Works inside and outside, exposed to dirt, sewage, dust, grease, fumes, and refrigerant gases. Is subject to injury from use of hand and power tools, and to burns, cuts, bruises, and electrical shock. May be required to wear and/or use protective clothing and equipment in accordance with established health and safety regulations and SOP s.

Works outside and is occasionally exposed to bad weather while loading and unloading vehicle. Is subject to cuts, bruises, and broken bones as a result of accidents while driving or when loading and unloading vehicles. Is exposed to the possibility of serious accidents while driving in all types of traffic and weather.

NOTE: Employees are required to observe established safe working procedures. Appropriate protective clothing and/or equipment are provided to minimize or eliminate hazardous conditions, and its use is mandatory.