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Report to the Chairman, Committee on
Post Office and Civil Service, House of
Representatives

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FEDERAL PAY

Complexities in Calculating Federal Civilian Firefighters' Pay





United States
General Accounting Office
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General Government Division

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The Honorable William D. Ford
Chairman, Committee on Post
Office and Civil Service
House of Representatives

Dear Mr. Chairman:

This responds to the request you forwarded from the Chairmen of the Subcommittees on Postal Operations and Services and Compensation and Employee Benefits that we review the compensation of federal civilian firefighters. In subsequent discussions with the Subcommittees, we agreed to (1) determine whether errors in calculating firefighters' pay have resulted from the complexity of the pay calculations, (2) determine whether there have been instances of pay reductions due to loss of overtime pay when firefighters are promoted to supervisory positions, and (3) assess whether a bill (H.R. 1174) introduced in the 100th Congress would correct any pay problems identified. A similar bill (H.R. 2812) has been introduced in the 101st Congress. We focused our review on the Department of Defense (DOD) because it employs most of the federal firefighters.

Results in Brief

Payroll officials at most of the 17 military installations we visited did not believe that the complexity of the federal civilian firefighters' pay calculations is causing payroll errors. Generally, the calculations are automated. Eight of DOD's 14 automated civilian payroll systems were used at these installations. Five of the eight could do all parts of the firefighters' pay calculation automatically, while three required that overtime pay be calculated manually.

Our recomputation of a sample of pay calculations done by each of the eight payroll systems showed that most of the calculations in the sample were correctly done. However, we identified two types of payroll calculation errors—those that were one-time, random mistakes and those that resulted from misinterpretations of regulations. Errors resulting from misinterpretations of regulations could be attributed to the complexity of the calculations. The one-time mistakes as well as the misinterpretation errors occurred in parts of the pay calculations that were done manually. Therefore, we believe that errors will be less likely to occur, regardless of the complexity of the pay calculations, when DOD completes the full automation of its payroll systems, thereby eliminating

and the payroll office responsible for each installation.) Because three of the systems were only partially automated, payroll offices for six of the installations had to use manual calculations for unscheduled overtime, and one of the six had to use manual calculations for regularly scheduled overtime as well. The Army and Navy are in the process of automating all parts of civilian pay calculations, with completion expected by December 1992. The Air Force and the Marine Corps' pay calculations are fully automated.

Federal civilian firefighters at or above the GS-5 level who spend at least 80 percent of their worktime on supervisory and closely related work are exempt from the overtime provisions of FLSA. Therefore, their pay is the sum of only base and premium pay. This can result in pay inversion—the situation in which a firefighter promoted from a nonsupervisory to a supervisory position works the same number of hours per pay period before and after the promotion, but receives less pay.

A bill (H.R. 1174) was introduced in the 100th Congress to create a new salary structure for federal civilian firefighters that would have simplified the way their pay is computed by establishing pay schedules and replacing FLSA overtime pay with one method for computing overtime pay for all federal civilian firefighters. H.R. 1174 did not become law; however, a similar bill, H.R. 2812, has been introduced in the 101st Congress.

Objectives, Scope, and Methodology

Our objectives were to (1) determine whether errors in calculating federal civilian firefighters' pay occurred due to the complexity of the pay formula; (2) document instances of pay inversion due to loss of overtime when firefighters are promoted to supervisory positions; and (3) assess how H.R. 1174, and its successor H.R. 2812, address pay problems.

To identify pay calculation errors and their causes and to identify instances of pay inversion, we visited Air Force, Army, Marine Corps, and Navy civilian firefighters and payroll officials at 17 military installations in the Washington, D.C., Norfolk, Virginia, and San Francisco areas. To minimize travel costs and time, we judgmentally selected military installations in the nearby Washington, D.C., and Norfolk areas. The requesters agreed that the scope of our work would satisfy their request. We also visited installations in the San Francisco area after receiving a separate request from Congresswoman Nancy Pelosi asking us to do so. We interviewed firefighters and payroll officials at the

human error, such as using an outdated pay table or including a period of leave without pay in the overtime pay calculation. The other 11 occurred at one installation and resulted from the same misinterpretation of an OPM regulation. In addition, during discussions with payroll officials, we discovered errors at two other installations that also resulted from misinterpretations of OPM's regulations.

Errors caused by misinterpretation are more serious than random mistakes because errors resulting from misconceptions about how pay should be calculated for a particular set of circumstances will recur whenever the circumstances recur. Payroll officials for the three installations with misinterpretation errors said they did not receive any specialized training in calculating firefighters' pay. The errors that resulted from these misinterpretations of OPM's regulations are discussed below.

Firefighters Paid Twice for Some Overtime

The Navy payroll office for the installation that had the 11 misinterpretation errors had been manually calculating unscheduled overtime and overpaying firefighters who worked unscheduled overtime by compensating them under both Title 5 and FLSA. According to OPM regulations, payment for unscheduled overtime must be calculated under both Title 5 and FLSA, but employees can only be paid under the one that yields the higher amount, not under both.

By compensating under both Title 5 and FLSA, the payroll office paid firefighters twice for the same overtime hours. The payroll office is trying to determine the exact amount of the overpayment, but it estimates that between October 1978, the earliest month for which the installation has records, and May 1989, firefighters were overpaid by \$91,000. According to a Navy official, firefighters are no longer being paid for unscheduled overtime under both Title 5 and FLSA. In June 1989, the payroll office stopped calculating unscheduled overtime manually and began using a computer program it developed to compute firefighters' unscheduled overtime. The Navy is taking action to recover the overpayments.

GS-3 Firefighters Overpaid

An Army payroll office had been overpaying GS-3 firefighters because of a misunderstanding about OPM regulations on how to determine whether pay meets minimum wage requirements. An employee's regular rate of pay cannot be less than the statutory minimum wage (\$3.35 per hour). The payroll office had been manually overriding its automated

Pay Inversion Due to the Loss of Overtime Pay When Promoted to Supervisory Positions

Firefighters gave us the documentation for six occurrences of pay reductions because of lost overtime pay following their promotions to supervisory positions. Each firefighter worked 144 hours per pay period immediately before and after promotion. These six examples are summarized in table 1.1.

Table 1.1: Examples of Pay Inversion

Firefighter	Date of promotion	Gross salary per pay period before promotion	Gross salary per pay period after promotion
A	1/19/89	\$1,141.92	\$1,068.80
B	2/14/87	1,015.36	996.80
C	2/14/87	1,075.80	1,026.40
D	8/02/86	1,015.36	977.60
E	10/28/84	952.65	913.60
F	4/23/83	1,104.31	1,017.59

According to firefighters and personnel officials, some firefighters do not apply for supervisory positions because they are concerned about having their pay reduced due to lost overtime pay.

Conclusions

Most of the payroll calculations we verified were correctly done. However, errors in calculating firefighters' pay have occurred in parts of calculations that were done manually. Some of these errors occurred because of a one-time, human mistake; others occurred because payroll clerks misinterpreted OPM regulations on how to compute pay for a particular set of circumstances.

The misinterpretation errors, all of which occurred in manual parts of calculations, may have resulted from the complexity of the pay calculations. We believe that when the military services completely automate payroll calculations, the complexity of pay calculations will be less likely to cause errors because correctness will not be dependent on payroll clerks' accuracy, knowledge, or expertise. Until then, officials and personnel in payroll offices who are responsible for manual calculations need to be aware of how vulnerable manual calculations are to errors, and they need to receive specialized training in doing the manual parts of pay calculations. In view of DOD's plans to completely automate the pay calculations, we do not believe there is a need to establish a new

heads of other federal agencies employing firefighters to alert them to the potential vulnerability of their pay systems to similar errors.

The major contributors to this report are listed in appendix II. If there are any questions concerning the contents of this report, please call me on 275-5074.

Sincerely yours,



Bernard L. Ungar
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Military Installations Visited and Responsible Payroll Offices

Service	Installation visited	Payroll Office
Air Force	Andrews Air Force Base, Md.	Bolling Air Force Base, Washington, D.C.
	Langley Air Force Base, Va.	Langley Air Force Base, Va.
	Travis Air Force Base, Calif.	Travis Air Force Base, Calif.
Army	Fort Eustis, Va.	Fort Eustis, Va.
	Fort Lee, Va.	Fort Lee, Va.
	Fort Monroe, Va.	Fort Eustis, Va.
	Fort Myer, Va.	Fort Myer, Va./Corps of Engineers, Omaha, Nebr.
	Presidio of San Francisco, Calif.	Presidio of San Francisco, Calif.
Marines	Quantico Marine Corps Base, Va.	Quantico Marine Corps Base, Va.
Navy	Alameda Naval Air Station, Calif.	Fleet Accounting and Disbursing Center Pacific, San Diego, Calif.
	Concord Naval Weapons Station, Calif.	Concord Naval Weapons Station, Calif.
	Moffett Naval Air Station, Calif.	Fleet Accounting and Disbursing Center Pacific, San Diego, Calif.
	Norfolk Naval Air Station, Va.	Norfolk Naval Air Station, Va.
	Norfolk Naval Shipyard, Va.	Norfolk Naval Shipyard, Va.
	Oceana Naval Air Station, Va.	Norfolk Naval Air Station, Va.
	Patuxent Naval Air Station, Md.	Patuxent Naval Air Station, Md.
	Treasure Island Naval Station, Calif.	Fleet Accounting and Disbursing Center Pacific, San Diego, Calif.

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Abbreviations

DOD	Department of Defense
FLSA	Fair Labor Standards Act
OPM	Office of Personnel Management

firefighters' salary structure—as provided for in H.R. 1174 and its successor H.R. 2812—to reduce the potential for pay calculation errors.

However, there have been pay reductions due to loss of overtime pay when federal civilian firefighters have been promoted to supervisory positions, and we believe legislation is needed to correct the problem. This situation could reduce the pool of qualified applicants for supervisory firefighter positions. Under H.R. 1174, and its successor H.R. 2812, pay inversion would be eliminated because all firefighters—supervisory and nonsupervisory—would be compensated for any overtime hours worked. Alternatively, the pay inversion problem could also be eliminated by other legislative measures that would equalize the treatment of supervisors and nonsupervisors with respect to overtime pay. One possibility is to exempt all federal firefighters from FLSA and increase their premium pay percentages as a means of compensating nonsupervisory firefighters for their loss of the FLSA overtime pay they receive under current law.

Recommendation to Congress

We recommend that Congress enact legislation to change current pay provisions so that firefighters' pay is not reduced upon promotion.

Recommendations to the Secretary of Defense

We recommend that the Secretary of Defense alert officials at Army and Navy payroll offices that are manually calculating firefighters' pay that their pay systems are vulnerable to improper payments resulting from random mistakes and misinterpretations of regulations. We also recommend that the Secretary of Defense direct these Army and Navy payroll offices to provide specialized training to their personnel who do the manual calculations.

Agency Comments

We provided a draft of this report to DOD for comment. DOD officials gave us their comments orally. They concurred with our findings, conclusions, and recommendations and offered technical suggestions that have been incorporated in the report as appropriate.

As arranged with the Committee and Subcommittees, we are sending copies of this report to the Secretary of Defense; the Director, OPM; and other interested parties. We are also sending copies of the report to the

payroll system to adjust GS-3 firefighters' base pay. Instead of comparing the GS-3 firefighters' regular rate of pay—which includes base pay and premium pay—with the minimum wage, payroll clerks were incorrectly comparing only base pay with the minimum wage. The payroll office estimated that because of this erroneous manual adjustment, six firefighters were overpaid by about \$6,500 between July 1982, when the payroll office started making the manual adjustments, and February 1989, when the payroll office stopped the manual adjustments and began processing GS-3 firefighters' pay through the automated payroll system. The Army also is taking action to recover the overpayments.

Firefighter Not Paid Entitled Overtime

Another Army payroll office that had been manually calculating pay for scheduled overtime had not been including such pay for a firefighter who had been entitled to it when he worked a 112-hour per pay period schedule. In accordance with FLSA and OPM regulations, nonsupervisory firefighters should be compensated for the scheduled overtime they work in excess of 106 hours per pay period. A payroll supervisor at this installation said he was not aware that FLSA applied to firefighters who worked schedules of less than 144 hours per pay period. According to another payroll office official, the installation's available payroll records—which cover the past 4 years—indicate that only one firefighter at the installation had been entitled to FLSA overtime pay but had not received it. After we brought this matter to their attention, payroll officials took action to pay the firefighter about \$2,500 to compensate him, with interest, for unpaid scheduled overtime.

installations visited. We also talked to union officials of the International Association of Fire Fighters, the National Federation of Federal Employees, and the Federal Firefighters Association, and to DOD and OPM officials.

To determine whether there have been any pay calculation errors resulting from the complexity of the calculations, we verified a judgmentally selected sample of payroll calculations done for two fiscal year 1989 pay periods by each of the payroll systems that were used to calculate pay for the installations we visited. Using information on work hours and salaries that each payroll office in our sample had given us, we manually recomputed 239 firefighters' gross pay. We did not determine whether payroll clerks made errors in transferring data from time and attendance records to automated payroll systems because input errors would not have been related to the complexity of pay calculations. We also did not evaluate all of the internal control procedures that payroll offices may have established to prevent or detect firefighters' pay calculation errors because such an evaluation was beyond the scope of our work. Because we did not randomly sample all DOD payroll offices, our findings cannot be generalized to all DOD installations and payroll offices.

We obtained documentation from firefighters showing instances of pay reductions upon promotion to supervisory positions. We did not ask payroll officials to search payroll records for additional examples because we were not trying to identify all instances of pay inversion, but merely to document that this situation can occur under the current pay system.

Our work was done in accordance with generally accepted government auditing standards between July 1988 and April 1989. Responsible officials of the Department of Defense provided comments on this report. Their views are incorporated where appropriate.

Pay Errors Due to the Complexity of Pay Calculations

Officials at OPM, DOD, and the installations' payroll offices agree that the pay calculations for firefighters are complex. However, according to payroll officials at most of the installations we visited, the complexity of the firefighters' pay formula is not causing payroll errors. Our verification of payroll calculations showed that most of the calculations in our sample were correctly done.

However, 18 of the 239 pay calculations we verified had errors. Seven were one-time, unrelated mistakes that occurred as a result of random

the need for any manual calculations. DOD expects all of its payroll systems to be fully automated by December 1992.

We also identified six instances in which federal firefighters were promoted to supervisory positions and continued working the same number of hours but received less pay because, as supervisors, they were no longer entitled to overtime pay. H.R. 1174 and its successor, H.R. 2812, would have eliminated pay reductions when firefighters are promoted to supervisory positions, because they would be entitled to overtime pay under provisions of the bill.

Background

The Department of Defense employs over 80 percent of approximately 11,000 federal civilian firefighters, with the remaining number divided among civilian agencies such as the Departments of Agriculture, the Interior, and Veterans Affairs.

Most federal civilian firefighters have a tour of duty of 72 hours per 7-day workweek, or 144 hours per biweekly pay period. The firefighters work on a one-day-on/one-day-off basis for a total of three 24-hour shifts per workweek.

The Office of Personnel Management (OPM) is responsible for issuing regulations implementing Title 5 of the U.S. Code, which provides for regular pay for all hours worked within the tour of duty and overtime pay only for hours worked beyond the tour of duty, and the Fair Labor Standards Act (FLSA), as amended, which provides for overtime pay for all hours worked in excess of 53 hours per workweek (106 hours per biweekly pay period). Federal civilian firefighters are paid on a biweekly basis the sum of (1) base pay under Title 5 from the General Schedule (GS), (2) premium pay under Title 5 based on a percentage of base pay (usually 25 percent) for regularly scheduled standby duty (usually 16 of each 24 hours on duty), and (3) overtime pay under FLSA. However, if a firefighter works unscheduled overtime beyond his tour of duty and his overtime pay entitlement under Title 5 is greater than his overtime pay entitlement under FLSA, the firefighter receives the Title 5 overtime pay in lieu of any FLSA overtime pay.

A DOD payroll office often calculates pay for several military installations, and several payroll offices often use the same automated payroll system. DOD has 14 automated payroll systems. The 17 military installations we visited were serviced by 13 payroll offices, which used 8 of these automated systems. (See app. I for a list of installations visited

