Testimony of

Dr. Hratch G. Semerjian
Deputy Director

National Institute of Standards and Technology
Technology Administration
U.S. Department of Commerce

Before the

Subcommittee on Oversight of Government Management, the Federal Workforce and the District of Columbia
Senate Committee on Homeland Security and Government Affairs

"Alternative Personnel Systems: Assessing Progress in the Federal Government"

September 27, 2005

Chairman Voinovich and Ranking Member Akaka, I am pleased to have this opportunity today to testify before the subcommittee regarding the Alternative Personnel Management System (APMS) used at the National Institute of Standards and Technology. I would first like to provide the subcommittee with a little background on what NIST does and why it switched from the General Schedule system and instituted our APMS.

Originally founded in 1901 as the National Bureau of Standards, NIST is a non-regulatory federal agency within the U.S. Commerce Department's Technology Administration. NIST has serves industry, academia, and other parts of the government by by advancing measurement science, standards, and technology thus enhancing economic security and improving the quality of life for all Americans. In order to accomplish this mission, NIST has chiefly relied on one key asset; its staff of dedicated scientists and engineers, technicians, administrative, and support staff. Recognizing the need to attract and retain top quality staff, NIST's management, starting in the mid 1980's, worked with Congress to establish an alternative personnel management system.

NIST's Authorization Act for Fiscal Year 1987 (P.L. 99-574) established a 5-year project to demonstrate an alternative personnel management system. The NIST demonstration system became permanent as of March 1996 through the National Technology Transfer and Advancement Act of 1995 (P.L. 104-113).

The NIST system is based on the concepts of:

- market sensitivity and competitiveness
- pay for performance
- administrative simplicity
- management flexibility, and
- government-wide applicability

The goals of the NIST system were to improve hiring of high-quality personnel and retention of high performers, in order to more effectively accomplish the mission and goals of NIST. Evaluations and feedback from managers and employees show that these changes have significantly improved NIST's ability to recruit and retain high quality staff. In addition, a basic objective of the original project was to design the system to serve as a model for simplifying and improving Federal personnel systems government-wide, not just at NIST. The "new and improved" system has dramatically changed NIST management of human resources. It also has provided a model of reform to other agencies within the Department of Commerce, such as the Technology Administration, the National Oceanic and Atmospheric Administration, and the Bureau of Economic Analysis.

The basic features of the NIST personnel system are:

- Recruiting: NIST competes more effectively in the labor market through more efficient and faster staffing mechanisms, such as direct hire authority, more direct management involvement in recruiting and hiring, flexible entry salaries, recruiting allowances, and more flexible paid advertising.

- Retention: NIST compensates and retains good performers more effectively through pay-for performance, the higher pay potential of pay banding, supervisory differentials, and retention allowances.
- Classification: NIST has simplified, accelerated, and improved the classification process through pay banding, generic NIST-specific classification standards, automated position descriptions, and delegation of authority to line managers.
- Performance: To more effectively support pay-for-performance, NIST uses performance appraisal results as a basis for granting comparability and locality increases, performance pay increases, performance bonuses, and evaluating and improving individual and organizational performance.
- Administration: NIST has streamlined the personnel administration process through reduction of paperwork, automation of personnel processes, and delegation.
- Line Management Authority: more direct involvement in recruiting has strengthened the manager's role in personnel management through delegation of authority and accountability to line managers.

The most noticeable difference between the NIST system and the General Schedule (GS) system used by other agencies is that NIST positions are classified according to career path and pay band, instead of grade. Career paths are categories of occupations grouped by similarities in work, qualification requirements, pay ranges, and career progression. A pay band encompasses a broader salary and classification range than does a General Schedule (GS) grade. A single band usually covers the same range as two or more grades (See Attachment I).

The NIST system covers approximately 2,500 NIST employees in four career paths:

- Scientific and Engineering Professionals (ZP)
- Scientific and Engineering Technicians (ZT)
- Administrative Professionals (ZA)
- Administrative Support Staff (ZS)

Senior Executive Service (SES) employees and "trades and craft" (wage grade) employees are <u>not</u> covered.

The APMS groups employees in "pay pools"-- which are groupings of the same career path within a defined organizational unit. The pay pool manager is the line manager who manages his or her organization's pay increase and bonus fund and has final decision authority over the performance ratings and bonuses of subordinate employees. Annual pay pool allocations are based on aggregate salaries of employees eligible for an increase. Performance cycle results are published on the NIST internal Web and available to all staff.

Since implementing the Alternative Personnel Management System, according to findings in the *Office of Personnel Management's "Summative Evaluation Report National Institute of Standards and Technology Demonstration Project: 1988-1995,"* NIST is more competitive for talent; NIST retained more top performers than a

comparison group; and NIST managers reported significantly more authority to make decisions concerning employee pay. Key indicators of NIST's ability to attract and retain world-class scientists and engineers are the numerous awards and recognition that have been bestowed upon them since the implementation of the APMS. NIST staff have won two Nobel Prizes for Physics, been selected for a MacArthur Fellowship "Genuis Award", received the National Medal of Science, received UNESCO's 2003 Women in Science Award, received 21 Presidential Early Career Awards for Science and Engineering (PECASE) awards, and earned 16 inductions into the National Academies of Science and Engineering.

While I would like to say everything has worked perfectly since initial implementation, the fact is that NIST has had to make minor adjustments to the system over time. This was not unexpected and has improved the functionality of the system. Over the years both supervisory and nonsupervisory employees have provided ideas for improving the system, through focus groups and other forums. NIST responded to this feedback by developing a revised performance appraisal and payout system in 1991, more recent feedback -- from the 2000 and 2002 NIST Employee Surveys, the NIST Research Advisory Committee's 2002 Report to the NIST Director, and stakeholder focus groups – has led to the latest changes which will be implemented during the next performance cycle.

Starting on October 1, NIST will replace the current 100-point rating scale with six performance ratings and link pay increases to these ratings. Pay increases will be based on an annually determined percentage of the mid-point salary for each pay band in the career path and linked directly to the top three performance ratings, thus strengthening the pay-for-performance link, increasing transparency, and reducing potential payout variations among employees in the same career path and pay band and with the same performance ratings. In addition, the new change will implement a required bonus for high-performing employees who cannot receive a pay increase because they are at the top or close to the top of their pay band.

The NIST system offers improvements in position classification, recruitment, extended probationary period for research positions, performance appraisal, pay for performance, automation and paperwork reduction, and delegations of authority to managers-- all of which have many advantages over the current GS system.

In conclusion, the NIST Alternative Personnel Management System is meeting its objectives to recruit and retain quality staff; to make compensation more competitive; to link pay to performance; to simplify position classification; to streamline processing; to improve the staffing process and get new hires onboard faster; and to increase the manager's role and accountability in personnel management. The NIST system continues to operate as an innovative personnel system which has a proven track record of demonstrating new ideas in the area of human resources management. Thank you for inviting me to testify today, and I would be happy to answer any questions.

Hratch G. Semerjian, Deputy Director

Hratch G. Semerjian is the deputy director of NIST. From November 2004 through July 2005, Dr. Semerjian served as the acting NIST director.

Dr. Semerjian has served as the deputy director of NIST since July 2003. In this position, Dr. Semerjian is responsible for overall operation of the Institute, effectiveness of NIST's technical programs, and for interactions with international organizations. NIST has a total budget of about $858 million, and a permanent staff of about 3,000, as well as about 1,600 guest researchers from industry, academia, and other national metrology institutes from more than 40 countries. Most of the NIST researchers are located in two major campuses in Gaithersburg, Md., and Boulder, Colo. NIST also has two joint research institutes; the oldest of these is JILA, a collaborative research program with the University of Colorado at Boulder, and the other is CARB (Center for Advanced Research in Biotechnology), a partnership with the University of Maryland Biotechnology Institute.

Dr. Semerjian received his M.Sc. (1968) and Ph.D. (1972) degrees in engineering from Brown University. He served as a lecturer and post doctoral research fellow in the Chemistry Department at the University of Toronto. He then joined the research staff of Pratt & Whitney Aircraft Division of United Technologies Corp. in East Hartford, Conn. In 1977, Dr. Semerjian joined the National Bureau of Standards (now NIST), where he served as director of the Chemical Science and Technology Laboratory (CSTL) from April 1992 through July 2003. Awards he has received include the Fulbright Fellowship, C.B. Keen Fellowship at Brown, the U.S. Department of Commerce Meritorious Federal Service (Silver Medal) Award in 1984, and the U.S. Department of Commerce Distinguished Achievement in Federal Service (Gold Medal) Award in 1995. In 1996, he was elected a Fellow of the American Society of Mechanical Engineers. In 1997, he received the Brown Engineering Alumni Medal. Dr. Semerjian was elected to the National Academy of Engineering in 2000.