

APPENDIX B-1

**ANALYSES OF THE LINKAGE BETWEEN PAY
AND PERFORMANCE:
METHODS FOR STATISTICAL ANALYSES**

YEAR EIGHT

ANALYSES OF THE LINKAGE BETWEEN PAY AND PERFORMANCE: METHODS FOR STATISTICAL ANALYSES

As in previous years, the body of this report contains results from statistical analyses performed on the objective data pertaining to the Demonstration and Comparison Group participants. In this technical appendix, we provide more detail on the statistical analyses from which the results were derived as well as other methodological issues of relevance to the study design. The following information is provided:

- Use of sample versus census data analysis techniques
- Results of the regression analysis
- Scatterplot displaying the performance score-bonus correlation in the Demonstration Group
- Results of the analysis of covariance (ANCOVA).

Use of Sample Versus Census Data Analysis Techniques

The database of Demonstration Group participants represents the entire universe of DoC employees who are receiving the human resource interventions as part of this Demonstration Project. By definition this group is a population rather than a sample. The most widely used inferential statistics, and those used as part of this evaluation (Analysis of Covariance), were designed to be applied to sample data. Despite this theoretical hurdle, it has become common practice among researchers to use these inferential statistics in the absence of a better method.

To most accurately describe the population in question, Booz Allen produced effect size estimates along with significance levels. By producing these additional data, Booz Allen hopes to mitigate the theoretical concerns of applying data analysis techniques developed for samples on data derived from a population.

Results of the Regression Analysis

Our regression analysis in Year Eight, as in Years Four-Seven, is based on the analysis performed for the NIST Demonstration Project where the relationship between pay and performance is estimated considering additional factors that may also influence pay.¹ By assessing the relationship between performance score and performance-based pay increase we are able to more accurately answer the questions, “how strongly related are performance scores and pay increases when additional factors are considered in the same analysis?” and “does race/national origin, gender, or veteran status have a significant impact on pay increases, beyond other factors?”

The following factors were considered in Year Eight as they relate to performance-based pay increase: Initial Year Eight Salary (salary prior to pay increases, in dollars), pay band as of September 2005, interval as of September 2005, whether or not one was promoted in Year

1 Due to statistical factors associated with the relationship between Initial Year salary and End of Year salary, this analysis was altered from Year Five onward to assess the effects of performance score on Performance-based Pay Increase (rather than on End of Year salary as was considered in Year Four).

Eight, supervisory status (supervisor/non-supervisor), length of service, performance score, age, organization, race/national origin, gender, and veteran status. The regression analysis looks at the degree to which these factors are related to performance-based pay increase in Year Eight. Analyses were conducted separately for each career path as of September 2005.

The results of the overall regression analysis are displayed in Tables 1-4. Statistically speaking, the factors included in this analysis account for 51% (ZP), 56% (ZT), 34% (ZA), and 36% (ZS) of the variance in performance-based pay increases for these four career paths. The tables provide more detail as to which variables account for the variance in performance-based pay increases. Only variables listed in these tables have a significant effect on performance-based pay increases.

The results of the regression analysis confirmed that performance score was a consistent predictor of performance-based pay increase across all career paths. This provides support for a pay and performance link within the Demonstration Project by demonstrating that performance score is a key factor influencing pay. These results also show that the Demonstration Project is operating as intended because the system is designed to ensure a high degree of linkage between pay and performance.

The results also showed that organization was a consistent predictor of performance-based pay increase in all four career paths in Year Eight. The difference in pay increases across organizations likely results from the fact that organizations operate under different pay pools that were built from different historical data. No other variables (aside from performance score and organization) were consistent predictors across all four career paths.

Three variables – interval, promotion, and age – were predictors in three of the four career paths. One, higher performance-based pay increases tended to be associated with being at a lower interval, which is consistent with the design of the system in which those in lower intervals within their bands are eligible for greater salary increases. Two, promotion is related to pay increases in ZP and ZS, such that higher performance-based pay increases tended to be associated with being promoted. However, the opposite was true for ZT; higher performance-based pay increases tended to be associated with not being promoted. While an unusual finding, this may be a function of the small number of individuals in this analysis; only 14 of the 262 ZT employees were promoted and, of these, data were only available and showed non-zero salary increases for five (the remaining nine had missing data or received a salary increase of zero). Three, higher performance-based pay increases tended to be associated with being younger, likely reflecting the confounding influence of younger people being lower in their bands and with more movement to grow.

Finally, given the emphasis on examining the impact of the pay-for-performance system on minorities, women, and veterans, we included these demographic variables in the regression analysis. The results showed that race/national origin was a predictor of performance-based pay increase in one of the four career paths – ZA. Race/national origin is related to pay increases in ZA such that higher performance-based pay increases tended to be associated with being Asian and lower performance-based pay increases tended to be associated with being Black (not of Hispanic origin). The impact of race/national origin on the prediction of performance-based pay

increase was lesser than the impact of performance score, interval, age, supervisor status, and organization. Neither gender nor veteran status was a significant predictor of performance-based pay increases in any of the four career paths.

Table 1: Results of Regression Analysis – ZP Career Path

Variables	B	Beta	R	Adjusted R-squared
Performance Score	188.35	.48	.72	.51
Length of Service	-303.89	-.42		
Interval	-789.50	-.35		
Band	522.85	.20		
Initial Salary in Year Eight	.02	.18		
Supervisor Status	-697.35	-.13		
Promotion	-1033.95	.09		
Age	-11.23	-.05		
Organization	*	*		

Notes:

1. Other variables that were tested but which did not significantly increase the prediction of performance-based pay increase at $p < .05$ are: race/national origin, gender, and veteran status. This analysis was conducted in SPSS using “enter” regression and with the primary variables tested in the first model and race/national origin, gender, and veteran status tested in the second model.
 2. Results are presented in descending order, by Beta weights, to demonstrate the decreasing strength of their relationships with performance-based pay increase.
 3. Supervisory Status was coded as 0 for supervisors and 1 for non-supervisors.
 4. Promotion in Year Eight was coded as 0 for not promoted and 1 for promoted.
- * The categorical variable “Organization” was dummy coded. The results showed that the difference between at least two organizations was significant. Differences due to organization likely reflect differences in practices and/or the size of pay pools.

Table 2: Results of Regression Analysis – ZT Career Path

Variables	B	Beta	R	Adjusted R-squared
Interval	-626.47	-.55	.77	.56
Performance Score	81.88	.44		
Promotion	-616.94	-.15		
Age	-12.09	-.14		
Organization	*	*		

Notes:

1. *Other variables that were tested but which did not significantly increase the prediction of performance-based pay increase at $p < .05$ are: Initial Year Eight salary (prior to increases), Band as of September 2005, Supervisor Status, length of service, race/national origin, gender, and veteran status. This analysis was conducted in SPSS using “enter” regression and with the primary variables tested in the first model and race/national origin, gender, and veteran status tested in the second model.*
 2. *Results are presented in descending order, by Beta weights, to demonstrate the decreasing strength of their relationships with performance-based pay increase.*
 3. *Supervisory Status was coded as 0 for supervisors and 1 for non-supervisors.*
 4. *Promotion in Year Eight was coded as 0 for not promoted and 1 for promoted.*
- * *The categorical variable “Organization” was dummy coded. The results showed that the difference between at least two organizations was significant. Differences due to organization likely reflect differences in practices and/or the size of pay pools.*

Table 3: Results of Regression Analysis – ZA Career Path

Variables	B	Beta	R	Adjusted R-squared
Performance Score	162.74	.47	.60	.34
Interval	-718.59	-.31		
Age	-26.24	-.12		
Supervisor Status	-654.86	-.11		
Organization	*	*		
Race/national origin	**	**		

Notes:

1. Other variables that were tested but which did not significantly increase the prediction of performance-based pay increase at $p < .05$ are: Initial Year Eight salary (prior to increases), Band as of September 2005, promotion, length of service, gender, and veteran status. This analysis was conducted in SPSS using “enter” regression and with the primary variables tested in the first model and race/national origin, gender, and veteran status tested in the second model.
 2. Results are presented in descending order, by Beta weights, to demonstrate the decreasing strength of their relationships with performance-based pay increase.
 3. Supervisory Status was coded as 0 for supervisors and 1 for non-supervisors.
 4. Promotion in Year Eight was coded as 0 for not promoted and 1 for promoted.
- * The categorical variable “Organization” was dummy coded. The results showed that the difference between at least two organizations was significant. Differences due to organization likely reflect differences in practices and/or the size of pay pools.
- ** The categorical variable “Race/national origin” was dummy coded. The results showed that the difference between at least two of the Race/national origin groups was significant.

Table 4: Results of Regression Analysis – ZS Career Path

Variables	B	Beta	R	Adjusted R-squared
Promotion	1356.62	.37	.63	.36
Performance Score	37.59	.33		
Organization	*	*		

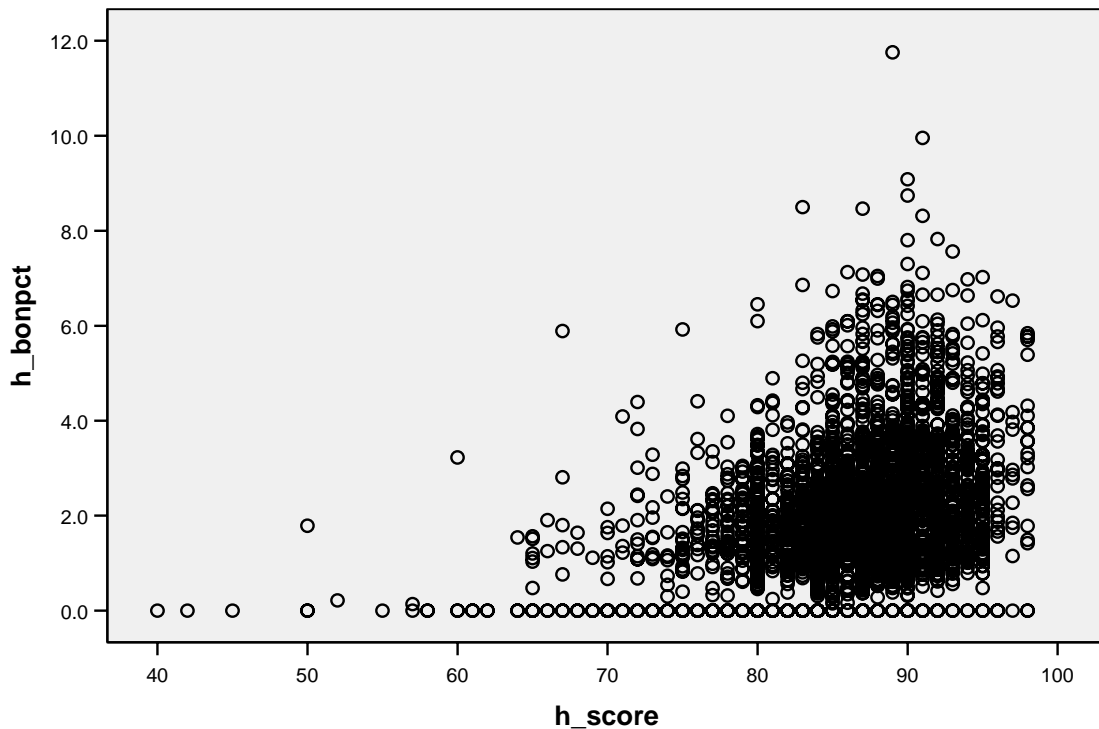
Notes:

1. Other variables that were tested but which did not significantly increase the prediction of performance-based pay increase at $p < .05$ are: Initial Year Eight salary (prior to increases), Band as of September 2005, interval, Supervisor Status, length of service, age, and veteran status. This analysis was conducted in SPSS using “enter” regression and with the primary variables tested in the first model and race/national origin, gender, and veteran status tested in the second model.
 2. Results are presented in descending order, by Beta weights, to demonstrate the decreasing strength of their relationships with performance-based pay increase.
 3. Supervisory Status was coded as 0 for supervisors and 1 for non-supervisors.
 4. Promotion in Year Eight was coded as 0 for not promoted and 1 for promoted.
- * The categorical variable “Organization” was dummy coded. The results showed that the difference between at least two organizations was significant. Differences due to organization likely reflect differences in practices and/or the size of pay pools.

Scatterplot Displaying the Performance Score-Bonus Correlation in the Demonstration Group

Figure 1 displays a scatterplot showing the relationship between performance scores and bonuses (as a percentage of base salary) in the Demonstration Group. Correlational analyses revealed a correlation of $r = .35$ ($p < .01$). The scatterplot below suggests two findings consistent with a pay-for-performance system: employees receiving low performance scores were unlikely to receive a large bonus and employees who did receive a large bonus were more likely to have received a high performance score. This scatterplot also shows that there were a number of employees who received high performance scores who received smaller bonuses.

Figure 1. Bonus Percent by Performance Score



Results of the Analysis of Covariance (ANCOVA)

Analysis of variance (ANOVA) involves determining whether the difference between two or more means is statistically significant. Analysis of covariance (ANCOVA, also referred to as ANACOVA) builds one more level of complexity. With ANCOVA, those differences between the means are examined while also *controlling* for the effects that another variable or variables may have on the relationship. That is, the question becomes "what is the effect of something when we take into account something else?" (Will G. Hopkins, *A New View of Statistics*).

When performing ANCOVAs, the output produces means that account for the presence of other specified variables. These means are known as "adjusted means;" they allow closer examination of the relationship between two variables of interest while removing the impact that other variables may have on the relationship.

Using a standard statistical software, the Statistical Package for the Social Sciences (SPSS), Booz Allen ran ANCOVA analyses to assess any differences in pay outcomes for EEO groups and veterans within the Demonstration Project. Separate ANCOVA analyses were run for each demographic subgroup (i.e., race/national origin groups, women, and veterans) to test whether the new pay-for-performance system adversely affected subgroups. In essence, the ANCOVA analyses indicate whether differences for subgroups in average pay increases or bonuses/awards were significant. We examined, for example, differences in average pay increases for females and males. In this example we sought to determine whether 1) there was a statistically significant difference in average pay increases between females and males and 2) whether the size of the effect of gender on average pay increases was large enough to be meaningful.

Separate ANCOVAs were run for several independent variables whose categories were:

1. Race/national origin groups
2. Female/male
3. Veteran/non-veteran.

Separate ANCOVAs for each of these subgroups were performed for each of the two dependent variables of interest:

1. Percent Increase in Salary (amount of the performance-based pay increase expressed as a percent of salary from the beginning of the performance year)
2. Percent Bonus/Award (amount of bonus/award expressed as a percent of salary from the beginning of the performance year).

ANCOVAs were calculated using four covariates: Performance Score, Career Path, Time in Service, and Organization. The ANCOVA analyses were used to address the question of how much impact gender, for example, had on differences in Percent Increase in Salary once the effects of Performance Score, Career Path, Time in Service, and Organization were statistically accounted for.

In these analyses, values less than .01 in the column labeled “Significance” were considered significant. Due to the large number of cases in the data set, it was not unexpected to find that many relationships were statistically significant. Because so many of these relationships were statistically significant, it is important to also consider the Eta squared value.

The column labeled “Eta Squared” is the estimate of the size of the effect that each independent variable had on the dependent variable of interest (Percent Increase in Salary or Percent Bonus/Award). For these data, values greater than .05 were considered to be of interest. However, consistent with past years, none of the subgroup variables’ eta squared values in any of the analyses reached this level (i.e., the values listed for the eta squared on the rows labeled RNO Group, Female/Male, or Veteran/Non-Veteran in the charts to follow).

For each ANCOVA analysis, raw and estimated marginal means are presented. The raw measures are labeled “Unadjusted Means.” The estimated marginal means are means that have been adjusted for the covariates and are labeled “Adjusted Means.”

In summary, the findings presented in Table 5 and Table 6 indicate that while some of the relationships between the independent variables and the dependent variables were statistically significant (due to the large sample size), none had an effect on the distribution of pay increases or bonuses/awards large enough to be meaningful.

Table 5: Results of ANCOVA Analysis – Demonstration Group Data

Dependent Variable = Percent Increase in Salary Independent Variable Categories = RNO Group			DEMO GROUP
Group	Unadjusted Means	Standard Deviation	N
White (not of Hispanic origin)	3.43	3.16	2923
Black (not of Hispanic origin)	2.71	2.59	471
Hispanic	3.16	3.35	109
Asian or Pacific Islander	3.88	3.54	218
American Indian or Alaskan Native	3.54	2.15	14
ANCOVA Results		Significance	Eta Squared
Performance Score	.00	.21	
Time in Service	.00	.22	
Career path – ZP (versus ZA)	.00	.01	
Career path – ZS (versus ZA)	.93	.00	
Career path – ZT (versus ZA)	.00	.00	
Organization – NESDIS (versus BEA)	.00	.01	
Organization – NMF (versus BEA)	.00	.04	
Organization – NTIA/ITS (versus BEA)	.89	.00	
Organization – NWS (versus BEA)	.36	.00	
Organization – OAR (versus BEA)	.01	.00	
Organization – OSASA (versus BEA)	.00	.02	
Organization – PPI (versus BEA)	.27	.00	
Organization – TA (versus BEA)	.00	.00	
RNO Group	.08	.00	
Group	Adjusted Means	Standard Error	
White (not of Hispanic origin)	3.37	.05	
Black (not of Hispanic origin)	3.13	.12	
Hispanic	3.28	.24	
Asian or Pacific Islander	3.73	.17	
American Indian or Alaskan Native	3.41	.67	

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Female/Male			DEMO GROUP	
Group	Unadjusted Means	Standard Deviation	N	
Female	3.59	3.19	1542	
Male	3.20	3.08	2193	
ANCOVA Results		Significance	Eta Squared	
Performance Score		.00	.21	
Time in Service		.00	.21	
Career path – ZP (versus ZA)		.00	.01	
Career path – ZS (versus ZA)		.89	.00	
Career path – ZT (versus ZA)		.00	.00	
Organization – NESDIS (versus BEA)		.00	.01	
Organization – NMF (versus BEA)		.00	.04	
Organization – NTIA/ITS (versus BEA)		.80	.00	
Organization – NWS (versus BEA)		.31	.00	
Organization – OAR (versus BEA)		.02	.00	
Organization – OSASA (versus BEA)		.00	.02	
Organization – PPI (versus BEA)		.28	.00	
Organization – TA (versus BEA)		.00	.00	
Female/Male		.46	.00	
Group	Adjusted Means	Standard Error		
Female	3.32	.07		
Male	3.39	.06		

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Veteran/Non-Veteran			DEMO GROUP	
Group	Unadjusted Means	Standard Deviation	N	
Veteran	2.64	2.63	432	
Non-Veteran	3.46	3.18	3303	
ANCOVA Results		Significance	Eta Squared	
Performance Score		.00	.21	
Time in Service		.00	.22	
Career path – ZP (versus ZA)		.00	.01	
Career path – ZS (versus ZA)		.74	.00	
Career path – ZT (versus ZA)		.00	.00	
Organization – NESDIS (versus BEA)		.00	.01	
Organization – NMF (versus BEA)		.00	.04	
Organization – NTIA/ITS (versus BEA)		.80	.00	
Organization – NWS (versus BEA)		.29	.00	
Organization – OAR (versus BEA)		.02	.00	
Organization – OSASA (versus BEA)		.00	.02	
Organization – PPI (versus BEA)		.28	.00	
Organization – TA (versus BEA)		.00	.00	
Veteran/Non-Veteran		.33	.00	
Group	Adjusted Means	Standard Error		
Veteran	3.25	.12		
Non-Veteran	3.38	.04		

Dependent Variable = Percent Bonus Independent Variable Categories = RNO Group			DEMO GROUP
Group	Unadjusted Means	Standard Deviation	N
White (not of Hispanic origin)	1.99	1.37	3123
Black (not of Hispanic origin)	1.85	1.58	503
Hispanic	2.00	1.35	115
Asian or Pacific Islander	2.05	1.48	225
American Indian or Alaskan Native	2.10	1.00	15
ANCOVA Results	Significance	Eta Squared	
Performance Score	.00	.24	
Time in Service	.00	.02	
Career path – ZP (versus ZA)	.08	.00	
Career path – ZS (versus ZA)	.00	.06	
Career path – ZT (versus ZA)	.33	.00	
Organization – NESDIS (versus BEA)	.00	.03	
Organization – NMF (versus BEA)	.00	.11	
Organization – NTIA/ITS (versus BEA)	.00	.00	
Organization – NWS (versus BEA)	.00	.01	
Organization – OAR (versus BEA)	.00	.02	
Organization – OSASA (versus BEA)	.00	.07	
Organization – PPI (versus BEA)	.04	.00	
Organization – TA (versus BEA)	.00	.01	
RNO Group	.02	.00	
Group	Adjusted Means	Standard Error	
White (not of Hispanic origin)	1.99	.02	
Black (not of Hispanic origin)	1.82	.06	
Hispanic	2.06	.11	
Asian or Pacific Islander	2.08	.08	
American Indian or Alaskan Native	1.64	.30	

Dependent Variable = Percent Bonus Independent Variable Categories = Female/Male			DEMO GROUP
Group	Unadjusted Means	Standard Deviation	N
Female	2.18	1.57	1637
Male	1.83	1.26	2344
ANCOVA Results		Significance	Eta Squared
Performance Score		.00	.24
Time in Service		.00	.02
Career path – ZP (versus ZA)		.11	.00
Career path – ZS (versus ZA)		.00	.05
Career path – ZT (versus ZA)		.44	.00
Organization – NESDIS (versus BEA)		.00	.03
Organization – NMF (versus BEA)		.00	.12
Organization – NTIA/ITS (versus BEA)		.00	.01
Organization – NWS (versus BEA)		.00	.01
Organization – OAR (versus BEA)		.00	.02
Organization – OSASA (versus BEA)		.00	.07
Organization – PPI (versus BEA)		.04	.00
Organization – TA (versus BEA)		.00	.01
Female/Male		.36	.00
Group	Adjusted Means	Standard Error	
Female	1.95	.03	
Male	1.99	.03	

Dependent Variable = Percent Bonus Independent Variable Categories = Veteran/Non-Veteran			DEMO GROUP
Group	Unadjusted Means	Standard Deviation	N
Veteran	1.83	1.38	480
Non-Veteran	1.99	1.41	3501
ANCOVA Results		Significance	Eta Squared
Performance Score		.00	.24
Time in Service		.00	.02
Career path – ZP (versus ZA)		.17	.00
Career path – ZS (versus ZA)		.00	.06
Career path – ZT (versus ZA)		.49	.00
Organization – NESDIS (versus BEA)		.00	.03
Organization – NMF (versus BEA)		.00	.12
Organization – NTIA/ITS (versus BEA)		.00	.01
Organization – NWS (versus BEA)		.00	.01
Organization – OAR (versus BEA)		.00	.02
Organization – OSASA (versus BEA)		.00	.06
Organization – PPI (versus BEA)		.04	.00
Organization – TA (versus BEA)		.00	.01
Veteran/Non-Veteran		.07	.00
Group	Adjusted Means	Standard Error	
Veteran	2.07	.05	
Non-Veteran	1.96	.02	

Table 6: Results of ANCOVA Analysis – Comparison Group Data

Dependent Variable = Percent Increase in Salary Independent Variable Categories = RNO Group			COMP GROUP
Group	Unadjusted Means	Standard Deviation	N
White (not of Hispanic origin)	2.82	4.44	1647
Black (not of Hispanic origin)	2.44	4.12	157
Hispanic	2.72	4.73	37
Asian or Pacific Islander	3.42	5.03	84
American Indian or Alaskan Native	2.32	2.13	11
ANCOVA Results		Significance	Eta Squared
Performance Score		*	.00
Time in Service		.00	.07
Career path – ZP (versus ZA)		.23	.00
Career path – ZS (versus ZA)		.66	.00
Career path – ZT (versus ZA)		.00	.01
Organization – NESDIS (versus ESA)		.05	.00
Organization – NMF (versus ESA)		.00	.01
Organization – NOS (versus ESA)		.08	.00
Organization – OAR (versus ESA)		.00	.00
RNO Group		.06	.01
Group	Adjusted Means	Standard Error	
White (not of Hispanic origin)	2.89	.11	
Black (not of Hispanic origin)	1.85	.36	
Hispanic	2.86	.70	
Asian or Pacific Islander	3.30	.47	
American Indian or Alaskan Native	1.86	1.28	

* Comparison Group employees included in this analysis all received a rating of “passing” in Year Eight.

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Female/Male			COMP GROUP
Group	Unadjusted Means	Standard Deviation	N
Female	3.23	4.90	759
Male	2.54	4.09	1177
ANCOVA Results		Significance	Eta Squared
Performance Score		*	.00
Time in Service		.00	.07
Career path – ZP (versus ZA)		.45	.00
Career path – ZS (versus ZA)		.22	.00
Career path – ZT (versus ZA)		.00	.01
Organization – NESDIS (versus ESA)		.10	.00
Organization – NMF (versus ESA)		.00	.01
Organization – NOS (versus ESA)		.14	.00
Organization – OAR (versus ESA)		.01	.00
Female/Male		.34	.00
Group	Adjusted Means	Standard Error	
Female	2.94	.16	
Male	2.73	.13	

* Comparison Group employees included in this analysis all received a rating of “passing” in Year Eight.

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Veteran/Non-Veteran			COMP GROUP
Group	Unadjusted Means	Standard Deviation	N
Veteran	2.08	3.57	204
Non-Veteran	2.90	4.52	1732
ANCOVA Results		Significance	Eta Squared
Performance Score		*	.00
Time in Service		.00	.07
Career path – ZP (versus ZA)		.31	.00
Career path – ZS (versus ZA)		.24	.00
Career path – ZT (versus ZA)		.00	.01
Organization – NESDIS (versus ESA)		.12	.00
Organization – NMF (versus ESA)		.00	.01
Organization – NOS (versus ESA)		.14	.00
Organization – OAR (versus ESA)		.01	.00
Veteran/Non-Veteran		.26	.00
Group	Adjusted Means	Standard Error	
Veteran	2.48	.31	
Non-Veteran	2.85	.10	

* Comparison Group employees included in this analysis all received a rating of “passing” in Year Eight.

Dependent Variable = Percent Bonus Independent Variable Categories = RNO Group			COMP GROUP
Group	Unadjusted Means	Standard Deviation	N
White (not of Hispanic origin)	1.65	1.76	1649
Black (not of Hispanic origin)	1.60	1.79	159
Hispanic	1.94	2.58	37
Asian or Pacific Islander	1.46	1.60	84
American Indian or Alaskan Native	2.85	3.59	11
ANCOVA Results		Significance	Eta Squared
Performance Score		*	.00
Time in Service		.02	.00
Career path – ZP (versus ZA)		.00	.03
Career path – ZS (versus ZA)		.72	.00
Career path – ZT (versus ZA)		.00	.02
Organization – NESDIS (versus ESA)		.88	.00
Organization – NMF (versus ESA)		.21	.00
Organization – NOS (versus ESA)		.19	.00
Organization – OAR (versus ESA)		.02	.00
RNO Group		.11	.00
Group	Adjusted Means	Standard Error	
White (not of Hispanic origin)	1.66	.04	
Black (not of Hispanic origin)	1.45	.15	
Hispanic	1.97	.29	
Asian or Pacific Islander	1.57	.19	
American Indian or Alaskan Native	2.71	.53	

* Comparison Group employees included in this analysis all received a rating of “passing” in Year Eight.

Dependent Variable = Percent Bonus Independent Variable Categories = Female/Male			COMP GROUP	
Group	Unadjusted Means	Standard Deviation	N	
Female	1.80	1.96	765	
Male	1.56	1.66	1175	
ANCOVA Results		Significance	Eta Squared	
Performance Score		*	.00	
Time in Service		.01	.00	
Career path – ZP (versus ZA)		.00	.03	
Career path – ZS (versus ZA)		.48	.00	
Career path – ZT (versus ZA)		.00	.02	
Organization – NESDIS (versus ESA)		.98	.00	
Organization – NMF (versus ESA)		.13	.00	
Organization – NOS (versus ESA)		.14	.00	
Organization – OAR (versus ESA)		.01	.00	
Female/Male		.51	.00	
Group	Adjusted Means	Standard Error		
Female	1.69	.07		
Male	1.63	.05		

* Comparison Group employees included in this analysis all received a rating of “passing” in Year Eight.

Dependent Variable = Percent Bonus Independent Variable Categories = Veteran/Non-Veteran			COMP GROUP	
Group	Unadjusted Means	Standard Deviation	N	
Veteran	1.42	1.55	204	
Non-Veteran	1.68	1.81	1736	
ANCOVA Results		Significance	Eta Squared	
Performance Score		*	.00	
Time in Service		.01	.00	
Career path – ZP (versus ZA)		.00	.03	
Career path – ZS (versus ZA)		.51	.00	
Career path – ZT (versus ZA)		.00	.02	
Organization – NESDIS (versus ESA)		.89	.00	
Organization – NMF (versus ESA)		.13	.00	
Organization – NOS (versus ESA)		.14	.00	
Organization – OAR (versus ESA)		.01	.00	
Veteran/Non-Veteran		.23	.00	
Group	Adjusted Means	Standard Error		
Veteran	1.51	.13		
Non-Veteran	1.67	.04		

* Comparison Group employees included in this analysis all received a rating of “passing” in Year Eight.