

APPENDIX B-1

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

YEAR SIX

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 Six, as in Year Four and Year Five, 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 Six as they relate to performance-based pay increase: Initial Year Six Salary (salary prior to pay increases, in dollars), pay band as of September 2003, interval as of September 2003, whether or not one was promoted in Year

¹ Due to statistical factors associated with the relationship between Initial Year Six salary and End of Year Six salary, this analysis was altered in Year Five and Year Six 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).

Six, 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 Six. Analyses were conducted separately for each career path.

The results of the overall regression analysis are displayed in Tables 1-4. Statistically speaking, the factors included in this analysis account for 52% (ZP), 46% (ZT), 33% (ZA), and 56% (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 show that performance score was the one 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 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 regression analysis results also showed that organization was a consistent predictor of performance-based pay increase in all four career paths in Year Seven. 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.

Four variables were predictors in two of the four career paths. One, interval is related to pay increase in ZP and ZS, such that 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, supervisory status is related to pay increase in ZP and ZT, such that higher performance-based pay increases tended to be associated with being a supervisor. Three, promotion in Year Six is related to pay increase in ZP and ZA, such that higher performance-based pay increases tended to be associated with not being promoted; this finding likely reflects how the increase due to promotion is not calculated in the performance-based pay increase and the fact that individuals who received recent promotions were not eligible for performance-based pay increases. And four, age is related to pay increase in ZP and ZT, such that higher performance-based pay increases tended to be associated with being a lower age. This finding is not surprising given that there is a higher

correlation between age and being capped in ZP and ZT compared to the other two career paths². As a result, some of the older employees in these career paths are capped and therefore receive small to no performance-based pay increases.

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. None of these were found to be significant predictors of performance-based pay increase, beyond what was predicted by the variables discussed above.

Table 1: Results of Regression Analysis – ZP Career Path

ZP Career Path				
Variables	B	Beta	R	Adjusted R-squared
Length of Service	-211.72	-.41	.73	.52
Interval as of September 2003	-656.26	-.40		
Performance Score	97.07	.40		
Initial Year Six salary (prior to increases)	.02	.25		
Supervisory Status	-632.43	-.13		
Promotion in Year Six	-690.56	-.11		
Age	-16.59	-.11		
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: Band as of September 2003, Race/National Origin, Gender, and Veteran Status.
 2. This analysis was conducted in SPSS using “enter” regression and with the primary variables tested in the first model and race, gender, and veteran status tested in the second model.
 3. Results are presented in descending order, by Beta weights, to demonstrate the strength of their relationships with performance-based pay increase.
 4. Supervisory Status was coded as 0 for supervisors and 1 for non-supervisors.
 5. Promotion in Year Six 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.

² Among those who have eligible performance scores, the correlation between age and being capped was ZT: $r = .32, p < .001$; ZP: $r = .31, p < .001$; ZA: $r = .25, p < .001$; and ZS: $r = .22, p < .001$.

Table 2: Results of Regression Analysis – ZT Career Path

ZT Career Path				
Variables	B	Beta	R	Adjusted R-squared
Performance Score	58.88	.48	.71	.46
Supervisory Status	-868.43	-.20		
Age	-15.69	-.18		
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 Six salary (prior to increases), Band as of September 2003, Interval as of September 2003, Promotion in Year Six, Length of Service, Race/National Origin, Gender, and Veteran Status.
 2. This analysis was conducted in SPSS using “enter” regression and with the primary variables tested in the first model and race, gender, and veteran status tested in the second model.
 3. Results are presented in descending order, by Beta weights, to demonstrate the strength of their relationships with performance-based pay increase.
 4. Supervisory Status was coded as 0 for supervisors and 1 for non-supervisors.
 5. Promotion in Year Six 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

ZA Career Path				
Variables	B	Beta	R	Adjusted R-squared
Performance Score	101.45	.32	.59	.33
Promotion in Year Six	-553.45	-.08		
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 Six Salary (prior to increases), Band as of September 2003, Interval as of September 2003, Supervisory Status, Length of Service, Age, Race/National Origin, Gender, and Veteran Status.
 2. This analysis was conducted in SPSS using “enter” regression and with the primary variables tested in the first model and race, gender, and veteran status tested in the second model.
 3. Results are presented in descending order, by Beta weights, to demonstrate the strength of their relationships with performance-based pay increase.
 4. Supervisory Status was coded as 0 for supervisors and 1 for non-supervisors.
 5. Promotion in Year Six 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 4: Results of Regression Analysis – ZS Career Path

ZS Career Path				
Variables	B	Beta	R	Adjusted R-squared
Interval as of September 2003	-549.56	-.64	.76	.56
Performance Score	25.29	.38		
Organization	*	*		

Notes:

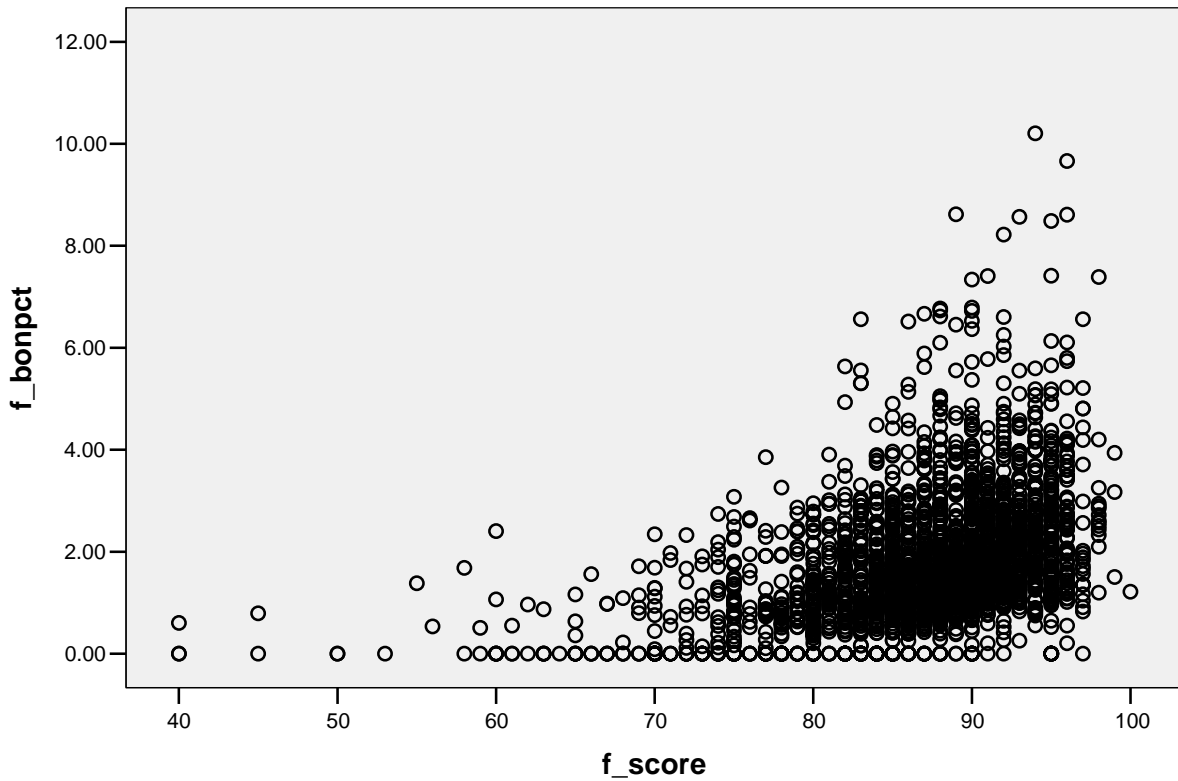
1. Other variables that were tested but which did not significantly increase the prediction of performance-based pay increase at $p < .05$ are: Initial Year Six Salary (prior to increases), Band as of September 2003, Promotion in Year Six, Length of Service, Age, Race/National Origin, Gender, and Veteran Status.
 2. This analysis was conducted in SPSS using “enter” regression and with the primary variables tested in the first model and race, gender, and veteran status tested in the second model.
 3. Results are presented in descending order, by Beta weights, to demonstrate the strength of their relationships with performance-based pay increase.
 4. There were no supervisors in ZS; therefore, Supervisory Status was omitted from this analysis.
 5. Promotion in Year Six 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 $r = .42$ ($p < .01$). 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

Bonus Percent by Performance Rating



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’ (i.e., the values of RNO Group, Female/Male, Veteran/Non-Veteran in the charts) eta squared values in any of the analyses reached this level.

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)	2.89	2.47	2187
Black (not of Hispanic origin)	2.40	2.08	334
Hispanic	2.69	2.17	81
Asian or Pacific Islander	2.65	1.89	119
American Indian or Alaskan Native	2.60	1.69	13
ANCOVA Results		Significance	Eta Squared
Performance Score		.00	.18
Time in Service		.00	.21
Career path – ZP (versus ZA)		.00	.01
Career path – ZS (versus ZA)		.47	.00
Career path – ZT (versus ZA)		.33	.00
Organization – NESDIS (versus BEA)		.28	.00
Organization – NMF (versus BEA)		.00	.08
Organization – NTIA/ITS (versus BEA)		.35	.00
Organization – OAR (versus BEA)		.49	.00
Organization – TA (versus BEA)		.03	.00
RNO Group		.04	.00
Group	Adjusted Means	Standard Error	
White (not of Hispanic origin)	2.87	.04	
Black (not of Hispanic origin)	2.56	.11	
Hispanic	2.78	.21	
Asian or Pacific Islander	2.70	.17	
American Indian or Alaskan Native	1.84	.52	

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Female/Male			DEMO GROUP
Group	Unadjusted Means	Standard Deviation	N
Female	3.10	2.43	1111
Male	2.62	2.36	1623
ANCOVA Results		Significance	Eta Squared
Performance Score	.00	.17	
Time in Service	.00	.20	
Career path – ZP (versus ZA)	.00	.01	
Career path – ZS (versus ZA)	.16	.00	
Career path – ZT (versus ZA)	.40	.00	
Organization – NESDIS (versus BEA)	.15	.00	
Organization – NMF (versus BEA)	.00	.09	
Organization – NTIA/ITS (versus BEA)	.23	.00	
Organization – OAR (versus BEA)	.81	.00	
Organization – TA (versus BEA)	.03	.00	
Female/Male	.70	.00	
Group	Adjusted Means	Standard Error	
Female	2.83	.06	
Male	2.80	.05	

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Veteran/Non-Veteran			DEMO GROUP
Group	Unadjusted Means	Standard Deviation	N
Veteran	2.11	1.89	354
Non-Veteran	2.92	2.45	2380
ANCOVA Results		Significance	Eta Squared
Performance Score	.00	.17	
Time in Service	.00	.20	
Career path – ZP (versus ZA)	.00	.01	
Career path – ZS (versus ZA)	.13	.00	
Career path – ZT (versus ZA)	.24	.00	
Organization – NESDIS (versus BEA)	.11	.00	
Organization – NMF (versus BEA)	.00	.09	
Organization – NTIA/ITS (versus BEA)	.24	.00	
Organization – OAR (versus BEA)	.81	.00	
Organization – TA (versus BEA)	.03	.00	
Veteran/Non-Veteran	.01	.00	
Group	Adjusted Means	Standard Error	
Veteran	2.58	.10	
Non-Veteran	2.85	.04	

Dependent Variable = Percent Bonus Independent Variable Categories = RNO Group			DEMO GROUP	
Group	Unadjusted Means	Standard Deviation	N	
White (not of Hispanic origin)	1.75	1.19	2192	
Black (not of Hispanic origin)	1.79	1.51	337	
Hispanic	1.86	1.23	82	
Asian or Pacific Islander	1.63	1.36	119	
American Indian or Alaskan Native	2.19	1.44	13	
ANCOVA Results		Significance	Eta Squared	
Performance Score		.00	.27	
Time in Service		.00	.01	
Career path – ZP (versus ZA)		.00	.00	
Career path – ZS (versus ZA)		.00	.07	
Career path – ZT (versus ZA)		.85	.00	
Organization – NESDIS (versus BEA)		.00	.01	
Organization – NMF (versus BEA)		.00	.09	
Organization – NTIA/ITS (versus BEA)		.00	.01	
Organization – OAR (versus BEA)		.00	.02	
Organization – TA (versus BEA)		.00	.03	
RNO Group		.33	.00	
Group	Adjusted Means	Standard Error		
White (not of Hispanic origin)	1.77	.02		
Black (not of Hispanic origin)	1.66	.06		
Hispanic	1.86	.11		
Asian or Pacific Islander	1.72	.09		
American Indian or Alaskan Native	1.64	.27		

Dependent Variable = Percent Bonus Independent Variable Categories = Female/Male			DEMO GROUP	
Group	Unadjusted Means	Standard Deviation	N	
Female	2.02	1.42	1117	
Male	1.57	1.07	1626	
ANCOVA Results		Significance	Eta Squared	
Performance Score		.00	.26	
Time in Service		.00	.01	
Career path – ZP (versus ZA)		.00	.00	
Career path – ZS (versus ZA)		.00	.07	
Career path – ZT (versus ZA)		.92	.00	
Organization – NESDIS (versus BEA)		.00	.01	
Organization – NMF (versus BEA)		.00	.09	
Organization – NTIA/ITS (versus BEA)		.00	.01	
Organization – OAR (versus BEA)		.00	.03	
Organization – TA (versus BEA)		.00	.03	
Female/Male		.86	.00	
Group	Adjusted Means	Standard Error		
Female	1.76	.03		
Male	1.75	.03		

Dependent Variable = Percent Bonus Independent Variable Categories = Veteran/Non-Veteran			DEMO GROUP	
Group	Unadjusted Means	Standard Deviation	N	
Veteran	1.47	1.18	357	
Non-Veteran	1.80	1.25	2386	
ANCOVA Results		Significance	Eta Squared	
Performance Score		.00	.26	
Time in Service		.00	.01	
Career path – ZP (versus ZA)		.00	.00	
Career path – ZS (versus ZA)		.00	.07	
Career path – ZT (versus ZA)		.83	.00	
Organization – NESDIS (versus BEA)		.00	.01	
Organization – NMF (versus BEA)		.00	.09	
Organization – NTIA/ITS (versus BEA)		.00	.01	
Organization – OAR (versus BEA)		.00	.03	
Organization – TA (versus BEA)		.00	.03	
Veteran/Non-Veteran		.41	.00	
Group	Adjusted Means	Standard Error		
Veteran	1.72	.05		
Non-Veteran	1.76	.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)	2.61	3.82	1567
Black (not of Hispanic origin)	2.53	3.80	164
Hispanic	4.35	6.84	30
Asian or Pacific Islander	2.25	2.86	75
American Indian or Alaskan Native	4.75	7.66	6
ANCOVA Results		Significance	Eta Squared
Performance Score		*	.00
Time in Service		.00	.05
Career path – ZP (versus ZA)		.73	.00
Career path – ZS (versus ZA)		.66	.00
Career path – ZT (versus ZA)		.01	.00
Organization – NESDIS (versus ESA)		.05	.00
Organization – NMF (versus ESA)		.00	.01
Organization – NOS (versus ESA)		.05	.00
Organization – OAR (versus ESA)		.02	.00
RNO Group		.06	.01
Group	Adjusted Means	Standard Error	
White (not of Hispanic origin)	2.65	.10	
Black (not of Hispanic origin)	2.20	.31	
Hispanic	4.19	.69	
Asian or Pacific Islander	2.11	.44	
American Indian or Alaskan Native	3.96	.10	

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

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Female/Male			COMP GROUP
Group	Unadjusted Means	Standard Deviation	N
Female	3.15	4.35	714
Male	2.29	3.49	1128
ANCOVA Results		Significance	Eta Squared
Performance Score		*	.00
Time in Service		.00	.04
Career path – ZP (versus ZA)		.74	.00
Career path – ZS (versus ZA)		.24	.00
Career path – ZT (versus ZA)		.03	.00
Organization – NESDIS (versus ESA)		.09	.00
Organization – NMF (versus ESA)		.01	.00
Organization – NOS (versus ESA)		.06	.00
Organization – OAR (versus ESA)		.03	.00
Female/Male		.00	.00
Group	Adjusted Means	Standard Error	
Female	2.97	.15	
Male	2.40	.12	

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

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Veteran/Non-Veteran			COMP GROUP	
Group	Unadjusted Means	Standard Deviation	N	
Veteran	1.82	2.74	227	
Non-Veteran	2.73	3.99	1615	
ANCOVA Results		Significance	Eta Squared	
Performance Score		*	.00	
Time in Service		.00	.05	
Career path – ZP (versus ZA)		.75	.00	
Career path – ZS (versus ZA)		.37	.00	
Career path – ZT (versus ZA)		.01	.00	
Organization – NESDIS (versus ESA)		.11	.00	
Organization – NMF (versus ESA)		.01	.00	
Organization – NOS (versus ESA)		.06	.00	
Organization – OAR (versus ESA)		.03	.00	
Veteran/Non-Veteran		.02	.00	
Group	Adjusted Means	Standard Error		
Veteran	2.04	.26		
Non-Veteran	2.70	.09		

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

Dependent Variable = Percent Bonus Independent Variable Categories = RNO Group			COMP GROUP	
Group	Unadjusted Means	Standard Deviation	N	
White (not of Hispanic origin)	1.57	1.64	1573	
Black (not of Hispanic origin)	1.78	2.34	164	
Hispanic	2.24	2.36	30	
Asian or Pacific Islander	1.49	1.64	77	
American Indian or Alaskan Native	.36	.52	6	
ANCOVA Results		Significance	Eta Squared	
Performance Score		*	.00	
Time in Service		.33	.00	
Career path – ZP (versus ZA)		.01	.00	
Career path – ZS (versus ZA)		.27	.00	
Career path – ZT (versus ZA)		.00	.01	
Organization – NESDIS (versus ESA)		.79	.00	
Organization – NMF (versus ESA)		.47	.00	
Organization – NOS (versus ESA)		.42	.00	
Organization – OAR (versus ESA)		.67	.00	
RNO Group		.08	.01	
Group	Adjusted Means	Standard Error		
White (not of Hispanic origin)	1.58	.04		
Black (not of Hispanic origin)	1.65	.14		
Hispanic	2.19	.32		
Asian or Pacific Islander	1.49	.20		
American Indian or Alaskan Native	0.15	.71		

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

Dependent Variable = Percent Bonus Independent Variable Categories = Female/Male			COMP GROUP	
Group	Unadjusted Means	Standard Deviation	N	
Female	1.81	1.96	719	
Male	1.45	1.55	1131	
ANCOVA Results		Significance	Eta Squared	
Performance Score		*	.00	
Time in Service		.72	.00	
Career path – ZP (versus ZA)		.03	.00	
Career path – ZS (versus ZA)		.58	.00	
Career path – ZT (versus ZA)		.01	.00	
Organization – NESDIS (versus ESA)		.84	.00	
Organization – NMF (versus ESA)		.44	.00	
Organization – NOS (versus ESA)		.38	.00	
Organization – OAR (versus ESA)		.62	.00	
Female/Male		.00	.00	
Group	Adjusted Means	Standard Error		
Female	1.75	.07		
Male	1.49	.05		

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

Dependent Variable = Percent Bonus Independent Variable Categories = Veteran/Non-Veteran			COMP GROUP	
Group	Unadjusted Means	Standard Deviation	N	
Veteran	1.30	1.49	228	
Non-Veteran	1.63	1.75	1622	
ANCOVA Results		Significance	Eta Squared	
Performance Score		*	.00	
Time in Service		.44	.00	
Career path – ZP (versus ZA)		.00	.01	
Career path – ZS (versus ZA)		.39	.00	
Career path – ZT (versus ZA)		.00	.01	
Organization – NESDIS (versus ESA)		.89	.00	
Organization – NMF (versus ESA)		.41	.00	
Organization – NOS (versus ESA)		.34	.00	
Organization – OAR (versus ESA)		.56	.00	
Veteran/Non-Veteran		.02	.00	
Group	Adjusted Means	Standard Error		
Veteran	1.34	.12		
Non-Veteran	1.63	.04		

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