

**APPENDIX D-1**

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

**YEAR NINE**



## **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 Group 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 Nine, as in Years Four-Eight, is based on the analysis originally performed for the NIST Demonstration Project where the relationship between pay and performance is estimated considering additional factors that may also influence pay.<sup>1</sup> 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 Nine as they relate to performance-based pay increase: Initial Year Nine Salary (salary prior to pay increases, in dollars), pay band as of September 2006, interval as of September 2006, whether or not one was promoted in Year

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<sup>1</sup> 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).

Nine, 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 Nine. Analyses were conducted separately for each career path as of September 2006.

The results of the overall regression analysis are displayed in Tables 1-4. Statistically speaking, the factors included in this analysis account for 53% (ZP), 48% (ZT), 47% (ZA), and 50% (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<sup>2</sup> effect on performance-based pay increases.

The results of the regression analysis confirmed that performance score was a significant predictor of performance-based pay increase in all four career paths in Year Nine. 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.

In addition, the results showed that organization was a consistent predictor of performance-based pay increase in all four career paths in Year Nine. 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, except performance score and organization, were consistent predictors across all four career paths.

Three variables – interval, initial salary, and supervisor status – 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 for ZP, ZA, and ZS, 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, higher performance-based pay increases tended to be associated with those at higher initial salaries for ZP and ZA and with lower initial salaries for ZT. Three, higher performance-based pay increases tended to be associated with being a supervisor for ZP, ZA, and ZS.

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.

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<sup>2</sup> Significant at the  $p \leq .05$  level.

**Table 1: Results of Regression Analysis – ZP Career Path**

Variables	B	Beta	R	Adjusted R-squared
Interval	-1054.22	-.50	.73	.53
Performance Score	116.34	.35		
Length of Service	-218.28	-.32		
Initial Salary in Year Nine	.02	.23		
Supervisor Status	-974.64	-.19		
Age	-25.08	-.13		
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, promotion, 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 Nine 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
Band	591.26	.69	.72	.48
Initial Salary in Year Nine	-.03	-.61		
Performance Score	90.23	.54		
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: interval, promotion, Supervisor Status, length of service, age, 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 Nine 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	179.76	.53		
Interval	-1031.14	-.48	.69	.47
Initial Salary in Year Nine	.02	.23		
Supervisor Status	-683.25	-.12		
Age	-17.40	-.08		
Promotion	-475.79	-.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: Band as of September 2006, 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 Nine 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**

Variables	B	Beta	R	Adjusted R-squared
Interval	-539.79	-.59	.72	.50
Performance Score	46.80	.52		
Supervisor Status	-860.91	-.11		
Organization	*	*		

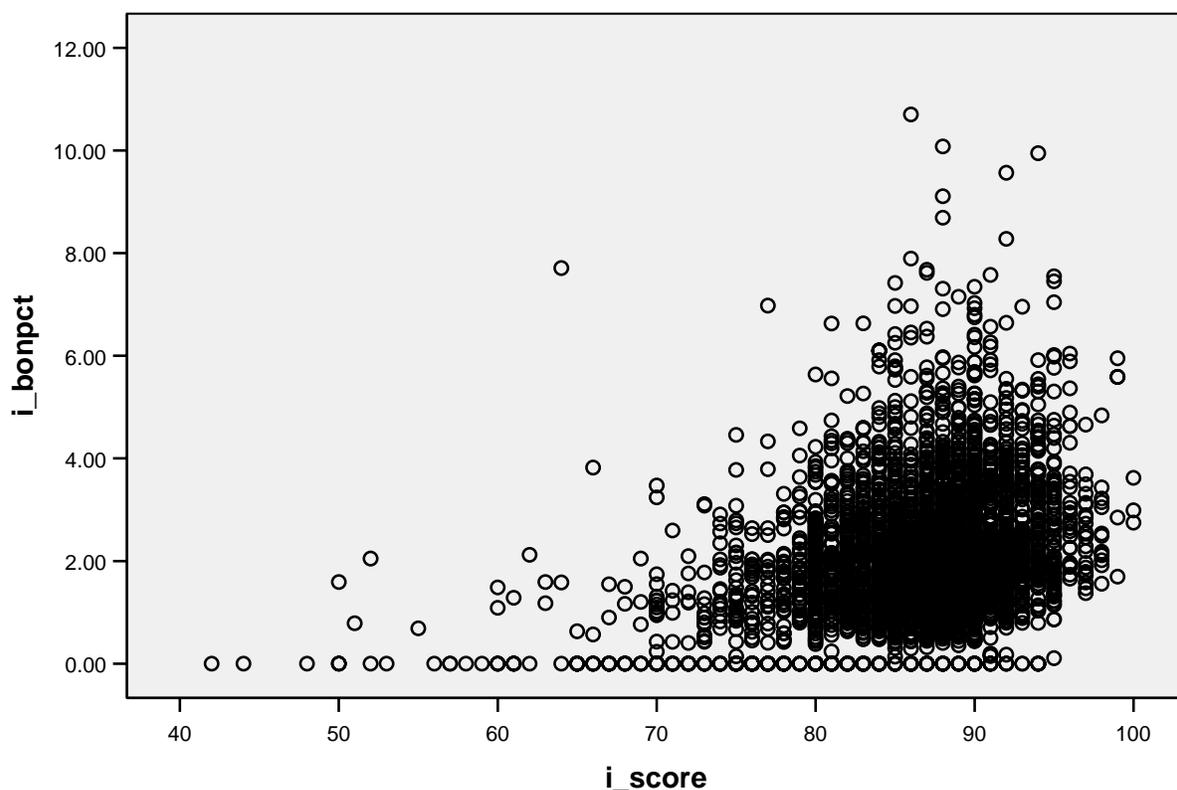
*Notes:*

1. Other variables that were tested but which did not significantly increase the prediction of performance-based pay increase at  $p < .05$  are: Initial Year Nine salary (prior to increases), Band as of September 2006, promotion, length of service, age, 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 Nine 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  $r = .34$  ( $p < .01$ ). 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			<b>DEMO GROUP</b>
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>
White (not of Hispanic origin)	3.26	2.71	2896
Black (not of Hispanic origin)	2.82	2.37	444
Hispanic	3.31	2.79	105
Asian or Pacific Islander	3.58	2.67	230
American Indian or Alaskan Native	3.65	2.46	16
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>
Performance Score	.00	.19	
Time in Service	.00	.23	
Career path – ZP (versus ZA)	.00	.01	
Career path – ZS (versus ZA)	.01	.00	
Career path – ZT (versus ZA)	.00	.01	
Organization – NESDIS (versus BEA)	.00	.02	
Organization – NMFS (versus BEA)	.00	.05	
Organization – NTIA/ITS (versus BEA)	.78	.00	
Organization – NWS (versus BEA)	.92	.00	
Organization – OAR (versus BEA)	.00	.00	
Organization – OSASA (versus BEA)	.00	.02	
Organization – PPI (versus BEA)	.13	.00	
Organization – TA (versus BEA)	.66	.00	
RNO Group	.12	.00	
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>	
White (not of Hispanic origin)	3.24	.04	
Black (not of Hispanic origin)	3.03	.11	
Hispanic	3.36	.21	
Asian or Pacific Islander	3.43	.14	
American Indian or Alaskan Native	3.90	.53	

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Female/Male			<b>DEMO GROUP</b>		
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>		
Female	3.53	2.76	1535		
Male	3.02	2.60	2156		
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>		
Performance Score		.00	.19		
Time in Service		.00	.23		
Career path – ZP (versus ZA)		.00	.01		
Career path – ZS (versus ZA)		.89	.00		
Career path – ZT (versus ZA)		.00	.01		
Organization – NESDIS (versus BEA)		.00	.02		
Organization – NMFS (versus BEA)		.00	.06		
Organization – NTIA/ITS (versus BEA)		.63	.00		
Organization – NWS (versus BEA)		.79	.00		
Organization – OAR (versus BEA)		.01	.00		
Organization – OSASA (versus BEA)		.00	.02		
Organization – PPI (versus BEA)		.13	.00		
Organization – TA (versus BEA)		.65	.00		
Female/Male		.14	.00		
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>			
Female	3.30	.06			
Male	3.18	.05			

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Veteran/Non-Veteran			<b>DEMO GROUP</b>		
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>		
Veteran	2.74	2.39	397		
Non-Veteran	3.29	2.70	3294		
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>		
Performance Score		.00	.19		
Time in Service		.00	.23		
Career path – ZP (versus ZA)		.00	.01		
Career path – ZS (versus ZA)		.01	.00		
Career path – ZT (versus ZA)		.00	.01		
Organization – NESDIS (versus BEA)		.00	.02		
Organization – NMFS (versus BEA)		.00	.06		
Organization – NTIA/ITS (versus BEA)		.66	.00		
Organization – NWS (versus BEA)		.79	.00		
Organization – OAR (versus BEA)		.01	.00		
Organization – OSASA (versus BEA)		.00	.02		
Organization – PPI (versus BEA)		.13	.00		
Organization – TA (versus BEA)		.65	.00		
Veteran/Non-Veteran		.63	.00		
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>			
Veteran	3.18	.11			
Non-Veteran	3.24	.04			

Dependent Variable = Percent Bonus Independent Variable Categories = RNO Group			<b>DEMO GROUP</b>	
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>	
White (not of Hispanic origin)	2.03	1.31	3124	
Black (not of Hispanic origin)	2.01	1.57	489	
Hispanic	2.15	1.47	114	
Asian or Pacific Islander	2.05	1.31	246	
American Indian or Alaskan Native	2.19	1.11	16	
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>	
Performance Score	.00	.26		
Time in Service	.00	.04		
Career path – ZP (versus ZA)	.00	.00		
Career path – ZS (versus ZA)	.00	.08		
Career path – ZT (versus ZA)	.25	.00		
Organization – NESDIS (versus BEA)	.00	.05		
Organization – NMFS (versus BEA)	.00	.13		
Organization – NTIA/ITS (versus BEA)	.00	.01		
Organization – NWS (versus BEA)	.00	.02		
Organization – OAR (versus BEA)	.00	.03		
Organization – OSASA (versus BEA)	.00	.09		
Organization – PPI (versus BEA)	.00	.01		
Organization – TA (versus BEA)	.00	.01		
Organization – NMAO (versus BEA)	.24	.00		
Organization – UNSEC (versus BEA)	.01	.00		
Organization – USSTAFF (versus BEA)	.60	.00		
Organization – NOS (versus BEA)	--	--		
RNO Group	.01	.00		
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>		
White (not of Hispanic origin)	2.05	.02		
Black (not of Hispanic origin)	1.86	.05		
Hispanic	2.14	.10		
Asian or Pacific Islander	2.10	.07		
American Indian or Alaskan Native	1.81	.27		

Dependent Variable = Percent Bonus Independent Variable Categories = Female/Male			<b>DEMO GROUP</b>
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>
Female	2.33	1.51	1650
Male	1.83	1.19	2339
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>
Performance Score	.00	.25	
Time in Service	.00	.03	
Career path – ZP (versus ZA)	.04	.00	
Career path – ZS (versus ZA)	.00	.08	
Career path – ZT (versus ZA)	.20	.00	
Organization – NESDIS (versus BEA)	.00	.05	
Organization – NMFS (versus BEA)	.00	.14	
Organization – NTIA/ITS (versus BEA)	.00	.01	
Organization – NWS (versus BEA)	.00	.02	
Organization – OAR (versus BEA)	.00	.03	
Organization – OSASA (versus BEA)	.00	.09	
Organization – PPI (versus BEA)	.00	.01	
Organization – TA (versus BEA)	.00	.01	
Organization – NMAO (versus BEA)	.18	.00	
Organization – UNSEC (versus BEA)	.00	.00	
Organization – USSTAFF (versus BEA)	.65	.00	
Organization – NOS (versus BEA)	--	--	
Female/Male	.04	.00	
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>	
Female	2.08	.03	
Male	2.00	.02	

Dependent Variable = Percent Bonus Independent Variable Categories = Veteran/Non-Veteran			<b>DEMO GROUP</b>		
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>		
Veteran	2.01	1.51	452		
Non-Veteran	2.04	1.33	3537		
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>		
Performance Score		.00	.26		
Time in Service		.00	.04		
Career path – ZP (versus ZA)		.01	.00		
Career path – ZS (versus ZA)		.00	.08		
Career path – ZT (versus ZA)		.38	.00		
Organization – NESDIS (versus BEA)		.00	.05		
Organization – NMFS (versus BEA)		.00	.14		
Organization – NTIA/ITS (versus BEA)		.00	.01		
Organization – NWS (versus BEA)		.00	.02		
Organization – OAR (versus BEA)		.00	.03		
Organization – OSASA (versus BEA)		.00	.09		
Organization – PPI (versus BEA)		.00	.01		
Organization – TA (versus BEA)		.00	.01		
Organization – NMAO (versus BEA)		.19	.00		
Organization – UNSEC (versus BEA)		.00	.00		
Organization – USSTAFF (versus BEA)		.63	.00		
Organization – NOS (versus BEA)		--	--		
Veteran/Non-Veteran		.09	.00		
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>			
Veteran	2.12	.05			
Non-Veteran	2.02	.02			

**Table 6: Results of ANCOVA Analysis – Comparison Group Data**

Dependent Variable = Percent Increase in Salary Independent Variable Categories = RNO Group			<b>COMP GROUP</b>
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>
White (not of Hispanic origin)	3.00	5.41	3711
Black (not of Hispanic origin)	2.47	3.81	202
Hispanic	2.74	4.38	122
Asian or Pacific Islander	2.46	4.22	145
American Indian or Alaskan Native	4.34	6.49	31
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>
Performance Score		*	*
Time in Service		.00	.10
Career path – ZP (versus ZA)		.34	.00
Career path – ZS (versus ZA)		.68	.00
Career path – ZT (versus ZA)		.45	.00
Organization – NESDIS (versus ESA)		.62	.00
Organization – NMFS (versus ESA)		.49	.00
Organization – NWS (versus ESA)		.80	.00
Organization – OAR (versus ESA)		.56	.00
RNO Group		.40	.00
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>	
White (not of Hispanic origin)	2.99	.08	
Black (not of Hispanic origin)	2.68	.36	
Hispanic	2.76	.45	
Asian or Pacific Islander	2.55	.41	
American Indian or Alaskan Native	4.27	.90	

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

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Female/Male			<b>COMP GROUP</b>
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>
Female	3.59	6.00	845
Male	2.80	5.09	3366
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>
Performance Score		*	*
Time in Service		.00	.09
Career path – ZP (versus ZA)		.04	.00
Career path – ZS (versus ZA)		.30	.00
Career path – ZT (versus ZA)		.07	.00
Organization – NESDIS (versus ESA)		.38	.00
Organization – NMFS (versus ESA)		.60	.00
Organization – NWS (versus ESA)		.50	.00
Organization – OAR (versus ESA)		.79	.00
Female/Male		.00	.00
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>	
Female	3.67	.19	
Male	2.78	.09	

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

Dependent Variable = Percent Increase in Salary Independent Variable Categories = Veteran/Non-Veteran			<b>COMP GROUP</b>	
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>	
Veteran	1.98	3.23	986	
Non-Veteran	3.26	5.74	3225	
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>	
Performance Score		*	*	
Time in Service		.00	.10	
Career path – ZP (versus ZA)		.40	.00	
Career path – ZS (versus ZA)		.50	.00	
Career path – ZT (versus ZA)		.15	.00	
Organization – NESDIS (versus ESA)		.43	.00	
Organization – NMFS (versus ESA)		.57	.00	
Organization – NWS (versus ESA)		.57	.00	
Organization – OAR (versus ESA)		.70	.00	
Veteran/Non-Veteran		.00	.00	
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>		
Veteran	2.40	.17		
Non-Veteran	3.13	.09		

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

Dependent Variable = Percent Bonus Independent Variable Categories = RNO Group			<b>COMP GROUP</b>	
<b>Group</b>	<b>Unadjusted Means</b>	<b>Standard Deviation</b>	<b>N</b>	
White (not of Hispanic origin)	1.44	1.20	3711	
Black (not of Hispanic origin)	1.45	1.37	202	
Hispanic	1.61	1.14	122	
Asian or Pacific Islander	1.32	1.19	145	
American Indian or Alaskan Native	1.51	1.47	31	
<b>ANCOVA Results</b>		<b>Significance</b>	<b>Eta Squared</b>	
Performance Score		*	*	
Time in Service		.31	.00	
Career path – ZP (versus ZA)		.00	.01	
Career path – ZS (versus ZA)		.00	.00	
Career path – ZT (versus ZA)		.00	.01	
Organization – NESDIS (versus ESA)		.00	.00	
Organization – NMFS (versus ESA)		.01	.00	
Organization – NWS (versus ESA)		.13	.00	
Organization – OAR (versus ESA)		.00	.00	
RNO Group		.04	.00	
<b>Group</b>	<b>Adjusted Means</b>	<b>Standard Error</b>		
White (not of Hispanic origin)	1.46	.02		
Black (not of Hispanic origin)	1.21	.08		
Hispanic	1.51	.10		
Asian or Pacific Islander	1.35	.09		
American Indian or Alaskan Native	1.51	.21		

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

Dependent Variable = Percent Bonus Independent Variable Categories = Female/Male			<b>COMP GROUP</b>	
Group	Unadjusted Means	Standard Deviation	N	
Female	1.64	1.49	845	
Male	1.40	1.12	3366	
<b>ANCOVA Results</b>		Significance	Eta Squared	
Performance Score		*	*	
Time in Service		.36	.00	
Career path – ZP (versus ZA)		.00	.01	
Career path – ZS (versus ZA)		.00	.00	
Career path – ZT (versus ZA)		.00	.01	
Organization – NESDIS (versus ESA)		.00	.00	
Organization – NMFS (versus ESA)		.00	.00	
Organization – NWS (versus ESA)		.25	.00	
Organization – OAR (versus ESA)		.00	.00	
Female/Male		.50	.00	
Group	Adjusted Means	Standard Error		
Female	1.47	.04		
Male	1.44	.02		

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

Dependent Variable = Percent Bonus Independent Variable Categories = Veteran/Non-Veteran			<b>COMP GROUP</b>	
Group	Unadjusted Means	Standard Deviation	N	
Veteran	1.23	1.06	986	
Non-Veteran	1.51	1.24	3225	
<b>ANCOVA Results</b>		Significance	Eta Squared	
Performance Score		*	*	
Time in Service		.58	.00	
Career path – ZP (versus ZA)		.00	.01	
Career path – ZS (versus ZA)		.00	.00	
Career path – ZT (versus ZA)		.00	.01	
Organization – NESDIS (versus ESA)		.00	.00	
Organization – NMFS (versus ESA)		.00	.00	
Organization – NWS (versus ESA)		.33	.00	
Organization – OAR (versus ESA)		.00	.00	
Veteran/Non-Veteran		.00	.01	
Group	Adjusted Means	Standard Error		
Veteran	1.26	.04		
Non-Veteran	1.50	.02		

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