Attachment B

MANAGEMENT AND BUDGET

Interpreting Results of Compliance Tests

Your jurisdiction is required to pass four tests to be in compliance with pay equity law. For more information about compliance tests, refer to the Guide to Understanding Pay Equity Compliance.

1. **Completeness and Accuracy Test** - Report is submitted on time, data is correct, and required information has been provided

2. **Statistical or Alternative Test**- Compares salary data to determine if female classes are paid consistently below male classes of comparable work value (job points). The Minnesota Pay Equity Management System will generate results applying the Statistical Analysis Test. Underpayment ratio results of 80 and above are passing. In some cases, the Alternative Analysis is required and consists of a manual review of the data. Refer to the following page to determine which test applies to your report.

3. **Salary Range Test** - Compares the average number of years required for female classes to move through a salary range consisting of a time-phased step progression to the average number of years required for male classes. Results of 0 or 80 and above are passing scores. (Test does not apply if years to achieve maximum salary are not defined or if salary ranges are not defined).

4. **Exceptional Service Pay Test** - Compares the percentage of female classes receiving longevity or performance pay to the percentage of male classes receiving longevity or performance pay. In noting exceptional service pay, recipients must exceed the maximum salary reported. Results of 0 or 80 and above are passing scores. (Test does not apply if exceptional service pay is not available in your jurisdiction).

MANAGEMENT AND BUDGET

Compliance Determination Questionnaire

Answer the questions below to interpret results of a jurisdiction's compliance report.
Please note that MMB will make all final compliance determinations, this should be used for informational review purposes only.

1. Is the underpayment ratio at or above 80%?
    A. Yes- Compliance (Go to question 4)
    B. No- Are there 6 or more male classes and at least one class with a salary range?
        I. YES- Move on to T-test and then go to question 2.
        II. NO- Use alternative analysis test; go to question 3.

2. Is the value of T and degrees of freedom within range according to the t-test table?
    A. Yes- Compliance (Go to question 4)
    B. No- Out of compliance (Go to question 4, please note that even if the other tests listed in questions 4 and 5 have passing scores the jurisdiction may still be out of compliance)

3. Alternative Analysis Test - If the answer is yes to any of the statements below, the jurisdiction may be out of compliance, even if the other tests listed in questions 4 and 5 have passing scores.
    - *Is there a female job class with more points and less pay than a male class and the difference cannot be explained by years of service?*
    - *Is there a female job class with the same points as a male class and less pay and the difference cannot be explained by years of service?*
    - *Is there a female job class between 2 male classes and the female job class receives less pay than either male class and the difference cannot be explained by years of service?*
    - *Is there a female class rated lower than all male classes and pay is not reasonably proportionate to points as other classes and the difference cannot be explained by years of service?*

    I. Did you answer yes to any of the questions above?
        A. NO- Compliance, go to question 4
        B. Yes- Jurisdiction may be out of compliance (Go to question 4, please note that even if the other tests listed in questions 4 and 5 have passing scores the jurisdiction may still be out of compliance)

4. Is the salary range test 0%, or at or above 80%?
    A. Yes- Compliance (Go to question 5)

    B. No- Out of compliance (Go to question 5, Jurisdiction may be out of compliance with pay equity law, even if there is a passing score on a test from a previous question)

5. Is the exceptional service pay test 0%, or at or above 80%?

    A. Yes- Compliance (End)

    B. No- Out of compliance (Jurisdiction might be out of compliance with pay equity law, even if there is a passing score on a test from a previous question)

Compliance Report

The statistical analysis, salary range and exceptional service pay test results are shown below. Part I is general information from the Pay Equity Implementation Report data. Parts II, III and IV of the Compliance Report give test results. For more detail on each test, refer to Minnesota Rules Chapter 3920.

I. GENERAL JOB CLASS INFORMATION

	Male Classes (1)	Female Classes (2)	Balanced Classes	All Job Classes
# Job Classes	8	4	2	14
# Employees	14	4	24	42
Avg. Max Monthly Pay Per Employee	1,537.22	1,796.87		1,656.86 (3)

II. STATISTICAL ANALYSIS TEST

A. Underpayment Ratio = 150.0* (4)

	Male Classes	Female Classes
a. # At or above Predicted Pay	5	3
b. # Below Predicted Pay	3	1
c. TOTAL	8	4
d. % Below Predicted Pay (b divided by c = d)	37.50 (5)	25.00 (6)

*(Result is % of male classes below predicted pay divided by % of female classes below predicted pay.)

B. T-test Results

Degrees of Freedom (DF) = 16 Value of T = -3.732 (7)

a. Avg. diff. in pay from predicted pay for male jobs = $2 (8)

b. Avg. diff. in pay from predicted pay for female jobs = $75 (9)

III. SALARY RANGE TEST = 105.71% (10) (Result is A divided by B)

A. Avg. # of years to max salary for male jobs = 5.29

B. Avg. # of years to max salary for female jobs = 5.00

IV. EXCEPTIONAL SERVICE PAY TEST = 50.00% (11) (Result is B divided by A)

A. % of male classes receiving ESP 50.00*

B. % of female classes receiving ESP 25.00

*(If 20% or less, test result will be 0.00.)

Compliance Report

Explanations below correspond to shaded numbers on page three.

1. **Average Maximum Monthly Salary for Employees in Male Classes**
2. **Average Maximum Monthly Salary for Employees in Female Classes**
3. **Overall Average Maximum Monthly Salary for an Employee**
4. **Underpayment Ratio**

   The minimum requirement to pass the statistical analysis test is an underpayment ratio of 80%. The underpayment ratio is calculated by dividing the percentage of male classes below predicted pay (item five) by the percentage of female classes below predicted pay (item six). In the example on page three, 37.5 ÷ 25 = 150%. Jurisdictions with an underpayment ratio below 80% can improve their score by increasing salaries for female classes to at or above predicted pay. More details regarding predicted pay are on pages six through 13.

   If the underpayment ratio is less than 80%, a jurisdiction may still pass the statistical analysis test if the t-test results (explained in item 7) are not statistically significant. The t-test measures the average dollar difference from predicted pay for male and female classes.

5. **Percentage of Male Classes Below Predicted Pay**

   This percentage is calculated by dividing the number of male classes below predicted pay by the overall total of male classes. In the example on page three, the total of male classes is eight, and three fall below predicted pay. Therefore, 3 ÷ 8 = 37.50%.

6. **Percentage of Female Classes Below Predicted Pay**

   This percentage is calculated by dividing the number of female classes below predicted pay by the overall total of female classes. In the example on page three, the total of female classes is four and one of those falls below predicted pay. Therefore, 1 ÷ 4 = 25%.

7. **T-Test & Degrees of Freedom**

   These numbers are used only for jurisdictions with an underpayment ratio below 80%, at least six male classes and at least one class with a salary range. If the underpayment ratio is 80% or more, these numbers are not used nor are they used for jurisdictions in the alternative analysis.

   These numbers show the average dollar amount that males and females are from predicted pay and answer the question: Are females paid less than males on average and, is the underpayment of females statistically significant?

   To determine if these numbers show statistical significance, they must be checked against the table on page five. Find the DF number in the "Degrees of Freedom" column and then look across for the "Value of T." If the "value of t" on the compliance report is less than the "value of t" on the table, it means that either there is no underpayment of female classes or that the underpayment is not statistically significant. If the t-test number is the same or more than the "value of t" on the table, the underpayment for female classes is statistically significant and the jurisdiction would not pass the test.

   Salary increases for female classes sufficient to eliminate statistical significance would allow a jurisdiction to pass the statistical analysis test even with an underpayment ratio below 80%.

In the example on page three, t-test results would not be used because the underpayment ratio is above 80%, but let's assume we needed to check these results. First, we would find 16 in the DF column and then look across to find the value of t at 1.746. Since our t-test number is -3.732, well below the value of t on the table, these results would show that on average, females are not underpaid compared to males.

T-Test Table
(5% Significance)

DF	Value of t	DF	Value of t	DF	Value of t
1	6.314	12	1.782	23	1.714
2	2.920	13	1.771	24	1.711
3	2.353	14	1.761	25	1.708
4	2.132	15	1.753	26	1.706
5	2.015	**16**	**1.746**	27	1.703
6	1.943	17	1.740	28	1.701
7	1.895	18	1.734	29	1.699
8	1.860	19	1.729	30	1.697
9	1.833	20	1.725	40	1.684
10	1.812	21	1.721	60	1.671
11	1.796	22	1.717	120	1.658
				Infinity	1.645

While the entire method for calculating t-test results cannot be explained here, it is a commonly accepted mathematical technique for measuring statistical significance. The formula is fairly complex, but basically it factors in predicted pay, the dollar difference from predicted pay and the number of employees. The DF number is the total number of employees in male or female dominated classes only, minus two.

8. Average Dollar Amount Male Classes are Above or Below Predicted Pay

In the example on page three, the maximum monthly salary for male classes, on average, is $2 above predicted pay.

9. Average Dollar Amount Female Classes are Above or Below Predicted Pay

In the example on page three, the maximum monthly salary for female classes, on average, is $75 above predicted pay.

10. Salary Range Test

This number must be either 0% or 80% or more to pass this test. In the example on page three, 105.71% is passing. Jurisdictions not passing this test can pass it by reducing the number of years it takes for female classes to reach maximum salaries, increasing the number of years for males to reach maximum salaries, or some combination of both. A result of 0% would mean that either there are no male classes with an established number of years to move through a salary range, no female classes with an established number of years to move through a salary range, or both. A description of how the salary range test is calculated is on page 18.

11. Exceptional Service Pay Test

This number must be either 0% or 80% or more to pass this test. In the example on page three, 50% is not passing. Jurisdictions not passing this test can pass it by either increasing the number of female classes that receive exceptional service pay, decreasing the number of male classes that receive exceptional service pay, or some combination of both. A result of 0% could mean that fewer than 20% of male classes receive exceptional service pay or that no female classes receive exceptional service pay. A description of how the exceptional service pay test is calculated is on page 19.