APPENDIX B

COMPUTED MEASURES
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BACKGROUND
As part of Core TPS, calculations of "computed measures" are required. These measures, based on reported aggregate information, are indicators of the timeliness and completeness with which Unemployment Insurance tax transactions occur. States will report a series of data elements, which the automated TPS data system will use to calculate the computed measures.

Computed measures are used in four of the tax functions within TPS:

- Status Determination - (Chapter III)
- Report Delinquency - (Chapter V)
- Collections - (Chapter VI)
- Field Audit - (Chapter VII)

Be sure to read the section - "Computed Measures" in Chapters III, V, VI and VII. These sections show the formula used to calculate each measure and describe the rationale behind each of the measures.

In addition, you must reference the TPS Glossary (Appendix C) for definition of terms since all SESAs may not define data items in the same way.
COMPUTED MEASURES SPECIFICATIONS

<table>
<thead>
<tr>
<th>COMPUTED MEASURES</th>
<th>BACKGROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What is the Source for the data?</strong></td>
<td>Data needed to compute the TPS measures will come from reports currently submitted to the National Office as part of the UI Required Reporting (UIRR) System. The reports from which data are used are the ETA 581 - <em>Contributions Operations</em>, the ETA 2112 - <em>UI Financial Summary, Unemployment Fund</em> and the Bureau of Labor Statistics (BLS) ES 202 - <em>Employment, Wages and Contributions</em>. Data for these reports are stored within the UI Data Base System (UIDB) maintained at both the State and National Offices.</td>
</tr>
<tr>
<td><strong>How will Computed Measures be Gathered?</strong></td>
<td>The software developed for TPS will automatically access the UIDB and, with computer coded instructions, will calculate the necessary measures. New measures will be available on a quarterly basis, however the TPS software will provide a means for the TPS reviewer to request the calculated measures as of any quarter.</td>
</tr>
<tr>
<td><strong>How are Computed Measures Used?</strong></td>
<td>The Program Review portion of TPS is used to verify the accuracy of selected outputs in various tax functional areas. The Computed Measures will be used in conjunction with the accuracy findings to determine if necessary actions are being accomplished in a timely, complete manner. For example, the review of status determinations may reveal no errors in accuracy but the computed measures may reveal that the determinations are taking an exceptionally long time to make. A reasonable balance must be attained between accuracy and timeliness.</td>
</tr>
</tbody>
</table>
Measures can also be used in conjunction with the data collected in Methods Surveys. The reviewers can compare results of their measures with similar SESAs and in the Annual Report can recommend new, improved or additional methods used by other States to improve timeliness or completeness in one or more of the tax functions.

**Retention Period**

Once calculated, the measures will be kept for at least three years so that trends can be observed or to reveal the impact of instituting new procedures.

**Need for Consistency**

For each of the measures there are TPS Data Elements with specific definitions. SESAs must review their files and systems for SESA Data Elements to determine which ones will be used that are defined the same as the TPS elements. Not all SESAs use the same terminology and often the same term is used differently.

To ensure consistency SESAs must carefully review TPS definitions and then determine what element(s) in their State system will be used to accurately reflect the data needed for TPS measures.
Beginning on the following page, information is provided for each of the four tax functions which utilize Computed Measures (Status Determination, Report Delinquency, Collections and Field Audit).

The information, given by each tax function, consists of the following:

- List of all measures
- List of TPS Data Elements needed to calculate measures
- SESA Data Elements from which TPS Data Elements may be derived
- Hints to assist in data definitions
- A chart for each measure showing:
  - Formula used in calculation
  - Required Report from which elements are obtained
  - The EDP formula used in the software for calculating measure
  - A table showing the necessary number of quarters of data needed to calculate the measure. (Most measures require multiple quarters.)

NOTE: Each TPS data element is given a unique identifier to be used in the TPS Automated system. On the following pages these identifiers use the following criteria:

SD # = Status Determination Data Elements
RD # = Report Delinquency Data Elements
CO # = Collections Data Elements
FA # = Field Audit Data Elements
STATUS DETERMINATION
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There are 4 computed measures for the Status Determination function.

(A) Percentage of status determinations made within 90 days from the last day of the quarter in which the business first became liable. (Newly established employers)

(B) Percentage of status determinations made within 180 days from the last day of the quarter in which the business first became liable. (Newly established employers)

(C) Percentage of status determinations made within 90 days from the last day of the quarter in which the business became a successor.

(D) Percentage of status determinations made within 180 days from the last day of the quarter in which the business became a successor.

Six data elements are reported and used by TPS for each quarter in order to calculate the computed measures for the Status Determination Function.

For newly established accounts
SD 1 Total number of determinations
SD 2 Count of determinations made in 90 days or less
SD 3 Count of determinations made in 180 days or less (includes the count at 90 days)

For successor accounts
SD 4 Total number of determinations
SD 5 Count of determinations made in 90 days or less
SD 6 Count of determinations made in 180 days or less (includes the count at 90 days)
Each SESA will identify the appropriate data items from its records for use in calculating the TPS data elements. Examples of status data elements that might be used include:

- Date of liability
- Ending date for quarter of liability
- Date of determination
- Type of determination (e.g. new, successor, termination)

There are a number of issues to which States should pay attention when reviewing computed measures for Status Determination.

- Is the calculation of time lapse based on the difference between the end date of the quarter in which liability occurred and the determination date, not the difference between the liability date and the determination date as in earlier report definitions?
- What establishes the date of status determination? (The TPS definition is "The date the determination is entered on the system")
- What is the definition of date of liability? (The TPS definition is "The date on which an employing unit meets the State law definition of employer.")
- Are there any special circumstances when the originally recorded date of liability changes when new information becomes available to the SESA? How were these circumstances handled in the calculations of computed measures?

NOTE: All four computed measures for Status Determinations use very similar calculations. If States process the data items differently in different situations, for example successorships versus new liability, the differences should be investigated to ensure correct information.
## COMPUTED MEASURES SPECIFICATIONS

### COMPUTED MEASURES STATUS DETERMINATION

#### A. Percent of Determinations Within 90 Days - New Accounts:

Percentage of Status Determinations of newly established accounts made within 90 days from the last day of the quarter in which the business first became liable.

This measure is derived from the following formula:

\[
\text{Number of New determinations made within 90 days} \over \text{Total number of New Status Determinations}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period, denoted below as \([Q(x)]\). Indicators for Status Determination require one quarter of data.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports, ([Q(x)])</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of New Determinations made within 90 days.</td>
<td>ETA 581 # 15</td>
<td>SD 2</td>
<td>x</td>
</tr>
<tr>
<td>Total Number of New Status Determinations</td>
<td>ETA 581 # 14</td>
<td>SD 1</td>
<td>x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters:**

\(Q(x)\) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04 (i.e. \(Q(x) \rightarrow 9101\))

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[\text{SD 2 for Qx} \cdot 100 = \text{mmm.m\%}\]

\[\text{SD 1 for Qx}\]

---

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Appendix B
B. Percent of Determinations Within 180 Days - New Accounts:

Percentage of Status Determinations of newly established accounts made within 180 days from the last day of the quarter in which the business first became liable.

This measure is derived from the following formula:

\[
\frac{\text{Number of New determinations made within 180 days}}{\text{Total number of New Status Determinations}} \times 100 = \text{mmm.m%}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period, denoted below as \([Q(x)]\). Indicators for Status Determination require one quarter of data.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
<th>Q(x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of New Determinations made within 180 days</td>
<td>ETA 581 # 16</td>
<td>SD 3</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Total Number of New Status Determinations</td>
<td>ETA 581 # 14</td>
<td>SD 1</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

Example of Report Quarters:

\[Q(x)\] is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04 (i.e. Q(x) -----> 9101)

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\text{SD 3 for Qx} \quad * \quad 100 = \text{mmm.m%}
\]

\[
\text{SD 1 for Qx}
\]
C. **Percent of Determinations Within 90 Days - Successor Accounts:**

Percentage of Status Determinations of successor accounts made within 90 days from the last day of the quarter in which the business became a successor.

This measure is derived from the following formula:

\[
\frac{\text{Number of Successor determinations made within 90 days}}{\text{Total number of Successor Status Determinations}} \times 100 = \text{mmm.m}\%
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period, denoted below as [Q(x)]. Indicators for Status Determination require one quarter of data.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Successor Determinations made within 90 days.</td>
<td>ETA 581 # 18</td>
<td>SD 5</td>
<td>x</td>
</tr>
<tr>
<td>Total Number of Successor Status Determinations</td>
<td>ETA 581 # 17</td>
<td>SD 4</td>
<td>x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters:**

Q(x) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04 (i.e. Q(x) -------> 9101)

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\text{SD 5 for } Q_x \quad \text{----------------} \quad \times 100 = \text{mmm.m}\%
\]

\[
\text{SD 4 for } Q_x
\]
**D. Percent of Determinations Within 180 Days - Successor Accounts:**

Percentage of Status Determinations of successor accounts made within 180 days from the last day of the quarter in which the business became a successor.

This measure is derived from the following formula:

\[
\frac{\text{Number of Successor determinations made within 180 days}}{\text{Total number of Successor Status Determinations}} \times 100 = \text{mmm.m%}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period, denoted below as \([Q(x)]\). Indicators for Status Determination require one quarter of data.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Successor Determinations made within 180 days.</td>
<td>ETA 581 # 19</td>
<td>SD 6</td>
<td>x</td>
</tr>
<tr>
<td>Total Number of Successor Determinations</td>
<td>ETA 581 # 17</td>
<td>SD 4</td>
<td>x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters:**

\(Q(x)\) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04 (i.e. \(Q(x) \rightarrow 9101\)).

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{\text{SD 6 for Qx}}{\text{SD 4 for Qx}} \times 100 = \text{mmm.m%}
\]
REPORT DELINQUENCY
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REPORT DELINQUENCY

There are 6 computed measures for the Report Delinquency function.

For Contributory Employers

(A) Percent of reports filed timely.

(B) Percent of reports secured by the end of the following quarter.

(C) Percent of reports secured plus delinquencies resolved within 180 days (e.g. two following quarters).

For Reimbursing Employers

(D) Percent of reports filed timely.

(E) Percent of reports secured by the end of the following quarter.

(F) Percent of reports secured plus delinquencies resolved within 180 days (e.g. two following quarters).
Eight data elements are reported and used by TPS for each quarter in order to calculate the computed measures for the Report Delinquency function.

For Contributory Employers

RD 1  Total number of employers filing timely.

RD 2  The number of active contributory employers.

RD 3  Total number of employers who, as of the last day of the report quarter, had submitted reports for the preceding quarter.

RD 4  Total number of employers who, as of the last day of the report quarter, had resolved reports for the second quarter preceding the report quarter.

For Reimbursing Employers

RD 5  Total number of employers filing timely.

RD 6  The number of active reimbursing employers.

RD 7  Total number of employers who, as of the last day of the report quarter, had submitted reports for the preceding quarter.

RD 8  Total number of employers who, as of the last day of the report quarter, had resolved reports for the second quarter preceding the report quarter.

Each SESA will identify the appropriate data items from its records for use in calculating the TPS data elements.
Examples of Report Delinquency data elements that might be used include:

- Date report received/quarter report received
- Employers filing timely, in each quarter
  - contributory
  - reimbursing
- Active employers in each quarter.
  - contributory
  - reimbursing
- Employers who, as of the last day of the quarter, had submitted reports for the previous quarter -- for each quarter
  - contributory
  - reimbursing
- For each quarter, delinquencies resolved by end of quarter following quarter in which the report was due.
  - contributory
  - reimbursing
- Final assessments issued by quarter of origination
- Inactivations (or other determination of non-liable status) by quarter of origination
There are a number of issues to which States should pay attention when reviewing computed measures for Report Delinquency.

- Secured reports may not include reports cleared by a final assessment.

- For counts of delinquencies resolved, is the State including only final assessments that are legal and collectible?

- Data elements for report delinquency involve tracking activity by quarter of the transaction as well as the quarter the delinquency originated. Are activities counted for the correct quarter?

- Several of the data elements used for the report delinquency computed measures may not be available in existing SESA records. If special counts or logs are developed, the reviewer should assess the logic used in creating these counts.
A. Timely Employers - Contributory Employers

The percent of contributory employers filing reports timely.

This measure is derived from the following formula:

\[
\frac{\text{The average number of contributory employers filing reports timely for four (581) report quarters}}{\text{The average number of active contributory employers for four (581) report quarters ending one quarter earlier}} \times 100 = \text{mmm.m%}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires \textbf{FIVE (5)} quarters.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average # of employers filing timely.</td>
<td>ETA 581 # 6</td>
<td>RD 1</td>
<td>Q(x) Q(x-1) Q(x-2) Q(x-3) Q(x-4) Q(x-5)</td>
</tr>
<tr>
<td>Average # of Active employers</td>
<td>ETA 581 # 1</td>
<td>RD 2</td>
<td>x x x x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters:**

\[Q(x)\] is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\[
\begin{align*}
Q(x) & \rightarrow 9102 \\
Q(x-1) & \rightarrow 9101 \\
Q(x-2) & \rightarrow 9004 \\
Q(x-3) & \rightarrow 9003 \\
Q(x-4) & \rightarrow 9002 \\
Q(x-5) & \rightarrow 9001
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{\text{Sum of RD 1) for Q(x-3), Q(x-2), Q(x-1), Qx}}{\text{Sum of RD 2) for Q(x-4), Q(x-3), Q(x-2), Q(x-1)}} \times 100 = \text{mmm.m%}
\]
B. **Secured Reports - Contributory Employers**

The percent of quarterly reports secured by the last day of the following quarter.

This measure is derived from the following formula:

The average number of contributory employers whose reports had been secured by the last day of four (581) report quarters.

Average number of active contributory employers for the four (581) report quarters ending one quarter earlier.

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **FIVE (5) quarters**.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average # of employers who had</td>
<td>ETA 581 # 7</td>
<td>RD 3</td>
<td>Q(x) x Q(x-1) x Q(x-2) x Q(x-3) x Q(x-4) x Q(x-5)</td>
</tr>
<tr>
<td>secured reports</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average # of Active employers</td>
<td>ETA 581 # 1</td>
<td>RD 2</td>
<td>Q(x) x Q(x-1) x Q(x-2) x Q(x-3) x Q(x-4) x Q(x-5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example of Report Quarters:**

\[Q(x)\] is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\[
\begin{align*}
Q(x) & \quad \rightarrow 9102 \\
Q(x-1) & \quad \rightarrow 9101 \\
Q(x-2) & \quad \rightarrow 9004 \\
Q(x-3) & \quad \rightarrow 9003 \\
Q(x-4) & \quad \rightarrow 9002 \\
Q(x-5) & \quad \rightarrow 9001
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{(\text{Sum of RD 3}) \text{ for } Q(x-3), Q(x-2), Q(x-1), Qx}{(\text{Sum of RD 2}) \text{ for } Q(x-4), Q(x-3), Q(x-2), Q(x-1)} \times 100 = \text{mmm.m%}
\]
C. Resolution of Report Delinquencies - Contributory Employers

The percent of reports secured plus delinquencies resolved by the last day of the second reporting period (i.e., within 180 days of the quarter ended date, or within 180 days of the date delinquency discovered for newly established accounts).

This measure is derived from the following formula:

\[
\text{Average number of contributory employers whose report delinquencies were resolved within 180 days (two quarters) for four (581) report quarters.}
\]

\[
\text{Average number of active contributory employers for the four (581) report quarters ending two quarters earlier.}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **SIX (6)** quarters.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average # of employers whose report delinquencies were resolved.</td>
<td>ETA 581 # 8</td>
<td>RD 4</td>
<td>Q(x) Q(x-1) Q(x-2) Q(x-3) Q(x-4) Q(x-5)</td>
</tr>
<tr>
<td>Average # of Active employers</td>
<td>ETA 581 # 1</td>
<td>RD 2</td>
<td>x x x x x</td>
</tr>
</tbody>
</table>

Example of Report Quarters:

\[Q(x) \text{ is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04}\]

\[
\begin{align*}
Q(x) & \rightarrow 9102 \\
Q(x-1) & \rightarrow 9101 \\
Q(x-2) & \rightarrow 9004 \\
Q(x-3) & \rightarrow 9003 \\
Q(x-4) & \rightarrow 9002 \\
Q(x-5) & \rightarrow 9001 \\
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{\text{(Sum of RD 4) for Q(x-3), Q(x-2), Q(x-1), Qx}}{\text{(Sum of RD 2) for Q(x-5), Q(x-4), Q(x-3), Q(x-2)}} \times 100 = mmm.m\%
\]
COMPUTED MEASURES SPECIFICATIONS

D. **Timely Employers - Reimbursing Employers**

The percent of reimbursing employers filing reports timely.

This measure is derived from the following formula:

\[
\frac{\text{The average number of reimbursing employers filing reports timely for four (581) report quarters}}{\text{The average number of active reimbursing employers for four (581) report quarters ending one quarter earlier}} \times 100 = \text{mmm.m}%
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **FIVE (5)** quarters.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average # of employers filing timely.</td>
<td>ETA 581 # 9</td>
<td>RD 5</td>
<td>x x x x</td>
</tr>
<tr>
<td>Average # of Active employers</td>
<td>ETA 581 # 2</td>
<td>RD 6</td>
<td>x x x x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters:**

\[Q(x)\] is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\[
\begin{align*}
Q(x) & \rightarrow 9102 \\
Q(x-1) & \rightarrow 9101 \\
Q(x-2) & \rightarrow 9004 \\
Q(x-3) & \rightarrow 9003 \\
Q(x-4) & \rightarrow 9002 \\
Q(x-5) & \rightarrow 9001
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{\text{Sum of RD 5 for } Q(x-3), Q(x-2), Q(x-1), Qx}{\text{Sum of RD 6 for } Q(x-4), Q(x-3), Q(x-2), Q(x-1)} \times 100 = \text{mmm.m%}
\]

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**APPENDIX B**

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**TAX PERFORMANCE SYSTEM**

**COMPUTED MEASURES REPORT DELINQUENCY**

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**R 12/00**
E. **Secured Reports - Reimbursing Employers**

The percent of quarterly reports secured by the last day of the following quarter.

This measure is derived from the following formula:

The average number of reimbursing employers whose reports had been secured by the last day of four (581) report quarters.

Average number of active reimbursing employers for the four (581) report quarters ending one quarter earlier.

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **FIVE (5)** quarters.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average # of employers who had secured reports</td>
<td>ETA 581 # 10</td>
<td>RD 7</td>
<td>x x x x</td>
</tr>
<tr>
<td>Average # of Active employers</td>
<td>ETA 581 # 2</td>
<td>RD 6</td>
<td>x x x x</td>
</tr>
</tbody>
</table>

Example of Report Quarters:

\[Q(x)\] is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\[
\begin{align*}
Q(x) & \quad \rightarrow \quad 9102 \\
Q(x-1) & \quad \rightarrow \quad 9101 \\
Q(x-2) & \quad \rightarrow \quad 9004 \\
Q(x-3) & \quad \rightarrow \quad 9003 \\
Q(x-4) & \quad \rightarrow \quad 9002 \\
Q(x-5) & \quad \rightarrow \quad 9001 \\
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{\text{Sum of RD 7) for Q(x-3), Q(x-2), Q(x-1), Qx}}{\text{Sum of RD 6) for Q(x-4), Q(x-3), Q(x-2), Q(x-1)}} \times 100 = \text{mmm.m%}
\]
F. Resolution of Report Delinquencies - Reimbursing Employers

The percent of reports secured plus delinquencies resolved by the last day of the second reporting period (i.e., within 180 days of the quarter ended date, or within 180 days of the date delinquency discovered for newly established accounts).

This measure is derived from the following formula:

The average number of reimbursing employers whose report delinquencies were resolved within 180 days (two quarters) for four (581) report quarters.

Average number of active reimbursing employers for the four (581) report quarters ending two quarters earlier.

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **SIX (6)** quarters.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average # of employers whose report delinquencies were resolved.</td>
<td>ETA 581 # 11</td>
<td>RD 8</td>
<td>Q(x) Q(x-1) Q(x-2) Q(x-3) Q(x-4) Q(x-5)</td>
</tr>
<tr>
<td>Average # of Active employers</td>
<td>ETA 581 # 2</td>
<td>RD 6</td>
<td>x x x x x x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters:**

\(Q(x)\) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\(Q(x) \longrightarrow 9102\)
\(Q(x-1) \longrightarrow 9101\)
\(Q(x-2) \longrightarrow 9004\)
\(Q(x-3) \longrightarrow 9003\)
\(Q(x-4) \longrightarrow 9002\)
\(Q(x-5) \longrightarrow 9001\)

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{\text{Sum of RD 8) for } Q(x-3), Q(x-2), Q(x-1), Qx}{\text{Sum of RD 6) for } Q(x-5), Q(x-4), Q(x-3), Q(x-2)} \times 100 = \text{mmm.m\%}
\]
COLLECTIONS
(this is a blank page for portfolio)
## COMPUTED MEASURES SPECIFICATIONS

### COLLECTIONS

There are 8 computed measures for the Collections function.

<table>
<thead>
<tr>
<th>COMPUTED MEASURES</th>
<th>COLLECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Percent of amounts due paid timely (Contributory Employers)</td>
<td></td>
</tr>
<tr>
<td>(B) Turnover Ratio - The ratio of receivables liquidated and declared uncollectible and/or doubtful to taxes due (Contributory Employers)</td>
<td></td>
</tr>
<tr>
<td>(C) Receivables declared uncollectible and/or doubtful - The percent of tax due declared uncollectible and/or doubtful (Contributory Employers)</td>
<td></td>
</tr>
<tr>
<td>(D) Accounts receivable at the end of the report period as a percent of tax due (Contributory Employers)</td>
<td></td>
</tr>
<tr>
<td>(E) Percent of amounts due paid timely (Reimbursing Employers)</td>
<td></td>
</tr>
<tr>
<td>(F) Turnover Ratio - The ratio of receivables liquidated and declared uncollectible and/or doubtful to taxes due (Reimbursing Employers)</td>
<td></td>
</tr>
<tr>
<td>(G) Receivables declared uncollectible and/or doubtful - The percent of tax due declared uncollectible and/or doubtful (Reimbursing Employers)</td>
<td></td>
</tr>
<tr>
<td>(H) Accounts receivable at the end of the report period as a percent of tax due (Reimbursing Employers)</td>
<td></td>
</tr>
</tbody>
</table>
Twelve data elements are reported and used by TPS for each quarter in order to calculate the computed measures for the Collections function.

For Contributory Employers

CO 1  Amount determined receivable
CO 2  Dollar amount deposited, net UI Contributions
CO 3  Amount of receivables liquidated
CO 4  Amount of receivables declared uncollectible
CO 5  Amount of receivables ruled doubtful
CO 6  Amount of receivable balance

For Reimbursing Employers

CO 7  Amount determined receivable
CO 8  Dollar amount deposited, net UI Contributions
CO 9  Amount of receivables liquidated
CO 10 Amount of receivables declared uncollectible
CO 11 Amount of receivables ruled doubtful
CO 12 Amount of receivable balance

All of these data elements should be available in State systems as a normal by-product of the quarterly accounting process.
A. **Amounts Paid Timely - Contributory Employers**

The percent of amounts due that were paid timely.

This measure is derived from the following formula:

\[
1 - \frac{\text{Amounts Determined Receivable for four (581) report quarters.}}{\text{Tax Due: Annual dollar Amounts Deposited plus Amounts Determined Receivable minus Receivables Liquidated.}}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as [Q(x)], data from previous quarters are needed. The chart below illustrates the data required. This measure requires **FOUR (4) quarters**.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amounts Determined Receivable</td>
<td>ETA 581 # 22</td>
<td>CO 1</td>
<td>x x x x</td>
</tr>
<tr>
<td>Annual Amounts Deposited</td>
<td>ETA 2112 # 11</td>
<td>CO 2</td>
<td>x x x x</td>
</tr>
<tr>
<td>Receivables Liquidated</td>
<td>ETA 581 # 23</td>
<td>CO 3</td>
<td>x x x x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters**

Q(x) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

- Q(x) ---> 9102
- Q(x-1) ---> 9101
- Q(x-2) ---> 9004
- Q(x-3) ---> 9003

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{\text{(Sum of CO 1) for Q(x-3), Q(x-2), Q(x-1), Qx}}{\text{[1 - (--------------------------) * 100 = mmm.m%}}} \times \frac{\text{(Sum of CO 2 + CO 1 - CO 3) for Q(x-3), Q(x-2), Q(x-1), Qx}}{}}
\]
B. Turnover Ratio - Contributory Employers

Ratio of receivables liquidated and declared uncollectible and/or doubtful to tax due.

This measure is derived from the following formula:

\[
\frac{\text{Receivables Liquidated} + \text{Receivables Declared Uncollectible} + \text{Receivables Ruled Doubtful for four (581) report quarters}}{\text{Tax Due: Annual dollar Amounts Deposited plus Amounts Determined Receivable minus Receivables Liquidated.}}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as [Q(x)], data from previous quarters are needed. The chart below illustrates the data required. This measure requires **FOUR (4) quarters**.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receivables Declared Uncollectible</td>
<td>ETA 581 # 24</td>
<td>CO 4</td>
<td>x x x x</td>
</tr>
<tr>
<td>Receivables Ruled Doubtful</td>
<td>ETA 581 # 25</td>
<td>CO 5</td>
<td>x x x x</td>
</tr>
<tr>
<td>Amounts Determined Receivable</td>
<td>ETA 581 # 22</td>
<td>CO 1</td>
<td>x x x x</td>
</tr>
<tr>
<td>Annual Amounts Deposited</td>
<td>ETA 2112 # 11</td>
<td>CO 2</td>
<td>x x x x</td>
</tr>
<tr>
<td>Receivables Liquidated</td>
<td>ETA 581 # 23</td>
<td>CO 3</td>
<td>x x x x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters**

Q(x) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\[
\begin{align*}
Q(x) &\rightarrow 9102 \\
Q(x-1) &\rightarrow 9101 \\
Q(x-2) &\rightarrow 9004 \\
Q(x-3) &\rightarrow 9003
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{\text{(Sum of CO 3 + CO 4 + CO 5) for Q(x-3), Q(x-2), Q(x-1), Qx}}{\text{(Sum of CO 2 + CO 1 - CO 3) for Q(x-3), Q(x-2), Q(x-1), Qx}} \times 100 = \text{mmm.m%}
\]
C. Receivables Declared Uncollectible and/or Doubtful - Contributory Employers

Percent of tax due declared uncollectible and or doubtful.

This measure is derived from the following formula:

\[
\frac{(\text{Sum of CO 4 + CO 5})}{(\text{Sum of CO 2 + CO 1 - CO 3})} \times 100 = mmm\text{.m}\% 
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \(Q(x)\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires FOUR (4) quarters.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receivables Declared Uncollectible</td>
<td>ETA 581 # 24</td>
<td>CO 4</td>
<td>x x x x</td>
</tr>
<tr>
<td>Receivables Ruled Doubtful</td>
<td>ETA 581 # 25</td>
<td>CO 5</td>
<td>x x x x</td>
</tr>
<tr>
<td>Amounts Determined Receivable</td>
<td>ETA 581 # 22</td>
<td>CO 1</td>
<td>x x x x</td>
</tr>
<tr>
<td>Annual Amounts Deposited</td>
<td>ETA 2112 # 11</td>
<td>CO 2</td>
<td>x x x x</td>
</tr>
<tr>
<td>Receivables Liquidated</td>
<td>ETA 581 # 23</td>
<td>CO 3</td>
<td>x x x x</td>
</tr>
</tbody>
</table>

Example of Report Quarters

\(Q(x)\) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

- \(Q(x)\) --> 9102
- \(Q(x-1)\) --> 9101
- \(Q(x-2)\) --> 9004
- \(Q(x-3)\) --> 9003

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{\text{Receivables Declared Uncollectible and/or Doubtful for four (581) report quarters.}}{\text{Tax Due: Annual dollar Amounts Deposited plus Amounts Determined Receivable minus Receivables Liquidated.}} \times 100 = mmm\text{.m}\% 
\]

(Sum of CO 4 + CO 5) for Q(x-3), Q(x-2), Q(x-1), Qx

(Sum of CO 2 + CO 1 - CO 3) for Q(x-3), Q(x-2), Q(x-1), Qx
D. **Unpaid Contributions** - Contributory Employers

The percent of accounts receivable at end of report period to tax due.

This measure is derived from the following formula:

\[
\text{Receivable Balance at end of (581) report quarter.}
\]

\[
\frac{\text{Tax Due:} \quad \text{Annual dollar Amounts Deposited plus Amounts Determined Receivable minus Receivables Liquidated.}}{\text{Receivable Balance at end of 581 report quarter.}} \times 100 = \text{mmm.m}%
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **FOUR (4) quarters**.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receivable Balance</td>
<td>ETA 581 # 26</td>
<td>CO 6</td>
<td>x</td>
</tr>
<tr>
<td>Amounts Determined Receivable</td>
<td>ETA 581 # 22</td>
<td>CO 1</td>
<td>x x x x</td>
</tr>
<tr>
<td>Annual Amounts Deposited</td>
<td>ETA 2112 # 11</td>
<td>CO 2</td>
<td>x x x x</td>
</tr>
<tr>
<td>Receivables Liquidated</td>
<td>ETA 581 # 23</td>
<td>CO 3</td>
<td>x x x x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters**

\(Q(x)\) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

- \(Q(x)\) \(\rightarrow\) 9102
- \(Q(x-1)\) \(\rightarrow\) 9101
- \(Q(x-2)\) \(\rightarrow\) 9004
- \(Q(x-3)\) \(\rightarrow\) 9003

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\text{CO 6 for } Q(x) = \frac{(\text{Sum of CO 2 + CO 1 - CO 3}) \times 100}{\text{mmm.m}}
\]

\(\text{Q(x), Q(x-1), Q(x-2), Q(x-3)}\)
COMPUTED MEASURES SPECIFICATIONS

E. **Amounts Paid Timely - Reimbursing Employers**

The percent of amounts due that were paid timely.

This measure is derived from the following formula:

\[
\text{Tax Due: } \frac{\text{Amounts Determined Receivable for four (581) report quarters.}}{\text{Tax Due: Annual dollar Amounts Deposited plus Amounts Determined Receivable minus Receivables Liquidated.}}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **FOUR (4) quarters**.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amounts Determined Receivable</td>
<td>ETA 581 # 34</td>
<td>CO 7</td>
<td>x x x x</td>
</tr>
<tr>
<td>Annual Amounts Deposited</td>
<td>ETA 2112 # 18,19,20</td>
<td>CO 8</td>
<td>x x x x</td>
</tr>
<tr>
<td>Receivables Liquidated</td>
<td>ETA 581 # 35</td>
<td>CO 9</td>
<td>x x x x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters**

\(Q(x)\) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\[
\begin{align*}
Q(x) & \rightarrow 9102 \\
Q(x-1) & \rightarrow 9101 \\
Q(x-2) & \rightarrow 9004 \\
Q(x-3) & \rightarrow 9003
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\left( \frac{\text{Sum of CO 7) for Q(x-3), Q(x-2), Q(x-1), Qx}}{\text{Sum of CO 8 + CO 7 - CO 9 for Q(x-3), Q(x-2), Q(x-1), Qx}} \right) * 100 = \text{mmm.m%}
\]
F. **Turnover Ratio - Reimbursing Employers**

Ratio of receivables liquidated and declared uncollectible and/or doubtful to tax due.

This measure is derived from the following formula:

\[
\frac{\text{Receivables Liquidated} + \text{Receivables Declared Uncollectible} + \text{Receivables Ruled Doubtful}}{\text{Tax Due}} \times \frac{100}{4} \text{ for four quarters.}
\]

**Tax Due:** Annual dollar Amounts Deposited plus Amounts Determined Receivable minus Receivables Liquidated.

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **FOUR (4) quarters**.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receivables Declared Uncollectible</td>
<td>ETA 581 #36</td>
<td>CO 10 x x x x</td>
<td></td>
</tr>
<tr>
<td>Receivables Ruled Doubtful</td>
<td>ETA 581 #37</td>
<td>CO 11 x x x x</td>
<td></td>
</tr>
<tr>
<td>Amounts Determined Receivable</td>
<td>ETA 581 #34</td>
<td>CO 7 x x x x</td>
<td></td>
</tr>
<tr>
<td>Annual Amounts Deposited</td>
<td>ETA 2112 #18,19,20</td>
<td>CO 8 x x x x</td>
<td></td>
</tr>
<tr>
<td>Receivables Liquidated</td>
<td>ETA 581 #35</td>
<td>CO 9 x x x x</td>
<td></td>
</tr>
</tbody>
</table>

**Example of Report Quarters**

\(Q(x)\) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\[
Q(x) \rightarrow 9102
\]
\[
Q(x-1) \rightarrow 9101
\]
\[
Q(x-2) \rightarrow 9004
\]
\[
Q(x-3) \rightarrow 9003
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{(\text{Sum of CO 9} + \text{CO 10} + \text{CO 11}) \text{ for } Q(x-3), Q(x-2), Q(x-1), Qx}{100} = \text{mmm.m%}
\]

\[
\frac{(\text{Sum of CO 8} + \text{CO 7} - \text{CO 9}) \text{ for } Q(x-3), Q(x-2), Q(x-1), Qx}{100} = \text{mmm.m%}
\]
G. Receivables Declared Uncollectible and/or Doubtful - Reimbursing Employers

Percent of tax due declared uncollectible and or doubtful.

This measure is derived from the following formula:

\[
\text{Receivables Declared Uncollectible and/or Doubtful for four (581) report quarters.}
\]

\[
\text{Tax Due: Annual dollar Amounts Deposited plus Amounts Determined Receivable minus Receivables Liquidated.}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \(Q(x)\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **FOUR (4) quarters**.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receivables Declared Uncollectible</td>
<td>ETA 581 # 36</td>
<td>CO 10</td>
<td>x x x x</td>
</tr>
<tr>
<td>Receivables Ruled Doubtful</td>
<td>ETA 581 # 37</td>
<td>CO 11</td>
<td>x x x x</td>
</tr>
<tr>
<td>Amounts Determined Receivable</td>
<td>ETA 581 # 34</td>
<td>CO 7</td>
<td>x x x x</td>
</tr>
<tr>
<td>Annual Amounts Deposited</td>
<td>ETA 2112 # 18,19,20</td>
<td>CO 8</td>
<td>x x x x</td>
</tr>
<tr>
<td>Receivables Liquidated</td>
<td>ETA 581 # 35</td>
<td>CO 9</td>
<td>x x x x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters**

\(Q(x)\) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

- \(Q(x)\) ---\(\rightarrow\) 9102
- \(Q(x-1)\) ---\(\rightarrow\) 9101
- \(Q(x-2)\) ---\(\rightarrow\) 9004
- \(Q(x-3)\) ---\(\rightarrow\) 9003

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\text{(Sum of CO 10 + CO 11) for Q(x-3), Q(x-2), Q(x-1), Qx} \\
\text{----------------------------------------------------------------------------------------------} \\
\text{* 100 = mmm.m%} \\
\text{(Sum of CO 8 + CO 7 - CO 9) for Q(x-3), Q(x-2), Q(x-1), Qx} \\
\]
H. Unpaid Reimbursements - Reimbursing Employers

The percent of accounts receivable at end of report period to tax due.

This measure is derived from the following formula:

\[
\text{Receivable Balance at end of (581) report quarter.}
\]

\[
\text{Tax Due: Annual dollar Amounts Deposited plus Amounts Determined Receivable minus Receivables Liquidated.}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \(Q(x)\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires FOUR (4) quarters.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Q(x)</td>
</tr>
<tr>
<td>Receivable Balance</td>
<td>ETA 581 # 38</td>
<td>CO 12</td>
<td>x</td>
</tr>
<tr>
<td>Amounts Determined Receivable</td>
<td>ETA 581 # 34</td>
<td>CO 7</td>
<td>x</td>
</tr>
<tr>
<td>Annual Amounts Deposited</td>
<td>ETA 2112 # 18,19,20</td>
<td>CO 8</td>
<td>x</td>
</tr>
<tr>
<td>Receivables Liquidated</td>
<td>ETA 581 # 35</td>
<td>CO 9</td>
<td>x</td>
</tr>
</tbody>
</table>

Example of Report Quarters

\(Q(x)\) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\[
\begin{align*}
Q(x) & \rightarrow 9102 \\
Q(x-1) & \rightarrow 9101 \\
Q(x-2) & \rightarrow 9004 \\
Q(x-3) & \rightarrow 9003 \\
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\frac{(\text{Sum of CO 8 + CO 7 - CO 9}) \times 100}{Q(x-3), Q(x-2), Q(x-1), Qx} = \text{mmm.m}%
\]
FIELD AUDIT
There are 3 computed measures for the Field Audit function.

(A) Percent of change in total wages resulting from audit

(B) Percent of contributory employers which are audited

(C) Percent of total wages audited

Eight data elements are reported and used by TPS for each quarter in order to calculate the computed measures for the Field Audit function. With the exception of (2) and (8) below, these are sums of findings reported for individual audits.

FA 1 Total number of completed audits of contributory employers
FA 2 Total number of contributory employers
FA 3 Total wages identified by audit as over-reported
FA 4 Total wages identified by audit as under-reported
FA 5 Total wages audited - Pre-Audit
FA 6 Total wages audited - Post-Audit
FA 7 Total number of quarters audited
FA 8 Total wages paid by all contributory employers
## Tax Performance System

### Computed Measures Specifications

<table>
<thead>
<tr>
<th>Computed Measures</th>
<th>Field Audit</th>
</tr>
</thead>
</table>

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B - 40  
R 12/00
There are a number of issues to which States should pay attention when reviewing computed measures for Field Audit.

- In what circumstances does the State count audits of less than 4 quarters?
- What is done with audits of non-registered employers that are determined by the audit to be liable?
- What is the definition of a completed audit?

Data elements in field audits are generally counts or sums of findings from individual audits.

The primary concern is whether the data element counted is appropriately defined given the TPS specifications.
A. **Total Wage Change**

The percent of change in total wages resulting from audit for a given calendar year.

This measure is derived from the following formula:

\[
\frac{\text{Total wages over-reported} + \text{total wages under-reported}}{\text{Total wages audited - Pre-Audit}} \times 100 = \text{m} \text{m} \text{m\%}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires \(\text{FOUR} \ (4) \ \text{quarters}\).

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports,</th>
<th>Q (x)</th>
<th>Q (x-1)</th>
<th>Q (x-2)</th>
<th>Q (x-3)</th>
<th>Q (x-4)</th>
<th>Q (x-5)</th>
<th>Q (x-6)</th>
<th>Q (x-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Wages Over-reported</td>
<td>ETA 581 # 55</td>
<td>FA 3</td>
<td>x x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Wages Under-reported</td>
<td>ETA 581 # 52</td>
<td>FA 4</td>
<td>x x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Wages Audited - Pre-Audit</td>
<td>ETA 581 # 48</td>
<td>FA 5</td>
<td>x x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example of Report Quarters:**

\[
\text{Q(x) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04}
\]

\[
\begin{align*}
\text{Q(x)} & \quad \rightarrow \quad 9102 \\
\text{Q(x-1)} & \quad \rightarrow \quad 9101 \\
\text{Q(x-2)} & \quad \rightarrow \quad 9004 \\
\text{Q(x-3)} & \quad \rightarrow \quad 9003
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\begin{align*}
\text{(Sum of FA 3 + FA 4) for Q(x-3), Q(x-2), Q(x-1), Qx} \\
\text{--------------------} & \quad \times 100 = \text{mmm.m}\% \\
\text{(Sum of FA 5) for Q(x-3), Q(x-2), Q(x-1), Qx}
\end{align*}
\]
B. Employers Audited

The percent of contributory employers which are audited for four (581) report quarters under review.

This measure is derived from the following formula:

\[
\text{Number of Audits completed during four (581) report quarters} \div \text{Number of Contributory Employers at the end of the (581) report quarter two quarters prior to the four quarters in which the audits were completed}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **SIX (6) quarters**.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Audits Completed during four quarters</td>
<td>ETA 581 # 46</td>
<td>FA 1</td>
<td>Q (x) x x x Q (x-4)</td>
</tr>
<tr>
<td>Number of Contributory Employers end of quarter prior to four quarters in which audits were completed</td>
<td>ETA 581 # 1</td>
<td>FA 2</td>
<td>Q (x) x</td>
</tr>
</tbody>
</table>

Example of Report Quarters:

\[Q(x) \text{ is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04}\]

\[
\begin{align*}
Q(x) & \rightarrow 9102 & Q(x-4) & \rightarrow 9002 \\
Q(x-1) & \rightarrow 9101 & Q(x-5) & \rightarrow 9001 \\
Q(x-2) & \rightarrow 9004 & Q(x-6) & \rightarrow 8904 \\
Q(x-3) & \rightarrow 9003 & Q(x-7) & \rightarrow 8903
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[(\text{Sum of FA 1 for } Q(x-3), Q(x-2), Q(x-1), Qx) \div \text{FA 2 for } Q(x-5) \times 100 = \text{mmm.m}\%\]
C. **Wages Audited**

The annualized percent of total wages audited for four (581) report quarters under review.

This measure is derived from the following formula:

\[
\frac{(\text{Total Wages Audited - Post-Audit for four (581) report quarters})}{\text{Total Quarters Audited for four (581) report quarters}} \times \frac{\text{Total number of Audits for four (581) report quarters}}{4 \text{ quarters}} \times \text{Total wages of contributory employers for prior four quarters}
\]

The following chart describes each data element used in the calculation of the measures and indicates the relationship to existing federally required reports. The indicator reports can be generated for any time period. To generate an indicator report as of a given quarter, denoted below as \([Q(x)]\), data from previous quarters are needed. The chart below illustrates the data required. This measure requires **EIGHT (8) quarters**.

<table>
<thead>
<tr>
<th>Description</th>
<th>Report and Item #</th>
<th>EDP Element Name</th>
<th>Quarters required to process Reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Wages Audited - Post Audit</td>
<td>ETA 581 # 49</td>
<td>FA 6</td>
<td>Q (x) x x x x</td>
</tr>
<tr>
<td>Total Quarters Audited</td>
<td>ETA 581 # 47</td>
<td>FA 7</td>
<td>Q (x) x x x x</td>
</tr>
<tr>
<td>Total Number Audits Completed</td>
<td>ETA 581 # 46</td>
<td>FA 1</td>
<td>Q (x) x x x x</td>
</tr>
<tr>
<td>Total Wages of Contributory Employers prior four quarters</td>
<td>ES 202</td>
<td>FA 8</td>
<td>Q (x-7) x x x x</td>
</tr>
</tbody>
</table>

**Example of Report Quarters:**

Q(x) is in the format of YYQQ, where YY is a 2 digit year and QQ is a quarter between 01 - 04

\[
\begin{align*}
Q(x) & \rightarrow 9102 \\
Q(x-1) & \rightarrow 9101 \\
Q(x-2) & \rightarrow 9004 \\
Q(x-3) & \rightarrow 9003
\end{align*}
\]

Below is a representation of the formula that is used in computing the measures in the Computed Measures software.

\[
\sum \text{FA 6 for } Q(x-3), Q(x-2), Q(x-1), Qx \times \sum \text{FA 1 for } Q(x-3), Q(x-2), Q(x-1), Qx
\]

\[
\frac{\text{Total Wages Audited - Post-Audit for four (581) report quarters}}{\text{Total Quarters Audited for four (581) report quarters}} \times \frac{\text{Total number of Audits for four (581) report quarters}}{4 \text{ quarters}} \times \text{Total wages of contributory employers for prior four quarters} \times 4 \times 100 = \text{mmm.m}\%
\]

(Sum FA 6) for Q(x-3), Q(x-2), Q(x-1), Qx * (Sum FA 1) for Q(x-3), Q(x-2), Q(x-1), Qx

(Sum FA 7) for Q(x-3), Q(x-2), Q(x-1), Qx * (Sum FA 8) for Q(x-7), Q(x-6), Q(x-5), Q(x-4)
## COMPUTED MEASURES SPECIFICATIONS

<table>
<thead>
<tr>
<th>COMPUTED MEASURES</th>
<th>FIELD AUDIT</th>
</tr>
</thead>
</table>

## VERIFICATION
VERIFYING DATA

It is important to know whether the computed measures mean what TPS intends. TPS employs 21 Computed Measures. These are calculated from 34 TPS Data Items, which are reported on Federally required reports. To produce the 34 TPS data items, each SESA compiles, adds together, or otherwise manipulates a variety of SESA Data Items from its own data system. If the TPS Computed Measures are to mean what TPS intends, all the links in this chain must be forged correctly, including:

1) the definitions of the SESA items must be consistent with the TPS data items;

2) SESA staff must apply the definitions correctly;

3) the compilations and computations applied to the SESA items to create the TPS items must be done correctly; and finally

4) the computations applied to convert the TPS items into TPS Computed Measures must be done correctly.

A complete verification of all these elements is extremely time-consuming, particularly steps 2) and 3).

The steps described in these instructions are only intended to determine whether the correct operational definition of computed measures was used. Thus it is limited to two issues: (1) were the data items used in the calculations defined correctly, and (2) were the calculations performed on those data items consistent with the TPS definitions for computed measures? Therefore, TPS staff are not expected to:

- examine computer software code,
- test computer programs, or
- reconcile individual records to the aggregate data elements.
The TPS staff will need to review operational definitions for each of the TPS data elements entered on the TPS data system. This means reviewing definitions for all component SESA elements. A total of Thirty Four TPS data elements are reported quarterly.

- This appendix refers to the ETA 581 Report revision dated September 1994 - all data items referenced refer to this version.

- These data elements are identical to existing elements in Federal reports including the ETA 581, ETA 2112, and ES 202. (Example: Number of field audits completed)

- Some appear similar to reporting items previously used but have been redefined slightly for TPS. (Example: Percentage of status determinations of newly established accounts made within 180 days of the last day of the quarter in which the business became liable. -- The previous definition in the ETA 581 report defines the time period as 180 days from the date the employer became subject.)

- Some items were not previously reported. (Example: The number of employers whose report delinquencies were resolved within 180 days.)

It may take longer to check newer items since they will not have been reviewed before, but all items needed to compute the Thirty Four data elements need to be examined by the TPS reviewer.

To be sure the data reported is correct the TPS staff will probably need to (1) speak with data processing staff, (2) meet with operational staff for the tax function, (3) review documents such as definition sections of data processing guides, forms preparation manuals, and definition sections of the UI Tax manuals and (4) meet with the SESA staff responsible for gathering and completing the required reports.
SESAs will need to go through three steps to ensure the proper calculation of the TPS computed measures.

In **Step 1** the SESA will identify items from its (automated or manual) records that are needed to calculate the data elements it will report for TPS. These instructions use the term *SESA data items* to refer to data from SESA records.

In **Step 2** the SESA will use the **SESA data items** from its records to calculate the TPS data elements. These *TPS data elements* are the Thirty Four pieces of information listed in this Appendix. The SESA will add, compare or count the data items from its records to calculate the TPS data elements.

In **Step 3** the SESA will use the TPS data elements it has calculated in the TPS automated system, which will then automatically calculate the computed measures.

The example on the next page follows these steps for one data element.
EXAMPLE

COMPUTATION OF THE NUMBER OF STATUS DETERMINATIONS MADE WITHIN 90 DAYS FOR NEWLY LIABLE ACCOUNTS (ITEM SD #2 - APPENDIX B)

Step 1
The SESA identifies the data items from its records that will be used to calculate the TPS data elements. Items that might be used in this example are:
- The date the business became liable
- A code identifying the type of determination (new liability/successor)
- The date the determination was made

Step 2
Once the relevant data items are identified, a series of computations are performed on the SESA data items to produce the TPS data elements. In this example, the logic of the calculation might be as follows:
- Check the employer (or status activity) record. If the employer is newly liable and the determination was made during the report quarter, continue.
- Determine the end date for the quarter the employer first became liable.
- Compute the number of days between that quarter ending date and the date of the status determination. Note whether the difference is less than or equal to 90 days.
- Count the number of status determinations for which the difference is less than or equal to 90 days. This count becomes the value for field SD #2.

Step 3
Having computed the TPS data element, the SESA enters it in the UIRR system. The automated TPS data system uses this value, along with other data elements, to automatically calculate the computed measure for the percent of status determinations made within 90 days of the end of the quarter in which the employer became liable.
The verification process will vary depending on the data element being reviewed, agency procedures, and the judgement of the TPS reviewer. A typical review might include the following (start with the TPS data element and trace its definition/calculation back to the original data items from SESA records):

1) The objective for the reviewer is to understand exactly how each element can be computed in order to determine whether the calculations can be done correctly. The reviewer might begin by discussing the TPS computed measures with the data processing staff to ask how the TPS data elements should be calculated. The TPS reviewer would not attempt to examine computer programs, but would simply ask what rules will be used for the calculation.

Suppose the TPS data element was the one from our earlier example, the number of status determinations made within 90 days. The EDP person might explain that "data field 25" in the State's employer data record was the date of liability and "field 47" was the date the determination was made. Checking the computer program the EDP person might be able to explain that they identified the quarter ending date following the liability date ("field 25") and counted all cases where the difference between the end of the quarter and "field 47" was less than 90 days after the end of the quarter. (Note that if the calculation counted all determinations made within 90 days of the liability date the reviewer would report that the calculation had been done incorrectly.) If the calculations were not done by computer, the reviewer would probably begin the review with the person who did the calculations.
2) The TPS reviewer could then ask what SESA "data fields 25 and 47" were. In some States the EDP staff might be able to point out a definition of these elements in a data entry guide. In other instances they might say something like "data field 25" is taken from the line 3 on form "UI-4, the Employer Registration Form".

3) In the latter case the TPS reviewers would go back to the unit responsible for checking and entering form "UI-4". By reviewing instruction manuals and talking with unit staff they would identify the definitions used to complete line 3. They would check, for example, to make sure the computations had used the date of liability, not the date the "UI-4" form was completed.

4) Having gone through these straightforward steps, the TPS reviewer would then be able to understand exactly how the data element was created and could check to see whether the definition was consistent with TPS instructions and definitions.

**SUMMARY**

Review the computed measure data elements for each tax function to determine whether the SESA definitions are consistent with TPS requirements.

The following should guide you in determining the accuracy of the data gathered for the TPS measures:

1. **From what type of records were the data elements obtained?** Were all records automated? Were manual counts required? Was data available in existing reports or accounting records?
2. **What data items from SESA records were used to determine each TPS data element?** Identify the individual pieces of data from your records that are used to calculate the data elements reported to TPS.

   - For some functions examples were provided of the types of information that might be used in a calculation. This information is provided to guide reviewers to the correct data items in their State. The list is not intended to be comprehensive.

   - Ask that specific SESA data fields will be used. The purpose of this question is merely to facilitate discussion by noting what a data element is called in the State. The field name for automated records may be a mnemonic like LDATE-SUB1. For manual records it may be a position on a report or form such as, the column total for a processing log.

3. **What is the definition for each of the SESA data items used?** In response to this question determine the definition the State uses for each data item. (This Appendix sometimes lists special issues to attend to when reviewing the definitions used.)

4. **What calculations are done on the SESA data items to create the TPS data elements?** The data items need to be counted, combined or compared to calculate the TPS data elements. Examine the calculation steps to make sure that the correct items are counted, that date comparisons are done correctly, etc.

5. **Are the reported TPS data elements correctly defined?** Given the answers to the prior questions verify whether each TPS data element is defined and computed according to TPS instructions.
TECHNICAL ASSISTANCE
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TECHNICAL ASSISTANCE

The National Office is available to assist SESAs regarding the proper definitions and other questions on COMPUTED MEASURES.

A toll free Hotline Number is available for Data Processing questions. The number in Washington is:

1-800-473-0188

You MUST inform the Hotline Operator that your call pertains to TAX PERFORMANCE SYSTEM (TPS). The Hotline staff has been instructed to forward your call to a member of the TPS WORKGROUP.

Calls can also be made to the telephone number within the TPS WORKGROUP at 202-693-3032 (this is not a toll free number).