

OBJECTIVE: To document the audit sampling methods and considerations for both statistical and non-statistical sampling used in the conduct of the audit in accordance with SAS 39.

CONSIDERATIONS: Generally accepted auditing standards (SAS 39, AU 350.01) define audit sampling as:

...the application of an audit procedure to less than 100 percent of the items within an account balance or transaction class for the purpose of evaluating some characteristic of the balance or class.

What Audit Sampling IS: A test that involves application of procedures to less than 100 percent of the population for the purpose of projecting the results to the entire account balance or transaction class. Examples would include:

- Test of attributes on a sample of items for the purpose of concluding on the effectiveness of internal controls through projecting the results to all items
- Test of compliance on a sample of items for the purpose of concluding on compliance with laws, regulations or contract requirements through projecting results to all items
- Test of account balance or transaction class details on a sample of items for the purpose of projecting the results to the entire account balance or transaction class to conclude on the fair presentation of the balance or class

What Audit Sampling IS NOT: A test that involves application of procedures to less than 100 percent of the population but that DOES NOT involve projecting the results to the entire account balance or transaction class. Examples would include:

- Test or review of a few transactions to gain an understanding of the nature of the entity's operations or processes, but not to form a conclusion about effectiveness
- Test of a few transactions to clarify the auditor's understanding of the design of the entity's internal controls, but not to conclude on effectiveness
- Test of details limited to a specific group of transactions or items within an account balance or transaction class that have a distinct characteristic, such as all items over ISI, where results are not projected to the untested transactions or remaining balance of account or class

TRANSACTION CLASS OR ACCOUNT BALANCE: **Utility Billing**

WORK PAPER REFERENCE OF TESTING: **F-2**

TYPE AND OBJECTIVE OF SAMPLING TEST:

Test of control attributes for concluding on control effectiveness _____

Test of compliance for concluding on the level of compliance _____

Substantive test of details for concluding on fair presentation X

DOCUMENTATION OF SAMPLING PLAN

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| <p>Definition of the Population to be Tested</p> | <p>The population is either all the items that make up the account balance or transaction class, or the portion of the balance or class being tested. A portion of the account balance or class is tested through sampling when other items in the population have been separately tested.</p> | <p>All customer account billings (entire population).</p> |
| <p>Sampling Unit</p> | <p>The sampling units are the individual items that will be subject to testing, such as customer account balances to be confirmed, invoices, payroll, or utility bills.</p> | <p>Customer utility bill per billing registers.</p> |
| <p>Deviation, Misstatement, or Noncompliance Definition</p> | <p>Define what constitutes a deviation, instance of noncompliance or a misstatement. Only identify controls, noncompliance or misstatement important to achieving objectives.</p> | <p>Incorrect rate, consumption, calculation or balance forward.</p> |
| <p>Tolerable Rate Risk of Deviations or Noncompliance Or Tolerable Misstatement</p> | <p>Tolerable rate risk is the level of risk of deviations, noncompliance or misstatement considered acceptable (tolerable) while still concluding positively as to the audit objective.</p> <p>For control and compliance tests, a Low tolerable rate risk is acceptable when experience indicates a low level of errors or fraud is expected, or when a moderate control risk is desired (i.e. inherent risk is other than High). A High tolerable rate risk is acceptable when experience indicates a higher level of errors or fraud is expected, or when a low control risk is desired (i.e. inherent risk is High).</p> <p>For substantive tests, use the lowest monetary, tolerable misstatement acceptable for the opinion units involved.</p> | <p>For control and/or compliance tests:</p> <p>Low _____</p> <p>High _____</p> <p>For substantive tests:</p> <p>\$ <u>23,000</u></p> <p>Tolerable Misstatement</p> |

| | | |
|--|--|---|
| <p>Sampling Risk / Other Procedures Risk / Risk of Incorrect Acceptance or Assessment</p> | <p>In control tests, this risk is the allowable risk of assessing control risk too low. In substantive tests, this risk is the uncertainty resulting from not testing 100 percent of the population.</p> <p>If sampling is the only audit procedure to achieve the audit objective, consider sampling risk to be High. If other effective audit procedures will be applied to balance or class, then consider sampling risk to be Low.</p> | <p>High _____</p> <p>Low <u>X</u></p> |
| <p>Expected Deviations, Misstatement or Noncompliance</p> | <p>The expected rate is the auditor's best judgment, based on past experience or current understanding, as to the anticipated number or amount of deviations or misstatements from the sample. If the expected rate is more than 1/3rd the tolerable rate, sampling is likely not going to be an efficient audit procedure.</p> | <p>1/3rd of tolerable = <u>\$7,700</u></p> <p>Expected rate = <u>\$2,000</u></p> |
| <p>Sample Size Computation</p> | <p>For control and compliance testing see chart below.</p> <p>For substantive testing, use the following formula:</p> <p>(Dollar Value of Remaining Population / Tolerable Misstatement) x Risk Factor from Chart Below</p> <p>Note: If calculated sample size is too high, consider reducing the remaining population by stratifying it and separately testing individually large amounts.</p> | <p>$(825,000 / 23,000) \times 1.9$</p> <p>Sample Size <u>68</u></p> |
| <p>Sample Selection Method</p> | <p>Description of how sample items were selected.</p> | <p>Haphazard <u>X</u></p> <p>Random _____</p> <p>Systematic _____</p> |

MODEL FOR CONTROL & COMPLIANCE TESTS SAMPLE SIZE DETERMINATION

| Tolerable Rate of Deviations/Noncompliance | Risk of Assessing Control Risk Too Low | Sample Size |
|--|--|-------------|
| H | L | 25 |
| H | H | 40 |
| L | L | 40 |
| L | H | 60 |

RISK FACTORS FOR SUBSTANTIVE TEST SAMPLE SIZE DETERMINATION

| Desired Detection Risk | Other Procedures Risk | | |
|------------------------|-----------------------|----------|------------|
| | High | Moderate | Low |
| Low | 3.0 | 2.3 | 1.9 |
| Moderate | 2.3 | 1.6 | 1.2 |
| High | 1.9 | 1.2 | 0.9 |

DOCUMENTATION OF SAMPLING RESULTS EVALUATION

| | |
|--|--|
| Tolerable Rate of Deviations, Noncompliance or Misstatement (Use 3% of Sample Size, or \$ Amount of Tolerable Misstatement) | \$23,000 |
| Number of Deviations, Instances of Noncompliance or Amount of Misstatement Detected from Sample | \$210 |
| Likely Causes for Deviations, Noncompliance or Misstatements | Incorrect sewer rate component in system. |
| Projection of Deviations, Noncompliance or Misstatements to Entire Population | $\text{(Sample overstatement / sample population revenue)} \times \text{Population amount}$ $(210/18,000) \times 284,000 = \$3,313$ |
| Conclusion | Sewer revenue appears overstatement by a projected amount of \$3,313. Projected misstatement is below tolerable misstatement. Include as an audit difference for cumulative evaluation with other differences. |