

DATA VALIDATION CHECKLIST FOR LIQUID SCINTILLATION

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Sample Delivery Group #: _____

Matrix: _____

Laboratory: _____

Project ID: _____

| | Field Sample ID. | Lab Sample ID |
|----|------------------|---------------|
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Instructions: If criteria in this checklist are not met, follow qualification provided in the "Q" column. Sections titled "Raw Data Confirmation" need only be performed if necessary, as determined through the Data Quality Objective (DQO) process. *Qualification may require professional judgment. Data validation qualifiers are defined in Appendix E of procedure EPWSD-QPA-TP-202 and are included as an attachment to this form.*

Validated by: _____

Date: _____

Peer Reviewed by: _____

Date: _____

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1.0 Custody of Samples

| Validation Step | Y | N | NA | Q | |
|------------------------------------------------------------------------------------------|---|---|----|-------|-------|
| | | | | ≥ MDA | < MDA |
| 1. Is raw data present for all requested analyses? | | | | * | * |
| 2. Can the COC sample identification be traced to the actual sample in the data package? | | | | R | R |
| 3. Were the COCs completed with signatures and custody maintained? | | | | R | R |
| Qualified Sample(s) | | | | | |
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| * Qualify only if the deviation indicates an adverse effect on data quality. | | | | | |

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9.0 Sample Data Evaluation

| Validation Step |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Manually recalculate 1 detected and 1 non-detected result from a selected sample in the SDG. Did recalculation confirm reported results? If not, increase the frequency of recalculations until adequate confidence is gained in the reported results. |
| 2. On the sample preparation worksheet were spikes identified (including expiration dates and nominal activities), initial sample aliquot, distillation volume, distillation apparatus ID, and volume counted in the vial. |
| 3. On analytical run log has the following information been provided: <ul style="list-style-type: none">• LSC rack position #• Count time• Detector efficiency• Background counts (cpm)• Sample activity concentration• Sample activity error• Quenching factor |
| Action: Indicate instances of manual calculations not confirming reported results. Where samples have been reanalyzed, and both re-analyses are included in the data package, indicate on the laboratory reporting forms which results are the most reliable. |
| Description of Sample-specific Evaluation Problems: |

| | |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Title: Guidance for Radiochemical Data Verification and Validation | DCN: EPWS-QPA-TP-202 Revision Number: 0 Revision Date:10/31/03 Issue Date: 10/31/03 Page 69 of 69 |
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APPENDIX E - DATA VALIDATION QUALIFIERS

| Qualifier | Stands For | Definition |
|-----------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| B | Blank | The analysis was performed and the analyte was detected above the MDA in the batch blank. |
| H | Holding Time | The sample was not prepared for analysis or analyzed within the specified holding time. |
| J | Approximate | The associated numerical value of an estimated result. |
| R | Rejected | The data has non-correctable problems (quantitative and/or qualitative) and is not usable (or unreliable). |
| U | Undetected | The analysis was performed and the analyte was not detected above the MDA. The associated numerical value is the MDA. |
| UJ | Estimated Non-detect | The analysis was performed and the analyte was not detected above the MDA. The associated numerical value is the MDA and is estimated. |
| * | Professional Judgment | The data is qualified based on the reviewer's professional judgment when after assessing all quality control criteria. |