

Vermont Housing and Conservation Board

Lead Based Paint Hazard Reduction Program

Lead in Dust Wipe Sampling / Quality Control / Spike Sample Submission

To insure the accuracy of results reported by laboratories for leaded dust wipe samples the Vermont Housing and Conservation Board shall implement the following procedures for quality control.

1. The Vermont Housing and Conservation Board shall conduct all dust sampling procedures in accordance with Appendix 13.1 of the HUD Guidelines for Evaluation and Control of Lead Based Paint Hazards in Housing or ASTM ES 30-94.
 - a. All dust samples are to be taken by State of Vermont licensed and certified lead inspectors and or risk assessors or dust clearance technicians.
 - b. Consulting companies utilized by the Vermont Housing and Conservation Board shall be properly licensed and certified for testing and will be supplied with sample media and collection tubes for all samples to be taken.
 - c. Sample media shall be “Cotton Tails” Baby Wash Cloths by Rockline Inc. Collection tubes shall be non-sterilized 50ml centrifuge tubes with caps in place.
 - d. All laboratories selected for submission of samples shall be currently licensed as a lead laboratory for the State of Vermont and shall be active participants in the National Lead Laboratory Accreditation Program (NLLAP), Environmental Lead Proficiency Analytical Testing Program (ELPAT) and shall provide up to date proof of such accreditation.
2. **Preparation of spiked samples.**
 - a. To insure the accuracy of reported results of lead in dust wipe samples, spiked dust wipe samples shall be secured or prepared for submission to laboratories.
 - b. Spiked samples shall be prepared in accordance with Appendix 14.3 of the HUD Guidelines for Evaluation and Control of Lead Based Paint Hazards in Housing.
 - c. Vermont Housing and Conservation Board will supply sample media and centrifuge tubes to the laboratory that prepares samples.
 - d. Sample media for dust wipes shall be “Cotton Tails” Baby Wash Cloths by Rockline Inc.
 - e. The laboratory preparing samples will obtain a standard reference material such as NIST 1759a, NIST 2710, NIST 2581, or similar for use.
 - f. All spiked samples shall have known amounts of NIST SRM carefully weighed to the nearest 0.1 microgram.
 - g. All spiked samples shall have weights of NIST SRM that fall in a range between 20 and 500 micrograms per sample.
 - h. 5% of the total number of spiked samples prepared by the laboratory shall be analyzed prior to shipment.
 - i. Recovery ranges for spiked samples analyzed must fall between the ranges of 90% to 110% or the shipment shall be considered unacceptable for use.
3. **Submission of Spiked Samples**
 - a. Spiked dust samples shall be supplied to all testing consultants with records kept as to which samples are in possession of each consultant.
 - b. Testing Consultants shall be instructed to blindly submit a spiked sample randomly into the sample stream at a rate of 1 spike per 50 samples submitted.

- c. Spiked samples should not be opened or removed from their container, or should the media be handled in any way.
- d. Spiked samples shall be noted on the sample collection form submitted to the Vermont Housing and Conservation Board, but shall be re-labeled as similar to the other samples it is being submitted with and no special notation shall appear on the laboratory chain of custody form.

4. Field Blanks

- a. After sampling is performed in a unit, or at the end of workday, but before decontamination, the testing consultant should prepare field blank samples.
- b. Field blank samples shall be noted on the sample collection form submitted to the Vermont Housing and Conservation Board, but shall be re-labeled as similar to the other samples it is being submitted with and no special notation shall appear on the laboratory chain of custody form.
- c. Field blanks shall be prepared as described in Appendix 13.1 of the HUD Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing.

5. Laboratory Quality Control

- a. Blind Analysis of spiked samples must fall within the recovery range of 80%- 120% of the true value. If the laboratory fails to obtain readings within the recovery range:
 - 1. The laboratory shall review all raw data and documentation for possible causes of error and provide copies of such data and any documented solutions or amendments to the data to the Vermont Housing and Conservation Board.
 - 2. Additional spiked samples will be sent to the lab for immediate analysis.
 - 3. If the additional spiked samples fail, all samples in the sample batch should be considered invalid.
 - 4. A full review of laboratory procedures may be necessary if adequate explanations for the errors cannot be found.
 - 5. Should testing error invalidate any sample batch, additional dust wipe samples shall be collected from all units grouped in the sample batch.
 - 6. After full review of laboratory procedures, if laboratory readings for spiked samples continue to fall outside the recovery range of 80%- 120%, The Vermont Housing and Conservation Board shall terminate any contract with such laboratory in accordance with any termination stipulations outlined the contract.

6. Sampling Quality Control

- a. If testing detects more than 50 micrograms of lead on any field blank, then all samples collected in the sample batch shall be considered invalid due to improper handling methods or contaminated sampling media.
- b. Should sampling error invalidate any sample batch, additional dust wipe samples shall be collected from all units grouped in the sample batch with a different batch of sample media..
- c. The Vermont Housing Conservation Board shall review proper sample handling strategies and decontamination protocol with the testing consultants involved.
- d. Should further field blanks show more than 50 micrograms of lead then all costs of further sampling shall be the responsibility of the testing consultant.
- e. Further lack of performance of proper sample handling by the testing consultant shall be grounds for termination of contract in accordance with stipulations outlined in the contract.