

Region 4
U.S. Environmental Protection Agency
Science and Ecosystem Support Division
Athens, Georgia

GUIDANCE DOCUMENT

Title: **Bulk Sampling for Asbestos**

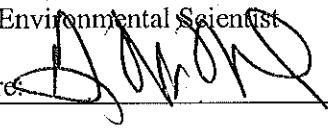
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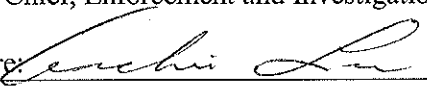
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Revision History

This table shows changes to this controlled document over time. The most recent version is presented in the top row of the table. Previous versions of the document are maintained by the SESD Document Control Coordinator.

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1 General Information

1.1 Purpose

This document describes how SESD conducts bulk sampling for asbestos and asbestiform fibers during investigations. The purpose of these investigations is to determine quantity and type of asbestos that may be present onsite to assist decision makers in recommending a course of remediation, enforcement action, or management control.

1.2 Scope/Application

The procedures contained in this document cover the bulk sampling methodology of collecting bulk asbestos samples from bulk materials by SESD personnel and how asbestos investigations are conducted. This procedure contains direction developed solely to provide internal guidance to SESD employees.

1.3 Documentation/Verification

This procedure was prepared by persons deemed technically competent by SESD management, based on their knowledge, skills and abilities and has been tested in practice and reviewed in print by a subject matter expert. The official copy of this procedure resides on the SESD local area network (LAN). The Document Control Coordinator is responsible for ensuring the most recent version of the procedure is placed on the SESD LAN and for maintaining records of review conducted prior to its issuance.

1.4 Definitions

1.4.1 Bulk Sample

A small portion (usually thumbnail size) of a suspect asbestos-containing building material collected for laboratory analysis to determine asbestos content.

1.5 References

SESD Operating Procedure for Control of Records, SESDPROC-002, Most Recent Version

SESD Operating Procedure for Equipment Inventory and Management, SESDPROC-108, Most Recent Version

SESD Operating Procedure for Logbooks, SESDPROC-010, Most Recent Version

SESD Operating Procedure for Report Preparation and Distribution, SESDPROC-003, Most Recent Version.

SESD Operating Procedure for Sample and Evidence Management, SESDPROC-005, Most Recent Version

US EPA. Safety, Health and Environmental Management Program Procedures and Policy Manual. Region 4 SESD, Athens, GA, Most Recent Version

USEPA, 40 Code of Federal Regulations, Part 763.86, Asbestos - Sampling

1.6 General Precautions

1.6.1 Safety

Asbestos exposure is primarily an inhalation hazard. Respiratory protection should be worn that will meet the protection factor designated in the SESD Safety, Health and Environmental Management Program Manual if there is risk of friable asbestos containing material becoming airborne. Also, if friable asbestos is expected to be disturbed, protective clothing may be necessary to avoid contaminating the worker and the site.

Refer to the SESD Safety, Health and Environmental Management Program Manual and any pertinent site-specific Health and Safety Plans (HASPs) for guidelines on safety precautions. These guidelines, however, should only be used to complement the judgment of an experienced professional. When using this procedure, minimize exposure to potential health hazards through the use of protective clothing, eye wear and gloves. Address chemicals that pose specific toxicity or safety concerns and follow any other relevant requirements, as appropriate.

1.6.2 Procedural Precautions

The sampler should be aware that cross contamination and disruption of asbestos containing material is a potential when conducting bulk asbestos sampling.

The sampler should take the following precautions to avoid cross contamination and disruption of material while sampling.

- The sampling tool must be cleaned with amended water after every sample is collected, or a different clean tool must be used.
- The sampler must avoid touching the material being sampled with his/her hands.
- The area being sampled must be sufficiently wet before collecting the sample.
- The space left after sampling must be enclosed or encapsulated to reduce the chance of airborne exposure.
- The object or material sampled should be minimally disturbed during the sampling process.

2 Quality Control

Since bulk asbestos sampling is conducted using an object to essentially cut out or off a small amount of material for analysis, quality control is limited to controls instituted in the field to reduce the risk of cross contamination. The precautions for reducing the chance of cross contamination are listed above in Section 1.6.2, Procedural Precautions. The main objectives are cleanliness of the sampling tool and adequate wetting of the material to reduce the risk of airborne exposure of asbestos fibers to the sampler or other unused sampling tools or equipment. Quality control steps for the analysis of sample are noted in the contract laboratory's Standard Operating Procedures, and Quality Assurance Plans.

3 Methodology

3.1 Summary of Procedure

SESD uses the method described in 40 CFR Part 763.86, Sampling (for asbestos) for collecting bulk asbestos samples. This method describes sampling for surfacing material, thermal system insulation, and miscellaneous material. 40 CFR Part 763.92(a) (1) and (2), and 40 CFR Part 763, Subpart. E, Appendix C also contain ancillary topics related to project management and planning that are suggested for bulk asbestos sampling.

The sampler or sampling team identifies areas with suspect materials to be sampled for asbestos. Materials that might be suspect for asbestos may include, but are not limited to, thermal system insulation, joint compound, roofing material, gaskets, floor coverings, decorative coatings, and wire insulation. The sampler will use a sampling tool appropriate for each kind of material and collect samples in airtight containers for subsequent laboratory analysis. The sampler should always use a clean tool to collect the sample, and special attention must be paid to avoid creation of airborne asbestos. This method is intended to provide material to a laboratory where the fibers can be quantified and qualitatively identified as a specific type of asbestos or non-asbestiform fiber. Sample location (GPS), study site, sample description, time, date, and project identification number should be recorded in the logbook, and pictures may be taken of the samples.

3.2 Apparatus, Materials, and Chemicals

- Sampling tool (knife, corer, spatula, etc)
- Spray bottle of tap water amended with a few drops of dishwashing liquid
- Disposable low lint wipes for cleaning tools
- 8 ounce glass jars
- Respirator
- Latex gloves
- Disposable Tyvek[®] clothing
- Silicone caulk or appropriate sealant
- Global Positioning System (GPS) receiver
- Camera
- Project logbook

3.3 Personnel Training for Bulk Sampling

Personnel will be trained to collect bulk asbestos samples using the requirements set forth in 40 CFR Part 763.92(a) (1) and (2) and 40 CFR Part. 763, Subpart. E, App. C. The training incorporates many sections of 40 CFR Part 763, but should focus on the sampling method listed in 40 CFR Part 763.86. The training includes inspection planning, bulk sampling, personal protection, and reporting. Personnel must demonstrate

proficiency by identifying areas where asbestos may be found and properly collecting a bulk sample using proper methodology.

3.4 Maintenance and Calibration

All instruments will be maintained and operated in accordance with the manufacturer's instructions and the SESD Operating Procedure for Equipment Inventory and Management (SESDPROC-108). All instruments placed in service will be calibrated to ensure that they are operational before they are taken to the field. If the instrument is not functioning properly, it will be red tagged and taken out of service. An instrument that has been red tagged will be repaired by personnel qualified to do instrument repair or by authorized company representatives, then calibrated, and returned to service.

3.5 Records

Information generated or obtained by SESD personnel will be organized and accounted for in accordance with the SESD Operating Procedure for Control of Records, SESDPROC-002. Field notes, recorded in a bound field logbook, will be generated, as well as chain-of-custody documentation in accordance with SESD Operating Procedure for Logbooks, SESDPROC-010, and SESD Procedure for Sample and Evidence Management, SESDPROC-005.

3.6 Data Review and Documentation

Data will be reviewed to ensure that the data is complete and meets the enforcement/technical requirements of the particular investigation objectives. The data will be reviewed by the project leader, team members, other technical experts, and SESD quality control staff, as appropriate. This review will be conducted in accordance with SESD Operating Procedure for Report Preparation and Distribution, SESDPROC-003.