

USDA Natural Resources Conservation Service

Scientific Collections Management and Access Policy

July 2016

Beginning in 2005, the White House's Office of Science and Technology Policy (OSTP) and Office of Management and Budget (OMB) included in its priorities for interagency activity a call to "focus attention on integrated support and planning for the care and use of federally held scientific collections." This call gave rise to the formation of an Interagency Working Group on Scientific Collections (IWGSC) under the Committee on Science of the National Science and Technology Council (NSTC). The IWGSC issued a report entitled, "Scientific Collections: Mission-Critical Infrastructure for Federal Science Agencies," in December 2008 that made recommendations for the improvement of management, accessibility and impact of scientific collections owned by U.S. government departments and agencies.

On October 6, 2010, OSTP issued a memorandum to the heads of executive departments and agencies entitled, "Policy on Scientific Collections," that directed IWGSC to develop plans for: 1) budgeting for collections, 2) ensuring best management practices for collections, and 3) making collections more accessible.

On March 20, 2014, OSTP issued a memorandum to the heads of executive departments and agencies entitled, "Improving the Management of and Access to Scientific Collections." In the memorandum, OSTP directed federal agencies that own, maintain or otherwise financially support permanent scientific collections to develop a scientific collections management and access policy.

In June, 2016, the Natural Resources Conservation Service (NRCS) joined the United States Department of Agriculture (USDA) Interagency Committee on Scientific Collections. This document summarizes the management and access policies for institutional scientific collections owned, maintained, or otherwise financially supported by the NRCS, an agency of the USDA. These policy requirements were developed with input from NSTC and IWGSC to also comply with the policy memorandum on scientific collections issued by OSTP in 2010 and the America COMPETES Reauthorization Act of 2010.

NRCS SCIENTIFIC COLLECTIONS PHILOSOPHY

It is NRCS policy that materials that make up a scientific collection are publicly funded assets, and great care and caution should be taken in regards to their care and preservation. As with real and personal property, NRCS must exercise reasonable oversight over the inventory and control of scientific materials. The primary scientific collection held by the NRCS is the **Soil Sample Archive** held at the National Soil Survey Center in Lincoln, NE.

Soil Sample Archive

The Soil Sample Archive contains over 412,000 samples each of which represents a distinct soil layer or horizon. The samples are from all 50 states and various foreign countries and were collected beginning in the 1940s. Most of these samples were collected by NRCS field soil scientists and submitted to the Kellogg Soil Survey Laboratory (KSSL) and its predecessor labs for analysis, and the analytical data has been used in support of the National Cooperative Soil Survey program. Typically, soil samples from each genetic soil horizon to a depth of approximately 2 meters are collected at sites representative of soil taxonomic units. Chemical, physical and mineralogical analyses were completed to provide data to

facilitate classification of the soil and for interpretations for soil use and management. Analytical methods were developed and standardized at the KSSL and its predecessor labs, and these analytical methods are now the standard methods for soil classification and for soil interpretations. Many of the archived soil samples were used in development of these standard methods and are available to serve as reference samples. As a result, the Soil Sample Archive, the KSSL, and the NRCS systems for soil classification (Soil Taxonomy) are linked in their development. The soil samples provide material with precisely known analytical parameters for use in development of new methods and for long term correlation and compatibility with standard methods.

In addition to the samples collected by NRCS field soil scientists, samples have been collected by NRCS research soil scientists and by entities including universities, government and non-governmental agencies who are direct cooperators in the National Cooperative Soil Survey program or who have cooperated in projects which contribute to NCSS goals and objectives including advancement of pertinent scientific principles.

Historically, most samples stored in the Soil Sample Archive have been analyzed by the KSSL and the KSSL has also been the principal user of archived samples. Typically, additional analyses may be requested on archived samples by NRCS Soil Survey offices who need additional data from procedures not originally conducted on the sample or from procedures not existent at the time of the original analyses. In-house NRCS research soil scientists use the samples to conduct research (analyses are done by the KSSL at the request of the research soil scientists). Archived samples may be used by KSSL technicians in developing methods, for QC for standard methods, and in calibrating equipment. Archived samples are provided to scientists and organizations outside of the KSSL for research applicable to the goals of the National Cooperative Soil Survey and NRCS and in developing methods needed by NRCS and KSSL.

The nature and uses of soil samples as compared to other scientific collections dictate a different management strategy in order to maintain the continuing availability and value of limited sample resources. The facts that (1) most soil analytical procedures are destructive, and (2) the quantity of archived samples material is limited (typically approximately 300 ml / 450g of soil is stored in a 1 pint / 473 ml container) means that to maintain the continuing availability of limited sample resources, a management approach is required that may be different than for collections that are reusable or have much larger quantities of sample materials. Therefore, when considering the appropriateness of accessing and using samples from the Archive, the following factors may be considered among others:

- The value and applicability of the proposed use to the goals for which the samples were originally taken, and to the goals of the National Cooperative Soil Survey and of the NRCS.
- The quantity of sample available and the amount required for the proposed analysis. This would also include consideration of the uniqueness of the sample/site and of the availability/abundance of samples from similar soils/sites.

These samples were originally collected to obtain data to answer questions related to classification and use of the soil and/or to obtain data from representative sites which can be extrapolated for interpretation and management to similar sites over a broad area.

Plant Materials – NRCS, through its Plant Materials Centers (PMCs), has collections of plant

germplasm and specimens, but these collections do not fall under this policy as they are not considered “scientific collections.” PMCs collect and assemble plant germplasm, evaluate the germplasm for various natural resource conservation uses, then release promising germplasm as a named cultivar or pre-variety to the public sector for large-scale increase and sale to the public and government agencies for natural resource conservation, revegetation, and restoration projects. [190-National Plant Materials Manual (NPMM), Part 539, Subpart A, Section 539.1; and 7 CFR 613] PMCs routinely maintain breeder and foundation seed stocks of the released plant materials. These materials are for seed and plant increase purposes and are therefore not considered “scientific collections.” The germplasm assembled and evaluated by PMCs are considered transient collections and part of a project in that after they are evaluated, some germplasm may go on to form a new conservation plant, some may be submitted to other entities for germplasm preservation, and the remainder will be disposed. PMCs work with other agencies, most notably the Agricultural Research Service (ARS) and its National Plant Germplasm System, to submit valuable germplasm or materials for long-term preservation. Such preservation may fall under the scientific collections policy of ARS. Submission of germplasm or voucher specimens to ARS or other entities transfers PMC materials into their collections. PMC materials within these collections are available to researchers and to the public through these cooperating agencies.

DEFINITIONS

SCIENTIFIC COLLECTION

For the purposes of this document, scientific collections are broadly defined as sets of physical objects, living or inanimate, and their supporting records and documentation, which are used in science and resource management and serve as long-term research assets that are preserved, cataloged, and managed by or supported by federal agencies for research, resource management, education, and other uses. Materials assembled specifically for short-term use, sometimes referred to as “project collections,” and not intended for long-term preservation, do not fall under this policy.

Scientific collections are created for the purpose of supporting or doing science or providing germplasm, rather than for their market value as collectibles or their historical, artistic, cultural, or other significance. The focus is on institutional collections, not on specimens, or parts of specimens used temporarily, that document individual-based observations. However, since all project or working research collections were obtained through public funding, are federal assets, and may be candidates for designation as institutional collections for long-term preservation, they must be cared for by means appropriate as a federal asset. The following criteria differentiate institutional from project collections. Each institutional collection is:

- Subject to a formal accessioning process, including associated documentation and archival material (e.g., notes, photographs and maps);
- Under the authority of scientific collection curators or scientists and housed in facilities devoted to long-term collection storage;
- Inventory validated on a schedule determined by the Agency to ensure accountability of the collection;
- Physically labeled in some way with catalog numbers or other unique identifiers linked to

- a corresponding record in a database or other record-keeping system;
- Routinely made available to all qualified users, with certain exceptions (Availability of soil samples is influenced by the limited amount of sample available and the fact that most analytical procedures are destructive.)
- Made available to qualified parties through formal procedures for research, education, or exhibition; (Sample material is given rather than loaned as most analyses are destructive.)
- Preserved long-term, except under certain infrequent conditions which may justify de-accessioning under a set of formal de-accessioning procedures.

SAMPLE METADATA

Sample metadata is information that describes a sample that is part of a scientific collection. Generally, metadata make a sample uniquely identifiable and more easily searchable. Sample metadata also often provide important scientific information about the specimen that may have its own research or education value. Metadata associated with archived soil samples includes:

- Sample specific information (i.e., date of sampling, identifiers of the associated sampling site, geographic location, depth of sampling, soil horizon designation);
- Soil pedon and site information: morphological description of soil pedon, soil classification, site location, geomorphology, physiography, vegetation, and land use (using specific criteria and terminology required by National Cooperative Soil Survey Standards).
- Analytical data.

RECORDS AND REGISTRIES

The following are records that are used to document and store sample information at different levels.

Sample Record – Laboratory Database

- Consists of sample identifiers used to associate with other databases, and includes sample depth and horizon, soil name, soil classification, site date and location. The Laboratory database also includes all analytical data related to the sample. Includes the Laboratory Information System (LIMS) and Repository databases.

Site and Pedon Database (NASIS)

- Site and pedon information collected at the sampling site is contained in the NRCS National Soil Information System database (NASIS). This database also contains information associated with NRCS Soil Survey program including maps, map units, soil classification and interpretations.

Soil Archive Database

- An index of all soil samples contained in the Soil Sample Archive. This database includes sample location for retrieval and dates of access and quantities accessed and remaining.

Scientific Collection Registry

- A scientific collection registry is defined as an online digital repository that stores and makes publicly available the scientific collection records and, as appropriate, the scientific collections database associated with that record. The Smithsonian Institution has identified

GRSciColl (<http://www.GRSciColl.org>) as an appropriate federal scientific collection registry. And the Agency has chosen to adopt GRSciColl as its scientific collections registry to host scientific collection records, with the option to store scientific collection databases.

PURPOSE AND SCOPE

NRCS is an agency committed to “helping people help the land”—our mission is to provide resources to farmers and landowners to aid them with conservation.

NRCS has responsibility for the National Cooperative Soil Survey (NCSS) program. The Soil Survey program was established by the Agriculture Appropriation Act of 1896 and predates the NRCS and its predecessors. Together, the NCSS partners have created a foundational database for more than 94 percent of the Nation’s soils. This figure includes a generalized soil survey of most of Alaska which does not meet NCSS standards. Removing these acres from the foundational database decreases the total to 85 percent.

Soil classification and soil interpretations done within the National Cooperative Soil Survey program are based on objectively quantifiable soil characteristics. Some soil characteristics such as hydrology, color, and structure are determined in the field, while many characteristics such as pH, CEC, bulk density particle size distribution and mineralogy are determined in the laboratory. Throughout much of the history of soil survey, the NRCS and its’ predecessor agencies have maintained in-house laboratories to conduct these analyses. In some locations, university labs as NCSS cooperators have also assisted with analyses. The primary source of samples in the Soil Sample Archive has been samples submitted by soil scientists through the NCSS. The KSSL and predecessor labs retained samples which had useful and complete analytical data and supporting metadata. Other sources have been NCSS cooperators and other scientists working on projects which contributed information directly applicable to NSCC or other NRCS programs.

Archived samples have historically had a diversity of uses. Soil scientists request additional analyses not requested at the time of the original analyses or analyses which did not exist at the time of the original analysis. The archived samples eliminate the need for relocation, sampling, and shipping. Additional analyses may be requested by the original submitter or by soil scientists with similar soils who need additional analytical data. Samples have been used for method development. The archive provides sample material with known characteristics as determined by other methods as a basis for development of new methods. Archived samples have been used by other labs for calibration standards for analytical methods.

Illustrations of recent uses of archived samples for scientific development include the following example. The availability of samples with an array of existing analytical data has been a key factor in the development of mid-infrared spectrometry as a tool for soil analysis. Previously analyzed samples are scanned with an infrared spectrometer, and predictive models for soil analytes have been statistically using the lab analytical data for those samples. This methodology holds potential for predicting an array of soil properties in remote applications without extensive lab infrastructure such as soil survey field offices and in developing countries. The availability of samples from a wide range of geologic parent materials which have previously had mineralogical composition determined has allowed archived samples to be used in the development of the color change propensity index which will be a valuable metric in evaluating hydric soils and wetlands.

LEGISLATIVE AND REGULATORY REQUIREMENTS AND AUTHORITIES

NRCS is an agency committed to “helping people help the land”—our mission is to provide resources to farmers and landowners to aid them with conservation.

The Soil Conservation Service was created by the Soil Conservation and Domestic Allotment Act of 1935 (P.L.74-46) and incorporated the Soil Erosion Service formed in 1932. The name was changed to the Natural Resources Conservation Service in 1994 to reflect the broader mission of the agency.

The NRCS Soil Sample Archive is maintained within the Soil Science Division which derives its authority from authorizing legislation for the Soil Survey Program.

The Soil Survey Program was established by the Agriculture Appropriation Act of 1896 and is guided by executive orders and Secretary’s memoranda. Subsequent legislation (1903, 1928, and 1935) clarified the purpose. In 1966, Congress expanded the scope and further clarified the intent of the Soil Survey Program in Public Law 89-560, the Soil Survey for Resource Planning and Development Act. The Division has been renamed the Soil Science Division.

Taken together, the statutory authorities direct the Secretary of Agriculture to:

- 1) Make an inventory of the soil resources of the United States;
- 2) Keep the inventory current to meet contemporary needs;
- 3) Interpret the information and make it available in a useful form; and
- 4) Provide technical assistance and promote the use of soil survey for a wide range of community planning and resource development issues related to both non-farm and farm uses.

The Program is a cooperative effort conducted by Natural Resources Conservation Service (NRCS) and other Federal agencies in collaboration with states and other entities. This consortium, the National Cooperative Soil Survey (NCSS) is governed by regional and national bylaws. Leadership for the Federal part of the NCSS is delegated to the Chief of the Natural Resources Conservation Service by the Under Secretary for Natural Resources and Environment (7 CFR 2.61). Together, the NCSS partners have created a foundational database for more than 94 percent of the Nation’s soils. This figure includes a generalized soil survey of most of Alaska which does not meet NCSS standards. Removing these acres from the foundational database decreases the total to 85 percent.

RESPONSIBILITIES: ORGANIZATIONAL COMPONENTS AND AGENCY OFFICIALS THAT SUPPORT AND IMPLEMENT COLLECTIONS POLICY IN NRCS

NRCS mission objectives to complete and maintain soil survey and to provide scientific support for soil and natural resource conservation are carried out through a network of 124 Major Land Resource Area (MLRA) soil survey offices which are assigned responsibility for geographic areas which comprise the entire United States and Territories. These soil survey offices are directed through 12 Regional Offices which provide administrative, technical, and logistical support. Soil survey activities including all of the Soil Survey Offices and Regional Offices and the National Soil Survey Center are within the Soil Survey Division which is led by the Soil Survey Division Leader and the Soil Science Division is within the

Resource Assessment Division which is led by the Associate Chief for Resource Assessment who reports directly to the NRCS Chief.

The NRCS soil sample archive was created and has developed as an integral part of the Kellogg Soil Survey Laboratory (KSSL). The KSSL was created in 2012 when the name was changed from the National Soil Survey Laboratory. The National Soil Survey Laboratory was created in 1975 when regional SCS laboratories in Riverside, CA, Beltsville, MD, and Lincoln, NE were consolidated into a single lab in Lincoln. The KSSL is located physically and organizationally within the National Soil Survey Center (NSSC). The National Soil Survey Center (NSSC) in Lincoln, NE provides technical and scientific support and training for field soil scientists in Soil Survey and Regional offices.

SPECIFIC ROLES REGARDING COLLECTIONS

The National Leader for Research and Laboratory is responsible for policy and management of the Soil Sample Archive. The Research and Laboratory Branch operates within the National Soil Survey Center which operates as part of the Soil Science Division (SSD), and the policies and goals of the Research and Laboratory Branch are established to support the goals and policies of the NSSC and the SSD which are led by the Director of the SSD.

Day to day management and activities in the archive are directly conducted by the Lead Physical Science Technician for sample processing and maintenance who acts as the curator of the collection. Storage and retrieval activities are conducted by KSSL physical science technicians.

Samples are collected and submitted primarily by soil scientists at the 124 NRCS MLRA Soil Survey Offices. Samples are also submitted by Resource Soil Scientists and State Soil Scientists located throughout the United States who carry out the Technical Soil Services function of the NRCS. Samples are also received from National Cooperative Soil Survey cooperators who would include Universities, state and local government agencies, tribal agencies and non-governmental agencies who are participating in the National Cooperative Soil survey. Foreign government agencies and international NGOs who are cooperating in Soil Science development activities also submit samples to the KSSL.

POLICIES AND PROCEDURES

SOIL SAMPLE ARCHIVE OPERATING PROCEDURES

Operating procedures address the following areas:

- Accessioning, Collection, Documentation/Metadata
- Maintenance, Storage, and Record Keeping
- Access, Utilization and Consumption, De-accessioning (if needed)

Accession, Collection and Documentation

Accession is accomplished through the sample receiving, preparation and storage procedures which are

documented in the KSSL Laboratory Methods Manual [Soil Survey Staff. 2014. Kellogg Soil Survey Laboratory Methods Manual. Soil Survey Investigations Report No. 42, Version 5.0. R. Burt and Soil Survey Staff (Ed.). U.S. Department of Agriculture, Natural Resources Conservation Service (2014)]. Samples to be archived are taken from soil characterization sampling projects submitted to the KSSL for analysis by NRCS field soil scientists and other NSSC cooperators. Sampling projects are assessed for several criteria to determine the appropriateness of the project for archiving. These include:

Completeness of sampling - All soil horizons within the zone of active soil formation (~2 meters) are sampled and enough sample is taken to ensure there is sufficient sample remaining for storage after planned analyses. The soil profile should be sampled by genetic horizons and not fixed depths, and samples should be collected, labeled, packaged, and shipped according to specifications in the KSSL protocol for sample submission and KSSL Laboratory Methods Manual.

Completeness/comprehensiveness of associated analytical data - The requested analyses should provide a comprehensive set of data needed for soil classification and commonly applied interpretations.

Completeness of associated metadata - The samples should be accompanied by complete morphological soil profile descriptions, and site descriptions including location, physiography, geomorphology, vegetation, and land use using standard NCSS format and terminology.

Specific requests for inclusion or exclusion in archiving - Sample submitters can request that samples that do not otherwise meet the completeness criteria be archived if they see a reasonable potential need for storing the samples (subject to there being sufficient sample material). Submitters can also request that samples that would otherwise meet the criteria for archiving not be stored.

Accessioning of collections and samples from sources other than KSSL

Accessioning is normally accomplished through selection of sampling projects submitted for analysis by the KSSL based on the criteria described in the previous section. Collections of specimens/samples not originally received and analyzed by the KSSL may be occasionally accessioned. Such acquisitions are subject to the following considerations:

- The acquisition of collections should be relevant to the mission and goals of NRCS, and the Cooperative Soil Survey program;
- The collections be accompanied by complete metadata and analytical data;
- Storage space, resources for preparing and storing samples, incorporating data and funding are available;
- The added value of the collection justifies the expenditure of resources, and the collection is not redundant; and
- There should be strict adherence to all applicable laws and regulations relating to collections acquisition.

As a general rule, collection items are acquired and accessioned only when there is a good faith intention to retain them in NRCS permanently or for the long-term. Institutional scientific collections are retained as long as they continue to serve the mission and objectives of the Agency, and can be properly maintained and used.

Maintenance

Samples are maintained at room temperature in an air-dried condition. The KSSL lead physical science technician for sample processing is responsible for the day to day maintenance of the archive. Sample information including location, dates of access and quantities removed and remaining are recorded in the soil sample archive database by KSSL technicians who are authorized to access samples. Remaining shelf space and rate of sample acquisition is reviewed periodically.

De-Accessioning

Sample status is documented when sample material is completely consumed, and samples are identified in the Laboratory and Archive databases as consumed. Historically, samples have not been de-accessioned for any reason other than being consumed or in limited instances damaged or contaminated. There are no plans for de-accessioning samples at this time.

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Access and Use Plan

Specimens within an NRCS collection are the property of the U.S. Government. Samples stored in the collection are subsamples of samples originally submitted to the KSSL for analysis (except for a limited number of special collections). The primary historical objective of storage of samples has been to keep samples available for potential additional analysis by the KSSL to supply data needed to resolve questions from the submitters or for analyses related to the mission of the Soil Survey Division and the KSSL.

Within practical limitations, the KSSL has provided access to samples in the archive to NCSS cooperators and other qualified requestors for qualified uses which have the potential to contribute to the goals of the KSSL and the NRCS SSD. Given that the quantity of sample material available is limited and that accessed sample material will not be returned, in determining if samples can be accessed, consideration is given to (1) the value and applicability of the proposed use to the goals for which the samples were originally taken and to the goals of the National Cooperative Soil Survey and of the NRCS, and (2) the quantity of sample available and the amount required for the proposed analysis. This would also include consideration of the uniqueness of the sample/site and of the availability/abundance of samples from similar soils/sites.

Additional limiting factors include safety and security issues, APHIS regulations (7 CFR 330), complexity of the storage system, limited human resources for arranging visits, and meeting and accompanying requestors. KSSL employees authorized to access the Soil Sample Archive working with the NRCS National Leader for Laboratory and Research, will have the discretion to temporarily, or permanently, limit the access to institutional scientific collections and related catalogs, databases, records, and metadata for purposes of:

- Safeguarding individual privacy, confidentiality, copyright, and intellectual property rights;
- Adhering to laws, regulations, treaties, and international or tribal agreements;
- Protecting national security;
- Resource limitations;
- Specimen availability;
- Preservation constraints; or,
- Addressing general security concerns.

Requests for samples will be made based on information in the Lab Characterization database. Lab Characterization data is available at: <http://ncsslabdatamart.sc.egov.usda.gov/>. Lists of potential samples will be submitted to the KSSL for determination if sample material is available. Not all samples with analytical data in the Lab database will have associated archived samples. The physical and informational infrastructure of the Soil Sample Archive is not configured to allow direct physical access to collections and will not be possible in most instances. Requested samples will most often be prepared and shipped to requestors by NRCS.

Metadata Format, Storage and Accessibility

Metadata associated with the Soil Sample Archive is included in the LIMS and the KSSL Repository databases. Analytical data, and site and pedon data is publicly accessible through the NRCS Lab Data

Mart website. Site and pedon data is available in the NRCS National Soil Survey Information System (NASIS) database which is accessible through the Soil Data Access and Web Soil Survey websites. Metadata is required to be submitted with samples, and formats for metadata are specified in the KSSL Laboratory Methods Manual, Field Book for Describing and Sampling Soils, and NASIS documentation.

BUDGETING

NRCS collections are supported by the entities within NRCS which house and utilize the collections, and budgets for operation of collections are included in the budget of the supporting entity. For example, the cost of storage space for the Soil Sample Archive is included in the overall cost of space for the entire NSSC. Receiving, preparing, storing samples, and recording sample metadata is an integral part of the analytical function of the KSSL and technicians' time is included in the overall budget for the KSSL. Projected costs for maintaining the Archive are expected to remain consistent with current costs for space, labor, and miscellaneous items. Provisions for housing and maintaining and expanding the Soil Sample Archive have been included in planning for potential relocation of the KSSL.

REPORTING

Records of additions and removals of samples and use of sample material is maintained on an ongoing basis through entries in the Laboratory Information Management System (LIMS) and in the Soil Sample Archive Database. Analytical data associated with archived samples is added into the LIMS as analyses are completed. Pedon and site metadata associated with new and existing samples is stored and updated in LIMS and in the National Soil Survey Information System database (NASIS) as samples are received or as data for existing samples is updated in the field.

PRACTICES FOR SAFEGUARDING INDIVIDUAL PRIVACY, CONFIDENTIALITY, AND NATIONAL SECURITY

Privacy/Confidentiality

In most cases, materials are distributed from NRCS collections without privacy or confidentiality restrictions. Certain circumstances require protection of confidential information. Confidentiality Agreements (CA) can be put into place to protect this information. A CA permits parties to exchange confidential information and data. With some samples, restrictions associated with the collection of the original sample may prevent it from being available for other users.

Biosafety and Biosecurity

To ensure safety and environmental protection, NRCS is required to comply with all federal, state, and local regulations regarding the receipt, handling, storage, shipping, and disposal of regulated materials including soil. The KSSL holds permits and operates under compliance agreements from APHIS and the Nebraska Department of Agriculture (NEDA) which specify procedures applicable to materials received from regulated areas. Regulated areas are subject to change and are continuously updated. The regulated status applicable at the time of receipt and storage of a sample remains applicable to that sample. Regulated samples are stored in the same area as non-regulated samples. The entire sample storage area is considered by APHIS to be regulated under 7 CFR 330, and regulations

related to storage, signage, and access apply. Training is required for access to the storage area and non-trained personnel must be accompanied by qualified trained KSSL employees.

The shipment of regulated samples from the Soil Sample Archive is limited to facilities holding the appropriate permits and compliance agreements, and specified conditions for transferal must be met. Shipments to non-qualified facilities require decontamination as specified by APHIS or other applicable agency. Decontamination may potentially alter some properties of the samples.

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