



AIHA[®]
Registry
Programs
LLC

XRF Field Measurement Registry Policy Document

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AIHA[®] Registry Programs, LLC
2700 Prosperity Ave Ste 250
Fairfax, VA 22031 USA
Info.RegistryLLC@aiha.org
www.aiharegistries.org
main +1 703-846-0755
fax +1 703-207-8558

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ARTICLE I

XRF FIELD MEASUREMENT REGISTRY PROGRAM OVERVIEW

Note: The following defines a registry program for organizations and their affiliated operators that perform *in situ* XRF field measurements of surface coatings for lead content. This registry program does not address accreditation required for recognition by the Environmental Protection Agency (EPA) under the National Lead Laboratory Accreditation Program (NLLAP) as required at 40 CFR Part 745 for environmental lead analyses.

1.1 Purpose

The primary purpose of the AIHA[®] Registry Program, LLC's XRF Field Measurement Registry (FMR) is to establish and maintain minimum standards of conduct for FMR participants performing *in situ* XRF measurements for lead in surface coatings regulated by 40 CFR Part 745. The FMR program helps to assure continued appropriate performance by the Registered Organization and its affiliated operators through the following:

- 1.1.1 Requiring the Registered Organization and its affiliated operators to submit applications that demonstrate that the Registered Organization and its affiliated operators meet the requirements set forth in this policy document;
- 1.1.2 Conducting a registry program that will require FMR participants to perform procedures with adequate controls using acceptable equipment and methods;
- 1.1.3 Surveillance of the performance of enrolled and Registered Organizations in applicable proficiency testing (PT) programs if/when available; and
- 1.1.4 Auditing of the FMR Registered Organization on a biennial basis to verify continued compliance with the standards and requirements of the FMR program.

1.2 Manner of Acting

The Registry Programs Board (RPB) shall conduct the technical business of the AIHA[®] Registry Programs, LLC according to the following directives.

- 1.2.1 A two-thirds majority of the RPB members eligible to vote shall be required on a formal, written letter ballot vote, electronic vote, or meeting vote for matters regarding an organization's registration, removal or denial.
- 1.2.2 A simple majority of the RPB members eligible to vote shall be required on a formal, written letter ballot vote, electronic vote, or meeting vote for matters other than those specified in Section 1.2.1.
- 1.2.3 A RPB member shall support any of his/her votes to deny registration or for the removal from the registry by citing the specific FMR policy that is the basis of the negative vote.

1.2.4 RPB members shall comply with the AIHA[®] Registry Programs, LLC's Registry Programs Board (RPB) Volunteer Conflict of Interest and Confidentiality Policies.

1.3 Authority

The RPB operates the FMR program under the authority granted by the RPB Executive Committee and the AIHA[®] Registry Programs management. The role and responsibilities of the RPB are set forth in the *RPB Member Duties and Responsibilities* document.

ARTICLE II

QUALITY SYSTEM REQUIREMENTS

2.1 Scope

To achieve and maintain registration under the FMR program, the Registered Organization and its affiliated operators shall meet all requirements detailed in this Article. All organizations seeking registration shall have in place a thoroughly documented quality system. The organization's quality system shall reflect the actual operations and quality assurance/quality control (QA/QC) program in place for the organization.

2.2 Organization and Responsibility

2.2.1 The Registered Organization must be a legal entity responsible for the proceedings of itself and its affiliated operators. The Registered Organization shall:

- a.)** specify the responsibility and authority of all personnel who manage, perform or verify work;
- b.)** provide adequate supervision of the staff;
- c.)** appoint a Technical Manager (however titled) to have overall responsibility for technical operations. The role and responsibility of the Technical Manager, including responsibility for ensuring conformance with these requirements and compliance with statutory and regulatory requirements, shall be defined in the Quality Manual;
- d.)** appoint a Quality Manager (however titled) who, irrespective of other duties and responsibilities, shall have defined responsibility and authority for ensuring that the quality system is implemented and followed at all times. The Quality Manager shall have direct access to the highest level of management at which decisions are made. The role and responsibility of the Quality Manager, including responsibility for ensuring conformance with these requirements and compliance with statutory and regulatory requirements, shall be defined in the Quality Manual;
- e.)** appoint deputies for the Technical Manager and Quality Manager as appropriate to maintain continuing operations. Deputies shall meet all requirements for the authorities, duties, responsibilities, etc. they assume; and,
- f.)** ensure that all personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the objectives of the quality system.

2.3 Impartiality and Operational Integrity

2.3.1 The Registered Organization shall:

- a.) have arrangements to ensure that its personnel are free from pressures and influences that may adversely affect the quality of their work;
- b.) have policies and procedures to avoid involvement in any activities that would diminish confidence in its work and results; and,
- c.) define the organization and management structure, its place in any parent organization, and the authoritative relationships between individuals.

2.3.2 The entity of which the Registered Organization is part shall be an entity that can be held legally responsible for any actions taken by the Registered Organization and/or its affiliated operators.

2.3.3 Registration under this program shall be extended to an entity at a single address only.

2.4 Quality Manual

2.4.1 The Registered Organization's quality system shall be documented in a Quality Manual (however named) and shall reflect the actual operating and QA/QC practices.

2.4.2 The Quality Manual shall include at minimum the following sections.

- a.) Title Page
- b.) Table of Contents
- c.) Quality Manual Maintenance and Update Procedures
- d.) Impartiality and Operational Integrity
- e.) Customers' Confidential Information and Proprietary Rights
- f.) Organization and Responsibility
- g.) Personnel Training, Qualification and Licensure
- h.) Service to the Customer
- i.) Review of Contracts
- j.) Purchasing Services and Supplies
- k.) Reference Standards
- l.) Equipment and Equipment Maintenance Procedures
- m.) Testing Procedures
- n.) Control of Nonconforming Testing Work
- o.) Improvement
- p.) Corrective Action
- q.) Preventive Action
- r.) Data Reduction and Reporting
- s.) Complaints
- t.) Quality Control
- u.) Control of Records
- v.) Internal Audits
- w.) Proficiency Testing
- x.) Radiation Safety Program

2.4.3 The Quality Manual shall also include:

- a.)** Appendix A: Lead-based Paint Inspector and/or Risk Assessor Licenses and Certifications;
- b.)** Appendix B: XRF Instrument Manufacturer's Training Certificates;
- c.)** Appendix C: Radioactive Materials Licenses.

2.5 Quality Manual Acceptance, Maintenance and Revision

- 2.5.1** The Quality Manual shall be updated whenever necessary, and shall be reviewed by the Quality Manager and approved by the Technical Manager at least annually.
- 2.5.2** The Registered Organization shall establish and maintain procedures to control the Quality Manual and other documents it uses, such as regulations, standards, methods, drawings, software, specifications, instrument instructions and manuals, and the U.S. Department of Housing and Urban Development (HUD) Performance Characteristics Sheet (PCS) for each type of XRF instrument used.
- 2.5.3** All documents issued to personnel as part of the quality system shall be reviewed by the Quality Manager and approved for use by the Technical Manager prior to issue.
- 2.5.4** Procedures adopted for Quality Manual maintenance and update shall ensure that:
 - a.)** an authorized, current edition of the Quality Manual is available to Operators when and where testing is performed;
 - b.)** invalid or obsolete Quality Manuals are promptly removed from use or otherwise assured against unintended use; and,
 - c.)** obsolete Quality Manuals retained for either legal or knowledge preservation purposes are visibly marked as "OBSOLETE".
- 2.5.5** The Quality Manual shall be uniquely identified to include the date of issue and/or revision identification, and shall have page numbers on each page showing "x of y" pagination where "x" is the page in view and "y" is the total number of pages (including appendices) in the Quality Manual.
- 2.5.6** Changes to the Quality Manual shall be reviewed by the Quality Manager and approved by the Technical Manager.
- 2.5.7** If the Quality Manual is amended by hand pending re-issue, the amendments shall be initialed and dated. The resulting revised Quality Manual shall be formally re-issued as soon as practicable.

- 2.5.8** Procedures shall be established to describe how changes to a Quality Manual maintained in a computerized system are made and documented.

2.6 Personnel Training, Qualification and Licensure

- 2.6.1** The Registered Organization shall use personnel who are employed by, or under contract to, the Registered Organization. Where contracted and additional technical and key support personnel are used, the Registered Organization shall ensure that such personnel are competent and adequately supervised, and that they conduct activities in accordance with the Registered Organization's quality system.
- 2.6.2** The Registered Organization shall maintain current job descriptions for all personnel involved in conduct, review and reporting of testing.
- 2.6.3** Job descriptions shall include required education, experience, training, qualifications/licensures, and duties.
- 2.6.4** The Registered Organization shall maintain records of the relevant training, educational and professional qualifications, experience, competence, skills and authorizations of all personnel involved in conduct, review and reporting of testing. This information shall be readily available and shall include the date on which authorization to perform assigned duties was awarded.

2.6.5 Technical Manager

The Registered Organization shall provide day to day supervision of its technical operations by designating at least one Technical Manager (however titled).

The Technical Manager shall:

- a.)** be an employee of the Registered Organization;
- b.)** authorize specific personnel to perform testing, to issue test reports, to review reports, and to give opinions and interpretations; provide adequate supervision for all subordinate personnel;
- c.)** be currently licensed as a Lead-Based Paint Risk Assessor (or however titled by the authority having jurisdiction) in States, the District, Territories, Tribes and/or Protectorates where testing is conducted, and/or U.S. Environmental Protection Agency (EPA) Certified as a Lead-Based Paint Risk Assessor for states where testing is conducted. A copy of current licenses and/or certifications shall be found in Appendix A of the Registered Organization's Quality Manual;
- d.)** have successfully completed manufacturer's training for the XRF instrument type to be used to conduct testing. A copy of the training certificate shall be found in Appendix B of the Quality Manual; and
- e.)** approve and sign final reports for release to the customer.

2.6.6 Quality Manager

The Registered Organization shall designate at least one Quality Manager (however titled).

The Quality Manager shall:

- a.) be an employee or contractor of the Registered Organization;
- b.) have a high school diploma or equivalent;
- c.) be currently licensed as a Lead-Based Paint Inspector or Risk Assessor (or however titled by the authority having jurisdiction) in States, the District, Territories, Tribes and/or Protectorates where testing is conducted, and/or U.S. Environmental Protection Agency (EPA) Certified as a Lead-Based Paint Inspector and/or Risk Assessor for states where testing is conducted. A copy of current licenses and/or certifications shall be found in Appendix A of the Registered Organization's Quality Manual; and
- d.) be responsible for maintenance and update of the Quality Manual.

2.6.7 Operator

Operators shall:

- a.) conduct *in situ* XRF testing of surface coatings for lead content according to all applicable quality assurance and quality control requirements;
- b.) be currently licensed as a Lead-Based Paint Inspector and/or Risk Assessor (or however titled by the authority having jurisdiction) in States, the District, Territories, Tribes and/or Protectorates where testing is conducted, and/or EPA Certified as a Lead-Based Paint Inspector and/or Risk Assessor for states where testing is conducted. A copy of current licenses and/or certifications shall be found in Appendix A of the Quality Manual;
- c.) have successfully completed manufacturer's training for the XRF instrument type to be used to conduct testing. A copy of the training certificate shall be found in Appendix B of the Quality Manual; and,
- d.) review and sign final reports of testing they had conducted.

2.6.8 Combined Positions

If a single individual serves in more than one position, this individual shall meet all requirements for all positions assumed.

2.6.9 Minimum Personnel

At minimum, one (1) person shall constitute a Registered Organization.

2.7 Operator Affiliation

The operator shall perform testing under the quality system of the Registered Organization. This includes all practices outlined in the Registered Organization's Quality Manual.

2.8 Operator Training

An operator who is enrolled with a Registered Organization shall be affiliated with this organization as follows:

Operators shall be appropriately certified/licensed and trained in the conduct of testing according to the quality system, in operation of the XRF instrument to be used for in-field testing, and in radiation safety. Records of training shall be maintained for all personnel.

2.8.1 Technical Training

The operator shall successfully complete any required certification, licensure and radiological and other training needed to perform testing. The Registered Organization shall ensure that all operators are properly trained to perform in-field testing according to the quality system.

2.8.2 Quality System Training

The Registered Organization shall document the operator's training as to conduct of the Registered Organization's quality system.

2.8.3 Operator's Personnel File

At minimum, operator personnel files must include documented evidence of the following.

- 2.8.3.1** Current licensure as a Lead-Based Paint Inspector and/or Risk Assessor (or however titled by the authority having jurisdiction) in States, the District, Territories, Tribes and/or Protectorates where testing is conducted, and/or EPA Certified as a Lead-Based Paint Inspector and/or Risk Assessor for states where testing is conducted;
- 2.8.3.2** Training in the application of the quality system including a description of the training, duration of the training, and date of completion; and,
- 2.8.3.3** Documented evidence of manufacturer's training and competency in use of the field-portable XRF type to be used to conduct testing

2.9 Quality Control

2.9.1 Materials and Equipment

To conduct testing, the Registered Organization shall be equipped with:

- 2.9.1.1 The field-portable XRF instrument type to be used during conduct of the testing;
- 2.9.1.2 Calibration Check Sample(s): test film sample(s) with known lead levels in units of milligrams per square centimeter, [mg/cm²], and known uncertainty of the lead level(s). All calibration test samples shall be U.S. National Institute of Standards and Technology (NIST) Standard Reference Materials (SRMs) (preferred), or at minimum be Certified Reference Materials (CRMs) traceable to NIST SRMs with known specified uncertainty for the claimed lead level; and,
- 2.9.1.3 Support Block(s): used to hold calibration check samples away from any additional underlying and possibly interfering material. The support block material shall not itself have potentially interfering leaded paint or other lead-containing material within or on it.

2.9.2 Quality Control Checks

- 2.9.2.1 Mode and/or Read Time: Calibration checks shall be performed for each operating mode and/or read time used during the testing. If more than one operating mode and/or read time is used during a testing, then calibration checks for each of the different operating modes and/or read times shall be conducted. The operating mode and/or read time used to conduct the testing shall be as recommended by the XRF manufacturer. The operating mode and/or read time used for testing shall be the same as that used for calibration checks.
- 2.9.2.2 Conduct and Performance: Calibration checks shall be conducted at lead levels and to performance level(s) at least as shown in the U.S. Department of Housing and Urban Development (HUD) XRF Performance Characteristics Sheet (PCS) for the XRF instrument type used to perform in-field testing.

2.9.3 Frequency

- 2.9.3.1 After powering the instrument on and allowing for an appropriate warm-up period based on the manufacturer's instructions, an initial calibration check shall be performed.
- 2.9.3.2 Following the initial calibration check, a continuing calibration check at least every two (2) hours shall be performed thereafter during use.

- 2.9.3.3** After completing the collection of measurements at test locations and prior to powering the instrument down, a final continuing calibration check shall be performed. (The automatic shut-down of an XRF instrument resulting from excessive battery drainage usually may not be predicted with accuracy. Therefore, replacement of a battery or any brief loss of power during the testing need not be considered as powering the instrument down. However, replacement of the instrument battery shall be immediately followed by a continuing or final calibration check, as appropriate. If battery power loss can be predicted or if there is warning of battery power loss, a calibration check shall be conducted prior to battery replacement and again after the battery has been replaced.)
- 2.9.3.4** All XRF measurements collected must be bracketed by at least initial and final continuing calibration checks.

2.10 Control of Records

- 2.10.1** The Registered Organization shall establish and maintain procedures regarding records and recordkeeping.
- 2.10.2** All records shall be legible and shall be stored and retained in such a way that they are readily retrievable from safe and secure storage.
- 2.10.3** The Quality Manual shall include how and for how long records are to be maintained.
- 2.10.4** All records shall be maintained for at least five (5) years. This minimal requirement does not override any requirements set forth by Federal, State or other applicable jurisdiction regulations.
- 2.10.5** All records shall be securely maintained and held in confidence.
- 2.10.6** The Registered Organization shall have procedures to protect and back-up records stored electronically, and to prevent unauthorized access or change.
- 2.10.7** Computer records are satisfactory without hard copy files if copies can be produced as needed and if data changes are documented.
- 2.10.8** The Registered Organization shall retain records and sufficient information to establish a trail from calibration and calibration verification records, in-field testing data, and operator records to and including the testing report issued. Records of testing shall contain sufficient information to facilitate and enable the testing to be repeated at locations and in numbers as close as possible to the original testing.
- 2.10.9** Records shall include the identity of personnel responsible for performance of testing, and the review and approval of results.

- 2.10.10** Observations, test data, etc. shall be recorded at the time they are made, and shall be identifiable to the specific project and site.
- 2.10.11** When mistakes occur in records, each mistake shall be lined out in a single stroke, not erased, and the correct value entered alongside or above. All such alterations to records shall be signed or initialed by the person making the correction. In the case of records stored electronically, equivalent measures shall be taken to avoid loss or change of original data.
- 2.10.12** All corrections made to records shall be dated.
- 2.10.13** All entries to hard copy records shall be made using ink. No correction fluid may be used on records.
- 2.10.14** At minimum, the Registered Organization shall have written procedures that meet the following:
- 2.10.14.1** In general, all information related to collection of XRF measurements during the testing must be documented. Documentation of testing may be manual and/or electronic.
- 2.10.14.1.1 Manual** record keeping shall be performed within a field log, such as a bound set of data forms or bound field ledger, and shall be used as follows.
- a.)** Each field log shall be uniquely identified.
 - b.)** Each page within the field log shall be uniquely identified using consecutive page numbers.
 - c.)** All manual record-keeping entries shall be made using ink.
 - d.)** At minimum, each page of the field log shall have a signature and date of entry. Multiple entries made on the same page of the field log shall each be dated and signed if taken on different days and/or by different operators.
 - e.)** Any entry errors must be corrected by using only a single line through the incorrect entry (no scratch outs) accompanied by the initials of the person making the correction and the date of the correction. The correct entry shall be written in next to or above the incorrect entry. No correction fluid may be used.
- 2.10.14.1.2 Electronic** record keeping, if used for data recording, shall meet the following minimum requirements.

- a.) All of the records electronically recorded during the testing shall be printed in hard copy form and included as part of the testing documentation.
- b.) Each electronically recorded XRF measurement shall include, within the electronically captured record, a unique identification number, a component identifier, and a location identifier.

2.10.14.2 At a minimum, the following shall be documented for each site where testing is conducted.

- 2.10.14.2.1** Project and/or customer name and customer address and postal address of the location where testing was conducted;
- 2.10.14.2.2** General testing site description and/or unit designation;
- 2.10.14.2.3** The XRF instrument manufacturer, model number, radiation source type, radiation source age or date of XRF instrument manufacture and software version number for the XRF instrument used for the testing;
- 2.10.14.2.4** The name(s) and inspector/risk assessor license identifier(s) of the operator(s) who conducted the testing, and Registered Organization name, postal address and telephone number(s);
- 2.10.14.2.5** A statement describing the testing protocols used to collect the testing data. This shall include at minimum the rooms where testing was conducted, what surfaces were tested, how many tests were conducted on each surface, and where on the surface testing was conducted;
- 2.10.14.2.6** The local, state, territorial, tribal or federal definition of lead-based paint in units of milligrams per square centimeter, [mg/cm²], used in the report;
- 2.10.14.2.7** The XRF instrument performance level(s) used for calibration checks shown in the HUD XRF PCS for the XRF instrument type used to perform testing;
- 2.10.14.2.8** A glossary of technical terms used to report results. At a minimum, the glossary shall contain definitions for building components and any codes used in reporting results, such as testing component orientation codes;
- 2.10.14.2.9** Any relevant notes regarding the testing, including but not limited to, the operating mode and/or read time utilized during testing, and diagrams, notes, photos and videos from/of the testing;

- 2.10.14.2.10** The XRF testing data in units of milligrams per square centimeter, [mg/cm²], with a determination that the measurement is: below or equal-to-or-above the applicable local, state, territorial, tribal or federal definition of lead-based paint; or, positive or negative for the presence of lead-based paint as defined by the applicable local, state, territorial, tribal or federal requirements; and,
- 2.10.14.2.11** A copy of the XRF instrument print-out that includes every electronically recorded XRF measurement, if the instrument is capable of such recording.
- 2.10.14.3** At a minimum, the following shall be documented for each XRF measurement collected.
- 2.10.14.3.1** A unique identifier.
- 2.10.14.3.2** Descriptive information on the location of the XRF measurement. At a minimum, the location description shall be sufficient to determine which building component was tested within the room and where on that component the measurement was taken. This description should be sufficient to distinguish between like building components present within the same room.
- 2.10.14.3.3** Substrate type, if known.
- 2.10.14.3.4** The XRF measurement value in units of milligrams per square centimeter, [mg/cm²].
- 2.10.14.3.5** A determination and record of the lead classification result with respect to the appropriate local, state, territorial, tribal or federal action level for surface coatings.
- 2.10.14.3.6** Date(s) of the XRF measurements, and the clock time of the day that the measurement was collected or at minimum the clock times of the day when testing began and ended.
- 2.10.14.3.7** Any relevant notes regarding testing, the testing location, read time, and operating mode.
- 2.10.14.4** At a minimum, the following information must be documented for each calibration check and checks recommended by the manufacturer of the XRF instrument.
- 2.10.14.4.1** A unique identifier for each XRF measurement.
- 2.10.14.4.2** A description and the lead content of each calibration check sample used.

2.10.14.4.3 The XRF measurement values in units of milligrams per square centimeter, [mg/cm²].

2.10.14.4.4 Date and approximate clock time of each calibration check.

2.10.14.4.5 Any relevant notes regarding calibration checks, read time and operating mode.

2.11 Review of Contracts

2.11.1 The Registered Organization shall establish and maintain policies and procedures for the review of contracts with customers. The policies and procedures for these reviews of contracts for testing shall ensure that:

- a.) the requirements and/or purposes for the testing are defined, documented and understood by all parties;
- b.) the Registered Organization has the capability and resources to meet the requirements; and,
- c.) the testing to be conducted is capable of meeting the customers' requirements.

2.11.2 Any differences between the customer's request for testing and the contract agreement for testing shall be resolved before work begins. Each contract shall be acceptable to both the Registered Organization and the customer.

2.11.3 Records of contract reviews, including any significant changes made as a result of the review, shall be maintained.

2.11.4 Records of discussions with a customer relating to the customer's requirements and/or the results of the work performed during execution of the contract shall be maintained.

2.11.5 The Registered Organization shall inform the customer of any deviations from the contract.

2.11.6 If a contract needs to be amended after the work has begun, the contract review process shall be repeated and any changes to the contract shall be communicated to affected parties.

2.12 Purchasing Services and Supplies

2.12.1 The Registered Organization shall establish and maintain policies and procedures for the purchasing of services and supplies that are used in the field measurement of lead surface coatings.

2.12.2 The policies and procedures for purchasing services and supplies shall ensure that the service or supply purchased will not negatively affect the quality of the final report produced by the Registered Organization and its affiliated operators.

2.12.3 The Registered Organization's procedures shall include the purchase, receipt and storage of supplies.

2.13 Reference Standards

2.13.1 Reference standards used for calibration verification of portable XRF instruments shall be NIST Standard Reference Material (SRM) paint films (preferred), or at minimum be Certified Reference Materials (CRMs) traceable to NIST SRM paint films.

2.13.2 The Registered Organization shall have and maintain certificates of traceability for all reference standards used by it within this registry program.

2.13.3 The Registered Organization shall have a policy stating that reference standards be used for calibration verification purposes only.

2.13.4 The Registered Organization shall have procedures for safe handling, transport, storage and use of reference standards to prevent deterioration and to protect their integrity.

2.14 Customers' Confidential Information and Proprietary Rights

The Registered Organization shall have policies and procedures to ensure the protection of its customers' confidential information and proprietary rights, including procedures for protecting the electronic storage and transmission of results.

2.15 Service to the Customer

A quality policy statement shall be issued by the Registered Organization and include at minimum:

- a.)** the Registered Organization's commitment to good professional practice and to the quality of its testing in servicing its customers;
- b.)** a statement of the Registered Organization's standard of service;
- c.)** the Registered Organization's commitment to meet and/or to comply with applicable requirements from those authorities having jurisdiction over testing of surfaces coatings for lead content;
- d.)** the Registered Organization's commitment to conform with the requirements of this registry program;
- e.)** the Registered Organization's commitment to meeting customer requirements; and,
- f.)** the Registered Organization's willingness to cooperate with customers or their representatives in clarifying the customer's requests and/or complaints.

2.16 Complaints

2.16.1 The Registered Organization shall have a policy and procedure within its corrective action process for the resolution of complaints received from customers or other parties.

2.16.2 Records shall be maintained of all complaints, and of the corrective actions taken.

2.17 Control of Nonconforming Testing Work

The Registered Organization shall establish a policy and procedure, and shall designate appropriate personnel, for implementing corrective action(s) when nonconforming work or departures from its policies and procedures have been identified.

2.18 Improvement

The Registered Organization shall continually improve the quality of operator performance and the effectiveness of its quality system through adherence to these policies and review and action from the findings of the organization's quality practices such as internal audits and corrective and preventive actions.

2.19 Corrective Action

2.19.1 The Registered Organization shall have a policy and procedures that shall be implemented when any aspect of its testing work, or the results of this work, do not conform to its own procedures or the agreed requirements of the customer. The policy and procedures shall ensure that:

- a.)** the responsibilities and authorities for the management of nonconforming work are designated and actions (including halting of work and withholding of test reports, as necessary) are defined and taken when nonconforming work is identified;
- b.)** an evaluation of the impact of the nonconforming work is made;
- c.)** stoppage of work and initiation of correction are immediate;
- d.)** when necessary, the customer shall be notified and/or the testing report recalled; and,
- e.)** work does not resume until the Technical Manager or deputy is satisfied that that corrective action(s) taken adequately addressed the nonconformance.

2.19.2 Where the evaluation indicates that the nonconforming work could recur or that there is doubt about the compliance with policies and/or procedures, the corrective action procedures shall be immediately followed.

2.19.3 The procedure for corrective action shall start with an investigation to determine the cause(s) of the problem.

2.19.4 Where corrective action is needed, the Registered Organization shall identify and document all potential corrective actions. It shall select, document and implement the action(s) most likely to eliminate the problem and to prevent recurrence.

- 2.19.5** Corrective actions shall be appropriate to the magnitude of the problem.
- 2.19.6** The Registered Organization shall implement and document any required changes resulting from corrective action investigations.
- 2.19.7** The Registered Organization shall monitor and document the results to ensure that the corrective actions taken have been effective.
- 2.19.8** Monitoring of the corrective action process shall continue until the Technical Manager or deputy is satisfied that that corrective action(s) taken adequately addressed the nonconformance and that the nonconformance is unlikely to reoccur.
- 2.19.9** The Registered Entity shall keep and maintain records of the corrective action process.

2.20 Preventive Action

The Registered Organization shall implement policies and procedures to require identification of needed improvements and potential sources of nonconformities. Procedures shall govern the development of appropriate action plans, and appropriate controls to ensure that they are effective.

2.21 Internal Audit

- 2.21.1** The Registered Organization shall have a policy and procedure for an annual systems audit. The purpose of the audit is to verify that all actions adhere to the requirements of this document and its quality system.
- 2.21.2** A report of the audit findings shall be kept on record. At a minimum, the Registered Organization's Quality Manager shall use the XRF FMR Organization Checklist to audit the quality system.
- 2.21.3** Deficiencies shall be addressed through corrective action.
- 2.21.4** If audit findings impact customer results or reports, the customer shall be notified of the error and corrective action taken. Amended results shall be issued.

2.22 Equipment and Equipment Maintenance Procedure

- 2.22.1** The Registered Organization for testing within this registry program shall use only those XRF instruments having a current HUD PCS.
- 2.22.2** The Registered Organization shall have or have available all items required for the correct performance of testing.
- 2.22.3** XRF instruments shall be operated only by qualified and authorized personnel.

- 2.22.4** Up-to-date instructions on the use and maintenance of XRF instruments to be used for testing (including any relevant manufacturer's manuals) shall be readily available for use by operators.
- 2.22.5** Each XRF instrument and its software used for testing shall, when practicable, be uniquely identified.
- 2.22.6** An equipment log shall be maintained for each XRF instrument used for testing.
- 2.22.7** Records shall be maintained for each XRF instrument and its software used for testing.
- 2.22.8** XRF instrument records shall include at least the following:
- a.)** the manufacturer's name, type identification, software version, and serial number or other unique identification;
 - b.)** documentation that equipment complies with the manufacturer's initial calibration specifications;
 - c.)** the current custodian and/or location, where appropriate;
 - d.)** the manufacturer's instructions;
 - e.)** dates, results and copies of reports and certificates of all manufacturer's calibrations, adjustments, acceptance criteria, and the due date of next manufacturer's calibration; and,
 - f.)** any damage, malfunction or repair to the instrument.
- 2.22.9** The Registered Organization shall have procedures for safe handling, transport, storage, use and planned maintenance of the XRF instrument.
- 2.22.10** An XRF instrument that has been subjected to mishandling, gives suspect results, or has been shown to be defective, outside the manufacturer's acceptance limits, etc. shall be taken out of service. It shall be isolated to prevent its use or clearly labeled as being "OUT OF SERVICE" until it has been repaired and shown by manufacturer's calibration to perform correctly.
- 2.22.11** Upon discovery of suspected XRF performance, the Registered Organization shall examine the effect of the problem on testing conducted using the instrument and shall immediately initiate the corrective action process.
- 2.22.12** All XRF instruments used and/or under the control of the Registered Organization shall be labeled, coded or otherwise identified to indicate the date when last calibrated by the manufacturer, and the date or expiration criteria when recalibration by the manufacturer is due.

2.22.13 When, for whatever reason, an XRF instrument goes outside the direct control of the Registered Organization, the Registered Organization shall ensure that the function and calibration status of the instrument are checked and shown to be within calibration before the instrument is used for testing.

2.22.14 Results of the function and calibration verification checks required for an XRF instrument that goes outside the direct control of the Registered Organization shall be documented.

2.22.15 Intermediate checks are needed to maintain confidence in the calibration status of the XRF instrument. These checks shall be carried out according to a defined procedure. Calibration verification procedures shall specify the frequency of calibration verification checks.

2.22.16 Any external service used to calibrate an XRF instrument must calibrate the instrument to the original manufacturer's specifications.

2.23 Testing Procedures

2.23.1 The Registered Organization shall use testing procedures which meet the needs of the customer and which are appropriate for the customer contracts it undertakes. These procedures shall be available to the customer at the location where testing is being conducted.

2.23.2 Testing procedures shall preferably be based on one of the following:

- a.)** international, regional, or national standards (preferred);
- b.)** procedures published in relevant scientific texts or journals, or by reputable technical organizations; or,
- c.)** procedures as specified by the manufacturer of the XRF instrument.

2.23.3 The Registered Organization shall develop a testing plan prior to conducting measurements. The testing plan shall be available to the customer at the location where testing is being conducted. The plan shall be based on applicable regulations and appropriate statistical methods.

2.23.4 Where the customer requires deviations, additions or exclusions from the testing procedure, these shall be recorded in detail with the appropriate testing data, shall be included in all documents containing testing results, and shall be communicated to affected personnel.

2.23.5 The Registered Organization shall have procedures for recording relevant data and operations relating to testing. These records shall include the testing procedure used, the identification of the operator, diagrams or other equivalent means to identify the testing locations, and, if appropriate, the statistics the testing procedures are based upon.

- 2.23.6** When necessary, testing procedures shall be supplemented with additional details to ensure consistent application.
- 2.23.7** When the customer does not specify the testing procedures to be used, the Registered Organization shall select appropriate procedures as described in 2.23.2.
- 2.23.8** Procedures developed or adopted by the Registered Organization may also be used if they are appropriate for the intended use.
- 2.23.9** The customer shall be informed of and approve the testing procedure chosen before testing begins.
- 2.23.10** The Registered Organization shall confirm that it can properly conduct its standard procedures before conducting them for customers. If the standard procedure changes, confirmation of the procedure shall be repeated.
- 2.23.11** The Registered Organization shall inform the customer when the procedure proposed by the customer is considered to be inappropriate, out of date, illegal, etc.
- 2.23.12** The introduction of testing procedures developed by the Registered Organization shall be assigned to qualified personnel equipped with adequate resources.
- 2.23.13** At minimum, the Registered Organization shall have a written testing procedure that meets the requirements given in 40 CFR Part 745.
- 2.23.14** Where appropriate, the Registered Organization shall request that customers or their representatives observe the testing.

2.24 Data Reduction and Reporting

- 2.24.1** The Registered Organization shall have a procedure for the systematic review of testing data and reports of testing.
- 2.24.2** When computers or automated equipment are used for the acquisition, processing, recording, reporting, storage or retrieval of testing data, the Registered Organization shall ensure that:
- a.)** computer software developed by the user is documented in sufficient detail, is suitably validated, and is adequate for use;
 - b.)** procedures are established and implemented for protecting testing data. Such procedures shall include, but not be limited to, integrity and confidentiality of data collection, data storage, data processing, and data transmission; and,

- c.) computers and automated equipment are maintained to ensure proper functioning and are operated within the environmental limits and operating conditions necessary to maintain the integrity of the testing.

2.24.3 The Registered Organization shall establish and maintain a data review process beginning before the start of testing and extending through delivery of the testing report. When possible, the data review process shall be an independent review conducted by the Quality Manager (or Quality Manager Deputy) other than the operator who performed the testing under review. For a Registered Organization of only one person, the operator shall perform and document a second review of the data as the Quality Manager.

2.24.4 The data reduction and review process shall include, but not necessarily be limited to:

- a.) comparison of calibration check data against the manufacturer's acceptance limits,
- b.) transcription of data and
- c.) adherence to the procedures for conduct of the testing.

2.24.5 The review process shall be documented and shall be completed before the testing data are reported.

2.24.6 The final report issued to the customer shall at minimum include:

- 2.24.6.1** Project and/or customer name and customer address, and postal address of the location where testing was conducted;
- 2.24.6.2** General testing site description and/or unit designation;
- 2.24.6.3** The XRF instrument manufacturer, model number, radiation source type, radiation source age or date of XRF instrument manufacture and, if appropriate, and software version number for the XRF instrument used for the testing;
- 2.24.6.4** The name(s) and inspector/risk assessor license identifier(s) of the operator(s) who conducted the testing, and Registered Organization name, postal address and telephone number(s);
- 2.24.6.5** A statement describing the testing protocols used to collect the testing data. This shall include at minimum the rooms where testing was conducted, what surfaces were tested, how many tests were conducted on each surface, and where on the surface testing was conducted;
- 2.24.6.6** The local, state, territorial, tribal or federal definition of lead-based paint in units of milligrams per square centimeter, [mg/cm²], used in the report;

- 2.24.6.7** The XRF instrument performance level(s) used for calibration checks shown in the HUD XRF PCS for the XRF instrument type used to perform testing;
- 2.24.6.8** A glossary of technical terms used to report results. At a minimum, the glossary shall contain definitions for building components and any codes used, such as testing component orientation codes, used in reporting results;
- 2.24.6.9** Any relevant notes regarding the testing, including but not limited to, the operating mode and/or read time utilized during testing, and diagrams, notes, photos and videos from/of the testing;
- 2.24.6.10** The XRF testing data in units of milligrams per square centimeter, [mg/cm²], with a determination that the measurement is: below or equal-to-or-above the applicable local, state, territorial, tribal or federal definition of lead-based paint; or, positive or negative for the presence of lead-based paint as defined by the applicable local, state, territorial, tribal or federal requirements; and,
- 2.24.6.11** A copy of the XRF instrument print-out that includes every electronically recorded XRF measurement, if the instrument is capable of such recording.
- 2.24.7** The final report shall:
- 2.24.7.1** Be reviewed by the Quality Manager or Quality Manager Deputy. For Registered Organizations of only one person, this review will be performed and documented as a second review of the data;
- 2.24.7.2** Be reviewed and signed by the operator(s) who conducted the testing;
- 2.24.7.3** Be approved for release to the customer and signed by the Technical Manager or Technical Manager Deputy; and,
- 2.24.7.4** Show the titles “Operator” and/or “Technical Manager” (however titled), as applicable, for the signatories. Each Operator who collected data included on the report shall be identified as an “Operator” on the report.

2.25 Radiation Safety Program

The Registered Organization shall have an operating radiation safety program. The radiation safety program shall include:

- a.)** a procedure and schedule for leak testing that includes the company name, address, telephone number, and contact person name for processing leak sample tests;

- b.)** a procedure for use and maintenance of an instrument log (a bound book with numbered pages or electronic equivalent) for each XRF instrument. The log shall include at minimum the manufacture's name and model, serial number, date sourced, isotope identity and activity, when repairs or adjustments were made and by whom they were made, and information on the use of the instrument that includes date, time of day, user identity and location of use;
- c.)** contact and emergency contact information for whom to immediately contact regarding occurrence of damage to the XRF instrument that does or may involve unwanted radiation exposure;
- d.)** contact and emergency contact information for the authority having jurisdiction over the XRF instrument radioactive source;
- e.)** procedures for safe handling, transport, storage and use of the XRF instrument;
- f.)** procedures for conduct of and contact information on the radiation dosimetry service used, if applicable;
- g.)** assignment of a Radiation Safety Officer (RSO) to deal with the authority or authorities having jurisdiction over the XRF radioactive source. The RSO shall be responsible for dealing with emergencies involving the XRF radioactive source. The RSO shall be available at all times through use of the contact information included; and,
- h.)** licenses from the authorities having jurisdiction for the radioactive materials in the XRFs used within their jurisdictions. Copies of current licenses shall be found in Appendix C of the Quality Manual.

ARTICLE III

REQUIREMENTS AND CONDITIONS FOR PROFICIENCY TESTING

3.1 Proficiency Testing

No PT program for *in situ* XRF testing for lead in surface coatings currently exists. Upon the establishment of a proficiency program deemed appropriate and acceptable by the RPB, all FMR Registered Organizations will be required to enroll in and maintain proficiency in such program.

ARTICLE IV

XRF FIELD MEASUREMENT REGISTRY REGISTRATION

4.1 Initial Organization Registration

For an organization to qualify for initial registration in the FMR, the organization shall successfully complete the registration process and meet the requirements of this policy. Registration is summarized in the following steps. A flow chart outlining this process can be found in Appendix C.

- 4.1.1** Full payment of FMR Program fees, as specified in the current Registry Programs Fee Schedule posted on the AIHA[®] Registry Programs, LLC's website, shall be received.
- 4.1.2** The completed organization application shall be submitted to AIHA[®] Registry Programs, LLC on compact disc in duplicate. The AIHA[®] Registry Programs, LLC staff shall review the application for completeness within ten (10) business days.
- 4.1.3** The organization will be granted twenty (20) business days to respond to any deficiencies found during the completeness review.
- 4.1.4** Steps 4.1.2 and 4.1.3 will be repeated a maximum of two iterations. If the application is not complete at this time, the application process will be halted and the organization will have to wait six (6) months before reapplying for registration.
- 4.1.5** The complete organization application will be placed in queue for the next available member of the Registry Programs Board (RPB) to perform a technical review.
- 4.1.6** The completed application shall undergo a technical review within twenty (20) business days of receipt by a qualified RPB member.
- 4.1.7** The organization will be granted twenty (20) business days to respond to any deficiencies found during the technical review.
- 4.1.8** Steps 4.1.6 and 4.1.7 will be repeated a maximum of two iterations. If the application is not complete at this time, the application process will be halted and the organization will have to wait six (6) months before reapplying for registration.
- 4.1.9** Ten (10) percent of applications will be subject to a quality audit by a RPB member before registration notification (this audit will be performed by a different RPB member than referenced in 4.1.5 and 4.1.6), as outlined in

sections 4.3.8 and 4.3.9. RPB shall complete its quality audit review within ten (10) business days of receipt.

- 4.1.10** If deficiencies are found in the application during the completeness, technical or quality audit review, the organization can be granted up to a forty (40) business day extension to submit their deficiency response.
- 4.1.11** Before the organization may qualify for registration on the FMR, the organization must be placed on a ballot for approval of registration by the RPB.
- 4.1.12** Before the organization and its affiliated operators are included on the registry web list the organization shall successfully complete the registration process.
- 4.1.13** The Registered Organization will be added to the AIHA[®] Registry Programs web list of FMR Registered Organizations and Affiliated Operators within ten (10) business days of registration.

4.2 XRF FMR Affiliated Operator Enrollment and Addition

For an operator to qualify for inclusion on the web list of FMR Registered Organizations and Affiliated Operators he/she shall meet the requirements of an Operator, as detailed in section 2.6.7. A flow chart outlining the process of affiliated operator addition can be found in Appendix D.

- 4.2.1** Operator affiliated with an organization seeking initial registration must be included on the appropriate forms of the organization application. Documentation of the affiliated operator's training, qualifications and licensure must be included with the organization application and will be reviewed through the initial organization registration process outlined in section 4.1.
- 4.2.2** Operator's to be enrolled as affiliated operators with a Registered Organization, an organization that has previously achieved and maintains registration, will be reviewed through the following steps.
- 4.2.3** Full payment of FMR Program fees, as specified in the most recent Registry Programs Fee Schedule posted on the AIHA[®] Registry Programs, LLC's website, shall be received by AIHA[®] Registry Programs, LLC.
- 4.2.4** The operator enrolling shall be affiliated with a Registered Organization and shall comply with this Registered Organization's quality system as defined in Article II.
- 4.2.5** The completed operator addition form and training, qualification and licensure documentation, as detailed in the XRF FMR Program Application, shall be submitted to AIHA[®] Registry Programs, LLC. The AIHA[®] Registry Programs, LLC staff shall review the application within five (5) business days. Operator additions that meet the requirements will skip to step 4.2.7.

- 4.2.6** The Registered Organization will be granted ten (10) business days to respond to any deficiencies found during the completeness review.
- 4.2.7** Steps 4.2.4 and 4.2.5 will be repeated a maximum of two iterations. If the information necessary to demonstrate that the enrolling individual meets the requirements of an operator, as defined in section 2.6.7 is not submitted or satisfactory at this time the enrollment process will be halted and the operator will have reenroll when he/she can meet the requirements.
- 4.2.8** The operator will be added to the AIHA[®] Registry Programs web list of FMR Registered Organizations and Affiliated Operators within five (5) business days of the add forms being accepted as meeting the requirements.

4.3 Registration Process

Flow charts outlining the registration processes for an organization and its affiliated operators are included as Appendix C and D. Specific requirements to supplement these flow charts are listed below:

4.3.1 Registration Process

The registration process shall be completed within twelve (12) months from the date of receipt by AIHA[®] Registry Programs of the FMR application. An organization that fails to complete the requirements for registration or maintenance of registration within this specified time period of application review will have its application administratively removed from consideration by the AIHA[®] Registry Programs, LLC. The organization and/or its affiliated operators will also be administratively removed from the FMR program and the FMR Registered Organizations and Affiliated Operators web list. Once notified of the removal of its application, the organization shall wait six (6) months before reapplying for registration. If the application is removed from consideration by AIHA[®] Registry Programs, LLC, then the organization shall have a right to appeal this decision to deny registration (refer to Articles V and VI).

4.3.2 Requests for Extensions

An organization may request, in writing, an extension of time to complete all registration requirements from the AIHA[®] Registry Programs. Extensions are granted in twenty (20) business day increments up to forty (40) business days. The application process will be halted and the organization will be administratively removed from the FMR program if the application is not completed by the end of the extension period.

4.3.3 Submittal of Applications

Organization applications shall be submitted on compact disc in duplicate to AIHA[®] Registry Programs, LLC. Applications may be obtained from the

AIHA[®] Registry Programs website.

Operator addition forms may be obtained from the AIHA[®] Registry Programs website. A single copy of operator addition application materials is sufficient. Operator addition applications may be submitted electronically via email or on compact disc.

4.3.4 Return of Materials

Any return of materials to the submitting organization and/or operator shall be documented and copies of the returned materials maintained in AIHA[®] Registry Programs records.

4.3.5 Halting the Process

If the process is halted for reasons identified in this Article, then the organization and/or operator will be required to submit another application and pay application fees again. There shall be no refund of application fees. The organization and/or operator will forfeit all application fees if the process is halted. The organization will have to wait six (6) months to reapply.

4.3.6 Initial Review

The AIHA[®] Registry Programs shall have ten (10) business days to complete the initial completeness review of the organization application. The scope of this review shall minimally include an application completeness check.

4.3.7 Technical Review

For an initial or biennial organization FMR application technical review, a qualified member or the RPB shall have twenty (20) business days, from the time of receipt of application from the AIHA[®] Registry Programs, to complete their review of the organization application and provide a formal request for additional information to AIHA[®] Registry Programs for further action or recommend the organization for registration. Operators included with the organization application will be reviewed during this technical review.

For the technical review of an operator addition application submitted with a currently Registered Organization, an AIHA[®] Registry Programs Staff Reviewer shall have five (5) business days to complete their review of the operator addition and provide a formal request for additional information or determine that the operator meets the necessary requirements.

4.3.8 Quality Audit Review

Selection of an FMR application for a quality audit review by a RPB member

shall be determined at the beginning of the process and shall be based upon pre-defined selection criteria. RPB quality audit reviews shall be performed on a 10% frequency for all FMR organization application reviews unless otherwise directed by the RPB pursuant to written policy. The quality audit will be performed by a different RPB member than the one who performed the technical review.

4.3.9 Scope of Quality Audit Review

The scope of the RPB quality audit review shall cover the review process from receipt of the application to the final recommendation by RPB reviewer and shall include a determination of conformance to policy, timelines and technical requirements.

4.3.9.1 RPB shall complete the quality audit review within ten (10) business days of receipt of the application from the AIHA[®] Registry Programs, LLC.

4.3.10 Registration Ballot Process

4.3.10.1 The RPB ballot for board approval of registration shall list the Organizations that have met the necessary FMR program requirements for registration including the FMR identification number.

4.3.10.2 The RPB vote shall be in accordance with the provisions of Article I, Section 1.2.1.

4.3.10.3 The RPB ballot for board approval or registration of organizations will close within five (5) business days.

4.3.10.4 The RPB decision may be appealed to the RPB Executive Committee (see Article VI).

4.3.10.5 The AIHA[®] Registry Programs web list of FMR Registered Organizations and Affiliated Operators will be updated within ten (10) business days of the close of the RPB ballot.

4.4 Maintenance of Registration

Failure to comply with these requirements will result in suspension and possible removal from the program. Suspension will result in the temporary removal of the Registered Organization and its affiliated operators from the registry.

4.4.1 Reporting of Significant Changes Within an Registered Organization

The Registered Organization shall notify AIHA[®] Registry Programs, LLC in writing of changes in ownership, personnel, quality system, or other matters directly impacting the Registered Organization's quality and ability to meet the

policy requirements within twenty (20) business days of the change.

4.4.2 Biennial Renewal

Once every two (2) years the Registered Organization will receive a request from AIHA[®] Registry Programs, LLC to submit an application that provides updated and current Registered Organization and affiliated operator information. This application shall be completed and returned to AIHA[®] Registry Programs, LLC within forty (40) business days. The updated application shall be reviewed following the applicable steps of the organization registration process (section 4.1), as shown in Appendix C, to ensure that the Registered Organization's records, quality system, etc. are current and acceptable. A Registered Organization's failure to provide a completed application to AIHA[®] Registry Programs, LLC within the required time frame shall result in suspension and possible removal of the Registered Organization and/or its affiliated operators' names, as appropriate, from the AIHA[®] Registry Programs, LLC web list of FMR Registered Organizations and Affiliated Operators.

4.5 Maintenance of Associated Fees

After initial enrollment, the organization will be invoiced annually in October or November for the fees indicated as annual fees in the Registry Programs Fee Schedule. If the organization fails to pay the associated fees accrued by participation, AIHA[®] Registry Programs, LLC will temporarily remove (suspend) the organization from the AIHA[®] Registry Programs, LLC web list of FMR Registered Organizations and Affiliated Operators. AIHA[®] Registry Programs, LLC will notify the organization of this action in writing, specifying a payment deadline. If payment is not received by AIHA[®] Registry Programs, LLC within the specified time frame and a written request from the organization to extend the payment deadline has not been received and accepted, the AIHA[®] Registry Programs, LLC shall administratively remove the organization from the program. This action does not require a vote of the RPB and may not be appealed to the RPB Executive Committee.

ARTICLE V

SUSPENSION, REMOVAL AND DENIAL OF FMR REGISTRATION

5.1 Grounds

AIHA[®] Registry Programs, LLC may suspend, remove, or deny an organization's or its affiliated operator's inclusion on the FMR if any of the following circumstances apply:

- 5.1.1 The organization and/or operator fail(s) to comply with any of the requirements of the FMR Program.
- 5.1.2 The organization is no longer in the business of conducting *in situ* XRF testing for lead in surface coatings.
- 5.1.3 The Registered Organization fails to submit an updated application as part of the biennial renewal process within the required time frame.
- 5.1.4 The organization and/or operator fail(s) to respond to a written request for information within the required time frame.
- 5.1.5 The organization fails to notify AIHA[®] Registry Programs, LLC of changes in ownership, personnel, quality system, or other matters directly impacting quality within the required time frame.
- 5.1.6 Reserved.
- 5.1.7 Reserved.
- 5.1.8 Reserved.
- 5.1.9 The organization misrepresents their affiliation with the AIHA[®] Registry Programs, LLC or uses their FMR status in a misleading manner.
- 5.1.10 The organization or its affiliated operators misrepresents material information in an FMR application, or in any written correspondence with AIHA[®] Registry Programs, LLC.
- 5.1.11 The organization (or its owner(s)) has been convicted of a violation of federal/state/territorial/tribal/local laws related to the work performed under the FMR Program.
- 5.1.12 The organization and/or its affiliated operators knowingly reports fraudulent or erroneous data.
- 5.1.13 The organization and/or its affiliated operators misrepresent the organization's registration status and/or their participation in a PT program

through false or misleading advertising or communication (written or verbal) or in any other form.

5.1.14 The organization does not pay its fees in a timely manner.

5.2 Suspension

Suspension is a temporary removal of the organization's FMR registration and/or its affiliated operators when the organization and/or its affiliated operators are determined to be out of compliance with specific program requirements. Suspension may occur at any time for cause. Reasons for suspension include, but are not limited to, those outlined in Section 5.1. The organization has the right to appeal a suspension decision as outlined in Article VI.

Conditions for suspension include:

- 5.2.1** Suspension may be initiated upon the recommendation of the RPB Chairperson or RPB Executive Committee. A finite period of time for the suspension shall be clearly defined.
- 5.2.2** A two-thirds majority vote of the RPB to suspend shall be obtained for those suspension actions that are not automatic (administrative).
- 5.2.3** A FMR registration shall be immediately suspended upon notification of the initiation of the removal process.
- 5.2.4** A Registered Organization may submit a request to AIHA[®] Registry Programs, LLC to voluntarily suspend the registration(s) of the organization or its inclusion of its affiliated operators with the agreement of the RPB Chairperson for just cause and for a predetermined period of time.
- 5.2.5** AIHA[®] Registry Programs, LLC shall notify the organization by certified mail, return receipt requested, of the reasons for and conditions of the organization and/or affiliated operator suspension, the action required for reinstatement, and the deadline for satisfactorily completing the action.
- 5.2.6** During the suspension period, the organization may not advertise the organization's FMR registration, as applicable.
- 5.2.7** Suspension shall be terminated by the RPB Chairperson upon resolution of the initial cause.
- 5.2.8** Suspension shall proceed to removal if the actions required for reinstatement are not met by the deadline. This action shall be authorized and initiated by the RPB Chairperson for those suspension actions that are not automatic (administrative or proficiency).
- 5.2.9** AIHA[®] Registry Programs shall notify the organization, in writing, of any

action (reinstatement or removal) at the conclusion of the suspension period.

5.3 Removal Process

AIHA[®] Registry Programs, LLC staff shall continuously monitor the application process and information from organization customers, to identify situations of nonconformance. If AIHA[®] Registry Programs, LLC staff determines that grounds for removal (see Section 5.1) are observed, then AIHA[®] Registry Programs, LLC staff shall provide the RPB Chairperson with written notification of the nonconformance for those suspension actions that are not automatic (administrative). This notification shall, minimally, include the organization name, an explanation of the grounds for removal (by specific policy citation), and all pertinent supporting documentation. A flow chart outlining the removal process is included as in Appendix E. Specific requirements to supplement this flow chart are listed below.

5.3.1 Communications

All communication to the organization regarding removal actions shall be in writing and be sent to the organization by an appropriate documented delivery process. The letter shall clearly state the issues under review and the required date of response.

5.3.2 Removal Ballot

A ballot including the evidence that supports the grounds for removal shall be submitted to the RPB.

5.3.3 RPB Vote

The RPB shall vote in accordance with Article I, Section 1.2.1, to remove the organization from the FMR registry or terminate the removal process and reinstate the organization to registered status. The vote shall be completed in five (5) business days.

5.3.4 Notification of RPB's Decision

Within ten (10) business days from completion of the RPB vote, AIHA[®] Registry Programs, LLC staff shall send a letter using a documented delivery process to the organization informing those parties of the RPB decision to either: a) terminate the removal process, remove the suspension and reinstate the registration status of the organization; or b) terminate the organization's registration and offer the organization the right to appeal the decision to the RPB Executive Committee. The organization will have ten (10) business days to provide AIHA[®] Registry Programs, LLC with a written request to appeal. The organization shall also be informed of its monetary responsibilities shall it choose to appeal.

5.3.5 Removal

Absent an appeals request, the removal decision of the RPB is final. The AIHA[®] Registry Programs, LLC shall take the necessary steps, consistent with

the RPB removal decision, to remove the organization and/or its affiliated operators from the FMR program or to reinstate the registration status of the organization to provide official notification to the organization of such actions.

5.4 Process For Denial of Registration

If an organization fails to meet the requirements of the FMR Program, fails to complete the application and review process, or meets any of the grounds for denial of registration, the RPB may deny registration. The process for denial of registration is identical to the process for removal as detailed in Sec.5.3.

ARTICLE VI

APPEALS PROCESS

6.1 Right to Appeal

An organization has the right to appeal the decision of the RPB to suspend, deny or remove the organization's registration or their affiliated Operator's inclusion in the FMR Program to the RPB Executive Committee. If the organization chooses to appeal, it shall be responsible for some costs of the process. If the suspension, denial or removal of the organization's registration or their affiliated operator's inclusion is overturned, all costs for the appeal will be covered by the AIHA[®] Registry Programs, LLC. If the suspension, denial or removal of the organization's registration or their affiliated operator's inclusion is upheld, AIHA[®] Registry Programs, LLC shall pay fifty (50) percent of the transcription costs and the organization shall pay all remaining costs incurred. Organizations seeking initial registration of the organization shall bear the total cost of the transcription record. The expenses of any witnesses for either party shall be paid by the party producing such witnesses. All other expenses shall be borne by the party incurring those expenses. A flow chart outlining the appeals process is included as Appendix F. Specific requirements to supplement this flow chart are listed below.

6.2 Notice of Appeal

If the organization wishes to appeal the RPB decision, it shall notify the AIHA[®] Registry Programs, LLC in writing within ten (10) business days of the date of receipt of the letter from the AIHA[®] Registry Programs, LLC outlining the RPB's decision to remove or deny the organization's registration and/or its affiliated operator's inclusion in the FMR Program. The response shall include the reason for the appeal and a statement accepting responsibility for monetary expenses as described above. Failure to respond will result in termination of the registration of the organization or the registration of the affiliated operator.

6.2.1 Communications within AIHA[®] Registry Programs, LLC

If the organization notifies the AIHA[®] Registry Programs, LLC within ten (10) business days of its desire to appeal the RPB decision, the AIHA[®] Registry Programs, LLC shall contact the Chairperson of the RPB within five (5) business days. The Chairperson of the RPB will then contact the AIHA[®] Registry Programs' Board Coordinator, within ten (10) business days of notification, with recommendations of individuals to serve on the appeals committee.

6.3 Appeals Committee

Within twenty (20) business days of notification, the AIHA[®] Registry Programs' Board Coordinator shall have the responsibility to formally appoint an appeals

committee and designate a Chairperson to hear the appeal. The committee shall consist of at least three (3) uninvolved persons (persons not directly involved with the removal/denial decision nor a direct competitor of the organization), two (2) of whom shall have experience in the registry program.

6.4 Appeals Hearing

6.4.1 Site of Hearing.

The Chairperson of the appeals committee shall designate a time and place for the hearing that does not represent an undue burden for the organization or required participants. The time shall be no later than forty (40) business days after the formation of the appeals committee. The hearing shall commence at that time unless the Chairperson grants a continuance for good cause shown by the party requesting the continuance. The AIHA[®] Registry Programs, LLC shall provide at least twenty (20) business days written notice to the organization and its affiliated operator(s) of the reasons for the denial or removal action, the time and place of the hearing, an opportunity to examine evidence submitted in this adverse action and to present evidence on behalf of the organization and/or its affiliated operator(s). In addition, notice shall be provided to the Chairperson of the RPB.

6.4.2 Representation by Counsel

Counsel at the hearing may represent each party, at its own cost.

6.4.3 Stenographic Record

A stenographic record shall be made of the hearing.

6.4.4 Attendance at Hearing

In the event the organization fails to attend the hearing without good cause, the organization and its affiliated operator(s) shall be deemed to have waived its rights of appeal and the appeals committee shall recommend to the AIHA[®] Registry Programs' Board Coordinator that the adverse action be affirmed.

6.4.5 Parties

The parties of the hearing shall be the organization and the RPB. The RPB may be assisted in the presentation of its case by a staff representative of the AIHA[®] Registry Programs, LLC. Either party may choose to have witnesses; however, the Chairperson may require the exclusion of witnesses during presentation of evidence.

6.4.6 Order of Proceedings

The appeals hearing shall proceed as follows:

- 6.4.6.1.** The hearing shall be opened by the Chairperson of the appeals committee, who shall note the time, place and date, the presence and identity of the members of the appeals committee, the organization, RPB representative, and witnesses to the hearing.

- 6.4.6.2.** At the commencement of the hearing, the Chairperson shall offer each party an opportunity to make an opening statement to clarify the issues involved.
- 6.4.6.3.** The appellant organization and the appeals committee shall each present its case. Any documentation or presentations by witnesses may be subject to review and questions by the other parties to the appeal.
- 6.4.6.4.** The Chairperson shall have the discretion to vary this procedure but shall provide full and equal opportunity to each party for the presentation of all materials or relevant facts.
- 6.4.6.5.** Information offered by any party may be received as evidence by the Chairperson.
- 6.4.6.6.** The names and addresses of all witnesses and the identification of each exhibit in the order received shall be made a part of the record, which shall be maintained by the Chairperson.

6.4.7 Evidence

The parties to the hearing may offer any evidence that is material, relevant and bears on the issues before the appeals committee. The Chairperson and the appeals committee will give weight to the evidence presented as they see appropriate. In addition to the evidence taken in the presence of the hearing tribunal, a party may, subject to rulings of the Chairperson, submit evidence of witnesses by affidavit. The appeals committee shall give such weight to affidavits, as it deems appropriate, after considering any objections made to the admission of such affidavits. The proponent of an issue or proposition has the burden of proof on the matter.

6.4.8 Adjournment

The Chairperson, for good cause, may adjourn the hearing upon request or upon his/her own initiative, subject to reconvening at a specified future date.

6.4.9 Closing the Appeals Hearing

The Chairperson shall declare the hearing closed at the conclusion of closing statements or at a later date if he/she decides to permit the parties to file briefs or other documents subsequent to the hearing.

6.4.10 Reopening the Appeals Hearing

The Chairperson may reopen the hearing, for good cause, upon application by any party thereto or upon his/her own initiative.

6.4.11 Report of the Appeals Committee

The appeals committee shall render a final written report, approved by a

majority of the members of the appeals committee, no later than twenty (20) business days after the close of the hearing. The Chairperson shall submit a copy of the report to the AIHA[®] Registry Programs' Board Coordinator, the Chairperson of the RPB, the AIHA[®] Registry Programs, LLC and to all participants of the appeals hearing. Such report shall include the appeals committee findings, conclusions and recommendation concerning the action that had been the subject of the appeal. The appeals committee shall recommend that the adverse action be affirmed unless it determines such adverse action was arbitrary, capricious, an abuse of discretion, not in accordance with the required procedures, or not based upon substantial evidence

6.5 Final Decision

The AIHA[®] Registry Programs' Board Coordinator shall possess exclusive authority to render a final decision in any matter appealed in accordance with this appeal procedure. Within forty (40) business days of issuance of the report of the appeals committee, the board shall give written notice of its final decision to all parties to the appeal hearing.

If the AIHA[®] Registry Programs' Board Coordinator renders a decision to uphold the removal or denial of FMR registration, the AIHA[®] Registry Programs staff shall:

- 6.5.1** Inform the RPB of the board's decision.
- 6.5.2** Inform the organization and its affiliated operator(s) of the Registry Programs' Board Coordinator's decision.
- 6.5.3** Delete the organization and/or its operator(s) name from all official FMR web listings within five (5) business days of the Registry Programs' Board Coordinator's decision.

If the AIHA[®] Registry Programs' Board Coordinator renders a decision to deny removal or grant registration, the AIHA[®] Registry Programs, LLC staff shall:

- 6.5.4** Inform the RPB of the Registry Programs' Board Coordinator's decision.
- 6.5.5** Inform the organization of the Registry Programs' Board Coordinator's decision and issue written confirmation of registration in the FMR Program, if applicable.
- 6.5.6** Reinstate registration of the organization and add the Registered Organization and/or its affiliated operator(s) name to the FMR Registered Organization and Affiliated Operators web list.

ARTICLE VII

ADVERTISING

7.1 Advertising Policy

All FMR Registered Organizations are encouraged to advertise their registration on the FMR by using the prescribed language defined in this article.

The following policies govern the Registered Organization's reference to its FMR registration status in all communication media, such as the Internet, documents, reports, business cards, brochures or advertising.

Failure to conform to these advertising policies shall result in any or all of the following: request for corrective action, suspension or revocation of registration, publication of the transgression or possible initiation of legal actions.

7.2 Advertising Wording

7.2.1 Registered Organizations

An organization that has completed the registration process and remains in good standing in the XRF Field Measurement Registry Program may use the following terms in advertising:

- a.) "ABC Organization is a Registered Organization in the AIHA[®] Registry Programs, LLC's XRF Field Measurement Registry Program."
- b.) "ABC Organization is Registered in the XRF Field Measurement Registry."

7.2.2 Official Notification

An organization shall not advertise that it is FMR registered until it has received official notification from the AIHA[®] Registry Programs, LLC that it is registered.

7.2.3 Suspended Organizations

Organizations registered by AIHA[®] Registry Programs, LLC but under suspension, may not advertise that they are registered in the AIHA[®] Registry Programs, LLC XRF Field Registry Program.

7.3 Variation in Advertising

Any other use of these terms or any variation in terminology requires prior AIHA[®] Registry Programs, LLC approval. The FMR is not an accreditation or certification program, when advertising, the words accreditation, certification, or variations thereof, shall not be used in association with FMR registrant organizations.

ARTICLE VIII

MISCELLANEOUS

8.1 Indemnity

AIHA[®] Registry Programs, LLC shall indemnify and hold harmless its directors, officers, employees, agents and volunteers, members of the RPB, and all other representatives of the AIHA[®] Affiliate Laboratory Programs, their heirs and legal representatives from any and all claims for loss, liability or damage, including costs, fees and expenses that arise out of or in connection with the acts or omissions of such person committed in the performance of the Registry program activities provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of AIHA[®] Registry Programs, LLC.

8.2 Representation of Registration

See Article VII-Advertising

8.3 List of FMR Registered Organizations and Operators

The AIHA[®] Registry Programs, LLC maintains a list of Registered Organizations and Affiliated Operators on the AIHA[®] Registry Programs, LLC website. If an organization is suspended or revoked, the organization and its affiliated operators will be removed from the web list.

8.4 Confidentiality of Records

Files and records of the FMR shall be confidential and their use restricted to personnel engaged in administration of the Registry.

8.5 Conflicts of Interest

The AIHA[®] Registry Programs, LLC requires that all members of the RPB or other agents of AIHA[®] Registry Programs, LLC involved sign a Conflict of Interest statement that prohibits these individuals from participating in any activities and/or proceedings to grant, deny or revoke the registration of any organization where such person has a vested interest in the registration.

8.6 Fees

The fees associated with the FMR program shall be determined by the AIHA[®] Registry Programs, LLC. The AIHA[®] Registry Programs Fee Schedule shall include all appropriate fees for the FMR program. The current AIHA[®] Registry Programs Fee Schedule shall be maintained on the AIHA[®] Registry Programs, LLC web site.

8.7 Feedback From Participating Organizations

Participating organizations desiring changes in the AIHA[®] Registry Programs policies

or programs shall detail their suggestion(s) in writing to the AIHA® Registry Programs, LLC. The AIHA® Registry Programs, LLC shall inform the RPB Chairperson and of the suggestion(s) and review them when making future policy revision.

8.8 Complaints

Participating organizations and others desiring to file a complaint against a Registered Organization or affiliated operator as a result of performance or misrepresentation, or a complaint concerning other AIHA® Registry Programs, LLC issues, may do so in writing to the AIHA® Registry Programs, LLC. The AIHA® Registry Programs, LLC shall inform the RPB of the complaint to review and will take the appropriate actions.

ARTICLE IX APPENDICIES

APPENDIX A: Abbreviations

The following abbreviations may be helpful in interpreting this policy document and the FMR Application.

Abbreviation	Definition
40 CFR Part 745	40 Code of Federal Regulations Part 745
AIHA[®]	American Industrial Hygiene Association
CRM	Certified Reference Material
EPA	U.S. Environmental Protection Agency
FMR	Field Measurement Registry
HUD	U.S. Department of Housing and Urban Development
mg/cm²	milligrams per square centimeter
NIST	U.S. National Institute of Standards and Technology
PCS	Performance Characteristics Sheet
PT	Proficiency Testing
QA/QC	Quality Assurance/Quality Control
RPB	Registry Programs Board
RSO	Radiation Safety Officer
SRM	Standard Reference Material
XRF	X-Ray Fluorescence

APPENDIX B: Terms

The following terms may be helpful in interpreting this policy document and the FMR Application

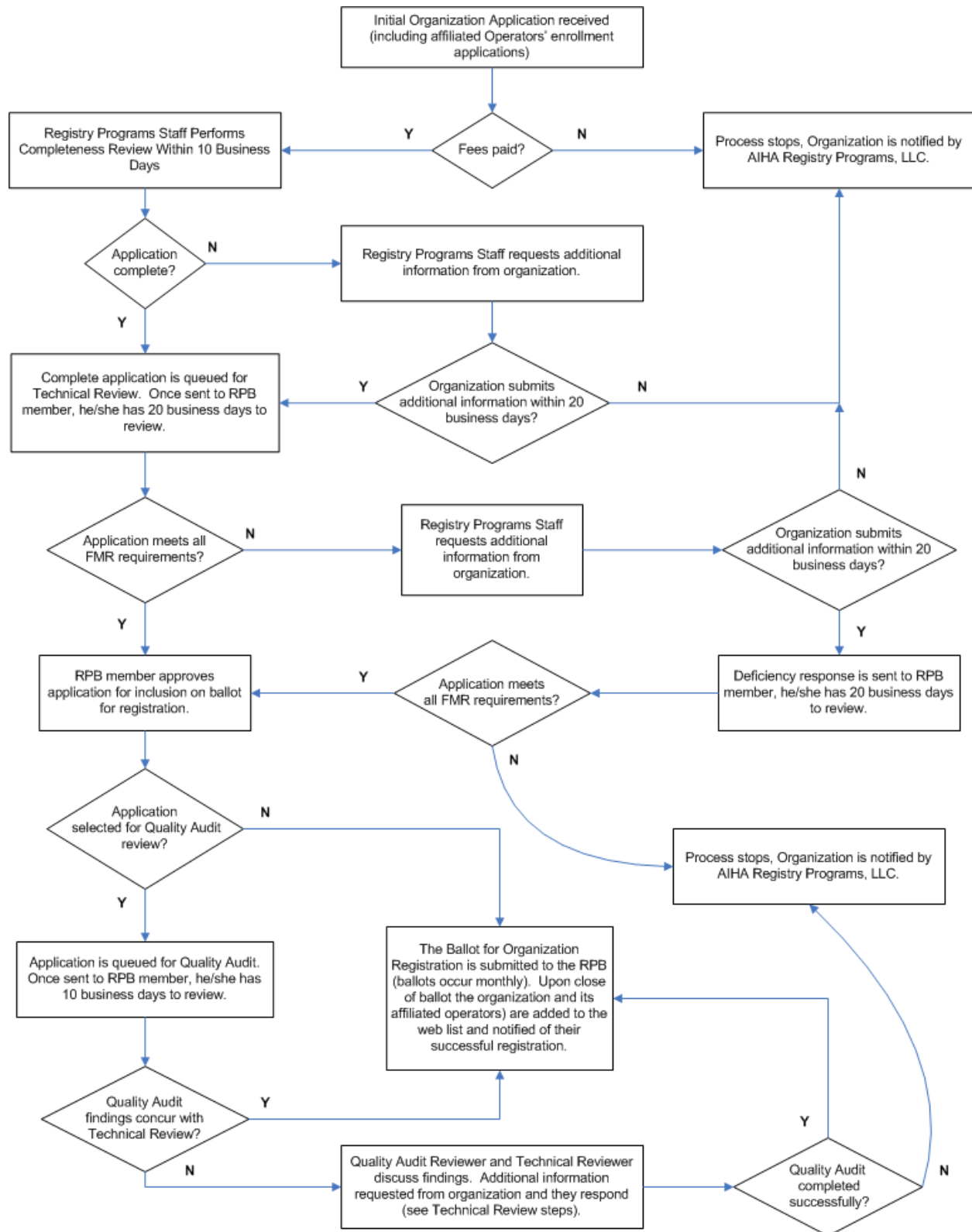
Term	Definition
Affiliated Operator	An operator of an XRF instrument that is to be enrolled with an organization who follows that organization's quality system and meets the definition of affiliation as set forth in this policy document.
AIHA[®] Affiliate Laboratory Programs	General term referring to any program within the AIHA [®] Registry Programs, LLC, AIHA [®] Proficiency Analytical Testing Programs, LLC or AIHA [®] Laboratory Accreditation Program, LLC established to maintain the highest possible standards of performance for operators, analysts, organizations and/or laboratories evaluating exposures to hazardous agents.
AIHA[®] Registry Programs Fee Schedule	A document that lists the current fees for all AIHA [®] Registry Programs, LLC's registry programs. This document includes enrollment forms and the enrollment dates for the registry programs.
AIHA[®] Registry Programs, LLC	A limited liability company that operates a group of registry programs with the primary mission of establishing standards for our participants to promote the production of quality data for use in evaluating exposures that impact public health, the environment and natural resources.
Biennial Application	A renewal application that shall be submitted every two years by all registered FMR organizations.
Calibration Check	A calibration reading taken on a standard reference material by the XRF instrument to determine if the instrument is working as expected. If readings are outside the acceptable calibration check range, the manufacturer's instructions must be followed to bring the instrument into control before XRF testing proceeds.
Calibration Check Sample	Test film sample(s) with known lead levels in units of milligrams per square centimeter, [mg/cm ²], and known uncertainty of the lead level(s). For use in this program shall be U.S. National Institute of Standards and Technology (NIST) Standard Reference Materials (SRMs) (preferred), or at minimum be Certified Reference Materials (CRMs) traceable to NIST SRMs with known specified uncertainty for the claimed lead level.
Certificate of Traceability	A certificate of calibration that indicates traceability to the National Institute of Standards and Technology (NIST) including referenced standard nomenclature, serial number, NIST report number and calibration date.
Certified Reference Material	A Reference Material, accompanied by a certificate, whose property values are certified by a procedure which establishes its traceability to an accurate realization of the unit in which the property values are expressed and for which each certified value is accompanied by an uncertainty at a stated level of confidence. For use in this program shall be traceable to NIST SRMs with known specified uncertainty for the claimed lead level.
Corrective Action	All activities taken, whether unsuccessful or not, to eliminate the cause(s) of an existing nonconformity or deficiency in order to prevent recurrence. See Deficiency.

Term	Definition
Customer	Any person or organization that engages the services of a Registered Organization.
Deficiency	A failure to comply with a requirement of the AIHA® Registry Programs, LLC FMR Program or an organization's own stated quality system requirements.
Deviation	A departure from written procedures, test methods, contracts or any other standard operating procedure that is part of the organization's Quality Assurance System.
Duplicate Measurement	Two measurements taken from and representative of the same population and carried through all steps of the measurement procedures in an identical manner. Duplicate measurements are used to assess variance of the total method.
Enrollment	The process through which an affiliated operator applies for the program and meets the requirements and qualifications of the FMR Policy. Enrollment of an affiliated operator in the FMR program begins with application and ends with application approval and inclusion of the operator on the web list.
Equipment	All physical items (including software and instruments) in the facility used in the performance of measurements.
Equipment Log	A bound set of data forms, bound field ledger or electronic record of all information related to collection of XRF measurements.
Final Report	The report presented to the customer at the end of a project or job.
Initial Organization	An organization applying to the FMR for the first time. May also be an organization that previously dropped or was dropped from the FMR program and is reapplying after the appropriate waiting period.
<i>in situ</i>	"in its original place"
Instrument Log	A bound book with numbered pages, or electronic equivalent, that includes the manufacture's name and model, serial number, date sourced, isotope identity and activity, when repairs or adjustments were made and by whom they were made, and information on the use of the instrument that includes date, time of day, user identity and location of use) for each XRF instrument.
Lead-Based Paint	Paint surface coatings that, by definition, contain lead in excess of 1.0 milligrams per square centimeter (mg/cm ²) 0.5 percent by weight
Lead-Based Paint Inspector	An individual who has been trained by an accredited training program and certified by EPA pursuant to §745.226 to conduct inspections.
Method	An orderly arrangement of steps to accomplish field measurements.
Operating Mode	One or more settings for use under different testing situations that define the operating parameters of an XRF instrument.
Outlier	A result that is outside the statistical control limits determined for a measurement.

Term	Definition
Performance Characteristics Sheet	XRF instrument model specific documents intended to provide up-to-date testing guidance and performance information including the specification of conclusive and inconclusive XRF results. Provides calibration check values to be used in conjunction with SRM/CRMs a procedure for evaluating XRF testing and recommendations on substrate correction with supplemental guidance on field substrate correction procedures.
Policy	An organization's written statement of commitment to implement a quality system program element.
Preventive Action	A change implemented to address a weakness in a quality system that is not yet responsible for causing nonconforming product or service
Procedure	A written set of instructions that describe how to implement a policy requirement, or how to carry out a specific task.
Proficiency Testing	Refers to any proficiency testing program, such as the programs established by the AIHA [®] Proficiency Analytical Testing Programs, LLC.
Quality	The suitability of a product or service for use, as perceived by the user.
Quality Assurance	An integrated system of activities involving planning, quality control, quality assessment, reporting and quality improvement to ensure a product or service meets defined standards of quality within a stated level of confidence.
Quality Assurance Program	See Quality Assurance.
Quality Control	The operation procedures used to ensure that the data are of known and acceptable precision and accuracy.
Quality Manager	An employee or contracted individual who, irrespective of other duties and responsibilities, shall have defined responsibility and authority for ensuring that the quality system is implemented and followed at all times, including responsibility for ensuring conformance with these requirements and compliance with statutory and regulatory requirements. See Article II, Section 2.6.6.
Quality Manager Deputy	An individual that meets the qualifications to be a Quality Manager that is appointed to fill the role to maintain continuing operations. Deputies shall meet all requirements for the authorities, duties, responsibilities, etc. they assume.
Quality Manual	A document stating the quality policy, quality system and internal quality control procedures of the organization.
Quality System	Fully documented organizational structure, procedures, processes and resources needed to implement quality management of the organization and its affiliated operators.
Radiation Safety Officer	An individual whose job duties include dealing with the authorities having jurisdiction over the XRF radioactive source and responsibility for dealing with emergencies involving the XRF radioactive source.
Read Time	A period of X ray data collection time that begins with the opening of the XRF instrument shutter to expose the surface to source gamma rays and X rays and ends when the source shutter is closed and the XRF reading is complete.

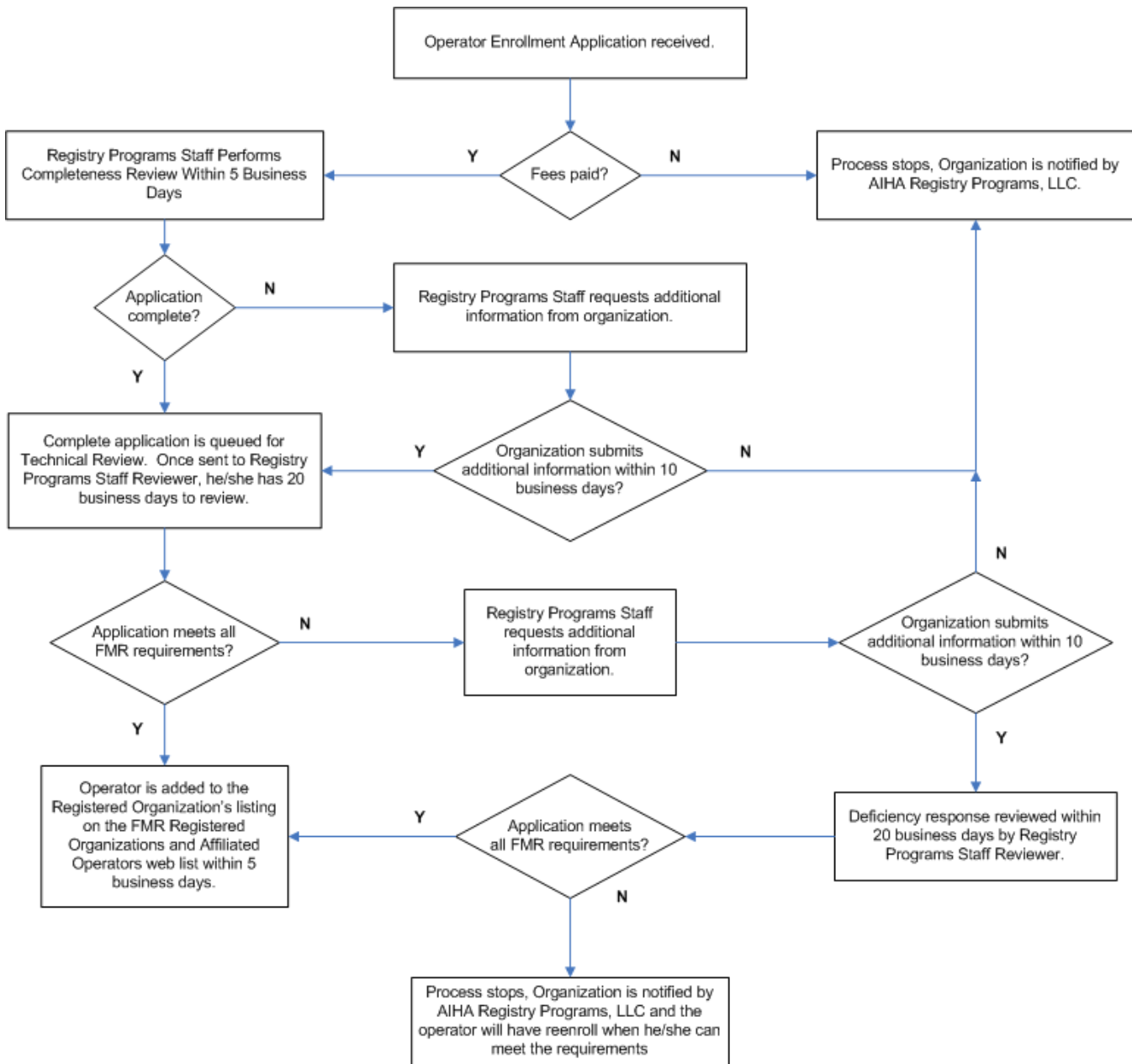
Term	Definition
Registered Organization	An XRF field measurement organization that has submitted a completed FMR application, which has successfully made it through the review process, and has been recommended for registration on ballot by the RPB.
Registration	The process through which an organization applies for and meets the requirements of the FMR Policy. Registration of an organization in the FMR program begins with application and ends with approval by the RPB via ballot.
Registry Program Board	An nominated group of qualified volunteer technical representatives from Industrial Hygiene and Environmental Lead disciplines that provide technical guidance to the AIHA® Registry Programs, LLC.
Requirement	An essential criterion necessary for approval.
Risk Assessor	An individual who has been trained by an accredited training program and certified by EPA pursuant to §745.226 to conduct risk assessments.
Standard Operating Procedure	A written document that details the procedures of an operation; an analysis or action whose techniques and procedures are thoroughly prescribed, and which are accepted as the procedure for performing certain routine or repetitive tasks.
Standard Reference Material	A Reference Material, accompanied by a certificate, whose property values are certified by the National Institute of Standards and Technology to establish its traceability to an accurate realization of the unit in which the property values are expressed and for which each certified value is accompanied by an uncertainty at a stated level of confidence.
Support Block	A block used to hold calibration check samples away from any additional underlying and possibly interfering material. The support block material shall not itself have potentially interfering leaded paint or other lead-containing material within or on it.
Suspension	A temporary removal of the registration status of an organization or and/or enrollment of its affiliated operators when it is found to be out of compliance with specific program requirements.
Technical Manager	An employee assigned with the overall responsibility for technical operations of the organization including responsibility for ensuring conformance with these requirements and compliance with statutory and regulatory requirements. See Article II, Section 2.6.5.
Technical Manager Deputy	An individual that meets the qualifications to be a Technical Manager that is appointed to fill the role to maintain continuing operations. Deputies shall meet all requirements for the authorities, duties, responsibilities, etc. they assume.
Testing Plan	A written plan detailing a systematic approach to the testing of a job or project. Indicates the testing procedures to be used and include a detailed outline of which measurements will be taken at what times, on which material, in what manner, and by whom.
Testing Procedure	The procedures to be used to perform the tests required by the testing plan. Testing procedures for use with this program shall be based on international, regional, or national standards; procedures published in relevant scientific texts or journals, or by reputable technical organizations; or procedures as specified by the manufacturer of the XRF instrument.

APPENDIX C: Initial Organization Registration Process

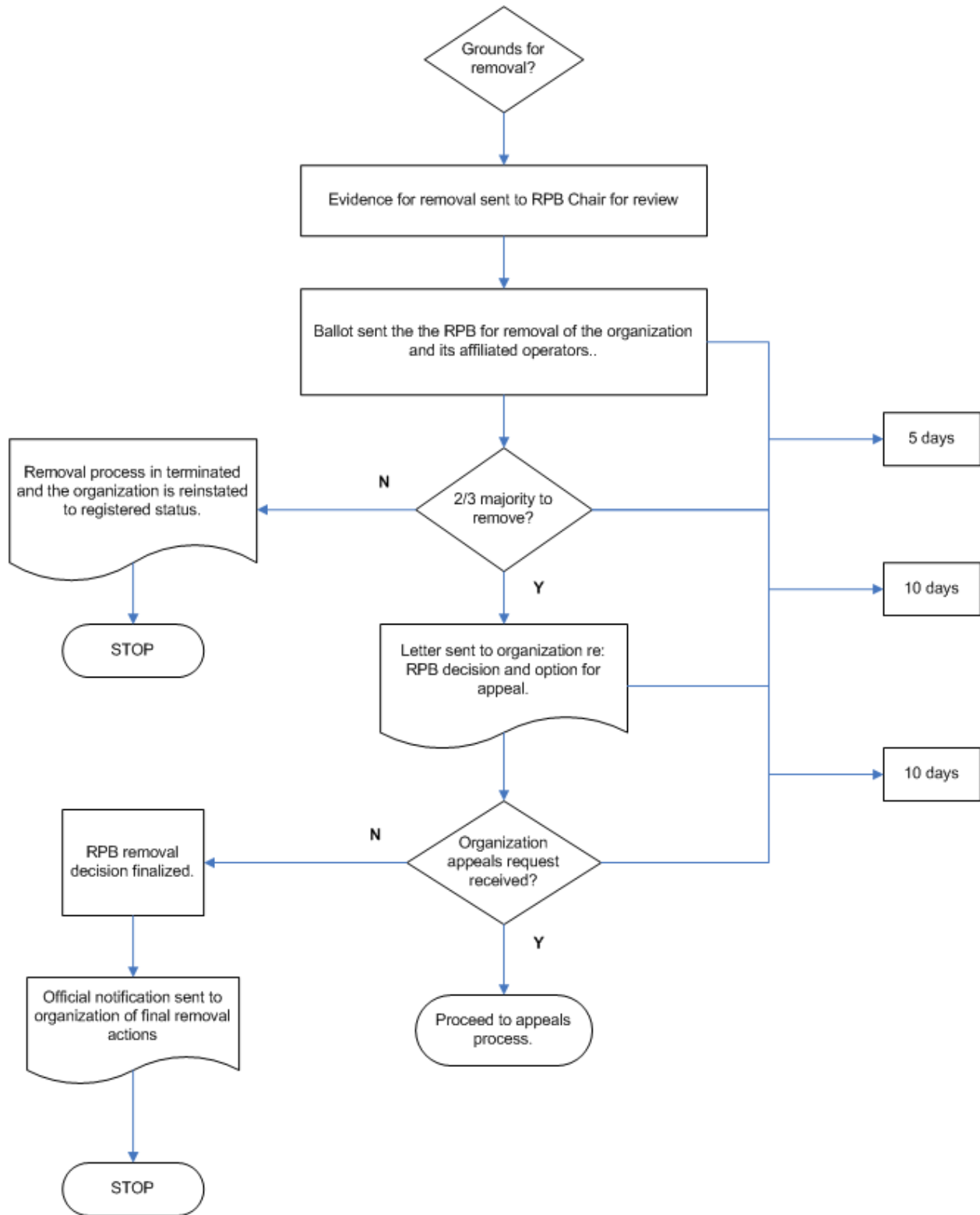


APPENDIX D: Operator Addition Process

For operator addition applications that are received after the organization has successfully completed the registration process.



APPENDIX E: FMR Removal Process



APPENDIX F: Appeals Process

