

# Indoor AirPlus Certification System

for Homes and Apartments

Effective: January 1, 2027

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## Table of Contents

1. <a href="#">Introduction</a> .....	1
1.1 Background .....	1
1.2 Home Certification Organizations and EPA Recognition .....	2
2. <a href="#">Effective Date</a> .....	4
3. <a href="#">HCO Eligibility Requirements</a> .....	4
3.1. Legal Responsibility .....	4
3.2. Independent Governance .....	4
3.3. Scope of Operations .....	5
3.4. Staffing and Competency .....	5
4. <a href="#">HCO Policies</a> .....	5
4.1. Business Code of Ethics .....	5
4.2. Impartiality and Objectivity .....	6
4.3. Non-Discrimination .....	6
4.4. Open Access .....	6
4.5. Data Privacy .....	7
4.6. Public Availability of HCO Policies .....	7
5. <a href="#">Certification and Oversight Procedures</a> .....	8
5.1. Training and Credentialing of Verifiers and Quality Control Reviewers .....	8
5.2. Verification Protocol .....	8
5.3. Sampling Protocol .....	9
5.4. Quality Control Protocol .....	10
5.5. Issuance of Indoor AirPlus Labels and Certificates .....	12
5.6. Certification Recall Procedure .....	12
5.7. Ethics Compliance and Homeowner Certification Review Requests .....	13
5.8. Recordkeeping, Reporting, and Disclosure .....	13
5.9. Coordination with the EPA .....	14
6. <a href="#">Software and Database Systems</a> .....	14
6.1. System Integration .....	14
6.2. Data Collection and Aggregation .....	15
6.3. Approved Software Tools .....	15
6.4. On-Site Photo and Test Result Collection System .....	16
6.5. Program Documentation Collection System .....	16
6.6. Quality Control Workflow Functionality .....	16
6.7. Indoor AirPlus Label and Certificate Printing System .....	17
6.8. HCO Database .....	17
6.9. Approval of Software and Systems .....	18
7. <a href="#">Use of Designees</a> .....	19
8. <a href="#">Program Compliance</a> .....	20
9. <a href="#">EPA Oversight Reviews</a> .....	20
10. <a href="#">Amendments, Modifications, and Revisions</a> .....	21
10.1. EPA-Initiated Changes .....	21
10.2. Revision, Amendments, and Interpretations of Referenced Standards .....	21
10.3. HCO-Initiated Changes .....	21
11. <a href="#">Withdrawal of Recognition</a> .....	22

# 1. Introduction

## 1.1 Background

The U.S. Environmental Protection Agency’s (EPA) Indoor AirPlus (IAP) program was developed to advance voluntary indoor air quality protections in new home construction and simultaneously provide homebuilders a partnership opportunity for enhancing their respective marketability efforts. In October 2008, the EPA released the first set of Indoor AirPlus Construction Specifications used to earn the Indoor AirPlus certification on a newly built or gut rehabilitated home or apartment, along with the Indoor AirPlus partnership opportunity for builders and verifiers.

With the publication of Indoor AirPlus Version 2 in August of 2024, the EPA released enhancements to the technical specifications and program requirements, including an overarching framework for market-based certification and oversight of quality control provisions for 3<sup>rd</sup>-party verification. The Indoor AirPlus Certification Protocol describes this framework, with the Indoor AirPlus Certification System for Homes and Apartments serving to establish the specific eligibility criteria, policy requirements, and certification procedures required of an Indoor AirPlus Home Certification Organization (HCO), including the application for EPA recognition as an IAP HCO.

**Table 1. Program Documents**

<b>Document Title</b>	<b>Function</b>
Indoor AirPlus Certification System for Homes and Apartments	Establishes eligibility criteria, policy requirements, and certification procedures required of an IAP HCO.
Indoor AirPlus Certification Protocol	Describes the framework for market-based certification and oversight of quality control provisions for 3 <sup>rd</sup> -party verification.
Indoor AirPlus Version 2 Verification Requirements	Includes the requirements for both Indoor AirPlus Certified and Indoor AirPlus Gold Certified homes.
Indoor AirPlus Version 2 Verification Checklist	Used by verification and HCO to document adherence to the design and construction requirements for both Indoor AirPlus Certified and Indoor AirPlus Gold Certified homes.
Indoor AirPlus Quality Control Checklist	Used by quality control reviewers to confirm proper verification process.

The following quality assurance elements are key themes in the EPA’s home certification system and core requirements for each HCO:

- Independent oversight
- Quality control procedures

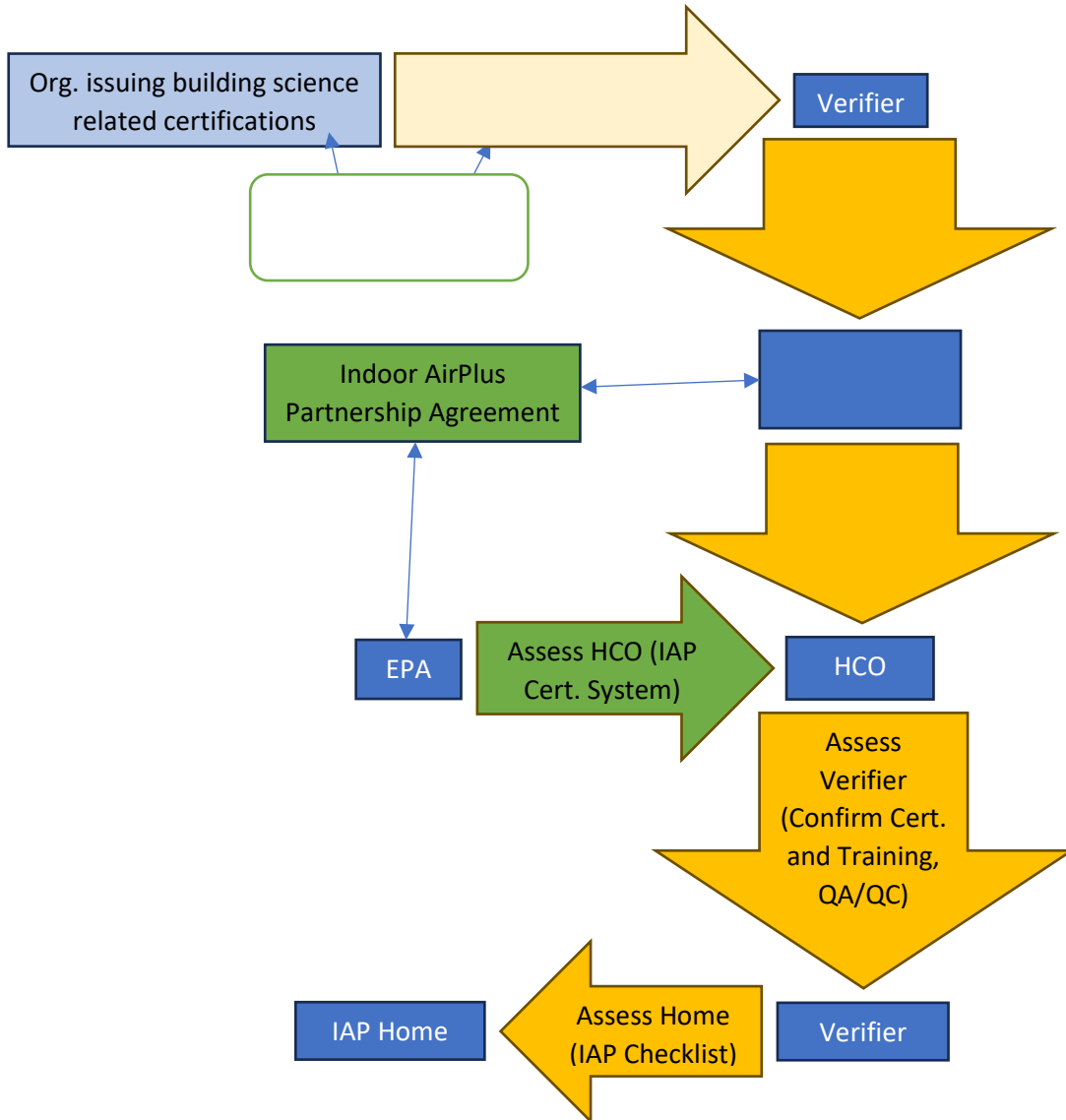
- Verifier training and oversight
- Verification protocols
- Impartiality
- Messaging and reporting

## **1.2 Home Certification Organizations and EPA Recognition**

An Indoor AirPlus HCO is defined as an independent organization that is recognized by the EPA to implement an Indoor AirPlus certification program that complies with the Indoor AirPlus Certification System for Homes and Apartments. These organizations are responsible for decisions related to the granting and withdrawal of Indoor AirPlus certifications for homes and apartments, and provide for the credentialing, oversight, and quality assurance of individuals that verify homes and apartments to earn Indoor AirPlus certification, hereafter referred to as “verifiers.” Verifiers are either the employee or designee of “verification organizations.” Quality control reviewers are either employed by the HCO or serves as a designee of the HCO, and conduct quality control file reviews, site visits, and other methods to confirm proper home certification processes from verifiers and verification organizations.

An organization seeking to become an HCO must submit an “Application for Recognition” to the EPA that demonstrates it meets the program’s eligibility criteria and has the capability, competencies, and proper controls to implement an Indoor AirPlus certification program in accordance with the Indoor AirPlus Certification System and the Indoor AirPlus Certification Protocol. The EPA will evaluate each Application for Recognition and will provide a written determination of its review to the associated applicant. In cases where the EPA determines that the application failed to meet program requirements, the EPA will identify areas of deficiency. Applicants whose applications are denied are eligible to submit a revised application for review no sooner than twelve (12) months from the most recent EPA determination. Figure 1 shows a flowchart that illustrates initiating the process for Indoor AirPlus certification as it relates to the verifier and home certification.

**Figure 1. Initiating the Process for Indoor AirPlus Certification**



In the context of this Indoor AirPlus Certification System, the EPA’s recognition of an HCO relates solely and specifically to the Indoor AirPlus certification program. HCOs and other organizations recognized by other EPA certification programs may be eligible to apply as an Indoor AirPlus HCO; however, it is not a requirement of an Indoor AirPlus HCO to also be recognized as an HCO for another EPA residential certification program.

Activities undertaken by HCOs are not intended as services provided to the federal government. HCOs are expected to be market-based and may not submit claims for compensation to the EPA or any other federal agency for their activities related to fulfilling the required roles and responsibilities of recognized HCOs.

Recognized HCOs may implement participation or certification fee structures, or seek funding from other sources, to support their Indoor AirPlus certification program.

## **2. Effective Date**

Any HCO engaged in the certification of Indoor AirPlus homes must be recognized by the EPA as an Indoor AirPlus HCO following the policies and procedures outlined in the Indoor AirPlus Certification Protocol and this document, in order to certify any home permitted on or after January 1, 2027.

## **3. HCO Eligibility Requirements**

To be eligible for recognition by the EPA as an Indoor AirPlus HCO, an organization is required to demonstrate the following:

### **3.1 Legal Responsibility**

The organization is required to be a legal entity, or defined part of a legal entity, that can be held responsible for all activities related to its Indoor AirPlus certification program.

### **3.2 Independent Governance**

The organization is required to be independent of the influence of (1) builders and developers whose homes and apartments would be certified and (2) other entities directly involved in the design, construction, or renovation of the building to be certified through its Indoor AirPlus certification program. In addition, the organization is required to maintain an independent governance mechanism to ensure that its policies and activities related to its Indoor AirPlus certification program comply with the requirements of the Indoor AirPlus Certification System and the Indoor AirPlus Certification Protocol and support the integrity of the Indoor AirPlus program.

Examples of such mechanisms include, but are not limited to, maintaining a Board of Directors or Independent Governance Committee with the following attributes:

**3.2a** Specific responsibility for safeguarding the impartiality and integrity of the HCO's Indoor AirPlus certification program;

**3.2b** Authority to review the HCO's policies, procedures, and actions;

**3.2c** A balanced representation of stakeholders such as builders, verifiers, designees (see Section 7), and representatives of trade associations, such that no single interest predominates;

**3.2d** Access to all information necessary to fulfill its functions;

**3.2e** Have the right to independently inform the EPA if the HCO does not follow the input of this mechanism.

Accreditation to the ISO/IEC 17065 governing standard, “Conformity Assessment: Requirements for bodies certifying products, processes, and services,” is also considered to meet the independent governance requirement through section 5.2 of that standard, “Mechanism for safeguarding impartiality.”

### **3.3 Scope of Operations**

The organization is required to have the ability to implement its Indoor AirPlus certification program through the following:

**3.3a** Having access to a broad network of qualified verifiers; and

**3.3b** Maintaining a quality assurance and oversight mechanism for verifiers that ensures consistency in application of the Indoor AirPlus specifications, appropriate to the regions served by the verifiers.

### **3.4 Staffing and Competency**

The organization is required to employ, or have access to, sufficient personnel with the competencies necessary to meet all applicable requirements related to the Indoor AirPlus Certification System and the Indoor AirPlus Certification Protocol. This may include on-staff personnel, as well as designees (see Section 7) working under a contract or other formal agreement that places their activities under the legal responsibility of the HCO.

## **4. HCO Policies**

An HCO is required to maintain documented formal policies related to:

### **4.1 Business Code of Ethics**

The HCO is required to maintain a business code of ethics for the HCO, quality control reviewers, recognized verifiers, and its designees (if used).

### **4.2 Impartiality and Objectivity**

**4.2.1** The HCO is required to maintain conflict of interest (COI) policies to identify and mitigate risks to impartiality of the HCO, quality control reviewers, recognized verifiers, and its designees. These policies must address COI that pertain to both the individuals and organizations involved in the Indoor AirPlus certification process. Where designees are used, the HCO must maintain a specific COI policy for designees. COI policies are required to include disclosure of existing or potential COI and steps to

resolve the conflicts. In addition to any other conflicts identified, these policies must address at minimum, the following conflicts:

**4.2.1a** Conflicts between the HCO and its builder/developer clients;

**4.2.1b** Conflicts between individuals involved in the certification process and other entities involved in the design or construction of the home or apartment to be certified; and

**4.2.1c** Conflicts between verifiers, quality control reviewers, and individuals making certification decisions.

**4.2.2** All COI policies are required to be reviewed on an ongoing basis and disclosures updated, as necessary. The HCO is required to disclose any identified potential or existing COI and mitigation steps to the EPA on an annual basis (see Section 5.8)

**4.2.3** In addition, the HCO's organizational chart and management system are required to reflect impartiality of decision making related to its Indoor AirPlus certification program and show a clear separation of roles between certification decisions from other business activities that may present COI. Certification decisions are the responsibility of individuals who implement the HCO's quality control function, overseeing the process of evaluation/verification (i.e., verifiers).

### **4.3 Non-Discrimination**

The HCO is required to maintain a non-discrimination policy for the HCO, its participant verifiers, and its designees (if used) forbidding, at minimum, discrimination based on a person's race, sex, color, religion or national origin.

### **4.4 Open Access**

The HCO is required to maintain an open access policy for the HCO, its participant verifiers, and its designees (if used). The certification program must remain accessible to all eligible Indoor AirPlus partners.

Conditioning access on the size of the Indoor AirPlus builder or developer partner, or membership in any association or group, is prohibited.

### **4.5. Data Privacy**

**4.5.1** The HCO is required to maintain a data privacy policy for the usage, storage, and transmission of data and photos related to verification of Indoor AirPlus-specific program requirements, including, at a minimum, the following elements:

**4.5.1a** Applicable data and photos are permitted to be shared and used for the exclusive purpose of activities required by the Indoor AirPlus Certification System, such as quality control review, a certification review requested by a homeowner, and ethics investigations.

**4.5.1b** The HCO, its designees, verification organizations, and any other intermediate custodians (e.g., photo collection software) must retain certification documentation, including verification records, program documentation, photos, test results, and all other records related to the Indoor AirPlus Certification Protocol, for a minimum of two years from the date of certification (see Section 5.8).

**4.5.2** Exceptions to the above rules, including sharing data/photos with other parties (e.g., homeowners, researchers, non-EPA program administrators, commercial data brokers, or multiple listing services), are only permitted at the direction of the HCO and the EPA (e.g., for an investigatory hold) or with the express written authorization of both the verification organization that captured the data/photos and the builder/developer of the originating dwelling unit.

## **4.6. Public Availability of HCO Policies**

**4.6.1** The HCO is required to publish information on a public webpage that describes its certification program and the HCO's policies and procedures for granting and withdrawing certification, including but not limited to:

**4.6.1a** Business code of ethics, per Section 4.1.

**4.6.1b** Conflict of interest policies, per Section 4.2.

**4.6.1c** Non-discrimination policies, per Section 4.3.

**4.6.1d** Open access policies, per Section 4.4.

**4.6.1e** Data privacy policies, per Section 4.5.

**4.6.1f** Training and credentialing requirements, per Section 5.1.

**4.6.1g** The verification protocol, per Section 5.2.

**4.6.1h** The sampling protocol, if used, per Section 5.3.

**4.6.1i** The quality control protocol, per Section 5.4.

**4.6.1j** Ethics compliance and homeowner certification review request policies, per Section 5.7.

**4.6.1k** The published list of software and systems that are approved for use in the HCO's certification program, per Section 6.9.

**4.6.1l** Qualification criteria for designees, if used, per Section 7.0.

**4.6.1m** Implementation timelines regarding amendments, modifications, and revisions, per Section 10.0.

## **5. Certification and Oversight Procedures**

The HCO is required to take all necessary steps to evaluate conformance with the Indoor AirPlus Certification Protocol, including the following measures:

### **5.1. Training and Credentialing of Verifiers and Quality Control Reviewers**

**5.1.1** Ensure that verifiers and quality control reviewers hold a credential based on the competencies required for compliance with “ANSI/BPI-1200-S-2017: Standard Practice for Basic Analysis of Buildings,” or a similar standard as determined by an HCO and approved by the EPA.

**5.1.2** Confirm annually that verifiers and quality control reviewers maintain credentials that are referenced in 5.1.1.

**5.1.3** Confirm that verifiers and quality control reviewers have successfully completed the most recent EPA-recognized Indoor AirPlus Version 2 training (pending release).

**5.1.4** Develop additional content on quality control function and confirm that quality control reviewers have successfully reviewed the content.

**5.1.5** Maintain a public or private list of Indoor AirPlus credentialed verifiers and quality control reviewers that is updated regularly.

**5.1.6** Maintain a database of verifier headshot photos to allow quality control reviewers to confirm the identity of a verifier captured in the mandatory inspection photo (see Section 5.2).

### **5.2. Verification Protocol**

The HCO is required to implement a verification protocol for on-site observation and testing of Indoor AirPlus program requirements.

**5.2.1** All verification requirements specified in the Indoor AirPlus Certification Protocol and referenced standards, including the following items:

**5.2.1.1** The verifier performs a minimum of two inspections, one at pre-drywall and the other at final.

**5.2.1.2** The verifier verifies that each inspection checklist item has been met in accordance with the Indoor AirPlus Version 2 Verification Requirements.

**5.2.1.3** The verifier completes and signs a copy of the Indoor AirPlus Version 2 Verification Checklist.

**5.2.2** At each inspection, the following photos are required to be collected by the verifier as a record of their observations:

**5.2.2a** A timestamped and geo-tagged photo of the verifier in front of the rated dwelling unit;

**5.2.2b** Photos of checklist items that are timestamped, as specified in the Indoor AirPlus Certification Protocol (i.e., on the applicable Verifier Checklist).

### **5.3. Sampling Protocol**

**5.3.1** The HCO may choose to offer a sampling protocol for verifying multifamily buildings and units. Note that sampling cannot be applied to Indoor AirPlus detached dwellings (e.g., single-family homes and duplexes) or townhouses. When offered, the sampling protocol is required to, at a minimum:

**5.3.1.1** Require that sampled groups of dwelling units are within the same building, are of the same construction type, and include the same envelope systems;

**5.3.1.2** Require successful inspection on a qualification set of at least the first seven (7) consecutive instances of a sampled measure before applying sampling to that measure;

**5.3.1.3** Ensure verification occurs on a representative sample of dwelling units ready within a 30-calendar day period at a rate of no less 15 percent;

**5.3.1.4** Provide for corrective actions to address failures identified during sampling, including, at a minimum:

**5.3.1.4a** Correction of any failed requirements in the dwelling unit where it was discovered.

**5.3.1.4b** Additional verification of the failed requirement in at least two (2) additional dwelling or dwelling unit.

**5.3.1.4c** After multiple additional failures of the same requirement, complete verification of three additional dwelling units, and a documentation of a root cause analysis.

### **5.4. Quality Control Protocol**

**5.4.1** The HCO is required to implement comprehensive quality control systems and procedures, including, at minimum:

**5.4.1.1** Collect a complete certification package (verification checklist and all supporting documentation) prior to quality control selection and review (see Section 6.6);

**5.4.1.2** Have HCO personnel directly review any user-confirmed overrides of validation errors prior to certification;

**5.4.1.3** Perform quality control file review on at least one in ten (10%) Indoor AirPlus certified dwelling units that includes the following features:

**5.4.1.3a** Dwelling units are selected randomly for file review, per Section 6.6;

**5.4.1.3b** File review is performed by a human reviewer;

**5.4.1.3c** File review of dwelling units in multifamily buildings includes a review of the building's common spaces and central systems, as applicable;

Note:

N5.4.1.3c If multiple units from the same building are selected for file review, the building's common spaces and central systems are only required to be reviewed once.

**5.4.1.3c** The quality control file review, which includes completion of the Indoor AirPlus Quality Control Checklist, is successfully completed before distribution of the Indoor AirPlus certificate.

**5.4.2** If the above file review step is assigned to a designee, have HCO personnel directly perform an additional quality control file review ("HCO direct file review") that includes the following features:

**5.4.2.1** A rate of HCO direct file review adhering to the following schedule by year:

- 2027: 1 in 400 homes (0.25%)
- 2028 and 2029: 1 in 200 homes (0.5%)
- 2030 and beyond: 1 in 100 homes (1%)

**5.4.2.2** Dwelling units are selected randomly by the HCO (see Section 6.6), with 75% drawn from submissions previously reviewed by a designee, per above, and 25% being unreviewed.

**5.4.2.3** The HCO direct file review is at least as rigorous as the 10% file review above and is performed by a human reviewer using the Indoor AirPlus Quality Control Checklist;

**5.4.2.4** The HCO direct file review, which includes completion of the Indoor AirPlus Quality Control Checklist, occurs after a designee's original file review is complete (if applicable) and before distribution of the Indoor AirPlus certificate.

**5.4.3** For each verifier, perform annual field evaluation(s) to assess the verifier's skills and knowledge of current applicable policies, procedures, and program requirements and perform quality control of installed measures on certified homes/apartments (and/or homes/apartments pursuing certification). Field evaluations are required to include the following features:

**5.4.3.1** Quality assurance personnel independently verifying all applicable Indoor AirPlus program requirements via a witness, or via an after-the-fact assessment in which quality assurance personnel perform a site visit after the verifier has completed their site visit;

**5.4.3.2** Occurrence at the following rates, according to the annual number of Indoor AirPlus certifications to which a verifier contributes (for example, by performing one or both inspections and/or serving as the verifier of record):

**5.4.3.2a** For verifiers contributing up to one hundred (100) or fewer annual certifications, field evaluation is required to occur on at least one (1) home/apartment per year and alternate between the pre-drywall and final stages each year.

**5.4.3.2b** For verifiers contributing more than one hundred (100) annual home/apartment certifications, field evaluation is required on at least one (1) home/apartment at the pre-drywall stage and one (1) home/apartment at the final stage per year, for a total of at least two (2) annual field evaluations.

**5.4.4** Homes/apartments are selected based on availability by the assigned quality control reviewer, with the intent of capturing a representative cross-section of builders, locations, and home types.

**5.4.5** A home/apartment may not be re-used for multiple Indoor AirPlus field evaluations of the same verifier.

**5.4.6** Maintain a set of repeatable standards for assessing whether discrepancies found during quality control file reviews and field evaluations are within allowable thresholds, including the use of the appropriate Indoor AirPlus Quality Control checklist.

**5.4.7** In the event that deficiencies are discovered outside allowable thresholds, provisions must be made for addressing the deficiencies and, more generally, identifying and addressing the root cause(s) to ensure the deficiencies do not reoccur.

**5.4.8** In the event of recurring deficiencies related to a particular verifier, provisions must be made for corrective action, such as supplemental training or an increased rate of field evaluation, as well as conditions for triggering disciplinary action by the HCO.

**5.4.9 HCOs must** maintain an accidental data loss and missing photo policy with appropriate remedies, adequate safeguards against abuse, and escalating consequences for repeated occurrences designed to limit the rate of missing photos to no more than 1%.

**5.4.10** Quality control protocols that employ alternative schemes, such as those relying on remote video QA, automated file flagging, or artificial intelligence (AI), may be submitted to the EPA for consideration.

## **5.5. Issuance of Indoor AirPlus Labels and Certificates**

The HCO is required to maintain the final authority over all Indoor AirPlus certifications and be responsible for determining that certified homes and apartments conform with the Indoor AirPlus Certification Protocol.

**5.5.1** The HCO is required to implement protocols ensuring that, at minimum:

**5.5.1.1** The Indoor AirPlus label and certificate is created directly by the HCO or, if supported, printed through an approved tool per Section 6.7;

**5.5.1.2** Verifiers and designees shall not print (physically or digitally) the Indoor AirPlus label or certificate through any other method than specified above, including via proprietary recordkeeping systems; and

**5.5.1.3** Verifiers provide the Indoor AirPlus builder or developer partner with an Indoor AirPlus certificate for each certified home or apartment.

## **5.6. Certification Recall Procedure**

**5.6.1** The HCO is required to maintain a formal procedure to recall a certification following the discovery of unresolvable deficiencies during routine quality control review, including, at minimum:

**5.6.1.1** A standardized notice being sent to the builder, with the HCO retaining a copy, and

**5.6.1.2** Removal of the home's certification from the HCO database and public address lookup tool.

**5.6.2** The HCO is required to consult with the EPA regarding potential decertification(s) stemming from sources other than routine quality control review, including homeowner requests for a certification review and ethics compliance investigations per Section 5.7.

## **5.7. Ethics Compliance and Homeowner Certification Review Requests**

**5.7.1** The HCO is required to maintain:

**5.7.1.1** An ethics complaint process covering the HCO, its verifiers, and designees;

**5.7.1.2** Procedures for disciplining verifiers, including provisions for appeal; and

**5.7.1.3** A resolution process for homeowner inquiries, including:

**5.7.1.3a** Providing a web page that allows homeowners to submit inquiries or concerns regarding the Indoor AirPlus certification of their home or apartment.

**5.7.1.3b** For eligible inquiries, performing certification reviews for the Indoor AirPlus Certification Protocol as defined by the Indoor AirPlus Certified Homes Quality Control and Certification Review Checklist (pending) and rescinding the Indoor AirPlus certification in cases where the HCO determines a home fails the certification review.

## **5.8 Recordkeeping, Reporting, and Disclosure**

**5.8.1** The HCO is required to:

**5.8.1.1** Ensure data are retained for a minimum of two (2) years from the certification date and available to the EPA upon request, including verification records, program documentation, photos, test results, and all other records related to the Indoor AirPlus Certification Protocol;

**5.8.1.2** Report to the EPA within 30 days of any designee approvals or suspensions;

**5.8.1.3** Report to the EPA within 30 days of any disciplinary action taken, including any suspensions;

**5.8.1.4** Provide the EPA with aggregate/summary information about the indoor air quality features used in homes and apartments certified through the HCO's certification program upon request; and

**5.8.1.5** Conduct an annual internal management review and provide the EPA with an annual report (or more frequently, upon EPA's request) regarding the HCO's administration of its certification program, including the following topics:

**5.8.1.5a** Certification counts and trends;

- 5.8.1.5b Quality control activity review;
- 5.8.1.5c Missing photo rates;
- 5.8.1.5d Status of system/software development and approval;
- 5.8.1.5e Dispute resolution activities;
- 5.8.1.5f Identified conflict of interest and mitigation; and
- 5.8.1.5g Risk analysis of opportunities for improvement.

## **5.9 Coordination with the EPA**

5.9.1 The HCO is required to:

5.9.1.1 Maintain open lines of communication with the EPA to address questions and concerns promptly.

5.9.1.2 Participate in meetings upon request by the EPA.

5.9.1.3 Work collaboratively with the EPA to facilitate the comprehensive and coordinated investigation and response to:

5.9.1.3a Findings resulting from routine quality assurance activities;

5.9.1.3b Certification discrepancies, including those referred to the HCO by the EPA; and

5.9.1.3c Requests for certification review and other inquiries from homeowners.

## **6. Software and Database Systems**

The HCO is required to develop or recognize a set of software and database systems that includes the following features to support data collection, quality control review, and record keeping workflows:

### **6.1. System Integration**

If multiple systems are used to deliver the functionality specified below, the systems are required to be well-integrated to support effective participant workflows and data integrity. This includes, but is not limited to, the ability of a user to input and review all requisite data points (see Section 6.2) without unnecessary complexity or undue administrative burden.

### **6.2. Data Collection and Aggregation**

**6.2.1** A method to cross-reference data from relevant data sources to associate the following data points with each dwelling unit in a consistent manner across user interfaces:

**6.2.2** Physical address;

**6.2.3** Certification date;

**6.2.4** Indoor AirPlus version, revision number, and certification tier;

**6.2.5** The builder and verification organization associated with each certification, as identified by their account "Organization ID;"

**6.2.6** The verifier and any other individuals performing on-site inspections, cross-referenced against the database of credentialed verifiers (see Section 5.1);

**6.2.7** The quality control reviewers evaluating each certification (if applicable) cross-referenced against the database of credentialed quality control reviewers (see Section 5.1);

**6.2.8** The completed applicable Indoor AirPlus Verification Checklist and heating and conditioning system design documentation (see Section 6.5);

**6.2.9** The on-site inspections, which include the individual performing the inspection, the applicable Indoor AirPlus Verification Checklist (see Section 6.5), and collected on-site photos (see Section 6.4);

**6.2.10** If a sampling protocol is used, the inspection record of the sampled set of units (see Section 5.3); and

**6.2.11** For multifamily buildings:

**6.2.11a** A single building-level address, in addition to dwelling unit IDs (e.g., unit numbers);

**6.2.11b** Building-level photos of common spaces and central systems, as applicable.

### **6.3. Approved Software Tools**

**6.3.1** The HCO must identify and approve in writing for use in its certification program software tools that are continuously maintained with respect to the following functionality:

**6.3.1.1** A user interface that permits input and review of all data points necessary to demonstrate compliance with the Indoor AirPlus Version 2 Verification Requirements.

**6.3.1.2** Automatic warnings and errors for the standardized list of validations defined by the HCO including a user-confirmed error override function;

**6.3.1.3** Ability to submit confirmed verifications to the HCO database, including all data elements necessary to populate the HCO database per Sections 6.2 and 6.7; and

**6.3.1.4** Ability to receive error and confirmation notices from the HCO database and present appropriate notices to users.

#### **6.4. On-Site Photo and Test Result Collection System**

A user interface that permits upload and review of mandatory on-site photos and test results, including, as applicable, timestamp and geo-tag metadata (see 5.2.2a).

#### **6.5. Program Documentation Collection System**

A user interface that supports:

**6.5.1** Input and review of the mandatory Indoor AirPlus checklists in an itemized machine-readable format, with a recommendation to implement the reference data schema defined by the HCO;

**6.5.2** Upload and review of the mandatory HAC system design documents in a digital format, such as PDF or scanned image.

#### **6.6. Quality Control Workflow Functionality**

A system, or collection of systems with appropriate integration, to support the quality control workflow specified in Section 5.4 that includes the following functionality:

**6.6.1** Ability to submit verification files to the HCO database prior to quality control selection;

**6.6.2** Automatic flagging of user-confirmed error overrides for review by HCO personnel;

**6.6.3** Random selection of dwelling units for quality control file review by the HCO at specified rates, as drawn from the pool of submissions pursuing Indoor AirPlus certification;

**6.6.4** If applicable, random selection of dwelling units for HCO direct file review by the HCO at specified rates and distribution between previously reviewed and unreviewed submissions;

**6.6.5** A notification system to indicate when dwelling units are selected for review, as well as when the review is complete; and

**6.6.6** A "holding bin" that isolates selected submissions until the quality control review is complete.

## **6.7. Indoor AirPlus Label and Certificate Printing System**

A system to produce a digital Indoor AirPlus label and certificate and a hardcopy of the Indoor AirPlus label to affix on the certified unit that includes the following features:

- 6.7.1** Either operated directly by the HCO or their designee through approved software tools;
- 6.7.2** Use of the latest graphic templates and guidance provided by the EPA; and
- 6.7.3** Prevent production of the Indoor AirPlus label or certificate until the HCO transmits a confirmation of final certification (see Section 6.8).

## **6.8. HCO Database**

The HCO is required to develop and continuously maintain a central database that supports the functions specified above, including, but not limited to, the following features:

- 6.8.1** Data exchange protocols to aggregate submissions from all applicable sources, including the any modeling tools, photo and test result collection system, and program documentation collection system;
- 6.8.2** Logging of a final record for each certified dwelling unit, including all data points specified in Section 6.2;
- 6.8.3** Verifier and quality control reviewer credential records (see Section 5.1);
- 6.8.4** Tracking of quality control file review and field evaluation records (see Section 5.4);
- 6.8.5** Retention of records according to the minimum durations specified in Section 5.8;
- 6.8.6** Destruction of photos following the two-year photo retention period (see Section 4.5);
- 6.8.7** Assignment and notification of final certification, contingent on a final validation check as defined by the HCO, review of user-confirmed error overrides, and completion of assigned quality control file review and/or HCO direct review, as applicable;
- 6.8.8** Transmittal of nightly certification reports to the EPA's reporting database via the Homes Online Submission Tool API (HOST API), with coordination as needed to resolve reporting errors;
- 6.8.9** A public certification search interface that, at a minimum, accepts queries by physical address and reports the home or apartment's Indoor AirPlus certification status.

## **6.9. Approval of Software and Systems**

**6.9.1** The HCO is required to review and approve all specified software systems by performing the following activities:

**6.9.1.1** Verify that systems comply with these requirements as applicable to the functions assigned to those systems;

**6.9.1.2** Re-review major software/system versions (i.e., releases that affect functionality specified in this section) for compliance with these requirements and approve software for use on a version-specific basis;

**6.9.1.3** Publish a website list, by type (e.g., energy modeling tool) of software/systems approved for use in its certification program, including the following information: software name, approved version number or version range, date approved, which Indoor AirPlus programs and program versions the software supports, and, for earlier software versions, the approval expiration date as determined by a dwelling unit's permit date (see Section 4.6);

**6.9.1.4** Ensure that software/systems are updated by developers and reviewed by the HCO within 12 months when factors such as program revisions or the HCO database schema necessitate changes; and

**6.9.5** Implement a policy to ensure current versions of software tools are used for Indoor AirPlus certifications, with a transition period of no longer than six (6) months following new software version releases, as determined by a dwelling unit's permit date.

**6.9.2** The EPA reserves the right to review software/systems for compliance, require correction of any deficiencies, grant final approval for HCO recognition of new software/systems, and, if necessary, require de-listing of software/systems unable to be brought into compliance.

**6.9.3** To the extent that the HCO relies on third-party software systems to deliver specified functionality, the HCO is also required to provide a letter from the software developer stipulating an intent to offer their software for use in the HCO's certification program for a minimum of two years, including meeting the defined software requirements, maintaining integration with the HCO database and other applicable systems, and providing user support to the HCO's participant verifiers.

## **7. Use of Designees**

**7.1** The HCO is permitted to delegate certain activities related to the implementation of its certification program to external parties, referred to as designees. Where the HCO chooses to use a designee, the HCO is required to:

**7.1.1** Take responsibility for all designee activities related to the implementation of its certification program;

**7.1.2** Exercise final authority over certification decisions and issuance of the Indoor AirPlus label (Section 5.5), credentialing of verifiers (Section 5.1), resolving ethics complaints, presiding over appeals, and disciplining verifiers (Section 5.7);

**7.1.3** Have documented designee scopes of responsibility and corresponding criteria, including access to appropriately qualified individuals (Section 5.1);

**7.1.4** Maintain a public or private list of approved designees;

**7.1.5** Ensure that designees follow all of the HCO's policies and procedures, including those required in Sections 4.0 and 5.0;

**7.1.6** Have a quality assurance process by which to regularly assess and monitor the activities completed by the designees; and

**7.1.7** Implement corrective action for any designee breach of the HCO's policies or procedures.

**7.2** The HCO may not use designees for the following activities unless the designee is working under a contract or other formal agreement that places their activities under the legal responsibility of the HCO:

**7.2.1** Establishing policies governing Indoor AirPlus certification activities outlined in Section 4;

**7.2.2** Listing credentialed verifiers, as outlined in section 5.1;

**7.2.3** Credentialing and listing quality control reviewers and delivery of training and continuing education specific to quality control functions, as outlined in Section 5.1;

**7.2.4** Performing HCO direct file review, if applicable, as outlined in Section 5.4;

**7.2.5** Coordinating with the EPA, as outlined in Section 5.9; and

**7.2.6** Reviewing user-confirmed error overrides, as outlined in Section 6.3;

**7.2.7** Maintaining the central database, as outlined in Section 6.8.

**7.3** The EPA reserves the right to prohibit a designee's participation in Indoor AirPlus certification activities with cause.

## **8. Program Compliance**

The EPA may consider an applicant's history of noncompliance with Indoor AirPlus and other federal program requirements generally, including patterns of deficiencies relating to home certifications, energy ratings based on referenced national standards, or substantively similar activities. This may include consideration of another organization's compliance history where the applicant's leadership has or had a substantial affiliation or nexus to that organization during some or all of the noncompliant activity.

## **9. EPA Oversight Reviews**

**9.1** The EPA reserves the right to conduct periodic oversight reviews of any and all HCO activities related to the implementation of the Indoor AirPlus Certification System and the Indoor AirPlus Certification Protocol as needed to ensure the value and integrity of the Indoor AirPlus program. The EPA intends to review HCOs one (1) year after initial recognition and every two (2) years thereafter, with additional reviews as necessary based on performance issues that arise. The EPA may revisit the oversight review protocols and schedules as the HCO marketplace evolves. These reviews may include, but are not limited to:

**9.1.1** Review of HCO policies, procedures, documentation, and certification records.

**9.1.2** Phone interviews with HCO personnel and/or designees.

**9.1.3** In-person meetings with HCO personnel and/or designees at the HCO, designee, or EPA offices, at the EPA's discretion.

**9.1.4** Site visits (including re-evaluation, at the EPA's discretion) at homes and apartments that have been Indoor AirPlus certified.

**9.2** HCOs are expected to fully cooperate with EPA reviews, provide requested documentation, and make personnel available for interviews and meetings with EPA staff.

**9.3** If the EPA's review identifies deficiencies, the HCO will be provided with written notification and an allowance of 30 days to resolve identified issues and provide a written response to the EPA's findings. If the organization fails to submit a satisfactory response that addresses the deficiencies identified, the EPA reserves the right to suspend or withdraw the organization's recognition.

## **10. Amendments, Modifications, and Revisions**

The following sections describe procedures to be followed in the event of amendments, modifications, and/or revisions initiated either by the HCO or the EPA.

### **10.1 EPA-Initiated Changes**

**10.1.1** The EPA reserves the right to amend, revise, or provide technical clarification regarding the Indoor AirPlus Certification Protocol and Indoor AirPlus Certification System as needed to ensure the value and integrity of the Indoor AirPlus program.

**10.1.2.** The EPA generally releases revisions to program documents referenced in the Indoor AirPlus Certification Protocol, such as the National Program Requirements and Indoor AirPlus Verification Requirements, as enhancements, refinements, and/or clarifications are deemed necessary. HCOs are required to implement changes according to the implementation timeline that the EPA publishes with each update.

**10.1.3** For changes to the Indoor AirPlus Certification System, organizations previously recognized by the EPA will generally be given 180 days to implement any policies or procedures needed to comply with new EPA requirements, unless otherwise specified by the EPA based on consultation with HCOs. If changes affect the HCO's Application for Recognition or an applicant's referenced documents, the HCO is required to provide the EPA with a redlined copy of any updates.

### **10.2 Revisions, Amendments, and Interpretations of Referenced Standards**

HCOs are required to implement revisions, amendments, and interpretations of standards referenced in the Indoor AirPlus Certification Protocol within one (1) year of formal adoption by the standards developer and to publish an implementation timeline online. HCOs may request that the EPA allow for a longer implementation period when needed and on a case-by-case basis. If granted, the extended implementation timeline would be made available to all approved HCOs.

### **10.3 HCO-Initiated Changes**

The HCO is required to notify the EPA in writing about any proposed organizational, procedural, or policy changes, such as an addendum or interpretation to the HCO's operating standards, that materially affect its compliance with the requirements outlined in the Indoor AirPlus Certification System. If changes affect the HCO's Application for Recognition or applicant's referenced documents, the HCO is required to provide the EPA with a redlined copy of any updates. Notification must be made at least 60 days prior to the

implementation of such changes and with sufficient time to allow the EPA to evaluate the changes and determine if the HCO will continue to meet all program requirements.

## **11. Withdrawal of Recognition**

The EPA reserves the right to suspend or withdraw its recognition of an organization that no longer meets the eligibility, policy, certification, and oversight procedure requirements of the *Indoor* AirPlus Certification System and/or has demonstrated a pattern of actions that may negatively impact consumer and industry confidence in, or the integrity of, the EPA's Indoor AirPlus program. If the HCO fails to meet its program obligations, the EPA will issue a written notice of deficiencies, providing 30 days in which the HCO must submit a corrective action plan to the EPA for approval. Failure to provide a timely or approvable plan may result in suspension or withdrawal of the organizations recognition. If the EPA determines that an HCO has significantly breached the public trust, it will instead provide a 60-day notice of recognition withdrawal with no additional consideration for corrective actions.

Should the EPA suspend or withdraw recognition of an HCO, or if an HCO determines that it will no longer implement the certification program, the organization is required to cooperate with the EPA to ensure an orderly closure of its activities and timely transfer of relevant documentation. Organizations whose recognition as an HCO is withdrawn by the EPA may re-apply for recognition after a period of two years.