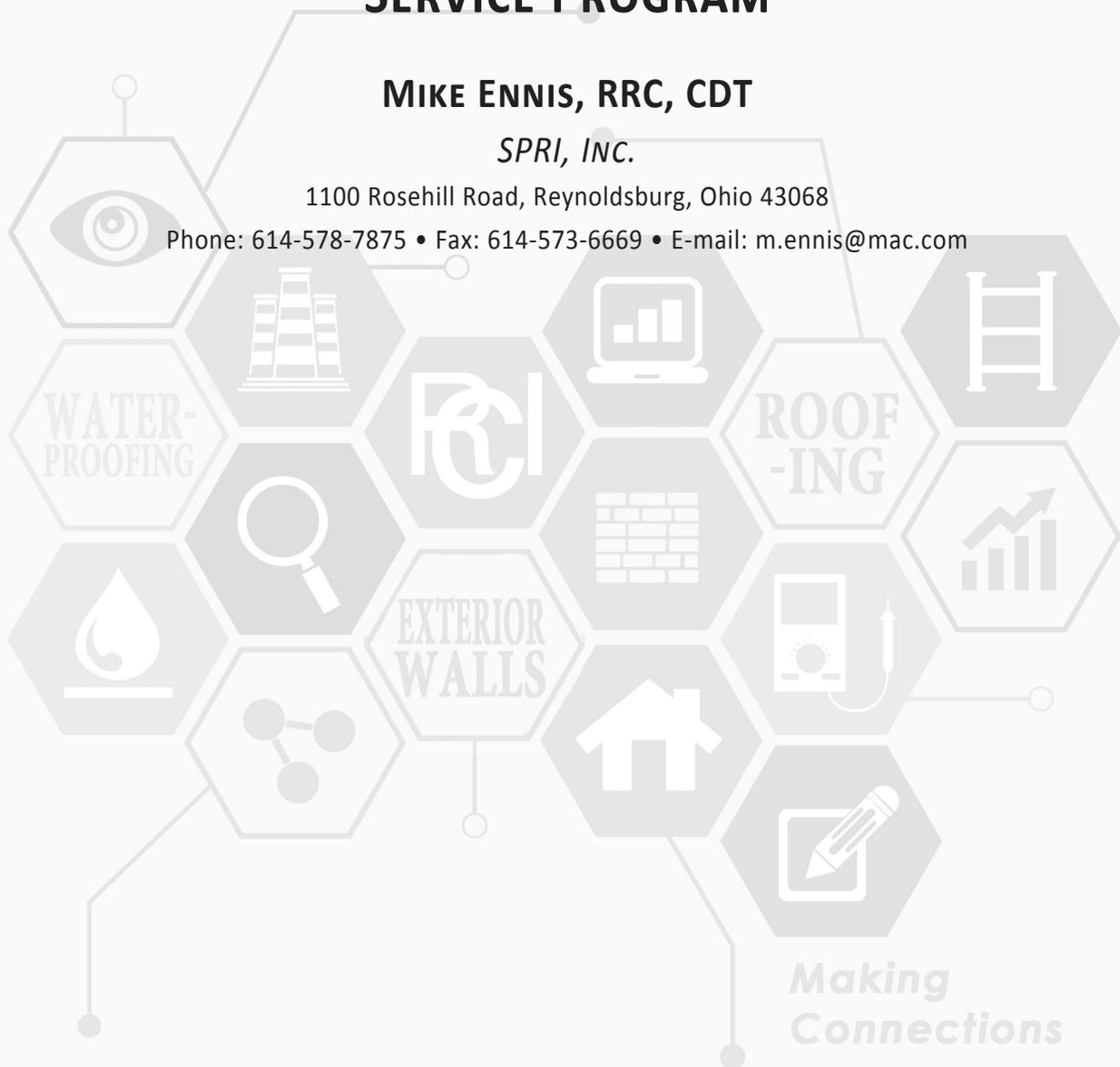# 31ST RCI INTERNATIONAL CONVENTION AND TRADE SHOW

SPRI ROOF SYSTEM LISTING SERVICE PROGRAM

MIKE ENNIS, RRC, CDT

SPRI, INC.
1100 Rosehill Road, Reynoldsburg, Ohio 43068
Phone: 614-578-7875 • Fax: 614-573-6669 • E-mail: m.ennis@mac.com

WATER-PROOFING

ROOF-ING

EXTERIOR WALLS

Making Connections

800-828-1902 • www.rci-online.org

Abstract

This paper will provide a detailed explanation of a new program called the Single-Ply Roofing Industry (SPRI) Listing Service Program. This program provides designers, code officials, roof consultants, contractors, and other interested parties with an easily searchable database of roofing assemblies tested in accordance with standards referenced as part of Chapter 15 of the International Building Code (IBC). The current scope of the program guidelines covers wind uplift only, with the intent to include other requirements contained in Chapter 15, such as fire ratings, impact resistance, and edge systems as future enhancements to the database. The requirements in these guidelines have been developed through a consensus-based approach.

Speaker

Mike Ennis, RRC, CDT — SPRI, Inc.

MIKE ENNIS has been technical director for SPRI, Inc., the association representing single-ply roofing manufacturers and component suppliers, since 2006. Ennis is a Registered Roof Consultant (RRC) with RCI and is chairman of the board of the Cool Roof Rating Council (CRRC). He is the immediate past chair and is on the board of directors of the Roofing Industry Committee on Weather Issues (RICOWI). He participates in standards and code development with ASHRAE, ASTM, ICC, and the NBC.

SPRI Roof System Listing Service Program

INTRODUCTION

The purpose of the Single-Ply Roofing Industry (SPRI) Listing Service Program (the Program) is to provide designers, code officials, roof consultants, contractors, and other interested parties with a database of roofing assemblies tested in accordance with standards referenced as part of Chapter 15 of the International Building Code (IBC).

This database will provide users with a one-stop shop to find roof assemblies that meet the requirements of the IBC instead of searching multiple laboratory-specific databases to find this information.

The Program is wholly owned by SPRI. SPRI is solely responsible for the establishment of the policies of the Program, including independent third-party management of the Program, as well as its overall direction, control, and implementation.

SPRI has elected to engage a manager to function as the Program's third-party administrator. As part of its administrative duties, the program manager is responsible for developing, populating, and maintaining the SPRI database.

In order to provide a credible listing service to the roofing industry, program guidelines (the Guidelines) govern the requirements for roof assembly submittals and supporting documentation, submittal validation, listing maintenance, and listing challenges and appeals. The Guidelines are part of an independent third-party listing program, and as such, these Guidelines constitute part of the agreements entered into by SPRI, the program participants, and the program manager.

The current scope of the Guidelines covers wind uplift only. The requirements in these Guidelines have been developed through a consensus-based approach.

DEFINITIONS

In this paper, terms will be used that are defined below:

End-user – Individuals such as consultants, architects, and authorities having jurisdiction utilizing the database for searching and identifying roof assembly performance.

Data extension – The use of comparative test data to allow alternative roofing system components to be included in a listing without conducting testing.

Dispute resolution committee – A neutral party, established by SPRI, providing arbitration on appeals and operating under defined procedures and rules.

Listing owner – Entity submitting roof assemblies for listing in the database and providing the supporting documentation for the assembly's performance.

SPRI oversight committee – The committee that oversees the operations and activities of the Program and database.

Program manager – The administrator of the Program and database.

Recognized component manufacturer (RCM) – A company that manufactures components that are utilized in roof assemblies that are listed in the database.

Validation – The technical review of the testing data and supporting documentation for establishing a listing. A validator, as set forth in the Program, must conduct validation.

Validator – ISO 17065-accredited certification body or a licensed professional engineer with the applicable expertise in the products and performance criteria being evaluated, which conducts the technical engineering review of the listing submittal.

GENERAL OVERVIEW

The Program provides a publicly accessible and searchable web-based database of roof assemblies. Four distinct groups will utilize the SPRI program database: listing owners, RCMs, the program manager, and the end-users. Each of the four groups requires unique settings, accessibility, and safeguards.

Listing owners and RCMs enter into an agreement with the program manager for their participation in the Program.

A listed roof assembly consists of all of the components that comprise the roof assembly, including but not limited to the deck, insulation, roof covering, and secure-ments. In general, components of an assembly must be manufactured by an RCM. The use of generic components (e.g., asphalt and polyethylene sheeting) will be identified as generic in the database and are not subject to the RCM requirements.

To add a roof assembly to the database, a listing owner submits a roof assembly listing application containing supporting documentation to the program manager in accordance with the assembly submittal requirements. The assembly supporting documentation may be in the form of qualified test reports or qualified existing listings. During this period, the listing submittal is pending in the database while under review.

During review, the program manager, in accordance with the governing submittal requirements, verifies the listing submittal's supporting documentation and RCM quality control requirements. Following a successful verification, the listing submittal is granted approval and is published by the program manager on the database. The listed assembly is accessible to the public through parametric searches and applicable category selections.

The listing owner maintains its listing by timely payment of applicable fees and periodic verification that there have been no changes that adversely affect the performance of the listed assembly. The program manager maintains the active listing in the database.

PROGRAM DETAILS

Eligibility

Eligible listing owners must have ownership or legal release of the listed assembly's supporting documentation and performance data. Each RCM that supplies components of a listed roof assembly must provide proof of satisfactory quality assurance inspections conducted by a third-party quality control agency at each of its recognized plant locations. The quality control agency performing the inspections must be accredited by the International Accreditation Service (IAS) or a similar accreditation body as complying with ISO Standard 17020 or ISO 17065 for performing inspections on its own behalf. Listing entries for another party are accept-

able when the listing owner grants written permission for the use of its data.

Listing Owner Responsibilities

The owner of a listing must first enter into an agreement with the program manager in order to participate in the Program. In order to obtain a listing in the database, the owner must submit the necessary supporting documentation and ensure that the supply of components and assemblies are good-faith reproductions of those tested and recognized in the assembly listing. It is also incumbent on the listing owner to notify the program manager of any changes to the listed assembly that adversely affect its performance.

The listing owner is also responsible for ensuring that agreements are in place with RCMs for proper identification of components utilized in listings. The identification must be clear enough to allow the end-user or authority having jurisdiction to adequately link the components to those identified on a listing.

Recognized Component Manufacturer Responsibilities

Each RCM must enter into an agreement with the program manager for participation in the Program and enroll its individual plant locations that manufacture components of listed or pending assemblies in the Program. The RCM must maintain a quality assurance system to ensure that its participating products consistently meet the requirements of the Program for each of its recognized plant locations. As part of the quality system, it must provide proof of enrollment in a quality control inspection for each of its recognized plant locations. Proof of inspection may be through the submittal of inspection reports, inspection summary forms, or other equivalent documentation. The documentation must identify variances as a result of inspections and confirmation that variances have been resolved.

The RCM is required to supply a list of its manufactured components that are part of any Program-listed assembly. The list includes any known part numbers or trade names utilized in listed assemblies. For each component in the database, all applicable manufacturing locations are noted. Recognizing that this information is proprietary, it is uploaded to a secure portion of the database and is only accessible to the specific RCM and the program manager. All

recognized components in the database will be accessible to the listing owners to select as part of their assemblies; however, the final assembly listing must be supported by a report from an accredited laboratory.

If an RCM fails to provide proof of inspections or resolution of variances, the affected plant locations will be removed from the database as part of the ongoing compliance requirements. If this step becomes necessary, the program manager will provide notification to the noncompliant RCM and the affected listing owners prior to the removal of the RCM plant locations and associated components. Following the notification, a time period will be provided for the RCM to supply proof of compliance. If inadequate proof is provided, all affected listings will be pulled from the Program's publicly visible site and the program manager will notify listing owners with any listings utilizing the affected components.

Applicable Test Standards

In order for tested assemblies to be included in the database, the wind uplift testing of roof assemblies will be conducted in accordance with FM 4474, UL 580, ASTM E1592, or UL 1897, as specified in Section 1504.3 of the IBC.

Assembly Submittal Requirements

A complete list of all roof assembly combinations being submitted for consideration must be provided. The components that make up each roof assembly include, but are not limited to:

- Roof coating
- Roof covering
- Cover board
- Insulation
- Method of securing all components
- Pattern or layout of securements
- Air, vapor, or thermal barrier
- Structural deck

Through the submittal process, each component in the assembly must be identified by the manufacturer, product trade name, and product description. The documented wind uplift for each assembly must be provided. Installation details are only required as necessary to properly describe the tested assembly. The listing owner has the authority to decide the content of the listing information, provided it complies with the program rules. Supporting documentation, testing data, and proprietary

information will not be publicly visible or accessible. No additional product information or claims will be included.

Supporting Documentation

Listings in the database may be supported by an existing listing or by the necessary test reports and supporting information for the performance characteristics for which the listing is being sought. Listings being supported by a current and valid existing listing from another qualified product listing program will be accepted by the program manager without further validation. Qualified product listing programs include, but are not limited to: ISO 17065-accredited certification bodies, Dade County Florida, FM Approvals, ICC-ES, State of Florida, and UL, LLC.

It is the responsibility of the listing owner to immediately notify the program manager in the event that a supporting listing is removed, whether voluntarily or involuntarily, from one or more of the qualified listing programs. In the event that a supporting listing is removed, the listing owner may submit supporting documentation to maintain its SPRI listing. For submittals not supported by an existing listing, test data must fully comply with the Program guidelines and provide the information necessary for validation. The program manager may request additional information as part of the review process of a listing application. All documents must contain the listing owner's name, document or reference number, and date.

Testing Laboratory Requirements

In the supporting documentation for each assembly, the independent testing laboratory, at the time of testing, must have been accredited as complying with ISO Standard 17025. The scope of accreditation for the laboratory at the time of testing must have also included the specific tests conducted in the assembly submittal.

Validation Requirements

Assembly submittals, not supported by an existing listing, must include a validation (technical engineering review) of the supporting documentation and the assembly's performance. Validation must be conducted by an ISO 17065-accredited certification body or by a licensed professional engineer with the applicable expertise in the products and performance criteria being evaluated. Listing owners cannot serve as

validators. The validation will ensure that the supporting documentation and performance fully comply with the applicable test standards.

ASSEMBLY LISTINGS
Listing Entries
Listing owners are responsible for entering the assembly information directly into the database, as well as uploading the necessary supporting documentation. The program manager then reviews the submittal for accuracy. All listings will remain in an unpublished, pending status, and are not accessible to the public until review by the program manager is completed. Only the program manager has the authority to activate and publish listings for visibility to the public. Initial review of a listing submission and its supporting documentation will be performed within 10 days of the submission.

Listing owners will be notified within 15 days of the listing submission of either acceptance of the listing or the reason for denial of the application. The listing owner can submit additional information after a denial to further support the assembly, or request a review through an appeal process.

Listing Publication
All listings will be published as part of a graphical user interface and database as part of the Program. This database will be accessible by end-users and will allow such end-users to search for and view performance of roof assemblies, specifically for the purpose of verifying compliance with standards referenced as part of IBC Chapter 15.

Listing Revisions
The listing owner will have secure access to its own listings and supporting information for maintenance and revision, as applicable. Any revisions that affect a listing will remain unpublished until reviewed by the program manager. During the program manager's review of the revision, the current listing will remain publicly accessible on the database unless withdrawn by the listing owner. This publicly visible listing will be updated once the revisions have been approved.

Listing Maintenance and Fees
This program is a fee-based system. In order to participate, the listing owner must pay an agreed-upon fee to the program manager and a listing maintenance fee. In

Figure 1

addition to the annual fee requirement, to maintain a current listing, the listing owner must log into its secure account on a three-year cycle and confirm that all supporting documentation, as well as the assembly, have not changed. All assembly listings will remain on the public site if confirmation by the listing owner is completed and associated fees have been remitted.

Listing Removal
The listing owner will have the authority to terminate a listing at any time without explanation. It is the listing owner's responsibility to notify the program manager when a supporting listing is suspended or discontinued. Failure to maintain a supporting listing for a Program listing will result in the removal of the listing from the database.

Data Extensions
Data extensions or evaluations used in support of component changes to a listed assembly must be validated with documentation clearly identifying the Program listing number(s), the revised or added component, the change made, rationale to support the change, and evidence of the performance equivalency.

Program Manager
SPRI has elected to engage a program manager to develop, implement, and administer the Program. Through a competitive interview process, SPRI hired Intertek as the program manager. Intertek is a global service provider for building products testing, certification, and inspections with ISO/IEC 17025, 17065, and 17020 accreditations. Intertek's Certification Services Group has significant experience developing and administering various types of programs for the building products industry, including listing and certification programs for specific

building products, as well as certification of qualified installers of specific building products. Intertek's Certification Services Group has developed and administered listing programs for industry associations, including the American Architectural Manufacturers Association (AAMA), the Vinyl Siding Institute (VSI), the Steel Framing Industry Association (SFIA), the Steel Stud Manufacturers Association (SSMA), the Insurance Institute for Business & Home Safety (IBHS), the Door and Access Systems Manufacturers Association (DASMA), and the Supreme Steel Framing System Association (SSFSA).

To effectively develop and implement the Program in accordance with SPRI's goals, SPRI is utilizing a three-phased approach:
1) Discovery and development
2) Database and webpage development
3) Program implementation and management

As the program manager, Intertek is responsible for developing the deliverables for each phase in accordance with consensus decisions and direction from SPRI and its membership. (See *Figure 1*.)

Phase I is discovery and development to determine and clarify the governing criteria of the Program. This phase is instrumental in ensuring the integrity and effectiveness of the Program. The policies and procedures developed include scope definition, participant eligibility, responsibilities, submittal requirements and limitations, maintenance requirements, and dispute resolution procedures. At the conclusion of Phase I, the Program is well defined and poised for development of the database and webpage.

Phase II of the process is the database and webpage development. Based on the Program's database criteria, the Program's approved governance documents developed in Phase I, and the information gathered

during discussions with SPRI, Intertek will utilize a team of experienced developers from its Information Technologies Development Group to create the web-based database. The database will have a user-friendly interface and will be easily accessible through the SPRI website. The database is designed for three distinct groups: the Program participants, the program manager, and the end-users. Each user group has particular objectives in using the database, and each will require unique settings for optimal performance and safeguards.

The database developer will need to consider features that include participant registration, participant listing submissions, program manager data validation, program manager administration/maintenance, and end-user parametric searching and reporting. The intent of the various features is that end-users be able to search and select roof assemblies utilizing any criteria they find useful.

Phase II will consist of a beta sequence where mock data will be populated into the system and beta users will test the database for functionality, efficiency, and user interface. At the conclusion of Phase II, the database will be populated with participant data and published for public use.

Following Phase II, Phase III will be program implementation and management. Intertek will function as the program manager and administer and maintain the SPRI-owned Program in accordance with the approved governance documents.

In summary, the program manager is responsible for:
- Entering into an agreement with the listing owners and RCMs for participation in the Program
- Conducting the review of submittals
- Confirming that the minimum quality control inspection requirements at each RCM's recognized plant location are being met
- Enforcing the provisions of the listing program
- Maintaining the database

PROGRAM QUALITY CONTROL

In order for the information contained in the database to be deemed to be reliable by the end users, quality control procedures have been established. A summary of these procedures follows.

Inspection of Recognized Plant Locations

Following an application to enroll as an RCM for the Program, an initial qualifying inspection will be announced and coordinated at the pending RCM's plant locations with an inspection agency. The initial inspection must include a review and approval of AC10-compliant quality system documentation and a review of the implementation of the documented quality system and associated processes and procedures at the manufacturing facility. A qualifying inspection may be waived if the RCM's plant location can provide proof, through inspection reports and an agreement with an accredited inspection agency, that the components recognized in the Program are part of an ongoing quality assurance inspection program with at least one inspection per year.

Ongoing Quality Control Inspections

Inspections will be performed a minimum of once per year at each RCM's recognized plant location. Each RCM must ensure that appropriate staff is available to assist the inspection agency representative during the inspections. Proof of inspection may be through the submittal of inspection reports, inspection summary forms, or other equivalent documentation. Documentation must identify variances as a result of inspections and confirmation that variances have been resolved.

Quality System Documentation

All RCMs must maintain quality control documentation and a quality system to ensure that their participating products consistently meet the requirements of the Program. The documentation must indicate how the recognized product is to be identified in the field, including manufacturer's name and product trade name, or identification as agreed upon through private labeling agreements.

Noncompliance Issues and Variances

If the program manager is notified of a noncompliance issue or issues with regard to the guidelines, the program manager may issue a variance to the contact of record for the affected RCM. The RCM will be given the opportunity to provide a response for correcting the variance within a specified timeframe. If the program manager determines that there are continued noncompliance issues or variances that affect listed assemblies, the

program manager may request additional information at its discretion. Any request for information by the program manager must be responded to by the RCM or designated representative within the timeframe specified by the program manager.

Failure to satisfactorily resolve variances may result in the removal of all affected listed assemblies from the publicly accessible database.

APPEALS
Appeals of Listing Denials, Removals, and Challenges

Following are listing actions eligible for appeal:
- **Listing denials:** listing owners' submissions of assemblies that are not approved for listing in the database by the program manager
- **Listing removals:** Listings that are removed from the database by the program manager without the consent of the listing owner
- **Listing challenges:** Disputes as to whether an existing published listing in the database is legitimate

Appeals and Challenge Process

Listing denials, listing removals, and decisions resulting from listing challenges may be appealed to the Dispute Resolution Committee (DRC). The appellant can submit its appeal in writing to the DRC. The appeal should include, as applicable, the listing number, listing record, and reason(s) for the appeal, supported with documentation and other evidence.

In general, appeals will be investigated fully and impartially by the DRC, after which the DRC will issue its determination in writing to the appellant filing the appeal, with copies provided to all others concerned. The DRC establishes and carries out, regularly and without discrimination, its own guidelines, procedures, and practices to review appeals, including, as much as practical, a consensus-based decision-making process for granting or denying appeals. While the DRC may request further information from the appellant, the program manager, or others, the DRC intends normally and customarily to issue its final determination granting or denying the appeal within 30 days of the DRC's receipt of the appeal and all evidence provided in support. Should the DRC grant the appellant's listing denial or listing removal appeal, the program manag-

er, once notified in writing by the DRC, will activate the assembly listing to the database within three business days, assuming all other program requirements are met. The appellant is charged a fee to complete the investigation.

FUTURE PLANS

After the database is completed and populated and it is confirmed that it is operating as designed and is fulfilling the needs of the end-users, the opportunity to utilize the database will be opened up to other roofing product categories, such as built-up roofing and metal roofing. The addition of information that would allow the end-user to verify conformance with the requirements of Chapter 15 of the IBC will also be considered. Examples of this type of information are fire classification and impact resistance.