Validation Testing (VT) Program

CRRC Roof Rating Program
Licensee Webinar

April 17, 2024

Housekeeping

- Submit questions via Q&A at any time - *helpful to note slide #*

- Questions will be responded to at the end

Today's Purpose and Goals

1. Describe the proposed Validation Testing program structure
2. Answer questions
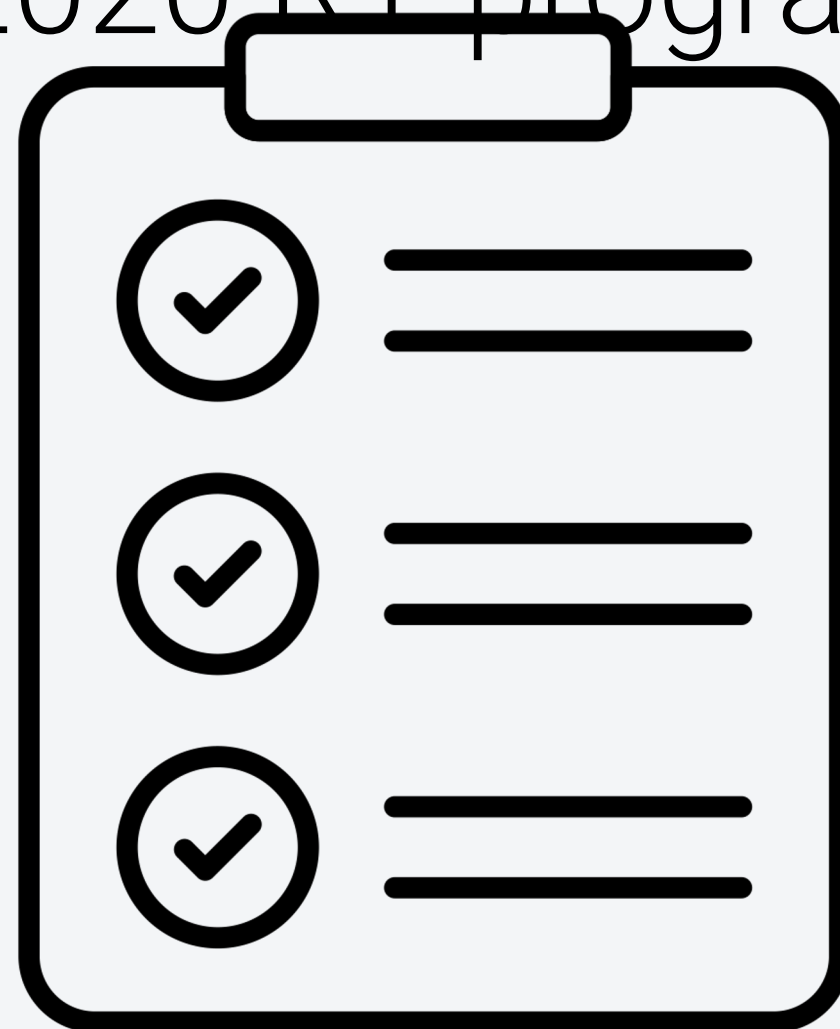3. Outline next steps

Presentation Outline

1. Background and context about Random Testing & Validation Testing Development

2. Summary of Proposed VT Program

3. Additional Information about VT
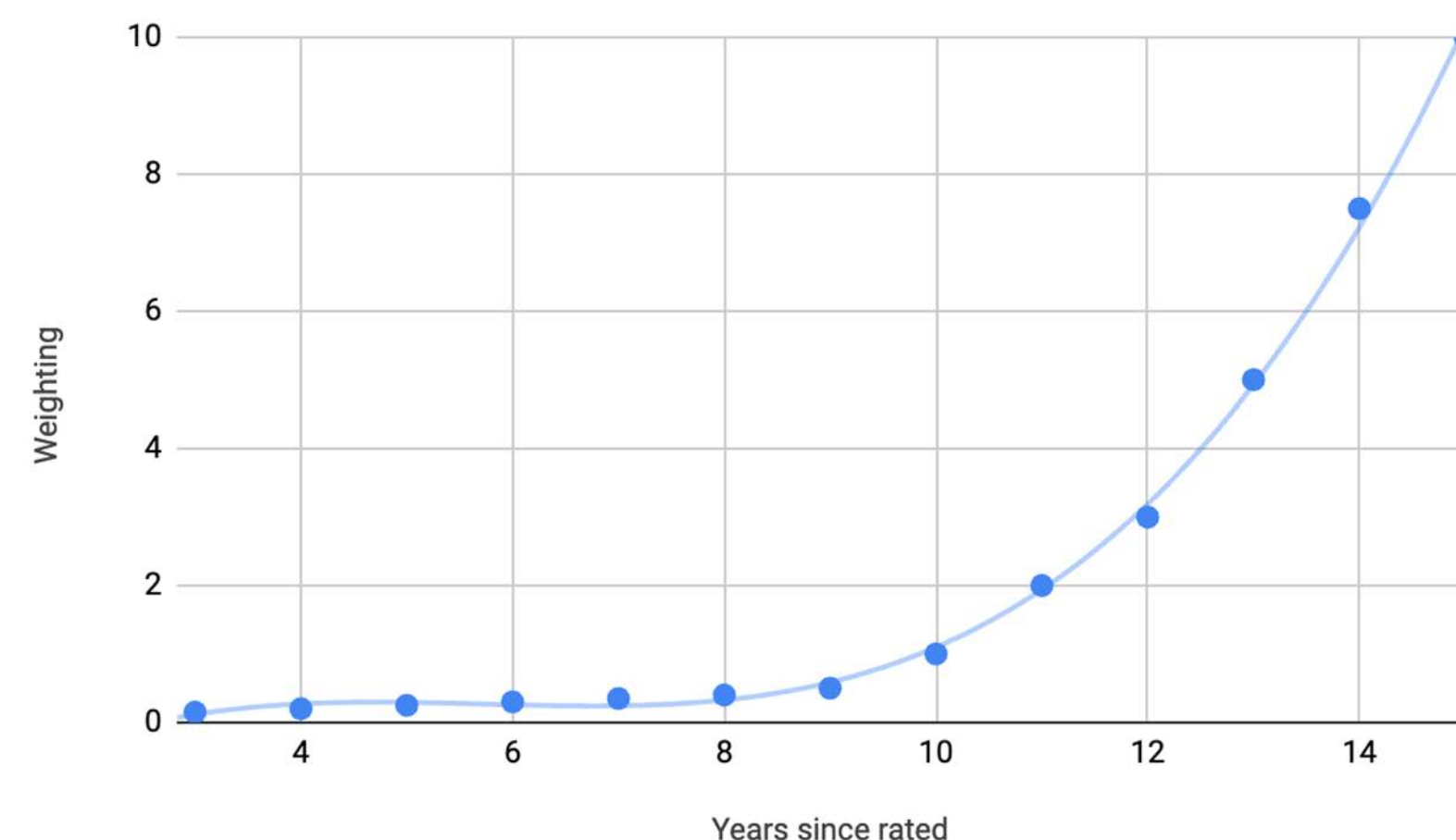
Background on Random Testing (RT)

- Quality assurance mechanism for CRRC Directory to ensure rated values match product performance

  – RT measurements are compared to **initial values**

- Each year, a percentage of rated products are selected for testing (7.0% as of the 2020 RT program year)

Background on Random Testing (RT)

- Each eligible product is assigned a random number, weighted by how long the product has been rated without going through RT

- Once products reach 15 years, they must go through RT

- Third-party organization collects test specimens and sends to CRRC, which are ~~~~~~~~~~~ or testing

Random Testing Selection Weighting by Years Since Rated

Weighting / Years since rated

Purpose of Validation Testing (VT)

- Continues to be a quality assurance mechanism for the CRRC Rated Products Directory

  – Rated product values are accurate

  – Products are available

  – Ratings haven't gotten "stale" due to changes in test methods, components, or suppliers

Process Undertaken to Develop VT

- Random Testing Working Group (RTWG) has been active since 2006 and has helped address RT issues and policy changes

- Staff began VT program design in early 2023

- RTWG provided input on drafts of VT program design beginning May, 2023

- Staff have solicited feedback from various industries and manufacturers

- CRRC Board of Directors & Board Executive Committee have provided feedback on program design

Validation Testing Summary

Active rated products are:

- required to be validated every 7 years to remain on the Directory
- sent directly to a lab selected by CRRC
- are tested according to the current test method
- given two chances to pass VT

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No random selection; fixed timeline instead

- Products must go through Validation Testing every 7 years

  – 7 years after initial rating

  – every 7 years thereafter

- For currently rated products, program will phase in over 7 years (see slide 11)

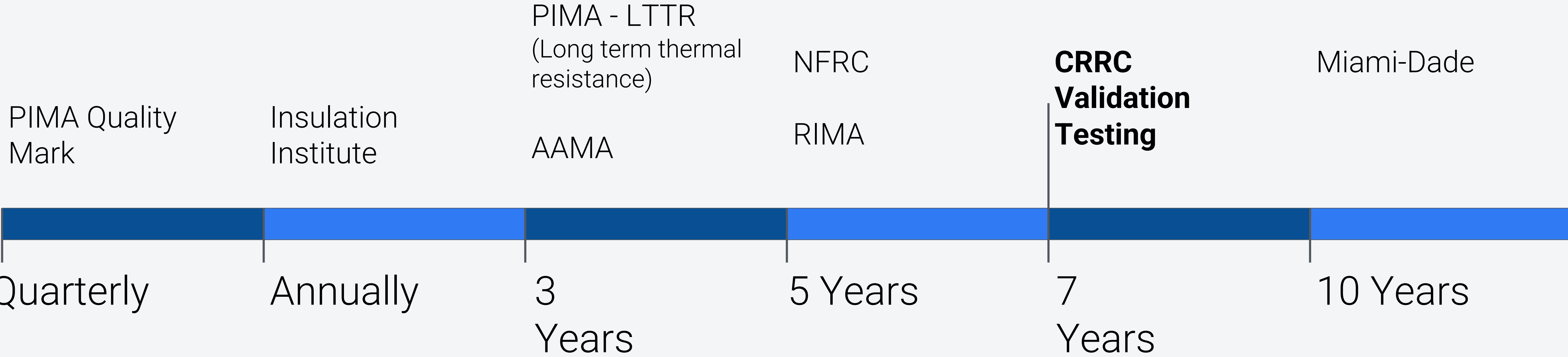- What happens if it doesn't go through VT? (see slide 20)

When will my products need to be validated?

Program Year	Year	Year Initially Rated or Last Tested Under RT
1	2025	2011–2012
2	2026	2013–2014
3	2027	2015–2016
4	2028	2017–2018
5	2029	2019–2020
6	2030	2021–2022
7	2031	2023–2024
8	2032	Products rated and previously tested in 2025

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Why seven years?

Quarterly	Annually	3 Years	5 Years	7 Years	10 Years
PIMA Quality Mark	Insulation Institute	PIMA - LTTR (Long term thermal resistance) AAMA	NFRC RIMA	**CRRC Validation Testing**	Miami-Dade

What products are included?

CRRC Rating Options

- CRRC Rating

- ~~Reference~~

- Formula Change or Retesting

Application Type

- Standard Product

- Color Family Representative Element

- Color Family Additional Element

- Compound Rating

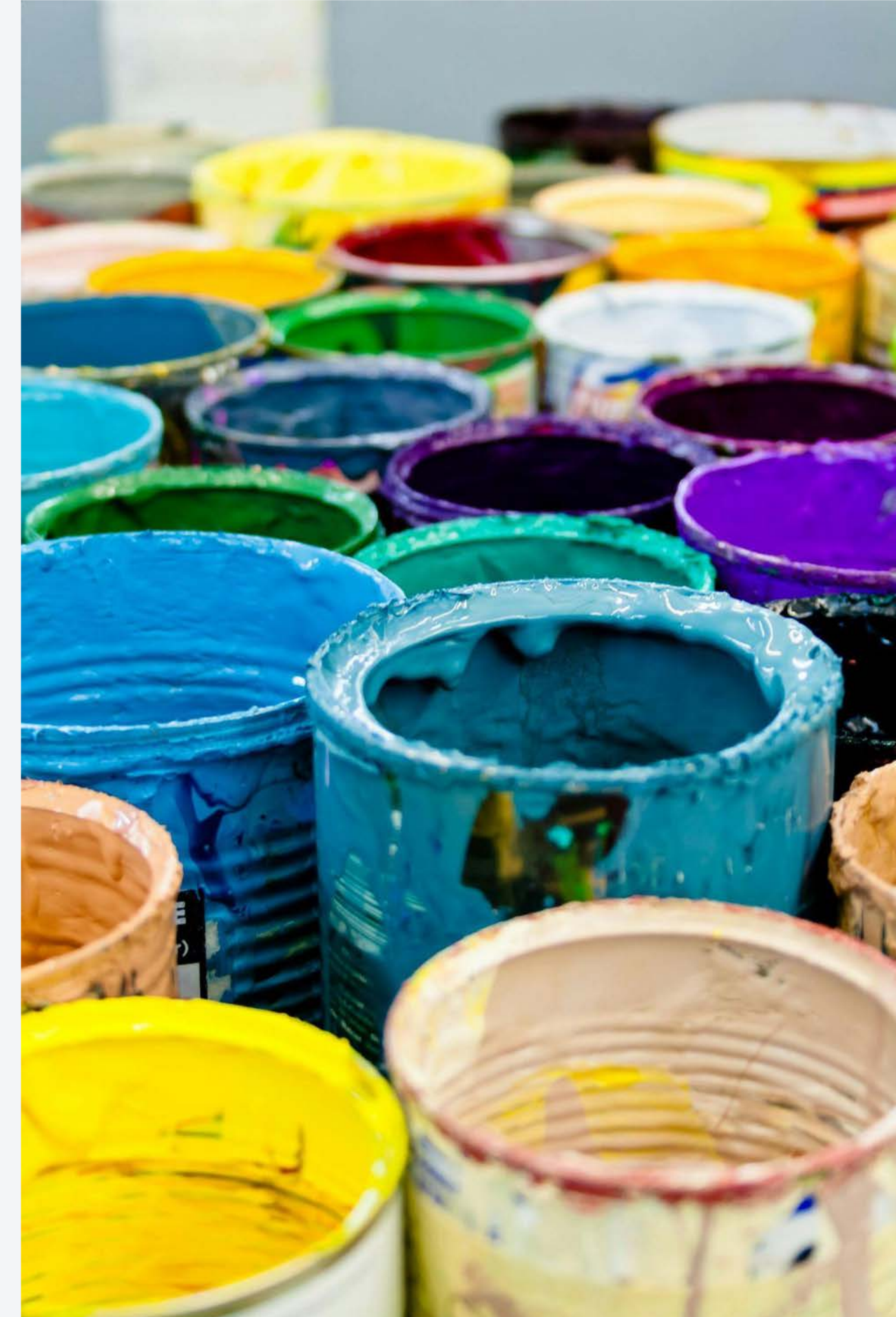- Mono-colored granules

- ~~Blend Assembly~~

What products are included?

- **All** product types (shingles, coatings, metal, single-ply, tile, etc.)
- **All** intended customer types (end-users and other manufacturers)

Photo courtesy of GAF

Photo courtesy of DaVinci Roofscapes

Acceptable product sources

- Production line

- Retain samples

- Single-run production

- Lab batch

- Separate party (e.g., private label OEM or fabricator)
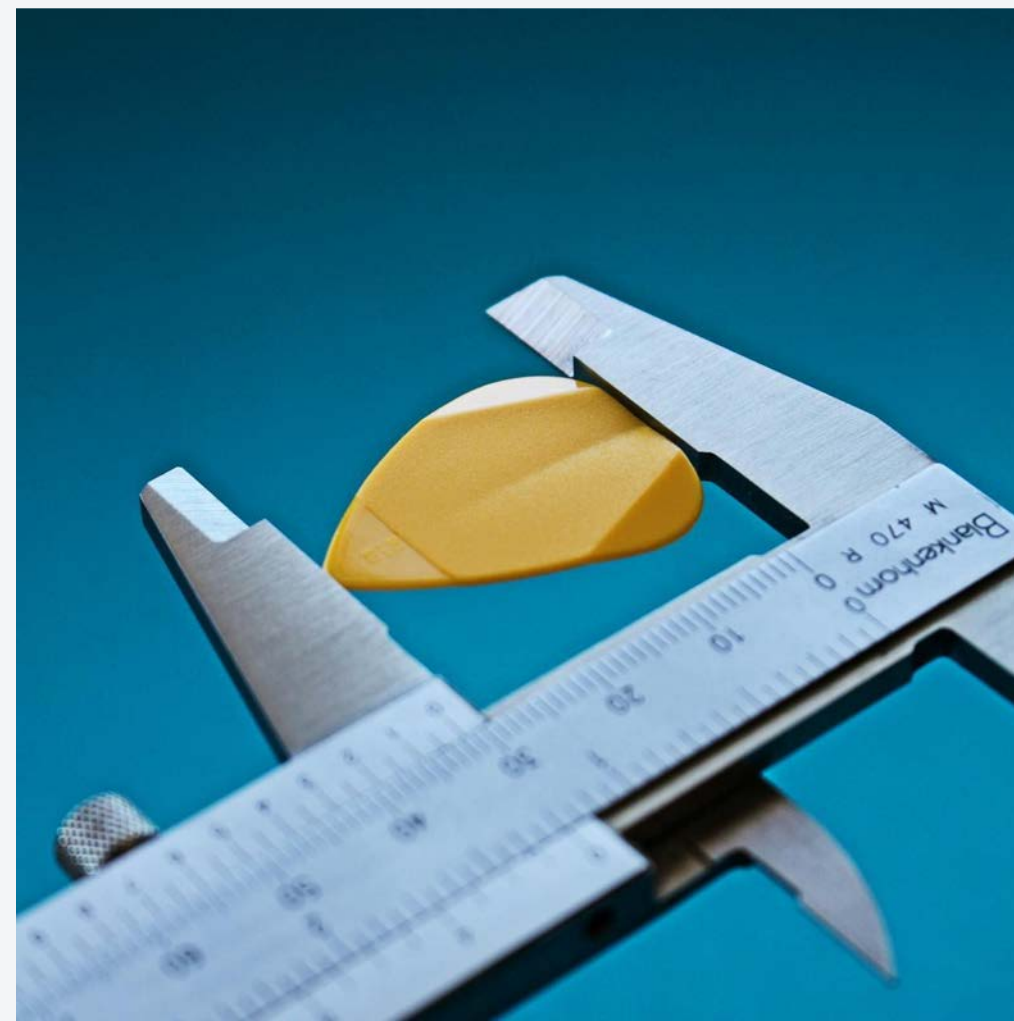
- **Traceability and source documentation is key!**

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Shipping to labs

- CRRC selects test lab (same as in RT) and informs Licensee

- Licensee ships specimens directly to the lab

Current test method

- Product tested according to the current test method

- VT is concerned with whether the ratings on the Directory are accurate

- Current test methods have been determined to be the most accurate and repeatable way to measure product properties

Two chances to pass

- Product specimens will be from two different sources/batches

- Tested at two different labs

- More efficient process in order to complete testing by end of year

- Very few products go to a third test

- Requirement increases credibility

Evaluation Criteria

- No changes from Random Testing

- Solar Reflectance fails if the value differs by more than ±0.05

- Thermal Emittance fails if the value differs by more than:

  - If initial TE is ≤0.30, ±0.05

  - If initial TE is >0.30, ±0.10

- Out of tolerance on either SR or TE is considered not passing
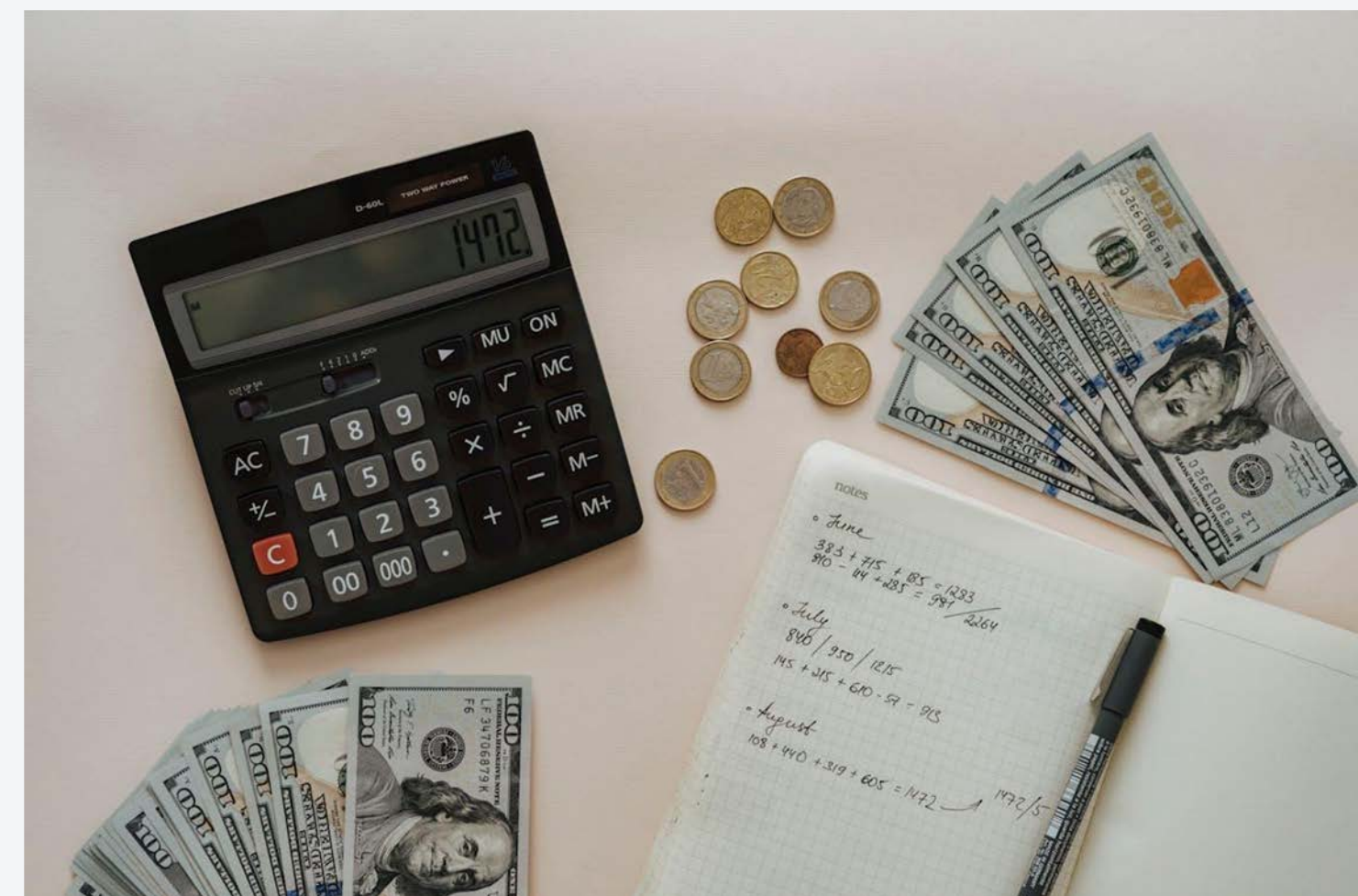
What happens if you don't validate?

- Without a passing Validation test, the product will terminate at the end of the year

  – Manufacturer voluntarily declines to go through VT

  – Manufacturer decides to submit a reformulation application

  – Product is not available to test

  – Product fails both VT tests

Additional VT Program Information

Program costs

- CRRC will pay lab testing fees for products going through VT

- Existing CRRC budget for Random Testing will be applied to VT

- More tests in VT than RT = higher costs

- Additional revenue generated from product renewal fees (see slide 23)

- Additional revenue intended to cover average program cost over seven years

Product Renewal Fee Increases

Product Renewal Fee Type	Current Rate	Rate Increase	New Rate
Standard Product Renewal	$155	$14	$169
Reference Product Renewal	$80	$9	$89
Color Family Additional Elements Renewal	$17	$12	$29
Color Family Representative Element Renewal	$155	$14	$169

Examples of annual cost increases:
1. Small manufacturer $50–$100/year
2. Mid-sized manufacturer $400–$600/year
3. Large manufacturer $1,500–$4,500/year

Product fees in context

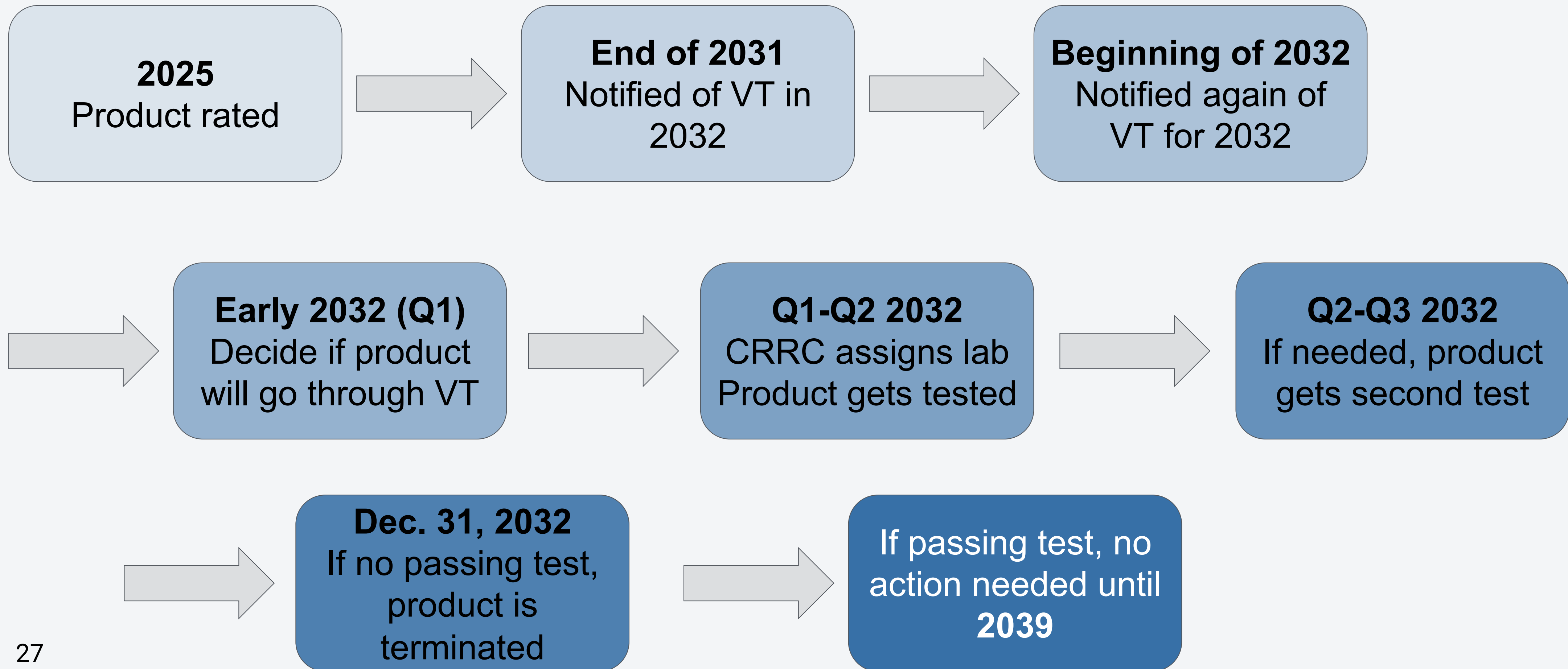| Product Renewal Fee Type	2005 CRRC fees (adjusted for inflation to 2024)	2025 Proposed fee amount
Standard Product	$194	$169
Reference Product	$97	$89
CF Rep. Element	$194	$169
CF Add. Element	$16	$29

Lab Contracting & Selection

- CRRC will negotiate test rates with all participating labs

- CRRC staff will assign products to labs on a rotating basis

- When test results are received, the lab goes back into the queue

- CRRC can divert products to different labs if necessary

  - High workload from non-CRRC work during certain times of the year
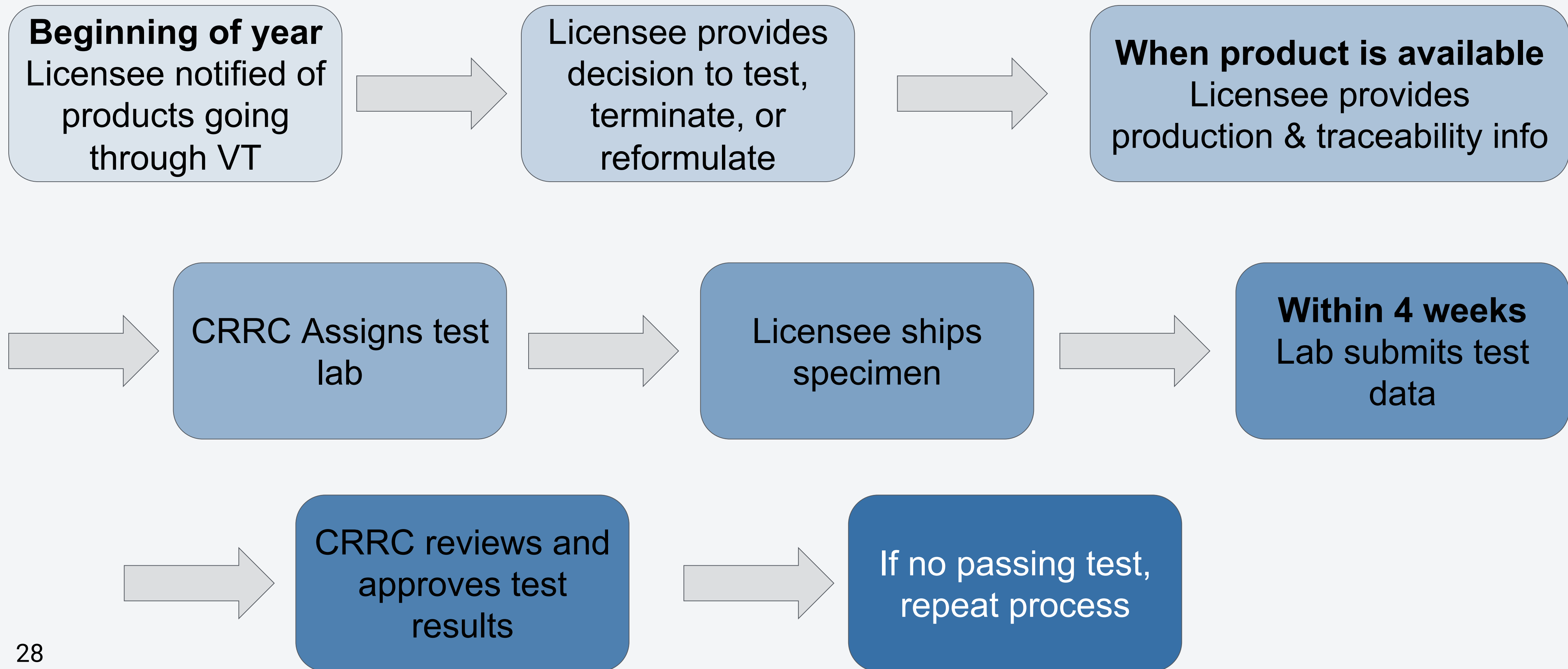
  - Lack of available testing technicians

Challenge testing

- Mechanism for CRRC or other stakeholders to raise concerns about a particular product or manufacturer

- Product is required to go through Validation Testing the next program year

- Currently exists in Random Testing

- Rarely used

Example timeline − 7-Year Cycle

2025
Product rated

→

End of 2031
Notified of VT in 2032

→

Beginning of 2032
Notified again of VT for 2032

→

Early 2032 (Q1)
Decide if product will go through VT

→

Q1-Q2 2032
CRRC assigns lab Product gets tested

→

Q2-Q3 2032
If needed, product gets second test

→

Dec. 31, 2032
If no passing test, product is terminated

→

If passing test, no action needed until **2039**

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Example timeline - VT Year

Beginning of year
Licensee notified of products going through VT

→

Licensee provides decision to test, terminate, or reformulate

→

When product is available
Licensee provides production & traceability info

→

CRRC Assigns test lab

→

Licensee ships specimen

→

Within 4 weeks
Lab submits test data

→

CRRC reviews and approves test results
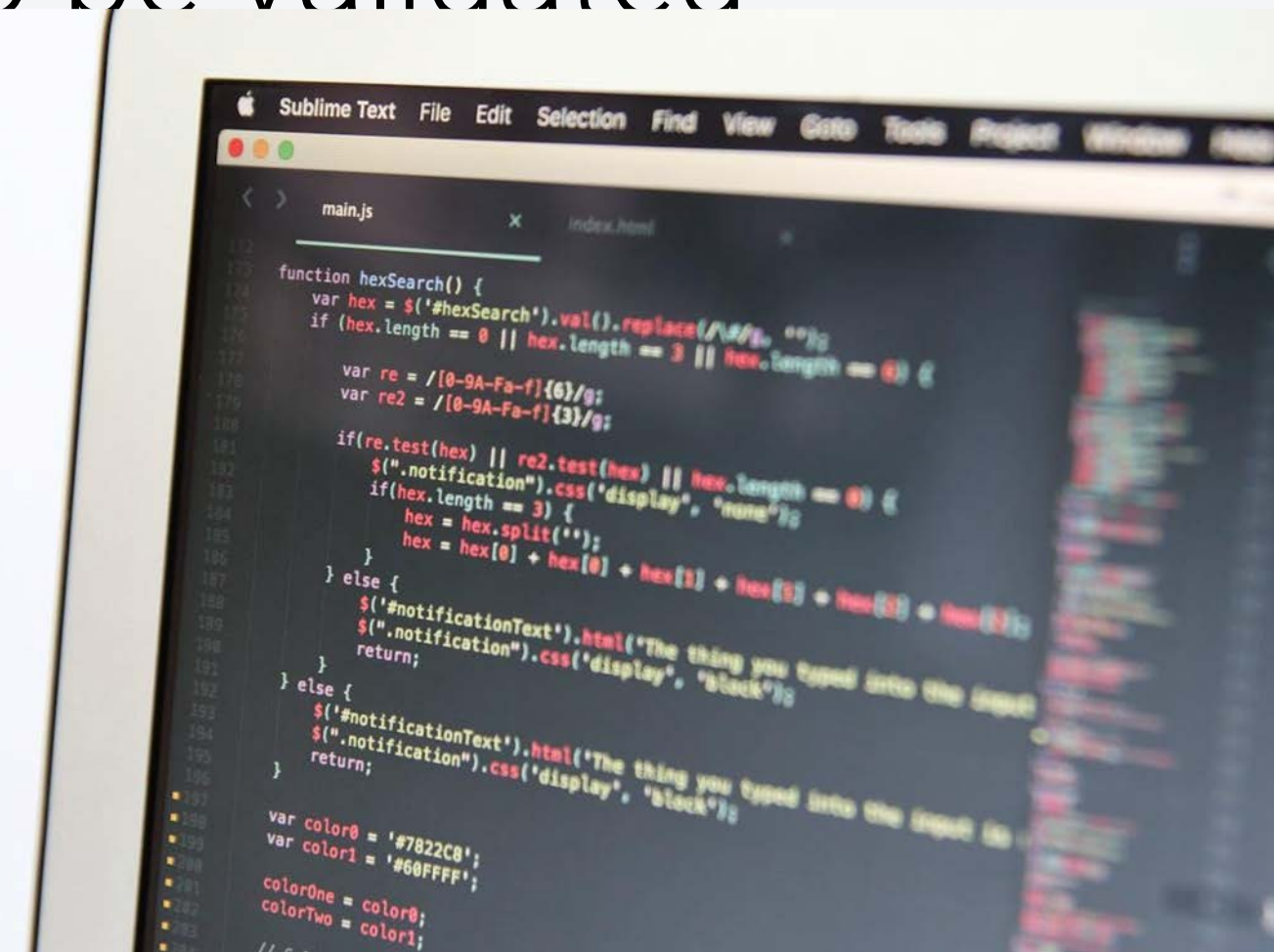
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If no passing test, repeat process

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CRRC Rating Portal - Licensees

- See when products will be required to be validated

- Submit VT testing decision

  – Proceed with VT

  – Voluntarily terminate

  – Reformulate

- Supply product source documentation

- Generate printable CRRC sample tag for product tracking

- View past VT test results

CRRC Rating Portal - Labs

- View relevant product information

- Submit measurements in online Test Results Report (TRR)

Applications: 455 Results

FILTER APPLICATIONS ▾

ID	Status	Status Date	Application Type	CRRC Product ID	Company	Brand	Model	Product Type	Initial	Rapid	Aged	Validation Testing
004825	Aged Approved	2020-06-23	Standard Product	1610-0021	Duro-Last Roofing Inc.	Duro-Last	DURP-LAST® EV FLEECE	Single-Ply	👁	👁	👁	➕
004627	Initial Pending Results	2022-12-22	Standard Product		General Coatings Manufacturing Corp.	Ultra-Flex 1000	Light Tan 1000	Coating	👁	➕	N/A	N/A
004628	Initial Pending Results	2022-12-22	Standard Product		General Coatings Manufacturing Corp.	Ultra-Flex 1000	Light Gray 1000	Coating	👁	➕	N/A	N/A
004345	Aged Pending Results	2019-10-21	Standard Product		Tremco CPG Inc.	TremProLiliconized Elastomeric	Roof Coating 2300	Coating	👁	👁	✏	N/A
004808	Initial Pending Results	2023-05-26	Color Family Additional Element		Dura Coat Products Inc.	Ceranamel	Native Copper DC151R-208CR	Metal	👁	N/A	N/A	N/A

CRRC Rating Portal - CRRC

- Automated Portal email communications

- Track & update product status throughout VT

- Assign test labs

- Review and approve VT test results

Next Steps

Next Steps

- Webinar recording and presentation will be available at
https://coolroofs.org/programs/roof-rating-program/crrc-validation-testing

- Provide feedback by *no later than* **May 1, 2024** for
Board consideration

- Board of Directors to approve program at
June 6, 2024 meeting

- Q2–Q3 Portal software development

- Q4 Program communication and orientation

- 2025 - Program launch!

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