Public Workshop on Regulatory Responses for Spray Polyurethane Foam Systems

SAFER CONSUMER PRODUCTS

November 29, 2023

This meeting is being recorded

Department of Toxic Substances Control

CalEPA

How to Participate

- Questions and comments can be submitted in two ways:
  - Question & Answer (Q&A) function
  - Raise hand function
- For those calling in, dial *9 to raise your hand and dial *6 to unmute.

Agenda

Time	Topic	Presenter
9:30	Introductions and Overview	**Chinh Sheow,** Public Participation Specialist, DTSC
9:35	Opening Remarks	**Karl Palmer**, Deputy Director, Safer Consumer Products, DTSC
9:40	Proposed Regulatory Responses for Spray Polyurethane Foam Systems with Unreacted Methylene Diphenyl Diisocyanate (SPF Systems)	**Kelly Grant, PhD,** Senior Environmental Scientist, Safer Consumer Products Program, DTSC
10:15 - end of comments or 11:50	Question & Answer (Q&A), Public Comment Period	The public comment period will last until 11:50 AM, or until there are no further public comments, whichever comes first.
	Closing remarks	**Jen Jackson**, Branch chief, Safer Consumer Products, DTSC

SAFER CONSUMER PRODUCTS (SCP)

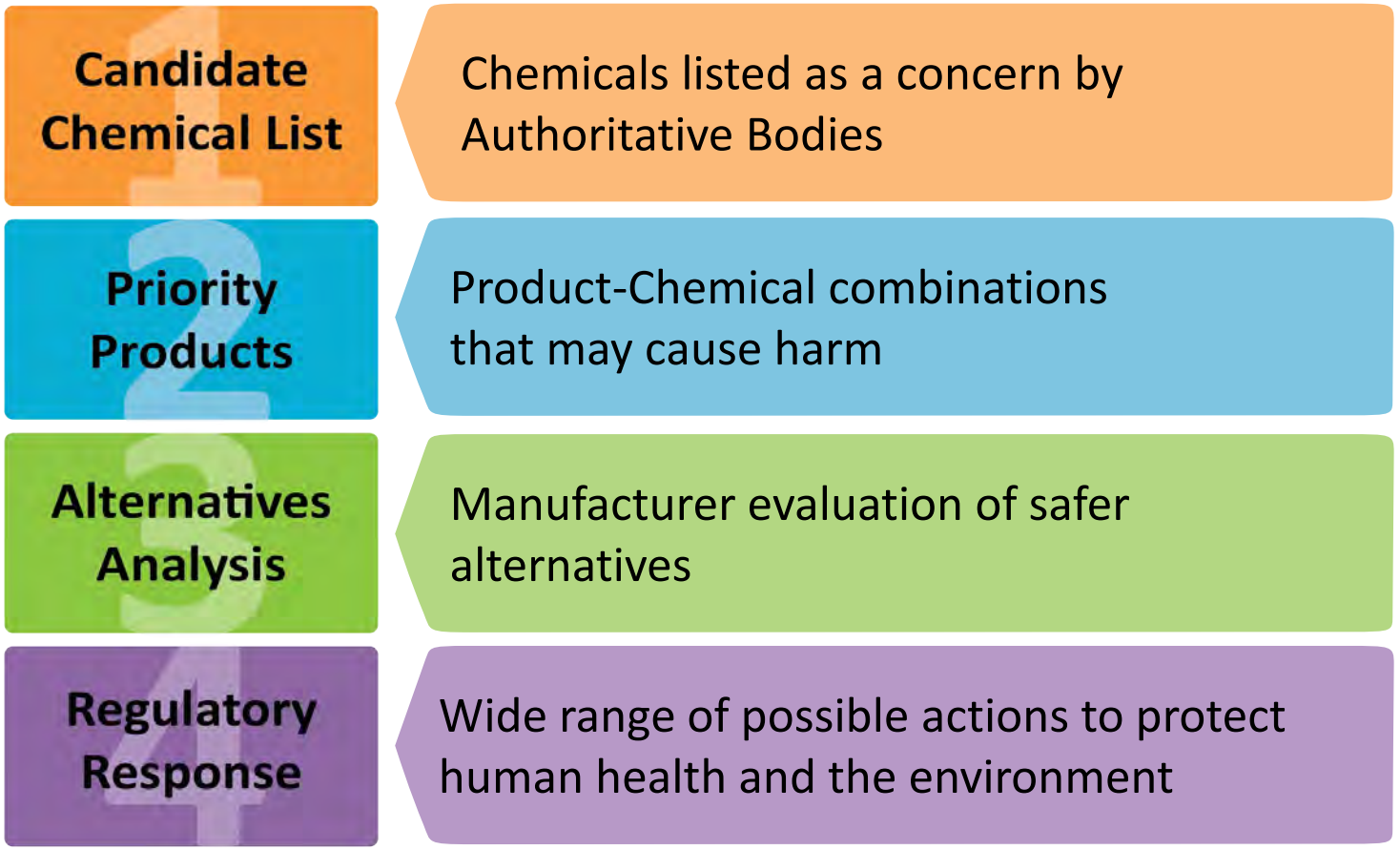
Opening Remarks

Karl Palmer
Deputy Director

SCP Program's Missions and Goals

- **Mission:** advance the design, development, and use of products that are chemically safer for people and the environment
- **Goals:**
  - Reduce hazardous chemicals in consumer products
  - Increase adoption of green chemistry principles and safer alternatives to chemicals of concern in products

Safer Consumer Products (SCP)



Regulatory Responses for the Manufacturers of Spray Polyurethane Foam Systems Containing Unreacted Methylene Diphenyl Diisocyanate (SPF Systems)

1. Provide information to consumers and users in California (§ 69506.3);
2. Implement use restrictions that mandate training prior to the sale of the Priority Product (§ 69506.4(e)); and
3. Advance green chemistry and engineering by collectively investing $8 million to fund grants to develop or make progress towards safer alternative(s) (§ 69506.8).

Note: All regulation citations refer to title 22 of the California Code of Regulations

Outline

- Background on SPF Systems
- Primer on the SCP process and the timeline of SPF Systems
- Regulatory responses
  - Selection principles
  - Required regulatory responses
    - Product information to consumers and users
    - Advancement of green chemistry and engineering
  - Additional regulatory response
    - Restriction on who may purchase or use the product (training requirement)

SPF Systems

- 2-component liquid systems
  - A Side: methylene diphenyl diisocyanate (MDI)
  - B Side: mixture of polyols, catalysts, blowing agents, flame retardants, and surfactants
- When mixed, the A & B sides react to form polyurethane foam
- Used for roofing, insulation, and filling voids and gaps
- No concern for MDI exposure once the foam has cured

Priority Product Definition Includes Four Types of Foam

- High-Pressure Foam: professional use
  - Open-cell 0.5 lb/ft^3
  - Closed-cell 2 lb/ft^3
  - Closed-cell 3 lb/ft^3 (roofs and exteriors)
- Low-Pressure Foam: do-it-yourselfers (DIY'ers) & workers

Candidate Chemical: Methylene Diphenyl Diisocyanate (MDI)

Candidate Chemical List

Priority Products

Alternatives Analysis

Regulatory Response

Chemicals listed as a concern by Authoritative Bodies

CalSAFER
SAFER CONSUMER PRODUCTS INFORMATION MANAGEMENT SYSTEM

Search

Respiratory Tox - EC Annex VI Resp. Sens. - Cat. 1
Chemicals classified by the European Union as respiratory sensitizers Category 1 in Annex VI to Regulation (EC) 1272/2008

Respiratory Tox - OEHHA RELs
Chemicals that are identified with non-cancer endpoints and listed with an inhalation or oral Reference Exposure Level by the California Office of Environmental Health Hazard Assessment under Health and Safety Code section 44360(b)(2)

Respiratory Tox - CA TACs
Chemicals identified as Toxic Air Contaminants under sections 93000 and 93001 of title 17 of the California Code of Regulations

Additional Hazard Traits Identified by DTSC

- Dermatotoxicity
- Immunotoxicity
- Respiratory Toxicity

Potential Adverse Impacts from Exposure to MDI from SPF Systems

- Respiratory Toxicity
  - Asthma
  - Extrinsic allergic alveolitis
  - Hypersensitivity pneumonitis
  - Interstitial and peribronchiolar fibrosis
  - Respiratory irritation
- Dermal toxicity
  - Allergic contact dermatitis
  - Dermal sensitization
- Immunotoxicity
  - Allergic sensitization

Priority Product: SPF Systems

Candidate Chemical List

Priority Products

Alternatives Analysis

Regulatory Response

Product-Chemical combinations that may cause harm

2018 – Rulemaking finalized to add SPF Systems as a Priority Product

- Potential exposure to MDI from the product
- Potential for one or more exposures to contribute to or cause significant or widespread adverse impacts

Timeline

- March 2014 – DTSC proposed adding SPF Systems as a Priority Product
- Feb 2017 – DTSC released the revised technical document
- July 2018 – Adopted SPF Systems as Priority Products
- August 2019 – American Chemistry Council (ACC) sued DTSC
- August 2019 – Responsible Entities (REs) submitted Alternative Analysis Report

Alternatives Analysis (AA) (§69505.5(b))

Candidate Chemical List

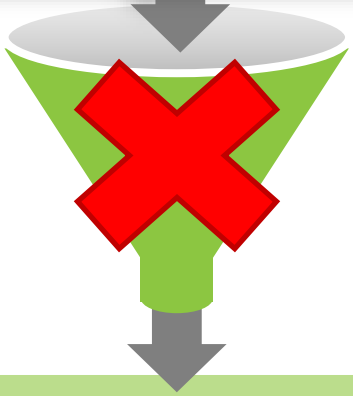
Priority Products

Alternatives Analysis

Regulatory Response

Manufacturer evaluation of safer alternatives

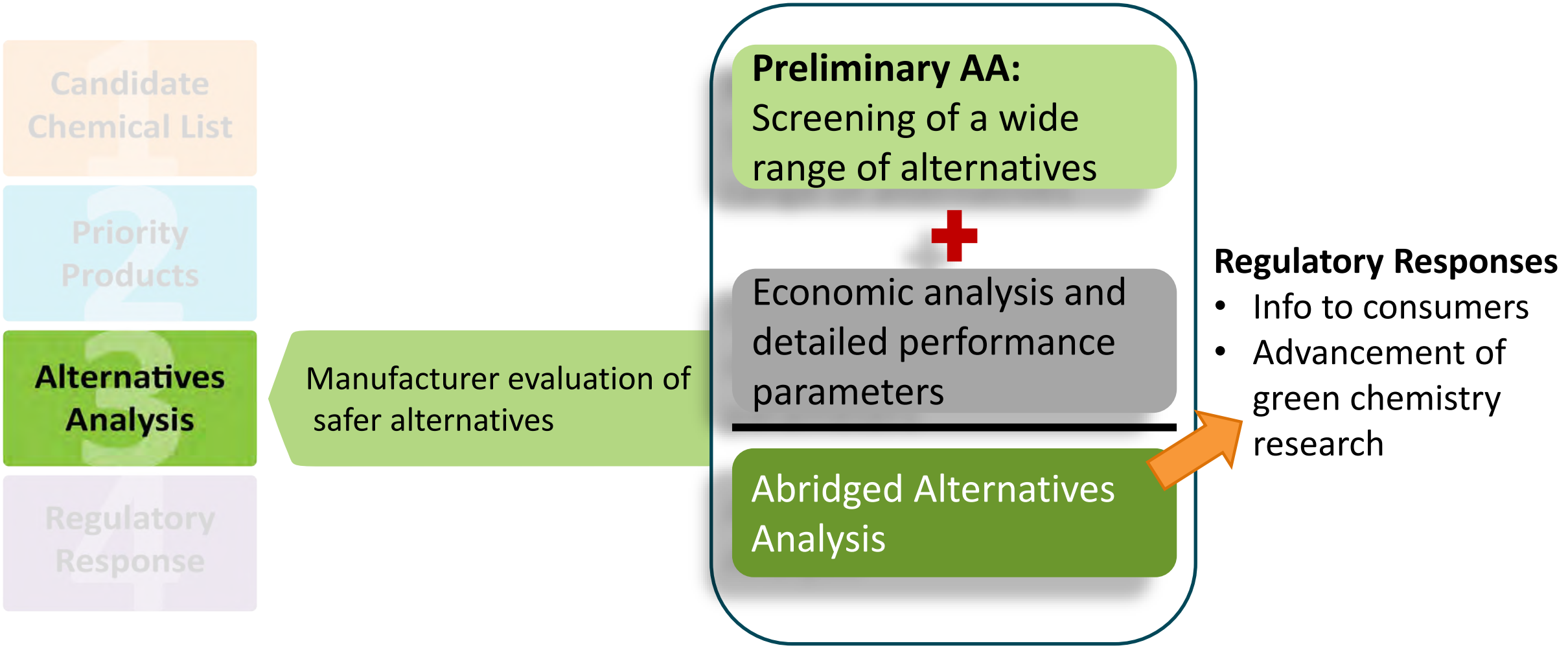
Preliminary AA: Screening of a wide range of alternatives



Scoping and Screening

Final AA: In-depth comparison to select safer alternatives

Abridged Alternatives Analysis (AA) (§69505.5(b))



Abridged Alternatives Analysis Report

REs evaluated several types of alternatives:

- Broader alternative insulations
  - Described as outside the scope of the AA
- Sprayable, reactive insulations that do not rely on MDI
  - Little information found on ingredients and performance
- Alternatives that may reduce exposure to MDI
  - Limited options
- REs found these alternatives to be neither functionally acceptable nor technically or economically feasible.


Abridged Alternatives Analysis Report for
Two-component Low- and High-pressure
Spray Polyurethane Foam Systems Containing
Unreacted Methylene Diphenyl Diisocyanate

Prepared for
American Chemistry Council
Center for the Polyurethanes Industry
Spray Foam Coalition
700 2nd Street NE
Washington, DC 20002

October 14, 2020

GRADIENT
www.gradientcorp.com
600 Stewart Street, Suite 1900
Seattle, WA 98101
206-267-2920

Timeline Cont.

- August 2019 – ACC sued DTSC
- Oct 2020 – REs submitted Revised Abridged AA Report
- Feb 2021 – DTSC issued Notice of Compliance for Revised Abridged AA & suspended further activity until the lawsuit was resolved
- April 2023 – California Supreme Court denied hearing ACC's final appeal in lawsuit; DTSC prevailed
- October 2023 – DTSC notified REs that regulatory response (RR) process resumed
- November 2023 – DTSC issued the Notice of Proposed Determination for RR

SCP Framework Process – Regulatory Response (RR)

Candidate Chemical List

Priority Products

Alternatives Analysis

Regulatory Response

Wide range of possible actions to protect human health and the environment

Possible Regulatory Response requirements:

- Pre-RR: additional research to inform the RR
- Product info to consumers
- Use restriction on chemicals and products
- Sales prohibition
- Engineered safety measures or administrative controls
- End-of-life management
- Advance of green chemistry and engineering research

Selection Principles for Regulatory Responses (§§ 69506)

Preference is given to regulatory responses that provide the greatest level of inherent protection.

Public health and environmental protection	Economic interests of responsible entities	Government efficiency and cost containment
• Degree that RRs address the adverse impacts • REs' ability to act • (Un)Intended impacts on sensitive subpopulations	• Conflicting regulations on the chemical of concern • Comparative cost of the RR • Practical capacity of the RE to comply	• RR cost relative to cleanup costs • Administrative burden • Ease of enforcement

Abridged AAs Trigger Two Regulatory Responses (§ 69505.4(b)(4))

Manufacturers are required to:

- Provide product information to consumers or users (§ 69506.3)
- Advance green chemistry and green engineering to develop a safer product (§ 69506.8)

Provide information to consumers and users in California (§ 69506.3)

- Provide users with safety information before purchasing the product
- Promote safe use and disposal of the product
- Help users understand the hazards of the product and how to prevent exposures.

Information to Both High-Pressure & Low-Pressure Foam Users

Product label or nozzle cover:

- Statement directing users to take safety training before opening the product.
- Easily accessible link, for example a Quick Response (QR) code, to access training
- Graphic of required safety equipment, including: a respirator, eye protection, gloves, and protective coveralls
- Instructions for safe disposal

Information for Low-Pressure Foam users (workers & DIYers)

"Quick Start Guide" with images and limited text

- Instructions to access free online training, e.g., a QR Code
- Images of a respirator with cartridges, eye protection, gloves, and liquid-resistant coveralls.
- "This product can cause asthma and allergic reactions. Protect yourself by properly using personal protective equipment per the manufacturer's instructions."
- Instructions provided in Spanish too
- More

Advancement of Green Chemistry and Green Engineering (§ 69506.8)

When a manufacturer concludes that no safer alternative to its Priority Product is functionally acceptable, technically feasible, and economically feasible…, the Department **may require the manufacturer** to initiate a research and development project **or fund a challenge grant** pertinent to the Priority Product that uses green chemistry and/or green engineering principles to do one or more of the following:

a) Design a safer alternative to the Priority Product;

b) Improve the performance of a safer alternative to the Priority Product;

c) Decrease the cost of the safer alternative to the Priority Product; and/or

d) Increase the market penetration of a safer alternative to the Priority Product.

Advancement of Green Chemistry and Engineering (§ 69506.8)

- Require REs to collectively pay $8 million into the Green Chemistry Innovation Fund (GCIF)
- The GCIF will be used to fund grants for R&D projects by academics and industry.
- Administered by a third party.
- Independent review panel of experts will select 5-6 projects for funding
- Grants would last 2-3 years
- Sufficient funding to attract high-caliber proposals with multiple approaches to develop safer products

Justification for $8 million contribution

- The investment in R&D should be greater than the second stage of a two-stage AA (about $150k) [§ 69595.4(b)(4), FSOR]
  - With 13 responsible entities that's $1.95 million
- Partly based on information in the Abridged AA Report
  - AA states there are 4 distinct products
  - $2M/product is high-middle range for R&D costs
  - Investment in Green Chemistry Innovation Fund for SPF Systems
- Consulted with experts
  - Sufficient to attract multiple, qualified grant proposals

Proposed Criteria for Evaluating Research Proposals

- Scientific merit
- Applicability to spray foam insulation
- Achievable within the period of the research
- Risk-to-reward ratio
- Potential degree and speed with which adverse impacts to workers could be eliminated
- Potential for and proximity to commercialization
- Extent to which green chemistry and engineering principles are used

Use Restriction § 69506.4(e): Restriction on who may purchase or use the product

- REs are required to develop and institute a mandatory training program and ensure that all users of SPF Systems have successfully completed requisite training before sale of product.
  - REs are strongly encouraged to subsidize the training for the workers
  - Professional users are required to take rigorous training
    - i.e., Spray Polyurethane Foam Alliance (SPFA) training program or equivalent
  - Low pressure foam (LPF) users must take free, online training
    - The Center for the Polyurethanes Industry training meets the minimum requirements for LPF

Use Restriction § 69506.4(e): Annual Reports

- The number of:
  - New trainees
  - Renewing trainees
  - Trainees who have moved up to a higher level of licensure
- Total SPF workers in CA, with estimates of new and continuing members of the workforce
- Details & efficacy of incentive programs for workers to take the training
- Details of outreach efforts to distributors & employers to verify training

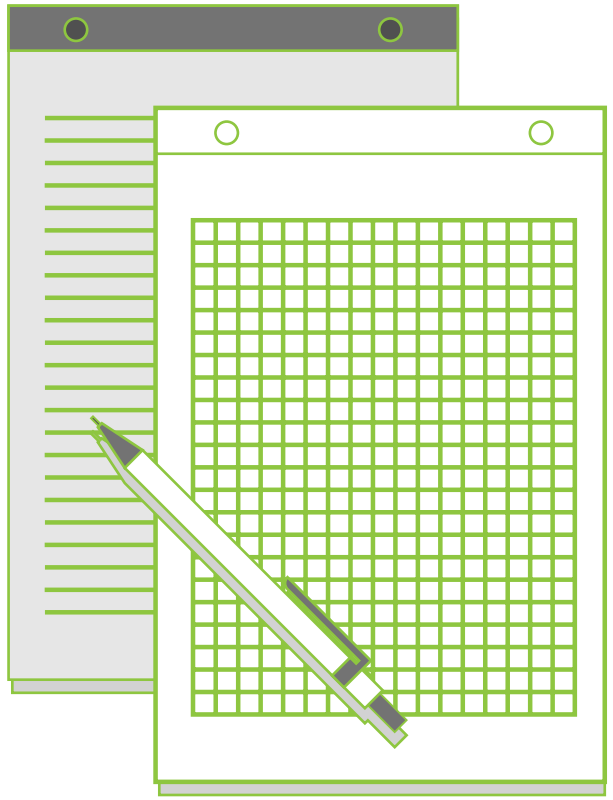
Next steps in the RR process

- Synthesize public comments
- Revise the NOPD to determine final RRs
  - The regulations do not establish a specific timeframe
- Issue the Notice of Final Determination & reach agreement with the REs on implementation
  - Deadlines to implement RRs
  - Provide a response to public comments
- RE reporting requirements pursuant to § 69506.10
  - Their supply chain
  - DTSC

How to engage with us through this process

- CalSAFER comment period
- Safer Consumer Products Regulations
- SCP E-mail List (E-List):
  - Learn about upcoming regulations, events, workshops
- Further questions? Email me at kelly.grant@dtsc.ca.gov

Other SCP Resources



- Workshop information—including this recording—will be available on our Workshops and Upcoming Events web page soon
- Celebrate the Safer Consumer Products Program's 10-year anniversary by visiting our Decade of Safer Consumer Products accomplishments page
- Visit the DTSC Green - YouTube Channel to learn more about other DTSC projects

Thank you.

- Clarifying questions

- Comments

Question & Answer / Comment Period

- Questions and comments submissions:
  - Question & Answer (Q&A) Zoom function
  - Raise hand function
- For those calling in, dial *9 to raise your hand and *6 to unmute.
- We encourage you to accurately document your comments in CalSAFER.

SAFER CONSUMER PRODUCTS (SCP)

Closing Remarks

Jen Jackson
Branch Manager in Safer Consumer Products