STATE OF CALIFORNIA — DEPARTMENT OF FINANCE

ECONOMIC AND FISCAL IMPACT STATEMENT (REGULATIONS AND ORDERS)

STD. 399 (REV. 12/2013)

ECONOMIC IMPACT STATEMENT

DEPARTMENT NAME	CONTACT PERSON	EMAIL ADDRESS	TELEPHONE NUMBER
Dept. of Toxic Substances Control	Andrew King	andrew.king@dtsc.ca.gov	916-323-3492

DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400	NOTICE FILE NUMBER
Safer Consumer Products: Listing Spray Polyurethane Foam Systems with MDI as a Priority Product	Z

A. ESTIMATED PRIVATE SECTOR COST IMPACTS *Include calculations and assumptions in the rulemaking record.*

1. Check the appropriate box(es) below to indicate whether this regulation:

- [X] a. Impacts business and/or employees
- [X] b. Impacts small businesses
- [X] c. Impacts jobs or occupations
- [ ] d. Impacts California competitiveness
- [X] e. Imposes reporting requirements
- [ ] f. Imposes prescriptive instead of performance
- [X] g. Impacts individuals
- [ ] h. None of the above (Explain below):

If any box in Items 1 a through g is checked, complete this Economic Impact Statement.
If box in Item 1.h. is checked, complete the Fiscal Impact Statement as appropriate.

2. The Dept. of Toxic Substances Control (Agency/Department) estimates that the economic impact of this regulation (which includes the fiscal impact) is:

- [X] Below $10 million
- [ ] Between $10 and $25 million
- [ ] Between $25 and $50 million
- [ ] Over $50 million *[If the economic impact is over $50 million, agencies are required to submit a Standardized Regulatory Impact Assessment as specified in Government Code Section 11346.3(c)]*

3. Enter the total number of businesses impacted: 17 (See attach.)

Describe the types of businesses (Include nonprofits): Manufacturers (See attachment)

Enter the number or percentage of total businesses impacted that are small businesses: 2 (See attach.)

4. Enter the number of businesses that will be created: Indeterminate eliminated: 0

Explain: See attachment

5. Indicate the geographic extent of impacts: [X] Statewide [ ] Local or regional (List areas):

6. Enter the number of jobs created: Indeterminate and eliminated: Indeterminate

Describe the types of jobs or occupations impacted: See attachment

7. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here? [ ] YES [X] NO

If YES, explain briefly: The regulation will apply to manufacturers selling 2-component spray polyurethane systems with unreacted methylene diisocyanates in California. 14 of the 17 potentially impacted manufacturers licensed to sell these systems in California are headquartered in states other than California. Only 3 manufacturers are located in California.

ECONOMIC IMPACT STATEMENT (CONTINUED)

B. ESTIMATED COSTS *Include calculations and assumptions in the rulemaking record.*

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? $ 1.1 - 3.1 million

   a. Initial costs for a small business: $ $62,800 - $182,800 Annual ongoing costs: $ 0 Years: 2017-2018

   b. Initial costs for a typical business: $ $62,800 - $182,800 Annual ongoing costs: $ 0 Years: 2017-2018

   c. Initial costs for an individual: $0 Annual ongoing costs: $ 0 Years: N/A

   d. Describe other economic costs that may occur: None anticipated

2. If multiple industries are impacted, enter the share of total costs for each industry: N/A

3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements. *Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted.* $0 (See attach.)

4. Will this regulation directly impact housing costs? ☐ YES ☒ NO

   If YES, enter the annual dollar cost per housing unit: $

   Number of units:

5. Are there comparable Federal regulations? ☐ YES ☒ NO

   Explain the need for State regulation given the existence or absence of Federal regulations: See attachment

   Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: $ 0

C. ESTIMATED BENEFITS *Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment: See attachment

2. Are the benefits the result of: ☐ specific statutory requirements, or ☒ goals developed by the agency based on broad statutory authority?

   Explain: The statute seeks to minimize adverse health effects, evaluate safer alternatives, and promote safer products.

3. What are the total statewide benefits from this regulation over its lifetime? $ Indeterminate

4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: Potential job expansion in business consulting; worker safety training, education, and certification; manufacturing and distributing personal protective equipment; research and development of safer chemicals and products.

D. ALTERNATIVES TO THE REGULATION *Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: See attachment

ECONOMIC IMPACT STATEMENT (CONTINUED)

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation: Benefit: $ Indeterminate Cost: $ 1.1-3.1 million

Alternative 1: Benefit: $ Indeterminate Cost: $ Indeterminate

Alternative 2: Benefit: $ Indeterminante Cost: $ Indeterminate

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives: See attachment.

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs? ☐ YES ☒ NO

Explain: See attachment

E. MAJOR REGULATIONS *Include calculations and assumptions in the rulemaking record.*

California Environmental Protection Agency (Cal/EPA) boards, offices and departments are required to submit the following (per Health and Safety Code section 57005). Otherwise, skip to E4.

1. Will the estimated costs of this regulation to California business enterprises **exceed $10 million?** ☐ YES ☒ NO

If YES, complete E2. and E3
If NO, skip to E4

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: _____

Alternative 2: _____

(Attach additional pages for other alternatives)

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation: Total Cost $ _____ Cost-effectiveness ratio: $ _____

Alternative 1: Total Cost $ _____ Cost-effectiveness ratio: $ _____

Alternative 2: Total Cost $ _____ Cost-effectiveness ratio: $ _____

4. Will the regulation subject to OAL review have an estimated economic impact to business enterprises and individuals located in or doing business in California exceeding $50 million in any 12-month period between the date the major regulation is estimated to be filed with the Secretary of State through12 months after the major regulation is estimated to be fully implemented?

☐ YES ☒ NO

If YES, agencies are required to submit a Standardized Regulatory Impact Assessment (SRIA) as specified in Government Code Section 11346.3(c) and to include the SRIA in the Initial Statement of Reasons.

5. Briefly describe the following:

The increase or decrease of investment in the State: Possible increase in business investments in education, training, certification, manufacturing and sales of personal protection equipment, research and development of safer chemicals and products.

The incentive for innovation in products, materials or processes:

DTSC expects this regulation will stimulate innovation in the development of alternative chemicals and safer products.

The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency:

See attachment

STATE OF CALIFORNIA — DEPARTMENT OF FINANCE

ECONOMIC AND FISCAL IMPACT STATEMENT
(REGULATIONS AND ORDERS)

STD. 399 (REV. 12/2013)

FISCAL IMPACT STATEMENT

A. FISCAL EFFECT ON LOCAL GOVERNMENT *Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

☐ 1. Additional expenditures in the current State Fiscal Year which are reimbursable by the State. (Approximate) (Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

$ _____

☐ a. Funding provided in _____

Budget Act of _____ or Chapter _____, Statutes of _____

☐ b. Funding will be requested in the Governor's Budget Act of _____

Fiscal Year: _____

☐ 2. Additional expenditures in the current State Fiscal Year which are NOT reimbursable by the State. (Approximate) (Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

$ _____

Check reason(s) this regulation is not reimbursable and provide the appropriate information:

☐ a. Implements the Federal mandate contained in _____

☐ b. Implements the court mandate set forth by the _____ Court.

Case of: _____ vs. _____

☐ c. Implements a mandate of the people of this State expressed in their approval of Proposition No. _____

Date of Election: _____

☐ d. Issued only in response to a specific request from affected local entity(s).

Local entity(s) affected: _____

☐ e. Will be fully financed from the fees, revenue, etc. from: _____

Authorized by Section: _____ of the _____ Code;

☐ f. Provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each;

☐ g. Creates, eliminates, or changes the penalty for a new crime or infraction contained in _____

☐ 3. Annual Savings. (approximate)

$ _____

☐ 4. No additional costs or savings. This regulation makes only technical, non-substantive or clarifying changes to current law regulations.

☒ 5. No fiscal impact exists. This regulation does not affect any local entity or program.

☐ 6. Other. Explain _____

STATE OF CALIFORNIA — DEPARTMENT OF FINANCE

ECONOMIC AND FISCAL IMPACT STATEMENT
(REGULATIONS AND ORDERS)

STD. 399 (REV. 12/2013)

FISCAL IMPACT STATEMENT (CONTINUED)

B. FISCAL EFFECT ON STATE GOVERNMENT *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

$ _____

It is anticipated that State agencies will:

☐ a. Absorb these additional costs within their existing budgets and resources.

☐ b. Increase the currently authorized budget level for the _____ Fiscal Year

☐ 2. Savings in the current State Fiscal Year. (Approximate)

$ _____

☐ 3. No fiscal impact exists. This regulation does not affect any State agency or program.

☒ 4. Other. Explain This proposed regulation would result in no additional costs as the workload would be absorbed with existing resources. DTSC estimates that the total costs to be absorbed would range from $487,528 to $955,443.

C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

$ _____

☐ 2. Savings in the current State Fiscal Year. (Approximate)

$ _____

☒ 3. No fiscal impact exists. This regulation does not affect any federally funded State agency or program.

☐ 4. Other. Explain _____

FISCAL OFFICER SIGNATURE	DATE
	12/1/17

The signature attests that the agency has completed the STD. 399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or departments not under an Agency Secretary must have the form signed by the highest ranking official in the organization.

AGENCY SECRETARY	DATE
	1/11/18

Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD. 399.

PARTMENT OF FINANCE PROGRAM BUDGET MANAGER	DATE
Matt Almy for KF	3/12/18

SAFER CONSUMER PRODUCTS REGULATIONS: LISTING SPRAY POLYURETHANE FOAM SYSTEMS CONTAINING METHYLENE DIPHENYL DIISOCYANATES AS A PRIORITY PRODUCT

Attachment to the Economic and Fiscal Impact Statement (Std. 399)

Section 1. Summary of Regulatory Impacts

The Department of Toxics Substances Control (DTSC) prepared this economic impact analysis to support the rulemaking proposal to designate *Spray Polyurethane Foam Systems Containing Methylene Diphenyl Diisocyanates* as a Priority Product under the Safer Consumer Products (SCP) regulations (Title 22, California Code of Regulations (22 CCR) sections 69501-69510). For the purposes of this regulation, DTSC describes "spray polyurethane foam systems containing unreacted methylene diphenyl diisocyanates" as spray polyurethane foam (SPF) systems containing liquid chemical mixtures in two-separate containers that are sold or distributed together. SPF is used for insulation, roofing, and sealing or filling voids and gaps. The two containers are commonly referred to as Side A and Side B. Side A contains unreacted methylene diphenyl diisocyanates (MDI). Side B contains a mixture of polyols and other ingredients, which may include catalysts, blowing agents, flame retardants, and surfactants. Exposure to unreacted MDI during use of SPF systems can cause asthma, respiratory irritation, and allergic contact dermatitis. Respiratory and dermal sensitization can occur in a subpopulation of those exposed. Once an individual is sensitized, subsequent re-exposures may trigger severe asthma attacks at very low levels of unreacted MDI from any MDI-containing products.

DTSC determined that there are 17 SPF systems manufacturers located throughout the U.S. that could be impacted by this proposed regulation. The estimated total cost to an individual SPF systems manufacturer to comply with the SCP regulatory requirements to submit a Priority Product Notification and Alternatives Analysis (AA) Report ranges from $62,800 to $182,800. Although there is uncertainty in the assumptions used to develop this economic impact assessment, DTSC estimates that costs could range from $1,067,600 to $3,107,600 for the 17 affected manufacturers to fulfill these SCP regulatory requirements.

This economic impact assessment is also based on the assumption that SPF systems manufacturers will comply fully with the SCP regulations by submitting Priority Product Notifications and AA Reports to DTSC by the dates specified in regulation. SPF systems manufacturers that do not submit AA Reports must: 1) remove MDI from their SPF systems, 2) replace MDI with a safer chemical, or 3) stop selling their SPF systems in California. If manufacturers fail to take one of these actions by the dates specified in the SCP regulations, DTSC will notify importers, retailers, or assemblers (as applicable) of the noncompliance and prohibit them from distributing or selling SPF systems with MDI in California.

Section 2. Safer Consumer Products Regulatory Requirement to Conduct Alternatives Analysis

Following the designation of SPF systems with unreacted MDI as a Priority Product, manufacturers must submit a Priority Product Notification and conduct an Alternatives Analysis (AA) to determine if SPF can be made safer. In lieu of submitting an AA Report, an SPF systems manufacturer could also remove unreacted MDI from their SPF products or stop selling their SPF products with unreacted MDI in California.

This analysis is a two-stage process that takes into account many facets of product manufacturing, including process engineering, environmental management, financial analysis, and research and development. In the first stage of the AA process, manufacturers are required to identify the goal, scope, legal, functional, and performance requirements of the Priority Product and the Chemical of Concern, and use this information to identify an array of alternatives to consider. When the first stage is completed, the manufacturer documents the findings in a Preliminary AA Report and submits this report to DTSC. During the second stage of the AA process, the manufacturer compares the Priority Product with possible alternatives using a more in-depth analysis and considers additional factors, including life cycle and economic impacts. This information is submitted to DTSC in the Final AA Report.

If a manufacturer determines there are no functionally acceptable or technically feasible alternatives to the use of the Chemical of Concern in the Priority Product, they may submit an Abridged AA Report, in lieu of submitting the Preliminary and Final AA Reports required by the two-stage process. The Abridged AA process requires manufacturers to document their screening of potential alternatives. Because the Abridged AA process allows for the continued sales and use of the Priority Product, manufacturers' Abridged AA Reports must include an implementation plan to carry out the following Regulatory Responses, which require:

- providing product safety information to consumers including information on chemical hazards, safe handling and disposal procedures, and other information needed to protect public health or the environment; and
- advancing green chemistry and green engineering principles, including initiating research and development projects or funding challenge grants to design safer alternatives or improve performance, lower cost, or increase market penetration of existing safer alternatives.

Following submission of an Abridged AA Report or Final AA Report, DTSC will invite public comments and require manufacturers to address all substantive comments before initiating departmental review. DTSC must evaluate each report on its own merits, taking into consideration each manufacturer's unique conclusions and proposals and ensure that the manufacturer adequately supported claims that no alternatives exist. Because manufacturers' reports and proposed Regulatory Responses address their specific business situations, DTSC cannot predetermine the actions that manufacturers would need to take, either individually or collectively, to meet the goals of protecting people and the environment and advancing green chemistry or green engineering principles. Despite uncertainty surrounding individual Abridged AA Reports, DTSC's collective response to these submissions will maximize the use of alternatives

of least concern industry-wide and give preference to Regulatory Responses that provide the greatest level of inherent protection to people and the environment.

Section 3. Spray Polyurethane Foam Systems Manufacturer Survey Results

To better assess the impacts of the proposed regulation, DTSC surveyed affected SPF systems manufacturers and the American Chemistry Council's Center for the Polyurethanes Industry. Respondents indicated there are currently no known functionally equivalent or technically feasible alternatives to the use of unreacted MDI in SPF and suggested that an Abridged AA Report, prepared individually or by a consortium of manufacturers, was a likely response to the proposed regulation. They also noted that they would not make a final decision to conduct a two-stage AA or an Abridged AA until DTSC adopts the proposed regulation and provides guidance for conducting AAs that meet the SCP regulatory requirements. Industry cost estimates ranged from $50,000 to $150,000 to prepare an Abridged AA Report and from $120,000 to $250,000 to prepare a two-stage AA Report. Given the large degree of uncertainty with respect to the resources needed to complete an AA Report, SPF systems manufacturers and the Center for the Polyurethanes Industry noted that the actual costs may be higher depending on the number of alternatives assessed; availability of data for each alternative considered; the need to hire external consultants; and the effort needed to respond to the public's comments and DTSC's reviews. They acknowledged that preparing a consortium Abridged AA Report could be cost effective if obstacles related to trade secret protection or antitrust provisions do not arise.

Section 4. Anticipated Economic Impacts to Manufacturers

The California Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation (BEARHFTI) regulates and licenses manufacturers of thermal insulation, as per California Business and Professions Code Sections 19049 and 19050.[1] DTSC determined that the list of companies registered with BEARHFTI represents the same companies impacted by this regulation. Based on this information, DTSC estimates there are 17 manufacturers of SPF systems with unreacted MDI that make or sell their products in California who would be required to comply with the notification and reporting requirements in the SCP regulations. Fourteen of the 17 manufacturers are not headquartered in California.

PRIORITY PRODUCT NOTIFICATION COST ESTIMATES

Each SPF systems manufacturer is required to submit a Priority Product Notification to DTSC via the online Safer Consumer Products Information Management System (CalSAFER) that includes their business contact information and the type, brand name(s), and product name(s) of the SPF systems they produce. This is a one-time requirement.

[1] http://www.bearhfti.ca.gov/

DTSC estimates that SPF systems manufacturers would require a maximum of 16 hours to prepare a Priority Product Notification at a cost of approximately $50/hour. DTSC estimates that each manufacturer could spend up to $800 to complete the required notification with total costs for the 17 affected SPF systems manufacturers estimated to be $13,600.

DTSC's survey focused on estimating SPF systems manufacturer's cost to complete an Abridged AA Report. Manufacturers were not asked to estimate costs associated with a Priority Product Notification; therefore, this estimate is based solely on DTSC's workload assessment.

ABRIDGED ALTERNATIVES ANALYSIS COST ESTIMATES

DTSC Cost Estimates

Although SPF systems with unreacted MDI is DTSC's second proposed Priority Product, it is likely the first product that will result in manufacturers conducting Abridged AAs. Since there are few precedent regulations of this nature and no previously conducted Abridged AAs to use as guides for this economic analysis, DTSC derived the estimated costs for each component of the Abridged AA process utilizing authoritative sources of information. These included the Interstate Chemicals Clearinghouse's AA Guide, the State of Washington's AA Guide for Small and Medium Businesses, University of California-Santa Barbara's Life Cycle Analysis and Pilot AA studies, and the European Chemicals Agency. DTSC estimates that costs could range from $48,000 to $78,000 to produce an individual Abridged AA Report (Table 1).

Table 1. Estimated Cost to Conduct an Abridged Alternatives Analysis

Abridged Alternatives Analysis - Required Elements	Cost	
	Low	High
Identification of Product Requirements and Functions of Chemicals of Concern	$1,000	$1,000
Identification of Alternatives	$2,000	$2,000
Identification of Factors Relevant for Comparison of Alternatives	$4,000	$4,000
Initial Evaluation & Screening of Alternatives	$14,000	$36,000
Consideration of Additional Information	$5,000	$5,000
Identification of Factors Relevant for Comparison	$10,000	$15,000
Alternative Selection	$2,000	$5,000
Report Preparation	$10,000	$10,000
Total	**$48,000**	**$78,000**

DTSC must make Abridged AA Reports available for public review and comment. Following DTSC's review of the comments received, SPF systems manufacturers may be required to submit an Abridged AA Report Addendum to DTSC to address issues identified during the comment period. Following receipt of an Abridged AA Report Addendum, if required, DTSC will review the information submitted by the SPF systems manufacturers to ensure compliance with SCP regulatory requirements. SPF systems manufacturers may incur additional costs if DTSC requires submission of an Abridged AA Report Addendum or determines that the submitted information does not meet SCP regulatory requirements and must be revised. Some manufacturers may respond adequately to the SCP regulatory requirements and will not be asked to revise their Abridged AA Report. However, given the demands of the Abridged AA process and the fact that no

manufacturer has ever prepared such a report, it is highly likely that most SPF systems manufacturers will incur costs to prepare additional information or revise their Abridged AA Reports. DTSC estimates that these costs could range from $12,000 to $32,000 per manufacturer (Table 2).

Table 2. Estimated Costs to Respond to Reviews of an Abridged Alternatives Analysis Report

Manufacturer Responses	Cost	
	Low	High
Prepare Abridged AA Report Addendum to Respond to Public Comments	$5,000	$10,000
Respond to DTSC Reviews	$7,000	$22,000
Total	**$12,000**	**$32,000**

Because no manufacturer has ever prepared an Abridged AA Report, DTSC will assume that each report will include deficiencies that will require additional work on the part of the manufacturer. For the purposes of this economic analysis, DTSC estimates that the cost to complete an approved Abridged AA Report could range from $60,000 to $110,000.

Manufacturer Cost Estimates

Estimates provided by SPF systems manufacturers and the American Chemistry Council's Center for the Polyurethanes Industry ranged from $50,000 to $150,000 to prepare an Abridged AA Report and from $120,000 to $250,000 to prepare a two-stage AA Report. They based these estimates on input from consulting firms with expertise in performing alternatives assessments (a narrower form of alternatives analysis), hazard assessments, and life cycle analyses. Respondents noted the large degree of uncertainty in these estimates and indicated that the actual costs may be higher depending on the number of alternatives assessed, availability of data for each alternative considered, the need to hire external consultants, and the effort needed to respond to DTSC's reviews.

A few survey respondents indicated that, based on their size and market share, they would need to participate in a consortium of manufacturers to meet regulatory requirements. Although both manufacturers and the American Chemistry Council's Center for the Polyurethanes Industry acknowledged that preparing an Abridged AA Report as a consortium could be cost effective, they also noted that unanticipated issues, such as those related to trade secret protection or antitrust concerns, may limit their ability to pursue this option.

TOTAL ESTIMATED COST OF REGULATION

Given the high degree of uncertainty in the cost to produce an Abridged AA Report, DTSC opted to use the higher cost estimates provided by the SPF industry ($50,000 - $150,000). When combined with DTSC's cost estimates for responding to the department's AA Report review ($12,000 - $32,000 [Table 2]) and the estimated cost to submit a Priority Product Notification ($800), the estimated total cost for an individual manufacturer to comply with these requirements ranges from $62,800 to $182,800 (Table 3).

Table 3. Estimated Total Costs to Spray Polyurethane Foam Systems Manufacturers

Manufacturer Costs	Priority Product Notification	Abridged AA Report		Total Cost	
		Low	High	Low	High
Individual	$800	$62,000	$182,000	$62,800	$182,800
Industry-wide	$13,600	$1,054,000	$3,094,000	$1,067,600	$3,107,600

DTSC estimates that it would cost $1,067,600 to $3,107,600 for 17 SPF systems manufacturers to submit Priority Product Notifications and Abridged AA Reports and to respond to DTSC's Abridged AA Report reviews. Given uncertainties in the resources, data, and effort required to complete the Abridged AA process defined in the SCP regulations, the costs of this process may be underestimated. Likewise, if some or all of the affected manufacturers form a consortium to prepare an industry-wide Abridged AA Report, overall costs would likely be lower than the ranges shown in Table 3.

Section 5. Potential Economic Benefits to Consumers, Workers, and Businesses

The primary goal of this proposed regulation is to protect public health by requiring SPF systems manufacturers to evaluate ways to make SPF products safer for consumers and workers. By making SPF products safer, manufacturers may realize financial benefits from increased product sales, reduced employee health and safety costs, and reduced workers' compensation claims. Employers, workers, and consumers who use the safer products may also benefit from reduced medical costs, lower incidence of debilitating chronic conditions, and less need for personal protective equipment (PPE) or specialized safety training.

The Abridged AA process benefits SPF systems manufacturers, insulation contractors and their employees, consumers, and DTSC because it allows the continued sale and use of the Priority Product on the condition that the manufacturers:

- provide DTSC with data and analysis to adequately substantiate claims that no reasonable alternatives exist;
- undertake or fund research projects focused on the development of safer alternatives to the use of unreacted MDI in SPF; and
- take substantive and effective steps to protect consumers and workers from exposures that could result in acute or chronic health effects.

DTSC reviews each Abridged AA Report on its own merits, taking into consideration each manufacturer's unique conclusions and proposals. Because each manufacturer is required to propose Regulatory Responses that address their specific business situation, DTSC cannot predetermine the actions that SPF manufacturers would need to take, either individually or collectively, to improve consumer product information and advance green chemistry or green engineering principles. Despite this uncertainty, DTSC will maximize the use of alternatives of least concern and give preference to Regulatory Responses that provide the greatest level of inherent protection to people and the environment. While it is impossible to accurately predict or

quantify the full range of potential benefits associated with the implementation of this proposed regulation, DTSC anticipates that implementing required Regulatory Responses and researching safer alternatives to the use of MDI in SPF systems could benefit California's businesses and workers. These benefits could include expanded business and employment opportunities in the fields of regulatory and technical consulting, chemical and engineering research, worker and consumer safety education, professional installer education and certification, and the production and sales of PPE.

Section 6. Economic Impact Statement (Std. 399) – Additional Information

The following information supplements statements in the Economic and Fiscal Impact form (Std. 399) for the rulemaking proposal titled "SAFER CONSUMER PRODUCTS REGULATIONS – LISTING SPRAY POLYURETHANE FOAM SYSTEMS WITH UNREACTED METHYLENE DIPHENYL DIISOCYANATES AS A PRIORITY PRODUCT." The section headings and numbers shown below correspond to sections in the Std. 399 form that require additional information.

A. ESTIMATED PRIVATE SECTOR COST IMPACTS

3. Number of Businesses Impacted

- **Total Number of Businesses Impacted**

BEARHFTI regulates and licenses manufacturers of thermal insulation, as per California Business and Professions Code Sections 19049 and 19050. DTSC assumed that only businesses licensed by BEARHFTI are selling SPF systems in the California marketplace and represent the same companies impacted by this regulation. Based on this information, DTSC estimates there are 17 manufacturers of SPF systems with unreacted MDI that make or sell their products in California who would be required to comply with this regulation. Fourteen of the 17 affected businesses are headquartered in states other than California. DTSC excluded two manufacturers from the total listed by BEARHFTI because they do not produce two-component SPF systems that are subject to this regulation.

- **Types of Businesses**

These businesses are manufacturers that produce SPF systems with unreacted MDI that are available in the California marketplace. Based on extensive interaction with this business sector, DTSC assumes that manufacturers will comply with the SCP regulations notification and AA requirements, including the Priority Product Notification, and likely submit an Abridged AA Report.

- **Number or Percentage of Total Businesses Impacted that are Small Businesses**

Under Government Code section 11342.610, a small business is defined as being both independently owned and operated and not dominant in its field of operation. DTSC surveyed the 17 SPF systems manufacturers that are currently licensed by BEARHFTI to sell their products in California. Two survey respondents self-identified as small businesses and indicated that, due to their limited resources, they would need to participate in a consortium to prepare the required Abridged AA Report. One of these manufacturers is located in California; the other is located in North Carolina. Based on these survey responses, DTSC estimates that at least two SPF systems manufacturers potentially impacted by this regulation are small businesses.

4. Number of Businesses Created or Eliminated

DTSC determined that this proposal is unlikely to result in the elimination or creation of SPF systems manufacturing businesses. Use of SPF as insulation can save energy by preventing heat loss and heat penetration and its use is rapidly expanding due to energy efficiency requirements. In 2015, the SPF industry reported between 460 and 490 million pounds of SPF were used for roofing and insulation in the U.S. and Canada (Kavanaugh 2016). From 2013 to 2015, demand for SPF in residential construction and remodeling grew about 15% per year (Kavanaugh 2016). As such, DTSC does not anticipate that manufacturers will remove or replace unreacted MDI nor will they remove their SPF products from the California marketplace.

While assessing potential impacts of the proposed regulation, DTSC surveyed affected SPF manufacturers and the American Chemistry Council's Center for the Polyurethanes Industry. Respondents indicated that there are currently no known functionally equivalent or technically feasible alternatives to the use of unreacted MDI in SPF and suggested that an Abridged AA Report, prepared individually or by a consortium of manufacturers, was a likely response to the proposed regulation. Based on industry input, DTSC assumes that manufacturers will prepare Abridged AA Reports, which require them to implement specific Regulatory Responses, namely increased access to product information and funding of research and development initiatives. Businesses could be created to assist manufacturers in meeting regulatory obligations by providing consulting services, as well as chemical and material science research and development support. Employment opportunities for product safety specialists and marketing consultants could increase. Expanded business opportunities in worker education, training program development, and professional certification programs could materialize. An increased focus on health and safety may lead to increased manufacturing and sales of PPE for workers and consumers.

Manufacturers are also required to initiate in-house or externally fund research into the development of safer SPF systems. Employment opportunities could result from increased collaboration between manufacturers and California-based university research laboratories. These research initiatives could result in the design of products for expanded global markets.

6. Number of Jobs Created or Eliminated

The requirement to submit Priority Product Notifications and Abridged AA Reports is not likely to result in the creation or elimination of jobs in California. Although most of the SPF systems manufacturers impacted by this proposal are not located in California, statewide job expansion could occur in areas related to business consulting, product research and design, manufacturing and sales of PPE, product marketing, consumer education, worker safety training, and professional certification programs.

B. ESTIMATED COSTS

1. Lifetime Total Statewide Dollar Costs to Manufacturers

For these calculations, DTSC ***assumed*** the following:

- Seventeen manufacturers producing SPF systems with unreacted MDI will be impacted;
- at least two of the potentially impacted manufacturers are small businesses (with only one headquartered in CA);
- costs to submit notifications and prepare Abridged AA Reports are the same for all manufacturers regardless of size;
- each manufacturer will submit a one-time Priority Product Notification informing DTSC that they produce SPF systems with unreacted MDI;
- each manufacturer will submit an Abridged AA Report; and
- the one-time reporting process (Priority Product Notification and Abridged AA submission) takes approximately one year following adoption of the proposed regulation.

Caveats to DTSC's Assumptions:

- Given the increasing market value of the SPF industry and the lack of known alternatives to unreacted MDI in SPF, it is most likely that manufacturers will opt to submit Abridged AA Reports. While survey respondents agreed that this was the most likely approach, they also cautioned that their selected approach will largely depend on the final regulatory requirements and the information contained in the DTSC AA Guide that will be published in 2017.
- If manufacturers choose to submit an Abridged AA Report prepared by a consortium or trade association, then the total industry-wide costs may be lower than estimated. Since this is a new process for both manufacturers as well as DTSC, it is also possible that DTSC has under-estimated the costs to prepare an Abridged AA Report and to respond to the Department through the review process.

1.a. Initial Costs for a Small Business

DTSC estimates that each manufacturer, regardless of size, will spend approximately $800 (16 hours at $50/hour) to prepare and submit a Priority Product Notification, with total industry-wide costs estimated to be up to $13,600. DTSC estimates that each Abridged AA Report will cost between $62,000 and $182,000 for each business regardless of size. These are one-time notification and reporting requirements that manufacturers should be able to complete within one year of adoption of the proposed regulation; therefore, there are no ongoing costs.

1.b. Initial Costs for a Typical Business

See 1.a. DTSC estimates that costs for each business will be the same regardless of size.

1.c. Initial Costs for an Individual

There are no anticipated costs to individuals.

3. Annual Costs

There are no annual ongoing reporting costs because Priority Product Notifications and Abridged AA Reports are one-time reporting requirements.

5. Explanation for the Need for State Regulation Given the Existence or Absence of Federal Regulations

The purpose of the proposed regulation is to reduce human exposure to unreacted MDI in SPF that may result in acute and chronic adverse health impacts. The SCP program established a unique approach to regulating chemicals of concern in consumer products that gives DTSC the authority to take actions to protect people and the environment when such actions are outside the scope of other regulatory programs. There are no equivalent federal regulations that require product manufacturers to determine if the chemical in their product is necessary and if there is a safer alternative and to take steps to protect human health and the environment.

Out of concern for worker safety, the federal Occupational Safety and Health Administration and the California Division of Occupational Safety and Health established Permissible Exposure Limits for MDI that employers must observe. Worker protection is typically achieved through training and the use of PPE. The effectiveness of training and PPE is highly dependent on an employee's training, experience, supervision, and adherence to best practices, as well as a range of physical and environmental variables. These approaches are the least desirable because the original hazard, such as unreacted MDI, is still present in the workplace. Additionally, these worker protection standards do not apply to consumers or sole proprietors. This is potentially a large population of applicators who may be uninformed of the hazards posed by unreacted MDI and less likely to take steps to protect themselves.

The primary goal of the SCP regulations is to minimize potential human exposure by eliminating the chemical hazard or substituting a less hazardous chemical. This proposed regulation is an important supplement to current state and federal worker safety standards and the ongoing federal efforts to protect California workers by preventing worker and consumer injuries.

C. ESTIMATED BENEFITS

1. Benefits of the Regulation

By listing SPF systems containing unreacted MDI as a Priority Product, DTSC sets in motion a strategy to reduce human exposure to unreacted MDI during use of SPF products. Reductions in exposure to unreacted MDI could reduce the incidence of workplace-related asthma and the number of workdays lost to occupational illness or injury. Safer SPF systems could also reduce MDI exposures by sole

proprietors and consumers using SPF in home renovation projects. A reduction in airborne unreacted MDI means healthier air quality and safer homes and workplaces. The development of safer alternatives benefits California workers, consumers, and employers.

Manufacturers that opt to submit Abridged AA Reports must propose Regulatory Responses that increase consumer and worker information on the safe use of SPF products and support research into development of safer SPF systems based on green chemistry or green engineering principles. It is the responsibility of the manufacturer to provide estimates of costs and benefits associated with their proposed Regulatory Responses.

DTSC cannot pre-determine the responses that each manufacturer will select; therefore, it is impossible to accurately predict or quantify the full range of potential benefits associated with their implementation. DTSC will maximize the use of alternatives of least concern and give preference to regulatory responses that provide the greatest level of inherent protection. In general, economic benefits to California workers and business owners may include expanded employment opportunities in the fields of consulting, education, professional certification, and the production and sales of PPE.

The primary goal of the SCP regulations is to protect public health by reducing exposures to potentially harmful chemicals by encouraging manufacturers to consider ways to make a safer product for consumers and workers. If successful, companies may recognize financial benefits including reduced costs associated with workplace-related asthma and workers' compensation claims. Should a safer alternative be identified, manufacturers may benefit from reduced costs associated with the reduced need for and use of PPE or specialized safety training.

D. ALTERNATIVES TO THE REGULATION

DTSC analysis found no reasonable alternative to the selected alternative (the proposed regulation) would be either more effective in carrying out the purpose for which the action is proposed or would be as effective or less burdensome to affected private persons and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the law being implemented or made specific.

1. Alternatives Considered

DTSC considered the following alternatives to the proposed regulation:

- **<u>Regulation</u>: List two-component SPF systems with unreacted MDI as a Priority Product.**

Normal use of high- or low-pressure SPF systems with unreacted MDI have been shown to expose applicators, including workers and consumers, to levels of unreacted MDI that could be harmful to their health. These exposures have the potential to contribute to or cause significant or widespread adverse impacts to human health.

- **<u>Alternative 1: Systems with TDI and MDI.</u> List two-component SPF Systems with unreacted MDI used for insulation, filling voids and gaps, and roofing materials and roof coatings containing toluene diisocyanate (TDI) as a Priority Product.**

In this option, the Chemicals of Concern included both unreacted MDI and TDI. DTSC rejected this option after SPF systems manufacturers explained that TDI-containing coatings are a separate product that serves a different function.

- **<u>Alternative 2: Pre-Mixed Cans.</u> List two-component SPF Systems with unreacted MDI used for insulation, filling voids and gaps, and roofing materials and one-component pre-mixed cans of SPF products for insulation and filling of gaps and voids.**

This product is not included in the product-chemical description because the chemicals, including unreacted MDI, are pre-mixed in the one-component can and most of the MDI has been reacted. While there may be small amounts of unreacted MDI released when consumers apply the foam, exposures have not been well characterized and are assumed to be low.

- **<u>Alternative 3: Voluntary Industry Initiative.</u> Allow SPF systems manufacturers to take voluntary actions to minimize potential worker and consumer exposures to unreacted MDI.**

In lieu of DTSC adopting SPF systems with unreacted MDI as a Priority Product in regulation, industry representatives proposed to undertake voluntary actions to educate key stakeholders on workplace safety regulations, SPF product stewardship, and general health and safety. After discussing this proposal with industry representatives, DTSC rejected this option because it does not advance the goals of the SCP regulations in general and of this proposed regulation in specific: to drive SPF systems manufacturers to find safer alternatives to MDI in SPF while avoiding regrettable substitutions. Additionally, voluntary initiatives are not enforceable.

DTSC developed the Abridged AA process because the department anticipated that some manufacturers would determine that acceptable alternatives were not available. The Abridged AA process provides the structure for a binding regulatory agreement that secures investment funds for development of safer alternatives to the Priority Product; minimizes adverse impacts to people who continue to use the Priority Product as allowed by the regulations; and provides the necessary level of enforceability to ensure a level playing field among the regulated community. Had DTSC agreed to the proposed voluntary initiative, there would be no assurance that the SPF industry would vigorously pursue safer alternatives to the use of unreacted MDI in SPF products. DTSC needs to be able to take effective actions to ensure that workplaces are safe and that all SPF applicators, including sole proprietors and consumers, have access to health and safety information.

3. Cost Analysis for Alternatives

DTSC did not attempt to quantify costs or benefits associated with Alternative 1 or Alternative 2. Since both alternatives would have affected a greater number of manufacturers, it is likely that costs for each of these alternatives would exceed those associated with the proposed regulation. Since the manufacturers potentially affected by these alternatives likely would have submitted Abridged AA Reports with the two required Regulatory Responses, the benefits would have been similar to those described for the proposed regulation and may have impacted a greater number of people. DTSC also did not quantify costs or benefits associated with Alternative 3 due to a lack of authority to implement this alternative.

4. Performance Standards

The proposed regulation defines the Priority Product and its exceptions and lists the hazard traits and toxicological endpoints that satisfy the exposure and adverse impacts criteria. As such, the proposed regulation does not mandate the use of specific technologies or equipment, or prescribe specific actions or procedures. The notification and reporting requirements described above are already included in the SCP regulations, 22 CCR sections 69501-69510, that were adopted in October 2013.

E. MAJOR REGULATIONS

DTSC estimates that additional costs to manufacturers - beyond the current baseline condition - associated with the proposed requirements for manufacturers of SPF systems with unreacted MDI will be significantly less than the threshold amounts for a "major" regulation cited in Section 11346 of the Government Code and Section 57005 of the Health and Safety Code. Accordingly, DTSC is not required to prepare, and submit for approval, a "Standardized Regulatory Impact Assessment" because the estimated costs incurred by manufacturers of SPF systems with unreacted MDI will be less than $50 million in the first year. Consequently, DTSC is not required to conduct macro-economic modeling for the proposed rulemaking pursuant to Section 11346 of the Government Code. Similarly, the estimated additional costs for the proposed regulation will be less than $10 million (the Cal/EPA-specific threshold pursuant to Section 57005 of the Health and Safety Code).

Section 7. Fiscal Impact Statement (Std. 399) – Additional Information

The following information supplements statements in the Economic and Fiscal Impact form (Std. 399) for the rulemaking proposal titled "SAFER CONSUMER PRODUCTS REGULATIONS – LISTING SPRAY POLYURETHANE FOAM SYSTEMS WITH UNREACTED METHYLENE DIPHENYL DIISOCYANATES AS A PRIORITY PRODUCT." The section headings and numbers shown below correspond to sections in the Std. 399 form that require additional information.

B. FISCAL EFFECTS ON STATE GOVERNMENT

1.a. Additional Expenditures in the current State Fiscal Year.

DTSC will absorb additional costs associated with reviewing Priority Product Notifications and Abridged AAs submitted by SPF systems manufacturers by reallocating staff to this new task. As required by the SCP regulations, DTSC must publish the final AA Guide before DTSC adopts any Priority Products in regulation. DTSC closed the final public comment period for the AA Guide on February 3, 2017, and published the final document on June 14, 2017. Staff that participated in the development of the AA Guide will be reallocated to the new task of reviewing Abridged AAs submitted by SPF systems manufacturers.

Since the SCP program has not reviewed Priority Product Notifications or Abridged AAs for any other product, DTSC does not have any historical data to rely upon for estimating the fiscal impacts of this proposed regulation. In lieu of historical data, DTSC relied on expert estimations from the SCP staff that will be responsible for reviewing Priority Product Notifications and Abridged AAs. These staff evaluated the review requirements established in the SCP regulations and estimated the amount of time each job classification will spend reviewing an individual Priority Product Notification and Abridged AA. These estimates include review by a variety of technical staff including environmental scientists, toxicologists, engineers, economists and attorneys. DTSC then multiplied these time estimates by the average salary (including benefits) of each relevant job classification to find an estimate of the total fiscal costs to state government.

DTSC estimates that the fiscal costs to state government for reviewing an individual Priority Product Notification and Abridged AA will range from $28,678 to $56,203 (Table 4). Assuming 17 manufacturers submit individual Priority Product Notifications and Abridged AA reports, DTSC estimates the total fiscal costs to state government to review all Priority Product Notifications and Abridged AAs will range from $487,528 to $955,443 (Table 4).

Table 4: Estimated Fiscal Cost to State Government

	Low	High
Review Individual Notification and AA	$28,678	$56,203
Review All Notifications and AAs	**$487,528**	**$955,443**