TSCA NEW CHEMICAL DETERMINATIONS

A Working Approach for Making Determinations under TSCA Section 5

I. Introduction

The Toxic Substances Control Act ("TSCA"), as amended in 2016 by the Frank R. Lautenberg Chemical Safety for the 21st Century Act, requires EPA to make determinations on new chemical notices received under section 5.

On November 6, 2017, EPA's Office of Pollution Prevention and Toxics (OPPT) released a document titled "New Chemicals Decision-Making Framework: Working Approach to Making Determinations under section 5 of TSCA" (Working Approach). EPA solicited comments on the working approach and other draft documents relating to new chemical reviews and held a public meeting on December 6, 2017, to discuss and receive input.

The purpose of the Working Approach document was to increase transparency associated with implementation of the TSCA new chemicals program. Given the significant amendments to TSCA section 5 in 2016, EPA believes that it is valuable for stakeholders to have insight into EPA's evolving thinking on the implementation of this important provision of TSCA.

EPA is now updating the Working Approach document after consideration of comments received on the November 2017 version and based on additional implementation experience since that version was made available for comment.

Any action EPA takes on a new chemical submission is governed by application of the relevant statutory and regulatory requirements to the facts presented in the submission. This document discusses EPA's working approach to reviewing and acting on submissions under section 5(a)(1) of TSCA. EPA may choose to depart from this approach with respect to any specific submission as the Agency deems appropriate. This working approach does not create new authority, does not limit EPA's discretion in any way, nor does it bind the public. EPA may at any time revise its working approach based on learned experiences as EPA implements amended TSCA section 5, as well as based on any other appropriate circumstances.

As EPA continues to gain experience with new chemicals decision-making under amended TSCA, the Agency expects to evolve its working approach to making determinations under section 5 and to update this document as appropriate.

II. Overview

TSCA requires EPA to review section 5 notices, specifically, a premanufacture notice (PMN), microbial commercial activity notice (MCAN), or significant new use notice (SNUN), and make a determination before the new chemical can enter commerce or the significant new use can commence. TSCA sets forth five possible EPA determinations on new chemical notices:

- The chemical or significant new use presents an unreasonable risk of injury to health or the environment[1]
- Available information is insufficient to allow the Agency to make a reasoned evaluation of the health and environmental effects associated with the chemical or significant new use[2]
- In the absence of sufficient information, the chemical or significant new use may present an unreasonable risk of injury to health or the environment[3]
- The chemical is or will be produced in substantial quantities and either enters or may enter the environment in substantial quantities or there is or may be significant or substantial exposure to the chemical[4]; or
- The chemical or significant new use is not likely to present an unreasonable risk of injury to health or the environment.[5]

The working approach in this document describes, for the purposes of increasing transparency into EPA's processes and providing clarity to all parties that interact with the Section 5 program:

- EPA's general guiding principles and concepts for making determinations on new chemical notices submitted to EPA under section 5 of TSCA;
- The decision-making logic and the key questions that EPA must address; and
- A discussion of how EPA might apply the working approach to reach one of the five new chemical determinations allowable under the statute.

III. General Guiding Principles and Concepts

EPA utilizes a risk-based approach to assess whether a new chemical substance, under the conditions of use (as determined by the Administrator), presents an unreasonable risk of injury to health or the environment. The assessment culminates in an EPA determination under TSCA section 5(a)(3). Based on that determination, EPA is required to take certain additional actions, potentially including risk management actions (e.g., restrictions on manufacturing, processing, use, disposal, etc.) to address unreasonable risks, before a company may commence manufacture or processing of the chemical. This

[1] See TSCA § 5(a)(3)(A), 15 U.S.C. § 2604(a)(3)(A).
[2] See TSCA § 5(a)(3)(B)(i), 15 U.S.C. § 2604(a)(3)(B)(i).
[3] See TSCA § 5(a)(3)(B)(ii)(I), 15 U.S.C. § 2604(a)(3)(B)(ii)(I).
[4] See TSCA § 5(a)(3)(B)(ii)(II), 15 U.S.C. § 2604(a)(3)(B)(ii)(II).
[5] See TSCA § 5(a)(3)(C), 15 U.S.C. § 2604(a)(3)(C).

section describes some general guiding principles and important concepts associated with making determinations under TSCA section 5(a)(3).

A. Overall Policy

EPA's new chemicals program is intended to ensure that new chemicals do not present an unreasonable risk of injury to health or the environment under the conditions of use. EPA implements its authority under TSCA in a manner that facilitates timely reviews and does not impede unduly or create unnecessary economic barriers to technological innovation in chemical manufacturing.

B. Risk-Based Approach

EPA makes new chemical determinations using a risk-based approach, which takes into account both hazard and exposure. These determinations must also be made without consideration of costs or other non-risk factors.[6]

C. Conditions of Use

In reviewing new chemical notices, TSCA requires EPA to assess the chemical substance "under the conditions of use," defined in the law as "the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of."[7] The identification of conditions of use is a key step in making a determination under TSCA section 5(a)(3). The concepts of "intended," "known" and "reasonably foreseen" are described below and discussed further in a subsequent section on EPA's decision-making logic.

i. Intended Conditions of Use. EPA generally considers the intended conditions of use to be the circumstances of manufacture, processing, distribution in commerce, use, or disposal as stated in the section 5 submission. Risk mitigating practices and controls identified in the submission (e.g., production volume estimates, controls on releases to air or water, disposal practices, use of engineering controls, and personal protective equipment (PPE), etc.) are generally considered to be part of the intended conditions of use.

ii. Known Conditions of Use. Often there are no known conditions of use associated with a new chemical substance given that the chemical is typically "new" to the U.S. marketplace.[8] However, there may be chemicals that are already being manufactured in the U.S. pursuant to an exemption under TSCA section 5(h). Such chemicals are not listed on the TSCA Inventory, and therefore still "new" chemicals subject to the TSCA section 5 notice requirements. EPA may identify known conditions of use associated with these chemicals.

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[6] See TSCA § 5(a)(3), 15 U.S.C. § 2604(a)(3).

[7] See TSCA § 3(4), 15 U.S.C. § 2602(4).

[8] Because TSCA jurisdiction extends only to activities in the U.S., EPA interprets known uses as limited to uses within the U.S. However, evidence of use of a chemical outside the U.S. could result in EPA identifying such a use as a reasonably foreseen condition of use.

iii. Reasonably Foreseen Conditions of Use.

Reasonably foreseen conditions of use are future circumstances under which the Administrator might expect the new chemical substance to be manufactured, processed, distributed, used, or disposed of. Reasonably foreseen conditions of use are separate from and in addition to a submitter's intended conditions of use. The identification of reasonably foreseen conditions of use is necessarily a case-by-case determination and highly fact-specific, necessitating that EPA apply its professional judgment, experience, and discretion. The sources EPA uses to identify reasonably foreseen conditions of use may include, but are not limited to, searches of internal confidential EPA PMN databases (containing use information on analogue chemicals), other U.S. government public sources, patent abstracts in the Chemical Abstract Service STN platform, the National Library of Medicine's Hazardous Substances Data Bank (HSDB), other information in the Chemical Abstract Service STN Platform, REACH Dossiers, and technical encyclopedias (e.g., Kirk-Othmer and Ullmann).

D. Information Sufficiency

Whether there is sufficient information to permit a reasoned evaluation of the health and environmental effects is a key consideration in identifying which among the five available determinations under TSCA section 5(a)(3) might be appropriate.

"Sufficient information" does not necessarily mean complete or perfect information. For example, if EPA has compelling data indicating a chemical poses no hazard, but lacks exposure data, the Agency may nonetheless have sufficient information to permit a reasoned evaluation of the health and environmental effects of the PMN substance due to the lack of hazard.

Additionally, "sufficient information" need not necessarily be data on the actual chemical substance. As a long-standing practice, where appropriate, EPA often relies on analogue data to conduct a reasoned evaluation.

"Sufficient" information is not defined in TSCA or EPA's TSCA regulations. Given the case-by-case nature of the hazard and exposure scenarios, and the variability in what could be considered "sufficient" information for a particular assessment, EPA does not believe that a single definition would be appropriate. This is consistent with other contexts in which EPA explicitly declined to codify a definition of "sufficient" information.[9]

[9] See Final Rule; Procedures for Chemical Risk Evaluation Under the Amended Toxic Substances Control Act. EPA-HQ-OPPT-2016-0654-0108, July 20, 2017. Available online at: https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0654-0108. See also Response to Comments on Proposed Rule; Procedures for Prioritization of Chemicals for Risk Evaluation under the Toxic Substances Control Act. EPA-HQ-OPPT-2016-0636, July 20, 2017. Available online at: https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0636-0076

E. Unreasonable Risk

When a risk is identified, EPA considers a variety of factors in determining whether such risk presents an unreasonable risk of injury to health or the environment. These factors include but are not limited to the potential adverse effect (e.g., severity and/or reversibility) of the substance and/or its degradation products, the nature of the potential exposures (e.g., duration, magnitude, population, etc.) under the conditions of use, and workplace practices and exposure controls. As described in the risk evaluation framework rule[10], EPA has not formally defined the term "unreasonable risk." Instead, a determination of whether or not a risk is unreasonable is made on a case-by-case, chemical-specific basis.

F. Testing Requirements

Sections 4 and 5 of TSCA provide EPA with authority to require development of new information to characterize the risk pertaining to a chemical substance submitted under TSCA section 5(a). Generally, EPA requires additional information when there is insufficient information to perform a reasoned evaluation of health or environmental effects. Test data can reduce uncertainty in the risk assessment and provide a basis for the Agency to modify its risk management approach. Consistent with these authorities, EPA may, for example, require a submitter to develop and submit test data (e.g., physical-chemical properties, environmental fate, exposure monitoring or modeling, health or environmental toxicity) before the chemical can enter the market, or upon a submitter reaching a certain manufacturing volume threshold. Any requirement for testing by EPA, consistent with section 4(h), will be structured to reduce and replace vertebrate animal testing to the extent practicable and scientifically justified. EPA strives to operate within a tiered testing context, under which the results of lower-tiered testing will be used to evaluate whether additional higher-tiered tests are necessary.

G. Scientific Standards and Evidence

As required in TSCA section 26, EPA makes decisions under section 5 based on the weight of the scientific evidence and employs scientific standards consistent with best available science.

H. Significant New Use Rules (SNURs)

A SNUR is a rule that identifies a potential new use[11] of a chemical as a "significant new use." SNURs require persons who intend to manufacture (defined by statute to include import) or process a chemical substance for a significant new use to notify EPA at least

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10 See Unit III(D) of Final Rule; Procedures for Chemical Risk Evaluation Under the Amended Toxic Substances Control Act. EPA-HQ-OPPT-2016-0654-0108, July 20, 2017. Available online at: https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0654-0108

11 In addition to specific functional uses of a chemical that are new and different from the intended or known conditions of use, EPA may identify other circumstances of manufacturing, processing, distribution in commerce, use or disposal (e.g., manufacturing under a different process, in a different physical form, above a certain concentration, etc.) as "significant new uses" (SNUs).

90 days before commencing that activity. The required notification, known as a Significant New Use Notice (SNUN), provides EPA with available hazard, exposure and use information regarding the use of the chemical substance. The SNUN initiates EPA's evaluation of the notice, in accordance with the requirements of TSCA section 5. EPA must either (a) conclude that the significant new use is not likely to present an unreasonable risk under the conditions of use, or (b) take appropriate action under section 5(e) or 5(f). No person may commence manufacture or processing for the use specified in the SNUN until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required by that determination in accordance with the requirements of TSCA section 5. EPA utilizes SNURs in the new chemicals program[12] in three ways:

i. SNURs that Precede "Not Likely" Determinations. Where EPA identifies reasonably foreseen conditions of use associated with a new chemical notice, but lacks sufficient information to perform a reasoned evaluation and/or has identified potential risks associated with those conditions of use, EPA may consider whether a SNUR would address those concerns. Specifically, prior to making a determination under TSCA section 5(a)(3), EPA may consider proposing a SNUR designating those reasonably foreseen conditions of use as significant new uses.[13] Where EPA does not identify risks associated with the known or intended conditions of use during its review of a PMN, proposal of a SNUR enables the Agency to make a "not likely to present an unreasonable risk" determination on the notice while ensuring that any manufacturing or processing activity outside of the known and intended conditions of use would first be subject to closer scrutiny by EPA through submission of a SNUN. In the absence of the SNUR, such a determination by EPA would not be possible.

Although the requirements of a SNUR are not effective until 60 days after publication of the final rule in the Federal Register, EPA believes that a TSCA section 5(a)(3) determination (i.e., not likely to present an unreasonable risk) can be made following issuance of the proposed rule. Based on EPA's experience, a new use is not likely to commence during the pendency of a proposed SNUR because the publication of a proposed SNUR on EPA's website serves as the cut-off date for a significant new use. It is unlikely that manufacturers and processors would commence a prohibited new use that they would be legally required to cease upon the finalization of the SNUR. Once a SNUR is final and effective, no person may commence manufacture

[12] In addition to publication of proposed and final SNURs in the Federal Register, EPA highlights recent SNUR activities on its webpage here: https://www.epa.gov/reviewing-new-chemicals-under-toxic-substances-control-act-tsca/recent-activities-new-chemicals.

[13] TSCA authorizes EPA to issue a SNUR for a chemical substance at any time, including during review of a section 5 notice for a chemical substance. TSCA section 5(a)(2) applies to "a chemical substance," without restriction to chemical substances in commerce. EPA has issued numerous SNURs for substances that have not yet entered commerce (i.e., for which EPA has not received a Notice of Commencement of Manufacture or Import under 40 CFR 720.102).

or processing for the significant new use without first submitting a SNUN as described earlier. If EPA did not finalize the proposed SNUR, that decision would necessarily be based on information and data provided to the Agency during the comment period demonstrating that the new uses subject to the proposed SNUR are not likely to present an unreasonable risk.

ii. SNURs that Follow Section 5(e) Orders. Depending on EPA's determination under TSCA section 5(a)(3), the Agency may be required to issue an order under TSCA section 5(e) that imposes certain restrictions or requirements on the submitter to address unreasonable risks. However, section 5(e) orders apply only to the original submitter of the notice. TSCA requires that EPA consider promulgating a SNUR following a 5(e) order.[14] EPA often uses its SNUR authority to extend the limitations in section 5(e) orders to other domestic manufacturers, importers and processors. This ensures that all domestic manufacturers, importers, and processors are subject to similar restrictions and reporting requirements

iii. SNURs that Follow "Not Likely" Determinations.
If EPA has determined that the chemical substance under its conditions of use is "not likely" to present an unreasonable risk, EPA may still issue a SNUR that follows the determination. Specifically, where EPA has identified other circumstances that – should they occur in the future, even if not reasonably foreseen – may present risk concerns, EPA may consider identifying those other circumstances as significant new uses. This ensures that those circumstances will not occur absent notification to the Agency and further review before manufacture or processing for the significant new use is commenced. EPA has a long history of identifying such circumstances as significant new uses in a SNUR.

IV. Decision-Making Logic and Key Questions

In reaching a determination under TSCA section 5(a)(3), there are a number of questions that EPA considers:

1. What are the intended, known and reasonably foreseen conditions of use?
2. Does EPA have sufficient information to perform a reasoned evaluation? and
3. Can EPA address information deficiencies or risk concerns for reasonably foreseen conditions of use through the issuance of a SNUR?

As described below, the answers to these questions serve to guide EPA's review of new chemical notices and inform determinations under TSCA section 5(a)(3).

A. Identification of Conditions of Use

TSCA requires EPA to assess new chemical substances "under the conditions of use." Conditions of use associated with the chemical define the scope of EPA's review. Thus, it is necessary for EPA – early in the process – to identify the intended, known and

[14] TSCA section 5(f)(4) requires that EPA consider promulgating a SNUR following a section 5(e) order, or, if a SNUR is not issued, to publish a statement describing the reasons the Agency did not pursue such a rulemaking.

reasonably foreseen circumstances of manufacture, processing, distribution in commerce, use and disposal associated with the chemical. In general, EPA considers (1) intended conditions of use to be those identified by the submitter in the section 5(a) notice, (2) known conditions of use to include ongoing U.S. manufacturing activity occuring under one of the section 5(h) exemptions, and (3) reasonably foreseen conditions of use to include those future circumstances of manufacture, processing, distribution, use and disposal that EPA expects might occur.

The following sections describe EPA's general approach for identifying "reasonably foreseen" conditions of use, including conditions of use with respect to workers, and the impact of a submitter's amendments to a new chemical notice on the conditions of use analysis.

i. Identification of Reasonably Foreseen Conditions of Use. In identifying reasonably foreseen conditions of use, EPA applies an evidence-based approach supported by professional judgment, experience, and discretion. EPA considers a variety of information on uses. For example, EPA reviews chemical references to determine if a new chemical substance is already currently used outside the U.S., in which case it may be reasonable to foresee that such use could occur inside the U.S. As another example, EPA reviews structural analogues and their associated uses.[15] When there is at least one use in common with an intended condition of use for the new chemical, EPA may determine that it is reasonable to foresee that the new chemical substance will be used in the same additional way(s) as the associated analogue.

ii. Conditions of Use Involving Workers. In general, EPA's reviews of new chemical notices include an assessment of worker exposures. Where the submitter identifies controls to protect workers in the section 5(a) notice, including in any amendments to the submission, EPA considers those controls as part of the chemical's intended conditions of use. EPA's initial assessment includes consideration of engineering controls described in the section 5(a) notice, but not personal protective equipment (PPE) such as gloves and respirators. If risks are preliminarily identified, EPA then considers whether the risks would be mitigated by the use of PPE.

The requirements set forth by the Occupational Safety and Health Administration (OSHA), including OSHA's worker protection standard[16] require employers to provide and have affected employees use PPE wherever it is necessary by reason of hazards present in the workplace. EPA generally expects the submitter and any future

[15] EPA has data (including use information) on tens of thousands of chemicals that were previously the subject of TSCA section 5 notices and/or exemption applications, and uses this data in its analyses of potential analogues.

[16] See, e.g., 29 CFR § 1910.132(a) and (d), which requires employers to "…assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the employer shall…select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment…"

manufacturers and processors to comply with federal and state laws to protect workers, including OSHA's worker protection standards. Additionally, because EPA requires that the original submitter's Safety Data Sheet (SDS) reflects Agency recommendations to protect workers from risks identified in EPA's assessment, including PPE and hazard communication, future users of the chemical will have this information available to them when determining how to comply with OSHA's worker protection standards. Therefore, unless case-specific facts indicate otherwise, EPA believes that a chemical is generally not likely to present unreasonable risks to workers if the use of PPE and/or other exposure controls would mitigate potential risk.

In certain cases, however, the facts might indicate that the chemical may present unreasonable risks to workers. For example, there may be circumstances where even a short lapse in PPE protection may present unreasonable risks (e.g., acute lethality). In such cases, EPA may issue an order under section 5(e) to reinforce the measures necessary to protect workers. As another example, if a submitter declines to amend their notice or associated SDS to align with EPA's assessment on the appropriate type and level of controls to protect workers, there is a greater chance that both the submitter and any future user will not take the appropriate actions on worker protection.

iii. Amendments to Section 5 Notices; Changes to Conditions of Use. Where the submitters provide written amendments to their submission, EPA generally identifies the conditions of use in those amended submissions to be the new intended conditions of use, where appropriate.[17] However, conditions of use that were identified in an initial notice and later omitted in an amended submission may be determined to be reasonably foreseen conditions of use. Amendments to notices which alter the conditions of use (e.g., changes to the use types, production volume, manufacturing process, disposal practices, etc.) may necessitate rework of all or part of the technical review. It is imperative, therefore, for submitters to submit amendments to EPA, if any, as early as possible in the review process.

B. Analysis of Information Sufficiency

As discussed earlier in this document, information sufficiency is another key question in the decision-making process that EPA must address. Whether there is "sufficient information to permit a reasoned evaluation" on the new chemical substance (or significant new use) is important in identifying the appropriate determination under section 5(a)(3). In order to make a determination that a new chemical either "presents unreasonable risk"[18] or is "not likely to present unreasonable risk,"[19] EPA must have

[17] In general, "timely" means early enough in the review process to allow EPA to assess risks and make a determination within the applicable review period. In some cases, however, both EPA and the submitter may agree to suspend the review period to allow for assessment.

[18] See TSCA § 5(a)(3)(A), 15 U.S.C. § 2604(a)(3)(A).

[19] See TSCA § 5(a)(3)(C), 15 U.S.C. § 2604(a)(3)(C).

"sufficient information to permit a reasoned evaluation." Without sufficient information, EPA may make a determination of "insufficient information"[20] or "insufficient information and may present unreasonable risk."[21] Where EPA receives amendments or supplemental information during the review period, the Agency may need to revisit this analysis.

In analyzing the issue of information sufficiency, EPA generally considers:

- Whether there is information sufficient to characterize both hazard and exposure to render those characterizations into a quantitative or robust qualitative characterization of risk, and
- The level of certainty or confidence in the data used in the risk estimate.

For instance, if EPA's evaluation indicates a particular hazard, EPA's own level of confidence—i.e., the likelihood—that the animal data indicate potential risk to humans is a factor in whether the Agency has sufficient information available to permit a reasoned evaluation.

C. Consideration of SNUR for Reasonably Foreseen Conditions of Use

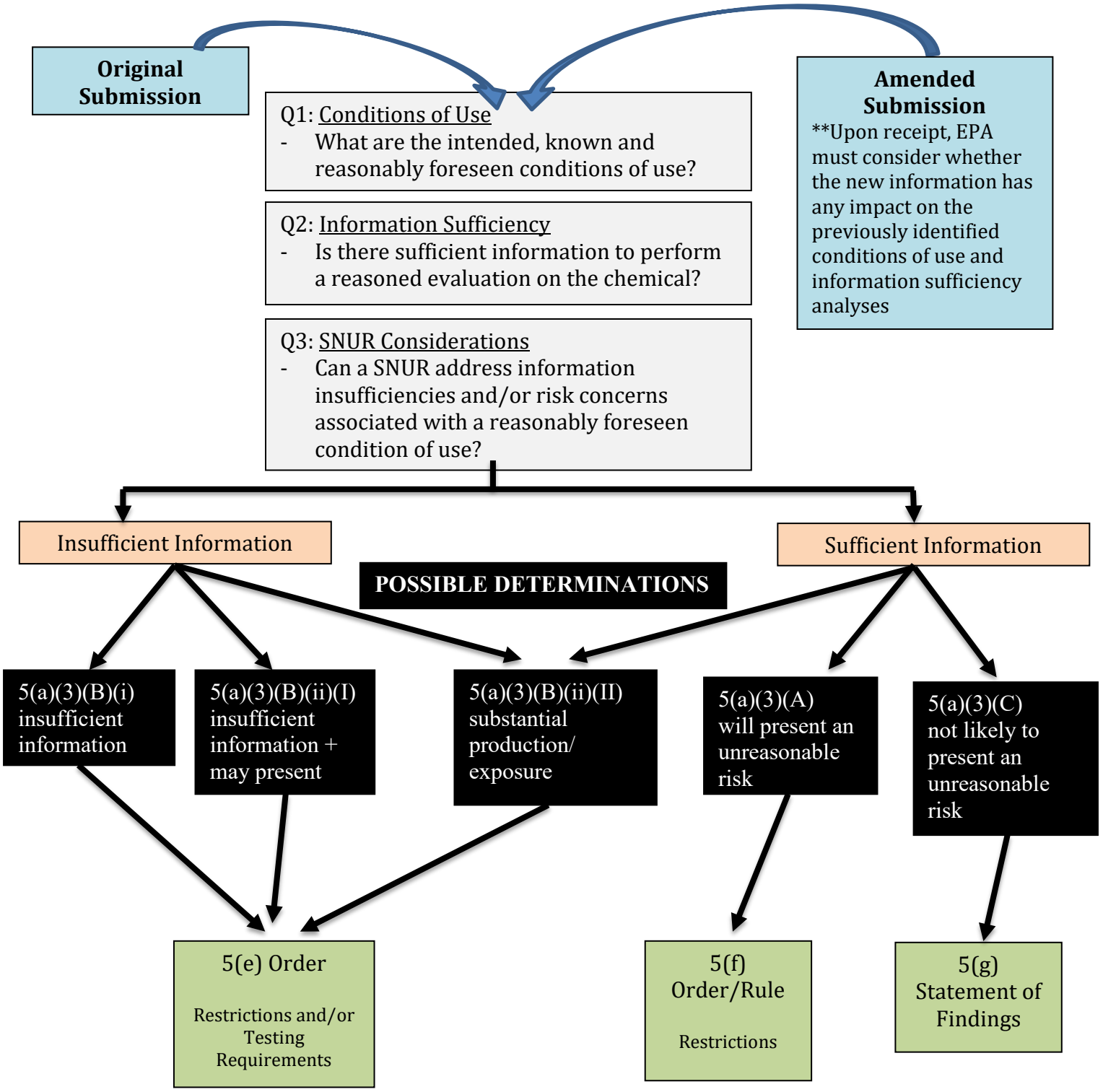
Where EPA identifies reasonably foreseen conditions of use during review of a section 5 notice, but lacks sufficient information to perform a reasoned evaluation and/or has identified potential risk concerns associated with a reasonably foreseen condition of use, EPA may consider whether a SNUR can appropriately address those deficiencies or concerns. A SNUR designating those reasonably foreseen conditions of use as "significant new uses" would require any persons who intend to manufacture or process a chemical substance for those uses to notify EPA before commencing that activity and to provide EPA with certain hazard, exposure and use information. A SNUR can be an effective means of ensuring that any manufacturing or processing activity for the reasonably foreseen conditions of use would first be subject to review by EPA, and, further restriction where appropriate.

D. Decision-Making Logic

The following figure represents the general logic flow for new chemical decision-making under TSCA, beginning with the questions described in this section and, subsequently, the different pathways leading to determinations under section 5(a)(3) and associated risk management actions:

[20] See TSCA § 5(a)(3)(B)(i), 15 U.S.C. § 2604(a)(3)(B)(i).
[21] See TSCA § 5(a)(3)(B)(ii)(I), 15 U.S.C. § 2604(a)(3)(B)(ii)(I).

Figure 1: TSCA Section 5(a)(3) Determination Pathways.



V. Section 5 Determinations

This section discusses the five specific determinations under section 5(a)(3) and some of the factors EPA generally considers, reflective of the guiding principles, concepts and analyses described above. These discussions are not intended to be interpretations of what is required by TSCA or the range of discretion afforded by TSCA; nor are they a recitation of the elements of a specific determination. This document does not purport to provide a comprehensive rationale for each specific determination type, as the agency's approach in any individual case will be based on the facts of that case. In addition, application of the general guiding principles and concepts may result in different decision paths, and certain cases may present circumstances that are not addressed in these discussions or that warrant different approaches from those set out here.

Presents Unreasonable Risk – TSCA Section 5(a)(3)(A)

- EPA concludes that there is sufficient information to permit a reasoned evaluation. That is, data (e.g., data for the chemical substance, an analogous substance, from a predictive model, a structural alert, or other appropriate sources) are adequate to characterize, with an acceptable degree of certainty, the hazard of the substance and/or its metabolite(s), components, or degradation products, and its exposure potential.
- Health or environmental risks under certain or all conditions of use are above risk benchmarks.[22]
- Risk-related factors—such as severity of endpoint (e.g., developmental effects vs. dermal irritation), reversibility of effect, or exposure-related considerations—lead EPA to determine that the risks are unreasonable under some or all conditions of use.
- Where reasonably foreseen conditions of use have been identified, EPA has not proposed or finalized a SNUR that would require review and regulation of reasonably foreseen conditions of use that would present an unreasonable risk before they occur.
- EPA must follow this determination with further appropriate action under 5(f) to address the unreasonable risk.

Not Likely to Present Unreasonable Risk – TSCA Section 5(a)(3)(C)

- EPA concludes that there is sufficient information to conduct a reasoned evaluation. That is, data (e.g., data for the chemical substance, for an analogous substance, from a predictive model, a structural alert, or other appropriate sources) are adequate to characterize, with an acceptable degree of certainty, the hazard of the substance and/or its metabolite(s), components, or degradation products, and its exposure potential.
- Health and environmental risks for the conditions of use are below risk benchmarks; or health and environmental risks are above the appropriate

[22] "Benchmarks" in this document means estimated risks above which EPA generally has had concern. For example, a 1×10^{-6} cancer risk estimate has often been considered a "benchmark" above which EPA has concerns for exposure to the general population.

benchmarks, but other risk-related factors—such as severity of endpoint, reversibility of effect, or exposure-related considerations (duration, magnitude, population, etc.), or others—lead EPA to determine that the chemical is not likely to present a risk that is *unreasonable*.
- In certain cases, EPA has proposed or finalized a SNUR that would require review and regulation (if appropriate) of reasonably foreseen conditions of use that might otherwise present unreasonable risks or for which the Agency lacks sufficient information to conduct a reasoned evaluation.
- EPA must, in accordance with TSCA section 5(g), follow this determination with a public statement regarding the findings that support the determination.

Insufficient Information to Permit a Reasoned Evaluation – TSCA Section 5(a)(3)(B)(i)
- EPA determines based on the facts before the Agency that there is insufficient information to conduct a reasoned evaluation under one or more conditions of use. That is, data (e.g., data for the chemical substance, for an analogous substance, from a predictive model, a structural alert, or other appropriate sources) are inadequate to characterize, with an acceptable degree of certainty, the hazard of the substance and/or its metabolite(s), components, or degradation products, and/or its exposure potential under one or more conditions of use.
- EPA has not proposed or finalized a SNUR that would require review and regulation (if appropriate) of reasonably foreseen conditions of use that might otherwise present concerns or for which the Agency lacks sufficient information to conduct a reasoned evaluation.
- EPA must issue an order pursuant to section 5(e) restricting the chemical as necessary to protect against unreasonable risk. EPA may call for additional testing in such orders.
- Pursuant to section 5(f)(4), EPA must also consider issuing a SNUR that would conform to the restrictions in the order, or publish a statement describing the reasons for not taking such action.

Insufficient Information to Permit a Reasoned Evaluation and May Present Unreasonable Risk - TSCA Section 5(a)(3)(B)(ii)(I)
- EPA determines based on the facts that the data (e.g., data for the chemical substance, for an analogous substance, from a predictive model, a structural alert, or other appropriate sources) indicate potential health or environmental concerns for the substance and/or its metabolite(s), components, or degradation products under one or more conditions of use such that the chemical may present an unreasonable risk.
- However, there is a high level of uncertainty associated with the data used and the identified risk(s).
- As such, EPA determines that there is insufficient information to conduct a reasoned evaluation under one or more conditions of use. That is, data are inadequate to characterize, with an acceptable degree of certainty, the hazard of the substance and/or its metabolite(s), components, or degradation products, and/or its exposure potential under one or more conditions of use.

- EPA has not proposed or finalized a SNUR that would require review and regulation (if appropriate) of reasonably foreseen conditions of use that otherwise present concerns or for which the Agency lacks sufficient information to conduct a reasoned evaluation.
- EPA must issue an order pursuant to section 5(e) restricting the chemical as necessary to protect against unreasonable risk. EPA may call for additional testing in such orders.
- Pursuant to section 5(f)(4), EPA must also consider issuing a SNUR that would conform to the restrictions in the order, or publish a statement describing the reasons for not taking such action.

Produced in Substantial Quantities; and May Reasonably be Anticipated to Enter the Environment in Substantial Quantities or May be Significant or Substantial Human Exposure - TSCA Section 5(a)(3)(B)(ii)(II)

- As a result of the review, and guided by EPA's established criteria[23], EPA determines that the substance (A) is or will be produced in substantial quantities, and (B) the substance either enters or may reasonably be anticipated to enter the environment in substantial quantities or there is or may be significant or substantial human exposure.
- EPA has made the "may reasonably be anticipated" finding based on evidence, knowledge, or experience to suggest that this finding is appropriate, in a manner similar to its general approach for identifying reasonably foreseen conditions of use.
- EPA must follow this determination with an order pursuant to section 5(e) restricting the chemical where necessary to protect against unreasonable risk. EPA may call for additional testing in such orders.
- Pursuant to section 5(f)(4), EPA must also consider issuing a SNUR that would conform to the restrictions in the order, or publish a statement describing the reasons for not taking such action.

[23] See EPA's Exposure-Based Policy under Section 5 of TSCA, available online here: https://www.epa.gov/reviewing-new-chemicals-under-toxic-substances-control-act-tsca/exposure-based-policy-under-section