Instructions for the 2012 TSCA Chemical Data Reporting

U.S. Environmental Protection Agency Office of Pollution Prevention and Toxics

HIGHLIGHTS OF 2012 TSCA CHEMICAL DATA REPORTING (CDR)

- The determination of the need to report is based on production volume during calendar year 2011.
- Information on the reportable chemical substance must be reported during the 2012 CDR submission period, February 1, 2012 to June 30, 2012 (40 CFR 711.20).
- All reporting companies must report CDR data electronically, using e-CDRweb, the CDR web-based reporting tool, and EPA's Central Data Exchange (CDX) system. Prior to submitting data, submitters must register with CDX.
- Reporting is required for all chemical substances listed on the TSCA Inventory, both organic and inorganic, other than polymers, microorganisms, naturally occurring chemical substances, certain forms of natural gas, and water (40 CFR 711.5 and 711.6) when manufacture (including import) of those chemical substances meets the other reporting requirements. Chemical substances that are the subject of any of certain listed TSCA actions may not be eligible for partial or full exemptions (40 CFR 711.6).
- Manufacturers (including importers) are required to report full manufacturing data, for calendar year 2011, and production volume only, for calendar year 2010, for all reportable chemical substances, when 2011 site-specific production volume equals or exceeds 25,000 lb (40 CFR 711.15(b)).
- Manufacturers (including importers) are required to report processing and use data, for calendar year 2011, for all reportable chemical substances, when 2011 site-specific production volume equals or exceeds 100,000 lb (40 CFR 711.15(b)). Inorganic chemical substances are no longer exempt from the reporting of processing and use information.
- Small manufacturers are exempt from CDR requirements unless they manufacture (including import) 25,000 lb or more of a chemical substance that is the subject of a rule proposed or promulgated under sections 4, 5(b)(4), or 6 of TSCA, or is the subject of an order in effect under section 5(e) of TSCA, or is the subject of relief that has been granted under a civil action under sections 5 or 7 of TSCA (40 CFR 711.9) and (TSCA § 8(a)(3)(A)(ii)). See Appendix B for further information.
- Information submitted under CDR may be claimed as confidential; however, such claims must be made at the time of submission and substantiated in accordance with the CDR rule. Submitters must provide upfront substantiation of confidentiality claims for processing and use information as well as for confidentiality claims for site or chemical identity. A blank response or a response that is designated as "not known or reasonably ascertainable" may not be claimed as confidential (40 CFR 711.30).
- Visit the CDR Web site (http://www.epa.gov/cdr or http://www.epa.gov/iur) for program updates and announcements, other guidance materials for 2012 reporting, and contact information for technical assistance.

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PREFACE

As part of the Inventory Update Reporting (IUR) Modifications final rule, EPA changed the identification of the regulation from IUR to Chemical Data Reporting (CDR). Throughout this document, EPA has retained the use of the term "IUR" to reflect historical terminology and has used the term "CDR" to describe the revised reporting requirements.

The primary goal of this document is to help the regulated community comply with the requirements of the CDR rule. This document does not substitute for that rule, nor is it a rule itself. It does not impose legally binding requirements on the regulated community or on the U.S. Environmental Protection Agency (EPA).

Manufacturers (including importers) are required by the CDR rule to report to EPA information concerning the manufacturing, processing, and use of certain chemical substances listed on the TSCA Chemical Substance Inventory. The CDR requirements have changed since the last collection, which occurred in 2006 and was based on 2005 production data. EPA amended the IUR rule in a final action promulgated on August 16, 2011. Manufacturers (including importers) are subject to the revised reporting requirements based on manufacturing (including importing) activities conducted during the principal reporting year (calendar year 2011). The 2012 submissions are due by June 30, 2012, and must be submitted via the Internet using e-CDRweb and EPA's Central Data Exchange (CDX). e-CDRweb is a web-based reporting tool that allows manufacturers (including importers) to file a paperless CDR submission and receive instant receipt confirmation of their submissions. Electronic reporting is expected to significantly reduce errors in the reported data.

This guidance document contains the following chapters and appendices:

- Chapter 1 Introduction to the CDR and changes made since the 2006 reporting cycle.
- Chapter 2 Reporting requirements to determine which chemical substances are reportable, who must report, and what information must be reported.
- Chapter 3 When you must report.
- Chapter 4 Instructions for completing Form U.
- Chapter 5 How to assert confidentiality claims.
- Chapter 6 How to submit your Form U to EPA.
- Chapter 7 How to obtain copies of documents cited in this guidance document.
- Appendix A Glossary.
- Appendix B Chemical substances that are the subject of certain TSCA orders, proposed or final TSCA rules, relief granted under civil actions, or consent agreements.

- Appendix C Chemicals substances partially exempt from reporting in 2012.
- Appendix D Descriptions of codes for reporting *Processing or Use Operations, Industrial Sectors, Industrial Function Categories*, and *Consumer and Commercial Product Categories*.

Chapter 1.0 Introduction

1.0 Introduction

1.1 Background and Statutory Authority

As part of the IUR Modifications final rule, EPA changed the identification of the regulation from IUR to Chemical Data Reporting (CDR). Throughout this document, EPA has retained the use of the term "IUR" to reflect historical terminology and has used the term "CDR" to describe the revised reporting requirements.

In 1977, the U.S. Environmental Protection Agency (EPA) promulgated a rule under the Toxic Substances Control Act (TSCA) section 8(a), 15 U.S.C. 2607(a), to compile and keep current an inventory of chemical substances in commerce in the United States. This inventory is called the TSCA Chemical Substance Inventory (TSCA Inventory). In 1986, EPA promulgated the Inventory Update Reporting (IUR) rule, also under TSCA section 8(a), to facilitate the periodic updating of the TSCA Inventory and to support activities associated with implementing TSCA. The IUR rule has been amended since1986, most recently in 2011. At that time, EPA returned the frequency of reporting to once every four years, modified reporting thresholds, updated definitions, revised industrial classifications, modified situations in which confidentiality may be claimed, and began requiring electronic submission of CDR data over the Internet using the e-CDRweb reporting tool and EPA's Central Data Exchange (CDX). EPA's CDX is the point of entry on the Environmental Information Exchange Network for environmental data submissions to the Agency. It allows you to file a paperless CDR submission, significantly reducing data errors, and receive instant receipt confirmation of your submission.

This document, which pertains to EPA CDR reporting during 2012, updates the previous guidance issued for reporting in 2006 to incorporate instructions relevant to 2012 reporting. It provides detailed information and examples to assist manufacturers (including importers) in reporting under the CDR rule. Sample screenshots of the e-CDRweb tool are provided throughout this document to guide you through the completion of your Form U. **These screen shots are not based on actual data, but are hypothetical situations generated to assist submitters in completing Form U.** Appendix A provides a glossary of CDR terms, which may help you to understand the 2012 reporting requirements.

This document is not a substitute for the CDR rule in 40 CFR Part 711. To the extent that any inconsistencies exist between the CDR rule and this document, the requirements as promulgated in the rule should be followed. You should carefully review 40 CFR Part 711 to determine whether you are required to report information in response to CDR requirements.

To comply with the CDR rule, it is important to have a thorough understanding of the TSCA Inventory and the procedures available to determine whether a chemical substance is listed on the TSCA Inventory. Chapter 7 of this guidance document explains how you can obtain copies of TSCA rules, including the CDR rule, and access the non-confidential TSCA Inventory.

1.2 Changes From 2006 IUR Requirements and Rationale for Changes

In 2011, EPA changed the 2006 IUR requirements by promulgating the CDR Modifications rule. Details on EPA's rationale for specific changes are available in the preamble

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to the rule (XX FR XXXXX) (FRL- 8872-9). Descriptions of the major changes are included in Table 1-1. In summary, EPA amended the IUR rule to:

- Clarify reporting requirements;
- Improve the quality of data submitted and entered into the Agency's database;
- Better match data collected with the Agency's overall information needs;
- Make data more available to the public; and
- Reduce, to the extent possible, the paperwork burden on both regulated entities and EPA.

Additionally, EPA developed the electronic CDR reporting tool, e-CDRweb, to incorporate these changes.

Table 1-1. Changes Made to the IUR Rule by the 2011 Amendments

Change	Description	
How to Report		
CDX registration required	All submitters (including joint submitters) are required to register with EPA's Central Data Exchange (CDX) to submit their CDR reports electronically. Paper submissions will no longer be accepted.	
Use of electronic reporting tool, e-CDRweb, required	Requires electronic reporting of CDR data through the Internet, using EPA's CDX and the electronic reporting tool, e-CDRweb.	
Who is Required to Report		
Manufacturers (including importers) of chemical substances over 25,000 lb/site/yr	Requires reporting if the production volume of a chemical substance met or exceeded the 25,000 lb threshold during the principal reporting year (i.e., calendar year 2011) (40 CFR 711.8(a)).	
Manufacturers (including importers) of chemical substances that are potentially exempted under 40 CFR 711.6	Provides that chemical-specific reporting exemptions do not apply to any chemical substance that is the subject of an enforceable consent agreement (ECA) (40 CFR 711.6).	

What to Report		
Revisions to company and chemical identity reporting	 Requires manufacturers (including importers) to report: (40 CFR 711.15(b)(2) and 711.15(b)(3)(i)) The company name and mailing address belonging to the U.S. parent company. The currently correct Chemical Abstracts (CA) Index Name, as used to list the chemical substance on the TSCA Inventory, as part of the chemical identity. The Chemical Abstracts Services (CAS) Registry Number or TSCA Accession Number, as part of the chemical identity. Submitters can no longer use the Pre-Manufacture Notice (PMN) Number as part of a chemical identity. 	

Chapter 1.0 Introduction

Revisions to manufacturing-related data elements	Requires manufacturers (including importers) to report: (40 CFR 711.15(b)(3)(iii)-(vi)) • The production volume for calendar year 2010. • For the principal reporting year (i.e., 2011) only: • The production volume of a manufactured (including imported) chemical substance used at the reporting site. • Whether an imported chemical substance is physically at the reporting site. • The volume of the chemical substance directly exported and not domestically processed or used. • Whether a manufactured chemical substance, such as a byproduct, is being recycled, remanufactured, reprocessed, or reused.	
Reporting of processing and use information required for chemical substances manufactured at 100,000 lb or more (unless exempted)	Replaces the 300,000 lb threshold with 100,000 lb. For the principal reporting year only, requires reporting of processing and use information of all reportable chemical substances manufactured at 100,000 lb or more, unless otherwise exempted (40 CFR 711.15(b)(4)).	
Revisions to industrial processing and use-related data elements	Revises the list of industrial function categories. Replaces the reporting of NAICS codes with Industrial Sector codes (40 CFR 711.15(b)(4)(i)(B)).	
Revisions to consumer and commercial use-related data elements	Revises the list of consumer and commercial product categories. In addition, separates reporting of consumer or commercial codes and adds an indication of the number of commercial workers on the reporting form (40 CFR 711.15(b)(4)(ii)).	
"Readily obtainable" reporting standard replaced	For the reporting of processing and use information required by 40 CFR 711.15(b)(4), replaces the "readily obtainable" reporting standard with the "known to or reasonably ascertainable by" reporting standard (40 CFR 711.15 (b)(4)).	
Requirement for a U.S. address added for importers	Adds the requirement of a U.S. address for importers and clarifies procedures for joint submissions between importers and their foreign manufacturer counterparts (40 CFR 711.3 definition for <i>site</i> ; 40 CFR 711.15(b)(3)(i)(A)).	
Other Changes		
Definitions	Reorganizes and consolidates existing definitions and adds new definitions including manufacture, manufacturer, site, and definitions related to electronic reporting and chemical processing and use (40 CFR 711.3).	
Water fully exempted from reporting	Eliminates the need to report water (both naturally occurring and manufactured) under CDR; removes water from the petroleum streams partial exemption (40 CFR 711.6).	
New requirement for upfront substantiation for claiming confidential business information	Upfront substantiation is required for each processing and use data element claimed as confidential business information (40 CFR 711.30 (d)).	
Confidentiality claims for certain information disallowed	Confidentiality claims for processing and use data elements identified as "not known to or reasonably ascertainable by" are not allowed (40 CFR 711.15(b)(4)).	
Reporting frequency changed	Reporting is required for information generated during calendar year 2011 and for calendar years at four-year intervals thereafter. (40 CFR 711.20)	

2.0 Reporting Requirements

This chapter explains the reporting requirements for the 2012 CDR reporting cycle. CDR reporting requirements apply to manufacturers (including importers) of chemical substances. The term 'chemical substance' is defined in Appendix A.

For the 2012 submission period, manufacturers (including importers) are required to use e-CDRweb, the CDR reporting tool, and EPA's CDX to create an electronic version of Form U to submit information in response to the requirements of this rule (40 CFR Part 711). You must register with CDX to submit online, and you must register the name of the company on whose behalf you are submitting a Form U. EPA will no longer accept paper submissions or electronic media (diskette, CD-Rom, etc.) for any CDR submission.

If you reported under the 2006 IUR, you should review the reporting requirements carefully because they have changed. You may be required to report information on chemical substances that you did not need to report in previous IUR reporting cycles.

You should consider the following three steps to determine whether you are required to report for each chemical substance that you domestically manufacture (including import) into the United States during the principal reporting year (i.e., calendar year 2011):

- Step I: Is your chemical substance subject to the CDR rule?
- Step II: Are you a manufacturer (including importer) who is required to report?
- Step III: What information must you report?

This chapter discusses each of these steps and the associated reporting requirements in more detail.

2.1 Step I: Is Your Chemical Substance Subject to the CDR Rule?

Under the CDR rule, reporting for the 2012 CDR reporting cycle is generally required for a chemical substance that is manufactured (including imported), is on the TSCA Inventory as of February 1, 2012, and is not specifically exempted by 40 CFR 711.6(a). The term "CDR reportable chemical substance" will be used throughout this document to refer to a chemical substance that fulfills these requirements. Figure 2-1 presents a decision logic diagram to assist you in determining whether you manufacture a CDR reportable chemical substance. The following subsections explain each question in greater detail.

An CDR reportable chemical is a chemical substance that is domestically manufactured or imported into the United States, is listed in the TSCA Inventory, and is not specifically exempted by 40 CFR 711.6(a).

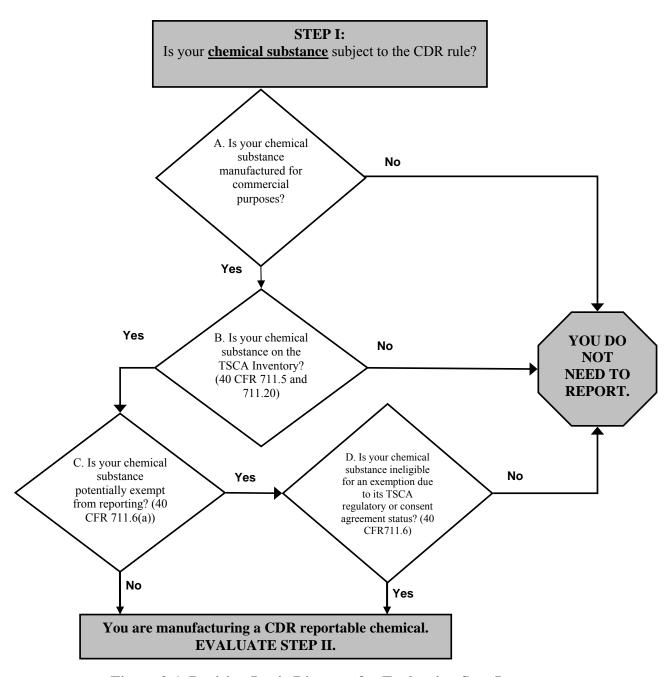


Figure 2-1. Decision Logic Diagram for Evaluating Step I

2.1.1 Is Your Chemical Substance Manufactured for Commercial Purposes? (Question A)

The first step in determining your reporting requirements is to determine whether you meet the definition of manufacture or manufacturer. The following manufacturing-related terms are defined below:

Manufacture – To manufacture, produce, or import for commercial purposes.
 Manufacture includes the extraction, for commercial purposes, of a component chemical substance from a previously existing chemical substance or complex

combination of chemical substances. When a chemical substance, manufactured other than by import, is:

- (1) produced exclusively for another person who contracts for such production, and
- (2) that other person specifies the identity of the chemical substance and controls the total amount produced and the basic technology for the plant process, then that chemical substance is co-manufactured by the producing manufacturer and the person contracting for such production (40 CFR 711.3).
- *Manufacture for commercial purposes* (1) To import, produce, or manufacture with the purpose of obtaining an immediate or eventual commercial advantage for the manufacturer, and includes among other things, such "manufacture" of any amount of a chemical substance or mixture:
 - (i) For commercial distribution, including for test marketing.
 - (ii) For use by the manufacturer, including use for product research and development, or as an intermediate.
 - (2) Manufacture for commercial purposes also applies to chemical substances that are produced coincidentally during the manufacture, processing, use, or disposal of another chemical substance or mixture, including both byproducts that are separated from that other substance or mixture and impurities that remain in that chemical substance or mixture. Such byproducts and impurities may, or may not, in themselves have commercial value. They are nonetheless produced for the purpose of obtaining a commercial advantage since they are part of the manufacture of a chemical product for a commercial purpose (40 CFR 704.3).
- *Manufacturer* A person who manufactures a chemical substance (40 CFR 711.3).

Thus, the manufacture of a chemical substance by a toll manufacturer is considered manufacturing, even in instances where another person is also considered to be manufacturing that chemical substance by contract (see 2.1.1.1 below). Both the toll manufacturer and the contracting party would be considered the co-manufacturers of the chemical substance.

For purposes of the CDR rule, a chemical substance is manufactured (including imported) only if it is manufactured (including imported) for commercial purposes. See TSCA Section 8(f), TSCA Section 3(7), and 40 CFR 704.3, which includes a parallel definition of "Import for commercial purposes." As identified above, the term *manufacture for commercial purposes* means that the chemical substance is produced for the purpose of obtaining a commercial advantage. Manufacture for commercial purposes also applies to chemical substances that are produced coincidentally during the manufacture, processing, use, or disposal of another chemical substance or mixture, including both byproducts that are separated and impurities that remain in a chemical substance or mixture. (40 CFR 704.3)

2.1.1.1 Manufacturing by Contract

The person who contracts with another person, such as a toll manufacturer, to manufacture a chemical substance is now considered to be the co-manufacturer, along with the toll manufacturer of that chemical substance. This is a change from previous reporting cycles.

As specified in the definition for *manufacture*, manufacturing by contract is a situation where the contracted person manufactures or produces the chemical substance exclusively for the contracting person, and where the contracting person specifies the identity of the chemical substance and controls the total amount produced and the basic technology of the plant process.

2.1.1.2 **Byproducts and Impurities**

Byproducts

Byproducts are chemical substances that are produced without a separate commercial intent during the manufacture, processing, use, or disposal of another chemical substance(s) or mixture(s) (40 CFR 704.3). If the byproduct is manufactured (including imported) in a volume of 25,000 lb or more at a single site during the principal reporting year, then its manufacture (including import) is potentially subject to CDR requirements.

Byproducts may or may not, in themselves, have commercial value. They are nonetheless produced for the purpose of obtaining a commercial advantage because they are part of the manufacture of a chemical product for a commercial purpose. Thus, chemical substances that are the byproducts of the manufacture, processing, use, or disposal of another chemical substance or mixture, like any other manufactured chemical substance, are subject to CDR reporting if they are listed on the TSCA Inventory, are not otherwise excluded from reporting, and their manufacturers are not specifically exempted from CDR requirements.

There are, however, conditions under which byproducts are not required to be reported. If, after it is manufactured (including imported), your byproduct chemical substance is not put to use for a separate commercial purpose (see 40 CFR 711.10(c) and 40

Can a byproduct be manufactured if the main product is an article?

Yes, potentially. You need to consider whether you are manufacturing a chemical substance as a byproduct when you are manufacturing an article. For example, if your use or processing of a chemical substance (chemical A) to manufacture an article coincidentally produces a different chemical substance (chemical B), apart from the article you intended to manufacture, then you have manufactured a byproduct chemical substance. This situation may occur, for example, when you are stripping a chemical substance off of a part of the article, and the stripping process results in the formation of a different chemical substance (possibly resulting in a "used" stripping solution).

CFR 720.30(h)), you do not need to report it. If your byproduct's only separate commercial purpose "is for use by public or private organizations that (1) burn it as a fuel, (2) dispose of it as a waste, including in a landfill or for enriching soil, or (3) extract component chemical substances from it for commercial purposes" (see 40 CFR 720.30(g)), then that byproduct is *also*

excluded from CDR reporting. This exclusion applies only to the byproduct; it does not apply to the component chemical substances extracted from the byproduct.

In interpreting section 40 CFR 720.30(g), one needs to consider the following important points.

Regarding 40 CFR 720.30(g)(1), note that where a byproduct is burned as a fuel, and is also being burned for other non-exempt commercial purposes (e.g., if the combustion residue is used as a process input), then the exemption under 40 CFR 720.30(g)(1) would not apply. To provide a specific example: in a paper pulping process black liquor is burned to generate power, and it then undergoes a chemical change to become manufactured smelt. The smelt is then used as a process inputs in the manufacture of white liquor which is then returned to the pulping process. The exemption under 40 CFR 720.30(g)(1) would not apply to the manufacture of the black liquor because the black liquor's post-combustion commercial purposes include non-exempt commercial purposes. If the black liquor were instead burned solely to generate power, the exemption under 40 CFR 720.30(g)(1) would have applied. If the black liquor were instead incinerated solely for destruction, the exemption under 40 CFR 720.30(h)(2) would have applied.

Is there a distinction for CDR byproduct reporting when it is burned for fuel or incinerated as a waste?

Any distinction between burning a byproduct as a fuel or incinerating it as a waste is generally not relevant under the CDR. This is because the CDR exempts both byproducts whose "only commercial purpose" is for burning as a fuel (40 CFR 720.30(g)(1)), and byproducts that are "not used for commercial purposes" (40 CFR 720.30(h)(2)). This latter category would include incineration, solely for destruction.

- Regarding 40 CFR 720.30(g)(2), although the manufacture of a byproduct is not reportable if the byproduct is subsequently disposed of as a waste for purposes of enriching the soil (e.g., to change the soil properties in a desirable way, such as by serving as a filler to make the soil less dense or enhancing moisture retention), a substance used as a fertilizer is <u>not necessarily</u> an excluded byproduct. For instance, if the substance's ordinary manner of use is as a fertilizer, then the substance is not a byproduct in the first place, and the provisions at 40 CFR 720.30(g) are inapplicable.
- Regarding 40 CFR 720.30(g)(3), individual component chemical substances extracted from a byproduct are reportable substances if they are extracted for a commercial purpose, even if the manufacture of the byproduct itself is not reportable pursuant to 720.30(g).

A "component chemical substance" means a chemical substance that <u>already exists</u> in the byproduct. If the recycling process involves breaking chemical bonds or forming new chemical bonds to convert a chemical substance in the byproduct into a different chemical substance (which is then extracted), then the recycling process does not count as extracting a component chemical substance of the byproduct. Note: In circumstances

where other substances in the byproduct are chemically reacted in order to facilitate the separation of a desired component chemical substance, such that the component chemical substance itself is not chemically changed before being extracted, then the process <u>does</u> constitute an extraction of the unchanged component chemical substance.

Note: Small businesses are generally not required to report information under CDR. See Section 2.2.2 for discussion of the small manufacturer exemption.

Figure 2-2 presents a decision logic diagram to assist you in determining whether your byproduct chemical substance is subject to the CDR rule.

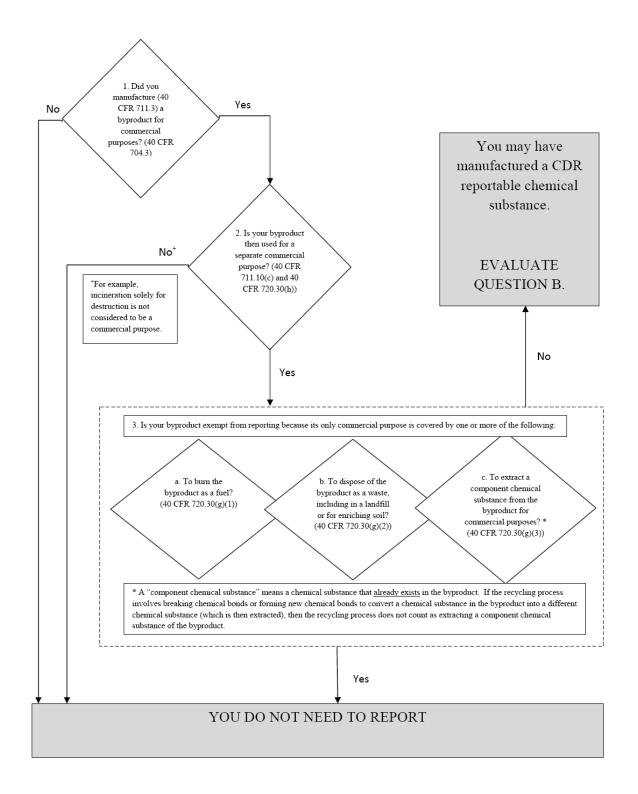


Figure 2-2. Decision Logic Diagram for Evaluating Whether a Byproduct Chemical Substance is Subject to the CDR Rule

You should note that your byproduct may have a separate commercial purpose even if you do not intentionally commercialize it. You may be sending the byproduct, which you consider a waste, to another person or site. If that other person or site uses your byproduct in

such a manner that it has a commercial purpose, then you are potentially required to report the byproduct for purposes of CDR (assuming you meet other reporting requirements such as production volume and the chemical substance is not otherwise exempted from reporting).

It is important to properly identify your byproduct chemical substance. Such chemical substances are often chemical combinations of variable or complex composition, and as such can be identified as a single chemical substance that represents the process stream. Complex chemical substances are listed on the TSCA Inventory as chemical substances of Unknown or Variable composition, Complex reaction products and Biological materials ("UVCB" chemical substances). In such cases, it is not necessary to determine the volumes of the individual chemical substances that comprise the UVCB chemical substance; rather, the single UVCB chemical substance name is proper. Further information on UVCB chemical substances is available on the EPA website at http://www.epa.gov/oppt/newchems/pubs/uvcb.txt.

For more information on byproduct reporting, including naming byproducts, see the examples below, and the Q&A document: *Recycling and the TSCA Chemical Substance Inventory-Premanufacture Notification and Chemical Data Reporting Requirements* available in the docket and also at *http://www.epa.gov/cdr* or *http://www.epa.gov/iur*.

Example 2-1. Efforts to comply with other Federal, state, or municipal rules, such as the use of pollution control devices, may also result in the manufacture of reportable chemical substances. For example, an energy company may operate a sulfur recovery plant as a pollution control device to minimize sulfur oxides emissions. The sulfur recovery plant generates elemental sulfur, a chemically different chemical substance from sulfur oxides. The sulfur therefore has been manufactured for a commercial purpose because it is a chemical substance formed from the byproduct sulfur oxides emissions, which is an activity conducted for the commercial purpose of operating a power plant. If the elemental sulfur is then *used* for a commercial purpose (other than those listed in 40 CFR 720.30(g)), the energy company may incur reporting obligations under the CDR rule for the byproduct sulfur oxides as well as for the sulfur.

A byproduct that is manufactured for a commercial purpose and, after manufacture, is used for a separate commercial purpose, may be excluded from reporting under CDR by 40 CFR 720.30(g)(2). 40 CFR 720.30(g)(2) states that if the byproduct's only commercial purpose is for use by public or private organizations that dispose of it as a waste, including in a landfill or for enriching soil, the byproduct is exempt from being reported under CDR. Examples 2-2 and 2-3 describe manufacturers that may be subject to RCRA requirements and how the 720.30(g)(2) byproduct exemption applies in these circumstances.

Example 2-2. Company ABC manufactures a byproduct. The byproduct does not qualify as a RCRA hazardous waste and does not meet the requirements of any exemption in 40 CFR 261.4. The manufacturer wishes to dispose of the byproduct, which can be used to enrich soil (e.g., to change the soil properties in a desirable way like serving as a filler to make the soil less dense or enhancing moisture retention). Company ABC provides this byproduct to another person who then disposes of it as a waste by spreading it on land to enrich the soil. If this disposal of the byproduct is the byproduct's <u>sole</u> commercial use, the byproduct qualifies for the CDR reporting exemption under 40 CFR 720.30(g)(2). Company ABC is not subject to reporting under the CDR, respecting the manufacture of its byproduct.

Example 2-3. Company ABC manufactures Byproduct X, which is not considered a RCRA solid waste because it serves as a feedstock to produce a zinc fertilizer and meets the requirements of 40 CFR 261.4(a)(20) (i.e., it is a hazardous secondary material used to make zinc fertilizers). The zinc fertilizer that is produced meets the requirements of 40 CFR 261.4(a)(21). Byproduct X is not being disposed of as a waste and therefore does not meet the CDR byproduct exemption at 40 CFR 720.30(g)(2). Company ABC is subject to reporting under the CDR, respecting the manufacture of its byproduct.

If your byproduct is manufactured (including imported) for commercial purposes, and it is subsequently put to use for a commercial purpose other than those listed in 40 CFR 720.30(g), you may be required to report this chemical substance and should evaluate Question B on Figure 2-1 (see also Section 2.1.2).

Impurities

An impurity is a chemical substance which is unintentionally present with another chemical substance (40 CFR 704.3). Although impurities may be produced for the purpose of obtaining a commercial advantage because they are part of the manufacture of a chemical product for a commercial purpose, they are not manufactured for distribution in commerce as chemical substances per se and have no commercial purpose separate from the chemical substance, mixture, or article of which they are a part. Thus a chemical substance that is manufactured or imported solely as an impurity is not subject to the CDR reporting requirements. See 40 CFR 720.30(h)(1).

2.1.2 Is Your Chemical Substance on the TSCA Inventory? (Question B)

The following subsections provide information to help you determine whether your chemical substance is listed on the TSCA Inventory.

2.1.2.1 What is the TSCA Inventory?

Authorized by section 8(b) of TSCA, the TSCA Inventory is a list of chemical substances manufactured (including imported) for commercial purposes in the United States. The TSCA Inventory was compiled originally in the late 1970s; chemical substances have been added continually through EPA's New Chemicals Program. EPA keeps a Master Inventory File, which

is the authoritative list of all the chemical substances reported to EPA for inclusion on the TSCA Inventory. Free access to the non-confidential portion of the TSCA Inventory file, commonly referred to as the "public TSCA Inventory," is available at

http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/index.html. The public TSCA Inventory contains chemical substances for which the identity is not considered confidential and the generic identification of chemical substances for which the specific identity has been claimed as TSCA confidential business information (CBI). The TSCA Inventory status of chemical substances can also be determined from EPA's Substance Registry Services (SRS), available at http://www.epa.gov/srs. See Section 2.1.3 for information about chemical substances that may be potentially exempt from reporting.

2.1.2.2 <u>How Do You Determine Whether a Chemical Substance is Listed on the TSCA Chemical Substance Inventory?</u>

The following methods may help you determine whether your chemical substance is listed on the TSCA Inventory:

- Locate the chemical substance on the public section of the TSCA Inventory (see Chapter 7 for information on obtaining the TSCA Inventory);
- Search SRS for information on the TSCA Inventory listing status;
- Search company records to determine whether the chemical substance was previously reported to EPA under CDR;
- Search company records for a commenced PMN or other communication with EPA that confirmed the chemical substance was on the TSCA Inventory; and
- Search company records for a Notice of Commencement of manufacture or import for a PMN substance that was submitted to EPA.

Several commercial databases have incorporated the public section of the TSCA Inventory (which excludes chemical substances with confidential identities) and can indicate whether a given chemical substance is listed on that portion of the TSCA Inventory. Because these databases are not generated or reviewed by EPA, the Agency cannot guarantee the accuracy of the information. If you use a commercial database that fails to include all reportable

chemical substances and, as a result, you fail to report information for these chemical substances, you may be in violation of TSCA (40 CFR 711.1(c)).

The CDR reporting related to mixtures and UVCB substances (chemical substances that are of Unknown or Variable composition, Complex reaction products, or Biological materials) requires careful consideration by submitters. Whenever a submitter has manufactured or imported a combination of several chemicals, the

Hydrates are mixtures of the corresponding non-hydrated chemical substance and water and, therefore, are not listed on the TSCA Inventory. Note that you may be required to report the corresponding non-hydrated component chemical substance. Adjust the reported production volume to exclude water.

submitter must first determine whether for TSCA purposes it is a mixture or a single UVCB chemical substance. A mixture is any combination of chemicals that meets the statutory definition of "mixture" at TSCA section 3(8). (See Appendix A). Mixtures are not reported to CDR – rather the mixture's component chemical substances, the chemical substances that make it up, are potentially subject to reporting, as described below. A UVCB substance is an indefinite combination of chemicals, that does not meet the statutory definition of "mixture" at TSCA section 3(8), whose number and individual identities and/or composition are not precisely or completely known. A UVCB combination of chemicals is subject to reporting under CDR and is considered a single chemical substance. Generally, the determination of whether a combination of chemicals is a mixture or a UVCB substance is made by the time that substance has been commercialized and, as such, would be clear early in the CDR process. The following discussion is presented with this generality in mind.

- If you imported a mixture, you will need to report the individual chemical components of the mixture to the extent that your total volume for the individual chemical substance triggers reporting (i.e., generally, to the extent that such volume reaches the 25,000 lb threshold).
- If you domestically manufactured a mixture, you will need to determine whether any chemical substances were formed from a chemical reaction that occurred as part of manufacturing the mixture. If a chemical reaction has occurred, a chemical substance formed from the chemical reaction may be subject to reporting, based on its production volume or the applicability of other exemptions. If a chemical reaction has not occurred, you have not manufactured any reportable chemical substances in the production of the mixture. In such a case, the production of the mixture has not triggered any CDR reporting requirement.
- Domestic manufacturers and importers should also consider whether the combination of the chemicals they have domestically manufactured or imported (respectively) should be chemically identified for TSCA purposes as a single UVCB chemical substance instead of a mixture.

EPA has developed two Inventory nomenclature guidance documents related to the mixture-UVCB determination titled: (1) *Toxic Substances Control Act Inventory Representation For Chemical Substances Of Unknown Or Variable Composition, Complex Reaction Products And Biological Materials: UVCB Substances.* Available on-line at:

http://www.epa.gov/oppt/newchems/pubs/uvcb.txt; (2) Toxic Substances Control Act Inventory Representation For Combinations Of Two Or More Substances: Complex Reaction Products. Available on-line at: http://www.epa.gov/oppt/newchems/pubs/rxnprods.txt.

Example 2-4. Company X manufactures 100,000 lb of magnesium sulfate heptahydrate, which is considered under TSCA to be a mixture of magnesium sulfate and water. The non-hydrous portion of the magnesium sulfate heptahydrate mixture, magnesium sulfate, constitutes 48,838 lb, which exceeds the 25,000 lb threshold. Therefore, Company X is required to report 48,838 lb of magnesium sulfate under the CDR rule.

In the event that you are not able to find your chemical substance on the TSCA Inventory, contact the TSCA Hotline at (202) 554-1404 for assistance to determine whether reporting is required. If your chemical substance is on the TSCA Inventory, you should review Question C on Figure 2-1 (Section 2.1.3) to determine whether you qualify for any other reporting exemptions.

2.1.3 Is Your Chemical Substance Potentially Exempt from Reporting? (Question C)

Five groups or categories of chemical substances, though included on the TSCA Inventory, are largely exempt from reporting under the CDR rule. These groups are polymers, microorganisms, certain forms of natural gas, naturally occurring chemical substances, and water. Sections 2.1.3.1 through 2.1.3.5 provide more details for each group of chemical substances. You may also refer to 40 CFR 711.6(a) for precise definitions of these groups. Note, however, that these exempted chemical substances (except for chemical substances that are exempted because they are naturally occurring) become subject to reporting again if they are the subject of any of certain TSCA actions. Section 2.1.4 provides details for when the exemption does not apply. Note that the act of importing does not change the identity of a chemical substance or group. For example, a naturally occurring chemical substance remains naturally occurring when it is imported.

To help identify chemical substances that are exempt from reporting under the CDR rule, EPA has labeled most of these chemical substances on the TSCA Inventory with the letters "XU." In the SRS, most of these chemical substances are identified as being "TSCA IUR Exempt" under the Statutes/Regulations heading. Note that you

Polymers, microorganisms, certain forms of natural gas, and water are not exempted from reporting when they are the subject of any of certain TSCA actions. See Section 2.1.4 for more details

are advised to use both these indicators only as a guide; submitters are responsible for verifying exemptions. Also note that if a chemical substance marked with "XU" or identified as being "TSCA IUR Exempt" subsequently becomes the subject of any of certain TSCA actions, the chemical substance is subject to the reporting requirements notwithstanding the "XU" or "TSCA IUR Exempt" indicator. If a chemical substance is not marked "XU" or "TSCA IUR Exempt," and 40 CFR 711.6 does not provide sufficient guidance to determine whether the chemical substance is exempt, contact the TSCA Hotline at (202) 554-1404 for assistance. Due to the change from IUR to CDR, EPA anticipates that the "TSCA IUR Exempt" identification flag will change to "TSCA CDR Exempt."

If your chemical substance <u>is not</u> in one of the following five categories of chemical substances, it is a CDR reportable chemical substance and you should review STEP II of the reporting requirements (Section 2.2, Figure 2-3). If your chemical substance is in one of the five categories, you should review Question D (Section 2.1.4).

2.1.3.1 Polymers

Polymers are typically exempt from CDR reporting. The CDR definition of polymer is sufficiently broad to include virtually all those chemical substances that are generally considered

polymers. The definition also includes siloxanes and silicones, silsesquioxanes, rubber, lignin, polysaccharides (such as starch and gums), proteins (such as gelatin and hemoglobin), and enzymes. However, for chemical substances that result from hydrolysis, depolymerization, or chemical modification of polymers, regardless of the extent of these processes, if the final products are no longer polymeric (e.g., a mixture of amino acids that is the result of hydrolysis of a polypeptide), the chemical substances are not considered to be polymers and must be reported if not otherwise excluded (40 CFR 711.6(a)(1)). See Appendix A or 40 CFR 711.6(a)(1) for the specific definition of polymers for purposes of the CDR rule.

2.1.3.2 Microorganisms

Microorganisms are exempt from CDR reporting. A microorganism is any combination of chemical substances that is a living organism and that meets the definition of "microorganism" at 40 CFR 725.3. Any chemical substance produced from a living microorganism is reportable unless otherwise excluded (40 CFR 711.6(a)(2)).

2.1.3.3 Certain Forms of Natural Gas

Table 2-1 identifies certain forms of natural gas that are exempt from CDR reporting (see 40 CFR 711.6(a)(4)).

Table 2-1. Chemical Substances Covered by the	e Exemption for Certain Forms of Natural
Gas	

Form of Natural Gas	CAS Registry Number
Natural gas (petroleum), raw liquid mix	64741-48-6
Natural gas condensates	68919-39-1
Gasoline natural	8006-61-9
Gasoline (natural gas), natural	68425-31-0
Natural gas	8006-14-2
Natural gas, dried	68410-63-9

2.1.3.4 Naturally Occurring Substances

Chemical substances that are described in 40 CFR 710.4(b) of the TSCA Inventory Reporting Regulations are considered "naturally occurring." Such chemical substances are not reportable under CDR if the chemical substance is produced solely by means described in section 710.4(b). Examples of chemical substances that are typically naturally occurring materials are raw agricultural commodities, water, air, crude oil, rocks, ores, and minerals. However, because the section 710.4(b) exemption is process-specific rather than chemical-specific, if you manufacture any chemical substance in a manner other than just as described in section 710.4(b), you are required to report it unless it is otherwise exempted (40 CFR 711.6(a)(3)). For this reason, minerals and certain agricultural products are sometimes considered not to be naturally occurring because of the means by which they are produced or isolated. Whether a chemical substance is considered "naturally occurring" depends on the manner in which it is produced and

isolated. Table 2-2 presents some examples of evaluating chemical substances for the naturally occurring chemical substance exemption.

Table 2-2. Examples of Evaluating Chemical Substances for the Naturally Occurring Exemption (40 CFR 711.6(a)(3))

- Calcined clays formed by heating naturally occurring clay typically must be reported because such heating is generally not done solely to remove water; a chemical change is primarily intended.
- Chemical substances that are removed/isolated from nature by physical or natural means are typically considered to be "naturally occurring." Using water to extract a chemical substance from a naturally occurring chemical substance is considered a natural means of removal. However, using any other solvent is not considered a natural means of removal and would result in the extracted chemical substance being potentially subject to reporting.
- In an electrostatic separation, small particles are removed from a liquid or gas stream. The process is essentially analogous to gravitational separation. Chemical substances that are processed by this means are considered to be "naturally occurring."
- Mined coal is typically included in the naturally occurring chemical substances category.
- Ammonia and nitric acid are generally produced by chemical synthesis and are, therefore, generally not considered to be "naturally occurring."

2.1.3.5 <u>Water</u>

Water, including both naturally occurring water and manufactured water (CASRN 7732-18-5), is exempt from CDR reporting. While naturally occurring water has always been exempt, the exemption for manufactured water is in effect for 2012 reporting.

2.1.4 Is Your Chemical Substance Ineligible for an Exemption Due to Its TSCA Regulatory or Enforceable Consent Agreement Status? (Question D)

With the exception of naturally occurring chemical substances, chemical substances must be reported if they are the subject of any of the following (even if the chemical substance is otherwise exempt):

- A rule proposed or promulgated under Sections 4, 5(a)(2),5(b)(4), or 6 of TSCA;
- An order issued under TSCA Sections 5(e) or 5(f);
- Relief that has been granted under a civil action under TSCA Sections 5 or 7; or
- An enforceable consent agreement (ECA) under 40 CFR Part 790. (40 CFR 711.6)

Example 2-5. Company A manufactured 35,000 lb of Chemical X, a polymer, in 2010. Chemical X is part of an enforceable consent agreement (ECA) between EPA and Company A, in which Company A is performing additional testing on Chemical X. Although Chemical X is a polymer that normally would be exempt from CDR reporting, it is part of an ECA and, thus, Company A is required to report Chemical X for the 2012 CDR. Additionally, Company B manufactures 40,000 lb of Chemical X in 2011. Although Company B is not a party to the ECA, Company B is also required to report Chemical X for the 2012 CDR.

Appendix B provides assistance in determining which chemical substances are included in these groups. However, if you are unable to determine whether the specific chemical substance you manufacture (including import) is listed in Appendix B, you can contact the TSCA Hotline at (202) 554-1404 or tsca-hotline@epa.gov. If you have determined that your chemical substance is a CDR reportable chemical substance, evaluate Step II on Figure 2-3 to determine whether you are a manufacturer (including importer) who is required to report.

2.2 Step II: Are You a Manufacturer Who Is Required to Report?

If you determined from Step I that you manufacture (including import) a CDR reportable chemical substance, Figure 2-3 presents a decision logic diagram that may help you determine whether you are a manufacturer (including importer) who must report. The following subsections explain each question in greater detail.

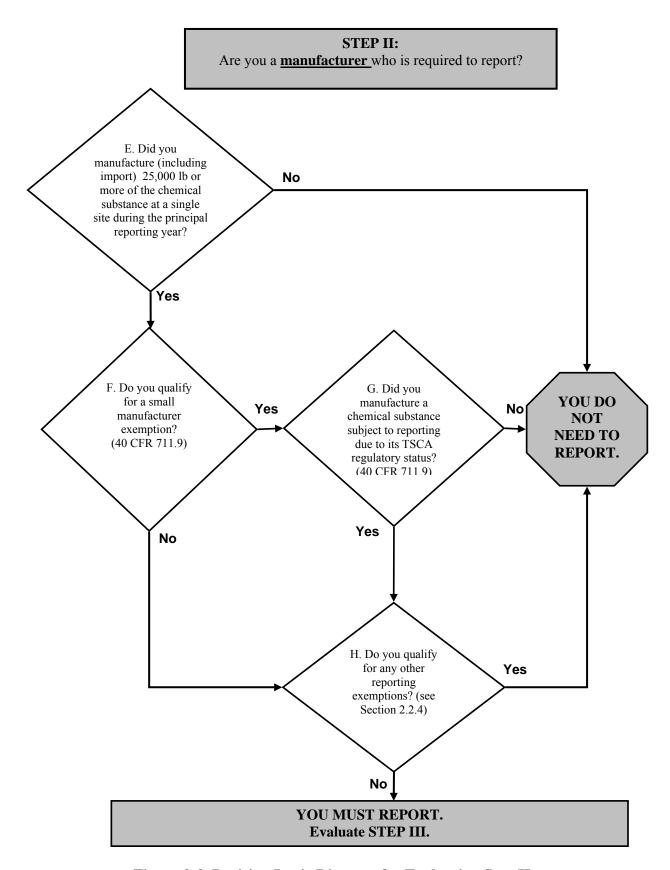


Figure 2-3. Decision Logic Diagram for Evaluating Step II

2.2.1 Did You Manufacture (Including Import) 25,000 lb or More of the Chemical Substance at a Single Site During the Principal Reporting Year? (Question E)

You are subject to CDR reporting if you manufactured (including imported) a chemical substance in production volumes of 25,000 lb or greater at any single site you owned or controlled during the principal reporting year. For the 2012 CDR, the principal reporting year is 2011. If you both domestically manufacture and import the same chemical substance, add the domestically manufactured and imported volumes at each site for calendar year 2011 to determine whether the amount of the chemical substance meets or exceeds the 25,000 lb threshold. Do not subtract the volume of chemical substance directly exported. The site at which a chemical substance is imported is described in 40 CFR 711.3 and 4.4.1 of this document.

Table 2-3 provides examples of how the production volume reporting requirement applies.

Table 2-3. Production Volume Threshold Examples

Description	2011 Reporting Requirement
Company A, which has only one manufacturing site, manufactured 26,000 lb of Chemical X, which is not exempt from reporting, at its site in 2011.	Company A must report for Chemical X because it manufactured 25,000 lb or more of Chemical X at its sole manufacturing site in 2011.
Company B, which has only one manufacturing site, manufactured 26,000 lb of Chemical X at its site in 2009 and 20,000 lb of Chemical X in 2011.	Company B is not required to report for Chemical X because it manufactured less than 25,000 lb of Chemical X in 2011.
Company C has two manufacturing sites for Chemical X. In 2011, Site 1 manufactured 13,000 lb of Chemical X and Site 2 manufactured 15,000 lb of Chemical X.	Company C is not required to report for Chemical X at either site because 2011 production was less than 25,000 lb at each site.
Company D has two manufacturing sites for Chemical X. In 2011, Site 1 manufactured 10,000 lb of Chemical X and Site 2 manufactured 150,000 lb of Chemical X.	Company D must report for Chemical X at Site 2 because at this location production was 25,000 lb or more in 2011. Company D is not required to report for Chemical X for Site 1 because 2011 production was less than 25,000 lb.
Company E has one site where it imports and manufactures Chemical X. Company E manufactured 21,000 lb of Chemical X and imported 5,000 lb of Chemical X in 2011.	Company E must report for Chemical X because the aggregate volume produced at and imported by its site in 2011 was 25,000 lb or more.
Company F has one site where it manufactured 30,000 lb of Chemical X in 2011. The company directly exported 25,000 lb of Chemical X and sold the remaining 5,000 lb in the United States.	Company F must report for Chemical X because it manufactured over 25,000 lb in 2011. The amount directly exported does not affect the determination of the need to report.

Meeting the 25,000 lb Threshold for Chemical Substances in Mixtures

In many cases, reportable chemical substances are components of a mixture. Although mixtures themselves are not reportable, the 25,000 lb threshold is applicable for each CDR

reportable chemical substance comprising a mixture; therefore, the chemical substances making up a mixture may individually be reportable. If you manufacture chemical substances as part of a mixture, you would determine your CDR reporting requirements by following Questions A-E (Sections 2.1.1 through 2.2.1) for each chemical substance in the mixture. As described in section 2.1.2.2, hydrates are mixtures of the corresponding non-hydrated chemical substance and water.

<u>UVCB Chemical Substances</u>: Note that, under TSCA, a complex combination of chemical substances is in most cases considered to be a single UVCB chemical substance. In such cases, reporting is triggered based on the volume of the UVCB chemical substance manufactured (that is, the whole entity), and not based on the volume of individual chemical components which may be present in the UVCB chemical substance. See Section 2.1.1.2 for further discussion of UVCB chemical substances.

Imported Mixtures: As an importer (see 40 CFR 704.3) of a mixture of chemical substances listed on the TSCA Inventory, you must determine whether the individual component chemical substances of a mixture are reportable. To do so, you would determine whether the annual aggregated volume of a particular reportable chemical substance was 25,000 lb or more at the site that controls the importation. The 25,000 lb threshold is applicable for each CDR reportable chemical substance in a mixture. You can determine the production volume for each chemical substance in the mixture that you imported during a particular calendar year by using the weight and percent composition of the chemical substance in the mixture. For each imported chemical substance, you would aggregate the volume of the chemical substance in all annual imports associated with the reporting site as defined in 40 CFR 711.3 and add the amount of the chemical substance domestically manufactured at the same site, if any, to determine whether the total volume of the chemical manufactured (including imported) meets the 25,000 lb threshold. Note that a chemical substance that is imported solely in small quantities for research and development, as an impurity, or as part of an article or in a manner described in 40 CFR 720.30(g) and (h) is not subject to the CDR reporting requirements (40 CFR 711.10).

If you have determined that you are manufacturing a CDR reportable chemical substance and meet the reporting threshold of 25,000 lb, evaluate Question F to determine whether you qualify for a small manufacturer exemption.

2.2.2 Do You Qualify For a Small Manufacturer Exemption? (Question F)

You qualify as a small manufacturer if you meet either of the following criteria (40 CFR 704.3):

- Your total sales during 2011, combined with those of your parent company, domestic or foreign (if any), are less than \$4 million regardless of annual production volume.
- Your total sales during 2011, combined with those of your parent company, domestic or foreign (if any), are less than \$40 million and your annual production volume of that chemical substance does not exceed 100,000 lb at any individual plant site. If the annual production volume of the chemical substance at any of your sites is more than 100,000 lb, you are required to report only for those sites. Note that under this criterion, it is possible to qualify as

a small manufacturer with respect to some chemical substances and not others or with respect to some sites and not others.

For purposes of the definition of a small manufacturer, total annual sales include all sales of the company, not just the total sales of a given chemical substance.

If you have determined that you are a small manufacturer of a CDR reportable chemical substance, evaluate Question G (described in the next section) to determine whether you are exempt from any reporting.

If you do not qualify for a small manufacturer exemption, evaluate Question H in Figure 2-3 (further described in Section 2.2.4) to determine whether you qualify for any other reporting exemptions.

2.2.3 Did You Manufacture a Chemical Substance Subject to Reporting Due to Its TSCA Regulatory Status? (Question G)

Small manufacturers are exempt from CDR requirements unless they manufacture (including import) a chemical substance that is the subject of a rule proposed or promulgated under sections 4, 5(b)(4), or 6 of TSCA, or is the subject of an order in effect under section 5(e) of TSCA, or is the subject of relief that has been granted under a civil action under sections 5 or 7 of TSCA (40 CFR 711.9) and (TSCA § 8(a)(3)(A)(ii)). Appendix B provides assistance with determining which chemical substances fall into these groups.

Table 2-4 provides examples of how the small manufacturing exemption applies.

Table 2-4. Small Manufacturer Exemption Examples (40 CFR 711.9)

Description	2012 Reporting Requirement
Site 1, which is one of several sites owned by Company A, had a production volume of 120,000 lb of Chemical X in 2011. The total annual sales of Company A (all sites combined) were \$1.25 million in 2011.	Site 1 is not required to report for Chemical X because combined sales in 2011 did not exceed \$4 million.
Site 2, which is one of several sites owned by Company B, had a production volume of 90,000 lb of Chemical X in 2011. The total annual sales of Company B (all sites combined) were \$20 million in 2011. None of the other sites produce Chemical X.	Site 2 is not required to report for Chemical X because annual production volume of that chemical substance did not exceed 100,000 lb at any of Company B's sites, and Company B had total annual sales of less than \$40 million.
Site 3, which is one of several sites owned by Company C, had a production volume of 200,000 lb of Chemical X in 2011. Site 4, another site owned by Company C, had a production volume of 75,000 lb of Chemical X in 2011. The total annual sales of Company C (all sites combined) were \$30 million in 2011.	Company C must report for Chemical X at Site 3 because annual production volume at Site 3 exceeded 100,000 lb. Company C is not required to report for Chemical X at Site 4 because annual production volume at site 4 did not exceed 100,000 lb and total annual sales was less than \$40 million.
Site 5, which is one of several sites owned by Company D, had a production volume of 50,000 lb of Chemical X in 2011. The total annual sales of Company D (all sites combined) were \$100 million in 2011.	Company D must report for Chemical X at Site 5 because total annual sales in 2011 exceeded \$40 million and the production volume of Chemical X at Site 5 exceeded 25,000 lb.
Site 6, which is one of several sites owned by Company E, had a production volume of 120,000 lb of Chemical X in 2011. The total annual sales of Company E (all sites combined) were \$1.25 million in 2011. Chemical X is subject to a section 4 test rule.	Site 6 is required to report for Chemical X. Even though combined sales are less than \$4 million, this chemical substance is subject to a test rule and therefore must be reported.

2.2.4 Do You Qualify for Any Other Reporting Exemptions? (Question H)

If you manufacture a reportable chemical substance solely under the following circumstances, you are not required to report for those chemical substances under the CDR rule:

- The chemical substance is manufactured solely in small quantities for research and development (40 CFR 711.10(a)).
- The chemical substance is imported as part of an article (40 CFR 711.10(b)). An article is defined in 40 CFR 704.3 as "a manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end-use function(s) dependent in whole or in part upon its shape or design during end use, and (3) which has either no change of chemical composition during its end use or only those changes resulting in composition which have no commercial purpose separate from that of the article, and that result from a chemical reaction that occurs upon end use of other chemical substances, mixtures, or articles; except that fluids and particles are not considered articles regardless of shape or design." EPA considers imported items articles if they are manufactured in a specific shape or design for a particular end-use application and this design is maintained as an essential feature in the finished product. Thus, EPA views materials such as metal or plastic sheets, wire, coated fabric, rolled carpet, sheets of plywood, and other similar materials as articles, even if, for example, subsequent to import they are rolled or drawn thinner, cut, printed, laminated, or

thermoformed, provided they meet the above definition. Chemical substances that are part of such articles are not subject to reporting under the CDR rule. If the shape of an item does not serve a function with respect to the item's end use (e.g., it is imported in a particular shape for the sake of shipping convenience) then it would not be considered an article. Thus, chemical substances that are part of items not considered by EPA as articles, such as metal ingots, billets, and blooms are subject to reporting under the CDR rule.

- The chemical substance is manufactured as an impurity, a non-isolated intermediate, or under any of the other circumstances identified in 40 CFR 720.30(g) and (h). (40 CFR 711.10(c))
- If between February 1, 2011, and January 31, 2012, you submitted all of the information required by the CDR rule in response to another rule promulgated under section 8(a) of TSCA (such as the Preliminary Assessment Information Reporting (PAIR) rule at 40 CFR Part 717, Subpart B), you are not required to report the same information under CDR for the same chemical substance during 2012 (40 CFR 711.22(a)).

Table 2-5 presents examples of these circumstances.

Table 2-5. Examples of Manufacturing/Importing Activities Under Circumstances Which Do/Do Not Require Reporting

Description	2012 Reporting Requirement
Company A manufactures 400,000 lb of a chemical intermediate called Chemical X during the production of a polymer. Chemical X is manufactured in Reactor 1 and is subsequently entirely consumed when reacted with other chemicals. Chemical X never leaves Reactor 1, except for sampling purposes.	Company A does not need to report Chemical X because it is considered to be a non-isolated intermediate and is therefore fully exempt.
Company B manufactures 400,000 lb of a chemical intermediate called Chemical Y during the production of a polymer. Chemical Y is manufactured in Reactor 1 and transferred to a storage tank until needed. Chemical Y is then transferred to Reactor 2 where it is mixed with other reactants to form the desired polymer, at which point Chemical Y is destroyed. Chemical Y never leaves this production site.	Company B is required to report Chemical Y. When Chemical Y was transferred to the storage tank, it was isolated, and, thus, does not meet the definition for "non-isolated intermediate."
Company C imports 10 million lb of Chemical Z in the form of thin sheets. Company C cuts these sheets into the desired size and shape, which are sold to consumers.	Company C is not required to report Chemical Z because it is considered to be an article and therefore exempt from reporting.
Company D imports 10 million lb of Chemical W in the form of pellets. Company D subsequently melts and molds Chemical W into the desired shape, which is sold directly to consumers.	Company D is required to report Chemical W because it imported pellets whose shape or design when imported was not related to their end use.
Company D domestically manufactures 10 million lb of Chemical W. Company D subsequently sells Chemical W to Company E in the form of pellets. Company E melts and molds the pellets.	Company D is required to report as the manufacturer of Chemical W. Company E is not required to report because it is neither manufacturing nor importing Chemical W.

If you manufacture a CDR reportable chemical substance in quantities greater than 25,000 lb and do not qualify for any reporting exemptions, you should evaluate Step III,

described in the following section, to determine what information you must report for your chemical substance.

2.3 Step III: What Information Must You Report?

Once you determine from Steps I and II that you are a manufacturer (including importer) of a CDR reportable chemical substance and are required to report, this section will help you determine what information you must report.

You are required to report the information described in 40 CFR 711.15(b)(1), (b)(2), and (b)(3) in Parts I and II of Form U. Basic company and site identification information is required by 40 CFR 711.15(b)(1) and (b)(2). Chemical identification and information pertaining to the manufacture (including import) of chemical substances is required by 40 CFR 710.15(b)(3). Note that the basic company and site information is reported once per site while the manufacturing information is reported separately for each reportable chemical substance at the site.

Figure 2-4 presents a decision logic diagram to assist you in determining the CDR information you must report. The following subsections explain each question in greater detail.

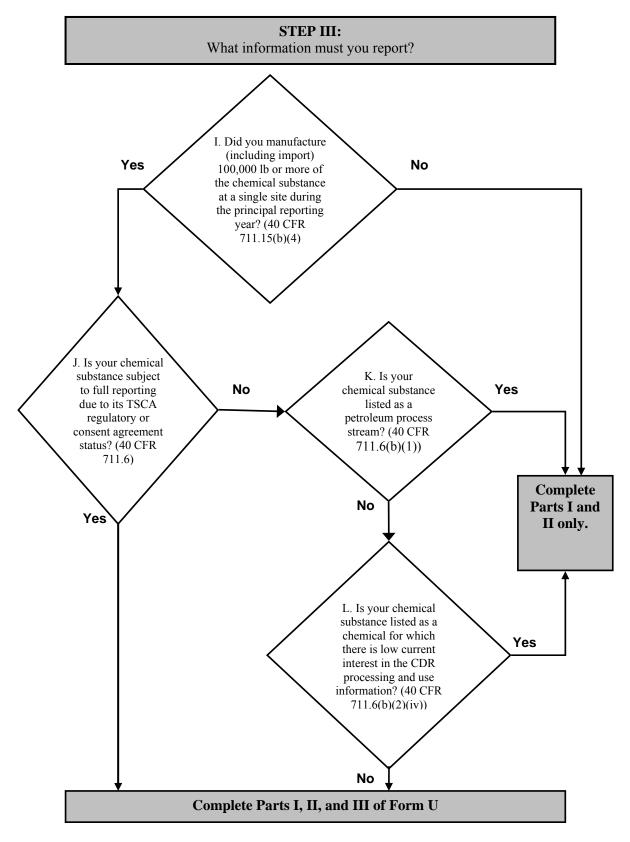


Figure 2-4. Decision Logic Diagram for Evaluating Step III

2.3.1 Did You Manufacture (Including Import) 100,000 lb or More of the Chemical Substance During the Principal Reporting Year? (Question I)

If you manufacture (including import) 100,000 lb or more of a reportable chemical substance at a single site in calendar year 2011, you must also report the information described in 40 CFR 711.15(b)(4) in Part III of Form U for that chemical substance. This information describes the industrial processing and use, and consumer and commercial uses of the chemical substance. Table 2-6 provides some examples of when industrial processing and use information and commercial and consumer use information must be reported.

If you have determined that you are manufacturing a CDR reportable chemical substance that meets the reporting threshold of 100,000 lb, evaluate Question J to determine whether you qualify for any partial exemptions. Manufacturers (including importers) of partially exempt chemical substances listed in 40 CFR 711.6(b) are not required to report processing and use information described in 40 CFR 711.15(b)(4) for those chemical substances, but are otherwise required to report the information requested on basic identity and manufacturing information described in 40 CFR 711.15(b)(2) and (3) for those chemical substances.

Table 2-6. Examples of Reporting Requirements for Information Described in 40 CFR 711.15(b)(4)

Description	2012 Reporting Requirement
Company A, which has only one manufacturing site, manufactured 100,000 lb of Chemical X, which is not exempt from reporting, at its site in 2011.	Company A must complete Parts I, II, and III for Chemical X because it manufactured 100,000 lb or more of Chemical X in 2011.
Company B, which has only one manufacturing site, manufactured 100,000 lb of Chemical X at its site in 2010 and 50,000 pounds of Chemical X in 2011.	Company B is not required to complete Part III for Chemical X because it manufactured less than 100,000 lb of Chemical X in 2011. Company B must complete Parts I and II for Chemical X.
Company C has two manufacturing sites for Chemical X. In 2011, Site 1 manufactured 40,000 lb of Chemical X and Site 2 manufactured 60,000 pounds of Chemical X.	Company C is not required to complete Part III for Chemical X at either site because 2011 production was less than 100,000 lb at each site. Company C should complete Parts I and II for Chemical X at each site.
Company D has three manufacturing sites for Chemical X. In 2011, Site 1 manufactured 10,000 lb of Chemical X, Site 2 manufactured 30,000 lb of Chemical X, and Site 3 manufactured 350,000 lb of Chemical X.	Company D is not required to report for Chemical X for Site 1 because 2011 production was less than 25,000 lb. Company D must complete Parts I and II for Chemical X at Site 2 because at this location production was 25,000 lb or more in 2011. Company D must complete Parts I, II, and III for Chemical X at Site 3 because 2011 production was 100,000 lb or more at this location.
Company E has one site where it imports and manufactures Chemical X. Company E manufactured 70,000 lb of Chemical X and imported 400,000 lb of Chemical X in 2011.	Company E must complete Parts I, II, and III for Chemical X because the combined amount manufactured and imported in 2011 was 100,000 lb or more.
In 2011, Company F manufactured 300,000 lb of a liquid that contains Chemical X at 50% by weight. Company F manufactured Chemical X via a chemical reaction; it did not combine existing chemicals to form a mixture.	Company F must complete Parts I, II, and III for Chemical X, because it manufactured 100,000 or more lb (i.e. 150,000 lb) of Chemical X in 2011.

2.3.2 Is Your Chemical Substance Subject to Full Reporting due to Its TSCA Regulatory or Consent Agreement Status? (Question J)

Chemical substances that are the subject of proposed or promulgated TSCA rules and/or orders or chemical substances that are part of certain enforceable consent agreements are not afforded a partial exemption (40 CFR 711.6). See Section 2.1.4 for a description of the chemical substances that meet these criteria. If you manufacture (including import) these chemical substances at quantities of 100,000 lb or more, you must report all CDR information (i.e., manufacturing, processing, and use information) regardless of any exemptions for which the chemical substance would otherwise qualify. See Appendix B for additional information about these chemical substances.

If your chemical substance is not part of a regulatory action or consent agreement, continue to evaluate Questions K and L as seen on Figure 2-4 and also described further in the following sections to determine whether your chemical substance is partially exempt.

2.3.3 Is Your Chemical Substance Listed as a Petroleum Process Stream? (Question K)

Manufacturers (including importers) of certain petroleum process streams, regardless of the production volume, do not need to complete Part III of Form U for these chemical substances. The chemical substances termed "petroleum process streams" for purposes of CDR that are partially exempt from CDR requirements are those listed by CAS Registry Number at 40 CFR 711.6(b)(1). Appendix C lists the exempt petroleum process streams.

2.3.4 Is Your Chemical Substance Listed as a Chemical for Which There is Low Current Interest in the CDR Processing and Use Information? (Question L)

EPA created a partial exemption for certain chemical substances for which EPA has identified a low current interest in their processing and use information. The specific chemical substances listed at 40 CFR 711.6(b)(2)(iv) are also listed in Appendix C.

If your CDR reportable chemical substance manufactured (including imported) in quantities of 100,000 lb or more is partially exempt, you are required to report only Parts I and II of the reporting form. Otherwise, you are required to report Parts I, II, and III of the reporting form, covering manufacturing, processing, and use information for your CDR reportable chemical substance. Chapter 3 will help you determine when you must report this information to EPA.

3.0 When You Must Report

For the 2012 reporting cycle, you are required to report information (pertaining to calendar year 2011 and 2010) during the 2012 submission period. The 2012 submission period begins February 1, 2012 and ends June 30, 2012 (40 CFR 711.20).

Your submissions for the 2012 reporting cycle must be submitted to EPA via the Internet and through EPA's Central Data Exchange (CDX) no later than June 30, 2012. You should note that registration with CDX is required prior to accessing e-CDRweb to submit your CDR information (40 CFR 711.35). (See Chapter 6 for more information on how to report your data using e-CDRweb and CDX). If you are required to report, failure to file your report during this period is a violation of TSCA sections 8(a) and 15 and may subject you to penalties (40 CFR 711.1(c)).

4.0 Instructions for Completing CDR Form U

This chapter will help you complete the CDR Form U. Section 4.1 describes how to certify your submission. Section 4.2 discusses the reporting standard – the effort required to comply with the CDR rule. Sections 4.3 through 4.8 provide guidance to help you complete each required section of Form U.

You are required to use the CDR reporting tool, e-CDRweb, to submit information for each CDR reportable chemical substance. If you are reporting information for more than one chemical substance at your site, you must report information for all reportable chemical substances on one Form U. However, you must submit a separate Form U for each site for which you are required to report.

The certification statement and Part I of Form U are completed once per reporting site. Parts II and III are completed for each reportable chemical substance at the site. Part IV is reserved for the special case of a joint submission, and is completed by the secondary submitter.

Note: Items such as the validation page and the SRS search page will appear in separate windows. Ensure that your pop-up blocker is disabled before you begin to complete Form U.

4.1 Certification

Your CDR submission must be certified, indicating that your submitted information has been completed in compliance with the CDR requirements and that any confidentiality claims are true and correct. To certify, the certification statement must be electronically signed and dated by an authorized official at your company. The authorized official typically is a senior official with management responsibility for the person (or persons) completing the form. You must include the printed name, title, and email address for the person signing the certification. See Section 6.3.1 for how to complete an electronic signature agreement.

This certification statement applies to all the information supplied on the form and should be signed only after the form has been completed. Note that knowingly providing false or misleading information or concealing required information may be punishable by fine or imprisonment or both under TSCA section 16(b).

4.2 Reporting Standard

Submitters are required to exercise certain levels of due diligence in gathering the information required by the CDR rule. You must report your information to the extent that the information is **known to or reasonably ascertainable by** you and your company. The term "known to or reasonably ascertainable by" is defined in 40 CFR 704.3 and discussed more fully below.¹

4-1

¹ Note that, for the 2006 IUR only, EPA had a different reporting standard (**readily obtainable**) for processing and use data.

Known to or reasonably ascertainable by means all information in a person's possession or control, plus all information that a reasonable person similarly situated might be expected to possess, control, or know.

Under TSCA section 8(a), EPA may collect information associated with chemical substances to the extent that it is known to or reasonably ascertainable by the submitter. This includes, but is not limited to, information that may be possessed by employees or other agents of the company reporting under the CDR rule, including persons involved in the research, development, manufacturing, or marketing of a chemical substance and includes knowledge gained through discussions, symposia, and technical publications. For purposes of CDR, the known to or reasonably ascertainable by standard applies to all the information required by the rule.

Examples of types of information that are considered to be in a person's possession or control, or that a reasonable person similarly situated might be expected to possess, control, or know include:

- Files maintained by the submitter, such as marketing studies, sales reports, or customer surveys;
- Information contained in standard references, such as MSDSs, that contain use information or concentrations of chemical substances in mixtures; and
- Information from the Chemical Abstracts Service (CAS) and from Dun & Bradstreet D-U-N-S®.

The following hypothetical examples illustrate the anticipated application of the "known to or reasonably ascertainable standard," in the specific context of the collection of processing and use data under the CDR. Because the standard applies on a case-by-case basis, however, these examples cannot substitute for a complete analysis of a submitter's particular circumstances:

Company XYZ discovers that it has no knowledge of how a particular reportable chemical substance (chemical substance #1) is processed or used by its customers. Company XYZ usually maintains marketing data documenting customers' use of its chemicals, in line with the reasonable business practices typical of comparable manufacturers, but it irrevocably lost these data for chemical substance #1 due to an inadvertent computer malfunction. Company XYZ has many customers, but it expects that it could substantially reconstruct this missing information by briefly contacting its largest customer and asking that customer what chemical substance #1 is generally used for. Company XYZ contacts this customer, reports on the basis of the processing and use data that the customer was willing to provide. Company XYZ has likely fulfilled its duties under the reporting standard. Company XYZ would not have fulfilled its duties under the reporting standard if it had not endeavored to supplement the information it already knew.

Company XYZ has never maintained information on how a particular reportable chemical substance (chemical substance #2) is processed or used by its customers. However, it is typical for comparable manufacturers to collect such information as part of their reasonable business practices. Company XYZ has many customers but it expects that it could substantially

fill this data gap by reviewing the public web site of its largest customer. Company XYZ reviews this web site, and reports on the basis of the information contained in the web site. Company XYZ has likely fulfilled its duties under the reporting standard. Company XYZ would not have fulfilled its duties under the reporting standard if it had not endeavored to supplement the information it already knew.

Company ABC maintains seasonal marketing data on changes in use patterns for a particular chemical substance (chemical substance #3). Comparable manufacturers typically only maintain such data on an annual basis, in line with reasonable business practices. Company ABC irrevocably loses its summer marketing data for chemical substance #3, due to an inadvertent computer malfunction. Company ABC expects that it could substantially reconstruct the missing summer marketing data by contacting its largest customer and asking the customer what it used or processed chemical substance #3 for in the past summer. Nevertheless, instead of attempting to reconstruct the summer data in this manner, Company ABC reports on the basis of the processing and use data that it already knows (regarding the winter, spring, and fall of the year). Company ABC has likely fulfilled its duties under the reporting standard. Company ABC would not have fulfilled its duties under the reporting standard if it designated the information as "not known or reasonably ascertainable" simply because one of the seasonal marketing reports was missing.

Company ABC has never maintained information on how a particular reportable chemical substance (chemical substance #4) is processed or used by its customers. However, it is typical for comparable manufacturers to collect such information as part of their reasonable business practices. Company ABC has one major customer and ten minor customers. Company ABC asks its major customer to supply information about how chemical substance #4 is processed and used, but that customer is unwilling to supply this information. Company ABC reasonably expects that the only remaining way to substantially fill this data gap would be to send a survey to its ten minor customers. Company ABC reports that the information is "not known or reasonably ascertainable" to it. Company ABC has likely fulfilled its duties under the reporting standard.

4.3 Part I - Section A. Parent Company Information²

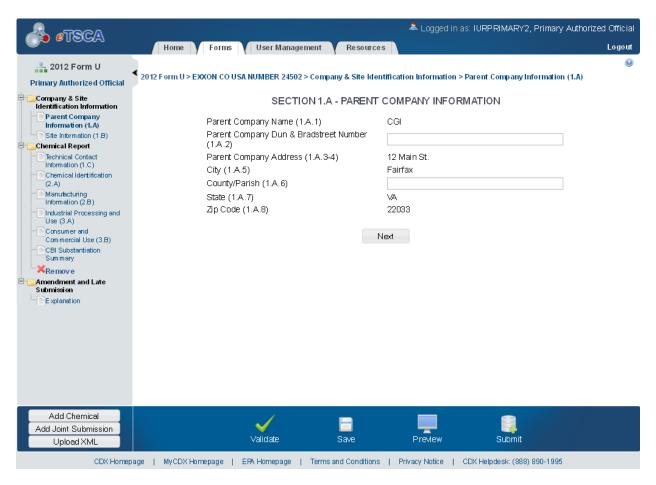
You must provide information about your U.S. parent company. For purposes of CDR, your U.S. parent company is the highest level company, located in the United States, which directly owns at least 50 percent of the voting stock of the manufacturer. This definition is limited to this context, is distinct from the more geographically broad definition of "parent company" used in 40 CFR 704.3, and does not apply to the determination of whether a person meets the small manufacturer exemption. Corporate names should be treated as U.S. parent company names for companies with multiple sites. When a site is owned by more than one company and none of the site owners directly owns at least 50 percent of its voting stock, the site should provide the name of the U.S. parent company of either the site operator or the owner with the largest ownership interest in the site.

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² See Sec 4.7.1 for information concerning CBI claims for Parent Company Information.

Example 4-1. Bestchem Corporation is not owned or controlled by any other corporation but has sites throughout the country whose names begin with Bestchem. In this case, Bestchem Corporation should be listed as the U.S. parent company.

Note: Information provided during CDX registration will populate your U.S. parent company identification information in Section A. Please double check this information to ensure all required fields are complete and accurate. If any information is incorrect or incomplete, the authorized official should make the necessary changes in CDX.



4.3.1 Parent Company Name (Block 1.A.1)

Enter the full name of the U.S. parent company, if applicable. The U.S. parent company name is the name of the highest level company, located in the United States, which directly owns at least 50 percent of the voting stock of the manufacturer. You should include any additional identifying terms such as Inc., Ltd., L.L.C., etc.

4.3.2 Parent Company Dun & Bradstreet D-U-N-S® Number (Block 1.A.2)

Enter the 9-digit Dun & Bradstreet D-U-N-S® number (D&B number) associated with the parent company name entered in Block 1.A.1. The number may be obtained from the treasurer or financial officer of the company.

D&B assigns separate numbers to subsidiaries and parent companies; you should make sure that the number you provide EPA belongs to your U.S. parent company. To verify the accuracy of your site and U.S. parent company D&B number and name, go to https://www.dnb.com/product/dlw/form_cc4.htm or call 1-800-234-3867. Callers to the toll free phone number should understand that the D&B support representatives will need to verify that callers requesting the D&B number are an agent of the business. D&B recommends knowing basic information such as when the business originated, officer names, and the name, address, and phone number for the facility.

You must obtain a D&B number for the U.S. parent company, if none exists. If your U.S. parent company does not have a D&B number, you can request one from your local office of D&B. There is no charge for this service and you are not required to disclose sensitive financial information to get a number. For more information on obtaining a D&B number, see https://www.dnb.com. If you are already listed with D&B, but do not know your number, you can call 1-800-234-3867 for assistance.

4.3.3 Parent Company Address (Blocks 1.A.3 through 1.A.8)

Enter the mailing address of the U.S. parent company name entered in Block 1.A.1, including the appropriate county or parish, using standard addressing techniques as established by the U.S. Postal Service. Post office box numbers should be accompanied by a street address. If a post office box is listed, it should be listed after the street address.

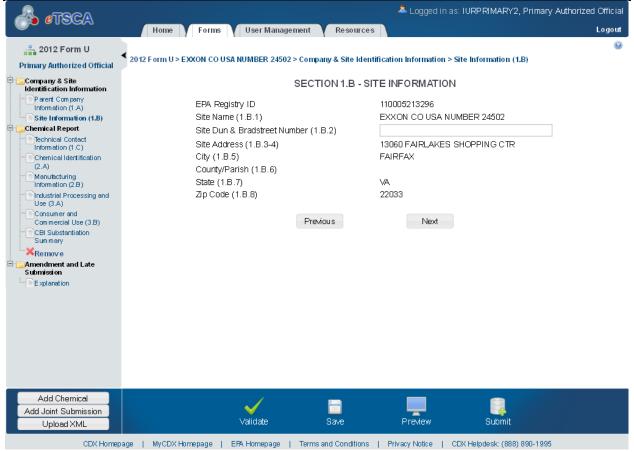
4.4 Part I - Section B. Site Information³

EPA requires the following information to be reported for each plant site at which a reportable chemical substance is manufactured: the site name, site D&B number, street address, city, county (or parish), state, and zip code.

Note: Information provided during CDX registration will populate your site identification information in Section B. Please double check this information to ensure all required fields are complete and accurate. If any information is incorrect or incomplete, the authorized official should make the necessary changes in CDX.

³ See Sec 4.7.2 for information concerning CBI claims for Site Information.

Chapter 2.0 When You Must Report



4.4.1 Special Provisions for Importers

The site where you import a chemical substance is considered the site of the operating unit within your organization that is directly responsible for importing the chemical substance and that controls the import transaction (e.g., the company's U.S. headquarters). For CDR, all importers must provide a U.S. address for the controlling site; this site may be your company's headquarters in the United States. If there is no such operating unit or headquarters in the United States, the site address for the importer is the U.S. address of an agent acting on the importer's behalf who is authorized to accept service of process for the importer (40 CFR 711.3). In the event that more than one person may meet the definition of "importer" (40 CFR 704.3), only one person should report. See 40 CFR 711.22(b).

Example 4-2. The headquarters of your company is located in New Town. Your company owns a plant site located in Old Town, which is in a different state. A headquarters employee purchases and arranges to have 500,000 lb of Chemical X imported from Japan to the Old Town plant site. The headquarters site in New Town controls the import transaction and is the site reported on Form U.

Example 4-3. The headquarters of your company is located in New Town. Your company owns three manufacturing sites, Sites 1, 2, and 3, all located in different states. An employee based at headquarters purchases and arranges to have 500,000 lb of Chemical X imported from Japan. The chemical is distributed as follows: 20,000 lb is delivered to Site 1; 180,000 lb is delivered to Site 2; and 300,000 lb is delivered to Site 3. The headquarters in New Town controls the import transaction for all three sites, and therefore is responsible for reporting all 500,000 lb of Chemical X. The site reported on Form U is New Town.

4.4.2 Site Name (Block 1.B.1)

Enter the full name of the site. You should include any additional identifying terms such as Inc., Ltd., L.L.C., etc.

4.4.3 Site Dun & Bradstreet Number D-U-N-S® (Block 1.B.2)

D&B assigns separate numbers to subsidiaries and parent companies; make sure that the number you provide EPA in block 1.B.2 belongs to the individual site for which you are reporting. You must obtain a D&B number for the site, if none exists. If the site does not have a D&B number, you can request one from your local office of D&B. Please refer to Section 4.3.2 for information on obtaining a D&B number.

4.4.4 Site Street Address (Blocks 1.B.3 through 1.B.8)

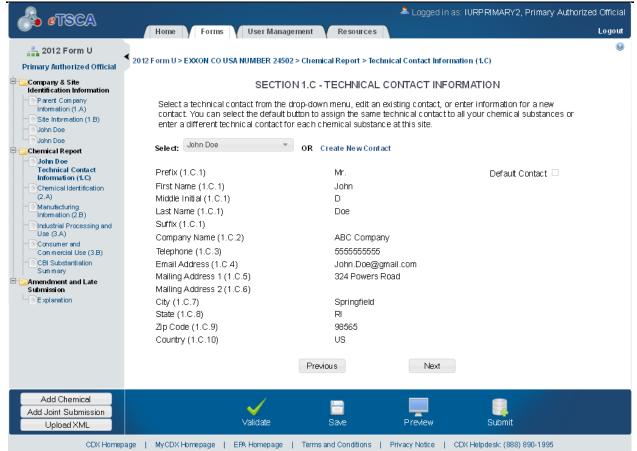
Enter your site mailing address, including the appropriate county or parish (or other jurisdictional indicator), using standard addressing techniques as established by the U.S. Postal Service. Post Office box numbers should be accompanied by a street address. If a Post Office box is listed, it should be listed after the street address.

4.5 Part I - Section C. Technical Contact Information⁴

This section requests information about the person whom EPA may contact for clarification of the information in your CDR submission. The technical contact should be a person who can answer questions about the reported chemical substance(s). Typically, a person located at the manufacturing site is best able to answer such questions. However, companies may use their discretion in selecting a technical contact or multiple technical contacts, as provided by the new e-CDRweb tool. Submitters should consider, in selecting the technical contact, that EPA may have follow-up questions about a CDR submission, one or more years after the submission date. The technical contact need not be the person who signed the certification statement. You can select your technical contact from the drop down list of support registrants or enter information for a new technical contact.

Note: If you select from the list of support registrants, the technical contact information provided during CDX registration will populate Section C. Please double check this information to ensure all required fields are complete and accurate. If any information is incorrect or incomplete, the authorized official should make the necessary changes in CDX.

⁴ See Sec 4.7.3 for information concerning CBI claims for Technical Contact Information.



4.5.1 Technical Contact Name and Company Name (Blocks 1.C.1 and 1.C.2)

Enter the name of the person whom EPA may contact for clarification of information submitted on Form U. Enter the name of the company employing the technical contact.

4.5.2 Technical Contact Telephone Number and Email Address (Blocks 1.C.3 and 1.C.4)

Enter the technical contact's telephone number, including the area code, and the contact's email address.

4.5.3 Technical Contact Mailing Address (Blocks 1.C.5 through 1.C.8)

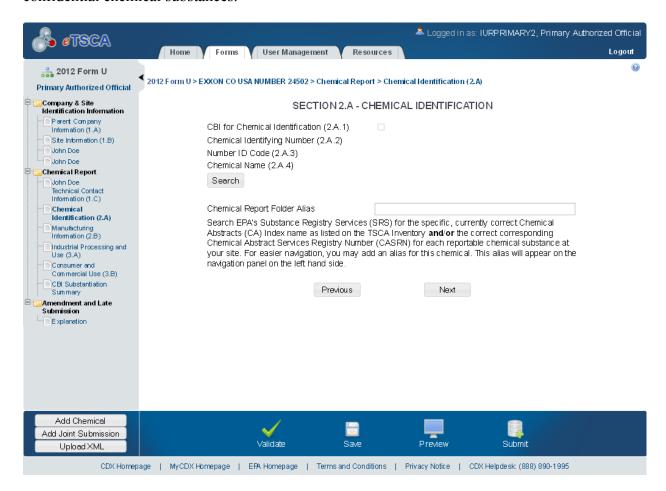
Enter the technical contact's full mailing address, using standard addressing techniques as established by the U.S. Postal Service. Post Office box numbers should be accompanied by a street address. If a Post Office box is used as a mailing address, the street address should be given in Block 1.C.5 followed by the Post Office box number in Block 1.C.6.

4.6 Part II - Section A. Chemical Substance Identification

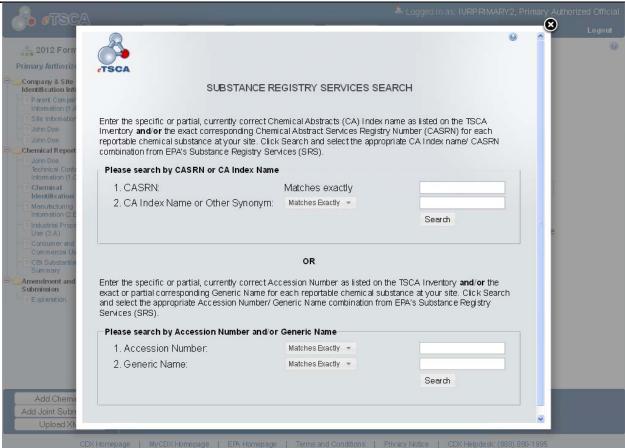
You must use the Agency's Substance Registry Services (SRS) to report the chemical substance identification information consisting of the currently correct Chemical Abstracts (CA) Index Name and the correct corresponding Chemical Abstracts Service (CAS) Registry Number (CASRN), as described in Sections 4.6.2 and 4.6.4. The SRS is EPA's central system for information about chemical substances that are tracked or regulated by EPA or other sources. It

is the authoritative resource for basic information about chemicals, biological organisms, and other chemical substances of interest to EPA and its state and tribal partners.

The correct CA Index Name and CASRN must be reported separately for each CDR reportable chemical substance at your site. If you wish to report a chemical substance listed on the confidential portion of the TSCA Inventory, you will need to report the chemical substance using a TSCA Accession Number (the generic name corresponding to the Accession Number will automatically be incorporated into your form). See Section 4.6.1 for details on how to report confidential chemical substances.



You will be able to connect directly to the SRS database from the reporting tool to report the correct CA Index Names and CASRNs for all of your non-confidential chemical substances on the TSCA Inventory. TSCA Accession Numbers and generic chemical names will be listed for chemical substances on the confidential portion of the TSCA Inventory. The use of the SRS to obtain the identities for all CDR reportable chemical substances is a convenient way to meet the chemical nomenclature requirement and will help to prevent errors in the reporting of chemical identification information for the CDR.

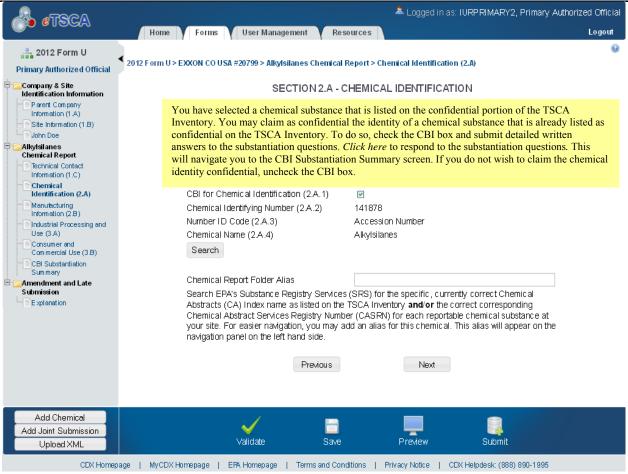


4.6.1 Confidentiality of Chemical Substance Information (Block 2.A.1)

If you wish to report a chemical substance listed on the confidential portion of the TSCA Inventory, you will need to report the chemical substance using a TSCA Accession Number. The generic chemical name corresponding to the TSCA Accession Number will also be automatically incorporated into your form.

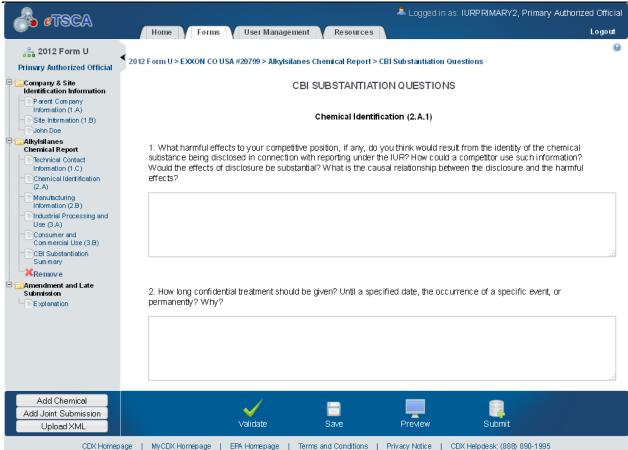
You may claim as confidential the identity of a chemical substance that is already listed as confidential on the TSCA Inventory (40 CFR 711.30(b)). To do so, you must check the appropriate CBI box in Part II, Section A **and** submit detailed written answers to the substantiation questions listed in Table 5-2. The identities of chemical substances listed on the public version of the TSCA Inventory are already publicly known. Therefore, claims for confidential treatment of the identity of a chemical substance which is listed on the public section of the TSCA Inventory are not valid and will not be allowed using the reporting tool. The Agency limits chemical identity CBI claims to only those chemical substances listed on the confidential portion of the Master Inventory File.

Chapter 2.0 When You Must Report



CBI claims for chemical identity will be accepted only when accompanied by a separate written substantiation for the chemical substances claimed as CBI. Clicking "Click here" in the warning statement automatically triggers the substantiation questions. If you fail to substantiate the claim for confidentiality of the chemical identity in accordance with applicable rules, EPA may make the information available to the public without further notice to you. Note that checking this box does not protect the link between your company and the chemical substance; it only asserts a CBI claim for the specific identity of the chemical substance. See Section 5.1 for more details about substantiating CBI claims for the identity of a chemical substance.

Chapter 2.0 When You Must Report



4.6.2 Chemical Substance Identifying Number (Block 2.A.2)

Every chemical substance reported in accordance with CDR must be accompanied by its correct CASRN, corresponding to the chemical substance's specific chemical name as described in 4.6.4. (40 CFR 711.15(b)(3)(i)). You may enter either a CASRN (Block 2.A.2) or the specific name of the chemical substance (Block 2.A.4) to select the appropriate CASRN/Chemical Abstracts (CA) Index Name combination from the SRS database.

Report the correct CASRN for your chemical substance if it is listed on the non-confidential portion of the TSCA Inventory. If your chemical substance is listed on the confidential portion of the TSCA Inventory and you wish to continue having the chemical identity be confidential, report the EPA-designated TSCA Accession Number. Each TSCA Inventory chemical substance has at least one of these types of numbers.

EPA is requiring that you report only the CASRN as a chemical identifying number, except in the case of confidential chemical substances. In the case of confidential chemical substances, EPA is requiring that you report only the TSCA Accession Number as a chemical identifying number. If, in the past, you reported using the PMN case number of a confidential substance, you can use the PMN case number to search the SRS to populate the pertinent chemical identification information for the confidential chemical substance listed on the TSCA Inventory. In the SRS, you can readily find a cross-reference list that displays the Accession Number, generic chemical name, and the PMN case number (or for an initial TSCA Inventory substance, the TSCA Inventory reporting form number) for any confidential chemical substance

listed on the TSCA Inventory. You can then select from the SRS the correct Accession Number corresponding to the confidential chemical substance intended to be reported (the generic name corresponding to the Accession Number will automatically be incorporated into your report).

There are certain circumstances where you occasionally may not be sure of the particular PMN case number and Accession Number the Agency has assigned to one of its confidential chemical substances, such that you would not be able to definitely determine this solely from searching the SRS. This could happen, for example, if the chemical substance were originally reported as part of a consolidated PMN and you did not learn from EPA which particular case number in the consolidated PMN number sequence corresponds to which of the several reported confidential chemical substances. This could also happen if a certain PMN represented a mixture of two or more confidential chemical substances, such that multiple Accession Numbers were assigned to the different chemical substances reported in that single PMN, and you didn't already request the particular Accession Numbers from EPA for the individual chemical substances comprising that multi-component type of PMN. In such circumstances, you should contact EPA well before initiating CDR reporting to obtain the required Accession Numbers from the Agency.

Submitters who are not able to identify the Accession Number by searching the SRS should contact EPA, in writing or via fax on company letterhead, well before initiating CDR reporting to obtain the Accession Number assigned when the Notice of Commencement (NOC) was submitted to the Agency. Individuals are urged to submit a complete and accurate TSCA Inventory Correspondence via fax or by U.S. mail at least one month before the submission deadline. Note that incomplete and/or inaccurate requests may be rejected. The Agency will respond to such inquiries in as timely a manner as possible. It is the responsibility of the submitter to contact the Agency for such information in sufficient time to allow for the Agency to respond.

Please send requests for a TSCA Accession Number as soon as possible to:

By Fax: 202-564-9538

By U.S. Postal Service:

U.S. Environmental Protection Agency Office of Pollution Prevention and Toxics Document Control Office (7407M) 1200 Pennsylvania Ave, NW Washington, DC 20460

By Hand Delivery or Courier:

U.S. Environmental Protection Agency Office of Pollution Prevention and Toxics Confidential Business Information Center EPA East Building, Room 6428 1201 Constitution Ave, NW Washington, DC 20004 202-564-8930; 202-564-8940

4.6.3 ID Code (Block 2.A.3)

The code corresponding to the type of identifying number you selected in the SRS will be entered in Block 2.A.1. See codes in Table 4-1.

Table 4-1. ID Code for Chemical Identifying Numbers

If the Number You are Reporting is a(n)	This Code Will be Entered
Accession Number	A
CAS Registry Number	С

4.6.4 Chemical Name (Block 2.A.4)

EPA is requiring the reporting of the CA Index Name currently used to list the chemical substance on the TSCA Inventory as the chemical name reported for CDR. You may enter either a CASRN (Block 2.A.2) or the specific name of the chemical substance (Block 2.A.4) to select the appropriate CASRN/Chemical Abstracts (CA) Index Name combination from the SRS database.

In cases where a chemical substance is listed on the confidential portion of the TSCA Inventory, you are to report the chemical substance's Accession Number which is listed on the non-confidential portion of the TSCA Inventory and is included in the SRS (the generic name corresponding to the Accession Number will automatically be incorporated into your report). In order to continue to protect the confidentiality of the underlying specific chemical identification information (i.e., the CASRN and specific chemical name), you must claim the chemical identity as CBI and complete the upfront substantiation. Doing so will maintain the confidentiality of the underlying specific chemical name and CASRN of the confidential chemical substance. The Accession Number and generic chemical name will remain non-confidential. Failure to identify the chemical identity as CBI and complete the upfront substantiation will waive any CBI claim to the chemical identity and will result in the transfer of the chemical substance from the confidential portion of the TSCA Inventory to the non-confidential, publicly releasable, portion of the TSCA Inventory.

4.6.5 Special Provisions for Importers and Joint Submitters

You may report an alternate chemical name, and in the case of importers, a trade name, in those instances where your supplier will not disclose to you the specific chemical name of the imported TSCA Inventory chemical substance or a reactant used to manufacture the TSCA Inventory chemical substance because the name is claimed confidential. In these cases, you and the supplier may report the information required in a joint submission. If you as the importer cannot provide the chemical name, supply a trade name or other designation to identify the proprietary chemical substance and provide the supplier's (secondary submitter's) company information. Complete as much of the Form U as you can. In addition, you must use e-CDRweb to ask the supplier (secondary submitter) of the confidential chemical substance to directly provide EPA with the correct chemical identity (as described in 4.6.2), in a joint submission with you. Your request to the supplier must include instructions for submitting chemical identity information electronically, using e-CDRweb and CDX (see 40 CFR 711.35), and for clearly referencing your submission. Contact information for the supplier, a trade name or other designation for the chemical substance or mixture, and a copy of the request to the supplier must be included with your submission for the chemical substance.

Similarly, in the event that you as a manufacturer completing a Form U cannot provide the complete chemical identity because you manufacture the reportable chemical substance using

a reactant having a specific chemical identity claimed as confidential by its supplier, supply a trade name or other designation to identify the proprietary chemical substance and provide the supplier's (secondary submitter's) company information. Complete as much of the Form U as you can. In addition, you must use e-CDRweb to ask the supplier to directly provide to EPA the correct chemical identity of the confidential reactant in a joint submission. Such request must include instructions for submitting chemical identity information electronically using e-CDRweb and CDX (see 40 CFR 711.35), and for clearly referencing your submission. Contact information for the supplier, a trade name or other designation for the chemical substance, and a copy of the request to the supplier must be included with your submission referencing the chemical substance.

In both cases, if the secondary submitter chooses to respond to the primary submitter's request, the secondary submitter would use e-CDRweb to identify the chemical substance in question and the percent composition of each component chemical substance of the trade name product or mixture.

EPA will only accept joint submissions that are submitted electronically using e-CDRweb and CDX (see 40 CFR 711.35) and that clearly reference the Form U submission to which they refer. See Chapter 6.7 for more information on how to submit joint reports. These special provisions only apply in cases where the supplier will not reveal the pertinent chemical identity to you because it is claimed confidential. In the event that you actually know the chemical identity of a chemical substance subject to CDR reporting, you must provide that information irrespective of a supplier's confidentiality claims.

4.7 Part II - Section B. Manufacturing Information

The following subsections describe the manufacturing information required to be reported for each chemical substance.

4.7.1 Confidentiality of Company Information (Block 2.B.1)

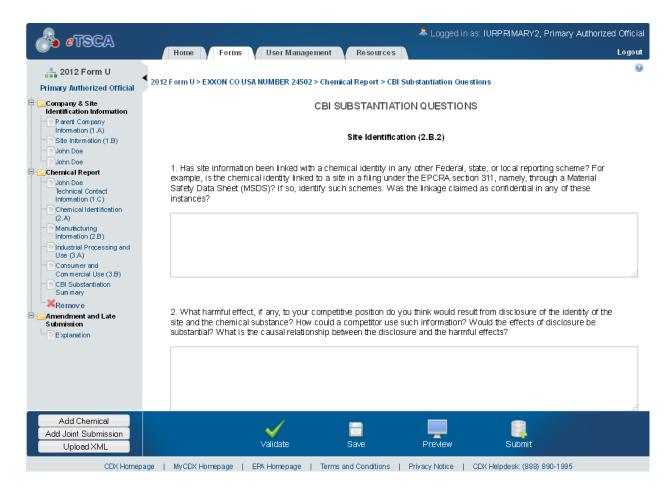
Check the CBI box in this block to assert a confidentiality claim for the link between the chemical substance and the company information reported in Part I, Section A. Checking other CBI boxes on the form will not protect this link. You may claim this connection as confidential for some chemical substances for which you are reporting, while not making the claim for others (each chemical substance manufactured at a site is reported in separate sections of Form U). EPA will not impute the existence of a CBI claim for company identity from a CBI claim associated with a different chemical substance.

4.7.2 Confidentiality of Site Information (Block 2.B.2)

Check the CBI box in this block and complete the substantiation questions to assert a confidentiality claim for the link between the chemical substance and the site identity reported in Part I, Section B. Checking the CBI box automatically triggers the substantiation questions. See Section 5.2 for information on completing the substantiation questions. If you fail to substantiate the site CBI claim in accordance with the applicable rules, EPA may make the information available to the public without further notice to you.

You may claim the connection between chemical substance and site as confidential for some chemical substances for which you are reporting, while not making the claim for others (each chemical substance is reported separately in Form U). EPA will not impute the existence of a CBI claim for site identity from a CBI claim associated with a different chemical substance.

EPA also has observed that submitters sometimes claim only their company identity, but not their site identity, as confidential. EPA will not impute the existence of a CBI claim for site identity from a CBI claim for company identity, even if the company name appears within the site identity information.



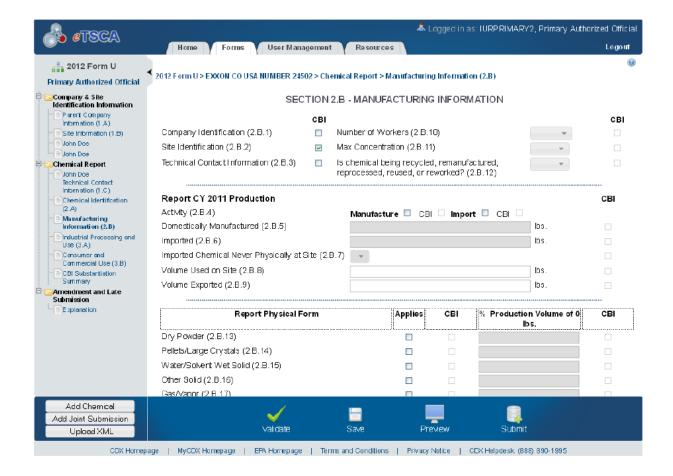
4.7.3 Confidentiality of Technical Contact Information (Block 2.B.3)

Check the CBI box in this block to assert a confidentiality claim for the link between the chemical substance and the technical contact information reported in Part I, Section C of Form U. You may claim this connection as confidential for some chemical substances for which you are reporting, while not making the claim for others (each chemical substance is reported separately in Form U). EPA will not impute the existence of a CBI claim for technical contact information from a CBI claim associated with a different chemical substance.

4.7.4 Reporting Manufacturing Information for Calendar Year 2011 (Blocks 2.B.4.-2.B.20)

This section of the CDR describes the manufacturing data elements that should be reported for your CDR reportable chemical substance for the calendar year 2011, the principal

reporting year for the 2012 submission period. If any information is not known or reasonably ascertainable by you (including your company), enter or select "NKRA" for "not known or reasonably ascertainable" in the box corresponding to that data element. You may also check the CBI box next to each data element to claim data as confidential. However, keep in mind that you can not claim a "NKRA" designation as confidential.



4.7.4.1 Activity (Domestically Manufacture and/or Import) (Block 2.B.4)

Check the box(es) that describe whether you domestically manufacture or import the chemical substance. If you both domestically manufacture and import the same chemical substance, check both boxes.

4.7.4.2 <u>Domestically Manufactured Production Volume (Block 2.B.5)</u>

Report the volume of the chemical substance domestically manufactured at your site during calendar year 2011, in pounds. Report the quantity to at least two significant figures; it should be accurate to the extent known to or reasonably ascertainable by you. Production volumes should be reported in numeric format, without commas (e.g., 6352000). For example, "2 million" or "2 E6" are not acceptable, nor are production volumes with decimals or abbreviations such as M (e.g., 12,000,000 = 12M) or K (e.g., 50,000 = 50K).

4.7.4.3 <u>Imported Production Volume (Block 2.B.6)</u>

Report the volume of chemical substance imported by your site in 2011, in pounds. Report the quantity to at least two significant figures; it should be accurate to the extent known to or reasonably ascertainable by you. You should use the same numeric format as described for Block 2.B.5, domestically manufactured production volume. Imported and domestically manufactured production volumes are reported separately for each chemical substance at each site.

Note that if you import various mixtures containing reportable chemical substances, you should add all import volumes associated with each chemical substance. For instance, if you import three mixtures and each mixture contains Chemical A, then you would determine the volume of Chemical A in each mixture and report the aggregated amount.

4.7.4.4 <u>For Imported Chemical Substances, Is the Chemical Never Physically at Site? (Block 2.B.7)</u>

Use the drop down box to select one of the following choices:

Y = Yes, the imported chemical substance is never physically at the reporting site (e.g., if you ship the chemical substance from a foreign country directly to another location such as a warehouse, a processing or use site, or a customer's site),

N = No, the imported chemical substance is actually physically present at the site.

NKRA = It is not known to or reasonably ascertainable by you whether the imported chemical substance is physically present at the site.

4.7.4.5 Production Volume Used On-Site (Block 2.B.8)

Report the total volume of the domestically manufactured and imported chemical substance used at the reporting site, in pounds. The number represents the volume of the chemical substance that does not leave the manufacturing site. The production volume used on-site should not exceed the sum of the domestically manufactured and imported volumes minus the volume exported (i.e., (Block 2.B.5 + Block 2.B.6) –Block 2.B.9). Report the quantity to at least two significant figures; it should be accurate to the extent known to or reasonably ascertainable by you. You should use the same numeric format as described for Block 2.B.5, domestically manufactured production volume.

4.7.4.6 Production Volume Exported (Block 2.B.9)

Report the production volume directly exported and not domestically processed or used, in pounds. The volume exported should not exceed the sum of the domestically manufactured and imported volumes (i.e., (Block 2.B.5 + Block 2.B.6). Report the quantity to at least two significant figures; it should be accurate to the extent known to or reasonably ascertainable by you. You should use the same numeric format as described for Block 2.B.5, domestically manufactured production volume.

Table 4-2. Examples of Reporting Production Volume for Part II – Manufacturing Information

Description	2012 Reporting Requirement
Site 1 domestically manufactures 30,000 lb of Chemical X.	Site 1 should report 30,000 lb as domestically manufactured for Chemical X. The total production volume (i.e., the domestically manufactured volume) should be used to report the remaining CDR information.
Site 2 domestically manufactures 15,000 lb of Chemical X and directly imports 15,000 lb of Chemical X.	Site 2 should report 15,000 lb as domestically manufactured. Because Site 2 controls the import transaction, Site 2 should also report 15,000 lb as imported for Chemical X. The total production volume (i.e., sum of the domestically manufactured and import volumes) should be used to report the remaining CDR information.
Site 3 domestically manufactures 30,000 lb of Chemical X. Of the 30,000 lb manufactured, Site 3 directly exports 10,000 lb to a foreign customer.	Site 3 should report 30,000 lb as domestically manufactured and 10,000 lb as exported for Chemical X. The production volume not directly exported should be used to report the remaining CDR information.
Site 4 domestically manufactures 70,000 lb and imports 30,000 lb of Chemical X. Site 4 uses 20,000 lb of Chemical X on site.	Site 4 should report 70,000 lb as domestically manufactured, 30,000 lb as imported and 20,000 lb as used on site. The total production volume (i.e., sum of the domestically manufactured and import volumes) should be used to report the remaining CDR information.
In 2011, Company B coordinates the import of 100,000 lb of Chemical X, which is imported directly to three different sites owned by Company B. Site 5 receives 40,000 lb and Sites 6 and 7 each receive 30,000 lb of Chemical X.	Company B should report 100,000 lb as imported for Chemical X. The total production volume (i.e., the imported volume) should be used to report the remaining CDR information. Because the three sites controlled by Company B did not control the import transaction, the sites are not required to report the imported volumes.

4.7.4.7 Number of Workers (Block 2.B.10)

Report the total number of workers reasonably likely to be exposed to each reportable chemical substance at each site during calendar year 2011 (40 CFR 711.15(b)(3)(vii)). For Block 2.B.10, use the drop down box to select the code corresponding to the appropriate range for the number of workers reasonably likely to be exposed to a reportable chemical substance during manufacture. Table 4-3 shows the codes and ranges which appear in the drop down box.

Table 4-3. Codes for Reporting Number of Workers Reasonably Likely to be Exposed

Code	Range of Workers Reasonably Likely to be Exposed
W1	Fewer than 10 workers
W2	At least 10 but fewer than 25 workers
W3	At least 25 but fewer than 50 workers
W4	At least 50 but fewer than 100 workers
W5	At least 100 but fewer than 500 workers
W6	At least 500 but fewer than 1,000 workers
W7	At least 1,000 but fewer than 10,000 workers
W8	At least 10,000 workers

"Reasonably likely to be exposed" means "an exposure to a chemical substance which, under foreseeable conditions of manufacture, processing, distribution in commerce, or use of the chemical substance, is more likely to occur than not to occur. Such exposures would normally include, but would not be limited to, activities such as charging reactor vessels, drumming, bulk loading, cleaning equipment, maintenance operations, materials handling and transfers, and analytical operations. Covered exposures include exposures through any route of entry (inhalation, ingestion, skin contact, absorption, etc.), but excludes accidental or theoretical exposures" (40 CFR 711.3).

Persons reasonably likely to be exposed to a chemical substance include workers whose employment requires them to pass through areas where chemical substances are manufactured, processed, or used (e.g., production workers and foremen, process engineers, and plant managers). Workers employed to drive vehicles which transport the chemical substance should be included in the number of workers reasonably likely to be exposed to the chemical substance if they come into contact with the chemical substance during loading or unloading. For example, workers engaged in the connection or disengagement of hoses used to load or unload the chemical substance should be included. However, workers involved solely with transporting chemical substances in sealed containers that are totally enclosed with no potential for exposure should not be included.

In addition, when a site employs temporary, seasonal, or contract workers in the manufacture of a reportable chemical substance, these workers should be included in the number of workers reasonably likely to be exposed to a chemical substance if they work in areas where the chemical substance is manufactured. The term does not include those employees whose jobs are not associated with potential exposures to a chemical substance or mixture (e.g., administrative staff who never enter areas where the chemical substance is manufactured) and who are unlikely to be exposed to a chemical substance for even a brief period of time. No allowance is made for personal protective equipment or for engineering controls that reduce but do not preclude exposure to a chemical substance; however, if contact between a worker and a chemical substance is highly improbable, the worker should not be included among those persons reasonably likely to be exposed to the chemical substance.

When there is no potential exposure to a chemical substance, the code W1 corresponding to fewer than 10 workers would be reported. This would be the case, for instance, when a chemical substance is imported in sealed containers and resold without repackaging or is shipped from a foreign source directly to a customer.

4.7.4.8 <u>Maximum Concentration (Block 2.B.11)</u>

Report the maximum concentration, measured by percentage of weight, of your reportable chemical substance at the time it is reacted on-site to produce a different chemical substance (site-limited) or as it leaves the site (40 CFR 711.15(b)(3)(viii)). The concentration must be accurate to the extent that information is known to or reasonably ascertainable by you. In your determination of the maximum concentration, do not include concentrations of the product sent off-site for non-commercial purposes (40 CFR 710.1(a)).

For each chemical substance, from the drop down box select the code which corresponds to the appropriate maximum concentration range of the chemical substance. Table 4-4 shows the codes and concentration ranges which appear in the drop down box. If the maximum concentration falls between two ranges, round your estimate to the nearest one percent using standard rounding procedures. Report the code that corresponds to the appropriate range. Report the maximum concentration regardless of the various physical forms in which the chemical substance may be sent off-site or reacted on-site to produce a different chemical substance.

Code	Concentration Range (weight percent)
M1	Less than 1% by weight
M2	At least 1% but less than 30% by weight
M3	At least 30% but less than 60% by weight
M4	At least 60% but less than 90% by weight
M5	At least 90% by weight

Table 4-4. Codes for Reporting Maximum Concentration

4.7.4.9 <u>Is Chemical Substance Being Recycled, Remanufactured, Reprocessed, or Reused ? (Block 2.B.12)</u>

Use the drop down box to select one of the following choices

Y = Yes, the manufactured chemical substance, such as a byproduct, is to be recycled, remanufactured, reprocessed, or reused.

N = No, the manufactured chemical substance, such as a byproduct, is not to be recycled, remanufactured, reprocessed, or reused.

NKRA = It is not known to or reasonably ascertainable by you whether the manufactured chemical substance, such as a byproduct, is to be recycled, remanufactured, reprocessed, or reused.

By selecting "Yes," you indicate that the manufactured chemical substance, which otherwise would be disposed of as a waste, is being removed from the waste stream and is being used or reused for a commercial purpose.

Example 4-4. The papermaking process involves the pulping of wood and several processing steps which generate white (CASRN 68131-33-9), black (CASRN 66071-92-9), and green (CASRN 68131-30-6) pulping liquors. During papermaking, wood pulping using the white liquor generates a black pulping liquor waste product, which is typically burned, resulting in the production of energy and an inorganic smelt that becomes green liquor. Green liquor is further processed to generate white liquor, which is used in the wood pulping process. The pulping liquors generated by the pulping cycle are CDR reportable chemical substances that are considered recycled, remanufactured, reprocessed, or reused. Block 2.B.12 should be selected for these chemical substances.

4.7.4.10 Physical Form and Percentage of Production Volume (Blocks 2.B.13 through 2.B.19)

Report all physical forms of the chemical substance at the time it is reacted or as it leaves your site and the percentage of production volume (including both domestically manufactured and imported volumes) for each physical form (40 CFR 711.15(b)(3)(viii)). For each chemical substance at each site, the submitter must report as many physical forms as applicable by selecting the appropriate blocks which correspond to the following six physical forms:

- Dry Powder
- Pellets or Large Crystals
- Water- or Solvent-Wet Solid
- Other Solid
- Gas or Vapor
- Liquid

Select "Unknown", if the physical form of the chemical substance is not known to or reasonably ascertainable by you.

Report the percentage of the total production volume of the chemical substance for each physical form reacted onsite or sent off-site rounded off to the closest 10 percent (40 CFR 711.15(b)(3)(ix)). If the chemical substance is sent off-site in more than one physical form, report all the physical forms in which it is sent off-site. These percentages may total more or less than 100% due to rounding.

Example 4-5. Determining Percentage of Production Volume

Company A domestically manufactures 75,000 lb and imports 25,000 lb of Chemical X, for a total production volume of 100,000 lb. Forty-eight percent (48,000 lb) of the production volume is produced as dry powder, 24 percent (24,000 lb) is produced as a pellets, 24 percent (24,000 lb) as a liquid solution, and 4 percent (4,000 lb) as a water-wet solid. Company A would report the following:

Dry Powder	50%
Pellets or Large Crystals	20%
Water- or Solvent-Wet Solid	0%
Other Solid	0%
Gas or Vapor	0%
Liquid	20%

4.7.5 Reporting Production Volume (PV) for the Year 2010 (Block 2.B.20)

Report the total volume of the chemical substance manufactured at your site (includes domestically manufactured and imported volumes) during the 2010 calendar year in pounds. Report the production volume to at least two significant figures; it should be accurate to the extent known to or reasonably ascertainable by you. Production volumes should be reported in numeric format, with or without commas (i.e., 58,000 or 6352000). For example, "2 million" or "2 E6" are not acceptable, nor are production volumes with decimals or abbreviations such as M (e.g., 12,000,000 = 12M) or K (e.g., 50,000 = 50K).

4.8 Part III - Processing and Use Information

In addition to completing Parts I and II, you must complete Part III of Form U for reportable chemical substances manufactured (including imported) for commercial purposes in an amount of 100,000 pounds or more at any one site during calendar year 2011 (40 CFR 711.15(b)), unless the

Information regarding processing or use activities must be reported to the extent that it is known to or reasonably ascertainable by the submitter (40 CFR 711.15(b)(4)).

chemical substance is partially exempt. See Sections 2.3.3 and 2.3.4 to determine whether you qualify for a partial exemption. If you manufacture the chemical substance in an amount less than 100,000 pounds at a site, you do not need to complete Part III for the chemical substances at that site; instead, check the N/A box. Report industrial processing and use information for each chemical substance manufactured (including imported) in an amount of 100,000 lb or more at sites under your control and at domestic sites that receive a reportable chemical substance from you directly or indirectly (including through a broker/distributor, from a customer of yours, etc.) (40 CFR 711.15(b)(4)). You should report the processing and use activities for the total 2011 production volume reported (both domestically manufactured (Block 2.B.5.) and imported (Block 2.B.6.)) in Part II.

The processing or use information should be reported to the extent that it is known to or reasonably ascertainable by you (40 CFR 711.15). Under the "known to or reasonably ascertainable by" standard, a submitter would therefore prepare its report about the processing and use of a chemical substance it manufactures (including imports), without confining its inquiry solely to what is known to managerial and supervisory employees, but would also be expected to review information which the manufacturer (including importer) may have in their possession or control, plus all information that a reasonable person similarly situated might be expected to possess, control, or know. The inquiry would be as extensive as a reasonable person, similarly situated, might be expected to perform within the organization. Information derived from customer surveys or other customer contacts, like any other information, would be "known to" the submitter if it is available after a reasonable inquiry within the organization. The standard does not necessarily require that the manufacturer conduct an exhaustive survey of all employees.

EPA would like to furthermore clarify that submitters are not required to conduct a new or additional customer survey (i.e., to pose a comprehensive set of identical questions to multiple customers) under this standard. If particular information cannot be derived or reasonably estimated from the information available to the company without conducting further customer surveys, it is not "known to or reasonably ascertainable" to the submitter for purposes of the CDR. However, to the extent that customer surveys are already in the submitter's possession or control, and to the extent that reasonable efforts to analyze or derive information from already-available customer surveys may inform processing and use information that is reported, the information is generally "known to or reasonably ascertainable." Section 4.2 contains additional information on the "known to or reasonably ascertainable by" reporting standard.

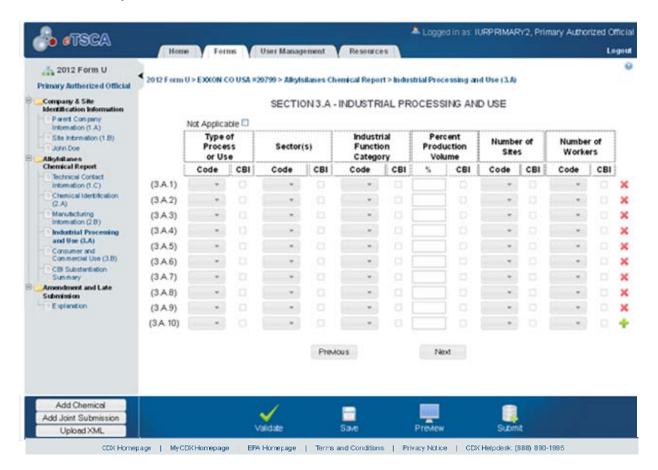
If any information is not known or reasonably ascertainable by you (including your company), enter or select "NKRA" for "not known or reasonably ascertainable" in the box corresponding to that data element.

You may check the CBI box next to each data element to claim data as confidential. However, keep in mind that you <u>cannot</u> claim a "NKRA" designation as confidential. Checking a CBI box associated with a specific processing and use data element automatically triggers substantiation questions. See Section 5.3 for information on completing the substantiation questions. Additional guidance on reporting processing and use information is available in the documents *Questions and Answers for the 2012 TSCA Chemical Data Reporting* and *Summary of EPA's Responses to Comments Submitted for the Proposed TSCA Inventory Update Reporting Modifications Rule* available on the Resources page at http://www.epa.gov/cdr or http://www.epa.gov/iur.

4.8.1 Part III - Section A. Industrial Processing and Use Data (Blocks 3.A.1 through 3.A.10)

For each IUR chemical substance manufactured (including imported) in an amount of 100,000 lb or more, report up to ten unique combinations of the following data elements: the Type of Process or Use Operation (TPU) (described in Section 4.8.1.1), the Industrial Sector (IS) (described in Section 4.8.1.2), and the Industrial Function Category (IFC) (described in Section 4.8.1.3) (40 CFR 711.15(b)(4)(i)). A combination of these three data elements defines a potential exposure scenario for risk-screening and priority-setting purposes. For each of these unique combinations, you are also required to report the percentage of production volume (described in Section 4.8.1.4), the number of sites (described in Section 4.8.1.5), and the number of workers

(described in Section 4.8.1.6) (40 CFR 711.15(b)(4)(i)). If more than ten unique combinations apply to a chemical substance, you need only report the ten combinations for the chemical substance that cumulatively represent the largest percentage of production volume, measured by weight (40 CFR 711.15(b)(4)(i)(C)). The reporting tool will allow you to enter more than ten combinations if you choose to do so.



4.8.1.1 Type of Processing or Use Operation

Chapter 2.0

To the extent that it is known to or reasonably ascertainable by you, use the drop down box to select the code which corresponds to the appropriate Type of Processing or Use Operation (TPU) for the particular combination of IS and IFC codes. Table 4-5 shows the codes and TPUs which appear in the drop down box. Note that if a chemical substance is fully reacted (i.e., reporting "PC" for the processing code), then the chemical substance is consumed and further processing and use information for that chemical substance will not exist. In such a situation, there is no further downstream processing and use information to be reported for that particular type of processing or use operation under 40 CFR 711.15(b)(4). A processing or use code may be reported more than once if more than one IS and/or IFC code applies to the same processing or use operation. Definitions for each code are provided in Appendix D, which may assist you in determining which code to report.

Table 4-5. Codes for Reporting Type of Industrial Processing or Use Operations

Code	Operation
PC	Processing as a reactant
PF	Processing—incorporation into formulation, mixture, or reaction product
PA	Processing—incorporation into article
PK	Processing—repackaging
U	Use—non-incorporative activities

4.8.1.2 Industrial Sectors

You must select from the drop down box the code which corresponds to the appropriate Industrial Sector (IS) for all sites that receive a reportable chemical substance from you either directly or indirectly (including through a broker/distributor, from a customer of yours, etc.) and that process and use of the reportable chemical substance to the extent that this information is known to or reasonably ascertainable by you (40 CFR 711.15(b)(4)(i)(B)). Table 4-6 shows the codes and sectors which appear in the drop down box. Because an industrial sector may apply to more than one processing and use scenario for a chemical substance, the same IS code may be reported with different combinations of IFC and TPU codes.

Note that for the 2006 IUR, you were required to report five-digit North American Industrial Classification System (NAICS) codes. Beginning with the 2012 reporting, EPA is replacing the NAICS codes with IS codes. A listing identifying the correspondence between NAICS codes and IS codes is provided in Table D-2 in Appendix D. Submitters who know the NAICS code can easily identify the IS code from Table D-2. Submitters who do not know a specific NAICS code may be able to identify a more general category.

When you chose the IS "Other," you also need to provide a written description of the use of the chemical substance. Your description may include the NAICS code.

Table 4-6. Industrial Sectors (IS)

IS Code	IS Title
IS1	Agriculture, forestry, fishing and hunting
IS2	Oil and gas drilling, extraction, and support activities
IS3	Mining (except oil and gas)
IS4	Utilities
IS5	Construction
IS6	Food, beverage, and tobacco product manufacturing
IS7	Textiles, apparel, and leather manufacturing
IS8	Wood product manufacturing
IS9	Paper manufacturing
IS10	Printing and related support activities
IS11	Petroleum and coal products manufacturing
IS12	Asphalt paving, roofing, and coating materials manufacturing
IS13	Petroleum lubricating oil and grease manufacturing

IS Code	IS Title
IS14	All other petroleum and coal products manufacturing
IS15	Petrochemical manufacturing
IS16	Industrial gas manufacturing
IS17	Synthetic dye and pigment manufacturing
IS18	Carbon black manufacturing
IS19	All other basic inorganic chemical manufacturing
IS20	Cyclic crude and intermediate manufacturing
IS21	All other basic organic chemical manufacturing
IS22	Plastic material and resin manufacturing
IS23	Synthetic rubber manufacturing
IS24	Organic fiber manufacturing
IS25	Pesticide, fertilizer, and other agricultural chemical manufacturing
IS26	Pharmaceutical and medicine manufacturing
IS27	Paint and coating manufacturing
IS28	Adhesive manufacturing
IS29	Soap, cleaning compound, and toilet preparation manufacturing
IS30	Printing ink manufacturing
IS31	Explosives manufacturing
IS32	Custom compounding of purchased resin
IS33	Photographic film paper, plate, and chemical manufacturing
IS34	All other chemical product and preparation manufacturing
IS35	Plastics product manufacturing
IS36	Rubber product manufacturing
IS37	Nonmetallic mineral product manufacturing (includes clay, glass, cement, concrete, lime, gypsum, and other nonmetallic mineral product manufacturing.
IS38	Primary metal manufacturing
IS39	Fabricated metal product manufacturing
IS40	Machinery manufacturing
IS41	Computer and electronic product manufacturing
IS42	Electrical equipment, appliance, and component manufacturing
IS43	Transportation equipment manufacturing
IS44	Furniture and related product manufacturing
IS45	Miscellaneous manufacturing
IS46	Wholesale and retail trade
IS47	Services
IS48	Other (requires additional information)

4.8.1.3 <u>Industrial Function Category</u>

Select from the drop down box the code that corresponds to the appropriate Industrial Function Category (IFC) for each particular combination of TPU and IS that you report (40 CFR 711.15(b)(4)(i)(C)). Table 4-7 shows the codes and IFCs that appear in the drop down box. Descriptions for each IFC are provided in Appendix D. If you select U099 (Other), provide a description of the industrial function of the chemical substance. Note that EPA revised the IFC descriptions and codes for the 2012 reporting.

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Table 4-7. Codes for Reporting Industrial Function Categories (IFCs)

IFC Code	IFC Title
U001	Abrasives
U002	Adhesives, binders, and sealants
U003	Adsorbents and absorbents
U004	Agricultural chemicals (non-pesticidal)
U005	Anti-adhesive agents
U006	Bleaching agents
U007	Corrosion inhibitors and anti-scaling agents
U008	Dyes
U009	Fillers
U010	Finishing agents
U011	Flame retardants
U012	Fuels and fuel additives
U013	Functional fluids (closed systems)
U014	Functional fluids (open systems)
U015	Intermediates
U016	Ion exchange agents
U017	Lubricants and lubricant additives
U018	Odor agents
U019	Oxidizing/reducing agents
U020	Photosensitive chemicals
U021	Pigments
U022	Plasticizers
U023	Plating agents and surface treating agents
U024	Process regulators
U025	Processing aids, not otherwise listed
U026	Processing aids, specific to petroleum production
U027	Propellants and blowing agents
U028	Solids separation agents
U029	Solvents (for cleaning and degreasing)
U030	Solvents (which become part of product formulation or mixture)
U031	Surface active agents
U032	Viscosity adjustors
U033	Laboratory chemicals
U034	Paint additives and coating additives not described by other codes
U099	Other (specify)

4.8.1.4 Percentage of Production Volume

Estimate the percentage of total 2011 production volume that is attributable to each unique combination of TPU, IS, and IFC. The percentage should be accurate to the extent that it is known to or reasonably ascertainable by you. Round your estimates to the nearest 10 percent

of production volume (40 CFR 711.15(b)(4)(i)(D)). If you would like to provide more specific percentages, please do so. Do not round a particular combination that accounts for less than five percent of the total production volume to zero percent if the production volume attributable to that combination is greater than or equal to 25,000 lb. In such cases, you must report the percentage of production volume attributable to that combination to the nearest one percent of production volume (40 CFR 711.15(b)(4)(i)(D)).

The total percentage of production volumes associated with the TPU, IS, and IFC combinations may add up to more than 100 percent, given that you are reporting on distribution of a chemical substance to sites in your control as well as downstream sites, some of which are not immediate purchasers from your original manufacturing site. Additionally, the total percentage of production volume may add up to less than 100 percent if, for example:

How to determine your percent production volume:

- 1. Determine the production volume that is attributable to each unique combination of TPU, IS, and IFC.
- 2. Determine your total production volume for 2011.
 - a. Add together the volume domestically manufactured and the volume imported.
 - b. DO NOT subtract the volume used on-site or the volume exported
- 3. Divide the volume determined in step 1 by the volume determined in step 2 and multiply by 100.
- You do not know or cannot reasonably ascertain information about how all of your production volume is processed or used;
- More than 10 combinations of codes are applicable to your chemical substance; or
- You export a portion of the production volume.

Table 4-8 provides examples of reporting industrial processing and use data.

Chapter 2.0 When You Must Report

Table 4-8. Examples of Reporting Industrial Processing and Use Information

Description	2012 Reporting Requirement
Site 1 manufactures 500,000 lb of Chemical X for processing for incorporation into a mixture. All of the production is for use in industrial sector IS17 (Synthetic Dye and Pigment Manufacturing). Of the production volume, 67% (335,000 lb) is used as a dye and 33% (165,000 lb) is used as a pigment.	On line 3.A.1 of Form U, enter PF for type of process or use, IS17 for industrial sector, U008 for IFC, and 70% for production volume. On line 3.A.2 of Form U, enter PF for type of process or use, IS17 for industrial sector, U021 for IFC, and 30% for production volume.
Site 1 manufactures 500,000 lb of Chemical X for processing for incorporation into a mixture. All of the production is for use under industrial sector IS17 (Synthetic Dye and Pigment Manufacturing). Of the production volume, 97% (485,000 lb) is used as a coloring agent for dyes and 3% (15,000 lb) is used as a coloring agent for pigments.	On line 3.A.1 of Form U, enter PF for type of process or use, IS17 for industrial sector, U008 for IFC, and 100% for production volume. On line 3.A.2 of Form U, enter PF for type of process or use, IS14 for industrial sector, and U021 for IFC. Because less than 100,000 lb is used for pigments, enter 0% for production volume.
Site 1 manufactures 12,000,000 lb of Chemical X for processing for incorporation into a mixture. All of the production is for use under industrial sector IS17 (Synthetic Dye and Pigment Manufacturing). Of the production volume, 97% (11,640,000 lb) is used as a coloring agent for dyes and 3% (360,000 lb) is used as a coloring agent for pigments.	On line 3.A.1 of Form U, enter PF for type of process or use, IS17 for industrial sector, U008 for IFC, and 100% for production volume. Because the use in pigments, IFC U021, accounts for 100,000 lb or more, on line 3.A.2 of Form U, enter PF for type of process or use, IS17 for industrial sector, U021 for IFC, and 3% for production volume.

4.8.1.5 Number of Sites Code

For each unique combination of TPU, IS, and IFC, select from the drop down box the code which corresponds to the appropriate number range for the total number of industrial sites, including those not under your control, that process or use each reported chemical substance to the extent that such information is known or reasonable ascertainable by you (40 CFR 711.15(b)(4)(i)(E)). In the event you both manufacture (including import) and process or use the same reportable chemical substance at the reporting plant site, your site would be counted as both a manufacturing site in Part II of Form U and a processing or use site reported in Part III of Form U (40 CFR 711.15(b)(4)). Table 4-9 shows the codes and site number ranges which appear in the drop down box.

Table 4-9. Codes for Reporting Numbers of Sites

Codes	Range
S1	Fewer than 10 sites
S2	At least 10 but fewer than 25 sites
S3	At least 25 but fewer than 100 sites
S4	At least 100 but fewer than 250 sites
S5	At least 250 but fewer than 1,000 sites
S6	At least 1,000 but fewer than 10,000 sites
S7	At least 10,000 sites

4.8.1.6 Number of Workers Code

For each unique combination of Type of Process or Use Operation, Industrial Sector, and Industrial Function Category, estimate the total number of workers that are reasonably likely to

be exposed to the chemical substance at sites that process or use the chemical substance (40 CFR 711.15(b)(4)(i)(F)). Include workers at sites which are not under your control as well as those sites you control. For each chemical substance, select from the drop down box the code that corresponds to the estimated range of the number of workers reasonably likely to be exposed. To claim this information as confidential, check the box adjacent to the reported information. Table 4-10 shows the codes and worker ranges which appear in the drop down box.

Table 4-10. Codes for Reporting Number of Workers Reasonably Likely to be Exposed During Processing and Use

Code	Range of Workers Reasonably Likely to be Exposed
W1	Fewer than 10 workers
W2	At least 10 but fewer than 25 workers
W3	At least 25 but fewer than 50 workers
W4	At least 50 but fewer than 100 workers
W5	At least 100 but fewer than 500 workers
W6	At least 500 but fewer than 1,000 workers
W7	At least 1,000 but fewer than 10,000 workers
W8	At least 10,000 workers

"Reasonably likely to be exposed" means "an exposure to a chemical substance which, under foreseeable conditions of manufacture (including import), processing, distribution in commerce, or use of the chemical substance, is more likely to occur than not to occur. Such exposures would normally include, but would not be limited to, activities such as charging reactor vessels, drumming, bulk loading, cleaning equipment, maintenance operations, materials handling and transfers, and analytical operations. Covered exposures include exposures through any route of entry (inhalation, ingestion, skin contact, absorption, etc.), but excludes accidental or theoretical exposures" (40 CFR 711.3).

Persons reasonably likely to be exposed to a chemical substance include workers whose employment requires them to pass through areas where chemical substances are manufactured, processed, or used (e.g., production workers and foremen, process engineers, and plant managers). Workers employed to drive vehicles that transport the chemical substances should be included in the number of workers reasonably likely to be exposed to the chemical substance *if* they come into contact with the chemical substance during loading or unloading. For example, workers engaged in the connection or disengagement of hoses used to load or unload the chemical substance should be included. However, workers involved solely with transporting chemical substances in sealed (totally enclosed with no potential for exposure) containers should not be included.

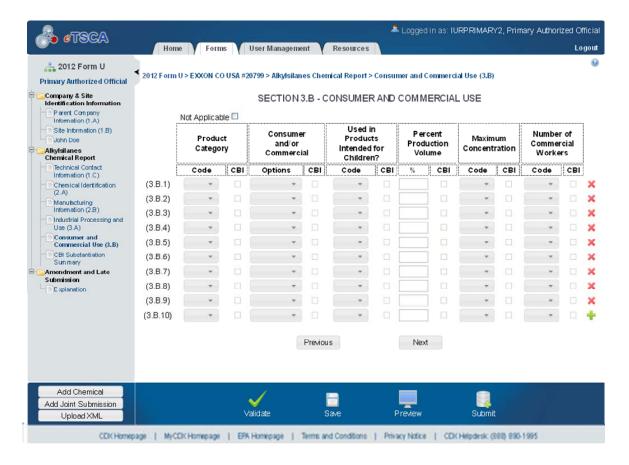
In addition, when a site employs temporary, seasonal, or contract workers in the manufacture of a reportable chemical substance, these workers should be included in the number of workers reasonably likely to be exposed to a chemical substance if they work in areas where the chemical substance is manufactured. The term does not include those employees whose jobs are unassociated with potential exposures to a chemical substance or mixture (e.g., administrative staff who never enter areas where the chemical substance is manufactured) and who are unlikely to be exposed to a chemical substance for even a brief period of time. No allowance is made for personal protective equipment or for engineering controls that reduce but

do not preclude exposure to a chemical substance; however, if contact between a worker and a chemical substance is highly improbable, the worker should not be included among those persons reasonably likely to be exposed to the chemical substance.

4.8.2 Part III - Section B. Consumer and Commercial Use Data (Blocks 3.B.1 through 3.B.10)

For purposes of CDR reporting, a commercial use means the use of a chemical substance or a mixture (including as part of an article) in a commercial enterprise providing saleable goods or a service (40 CFR 711.3). A consumer use, on the other hand, means the use of a chemical substance or a mixture (including as part of an article) when sold to or made available to consumers for their use (40 CFR 711.3).

You are required to report information that is known to or reasonably ascertainable by you concerning the consumer and commercial end uses of each chemical substance manufactured (including imported) in an amount of 100,000 lb or more at sites you control and at sites controlled by people to whom you have either directly or indirectly (including through a broker/distributor, from a customer, etc.) distributed the reportable chemical substance (40 CFR 711.15(b)(4)).



4.8.2.1 **Product Category**

You must designate up to ten product categories which correspond to the actual use of the chemical substance by selecting from the drop down box the codes which corresponds to the appropriate product categories (40 CFR 711.15(b)(4)(ii)(A)). The reporting tool will allow you to

enter more than ten categories if you choose to do so. Table 4-11 shows the codes and product categories which appear in the drop down box.

Note that EPA revised the list of product category codes. Descriptions of these categories are provided in Appendix D. If you select C999 (Other), you must provide a description of the product category. If more than ten codes apply, you need report only the ten codes for the chemical substance that cumulatively represent the largest percentage of production volume, measured by weight (40 CFR 711.15(b)(4)(ii)(A)).

Table 4-11. Product Category Codes

Code	Description
Chemical S	ubstances in Furnishing, Cleaning, Treatment/Care Products
C101	Floor coverings
C102	Foam seating and bedding products
C103	Furniture and furnishings not covered elsewhere
C104	Fabric, textile, and leather products not covered elsewhere
C105	Cleaning and furnishing care products
C106	Laundry and dishwashing products
C107	Water treatment products
C108	Personal care products
C109	Air care products
C110	Apparel and footwear care products
Chemical S	ubstances in Construction, Paint, Electrical, and Metal Products
C201	Adhesives and sealants
C202	Paints and coatings
C203	Building/construction materials - wood and engineered wood products
C204	Building/construction materials not covered elsewhere
C205	Electrical and electronic products
C206	Metal products not covered elsewhere
C207	Batteries
Chemical S	ubstances in Packaging, Paper, Plastic, Hobby Products
C301	Food packaging
C302	Paper products
C303	Plastic and rubber products not covered elsewhere
C304	Toys, playground, and sporting equipment
C305	Arts, crafts, and hobby materials
C306	Ink, toner, and colorant products
C307	Photographic supplies, film, and photochemicals
Chemical S	ubstances in Automotive, Fuel, Agriculture, Outdoor Use Products
C401	Automotive care products
C402	Lubricants and greases
C403	Anti-freeze and de-icing products
C404	Fuels and related products
C405	Explosive materials
C406	Agricultural products (non-pesticidal)

Code	Description	
C407	Lawn and garden care products	
Chemical Substances in Products not Described by Other Codes		
C980	Non-TSCA use	
C999	Other (specify)	

4.8.2.2 Consumer and/or Commercial Use

For each Product Category reported, select from the drop down box in the "Consumer and/or Commercial" column in Part III.B of Form U the options to indicate whether the use is a consumer use or a commercial use (40 CFR 711.15b)(4)(ii)(B). If the product has both consumer and commercial uses, select both options.

4.8.2.3 **Use in Product(s) Intended for Use by Children**

Within each consumer product category reported, you must determine whether any amount of each reportable chemical substance manufactured (including imported) in an amount of 100,000 lb or more by you is present in or on any consumer product(s) intended for use by children age 14 or younger, regardless of the concentration of the chemical substance remaining in or on the product (40 CFR 711.15(b)(4)(ii)(C)). If you determine that your chemical substance or mixture is used in a consumer product intended for use by children, select "Yes" from the drop down box in the "Used in Product(s) Intended for Children" column in Part III.B of Form U. If you determine that your chemical substance or mixture is not used in a consumer product intended for use by children, select "No" from the drop down box. If information as to whether the chemical substance is used in or on any consumer products intended for use by children is not known to or reasonably ascertainable by you, select "NKRA" from the drop down box.

EPA defines "intended for use by children" to mean the chemical substance or mixture is used in or on a product that is specifically intended for use by children age 14 or younger (40 CFR 711.3). Your chemical substance or mixture is intended for use by children if you answer "yes" to at least one of the following questions about the product into which your chemical substance or mixture is incorporated:

- Is the product commonly recognized (i.e., by a reasonable person) as being intended for use by children age 14 or younger?
- Does the manufacturer of the product state through product labeling or other written materials that the product is intended or will be used by children age 14 or younger?
- Is the advertising, promotion, or marketing of the product aimed at children age 14 or younger?

Table 4-12 illustrates some examples of "Use in Product(s) Intended for Use by Children." For example, certain products (e.g., crayons, coloring books, diapers, and toy cars) are typically used by children age 14 or younger. If you determine that your chemical substance or mixture is used in crayons, for example, you would report "Y" for children's use for C305.

Certain products, such as household cleaning products, automotive supplies, and lubricants, typically are not intended to be used by children age 14 or younger. As such, if you determine that your chemical substance or mixture is used in automotive care products and lubricants, for example, you would report "no" for children's use for categories C401 and C402.

Table 4-12. Examples of Products Intended for Use by Children

Codes	Category	Examples	
Chemical Substances in Furnishings, Cleaning, Treatment/Care Products			
C102	Foam seating and bedding products	Child's car seat, children's sheets	
C103	Furniture and furnishings not covered elsewhere	Baby cribs, changing tables	
C104	Fabrics, textile, and leather products not covered elsewhere	Children's clothing	
C108	Personal care products	Baby shampoo, children's bubble bath	
Chemical S	Chemical Substances in Construction, Paint, Electrical and Metal Products		
C201	Adhesives and sealants	Craft glue, model glue	
C202	Paints and coatings	Finger paints, water colors intended for use by children	
C205	Electrical and electronic products	Electronic games, remote control cars	
Chemical S	ubstances in Packaging, Paper, Plastic	, Hobby Products	
C302	Paper products	Diapers, baby wipes, coloring books	
C303	Plastic and rubber products not covered elsewhere	Pacifiers	
C304	Toys, playground, and sporting equipment	Toy trucks, dolls, toy cars, wagons, action figures, balls, swing sets, slides, skates, baseball gloves	
C305	Arts, Crafts, and Hobby Materials	Chemicals used as colorants in crayons, coloring inks, markers	
Chemical S	Chemical Substances in Automotive, Fuel, Agriculture, Outdoor Use Products		
C407	Lawn and garden products	Lawn and gardening tools designed specifically for children (e.g., kids rake)	
C999	Other (specify)	Other items specifically intended for use by children age 14 or younger	

4.8.2.4 <u>Percentage of Production Volume</u>

Estimate the percentage of your production volume for each chemical substance manufactured (including imported) in an amount of 100,000 lb or more that is attributable to each specific consumer and commercial end use carried out at sites under your control, as well as at sites that receive a reportable chemical substance from you either directly or indirectly (including through a broker/distributor, from a customer, etc.), to the extent that such information is known to or reasonably ascertainable to you (40 CFR 711.15(b)(4)(ii)(D)). You should round estimates to the nearest ten percent of production volume (40 CFR 711.15(b)(4)(ii)(D)). If you would like to provide more specific percentages, please do so. You may not round a consumer and commercial product category that accounts for five percent or less of the total production volume of a reportable chemical substance to zero percent if the

production volume attributable to that consumer and commercial product category is greater than or equal to 25,000 lb. (40 CFR 711.15(b)(4)(ii)(D)). In such cases, you must report the percentage of production volume

report the percentage of production volume attributable to that consumer and commercial product category to the nearest one percent of the production volume (40 CFR 711.15(b)(4)(ii)(D)).

Note that the total percentage of production volumes reported may add up to more or less than 100 percent. Rounding to the nearest ten percent can result in summed percentages either above or below 100 percent. Additionally, the total percentage of production volume may add up to less than 100 percent if, for example:

How to determine your percent production volume:

- 1. Determine the production volume that is attributable to each consumer and commercial end use.
- 2. Determine your total production volume for 2011.
 - a. Add together the volume domestically manufactured and the volume imported.
 - b. DO NOT subtract the volume used on-site or the volume exported
- 3. Divide the volume determined in step 1 by the volume determined in step 2 and multiply by 100.
- You do not know or cannot reasonably ascertain information about how all your production volume is used in consumer and commercial products;
- More than ten commercial or consumer product categories are applicable to your chemical substance; or
- A portion of your production is consumed in industrial uses or exported.

4.8.2.5 Maximum Concentration Code

When the chemical substance you manufacture (including import) is used in commercial or consumer products, you are required to report the estimated typical maximum concentration (measured by weight) of each chemical substance in each commercial or consumer product category reported in Part III of Form U (40 CFR 711.15(b)(4)(ii)(E)). For each chemical substance used in a reported commercial or consumer product, select from the drop down box the code that corresponds to the appropriate concentration range. Table 4-4 shows the codes and concentration ranges which appear in the drop down box.

4.8.2.6 Number of Commercial Workers Code

Report the total number of commercial workers, including those at sites not under your control that are reasonably likely to be exposed while using the reportable chemical substance, with respect to each commercial use (40 CFR 711.15(B)(4)(II)(F)). For each chemical substance

with a commercial use reported in Part III, select code which corresponds to the appropriate range of commercial workers reasonably likely to be exposed. Table 4-10 shows the code and worker ranges which appear in the drop down box.

5.0 How to Assert Confidentiality Claims

You can designate your CDR data as confidential business information (CBI) by checking the CBI box associated with selected data elements, responding to a series of substantiation questions for selected data elements, and ensuring that the signature of your authorized official accompanies any substantiation. You are encouraged to limit claims for CBI only to situations in which they are absolutely necessary. You are also encouraged not to assert confidentiality claims if your circumstances have changed and confidentiality is no longer needed. CBI claims will not be accepted or honored if they are not asserted as required at the time information is submitted to EPA or if they are submitted in a manner inconsistent with the CDR rule.

CBI claims must be warranted under the criteria for determining confidentiality found within 40 CFR 2.208. EPA's procedures for processing and reviewing confidentiality claims are set forth at 40 CFR Part 2, Subpart B and 40 CFR 711.30. EPA strongly encourages you to review confidentiality claims carefully to ensure that the information in question falls under the protection of TSCA Section 14 and fully meets the substantive questions within the Part 2 rules. If you assert that any of the information contained in the answers to these questions itself contains CBI, you must clearly identify the information that is claimed confidential by marking the specific information on each page with a label such as "confidential business information," "proprietary," or "trade secret" (40 CFR 711.30(b)(2)). If you fail to follow these instructions, EPA may release the information to the public without further notice to you.

Specific procedures to claim the identity of the reported chemical substance, the identity of the site, and processing and use data as CBI are addressed in the following subsections. Table 5-1 summarizes the special considerations for these data elements.

Data Element	Asserting a Confidentiality Claim
Chemical Identity	The chemical identities listed on the public version of the TSCA Inventory are already publicly known; therefore submitters cannot claim such chemical identities as CBI. The Agency has in the past, and will continue to do so, limited chemical identity claims to only those chemical substances listed on the confidential portion of the Master Inventory File. To assert a confidentiality claim for the TSCA Accession Number corresponding to the confidential chemical substance intended to be reported, check CBI box in Part II Section A and submit written answers to questions in 40 CFR 711.30(b)(1). (The questions are reproduced in Table 5-2.)
Site Identity	Check CBI box in Part II Block 2.B.2 and submit written answers to the questions in 40 CFR 711.30(c)(1). (The questions are reproduced in Table 5-3.)
Processing and Use Data	Check the appropriate CBI box in Part III, and submit written answers to questions in 40 CFR 711.30(d)(1) for each CBI box checked. (The questions are reproduced in Table 5-4.)

Table 5-1. Special Considerations for Asserting Confidentiality Claims

5.1 Chemical Identity

You may assert a confidentiality claim for the specific identity of a chemical substance only if EPA treats the identity of that chemical substance as confidential on the TSCA Inventory at the time your report is submitted (i.e., the chemical substance is not on the public portion of the TSCA Inventory) (40 CFR 711.30(b)). If you report a previously confidential chemical

substance as nonconfidential, that chemical substance subsequently will be listed on the TSCA Inventory as nonconfidential.

To assert a claim for the confidential chemical identity associated with the TSCA Accession Number ,you must check the appropriate CBI box in Part II, Section A **and** submit detailed written answers to the substantiation questions listed in Table 5-2. Checking the CBI box for chemical identity automatically triggers the substantiation questions. The answers must be complete and specific to the chemical substance in question. If you answer "Yes" to question 11, write the file name in the text box and electronically attach the relevant document.

Table 5-2. Substantiation Questions To Be Answered When Asserting Chemical Identity CBI Claims (40 CFR 711.30(b)(1))

No.	Question
1.	What harmful effects to your competitive position, if any, or to your supplier's competitive position, do you think would result from the identity of the chemical substance being disclosed in connection with reporting under the CDR? How could a competitor use such information? Would the effects of disclosure be substantial? What is the causal relationship between the disclosure and the harmful effects?
2.	For how long should confidential treatment be given? Until a specific date, the occurrence of a specific event, or permanently? Why?
3.	Has the chemical substance been patented? If so, have you granted licenses to others with respect to the patent as it applies to the chemical substance? If the chemical substance has been patented, and therefore disclosed through the patent, why should it be treated as confidential?
4.	Has the identity of the chemical substance been kept confidential to the extent that your competitors do not know it is being manufactured or imported for a commercial purpose by anyone?
5.	Is the fact that the chemical substance is being manufactured (including imported) for a commercial purpose available to the public, for example, in technical journals, libraries, or State, local, or Federal agency public files?
6.	What measures have you taken to prevent undesired disclosure of the fact that the chemical substance is being manufactured (including imported) for a commercial purpose?
7.	To what extent has the fact that this chemical substance is manufactured (including imported) for commercial purposes been revealed to others? What precautions have been taken regarding these disclosures? Have there been public disclosures or disclosures to competitors?
8.	Does this particular chemical substance leave the site of manufacture (including import) in any form (e.g., as product, effluent, emission)? If so, what measures have been taken to guard against the discovery of its identity?
9.	If the chemical substance leaves the site in a product that is available to the public or your competitors, can the chemical substance be identified by analysis of the product?
10.	For what purpose do you manufacture (including import) the chemical substance?
11.	Has EPA, another Federal agency, or any Federal court made any pertinent confidentiality determinations regarding this chemical substance? If so, please attach copies of such determinations.

5.2 Site Identity

You may assert a claim of confidentiality for the identity of the manufacturing (including importing) site if the linkage of the site with a reportable chemical substance is confidential and not publicly available (40 CFR 711.30(c). Claiming site identity as confidential protects the release of site name (i.e., where the chemical substance was manufactured (including imported)) address, city, county, state, zip code, and Dun & Bradstreet number. Note that claiming site identity confidential does not protect the link between the chemical identity and the company

name. To protect the link between the chemical identity and the company name, you need to check the CBI box associated with the company name.

To assert a claim of confidentiality for site identity, check the appropriate CBI box in Part II, Section B **and** substantiate your claim with detailed written answers to the two questions (see Table 5-3) at 40 CFR 711.30(c)(1). Checking the CBI box for site identity automatically triggers the substantiation questions. Note that confidentiality claims for both site and company information are to be made in conjunction with a specific chemical substance and cannot be made generically for a whole submission. For instance, if you report four chemical substances manufactured (including imported) at a given site on Form U, you are able to claim the site identity as confidential for one chemical substance while releasing this information for the other three. If the site identity for a particular chemical substance is not claimed as CBI, or is claimed but not substantiated pursuant to 40 CFR 711.30(c), EPA may make that information available to the public without further notice to the submitter. EPA will not impute the existence of a CBI claim for site identity from a CBI claim for company identity, even if the company name appears within the site identity information.

Table 5-3. Substantiation Questions To Be Answered When Asserting Plant Site Identity CBI Claims (40 CFR 711.30(c)(1))

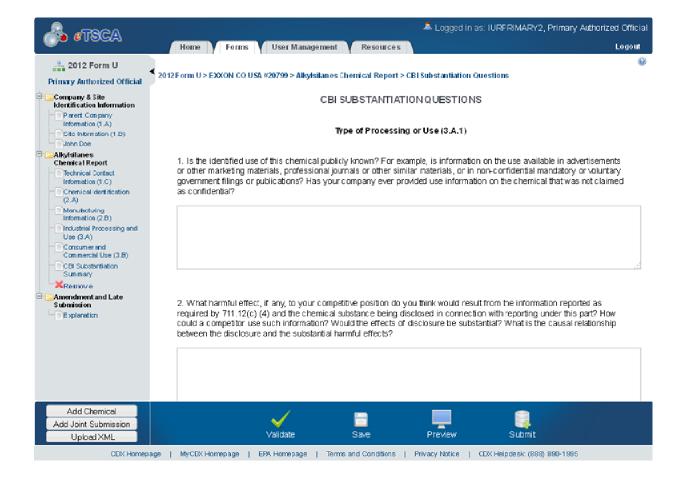
No.	Question	
1.	Has site information been linked with a chemical identity in any other Federal, state, or local reporting scheme? For example, is the chemical identity linked to a facility in a filing under the EPCRA section 311, namely through a Material Safety Data Sheet (MSDS)? If so, identify all such schemes. Was the linkage claimed as confidential in any of these instances?	
2.	What harmful effect, if any, to your competitive position do you think would result from disclosure of the identity of the site and the chemical substance? How could a competitor use such information? Would the effects of disclosure be substantial? What is the causal relationship between the disclosure and the harmful effects?	

5.3 Processing and Use Information

You may assert a claim of confidentiality for data associated with the processing and use information reported in Part III of Form U if you have reason to believe that release of the information would reveal trade secrets or confidential commercial or financial information, as provided by section 14 of TSCA and 40 CFR Part 2. While submitters were not required to provide upfront substantiation for this information during the last reporting cycle (2006), EPA now requires upfront substantiation of CBI claims for these data. To assert a claim of confidentiality for data associated with processing and use information, check the appropriate CBI box(es) in Part III of Form U and, for each box checked, substantiate your claim with detailed written answers to the questions in Table 5-4 (40 CFR 711.30(d)(1)). Checking a CBI box for a specific data element automatically triggers the substantiation questions. The answers must be complete and specific as to the chemical substance and data element in question.

Table 5-4. Substantiation Questions To Be Answered When Asserting Processing and Use Information CBI Claims (40 CFR 711.30(d)(1))

No.	Question	
1.	Is the identified use of this chemical substance publicly known? For example, is information on the use available in advertisements or other marketing materials, professional journals or other similar materials, or in non-confidential mandatory or voluntary government filings or publications? Has your company ever provided use information on the chemical substance that was not claimed as confidential?	
2.	What harmful effect, if any, to your competitive position or to your customer's competitive position do you think would result from disclosure of the processing and use data and the chemical substance? How could competitor use such information? Would the effects of disclosure be substantial? What is the causal relationship between the disclosure and the harmful effects?	



5.4 CBI Claims for "NKRA" Responses

If you designate information as "not known to or reasonably ascertainable by" (i.e., if you make a "NKRA" response), you **can not** claim the "NKRA" response as confidential.

5.5 Negative Responses for Products Intended for Use by Children

If your chemical substance is not used in products intended for use by children (i.e., you answered 'No' in Part III.B), you are encouraged **not** to claim the information as confidential.

6.0 How to Submit Your Form U to EPA

For the 2012 submission period, manufacturers (including importers) are required to use e-CDRweb, the CDR reporting tool, and EPA's Central Data Exchange (CDX) to create an electronic version of Form U to submit information in response to the requirements of this rule (40 CFR Part 711). EPA will no longer accept paper forms or electronic media (diskette, CD-Rom, etc.) for any CDR submission. A separate Form U is required for each plant site (40 CFR 711.15(a)). If you need to report information for more than one reportable chemical substance at your site, submit the information for all the chemical substances on one Form U.

6.1 The e-CDRweb Tool

The reporting tool, e-CDRweb, is a user-friendly, web-based tool that allows you to submit Form U electronically over the Internet. The tool includes embedded help files to help guide you through the CDR submission process and integrates with the Agency's Substance Registry Services (SRS) and Facility Registry System (FRS) to improve data quality and facilitate data entry. It can be accessed anywhere you have a connection to the Internet and requires no downloads or tool installs. Once you complete the relevant data entry, the tool will validate the form by performing basic error checks and making sure all the required fields are completed, allow you to create and save the submission for your records, and encrypt your file for submission through CDX.

Authorized officials and all support registrants must register to use the e-CDRweb tool at https://cdx.epa.gov. This registration requires the completion of an electronic signature agreement (ESA) form. You can either submit the form electronically or mail the form to EPA. If you choose to mail the ESA form, please allow adequate time for the mailing and processing of the form, which is estimated to take a minimum of five (5) business days. Note that a foreign supplier cannot submit an ESA electronically. If you are already registered with CDX for another TSCA program (e.g., the New Chemicals program), as either an Authorized Official or Support Registrant, you do not need to register again. In this case, log into CDX with your current user ID and password, and add the CDR as a new program.

For sites with their own data collection processes, e-CDRweb allows direct data transfers of Extensible Markup Language (XML) files into the reporting tool. By selecting "Upload XML," you can directly enter data for more than one chemical substance in Form U. You will be able to make adjustments to the uploaded information. The schema is available from the CDR web site at http://www.epa.gov/cdr or http://www.epa.gov/iur.

For more information on accessing e-IURweb, please visit http://www.epa.gov/cdr or http://www.epa.gov/iur. Additional assistance is available from the TSCA Hotline by telephone at (202) 554-1404 or by email at http://www.tsca-hotline@epa.gov. The TSCA hotline operates Monday through Friday, from 8:30 a.m. to 5:00 p.m. (EST).

6.2 The Central Data Exchange (CDX)

CDX is a service which enables you to electronically submit data to EPA. Registering your name, contact information, and information of the company on whose behalf you are submitting a Form U is required.

The following tasks can be performed through CDX:

- Retrieval of the company identity for which you are registered to submit documents;
- Cryptographic key pair generation;
- File encryption;
- File decryption;
- Document Submission allows you to submit your CDR Form U electronically to EPA; and
- Copy of Record Download allows you to download the official submitted document and the XML associated with that document.

Benefits of Submitting Forms through CDX:

- Reduces time and expense of mailing paper
- Improves security using digital encryption
- Eliminates errors associated with manual processing
- Automates and expedites validation and receipt acknowledgement
- Minimizes follow-up phone calls for clarification and correction

For questions or additional information about CDX, please visit http://www.epa.gov/cdx. Additional assistance can be obtained from the CDX help desk at helpdesk@epacdx.net or CDX technical support staff at 888-890-1995 (8:00 a.m. to 6:00 p.m. (EST) Monday through Friday).

6.3 Registering with CDX

CDX registration is required only for persons who will be submitting a Form U to EPA on behalf of a site, or for persons who are authorized to enter CDR data for a site. Each site that submits CDR information is <u>required</u> to have an Authorized Official (AO) who is the person responsible for signing the form and is responsible for the data). A site may also have one or more Support Registrants (SR) who complete Form U on behalf of the authorized official. For purposes of CDX registration, the roles and access rights of an Authorized Official and a Support Registrant are as follows:

• **Primary Authorized Official** -- The Primary Authorized Official is the person legally responsible for the site's CDR submission. The AO is the **only** person who can create a new Form U, reopen a completed Form U, and electronically sign and submit a Form U. The AO, typically, is a senior official for the reporting company, often with management responsibility for the person (or persons) completing the form. A company may have more than one person register as an AO; however, each AO will be given a separate CDX user ID and will need to know the passphrase of a specific Form U to access the form. For CDR purposes, the "primary" designation indicates the AO for a U.S. site. In the event that the CDR submission is part of a joint submission, the Primary AO is responsible for initiating the joint submission. EPA assumes that this person may be the authorized official for more than one plant site; therefore, there is a one-to-many relationship between an authorized official and sites.

- Secondary Authorized Official -- The Secondary Authorized Official is the person legally responsible for the secondary portion of a joint CDR submission. As with the Primary AO, the Secondary AO is the only person who can create a new Form U, reopen a completed Form U, and electronically sign and submit a Form U. The Secondary AO, typically, is a senior official for the secondary company, often with management responsibility for the person (or persons) completing the form. A company may have more than one person register as an AO; however, each AO will be given a separate CDX user ID and will need to know the passphrase of a specific Form U to access the form. EPA assumes that this person may be the authorized official for more than one plant site; therefore, there is a one-to-many relationship between an authorized official and sites.
- Primary Support Registrant -- The Primary Support Registrant is a person designated by an authorized official to provide supporting information on behalf of a site. The SR may be a corporate on-site contact, a technical contact, a paid employee of the company, an outside consultant for the company, or an authorized representative agent for the company. Support registrants are not allowed to create a new Form U or sign the certification statement required for the initial CDR submission, but they may enter or modify data for the site for which they are authorized. EPA assumes that this individual may be associated with more than one site, and even more than one company. SRs must register with CDX before they can be associated with a site.
- Secondary Support Registrant -- The Secondary Support Registrant is a person designated by a Secondary AO to provide supporting information on behalf of the secondary company in a joint submission. The SR may be a corporate on-site contact, a technical contact, a paid employee of the company, an outside consultant for the company, or an authorized representative agent for the company. SRs are not allowed to create a new submission or sign the certification statement required for the initial CDR submission, but they may enter or modify data for the site for which they are authorized. SRs must register with CDX before they can be associated with a site.

6.3.1 Registering as a Primary Authorized Official

CDX registration is a multi-part process. Follow these instructions to register at the CDX web site and add the e-CDRweb tool to your new CDX account.

Step 1: Complete the basic registration information

- a. Go to http://cdx.epa.gov to create your CDX account.
- b. On the CDX Home page, click the hyperlink next to "If you are new to CDX and wish to register, please click <u>here</u>." A warning and privacy notice will be displayed.
- c. Click the "Click here to continue" link to start the registration process.
- d. Accept the Terms and Conditions registration agreement. You will be directed to the Registration page.

- e. Complete all required information noted with a red asterisk. After entering a user name, password, and secret question, you will be asked to enter your organization's information.
- f. On the Program Selection page, select the Chemical Safety and Pollution Prevention option and click "Next."
- g. On the Add Program ID page, change the "Program ID Type" dropdown to "Primary Authorized Official." This will trigger the electronic signature agreement process.

Step 2: Sign the Electronic Signature Agreement (ESA)

The ESA form contains information entered during CDX registration along with terms of agreement for use of the electronic signature, and your signature. This form is the main registration form for CDX and helps ensure that all electronic signature holders are responsible parties. If you represent multiple sites, you will be able to generate a single ESA for all the sites you represent. Complete and electronically submit the ESA form. If you prefer, you can print and mail the form to EPA.

Step 3: Complete Online Registration

After completing and submitting the ESA form, the "successfully registered" confirmation page will be displayed. Click "Finished" to complete your online registration as a submitter for the 2012 CDR. You will be taken to the MyCDX home page. At this point, you have only created an online account and signed up for a role. Your registration application will be reviewed and if your credentials are confirmed, you will be notified via e-mail that your account has been activated.

Step 4: Activate your account

Once your account has been activated, the system will send you a registration status change notification email, requesting that you log into the system and continue with the user setup process.

Step 5: Complete the 20-5-1 Questionnaire

After logging back into CDX, you will be asked to provide answers to five security questions from the "20-5-1 Questionnaire." Each time you enter CDX, thereafter, you will be prompted with one randomly selected question of the five you answered to confirm your identity.

The "successfully registered" confirmation page will be displayed. Click "Continue" to complete your registration. You will be taken to the MyCDX home page.

Step 6: Click the "Edit Current Account Profiles" link

You will be taken to the "Edit Organization Profiles" screen. Once on the page, click the "Add/Edit Facilities" link and follow the prompts to select the name of your

reporting site from EPA's Facility Registry System (FRS) Facility Selector. The FRS Facility Selector will appear in a separate pop-up window. Search results will be returned displaying: EPA Registry ID, Facility Name, and Address.

Step 7: Click the "OPPT Chemical Submission System" link

You will be taken to the OPPT Chemical Submission System homepage. Choose "Chemical Data Reporting (CDR)" as your submission type and click "Ok."

Step 8: Begin using the e-CDRweb tool

Complete Parts I-III of Form U for all your reportable chemical substances as described in Section 4 of this document. You will need to create a passphrase before you can start to complete Form U. See Section 6.4 for instructions on creating a passphrase.

Note: Items such as the validation page and the SRS search page will appear in separate windows. Ensure that your pop-up blocker is disabled before you begin to complete Form U.

6.3.2 Registering as a Primary Support Registrant

CDX registration is a multi-part process. Follow these instructions to register at the CDX web site and add the e-CDRweb tool to your CDX account.

Step 1: Complete the basic registration information

- a. Go to http://cdx.epa.gov to create your CDX account.
- b. On the CDX Home page, click the hyperlink next to "If you are new to CDX and wish to register, please click <u>here</u>." A warning and privacy notice will be displayed.
- c. Click the "Click here to continue" link to start the registration process.
- d. Accept the Terms and Conditions registration agreement. You will be directed to the Registration page.
- e. Complete all required information noted with a red asterisk. After entering a user name, password, and secret question, you will be asked to enter your organization's information.
- f. On the Program Selection page, select the "Chemical Safety and Pollution Prevention" option button and click "Next."
- g. On the Add Program ID page, change the "Program ID Type" dropdown to "Primary Support Registrant." This will trigger the electronic signature agreement process.

Step 2: Enter the Authorized Official's CDX User ID

Enter the CDX user ID of the Authorized Official for whom you will be submitting information. If you enter the Authorized Official's user ID correctly the system will ask for further verification. After viewing the information of the Authorized Official whose ID was entered, click the "Next" button to complete the electronic signature agreement form.

Step 3: Sign the Electronic Signature Agreement (ESA)

The ESA form contains information entered during CDX registration along with terms of agreement for use of the electronic signature, and your signature. This form is the main registration form for CDX and helps ensure that all electronic signature holders are responsible parties. Complete and electronically submit the ESA form. If you prefer, you can print and mail the form to EPA.

Step 4: Complete Online Registration

After completing and submitting the ESA form, the "successfully registered" confirmation page will be displayed. Click "Finished" to complete your online registration as a Support Registrant. You will be taken to the MyCDX home page. At this point, you have only created an online account and signed up for a role. Your registration application will be reviewed and if your credentials are confirmed, you will be notified via e-mail that your account has been activated.

Step 5: Activate your account

Once your account has been activated, the system will send you a registration status change notification email, requesting that you log into the system and continue with the user setup process.

Step 6: Complete the 20-5-1 Questionnaire

After logging back into CDX, you will be asked to provide answers to five security questions from the "20-5-1 Questionnaire." Each time you enter CDX, thereafter, you will be prompted with one randomly selected question of the five you answered to confirm your identity.

The "successfully registered" confirmation page will be displayed. Click "Continue" to complete your registration. You will be taken to the MyCDX home page.

Step 7: Click the "Edit Current Account Profiles" link

You will be taken to the "Edit Organization Profiles" screen. Once on the page, click the "Add/Edit Facilities" link and follow the prompts to select the name of your reporting site from EPA's Facility Registry System (FRS) Facility Selector. The FRS Facility Selector will appear in a separate pop-up window. Search results will be returned displaying: EPA Registry ID, Facility Name, and Address.

Step 8: Click the "OPPT Chemical Submission System" link

You will be taken to the OPPT Chemical Submission System homepage. Choose "Chemical Data Reporting (CDR)" as your submission type and click "Ok."

Step 9: Begin using the e-CDRweb tool

Complete Parts I-III of Form U for all your reportable chemical substances as described in Section 4 of this document. You will need to create a passphrase before you can start to complete Form U. See Section 6.4 for instructions on creating a passphrase.

Note: Items such as the validation page and the SRS search page will appear in separate windows. Ensure that your pop-up blocker is disabled before you begin to complete Form U.

6.4 Creating a Passphrase

In order to begin completing your Form U, you will need to create a passphrase that is 8-20 characters in length. To better protect your account, your passphrase should contain a combination of letters and numbers. Your passphrase may include spaces, but should <u>not</u> contain special characters (e.g., +, ?, and *). You can create and use the same passphrase for all your reporting sites.

A passphrase can only be created by an Authorized Official for a reporting site. Your passphrase will be used as an encryption key to protect the contents of your data. As an Authorized Official, you are responsible for remembering your passphrase and distributing it to only authorized Support Registrants for your site.

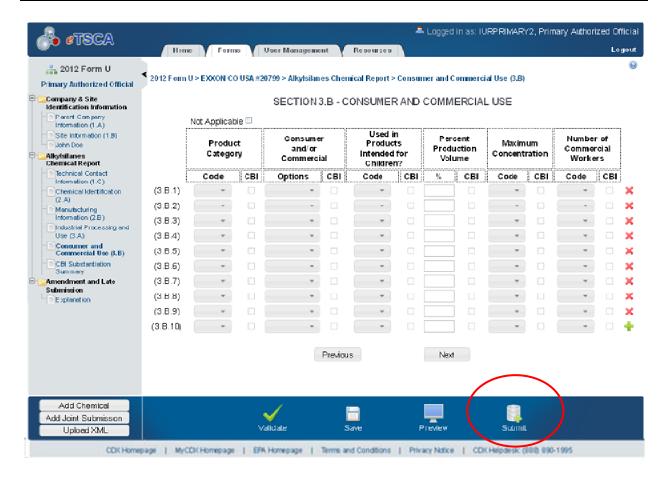
A CTSCA	Logged in as: IURPRIMARY2, Primary Authorized Official	
00 010001	Logout	
	₩	
CREATE	PASSPHRASE	
Please create a passphrase that has minimum of 8 characters and maximum of 20 characters in length. To better protect your account, your passphrase should contain a combination of letters and numbers. Your passphrase may include spaces, but should https://example.com/recombination-nc/letters and numbers. Your passphrase may include spaces, but should https://example.com/recombination-nc/letters and numbers. Your passphrase may include spaces, but should https://example.com/recombination-nc/letters and numbers. Your passphrase may include spaces, but should https://example.com/recombination-nc/letters and <a a<="" example.com="" href="https://example.com/recombination-nc/letters and <a href=" https:="" letters<="" recombination-nc="" td="">		
New Passphrase:		
Confirm New Passphrase:		
	Your passphrase will be used as an encryption key to protect the contents of your data. assphrase and distributing it to only authorized support registrants for your site.	
Note: If you lose or forget your passphrase, you will not be able to access your 2012 IUR Form U to print, submit, or make changes. You will need to complete a new 2012 IUR Form U and create a new passphrase for the reportable chemical substance(s) at your site. For security reasons, the system administrator will not have access to your passphrase and will not be able to retrieve it or reset it to a new one.		
Cancel	Next	
CDX Homepage MyCDX Homepage EPR Homepage	Terms and Conditions Privacy Notice CCIX Helpdesk: (888) 890-1995	

***NOTE: If you lose or forget your passphrase, you will not be able to access your Form U to print, submit, or make changes. You will need to complete a new Form U and create a new passphrase for the reportable chemical substance(s) at your site. For security reasons, the system administrator will not have access to your passphrase and will not be able to retrieve it or reset it to a new one.

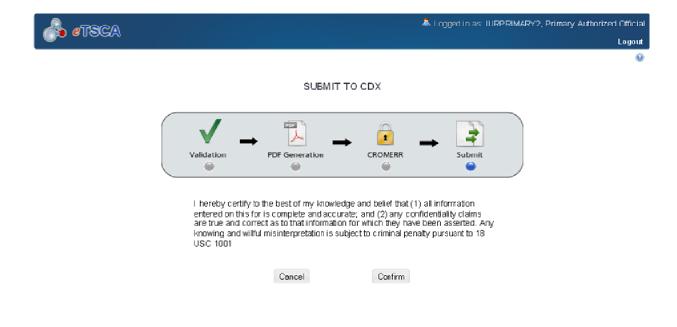
6.5 Submitting Form U through CDX

Follow these instructions to submit Form U. Please note that EPA will not be able to access a site's Form U until it is submitted through CDX.

Step 1. After you enter data for all the reportable chemical substances at your site, click the "Submit" button at the bottom of the screen. Note that only an Authorized Official can sign and submit a Form U.



- **Step 2.** Please correct all errors and review all warnings on the validation page to ensure the information is complete and correct.
- **Step 3.** Print or save a courtesy copy of your Form U submission. This document is for your personal records only. DO NOT SUBMIT THE FORM TO EPA.
- **Step 4.** Follow the prompts that will lead you to CDX, re-enter your passphrase, and complete the CROMERR 20-5-1 questions.
- **Step 5.** Click "Confirm" to submit your Form U to EPA.
- **Step 6.** Please verify that all fields are correct on the preview screen. *Once you submit* Form U, you will need to log into CDX to access the original Form U and make changes to the data. See Section 6.8 if you would like to make changes to your Form U submission.
- **Step 7.** Check the status of your submission through CDX.





After the file is processed and the signature validated, messages will be sent to the registered email address and the associated CDX inbox. These messages will confirm receipt of the CDR submission and validation of the signature.

To maintain the confidentiality of information submitted to EPA, e-CDRweb encrypts submissions using a Federal Information Processing Standards (FIPS) certified encryption module. The submission is encrypted by the reporting tool and remains encrypted during transmission to CDX, while stored and archived in CDX, and during transmission from CDX to EPA's operational data repository. The file can only be decrypted with EPA's private key when it reaches its final destination. EPA is the only party that possesses the private key, which converts the encrypted text back into readable text. EPA recognizes that securing CBI data is of utmost and critical importance to the success of CDX in the CDR submission process. For that reason, only CBI-cleared, EPA employees and contractors will be permitted access to CDR submissions.

6.6 Accessing Your Site's Data Before Submission

Form U can be completed in more than one session. The tool will save all data entered on a page once you navigate away from the page (i.e., you click "Next" or "Previous"). However, please click the "Save" button before logging out of the tool. You can pick up where you left off at any time.

Note that if a user accesses a page that is being edited by another individual, he or she will be able to view the most updated version of the form, but will not be able to edit any information. However, multiple people can edit different pages of the form at the same time.

6.7 Special Instructions for Joint Submitters

Joint submissions are allowed only in those instances where a supplier will not disclose to the manufacturer (including importer) the specific chemical name of the imported chemical substance or of a reactant used to manufacture a chemical substance, because the supplier claims the specific chemical name is confidential.

This may happen, for instance, when a company is importing a mixture under a trade name, and the foreign manufacturer refuses to reveal the chemical identity of a confidential component of the mixture. In this case, the importer and the supplier can jointly report the information through a joint submission. The importer must ask the supplier of the confidential chemical substance to directly provide EPA with the correct chemical identity in Part IV of Form U (see 40 CFR 711.15(b)(3)(i)(A)).

This may also happen in the event a manufacturer cannot provide the entire chemical identity of a chemical substance it manufactures because the chemical substance is manufactured using a reactant having a specific chemical identity that the reactant supplier claims as confidential and will not reveal to the manufacturer. In this case, the manufacturer and the supplier of the reactant can jointly report the information through a joint submission. The manufacturer must submit a report directly to EPA containing all information he or she knows or can reasonably ascertain about the chemical identity. Furthermore, the manufacturer must also ask the reactant supplier to directly provide to EPA the correct chemical identity of the confidential reactant in a joint submission (see 40 CFR 711.15(b)(3)(i)(B)).

A Primary AO or a Primary SR can identify, on a chemical-by-chemical basis, the Secondary AO for a chemical substance. A site may have different Secondary AOs for different chemical substances in its submission. The e-CDRweb tool will generate a unique ID number for each chemical substance (identified by a trade name). Therefore, a Secondary AO may receive multiple ID numbers from a Primary AO or SR. A Secondary AO may also report multiple chemical substances under one ID number in the case that the ID number refers to a mixture. In that situation, the Secondary AO will be identifying the chemical substances that comprise the mixture.

Because signatures are required by each party of a joint submission, they must each register with CDX, and complete their own sections of the same Form U report. The reporting tool will match both submissions based upon the unique ID number sent by the manufacturer (including importer) to notify the supplier of the partial CDR submission. Secondary AOs and SRs do not have access to any of the information submitted to EPA by the Primary AO. Likewise, Primary AOs and SRs cannot see the information that the Secondary AO reports to EPA. This way, the confidentiality of information for both the primary and secondary submitters is protected. The information provided by both submitters will be combined and processed as one joint submission once they are received by EPA.

NOTE: In the event that a manufacturer (including importer) actually knows or can reasonably ascertain the chemical identity (e.g., the CASRN or Accession Number) of a chemical substance subject to CDR reporting, the manufacturer (including importer) must

provide that information irrespective of a supplier's confidentiality claims. If such a primary submitter wishes to claim the chemical identity as confidential, to do so it must check the CBI box and provide upfront substantiation as described in Section 4.6.1. Different CBI procedures, described below, apply to submissions made directly by suppliers (i.e., by secondary and tertiary submitters).

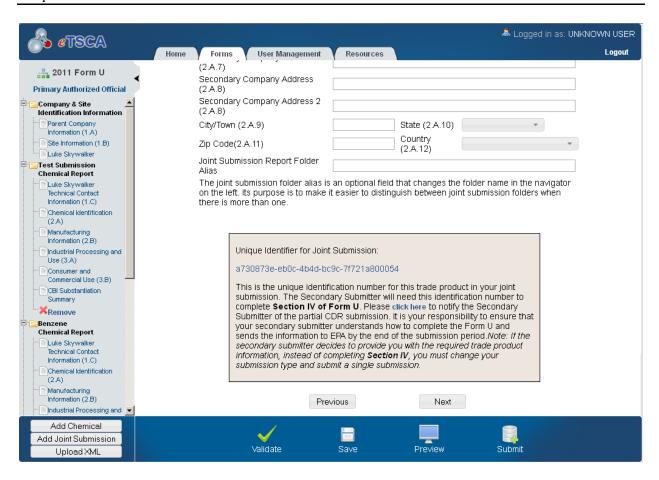
6.7.1 Submitting as a Manufacturer (including Importer)

If you are a manufacturer (including importer), as primary submitter, you should:

- 1. Register with CDX as a Primary Authorized Official or Primary Support Registrant. See section 6.3 for instructions on registering with CDX.
- 2. Complete Parts II and III of Form U for all your reportable chemical substances as described in Section 4 of this document. If you would like to create a joint submission, click the "Add Joint Submission" button to complete the required information for each reportable chemical substance supplied to you. Use the "Add Chemical" tab to include information for additional chemical substances supplied by the same company or another company.

a. Part II- Section A: Joint Submission Information (Blocks 2.A.5 through 2.A.12)

Click the "Add Joint Submission" button on the Navigation bar. Under the "Joint Submission Report" folder, click the "Chemical Identification (2.A)" link. The screen will display "Section 2.A – Chemical Identification (Joint Submissions Information)." Enter the trade name or another name to identify the proprietary mixture, and your secondary submitter's company name and complete mailing address. You may provide additional information about the trade name product (e.g., chemical substances that you know are components of the trade name product) in Block 2.A.6.



Follow the instructions in the box labeled "Unique Identifier for Joint Submission" to communicate with the secondary submitter via email. The tool will generate an email with a unique ID number and language that you can use to notify your secondary submitter of the partial CDR submission containing information for the trade name product. The ID number will be used to link the joint reports in an internal database. The email will request that the secondary submitter report the correct chemical identity information to EPA using e-CDRweb and refer them to the CDR web site (http://www.epa.gov/cdr or http://www.epa.gov/iur) for guidance on registering with CDX and completing Part IV of Form U. You can indicate whether you would like the tool to send a copy of your email to EPA, thereby providing a record of the request to the secondary submitter.

b. Part II-Section B: Manufacturing Information (Blocks 2.B.1 through 2.B.20)

Enter the manufacturing information for the proprietary chemical substance as described in Section 4.7 of this document.

c. Part III: Processing and Use Information (Blocks 3.A.1 through 3.B.10)

Enter the processing and use information for the proprietary chemical substance as described in Section 4.8 of this document.

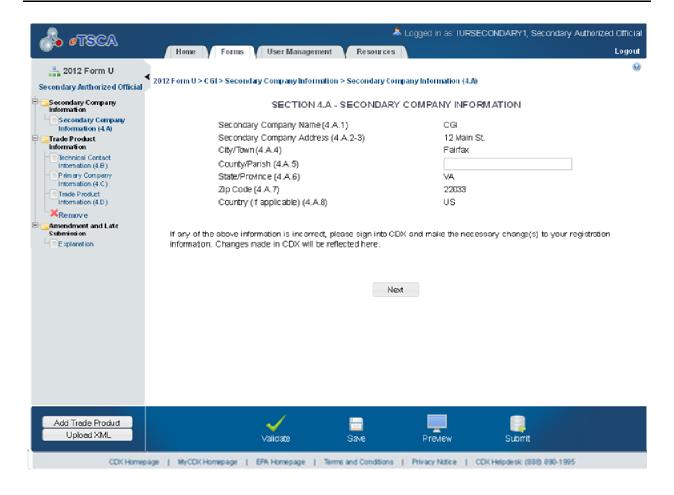
- 3. Submit the form to EPA via CDX. Please verify that all fields are correct on the preview screen.
- 4. It is your responsibility to ask your secondary submitter to complete Part IV of Form U and send the information to EPA by the end of the submission period. It is also your responsibility to include a copy of your request to your secondary submitter with the portion of the Form U that you send to EPA. The tool will make a copy of record available to the primary and the secondary submitters after EPA receives each portion of a joint submission. If the secondary submitter decides to provide you directly with the required trade name product information, you should change your submission type and submit a single submission.

6.7.2 Submitting as a Supplier

If you are a supplier, as secondary submitter, you should:

- 1. Register with CDX as a "Secondary Authorized Official" or "Secondary Support Registrant." See section 6.3 for instructions on registering with CDX. Note that if you're an foreign supplier will need to complete and mail an Electronic Signature Agreement (ESA) form to EPA as part of CDX registration. If you are a foreign supplier, you cannot submit the ESA electronically. **Please allow adequate time for the mailing and processing of the form, which is estimated to take a minimum of five (5) business days**. If you are already registered with CDX for another TSCA program (e.g., the PMN program) as either an Authorized Official or Support Registrant, you do not need to register again. In this case, log into CDX with your current user ID and password, and add the CDR as a new program.
- 2. Complete Part IV of Form U.
 - a. Section A: Secondary Company Information (Blocks 4.A.1 through 4.A.8)

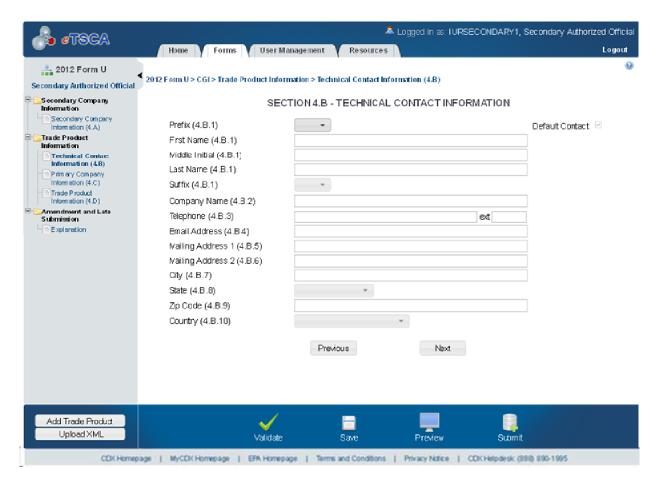
Your company information (domestic or foreign company name and mailing address) provided during CDX registration will populate Section A. Please double check this information to ensure all required fields are complete and accurate. If any information is incorrect or incomplete, the Authorized Official should make the necessary changes in CDX.



b. Section B: Secondary Technical Contact Information (Blocks 4.B.1 through 4.B.10)

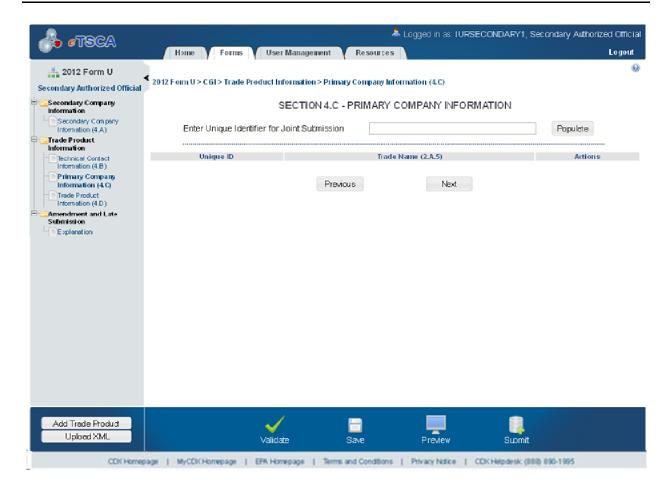
You are responsible for designating a technical contact for your company. Select the contact from the drop down list of Support Registrants or enter information for a new technical contact. If you select from the list of Support Registrants, the technical contact information (name, phone number, mailing address, etc.) will populate Section B. Please double check this information to ensure all required fields are complete and accurate. If any information is incorrect or incomplete, the Authorized Official should make the necessary changes in CDX.

The technical contact should be a person who can answer specific questions about the reported chemical substance(s) in your CDR submission. Typically, a person located at the manufacturing site is best able to answer such questions. The technical contact need not be the person who signs the certification statement.



c. Section C: Primary Company Information

Enter the Unique Identifier for Joint Submissions number provided to you by the manufacturer (including importer). Click the "Populate" button to generate the trade product name provided by the manufacturer (including importer). Verify the information and click the "Next" button to enter the information to identify the chemical substance.



d. Section D: Trade Product Identification Information

In this section of the Form U, enter your trade product name (which may be different than the name provided by the primary submitter) and the chemical composition of the product.

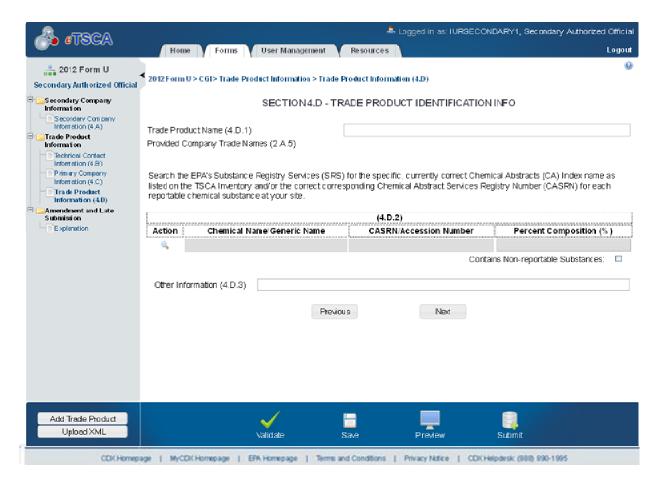
Step 1: Enter the trade product name used to identify the chemical substance in Box 4.D.1.

Step 2: In Section 4.D.2, click on the magnifying glass under the "Action" column and select the correct CA Index Name and CASRN for the chemical substance from the SRS.

The reporting tool is directly linked to the nonconfidential portion of the TSCA Inventory through the SRS database, which lists all chemical substances on the TSCA Inventory. Most chemical substances are identified by CA Index Name and CASRN. Chemical substances listed on the confidential portion of the TSCA Inventory are identified in SRS using a TSCA Accession Number and generic name. In the case of a chemical substance listed on the confidential portion of the TSCA Inventory, a secondary submitter does not need to claim the underlying chemical identity CBI or provide upfront substantiation. For such a chemical substance, EPA will presume that the chemical identity associated with the Accession Number is subject to a confidentiality claim when it is reported by a

secondary submitter. See Section 6.7.3 for more information on reporting a chemical substance listed on the confidential portion of the TSCA Inventory. In addition, EPA will presume that the information reported in Section 4.D. of Form U, and the connection between the chemical identity and the primary company associated with the joint submission, is subject to a confidentiality claim when it is reported by a secondary submitter.

- **Step 3:** Enter the percent composition of each component chemical substance of the trade name product or mixture.
- **Step 4:** You may provide additional information associated with the chemical substance in Block 4.D.3.
- e. Submit the file to EPA via CDX. Please verify that all fields are correct on the preview screen.



6.7.3 Reporting a Confidential Chemical Substance

In the case of confidential chemical substances, report the TSCA Accession Number (the generic name corresponding to the Accession Number will automatically be incorporated into your report). Submitters who, in the past, have reported using the PMN case number of a confidential chemical substance can identify the Accession Number from the SRS by searching on the PMN case number. In the SRS, a submitter can readily find a cross-reference list that

displays the Accession Number, generic chemical name, and the PMN case number (or for an initial TSCA Inventory chemical substance, the TSCA Inventory reporting form number) for any confidential chemical substance listed on the TSCA Inventory. Please note that a generic name often is not specific to a given TSCA Inventory chemical substance and may be used to represent multiple specific chemical identities. The TSCA Accession Number, however, is unique to the specific confidential chemical substance.

Submitters who are not able to identify the Accession Number by searching the SRS should contact EPA, in writing or via fax on company letterhead, well before initiating CDR reporting to obtain the Accession Number assigned when the Notice of Commencement (NOC) was submitted to the Agency. Individuals are urged to submit a complete and accurate TSCA Inventory Correspondence via fax or by U.S. mail at least one month before the submission deadline. Note that incomplete and/or inaccurate requests may be rejected. The Agency will respond to such inquiries in as timely a manner as possible. It is the responsibility of the submitter to contact the Agency for such information in sufficient time to allow for the Agency to respond.

Please send requests for a TSCA Accession Number as soon as possible to:

By Fax: 202-564-9538

By U.S. Postal Service:

U.S. Environmental Protection Agency Office of Pollution Prevention and Toxics Document Control Office (7407M) 1200 Pennsylvania Ave, NW Washington, DC 20460

By Hand Delivery or Courier:

U.S. Environmental Protection Agency Office of Pollution Prevention and Toxics Confidential Business Information Center EPA East Building, Room 6428 1201 Constitution Ave, NW Washington, DC 20004 202-564-8930; 202-564-8940

6.7.4 Submitting as a Tertiary Submitter

There may be instances where a foreign supplier purchases a mixture, under a trade name, from another company (tertiary company) and does not know the chemical components of the mixture. The foreign supplier can ask the company manufacturing the confidential chemical substance to directly provide EPA with the correct chemical identity in Part IV of Form U. In this case, the tertiary company would register with CDX and use the Unique Identifier for Joint Submissions, sent to the foreign supplier by the manufacturer (including importer), to complete Part IV of Form U.

The foreign supplier does not have access to any of the information submitted to EPA by the tertiary company. Likewise, the tertiary company cannot see the information the foreign supplier reports to EPA. This way, the confidentiality of information for both the foreign supplier and tertiary company is protected.

A tertiary company submitting on behalf of a supplier should:

1. Register with CDX as a "Secondary Authorized Official" or "Secondary Support Registrant." See Section 6.3 for instructions on registering with CDX.

2. Complete Part IV of Form U.

a. Section A: Secondary Company Information (Blocks 4.A.1 through 4.A.8)

Your company information (domestic or foreign company name and mailing address) provided during CDX registration will populate Section A. Please double check this information to ensure all required fields are complete and accurate. If any information is incorrect or incomplete, the authorized official should make the necessary changes in CDX.

b. Section B: Secondary Technical Contact Information (Blocks 4.B.1 through 4.B.10)

You are responsible for designating one technical contact for your company. Select the contact from the drop down list of Support Registrants or enter information for a new technical contact. If you select from the list of Support Registrants, the technical contact information (name, phone number, mailing address, etc.) will populate Section B. Please double check this information to ensure all required fields are complete and accurate. If any information is incorrect or incomplete, the Authorized Official should make the necessary changes in CDX.

The technical contact should be a person who can answer specific questions about the reported chemical substance(s) in your CDR Form U submission. Typically, a person located at the manufacturing site is best able to answer such questions. The technical contact need not be the person who signs the certification statement.

c. Section C: Trade Name Product Identification Information (Block 4.C.1 through 4.C.2)

Enter the Unique Identifier for Joint Submissions field provided to you by the supplier. Click the "Populate" button to generate the trade product name provided by the primary submitter. Verify the information and click the "Next" button to enter the information to identify the chemical substance.

d. Section D: Trade Product Identification Information

In this section of the Form U, enter your trade product name (which may be different than the name provided by the primary submitter) and the chemical composition of the product.

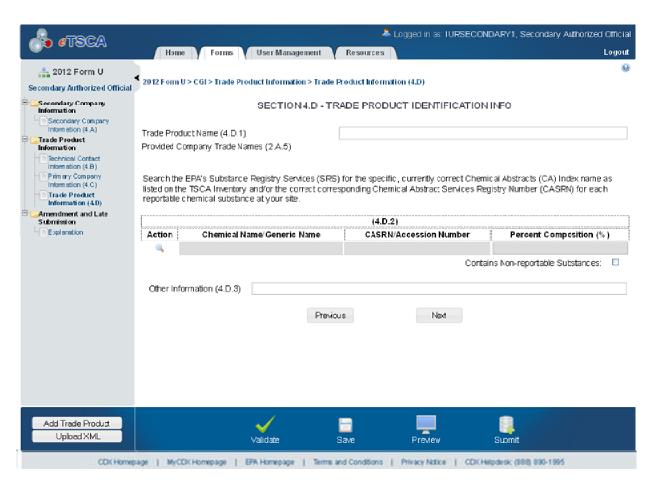
Step 1: Enter the trade product name used to identify the chemical substance in Box 4.D.1.

Step 2: In Section 4.D.2, click on the magnifying glass under the "Action" column and select the correct CA Index Name and CASRN for the chemical substance from the SRS.

The reporting tool is directly linked to the nonconfidential portion of the TSCA Inventory through the SRS database, which lists all chemical substances on the

TSCA Inventory. Most chemical substances are identified by CA Index Name and CASRN. Chemical substances listed on the confidential portion of the TSCA Inventory are identified in SRS using a TSCA Accession Number and generic name. In the case of a chemical substance listed on the confidential portion of the TSCA Inventory, a tertiary submitter does not need to claim the underlying chemical identity CBI or provide upfront substantiation. For such a chemical substance, EPA will presume that the chemical identity associated with the Access Number is subject to a confidentiality claim when it is reported by a tertiary submitter. See Section 6.7.3 for more information on reporting a chemical substance listed on the confidential portion of the TSCA Inventory. In addition, EPA will presume that the information reported in Section 4.D. of Form U, and the connection between the chemical identity and the secondary company associated with the joint submission, is subject to a confidentiality claim when it is reported by a tertiary submitter.

- **Step 3:** Enter the percent composition of each component chemical substance of the trade name product or mixture.
- **Step 4:** You may provide additional information associated with the chemical substance in Block 4.D.3.
- e. Submit the file to EPA via CDX. Please verify that all fields are correct on the preview screen.



6.8 Correcting or Updating 2012 CDR Submissions

If you wish to make a correction or addition to a previously submitted 2012 CDR Form U, log into CDX and access the original Form U. On the Forms page, unlock the form and edit as needed.

Only an Authorized Official or a Support Registrant (e.g. technical contact) can make changes to a previously submitted CDR Form U. An Authorized Official will be required to log into CDX and unlock the Form U to allow a Support Registrant to amend the validated and submitted form. The initial view of the data will be "Read Only" and persons must affirm in a multi-step process that an amendment is needed. A Support Registrant can save, finalize, or cancel an amendment, but an Authorized Official is responsible for signing and submitting the amended form. Canceling an amendment will revert back to the previously signed submission.

After certifying to the truthfulness and accuracy of the information reported and validating the Form U, the amended data file will be sent to EPA by CDX. The act of correcting errors in Form U submissions under the CDR does not grant the person making the correction immunity from enforcement action for any possible violations of the CDR rule.

If the reporting period is coming to a close, and changes have been made and saved to the Form U that have not been signed and submitted by the Authorized Official, a notice will be sent to the Authorized Official and Support Registrant(s). They will be notified that the Form U submission must be signed and submitted to EPA in order for it to be considered a valid submission.

6.9 Recordkeeping Requirements

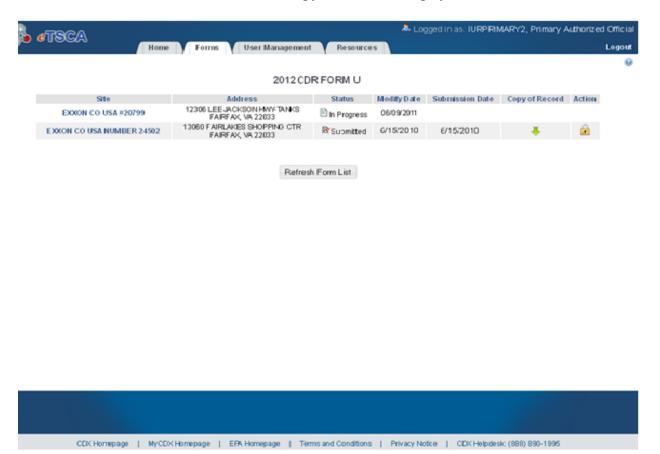
You are required to retain records of your CDR reports for five years beginning on the last day of the applicable submission period (40 CFR 711.25). For example, if you submit an CDR report for a submission period ending June 30, 2012, you would be required to retain the records on which the report is based until June 30, 2017. Submitters are encouraged to retain their records longer than five years to ensure that past records are available as a reference when new Form Us are being generated.

As long as the records are maintained in a manner consistent with normal business practices, you may determine their exact format. Required records include those that show the production volume, plant site, and site-limited status of each chemical substance reported. If a chemical substance is not reported because its site-specific annual production is less than 25,000 lb, EPA suggests you maintain records to document your reasons for not filing Form U.

If you qualify as an exempt small manufacturer, you need to keep records only for those chemical substances that you are required to report; however, in claiming an exemption, you bear the burden of documenting that you qualify for the exemption.

6.10 Requesting a Copy of Record

You may obtain a copy of record of your Form U, in accordance with the Cross-Media Electronic Reporting Rule (CROMERR). To generate a copy of your Form U, log into the reporting tool and click the "Copy of Record" button to view and print a copy of the form. The copy of record should be available shortly after the submission is completed. If a Form U is printed prior to submission, it will contain a watermark identifying that it is draft and cannot be submitted to EPA. You can also receive a copy of record through your CDX account.



7.0 How to Obtain Copies of Documents Cited in This Guidance Document

7.1 Obtaining Copies of the TSCA Rules

The CDR rule, 40 CFR Part 711, is available on the internet at the following address: http://www.access.gpo.gov/nara/cfr/waisidx_05/40cfr710_05.html

You may also contact the TSCA Hotline by telephone at (202) 554-1404 or by email tsca-hotline@epa.gov for assistance.

7.2 Obtaining Copies of the Public Portion of the TSCA Inventory

The public portion of the TSCA Inventory is available on the New Chemicals Program's web site at http://www.epa.gov/opptintr/existingchemicals/pubs/tscainventory/index.html. To search the non-confidential portion of the TSCA Inventory, companies and individuals can download a Microsoft Access file or Comma Separated Value (CSV) text file.

Appendix A

Glossary

The definitions and descriptions of terms used in CDR reporting provided below are taken from 40 CFR Part 711 unless otherwise noted.

Act means the Toxic Substances Control Act, 15 U.S.C. 2601 et seq.

Administrator means the Administrator of the U.S. Environmental Protection Agency. (See TSCA 3(1))

Article means a manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end-use function(s) dependent in whole or in part upon its shape or design during end use, and (3) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the article, and that result from a chemical reaction that occurs upon end use of other chemical substances, mixtures, or articles; except that fluids and particles are not considered articles regardless of shape or design. (40 CFR 704.3)

Byproduct means a chemical substance produced without separate commercial intent during the manufacture, processing, use, or disposal of another chemical substance(s) or mixture(s). (40 CFR 704.3)

Central Data Exchange (CDX) means EPA's centralized electronic document receiving system, or its successors, including associated instructions for registering to submit electronic documents

Chemical substance means any organic or inorganic substance of a particular molecular identity, including any combination of such substances occurring in whole or in part as a result of a chemical reaction or occurring in nature, and any chemical element or uncombined radical. "Chemical substance" does *not* include:

- (1) Any mixture;
- (2) Any pesticide (as defined in the Federal Insecticide, Fungicide, and Rodenticide Act) when manufactured, processed, or distributed in commerce for use as a pesticide;
- (3) Tobacco or any tobacco product;
- (4) Any source material, special nuclear material, or byproduct material (as such terms are defined in the Atomic Energy Act of 1954 and the regulations issued under such Act);
- (5) Any article the sale of which is the subject to the tax imposed by section 4181 of the Internal Revenue Code of 1954 (determined without regard to any exemptions from such tax provided by section 4182 or 4221 or any other provision of such Code); and
- (6) Any food, food additive, drug, cosmetic, or device (as such terms are defined in section 201 of the Federal Food, Drug, and Cosmetic Act) when manufactured,

processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device. (See TSCA 3(2))

Commerce means trade, traffic, transportation, or other commerce: (A) between a place in a State and any place outside of such State, or (B) which affects trade, traffic, transportation, or commerce described in clause (A). (TSCA 3(3))

Commercial use means the use of a chemical substance or a mixture containing a chemical substance (including as part of an article) in a commercial enterprise providing saleable goods or services.

Consumer use means the use of a chemical substance or a mixture containing a chemical substance (including as part of an article) when sold to or made available to consumers for their use.

Customs territory of the United States, as referenced in TSCA section 3 and defined in general note 2 of the Harmonized Tariff Schedule of the United States, includes only the States, the District of Columbia, and Puerto Rico.

Distribute in commerce and distribution in commerce, when used to describe an action taken with respect to a chemical substance or mixture or article containing a substance or mixture mean to sell, or the sale of, the substance, mixture, or article in commerce; to introduce or deliver for introduction into commerce, or the introduction or delivery for introduction into commerce of, the substance, mixture, or article; or to hold, or the holding of, the substance, mixture, or article after its introduction into commerce. (TSCA 3(4))

e-CDRweb means the electronic, web-based tool provided by EPA for the completion and submission of the CDR Form U report.

EPA means the United States Environmental Protection Agency. (40 CFR 704.3)

Importer means (1) any person who imports any chemical substance or any chemical substance as part of a mixture or article into the customs territory of the United States, and includes: (i) the person primarily liable for the payment of any duties on the merchandise, or (ii) an authorized agent acting on his/her behalf. (2) Importer also includes, as appropriate:

- (i) The consignee.
- (ii) The importer of record.
- (iii) The actual owner if an actual owner's declaration and superseding bond have been filed in accordance with 19 CFR 141.20.
- (iv) The transferee, if the right to draw merchandise in a bonded warehouse has been transferred in accordance with subpart C of 19 CFR part 144.
- (3) For the purposes of this definition, the customs territory of the United States consists of the 50 States, Puerto Rico, and the District of Columbia. (40 CFR 704.3)

Impurity means a chemical substance which is unintentionally present with another chemical substance. (40 CFR 704.3)

Industrial function means the intended physical or chemical characteristic for which a chemical substance or mixture is consumed as a reactant; incorporated into a formulation, mixture, reaction product, or article; repackaged; or used.

Industrial use means use at a site at which one or more chemical substances or mixtures are manufactured (including imported) or processed.

Intended for use by children means the chemical substance or mixture is used in a product that is specifically intended for use by children age 14 or younger. A chemical substance or mixture is intended for use by children when the submitter answers "yes" to at least one of the following questions for the product into which the submitter's chemical substance or mixture is incorporated:

- (1) Is the product commonly recognized (i.e., by a reasonable person) as being intended for children age 14 or younger?
- (2) Does the manufacturer of the product state through product labeling or other written materials that the product is intended or will be used by children age 14 or younger?
- (3) Is the advertising, promotion, or marketing of the product aimed at children age 14 or younger?

Intermediate means any chemical substance that is consumed, in whole or in part, in chemical reactions used for the intentional manufacture of other chemical substances or mixtures, or that is intentionally present for the purpose of altering the rates of such chemical reactions. (40 CFR 704.3)

Known to or reasonably ascertainable by means all information in a person's possession or control, plus all information that a reasonable person similarly situated might be expected to possess, control, or know. (40 CFR 704.3)

Manufacture means to manufacture, produce, or import for commercial purposes. Manufacture includes the extraction, for commercial purposes, of a component chemical substance from a previously existing chemical substance or complex combination of substances. When a chemical substance, manufactured other than by import, is: (1) produced exclusively for another person who contracts for such production, and (2) that other person specifies the identity of the chemical substance and controls the total amount produced and the basic technology for the plant process, then that chemical substance is co-manufactured by the producing manufacturer and the person contracting for such production.

Manufacturer means a person who manufactures a chemical substance.

Manufacture for commercial purposes means: (1) to import, produce, or manufacture with the purpose of obtaining an immediate or eventual commercial advantage for the manufacturer, and includes among other things, such "manufacture" of any amount of a chemical substance or mixture:

- (i) For commercial distribution, including for test marketing.
- (ii) For use by the manufacturer, including use for product research and development, or as an intermediate.
- (2) Manufacture for commercial purposes also applies to substances that are produced coincidentally during the manufacture, processing, use, or disposal of another substance or

mixture, including both byproducts that are separated from that other substance or mixture and impurities that remain in that substance or mixture. Such byproducts and impurities may, or may not, in themselves have commercial value. They are nonetheless produced for the purpose of obtaining a commercial advantage since they are part of the manufacture of a chemical product for a commercial purpose. (40 CFR 704.3)

Master Inventory File means EPA's comprehensive list of chemical substances which constitute the Chemical Substances Inventory compiled under section 8(b) of the Act. It includes substances reported under Part 710 of this chapter and substances reported under Part 720 of this chapter for which a Notice of Commencement of Manufacture or Import has been received under §720.120 of this chapter.

Microorganism means any combination of chemical substances that is a living organism and that meets the definition of microorganism at 40 CFR 725.3. Any chemical substance produced from a living microorganism is reportable under the CDR regulation unless otherwise excluded.

Mixture means any combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction; except that such term does include any combination which occurs, in whole or in part, as a result of a chemical reaction if none of the chemical substances comprising the combination is a new chemical substance and if the combination could have been manufactured for commercial purposes without a chemical reaction at the time the chemical substances comprising the combination were combined. (TSCA 3(8))

Naturally occurring substance is any chemical substance which is naturally occurring and: (1) which is (i) unprocessed or (ii) processed only by manual, mechanical, or gravitational means, by dissolution in water, by flotation, or by heating solely to remove water; or (2) which is extracted from air by any means. (40 CFR 710.4(b))

Non-isolated intermediate means any intermediate that is not intentionally removed from the equipment in which it is manufactured, including the reaction vessel in which it is manufactured, equipment which is ancillary to the reaction vessel, and any equipment through which the substance passes during a continuous flow process, but not including tanks or other vessels in which the substance is stored after its manufacture. (40 CFR 704.3)

Person means any individual, firm, company, corporation, joint venture, partnership, sole proprietorship, association, or any other business entity; any State or political subdivision thereof, or any municipality; any interstate body; and any department, agency, or instrumentality of the Federal government. (40 CFR 704.3)

Polymer means any chemical substance described with the word fragments "*polym*", "*alkyd", or "oxylated" in the Chemical Abstracts (CA) Index Name in the Master Inventory File, where the asterisk (*) in the listed word fragments indicates that any sets of characters may precede, or follow, the character string defined. Polymers also include any chemical substance which is identified in the Master Inventory File as siloxane(s) and silicone(s), silsesquioxane(s), a protein (albumin, casein, gelatin, gluten, hemoglobin), an enzyme, a polysaccharide (starch, cellulose, or gum), rubber, or lignin. The polymer exclusion does not apply to a polymeric

substance that has been hydrolyzed, depolymerized, or otherwise chemically modified, except in cases where the intended product of this reaction is totally polymeric in structure.

Principal reporting year means the latest complete calendar year preceding the submission period.

Process means to process for commercial purposes. (40 CFR 704.3)

Process for commercial purposes means the preparation of a chemical substance or mixture after its manufacture for distribution in commerce with the purpose of obtaining an immediate or eventual commercial advantage for the processor. Processing of any amount of a chemical substance or mixture is included in this definition. If a chemical substance or mixture containing impurities is processed for commercial purposes, then the impurities also are processed for commercial purposes. (40 CFR 704.3)

Processor means any person who processes a chemical substance or mixture. (40 CFR 704.3)

Reasonably likely to be exposed means an exposure to a chemical substance which, under foreseeable conditions of manufacture (including import), processing, distribution in commerce, or use of the chemical substance, is more likely to occur than not to occur. Such exposures would normally include, but would not be limited to, activities such as charging reactor vessels, drumming, bulk loading, cleaning equipment, maintenance operations, materials handling and transfers, and analytical operations. Covered exposures include exposures through any route of entry (inhalation, ingestion, skin contact, absorption, etc.), but excludes accidental or theoretical exposures.

Repackaging means the physical transfer of a chemical substance or mixture, as is, from one container to another container or containers in preparation for distribution of the chemical substance or mixture in commerce.

Reportable chemical substance means a chemical substance described in §711.5.

Site means a contiguous property unit. Property divided only by a public right-of-way shall be considered one site. More than one plant may be located on a single site.

- (a) For chemical substances manufactured under contract, i.e., by a toll manufacturer, the site is the location where the chemical substance is physically manufactured.
- (b) The site for an importer who imports a chemical substance described in §711.5 is the U.S. site of the operating unit within the person's organization that is directly responsible for importing the substance. The import site, in some instances, may be the organization's headquarters in the United States. If there is no such operating unit or headquarters in the United States, the site address for the importer is the United States address of an agent acting on behalf of the importer who is authorized to accept service of process for the importer.

(c) For portable manufacturing units sent out to different locations from a single distribution center, the distribution center shall be considered the site.

Site-limited means a chemical substance is manufactured and processed only within a site and is not distributed for commercial purposes as a substance or as part of a mixture or article outside the site. Imported substances are never site-limited. Although a site-limited chemical substance is not distributed for commercial purposes outside the site at which it is manufactured and processed, the substance is considered to have been manufactured and processed for commercial purposes.

Small quantities solely for research and development (or "small quantities solely for purposes of scientific experimentation or analysis or chemical research on, or analysis of, such substance or another substance, including such research or analysis for the development of a product") means quantities of a chemical substance manufactured, imported, or processed or proposed to be manufactured, imported, or processed solely for research and development that are no greater than reasonably necessary for such purposes. (40 CFR 704.3)

State means any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, the Canal Zone, American Samoa, the Northern Mariana Islands, or any other territory or possession of the United States. (TSCA 3(13))

Submission period means the period in which manufacturing, processing, and use data are submitted to EPA.

Test marketing means the distribution in commerce of no more than a predetermined amount of chemical substance, mixture, or article containing that chemical substance or mixture, or a mixture containing that substance, by a manufacturer or processor, to no more than a defined number of potential customers to explore market capability in a competitive situation during a predetermined testing period prior to the broader distribution of that chemical substance, mixture, or article in commerce. (40 CFR 704.3)

United States, when used in the geographic sense, means all of the States. (TSCA 3(14))

U.S. Parent Company means the highest level company, located in the United States, that directly owns at least 50 percent of the voting stock of the manufacturer.

Use means any utilization of a chemical substance or mixture that is not otherwise covered by the terms *manufacture* or *process*. Relabeling or redistributing a container holding a chemical substance or mixture where no repackaging of the chemical substance or mixture occurs does not constitute use or processing of the chemical substance or mixture.

Appendix B

Chemical Substances that are the Subject of Certain TSCA Orders, Proposed or Final TSCA Rules, or Relief Granted under Civil Actions

(as of July 2011)

Listed below are the CAS Registry Numbers (for non-confidential chemical substances) or Accession Numbers (for confidential chemical substances) of chemical substances that are the subject of a rule, proposed or promulgated under TSCA section 4, 5(a)(2),5(b)(4), or 6; a consent agreement developed under the procedures of 40 CFR part 790; an order issued under section 5(e)or 5(f) of TSCA; or relief that has been granted under a civil action under sections 5 or 7 of TSCA as of March 2011. See 40 CFR 711.6, and 711.9 and TSCA § 8(a)(3)(A)(ii) for further details. Table B-1 provides a brief description of the reporting requirements at 40 CFR 711.6 and 711.9.

Table B-1. Explanation of Reporting Requirements

	L. Explanation of Reporting Requirements	
40 CFR 711	Reporting Requirements	Explanation of Reporting Requirements
§ 711.6	Some groups or categories of chemical substances are exempted from some or all of the reporting requirements of this part, with the following exception: A chemical substance described in paragraph (a)(1), (a)(2), or (a)(4), or (b) of this section is not exempted from any of the reporting requirements of this part if that chemical substance is the subject of a rule proposed or promulgated under TSCA section 4, 5(a)(2), 5(b)(4), or 6, or is the subject of a consent agreement developed under the procedures of 40 CFR part 790, or is the subject of an order issued under TSCA section 5(e) or 5(f), or is the subject of relief that has been granted under a civil action under TSCA section 5 or 7	Information must be reported for chemical substances that would otherwise be wholly or partially exempted from CDR requirements because they are the subject of certain TSCA actions.
§ 711.9	A person described in § 711.8 is not subject to the requirements of this part if that person qualifies as a small manufacturer as that term is defined in 40 CFR 704.3. Notwithstanding this exclusion, a person who qualifies as a small manufacturer is subject to this part with respect to any chemical substance that is the subject of a rule proposed or promulgated under TSCA section 4, 5(b)(4), or 6, or is the subject of an order in effect under TSCA section 5(e), or is the subject of relief that has been granted under a civil	The exemption for small businesses does not apply to persons who manufacture (including import) a chemical substance that is the subject of certain TSCA actions. Even in such circumstances, however, the volume thresholds for reporting found in §711.8

Appendix B	Chemical Substances that	t are the Subject o	f Certain TSCA Actions

40 CFR 711	Reporting Requirements	Explanation of Reporting Requirements
	action under TSCA section 5 or 7.	still apply.

IMPORTANT: This document is intended to be an information resource. While EPA has tried to provide an accurate list of chemical substances, the list may contain errors and omissions. This list should not be relied upon in lieu of relevant orders, *Federal Register* documents, or the *Code of Federal Regulations*. In the event of a conflict between this list and orders, *Federal Register* documents, or the *Code of Federal Regulations*, this list will not be considered controlling.

In addition, please note that this list does NOT contain a full listing of all chemical substances subject to the CDR rule. The list is only intended to include those chemical substances which would otherwise be wholly or partially exempted from CDR requirements but for which information must be reported because they are the subject of certain TSCA actions as noted above. The exemptions for polymers, inorganic chemical substances, or microorganisms do not apply for chemical substances on these lists. The exemption for small businesses does not apply to some of the chemical substances on these lists. The exemption for naturally occurring chemical substances is still valid for chemical substances on these lists, as discussed in Section 2.1.3.4 of this Instruction manual. If after consulting the list you are uncertain as to the regulatory status of a chemical substance, contact the TSCA Hotline at (202) 554-1404 for assistance.

Appendix B

Table B-2. Chemical Substances that are the Subject of Certain TSCA Actions By CAS Registry Number

Number ACTION 50-07-7 5(a)(2) 50-29-3 5(a)(2) 50-55-5 5(a)(2) 51-79-6 5(a)(2) 56-04-2 5(a)(2) 56-49-5 5(a)(2) 56-49-5 5(a)(2) 56-53-1 5(a)(2) 57-10-3 4 62-44-2 5(a)(2) 62-50-0 5(a)(2) 70-25-7 5(a)(2) 70-30-4 5(a)(2) 70-30-4 5(a)(2) 74-90-8 4 74-90-8 4 74-90-8 4 74-90-8 4 74-90-8 4 74-90-8 4 75-05-8 4 75-05-8 4 75-05-8 4 75-35-4 4 75-36-5 4 78-31-5 4 78-31-5 4 78-88-7 5(a)(2) 77-73-6 4 78-88-5 4	CAS Registry	TSCA
50-29-3 5(a)(2) 50-55-5 5(a)(2) 51-79-6 5(a)(2) 56-04-2 5(a)(2) 56-49-5 5(a)(2) 56-53-1 5(a)(2) 57-10-3 4 62-44-2 5(a)(2) 62-50-0 5(a)(2) 70-25-7 5(a)(2) 70-30-4 5(a)(2) 70-30-4 5(a)(2) 74-90-8 4 74-93-1 4 74-95-3 4 75-05-8 4 75-05-8 4 75-35-4 4 75-36-5 4 75-88-7 5(a)(2) 76-01-7 5(a)(2) 77-73-6 4 78-33-1 4 78-87-5 4 79-00-5 4 79-31-2 4 79-95-8 4 80-62-6 4 80-73-9 5(a)(2); 5(e) 83-41-0 4 84-65-1 4 <	Number	ACTION
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56-53-1 5(a)(2) 57-10-3 4 62-44-2 5(a)(2) 62-50-0 5(a)(2) 70-25-7 5(a)(2) 70-30-4 5(a)(2) 74-90-8 4 74-93-1 4 74-95-3 4 75-05-8 4 75-05-8 4 75-35-4 4 75-35-4 4 75-36-5 4 75-88-7 5(a)(2) 76-01-7 5(a)(2) 77-73-6 4 78-33-1 4 78-87-5 4 79-00-5 4 79-20-9 4 79-46-9 4 79-95-8 4 80-62-6 4 80-73-9 5(a)(2); 5(e) 83-41-0 4 84-65-1 4	56-04-2	5(a)(2)
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75-05-8 4 75-07-0 4 75-15-0 4 75-35-4 4 75-36-5 4 75-88-7 5(a)(2) 76-01-7 5(a)(2) 77-73-6 4 78-33-1 4 78-87-5 4 79-00-5 4 79-20-9 4 79-31-2 4 79-95-8 4 80-62-6 4 80-73-9 5(a)(2); 5(e) 83-41-0 4 84-65-1 4	74-95-3	4
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76-01-7 5(a)(2) 77-73-6 4 78-11-5 4 78-33-1 4 78-59-1 4 78-87-5 4 79-00-5 4 79-20-9 4 79-31-2 4 79-95-8 4 80-62-6 4 80-73-9 5(a)(2); 5(e) 83-41-0 4 84-65-1 4	75-36-5	4
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79-95-8 4 80-62-6 4 80-73-9 5(a)(2); 5(e) 83-41-0 4 84-65-1 4	79-31-2	4
80-62-6 4 80-73-9 5(a)(2); 5(e) 83-41-0 4 84-65-1 4	79-46-9	4
80-73-9 5(a)(2); 5(e) 83-41-0 4 84-65-1 4	79-95-8	4
83-41-0 4 84-65-1 4	80-62-6	4
83-41-0 4 84-65-1 4		5(a)(2); 5(e)
	83-41-0	
	84-65-1	4
	85-22-3	5(a)(2)

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CAS Registry	TSCA
Number	ACTION
85-44-9	4
87-10-5	4
87-63-8	5(a)(2)
87-65-0	4
89-32-7	4
91-20-3	4
92-52-4	4
92-66-0	5(a)(2)
92-86-4	5(a)(2)
92-87-5	5(a)(2)
94-04-2	5(a)(2); 5(e)
95-69-2	5(a)(2)
95-77-2	4
95-80-7	4
95-94-3	5(a)(2)
95-95-4	4
96-22-0	4
98-09-9	4
98-29-3	4
98-56-6	4
98-86-2	4
99-28-5	4
99-35-4	5(a)(2)
100-00-5	4
100-21-0	4
100-41-4	4
100-44-7	4
101-55-3	5(a)(2)
101-90-6	4
104-76-7	4
106-42-3	4
106-46-7	4
106-90-1	4
106-92-3	4
107-04-0	5(a)(2)
107-06-2	4
107-13-1	4
107-21-1	4

Number 107-31-3 4 108-03-2 4 108-19-0 4 108-31-6 4 108-60-1 4 108-90-7 4 108-93-0 4 109-66-0 4 109-86-4 5(a)(2) 110-49-6 5(a)(2) 110-49-6 5(a)(2) 111-11-5 4 111-15-9 5(a)(2) 111-42-2 4 111-44-4 4 111-84-2 4 111-84-2 4 1118-79-6 4 118-79-6 4 118-79-6 4 118-79-6 4 118-82-1 4 119-61-9 4 120-36-5 4 120-80-9 4 122-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 126-72-7 5(a)(2) 126-72-7 5(a)(2)	CAS Registry	TSCA
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108-60-1 4 108-90-7 4 108-93-0 4 109-66-0 4 109-86-4 5(a)(2) 109-99-9 4 110-12-3 4 110-44-1 4 110-49-6 5(a)(2) 111-15-9 5(a)(2) 111-15-9 5(a)(2) 111-42-2 4 111-44-4 4 111-84-2 4 112-52-7 4 115-86-6 4 118-79-6 4 118-79-6 4 118-82-1 4 120-36-5 4 120-80-9 4 120-83-2 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-63-7 5(a)(2) 126-72-7 5(a)(2)	108-19-0	4
108-90-7 4 108-93-0 4 109-66-0 4 109-86-4 5(a)(2) 109-99-9 4 110-12-3 4 110-44-1 4 110-49-6 5(a)(2) 111-15-9 5(a)(2) 111-15-9 5(a)(2) 111-42-2 4 111-44-4 4 111-84-2 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 120-36-5 4 120-80-9 4 120-80-9 4 122-39-4 4 122-39-4 4 123-30-8 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	108-31-6	4
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110-44-1 4 110-49-6 5(a)(2) 110-80-5 5(a)(2) 111-11-5 4 111-15-9 5(a)(2) 111-42-2 4 111-44-4 4 111-84-2 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 120-36-5 4 120-80-9 4 120-83-2 4 122-39-4 4 122-39-4 4 123-30-8 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	109-99-9	4
110-49-6 5(a)(2) 110-80-5 5(a)(2) 111-11-5 4 111-15-9 5(a)(2) 111-42-2 4 111-44-4 4 111-84-2 4 112-52-7 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 120-36-5 4 120-80-9 4 120-83-2 4 122-39-4 4 122-39-4 4 123-30-8 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	110-12-3	4
110-80-5 5(a)(2) 111-11-5 4 111-15-9 5(a)(2) 111-42-2 4 111-44-4 4 111-84-2 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 119-61-9 4 120-36-5 4 120-80-9 4 120-83-2 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-63-7 5(a)(2) 123-67-7 5(a)(2)	110-44-1	4
110-80-5 5(a)(2) 111-11-5 4 111-15-9 5(a)(2) 111-42-2 4 111-44-4 4 111-84-2 4 112-52-7 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-63-7 5(a)(2) 126-72-7 5(a)(2)	110-49-6	5(a)(2)
111-15-9 5(a)(2) 111-42-2 4 111-44-4 4 111-84-2 4 112-52-7 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 123-30-8 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	110-80-5	
111-42-2 4 111-44-4 4 112-52-7 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 119-61-9 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	111-11-5	4
111-44-4 4 111-84-2 4 112-52-7 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 123-30-8 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	111-15-9	5(a)(2)
111-84-2 4 112-52-7 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 119-61-9 4 120-36-5 4 120-80-9 4 121-69-7 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-63-7 5(a)(2) 126-72-7 5(a)(2)	111-42-2	4
112-52-7 4 115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 119-61-9 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-63-7 5(a)(2) 126-72-7 5(a)(2)	111-44-4	4
115-86-6 4 118-75-2 4 118-79-6 4 118-82-1 4 119-61-9 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	111-84-2	4
118-75-2 4 118-79-6 4 118-82-1 4 119-61-9 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	112-52-7	4
118-79-6 4 118-82-1 4 119-61-9 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	115-86-6	4
118-82-1 4 119-61-9 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 122-60-1 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	118-75-2	4
119-61-9 4 120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	118-79-6	4
120-36-5 4 120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 122-60-1 4 123-30-8 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	118-82-1	4
120-80-9 4 120-83-2 4 121-69-7 4 122-39-4 4 122-60-1 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	119-61-9	4
120-83-2 4 121-69-7 4 122-39-4 4 122-60-1 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	120-36-5	4
121-69-7 4 122-39-4 4 122-60-1 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	120-80-9	4
122-39-4 4 122-60-1 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	120-83-2	4
122-60-1 4 123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	121-69-7	4
123-30-8 4 123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	122-39-4	4
123-33-1 4 123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	122-60-1	4
123-42-2 4 123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	123-30-8	4
123-54-6 5(a)(2) 123-63-7 5(a)(2) 126-72-7 5(a)(2)	123-33-1	4
123-63-7 5(a)(2) 126-72-7 5(a)(2)	123-42-2	4
126-72-7 5(a)(2)	123-54-6	5(a)(2)
126-72-7 5(a)(2)	123-63-7	
126-80-7 4	126-72-7	
	126-80-7	4

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126-99-8	4	556-52-5	4	1690-76-2	5(a)(2); 5(e)
127-19-5	4	573-58-0	5(a)(2)	1691-99-2	5(a)(2)
127-68-4	4	576-24-9	4	1705-60-8	5(a)(2); 5(e)
128-39-2	4	576-26-1	4	1737-93-5	5(a)(2); 5(e)
142-82-5	4	583-78-8	4	1763-23-1	5(a)(2)
144-62-7	4	591-78-6	5(a)(2)	1869-77-8	5(a)(2)
149-44-0	4	594-42-3	4	1885-48-9	5(a)(2)
150-76-5	4	608-71-9	4	1888-71-7	5(a)(2)
307-35-7	5(a)(2)	608-93-5	4; 5(a)(2)	1893-52-3	5(a)(2)
307-51-7	5(a)(2)	615-53-2	5(a)(2)	1937-37-7	5(a)(2)
320-72-9	4	615-58-7	4	1940-42-7	4
335-24-0	5(a)(2)	622-86-6	5(a)(2); 5(e)	2052-07-5	5(a)(2)
335-71-7	5(a)(2)	624-83-9	4	2113-57-7	5(a)(2)
335-77-3	5(a)(2)	640-19-7	4	2146-71-6	5(e)
335-97-7	5(a)(2)	680-31-9	5(a)(2)	2210-79-9	4
353-50-4	5(a)(2)	690-27-7	5(a)(2)	2224-15-9	4
354-21-2	5(a)(2)	690-83-5	5(a)(2); 5(e)	2238-07-5	4
354-25-6	5(a)(2)	693-38-9	5(a)(2)	2250-98-8	5(a)(2)
355-03-3	5(a)(2)	693-57-2	5(a)(2); 5(e)	2263-09-4	5(a)(2)
355-46-4	5(a)(2)	773-14-8	5(a)(2)	2302-97-8	5(a)(2)
359-07-9	5(e)	930-33-6	5(a)(2)	2320-06-1	5(a)(2)
372-39-4	5(a)(2); 5(e)	930-37-0	4	2362-14-3	5(a)(2)
375-03-1	5(a)(2)	930-55-2	5(a)(2)	2368-80-1	5(a)(2)
375-81-5	5(a)(2)	931-35-1	5(a)(2)	2417-04-1	5(a)(2); 5(e)
375-92-8	5(a)(2)	933-75-5	4	2421-08-1	5(a)(2)
376-14-7	5(a)(2)	1116-54-7	5(a)(2)	2425-01-6	4
383-07-3	5(a)(2)	1129-42-6	5(a)(2); 5(e)	2425-79-8	4
409-02-9	4	1163-19-5	4	2426-08-6	4
423-50-7	5(a)(2)	1187-03-7	5(a)(2)	2429-73-4	5(a)(2)
423-82-5	5(a)(2)	1241-94-7	4	2429-79-0	5(a)(2)
423-86-9	5(a)(2)	1324-76-1	4	2429-81-4	5(a)(2)
428-59-1	5(a)(2)	1330-78-5	4	2429-82-5	5(a)(2)
460-70-8	5(a)(2)	1332-21-4	6	2429-83-6	5(a)(2)
460-92-4	5(a)(2)	1333-82-0	6	2429-84-7	5(a)(2)
463-58-1	4	1336-36-3	6	2432-99-7	5(a)(2)
506-51-4	4	1489-69-6	5(a)(2); 5(e)	2461-15-6	4
506-52-5	4	1511-62-2	5(a)(2); 5(e)	2479-46-1	5(a)(2); 5(e)
515-40-2	4	1649-08-7	5(a)(2)	2494-89-5	4
531-85-1	5(a)(2)	1652-63-7	5(a)(2)	2524-04-1	4
547-68-2	5(a)(2)	1660-95-3	5(a)(2); 5(e)	2528-36-1	4

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2530-83-8	4	3820-83-5	5(a)(2)	7422-52-8	4
2537-62-4	5(a)(2)	3871-50-9	5(a)(2)	7439-97-6	5(a)(2)
2568-33-4	5(a)(2)	3871-99-6	5(a)(2)	7446-14-2	5(a)(2)
2586-58-5	5(a)(2)	3872-25-1	5(a)(2)	7647-01-0	4
2602-34-8	5(a)(2)	3971-28-6	5(e)	7664-39-3	4
2602-46-2	5(a)(2)	3984-22-3	5(a)(2); 5(e)	7665-72-7	4
2615-25-0	5(a)(2); 5(e)	4016-11-9	4	7738-94-5	6
2682-20-4	5(a)(2)	4016-14-2	4	7758-97-6	5(a)(2)
2706-91-4	5(a)(2)	4080-98-2	5(a)(2)	7775-11-3	6
2716-10-1	5(a)(2); 5(e)	4151-50-2	5(a)(2)	7778-50-9	6
2716-12-3	5(a)(2); 5(e)	4161-22-2	5(a)(2)	7782-50-5	4
2795-39-3	5(a)(2)	4162-45-2	4	7789-00-6	6
2840-00-8	5(a)(2); 5(e)	4300-97-4	5(a)(2); 5(e)	7789-99-3	5(a)(2); 5(e)
2893-80-3	5(a)(2)	4335-09-5	5(a)(2)	8005-02-5	4
2897-60-1	4	4694-91-1	5(a)(2); 5(e)	8014-91-3	5(a)(2)
2941-64-2	4	4719-04-4	4	8068-03-9	5(a)(2)
2965-52-8	5(a)(2)	4790-71-0	5(a)(2); 5(e)	10190-55-3	5(a)(2)
2991-50-6	5(a)(2)	5026-74-4	4	10192-46-8	5(a)(2)
2991-51-7	5(a)(2)	5117-12-4	5(a)(2); 5(e)	10588-01-9	6
2991-52-8	5(a)(2)	5248-39-5	5(a)(2); 5(e)	11103-86-9	6
3052-70-8	5(a)(2); 5(e)	5255-75-4	4	12027-96-2	5(a)(2); 5(e)
3072-84-2	4	5397-03-5	5(a)(2)	12031-65-1	5(a)(2); 5(e)
3083-25-8	5(a)(2)	5493-45-8	4	12032-75-6	5(a)(2); 5(e)
3089-19-8	5(a)(2)	5614-37-9	5(a)(2)	12036-37-2	5(a)(2); 5(e)
3101-60-8	4	5958-25-8	5(a)(2); 5(e)	12049-47-7	5(a)(2); 5(e)
3107-18-4	5(a)(2)	6196-98-1	5(a)(2); 5(e)	12056-51-8	5(a)(2); 5(e)
3132-64-7	5(a)(2)	6290-49-9	5(a)(2)	12057-17-9	5(a)(2); 5(e)
3165-93-3	5(a)(2)	6304-39-8	5(a)(2); 5(e)	12141-67-2	5(a)(2)
3188-83-8	4	6358-80-1	5(a)(2)	12163-45-0	5(a)(2); 5(e)
3194-55-6	4	6360-29-8	5(a)(2)	12175-02-9	5(a)(2)
3377-92-2	5(a)(2); 5(e)	6360-54-9	5(a)(2)	12230-80-7	5(a)(2); 5(e)
3389-71-7	5(a)(2)	6381-77-7	4	12232-96-1	5(e)
3397-65-7	5(a)(2)	6712-98-7	5(a)(2)	12438-71-0	5(a)(2); 5(e)
3530-19-6	5(a)(2)	6752-33-6	5(a)(2)	12656-57-4	5(a)(2)
3567-65-5	5(a)(2)	6770-38-3	5(a)(2)	12656-85-8	5(a)(2)
3568-29-4	4	6921-17-1	5(e)	12673-69-7	5(e)
3607-78-1	5(a)(2)	7226-23-5	5(a)(2)	13049-88-2	5(a)(2)
3626-28-6	5(a)(2)	7328-97-4	4	13169-90-9	5(a)(2)
3772-94-9	4	7345-69-9	5(a)(2)	13223-43-3	5(a)(2)
3811-71-0	5(a)(2)	7384-80-7	5(a)(2)	13236-02-7	4

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13252-13-6	5(e)	21807-69-2	5(a)(2); 5(e)	30381-98-7	5(a)(2)
13417-01-1	5(a)(2)	21850-44-2	4	30486-37-4	5(a)(2); 5(e)
13439-89-9	5(a)(2)	22094-81-1	5(a)(2)	30813-81-1	5(a)(2); 5(e)
13530-65-9	6	22094-83-3	5(a)(2)	31138-65-5	4
13530-68-2	6	22094-85-5	5(a)(2)	31506-32-8	5(a)(2)
13561-08-5	4	22421-59-6	4	31775-16-3	5(a)(2); 5(e)
13654-09-6	5(a)(2)	22527-63-5	4	32315-10-9	5(a)(2); 5(e)
13893-53-3	5(a)(2); 5(e)	22576-65-4	5(a)(2)	32534-81-9	4; 5(a)(2)
13990-54-0	5(a)(2)	23153-23-3	5(a)(2)	32536-52-0	4; 5(a)(2)
14018-95-2	6	24307-26-4	5(a)(2)	32539-16-5	5(a)(2)
14035-94-0	5(e)	24448-09-7	5(a)(2)	32568-89-1	4
14228-73-0	4	24615-84-7	4	34052-90-9	5(e)
14518-69-5	5(a)(2)	24924-36-5	5(a)(2)	34415-31-1	5(a)(2); 5(e)
14650-24-9	5(a)(2)	25155-23-1	4	34455-03-3	5(a)(2)
14720-55-9	5(a)(2)	25245-34-5	5(a)(2)	34590-94-8	4
15578-32-2	5(a)(2)	25249-16-5	5(a)(2)	34621-99-3	5(a)(2); 5(e)
15827-56-2	5(a)(2); 5(e)	25268-77-3	5(a)(2)	35077-00-0	5(a)(2)
16068-37-4	5(a)(2)	25321-41-9	4	35243-89-1	4
16071-86-6	5(a)(2)	25327-89-3	4	35358-78-2	5(a)(2)
16079-88-2	5(a)(2)	25608-40-6	5(a)(2)	35544-45-7	5(a)(2)
16096-31-4	5(a)(2); 5(e)	25646-71-3	4	36177-92-1	5(a)(2)
16298-38-7	5(a)(2)	26172-55-4	5(a)(2)	36355-01-8	5(a)(2)
16532-79-9	4	26447-14-3	4	36483-60-0	5(a)(2)
17202-41-4	5(a)(2)	26694-69-9	5(a)(2)	37338-48-0	5(a)(2)
17557-23-2	4	26761-45-5	4	37853-59-1	4
17963-04-1	4	27060-75-9	5(a)(2); 5(e)	37853-61-5	4
18241-31-1	5(e)	27193-86-8	4	37859-57-7	5(a)(2)
18934-00-4	5(a)(2); 5(e)	27603-25-4	5(a)(2)	38006-74-5	5(a)(2)
19019-43-3	5(a)(2)	27610-48-6	5(a)(2); 5(e)	38304-52-8	4
19201-36-6	5(a)(2)	27753-52-2	5(a)(2)	38850-52-1	5(a)(2)
19372-44-2	5(a)(2); 5(e)	27858-07-7	5(a)(2)	38850-58-7	5(a)(2)
19721-22-3	5(a)(2); 5(e)	27936-88-5	5(a)(2)	38850-60-1	5(a)(2)
19829-42-6	5(e)	28108-99-8	4	39142-28-4	5(a)(2)
20138-28-7	5(e)	28554-31-6	5(a)(2); 5(e)	39290-90-9	5(a)(2); 5(e)
20217-01-0	4	29081-56-9	5(a)(2)	39318-30-4	5(a)(2); 5(e)
21055-88-9	5(a)(2)	29091-20-1	5(a)(2); 5(e)	40088-47-9	5(a)(2)
21142-29-0	5(a)(2)	29117-08-6	5(a)(2)	41088-52-2	5(a)(2)
21160-95-2	5(a)(2); 5(e)	29457-72-5	5(a)(2)	41240-76-0	5(a)(2)
21542-96-1	5(a)(2)	29761-21-5	4	41317-15-1	5(a)(2); 5(e)
21544-03-6	5(a)(2)	30025-38-8	5(a)(2)	43048-08-4	5(a)(2)

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43224-75-5	5(a)(2)	61660-12-6	5(a)(2)	67906-73-4	5(a)(2)
50598-28-2	5(a)(2)	61788-76-9	4	67906-74-5	5(a)(2)
50598-29-3	5(a)(2)	62037-80-3	5(e)	67923-61-9	5(a)(2)
50622-20-3	5(a)(2)	62435-71-6	5(a)(2); 5(e)	67939-36-0	5(a)(2)
51032-47-4	5(a)(2)	63141-09-3	5(a)(2)	67939-37-1	5(a)(2)
51160-97-5	5(a)(2); 5(e)	63936-56-1	5(a)(2)	67939-42-8	5(a)(2)
51851-37-7	5(a)(2)	64712-27-2	5(a)(2)	67939-61-1	5(a)(2)
51868-46-3	5(a)(2)	64723-18-8	5(a)(2)	67939-87-1	5(a)(2)
52032-20-9	5(a)(2)	65652-41-7	4	67939-88-2	5(a)(2)
52166-82-2	5(a)(2)	65738-56-9	5(a)(2)	67939-90-6	5(a)(2)
52350-17-1	5(a)(2)	65992-66-7	5(a)(2); 5(e)	67939-92-8	5(a)(2)
52495-71-3	5(a)(2); 5(e)	65996-79-4	4	67939-93-9	5(a)(2)
52550-45-5	5(a)(2)	65996-82-9	4	67939-94-0	5(a)(2)
52556-42-0	4	65996-89-6	4	67939-96-2	5(a)(2)
54208-63-8	4	65996-92-1	4	67939-97-3	5(a)(2)
54423-67-5	5(a)(2); 5(e)	66008-68-2	5(a)(2)	67939-98-4	5(a)(2)
55120-77-9	5(a)(2)	66008-69-3	5(a)(2)	67940-02-7	5(a)(2)
55554-55-7	5(a)(2)	66008-70-6	5(a)(2)	67969-65-7	5(a)(2)
55910-10-6	5(a)(2)	66034-17-1	5(a)(2)	67969-69-1	5(a)(2)
56372-23-7	5(a)(2)	66241-11-0	4	68081-83-4	5(a)(2)
56553-60-7	5(a)(2)	66988-04-3	5(e)	68082-78-0	4
56773-42-3	5(a)(2)	67584-42-3	5(a)(2)	68084-62-8	5(a)(2)
56803-37-3	4	67584-48-9	5(a)(2)	68134-06-5	4
56875-68-4	5(a)(2)	67584-49-0	5(a)(2)	68134-07-6	4
57589-85-2	5(a)(2)	67584-50-3	5(a)(2)	68156-00-3	5(a)(2)
58576-98-0	5(a)(2)	67584-52-5	5(a)(2)	68156-01-4	5(a)(2)
58577-08-5	5(a)(2)	67584-53-6	5(a)(2)	68156-06-9	5(a)(2)
58857-49-1	5(a)(2)	67584-54-7	5(a)(2)	68156-07-0	5(a)(2)
58920-31-3	5(a)(2)	67584-56-9	5(a)(2)	68187-57-5	4
59071-10-2	5(a)(2)	67584-57-0	5(a)(2)	68187-76-8	4
59447-55-1	5(a)(2); 5(e)	67584-58-1	5(a)(2)	68187-84-8	4
59789-51-4	5(a)(2); 5(e)	67584-60-5	5(a)(2)	68227-87-2	5(a)(2)
60270-55-5	5(a)(2)	67584-61-6	5(a)(2)	68227-94-1	5(a)(2)
60466-61-7	5(a)(2); 5(e)	67584-62-7	5(a)(2)	68227-96-3	5(a)(2)
60497-09-8	5(e)	67906-38-1	5(a)(2)	68227-97-4	5(a)(2)
60501-41-9	4	67906-40-5	5(a)(2)	68227-98-5	5(a)(2)
60825-27-6	5(a)(2); 5(e)	67906-41-6	5(a)(2)	68227-99-6	5(a)(2)
61551-69-7	5(e)	67906-42-7	5(a)(2)	68228-00-2	5(a)(2)
61577-14-8	5(a)(2)	67906-70-1	5(a)(2)	68239-72-5	5(a)(2)
61578-04-9	4	67906-71-2	5(a)(2)	68239-73-6	5(a)(2)

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68239-75-8	5(a)(2)	68555-69-1	5(a)(2)	68957-57-3	5(a)(2)
68259-06-3	5(a)(2)	68555-70-4	5(a)(2)	68957-58-4	5(a)(2)
68259-07-4	5(a)(2)	68555-71-5	5(a)(2)	68957-60-8	5(a)(2)
68259-08-5	5(a)(2)	68555-72-6	5(a)(2)	68957-61-9	5(a)(2)
68259-09-6	5(a)(2)	68555-73-7	5(a)(2)	68957-62-0	5(a)(2)
68259-12-1	5(a)(2)	68555-74-8	5(a)(2)	68957-63-1	5(a)(2)
68259-14-3	5(a)(2)	68555-75-9	5(a)(2)	68958-60-1	5(a)(2)
68259-15-4	5(a)(2)	68555-76-0	5(a)(2)	68958-61-2	5(a)(2)
68259-38-1	5(a)(2)	68555-78-2	5(a)(2)	68959-23-9	4
68259-39-2	5(a)(2)	68555-79-3	5(a)(2)	68987-80-4	4
68298-06-6	5(a)(2)	68555-81-7	5(a)(2)	68988-22-7	4
68298-08-8	5(a)(2)	68555-90-8	5(a)(2)	69045-83-6	5(a)(2)
68298-09-9	5(a)(2)	68555-91-9	5(a)(2)	69045-84-7	5(a)(2); 5(e)
68298-10-2	5(a)(2)	68555-92-0	5(a)(2)	69155-42-6	4
68298-11-3	5(a)(2)	68568-77-4	5(a)(2)	69938-76-7	5(a)(2); 5(e)
68298-13-5	5(a)(2)	68586-14-1	5(a)(2)	70225-14-8	5(a)(2)
68298-60-2	5(a)(2)	68608-13-9	5(a)(2)	70225-15-9	5(a)(2)
68298-62-4	5(a)(2)	68608-14-0	5(a)(2)	70225-16-0	5(a)(2)
68298-78-2	5(a)(2)	68609-96-1	4	70225-17-1	5(a)(2)
68298-80-6	5(a)(2)	68610-90-2	4	70225-20-6	5(a)(2)
68298-81-7	5(a)(2)	68611-64-3	4	70225-24-0	5(a)(2)
68298-89-5	5(a)(2)	68647-60-9	4	70225-26-2	5(a)(2)
68299-20-7	5(a)(2)	68649-26-3	5(a)(2)	70248-52-1	5(a)(2)
68299-21-8	5(a)(2)	68797-76-2	5(a)(2)	70693-50-4	4
68299-29-6	5(a)(2)	68815-72-5	5(a)(2)	70776-36-2	5(a)(2)
68299-39-8	5(a)(2)	68867-60-7	5(a)(2)	70900-40-2	5(a)(2)
68310-02-1	5(a)(2)	68867-62-9	5(a)(2)	71033-08-4	4
68310-17-8	5(a)(2)	68877-32-7	5(a)(2)	71463-74-6	5(a)(2)
68310-75-8	5(a)(2)	68891-96-3	5(a)(2)	71463-78-0	5(a)(2)
68318-34-3	5(a)(2)	68891-97-4	5(a)(2)	71463-79-1	5(a)(2)
68318-36-5	5(a)(2)	68891-98-5	5(a)(2)	71463-80-4	5(a)(2)
68329-56-6	5(a)(2)	68891-99-6	5(a)(2)	71463-81-5	5(a)(2)
68391-09-3	5(a)(2)	68909-15-9	5(a)(2)	71487-20-2	5(a)(2)
68442-60-4	4	68928-80-3	5(a)(2)	71526-07-3	5(a)(2); 5(e)
68479-98-1	4	68937-41-7	4	71808-64-5	4
68517-02-2	4	68957-31-3	5(a)(2)	72162-15-3	4
68527-02-6	4	68957-32-4	5(a)(2)	72319-24-5	4
68541-01-5	5(a)(2)	68957-53-9	5(a)(2)	72785-08-1	5(a)(2)
68541-02-6	5(a)(2)	68957-54-0	5(a)(2)	72804-49-0	5(a)(2)

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73019-20-2	5(a)(2)
73019-28-0	5(a)(2)
73038-33-2	5(a)(2)
73231-04-6	5(e)
73275-59-9	5(a)(2)
73665-18-6	4
73772-32-4	5(a)(2)
73772-33-5	5(a)(2)
73772-34-6	5(a)(2)
74398-71-3	4
75150-13-9	4
75405-06-0	5(a)(2); 5(e)
77939-50-5	5(e)
77986-14-2	5(e)
78245-94-0	5(a)(2); 5(e)
78543-39-2	5(e)
79710-86-4	5(a)(2)
79771-08-7	5(a)(2)
79771-09-8	5(a)(2)
80584-91-4	5(f)
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81190-38-7	5(a)(2)
81711-69-5	5(a)(2)
82799-44-8	5(a)(2)
83048-65-1	5(a)(2)
83748-27-0	5(a)(2)
83748-28-1	5(a)(2)
84268-08-6	5(a)(2); 5(e)
84852-53-9	5(a)(2); 5(e)
84962-05-0	5(a)(2)
85029-61-4	5(a)(2); 5(e)
85137-09-3	5(a)(2)
85204-21-3	5(f),6
85322-38-9	4
85586-67-0	5(a)(2)
85712-26-1	5(a)(2); 5(e)
85712-27-2	5(a)(2); 5(e)
85736-97-6	5(a)(2)
86273-46-3	5(a)(2); 5(e)
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86917-58-0	5(a)(2); 5(e)
87676-07-1	5(a)(2); 5(e)
89610-32-2	5(a)(2)
90194-13-1	5(a)(2)
90884-29-0	5(a)(2); 5(e)
91081-99-1	5(a)(2)
91144-26-2	5(a)(2)
91788-83-9	5(a)(2)
92044-87-6	5(e)
92484-07-6	5(a)(2); 5(e)
93072-06-1	5(a)(2)
93589-69-6	5(a)(2); 5(e)
93705-66-9	5(a)(2); 5(e)
93820-33-8	5(a)(2)
94054-35-0	5(e)
94133-90-1	5(a)(2)
94148-67-1	5(a)(2)
94213-53-3	5(a)(2)
94317-64-3	5(a)(2); 5(e)
94933-05-8	5(a)(2)
95175-38-5	5(a)(2)
95590-48-0	5(a)(2)
96152-42-0	5(a)(2)
96478-09-0	5(a)(2); 5(e)
96549-95-0	5(a)(2); 5(e)
98999-57-6	5(a)(2)
99607-70-2	5(a)(2)
99636-32-5	5(e)
99742-80-0	5(e)
100402-91-3	5(e)
100545-50-4	5(a)(2)
100912-15-0	5(a)(2)
101646-62-2	5(a)(2)
101646-63-3	5(a)(2)
103331-86-8	5(a)(2)
103458-14-6	5(a)(2)
103490-06-8	5(a)(2); 5(e)
103490-08-0	5(a)(2); 5(e)
103580-64-9	5(a)(2)
103697-96-7	5(a)(2); 5(e)
104503-68-6	5(a)(2)

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105658-30-8	5(a)(2); 5(e)
106008-93-9	5(a)(2)
106008-94-0	5(a)(2)
106359-91-5	5(a)(2)
106790-31-2	5(a)(2); 5(e)
110726-28-8	5(a)(2)
110843-97-5	5(a)(2); 5(e)
110843-98-6	5(a)(2); 5(e)
111109-77-4	5(a)(2)
116671-32-0	5(a)(2); 5(e)
116971-11-0	5(a)(2)
117397-31-6	5(a)(2)
117806-54-9	5(a)(2)
118716-61-3	5(a)(2)
118716-62-4	5(a)(2)
119344-86-4	5(a)(2)
119438-11-8	5(a)(2); 5(e)
119462-56-5	5(a)(2)
119535-63-6	5(a)(2)
119914-24-8	5(e)
120983-72-4	5(a)(2)
121144-97-6	5(a)(2); 5(e)
121255-03-6	5(a)(2); 5(e)
121776-57-6	5(a)(2); 5(e)
122035-71-6	5(a)(2); 5(e)
124756-59-8	5(e)
124993-63-1	5(a)(2); 5(e)
125630-94-6	5(a)(2)
125904-10-1	5(a)(2); 5(e)
125904-11-2	5(a)(2); 5(e)
125997-20-8	5(a)(2); 5(e)
126213-50-1	5(a)(2)
126505-35-9	5(a)(2); 5(e)
126682-74-4	5(e)
127133-66-8	5(a)(2)
128446-60-6	5(a)(2)
129733-59-1	5(a)(2)
129813-71-4	5(a)(2)
130097-33-5	5(a)(2)
130169-66-3	5(a)(2); 5(e)

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130353-62-7	5(a)(2); 5(e)
130728-76-6	5(a)(2); 5(e)
132182-92-4	5(a)(2)
132299-20-8	5(e)
132482-53-2	5(a)(2)
132767-86-3	5(a)(2)
133911-74-7	5(a)(2); 5(e)
134701-20-5	5(a)(2)
134818-69-2	5(a)(2)
135011-47-1	5(a)(2); 5(e)
135020-80-3	5(a)(2); 5(e)
135364-47-5	5(a)(2); 5(e)
136040-19-2	5(a)(2)
136504-87-5	5(a)(2)
136504-96-6	5(a)(2); 5(e)
137787-41-8	5(a)(2)
137873-52-0	5(a)(2); 5(e)
138495-42-8	5(a)(2)
138859-29-7	5(a)(2); 5(e)
141420-50-0	5(a)(2); 5(e)
141914-99-0	5(a)(2)
142828-65-7	5(a)(2)
144761-93-3	5(a)(2); 5(e)
145556-04-3	5(a)(2); 5(e)
145963-84-4	5(a)(2); 5(e)
147129-86-0	5(a)(2)
147170-38-5	5(a)(2)
147170-47-6	5(a)(2)
147732-58-9	5(a)(2); 5(e)
147783-69-5	5(a)(2)
148124-41-8	5(e)
148124-42-9	5(e)
148240-78-2	5(a)(2)
148240-80-6	5(a)(2)
148240-81-7	5(a)(2)
148240-82-8	5(a)(2)
148373-01-7	5(a)(2); 5(e)
148684-79-1	5(a)(2)
149303-87-7	5(a)(2); 5(e)
149564-65-8	5(a)(2)
149850-30-6	5(a)(2)

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151686-36-1	5(a)(2); 5(e)
151717-27-0	5(a)(2)
152007-82-4	5(a)(2)
153454-44-5	5(a)(2); 5(e)
153590-17-1	5(a)(2)
153699-23-1	5(a)(2); 5(e)
155613-93-7	5(a)(2); 5(e)
156294-54-1	5(a)(2); 5(e)
157627-99-1	5(a)(2)
157707-95-4	5(a)(2)
158948-13-1	5(e)
159574-72-8	5(a)(2)
160653-08-7	5(a)(2)
160901-25-7	5(a)(2)
161717-32-4	5(e)
163206-28-8	5(a)(2)
163206-29-9	5(a)(2); 5(e)
163206-32-4	5(e)
163292-61-3	5(a)(2)
163292-64-6	5(e)
163436-84-8	5(a)(2)
163520-33-0	5(a)(2)
163879-69-4	5(a)(2)
163961-26-0	5(a)(2)
163961-34-0	5(a)(2)
164383-18-0	5(a)(2)
166432-37-7	5(a)(2)
166432-57-1	5(e)
166432-58-2	5(a)(2)
166514-73-4	5(e)
167412-23-9	5(a)(2); 5(e)
168113-88-0	5(a)(2)
168811-65-2	5(a)(2)
170678-69-0	5(a)(2)
172343-36-1	5(a)(2)
173904-11-5	5(a)(2)
174254-18-3	5(a)(2)
174305-36-3	5(a)(2)
174333-80-3	5(a)(2)
174974-45-9	5(e)
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203809-20-5	5(a)(2)
204336-40-3	5(a)(2)
204401-83-2	5(a)(2)
205764-98-3	5(a)(2)
206009-82-7	5(a)(2)
206886-68-2	5(e)
208408-03-1	5(a)(2)
210181-71-8	5(a)(2)
211389-36-5	5(e)
211578-04-0	5(e)
211578-08-4	5(e)
212335-59-6	5(e)
212335-62-1	5(e)
215856-72-7	5(e)
216583-60-7	5(e)
216583-66-3	5(e)
216583-91-4	5(e)
216583-94-7	5(e)
216583-95-8	5(e)
216593-48-5	5(e)
216593-49-6	5(e)
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216593-55-4	5(e)
216977-01-4	5(e)
218163-12-3	5(e)
220075-01-4	5(a)(2)
221279-59-0	5(a)(2)
222975-06-6	5(a)(2)
224646-44-0	5(a)(2); 5(e)
235083-88-2	5(a)(2)
235083-90-6	5(a)(2)
238420-68-3	5(a)(2)
247041-56-1	5(a)(2)
249297-16-3	5(a)(2)
251099-16-8	5(a)(2)
251553-55-6	5(e)
252254-51-6	5(e)
253685-23-3	5(e)
258839-39-3	5(a)(2); 5(e)
259795-03-4	5(a)(2)
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284685-45-6	5(a)(2)
290364-23-7	5(a)(2)
290364-24-8	5(a)(2)
297175-71-4	5(a)(2)
300371-38-4	5(a)(2)
306973-46-6	5(a)(2)
306973-47-7	5(a)(2)
306974-19-6	5(a)(2)
306974-28-7	5(a)(2)
306974-45-8	5(a)(2)
306974-63-0	5(a)(2)
306975-56-4	5(a)(2)
306975-57-5	5(a)(2)
306975-62-2	5(a)(2)
306975-84-8	5(a)(2)
306975-85-9	5(a)(2)
306976-25-0	5(a)(2)
306976-55-6	5(a)(2)
306977-10-6	5(a)(2)
306977-58-2	5(a)(2)
306978-04-1	5(a)(2)
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306979-40-8	5(a)(2)
306980-27-8	5(a)(2)
319926-68-6	5(a)(2)
327177-98-0	5(a)(2)
328389-90-8	5(a)(2)
329928-84-9	5(a)(2); 5(e)
332350-90-0	5(e)
332350-93-3	5(e)
333784-10-4	5(a)(2)
333955-69-4	5(a)(2)
333955-70-7	5(a)(2)
333955-79-6	5(a)(2)
333955-80-9	5(a)(2)
346709-25-9	5(a)(2)
350820-95-0	5(a)(2); 5(e)
352661-91-7	5(a)(2); 5(e)
359427-90-0	5(a)(2); 5(e)
364059-77-8	5(a)(2)

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371113-63-2	5(e)
383905-85-9	5(a)(2)
391232-99-8	5(a)(2)
406207-51-0	5(e)
452082-53-0	5(a)(2)
474095-58-4	5(a)(2)
475678-78-5	5(e)
477725-72-7	5(e)
591773-92-1	5(a)(2)
595585-15-2	5(a)(2)
610787-76-3	5(a)(2)
610787-77-4	5(a)(2)
610787-78-5	5(a)(2)
642928-30-1	5(a)(2)
649574-37-8	5(a)(2)
671756-61-9	5(a)(2)
676143-36-5	5(a)(2)
691400-36-9	5(a)(2)
691400-76-7	5(a)(2)
691401-28-2	5(a)(2)
705265-31-2	5(a)(2)
833482-31-8	5(a)(2)
849101-58-2	5(a)(2)
849925-18-4	5(a)(2)
851544-20-2	5(a)(2)
851545-09-0	5(a)(2)
851545-17-0	5(a)(2)
853030-17-8	5(e)
858944-25-9	5(a)(2)
863132-14-3	5(e)
864662-46-4	5(a)(2)
876065-86-0	5(e)
880647-20-1	5(e)
900169-60-0	5(a)(2)
903876-45-9	5(a)(2)
927818-78-8	5(a)(2)
936576-64-6	5(a)(2); 5(e)
956147-76-5	5(a)(2)

Appendix B

Table B-3. Chemical Substances That Are the Subject of Certain TSCA Actions By Accession Number

Accession	TSCA
Number	Action
15544	5(a)(2)
30309	5(a)(2); 5(e)
32178	5(a)(2); 5(e)
41259	5(a)(2); 5(e)
42741	5(a)(2); 5(e)
43313	5(a)(2); 5(e)
44292	5(a)(2); 5(e)
45002	5(a)(2); 5(e)
49435	5(a)(2)
49457	5(a)(2)
50567	5(a)(2); 5(e)
52381	5(a)(2)
53215	5(a)(2)
53862	5(a)(2); 5(e)
55904	5(a)(2)
56236	5(a)(2); 5(e)
58834	5(a)(2)
59531	5(a)(2); 5(e)
59622	5(a)(2); 5(e)
60787	5(a)(2); 5(e)
62625	5(a)(2); 5(e)
62705	5(f),6
64621	5(a)(2); 5(e)
65328	5(a)(2); 5(e)
65599	5(a)(2); 5(e)
65851	5(a)(2)
66503	5(a)(2); 5(e)
66616	5(a)(2); 5(e)
67993	5(a)(2); 5(e)
68101	5(a)(2); 5(e)
68474	5(a)(2); 5(e)
69239	5(a)(2)
71546	5(a)(2); 5(e)
72414	5(a)(2); 5(e)
73484	5(a)(2); 5(e)
73906	5(a)(2); 5(e)
75015	5(a)(2); 5(e)
77511	5(a)(2); 5(e)

Accession	TSCA
Number	Action
77668	5(a)(2); 5(e)
77759	5(a)(2); 5(e)
77873	5(a)(2); 5(e)
78581	5(a)(2); 5(e)
79164	5(a)(2); 5(e)
80376	5(a)(2); 5(e)
80912	5(a)(2); 5(e)
81426	5(a)(2); 5(e)
84801	5(a)(2); 5(e)
87560	5(a)(2); 5(e)
87968	5(a)(2); 5(e)
88063	5(a)(2)
88472	5(a)(2); 5(e)
90212	5(a)(2); 5(e)
91680	5(a)(2); 5(e)
93835	5(a)(2); 5(e)
97008	5(a)(2); 5(e)
97291	5(a)(2); 5(e)
97859	5(a)(2)
101974	5(a)(2)
102966	5(a)(2); 5(e)
103378	5(a)(2); 5(e)
103798	5(a)(2); 5(e)
105090	5(a)(2); 5(e)
105578	5(a)(2); 5(e)
106720	5(a)(2); 5(e)
106877	5(a)(2); 5(e)
107450	5(a)(2); 5(e)
108260	5(a)(2); 5(e)
109525	5(a)(2); 5(e)
112233	5(a)(2); 5(e)
112380	5(a)(2); 5(e)
113236	5(a)(2); 5(e)
114024	5(a)(2); 5(e)
115981	5(a)(2); 5(e)
119585	5(a)(2); 5(e)
120208	5(a)(2); 5(e)
121585	5(a)(2)

Accession	TSCA
Number	Action
121621	5(a)(2); 5(e)
121972	5(a)(2); 5(e)
122395	5(a)(2); 5(e)
122704	5(a)(2); 5(e)
122908	5(a)(2); 5(e)
123116	5(a)(2); 5(e)
123296	5(a)(2); 5(e)
123401	5(a)(2); 5(e)
123650	5(a)(2)
123785	5(a)(2); 5(e)
123898	5(a)(2); 5(e)
124540	5(a)(2); 5(e)
124595	5(a)(2); 5(e)
125792	5(a)(2); 5(e)
125883	5(a)(2)
126002	5(a)(2); 5(e)
126615	5(a)(2); 5(e)
127992	5(a)(2)
128111	5(a)(2)
128155	5(a)(2); 5(e)
128520	5(a)(2)
129487	5(a)(2)
129750	5(a)(2); 5(e)
129829	5(a)(2); 5(e)
130291	5(e)
130348	5(a)(2)
130360	5(a)(2)
130428	5(a)(2); 5(e)
130940	5(a)(2)
131125	5(a)(2); 5(e)
131830	5(a)(2)
132311	5(a)(2)
132355	5(a)(2)
132537	5(a)(2)
132651	5(a)(2); 5(e)
132811	5(a)(2); 5(e)
132855	5(a)(2)
133256	5(a)(2)

Accession	TSCA
Number	Action
133336	5(a)(2); 5(e)
133370	5(a)(2)
133438	5(a)(2)
134077	5(a)(2)
134306	5(a)(2)
135149	5(a)(2)
135649	5(a)(2)
135672	5(a)(2)
135945	5(a)(2)
136335	5(a)(2)
136482	5(a)(2)
136722	5(a)(2)
136880	5(a)(2)
137361	5(a)(2); 5(e)
137418	5(a)(2)
137963	5(a)(2)
138104	5(a)(2)
138217	5(a)(2)
138342	5(a)(2)
138499	5(e)
138557	5(a)(2)
138751	5(a)(2)
139674	5(a)(2); 5(e)
139787	5(a)(2)
140502	5(a)(2); 5(e)
140591	5(e)
141072	5(a)(2); 5(e)
141629	5(a)(2)
141925	5(a)(2); 5(e)
142086	5(a)(2); 5(e)
142360	5(a)(2)
143034	5(a)(2)
143410	5(a)(2); 5(e)
143501	5(a)(2)
143636	5(a)(2)
143807	5(a)(2)
143896	5(a)(2)
144117	5(a)(2)
144388	5(a)(2)
144402	5(e)
144719	5(a)(2)
1	

Accession	TSCA
Accession Number	Action
144797	5(a)(2); 5(e)
145563	5(e)
145814	5(a)(2)
146282	5(a)(2)
146340	5(a)(2)
146453	5(a)(2); 5(e)
146588	5(a)(2); 5(e)
146646	5(a)(2)
146975	5(a)(2)
147036	5(a)(2)
147229	5(a)(2)
147809	5(a)(2)
147923	5(a)(2)
148073	5(a)(2)
148084	5(e)
148164	5(a)(2); 5(e)
148835	5(a)(2)
149021	5(a)(2)
150595	5(a)(2); 5(e)
150711	5(a)(2); 5(e)
151247	5(a)(2)
151372	5(a)(2)
152115	5(a)(2)
152386	5(a)(2); 5(e)
152853	5(a)(2)
152897	5(a)(2)
152955	5(a)(2)
153174	5(e)
153196	5(a)(2)
153232	5(a)(2); 5(e)
153312	5(a)(2)
153889	5(a)(2)
154473	5(a)(2); 5(e)
154688	5(e)
154724	5(a)(2)
155750	5(a)(2); 5(e)
156015	5(a)(2)
156128	5(a)(2)
156140	5(a)(2)
156413	5(a)(2)
156526	5(a)(2); 5(e)

Accession	TSCA
Number	Action
157109	5(a)(2)
157825	5(e)
158226	5(a)(2)
158511	5(a)(2)
158635	5(a)(2)
158715	5(a)(2)
158726	5(a)(2)
159229	5(a)(2)
159570	5(a)(2)
159650	5(e)
160044	5(e)
160180	5(a)(2)
161070	5(a)(2)
161887	5(a)(2)
161898	5(a)(2)
162222	5(a)(2); 5(e)
162415	5(a)(2)
162459	5(a)(2)
163474	5(a)(2); 5(e)
163929	5(a)(2); 5(e)
163985	5(a)(2)
165141	5(a)(2); 5(e)
165505	5(a)(2)
165516	5(a)(2)
165538	5(a)(2)
166519	5(a)(2)
166597	5(e)
167261	5(a)(2)
167374	5(e)
167512	5(a)(2)
167830	5(a)(2)
167910	5(a)(2)
167943	5(a)(2)
168162	5(e)
168377	5(a)(2)
168504	5(a)(2); 5(e)
168935	5(a)(2)
170059	5(a)(2); 5(e)
171063	5(a)(2)
171596	5(e)
172088	5(a)(2)

Accession	TSCA
Number	Action
172351	5(a)(2)
172691	5(a)(2); 5(e)
172737	5(a)(2); 5(e)
172793	5(a)(2)
173014	5(a)(2)
173296	5(a)(2); 5(e)
173310	5(a)(2); 5(e)
173343	5(a)(2); 5(e)
173489	5(a)(2)
173649	5(a)(2)
173876	5(a)(2)
174131	5(a)(2)
174324	5(a)(2); 5(e)
174368	5(a)(2)
174722	5(a)(2)
175032	5(a)(2); 5(e)
176091	5(a)(2)
176364	5(e)
176853	5(e)
176875	5(a)(2)
176911	5(a)(2)
176922	5(a)(2); 5(e)
178097	5(a)(2)
178495	5(a)(2); 5(e)
179090	5(a)(2); 5(e)
179329	5(a)(2)
187929	5(a)(2)
190762	5(a)(2); 5(e)
211871	5(a)(2)
230898	5(a)(2)
230967	5(a)(2)
231255	5(e)
231664	5(a)(2)
231722	5(a)(2)
232112	5(a)(2)
232258	5(a)(2)
232532	5(a)(2)
232918	5(e)
233864	5(e)
234152	5(e)
234210	5(a)(2)

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Accession Number	TSCA Action
234243	Action 5(a)(2)
234378	5(a)(2) $5(a)(2)$
234469	5(e)
234572	5(a)(2)
234798	5(a)(2) $5(a)(2)$
234878	5(a)(2) $5(a)(2)$
235586	5(e)
235724	5(e)
235746	5(a)(2)
236090	5(a)(2) $5(a)(2)$
236352	5(a)(2) $5(a)(2)$
236501	5(a)(2); 5(e)
236670	
236807	5(a)(2); 5(e) 5(a)(2)
237026	
237020	5(e)
237786	5(e) 5(a)(2)
238085	5(a)(2)
238267	5(a)(2)
238207	5(a)(2)
239555	5(a)(2)
240110	5(a)(2)
240110	5(a)(2)
240212	5(e)
240243	5(a)(2)
240392	5(e)
240843	5(e) 5(e)
240881	
240983	5(a)(2)
241140	5(e) 5(a)(2)
241919	5(a)(2)
241919	5(a)(2)
	5(a)(2)
242207	5(a)(2)
242218	5(a)(2)
242412	5(a)(2)
242467	5(e)
242650	5(a)(2)
242763	5(a)(2)
242901	5(a)(2)
242956	5(e)
243017	5(e)

Accession	TSCA
Number	Action
243313	5(a)(2); 5(e)
243335	5(e)
243799	5(a)(2)
244407	5(a)(2)
244429	5(a)(2)
244485	5(a)(2)
244872	5(a)(2)
245193	5(a)(2)
245397	5(e)
245820	5(e)
245831	5(e)
245933	5(a)(2)
246287	5(e)
246469	5(a)(2)
246743	5(a)(2)
247495	5(a)(2)
247826	5(e)
248465	5(a)(2)
248567	5(e)
248705	5(a)(2)
249399	5(e)
249468	5(a)(2)
249651	5(e)
249720	5(e)
250023	5(a)(2)
250089	5(a)(2)
250476	5(e)
250965	5(a)(2)
251300	5(e)
251491	5(a)(2)
251662	5(e)
251708	5(a)(2)
252187	5(a)(2)
252290	5(e)
253442	5(a)(2)
253577	5(a)(2)
253975	5(e)
254003	5(a)(2)
254183	5(a)(2)
254401	5(a)(2)
254456	5(e)
	(-)

Accession	TSCA
Number	Action
254489	5(e)
254730	5(a)(2)
254978	5(e)
255517	5(a)(2)
255620	5(a)(2)
255686	5(a)(2)
256214	5(e)
256236	5(a)(2); 5(e)
256394	5(e)
256634	5(e)
256645	5(e)
257002	5(a)(2)
257171	5(e)
257455	5(a)(2)
257853	5(e)
257922	5(e)
258049	5(a)(2)
258094	5(a)(2)
258174	5(a)(2)
258356	5(e)
258981	5(e)
259188	5(a)(2)
259213	5(a)(2)
259360	5(e)
259382	5(a)(2)
259622	5(a)(2)
259702	5(e)
259780	5(e)
260276	5(a)(2)
260561	5(a)(2)
260696	5(a)(2)
260721	5(a)(2); 5(e)
261348	5(a)(2)
261462	5(e)
261553	5(a)(2)
261826	5(e)
262589	5(e)
262874	5(a)(2)
262932	5(a)(2)
262943	5(a)(2)

A coordina	TSCA
Accession Number	Action
262965	5(a)(2)
263208	5(e)
263388	5(a)(2)
263526	5(e)
263855	5(a)(2)
263935	5(a)(2)
264165	5(e)
264472	5(a)(2)
264687	5(e)
264745	5(e)
264949	5(e)
265146	5(e)
265599	5(e)
266218	5(e)
266514	5(e)
266707	5(e)
266865	5(e)
266956	5(a)(2)
267084	5(e)
267391	5(a)(2)
268076	5(e)
268576	5(a)(2)
268883	5(e)
269160	5(a)(2)
269397	5(a)(2)
269626	5(a)(2)
269820	5(e)
269875	5(a)(2)
270236	5(a)(2)
270338	5(a)(2)
270565	5(a)(2); 5(e)
270587	5(a)(2)
270601	5(e)
271046	5(a)(2)
271477	5(a)(2)
271706	5(e)
271739	5(e)
271875	5(e)
272721	5(e)
272812	5(e)

Accession	TSCA
Number	Action
273100	5(a)(2)
273495	5(a)(2)
273735	5(a)(2)
274067	5(a)(2)
274136	5(e)
274238	5(a)(2)
274352	5(e)
274498	5(a)(2)
274589	5(a)(2)
274658	5(e)
274670	5(e)
274943	5(a)(2)
275219	5(a)(2)
275253	5(a)(2)
275468	5(a)(2)
275651	5(a)(2); 5(e)
275708	5(a)(2)
276314	5(e)
6507	5(a)(2)
276530	5(a)(2)
276632	5(a)(2)
276698	5(a)(2)
276825	5(a)(2)
276836	5(a)(2)
277055	5(e)
277293	5(a)(2)
277339	5(e)
277737	5(a)(2)
277895	5(a)(2)
278105	5(e)
278138	5(e)
278616	5(e)
278627	5(a)(2)
278638	5(a)(2)
279084	5(a)(2)
279108	5(e)
279506	5(a)(2)
279744	5(e)
279755	5(e)
279960	5(e)

Appendix B Table B-4. Chemical Substances that are the Subject of a Enforceable Consent Agreement by CAS Registry Number

Listed below are the chemical substances that are the subject of an enforceable consent agreement adopted under 40 CFR part790 and the Federal Register citations providing public notice of such agreements. See 40 CFR 790 and 799.5000 for more details.

CAS Registry Number	Chemical Name	Testing	FR Publication Date
67–64–1	Acetone	Health effects	January 23, 1995
71–55–6	1,1,1-Trichloroethane	Health effects	August 23, 1989
78-83-1	Isobutyl alcohol	Health effects	January 23, 1995
79–10–7	Acrylic Acid	Health effects	March 4, 1992
84–74–2	Di- n -butyl phthalate	Environmental effects	January 9, 1989
84–75–3	Di- n -hexyl phthalate	Environmental effects; Chemical fate	January 9, 1989
100-40-3	4-Vinylcyclohexene	Health effects; Chemical fate	September 23, 1991
106–91–2	Glycidyl methacrylate	Health effects	January 26, 1995
108-10-1	Methyl isobutyl ketone	Health effects	January 23, 1995
109–99–9	Tetrahydrofuran	Health effects	January 23, 1995
110–82–7	Cyclohexane	Health Effects and Environmental Releases Report	November 18, 1994
	Triethylene glycol monomethyl ether	Health effects	April 3, 1989
	Triethylene glycol monoethyl ether	Health effects	April 3, 1989
117-81-7	Di-2-ethylhexyl phthalate	Chemical fate	January 9, 1989
119–06–2	Ditridecyl phthalate	Chemical fate	January 9, 1989
123-86-4	N -butyl acetate	Health effects	January 23, 1995
131–11–3	Dimethly phthalate	Environmental effects	January 9, 1989
141–78–6	Ethyl acetate	Health effects	January 23, 1995

CAS Registry			
Number	Chemical Name	Testing	FR Publication Date
141–79–7	Mesityl oxide	Health effects	September 5, 1991
	Triethylene glycol monobutyl ether	Health effects	January 9, 1989
143–33–9	Sodium cyanide	Chemical fate; Terrestrial effects	December 17, 1991
556–67–2	Octamethylcyclo-tetrasiloxane	Chemical fate; Environmental effects	January 10, 1989
628-63-7	N -amyl acetate	Health effects	January 23, 1995
872–50–4	N- methylpyrrolidone	Health effects	November 23, 1993
994-05-8	Tertiary-amyl methyl ether	Health effects	March 21, 1995
1634-04-4	Methyl tert-butyl ether	Health effects	March 31, 1988
2461–18–9	Lauryl glycidyl ether ¹	Health effects	June 11, 1996
	C.I. Disperse Blue 79:1 Acetamide, <i>N</i> -[5-[bis[2-(acetyloxy) ethyl]amino]-2-[(2-bromo-4, 6-dinitrophenyl) azo]-4-methoxyphenyl]-	Health effects; Environmental effects	November 21, 1989
3648-20-2	Diundecyl phthalate	Environmental effects	January 9, 1989
4170–30–3	Crotonaldehyde	Environmental effects; Chemical fate	November 9, 1989
4675–54–3	Bisphenol A diglycidyl ether	Health effects Exposure evaluation	August 1, 1994
15965–99–8	Hexadecyl glycidyl ether ¹	Health effects	June 11, 1996
16245–97–9	n -Octadecyl glycidyl ether ¹	Health effects	June 11, 1996
26761-40-0	Diisodecyl phthalate	Chemical fate	January 9, 1989
38954-75-5	Tetradecyl glycidyl ether ¹	Health effects	June 11, 1996
68081-84-5	Alkyl (C ₁₀ -C ₁₆) glycidyl ether ¹	Health effects	June 11, 1996
	Ditridecyl phthalate (mixed isomers)	Chemical fate	January 9, 1989

CAS Registry Number	Chemical Name	Testing	FR Publication Date
68515–49–1	Diisodecyl phthalate (mixed isomers)	Chemical fate	January 9, 1989
	, ·	Environmental effects; Chemical fate	January 9, 1989
68609–97–2	Alkyl (C ₁₂ -C ₁₄) glycidyl ether ¹	Health effects	June 11, 1996
84852–15–3	5 1	Environmental effects; Chemical fate	February 21, 1990
120547-52-6	Alkyl (C ₁₂ -C ₁₃) glycidyl ether	Health effects	March 22, 1996
142844-00-6	Refractory ceramic fibers	Exposure monitoring	May 14, 1993

 $^{^{1}}$ As represented by alkyl (C_{12} - C_{13}) glycidyl ether (CAS No. 120547–52–6)

Appendix C

Chemical Substances Partially Exempt from Reporting in 2012

Chemical substances that are partially exempt from reporting requirements under the CDR rule in 2012 are listed in 40 CFR 711.6(b)(1) and 711.6(b)(2); these lists are included below. Note that inorganic chemical substances are no longer partially exempt from reporting requirements in 2012, so submitters should report complete information on inorganic chemical substances, including processing and use information.

IMPORTANT: This document is intended to be an information resource. While EPA has tried to provide an accurate list of chemical substances, the list may contain errors and omissions. This list should not be relied upon in lieu of the *Code of Federal Rules*. In the event of a conflict between this list and the *Code of Federal Rules*, this list will not be considered controlling.

Partially Exempt Chemical Substances Termed "Petroleum Process Streams" Under 40 CFR 711.6(b)(1)

CAS Registry Number	Product
8002-05-9	Petroleum
8002-74-2	Paraffin waxes and hydrocarbon waxes
8006–20–0	Fuel gases, low and medium B.T.U.
8008-20-6	Kerosine (petroleum)
8009-03-8	Petrolatum
8012-95-1	Paraffin oils
8030–30–6	Naphtha
8032-32-4	Ligroine
8042-47-5	White mineral oil (petroleum)
8052-41-3	Stoddard solvent
8052-42-4	Asphalt
61789-60-4	Pitch
63231–60–7	Paraffin waxes and hydrocarbon waxes, microcryst.
64741-41-9	Naphtha (petroleum), heavy straight-run
64741-42-0	Naphtha (petroleum), full-range straight-run
64741–43–1	Gas oils (petroleum), straight-run
64741–44–2	Distillates (petroleum), straight-run middle
64741–45–3	Residues (petroleum), atm. Tower
64741–46–4	Naphtha (petroleum), light straight-run
64741–47–5	Natural gas condensates (petroleum)
64741–49–7	Condensates (petroleum), vacuum tower

CAS Registry Number	Product
64741-50-0	Distillates (petroleum), light paraffinic
64741-51-1	Distillates (petroleum), heavy paraffinic
64741-52-2	Distillates (petroleum), light naphthenic
64741-53-3	Distillates (petroleum), heavy naphthenic
64741–54–4	Naphtha (petroleum), heavy catalytic cracked
64741–55–5	Naphtha (petroleum), light catalytic cracked
64741–56–6	Residues (petroleum), vacuum
64741–57–7	Gas oils (petroleum), heavy vacuum
64741–58–8	Gas oils (petroleum), light vacuum
64741–59–9	Distillates (petroleum), light catalytic cracked
64741-60-2	Distillates (petroleum), intermediate catalytic cracked
64741-61-3	Distillates (petroleum), heavy catalytic cracked
64741–62–4	Clarified oils (petroleum), catalytic cracked
64741–63–5	Naphtha (petroleum), light catalytic reformed
64741–64–6	Naphtha (petroleum), full-range alkylate
64741–65–7	Naphtha (petroleum), heavy alkylate
64741–66–8	Naphtha (petroleum), light alkylate
64741–67–9	Residues (petroleum), catalytic reformer fractionator
64741-68-0	Naphtha (petroleum), heavy catalytic reformed
64741–69–1	Naphtha (petroleum), light hydrocracked
64741-70-4	Naphtha (petroleum), isomerization
64741–73–7	Distillates (petroleum), alkylate
64741–74–8	Naphtha (petroleum), light thermal cracked
64741–75–9	Residues (petroleum), hydrocracked
64741–76–0	Distillates (petroleum), heavy hydrocracked
64741–77–1	Distillates (petroleum), light hydrocracked
64741–78–2	Naphtha (petroleum), heavy hydrocracked
64741–79–3	Coke (petroleum)
64741-80-6	Residues (petroleum), thermal cracked
64741-81-7	Distillates (petroleum), heavy thermal cracked
64741-82-8	Distillates (petroleum), light thermal cracked
64741–83–9	Naphtha (petroleum), heavy thermal cracked
64741-84-0	Naphtha (petroleum), solvent-refined light
64741-85-1	Raffinates (petroleum), sorption process
64741–86–2	Distillates (petroleum), sweetened middle
64741–87–3	Naphtha (petroleum), sweetened
64741–88–4	Distillates (petroleum), solvent-refined heavy paraffinic

CAS Registry Number	Product
64741–89–5	Distillates (petroleum), solvent-refined light paraffinic
64741–90–8	Gas oils (petroleum), solvent-refined
64741–91–9	Distillates (petroleum), solvent-refined middle
64741–92–0	Naphtha (petroleum), solvent-refined heavy
64741–95–3	Residual oils (petroleum), solvent deasphalted
64741–96–4	Distillates (petroleum), solvent-refined heavy naphthenic
64741–97–5	Distillates (petroleum), solvent-refined light naphthenic
64741–98–6	Extracts (petroleum), heavy naphtha solvent
64741–99–7	Extracts (petroleum), light naphtha solvent
64742-01-4	Residual oils (petroleum), solvent-refined
64742-03-6	Extracts (petroleum), light naphthenic distillate solvent
64742–04–7	Extracts (petroleum), heavy paraffinic distillate solvent
64742-05-8	Extracts (petroleum), light paraffinic distillate solvent
64742–06–9	Extracts (petroleum), middle distillate solvent
64742-07-0	Raffinates (petroleum), residual oil decarbonization
64742-08-1	Raffinates (petroleum), heavy naphthenic distillate decarbonization
64742-09-2	Raffinates (petroleum), heavy paraffinic distillate decarbonization
64742–10–5	Extracts (petroleum), residual oil solvent
64742–11–6	Extracts (petroleum), heavy naphthenic distillate solvent
64742–12–7	Gas oils (petroleum), acid-treated
64742–13–8	Distillates (petroleum), acid-treated middle
64742–14–9	Distillates (petroleum), acid-treated light
64742-15-0	Naphtha (petroleum), acid-treated
64742–16–1	Petroleum resins
64742–18–3	Distillates (petroleum), acid-treated heavy naphthenic
64742–19–4	Distillates (petroleum), acid-treated light naphthenic
64742–20–7	Distillates (petroleum), acid-treated heavy paraffinic
64742–21–8	Distillates (petroleum), acid-treated light paraffinic
64742–22–9	Naphtha (petroleum), chemically neutralized heavy
64742–23–0	Naphtha (petroleum), chemically neutralized light
64742–24–1	Sludges (petroleum), acid
64742–25–2	Lubricating oils (petroleum), acid-treated spent
64742–26–3	Hydrocarbon waxes (petroleum), acid-treated
64742–27–4	Distillates (petroleum), chemically neutralized heavy paraffinic
64742–28–5	Distillates (petroleum), chemically neutralized light paraffinic
64742–29–6	Gas oils (petroleum), chemically neutralized
64742–30–9	Distillates (petroleum), chemically neutralized middle

CAS Registry Number	Product
64742-31-0	Distillates (petroleum), chemically neutralized light
64742-32-1	Lubricating oils (petroleum), chemically neutralized spent
64742-33-2	Hydrocarbon waxes (petroleum), chemically neutralized
64742–34–3	Distillates (petroleum), chemically neutralized heavy naphthenic
64742–35–4	Distillates (petroleum), chemically neutralized light naphthenic
64742–36–5	Distillates (petroleum), clay-treated heavy paraffinic
64742–37–6	Distillates (petroleum), clay-treated light paraffinic
64742–38–7	Distillates (petroleum), clay-treated middle
64742–39–8	Neutralizing agents (petroleum), spent sodium carbonate
64742–40–1	Neutralizing agents (petroleum), spent sodium hydroxide
64742–41–2	Residual oils (petroleum), clay-treated
64742–42–3	Hydrocarbon waxes (petroleum), clay-treated microcryst.
64742–43–4	Paraffin waxes (petroleum), clay-treated
64742–44–5	Distillates (petroleum), clay-treated heavy naphthenic
64742–45–6	Distillates (petroleum), clay-treated light naphthenic
64742–46–7	Distillates (petroleum), hydrotreated middle
64742–47–8	Distillates (petroleum), hydrotreated light
64742–48–9	Naphtha (petroleum), hydrotreated heavy
64742–49–0	Naphtha (petroleum), hydrotreated light
64742-50-3	Lubricating oils (petroleum), clay-treated spent
64742-51-4	Paraffin waxes (petroleum), hydrotreated
64742-52-5	Distillates (petroleum), hydrotreated heavy naphthenic
64742–53–6	Distillates (petroleum), hydrotreated light naphthenic
64742–54–7	Distillates (petroleum), hydrotreated heavy paraffinic
64742-55-8	Distillates (petroleum), hydrotreated light paraffinic
64742–56–9	Distillates (petroleum), solvent-dewaxed light paraffinic
64742-57-0	Residual oils (petroleum), hydrotreated
64742–58–1	Lubricating oils (petroleum), hydrotreated spent
64742-59-2	Gas oils (petroleum), hydrotreated vacuum
64742–60–5	Hydrocarbon waxes (petroleum), hydrotreated microcryst.
64742–61–6	Slack wax (petroleum)
64742–62–7	Residual oils (petroleum), solvent-dewaxed
64742-63-8	Distillates (petroleum), solvent-dewaxed heavy naphthenic
64742–64–9	Distillates (petroleum), solvent-dewaxed light naphthenic
64742–65–0	Distillates (petroleum), solvent-dewaxed heavy paraffinic
64742–67–2	Foots oil (petroleum)
64742–68–3	Naphthenic oils (petroleum), catalytic dewaxed heavy

CAS Registry Number	Product
64742–69–4	Naphthenic oils (petroleum), catalytic dewaxed light
64742-70-7	Paraffin oils (petroleum), catalytic dewaxed heavy
64742-71-8	Paraffin oils (petroleum), catalytic dewaxed light
64742–72–9	Distillates (petroleum), catalytic dewaxed middle
64742-73-0	Naphtha (petroleum), hydrodesulfurized light
64742–75–2	Naphthenic oils (petroleum), complex dewaxed heavy
64742–76–3	Naphthenic oils (petroleum), complex dewaxed light
64742–78–5	Residues (petroleum), hydrodesulfurized atmospheric tower
64742–79–6	Gas oils (petroleum), hydrodesulfurized
64742–80–9	Distillates (petroleum), hydrodesulfurized middle
64742-81-0	Kerosine (petroleum), hydrodesulfurized
64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy
64742-83-2	Naphtha (petroleum), light steam-cracked
64742-85-4	Residues (petroleum), hydrodesulfurized vacuum
64742–86–5	Gas oils (petroleum), hydrodesulfurized heavy vacuum
64742–87–6	Gas oils (petroleum), hydrodesulfurized light vacuum
64742–88–7	Solvent naphtha (petroleum), medium aliph.
64742–89–8	Solvent naphtha (petroleum), light aliph.
64742–90–1	Residues (petroleum), steam-cracked
64742–91–2	Distillates (petroleum), steam-cracked
64742–92–3	Petroleum resins, oxidized
64742–93–4	Asphalt, oxidized
64742–94–5	Solvent naphtha (petroleum), heavy arom.
64742–95–6	Solvent naphtha (petroleum), light arom.
64742–96–7	Solvent naphtha (petroleum), heavy aliph.
64742–97–8	Distillates (petroleum), oxidized heavy
64742–98–9	Distillates (petroleum), oxidized light
64742–99–0	Residual oils (petroleum), oxidized
64743-00-6	Hydrocarbon waxes (petroleum), oxidized
64743-01-7	Petrolatum (petroleum), oxidized
64743-02-8	Alkenes, C>10 .alpha
64743-03-9	Phenols (petroleum)
64743-04-0	Coke (petroleum), recovery
64743-05-1	Coke (petroleum), calcined
64743-06-2	Extracts (petroleum), gas oil solvent
64743-07-3	Sludges (petroleum), chemically neutralized
64754–89–8	Naphthenic acids (petroleum), crude

CAS Registry Number	Product
64771–71–7	Paraffins (petroleum), normal C>10
64771–72–8	Paraffins (petroleum), normal C5-20
67254-74-4	Naphthenic oils
67674–12–8	Residual oils (petroleum), oxidized, compounds with triethanolamine
67674–13–9	Petrolatum (petroleum), oxidized, partially deacidified
67674–15–1	Petrolatum (petroleum), oxidized, Me ester
67674–16–2	Hydrocarbon waxes (petroleum), oxidized, partially deacidified
67674–17–3	Distillates (petroleum), oxidized light, compounds with triethanolamine
67674–18–4	Distillates (petroleum), oxidized light, Bu esters
67891–79–6	Distillates (petroleum), heavy arom.
67891–80–9	Distillates (petroleum), light arom.
67891-81-0	Distillates (petroleum), oxidized light, potassium salts
67891–82–1	Hydrocarbon waxes (petroleum), oxidized, compounds with ethanolamine
67891–83–2	Hydrocarbon waxes (petroleum), oxidized, compounds with isopropanolamine
67891–85–4	Hydrocarbon waxes (petroleum), oxidized, compounds with triisopropanolamine
67891-86-5	Hydrocarbon waxes (petroleum), oxidized, compounds with diisopropanolamine
68131-05-5	Hydrocarbon oils, process blends
68131–49–7	Aromatic hydrocarbons, C6-10, acid-treated, neutralized
68131–75–9	Gases (petroleum), C3-4
68153-22-0	Paraffin waxes and Hydrocarbon waxes, oxidized
68187–57–5	Pitch, coal tar-petroleum
68187–58–6	Pitch, petroleum, arom.
68187–60–0	Hydrocarbons, C4, ethane-propane-cracked
68307–98–2	Tail gas (petroleum), catalytic cracked distillate and catalytic cracked naphtha fractionation absorber
68307–99–3	Tail gas (petroleum), catalytic polymn. naphtha fractionation stabilizer
68308-00-9	Tail gas (petroleum), catalytic reformed naphtha fractionation stabilizer, hydrogen sulfide-free
68308-01-0	Tail gas (petroleum), cracked distillate hydrotreater stripper
68308-02-1	Tail gas (petroleum), distn., hydrogen sulfide-free
68308-03-2	Tail gas (petroleum), gas oil catalytic cracking absorber
68308-04-3	Tail gas (petroleum), gas recovery plant
68308-05-4	Tail gas (petroleum), gas recovery plant deethanizer
68308–06–5	Tail gas (petroleum), hydrodesulfurized distillate and hydrodesulfurized naphtha fractionator, acid-free
68308-07-6	Tail gas (petroleum), hydrodesulfurized vacuum gas oil stripper, hydrogen sulfide-free
68308-08-7	Tail gas (petroleum), isomerized naphtha fractionation stabilizer
68308-09-8	Tail gas (petroleum), light straight-run naphtha stabilizer, hydrogen sulfide-free

CAS Registry Number	Product
68308-10-1	Tail gas (petroleum), straight-run distillate hydrodesulfurizer, hydrogen sulfide-free
68308-11-2	Tail gas (petroleum), propane-propylene alkylation feed prep deethanizer
68308-12-3	Tail gas (petroleum), vacuum gas oil hydrodesulfurizer, hydrogen sulfide-free
68308-27-0	Fuel gases, refinery
68333-22-2	Residues (petroleum), atmospheric
68333-23-3	Naphtha (petroleum), heavy coker
68333-24-4	Hydrocarbon waxes (petroleum), oxidized, compds. with triethanolamine
68333-25-5	Distillates (petroleum), hydrodesulfurized light catalytic cracked
68333–26–6	Clarified oils (petroleum), hydrodesulfurized catalytic cracked
68333-27-7	Distillates (petroleum), hydrodesulfurized intermediate catalytic cracked
68333–28–8	Distillates (petroleum), hydrodesulfurized heavy catalytic cracked
68333-29-9	Residues (petroleum), light naphtha solvent extracts
68333–30–2	Distillates (petroleum), oxidized heavy thermal cracked
68333-81-3	Alkanes, C4-12
68333-88-0	Aromatic hydrocarbons, C9-17
68334–30–5	Fuels, diesel
68409–99–4	Gases (petroleum), catalytic cracked overheads
68410-00-4	Distillates (petroleum), crude oil
68410-05-9	Distillates (petroleum), straight-run light
68410–12–8	Distillates (petroleum), steam-cracked, C5-10 fraction, high-temp. stripping products with light steamcracked petroleum naphtha C5 fraction polymers
68410–71–9	Raffinates (petroleum), catalytic reformer ethylene glycol-water countercurrent exts.
68410–96–8	Distillates (petroleum), hydrotreated middle, intermediate boiling
68410–97–9	Distillates (petroleum), light distillate hydrotreating process, low-boiling
68410–98–0	Distillates (petroleum), hydrotreated heavy naphtha, deisohexanizer overheads
68411-00-7	Alkenes, C>8
68425–29–6	Distillates (petroleum), naphtha-raffinate pyrolyzate-derived, gasoline-blending
68425–33–2	Petrolatum (petroleum), oxidized, barium salt
68425–34–3	Petrolatum (petroleum), oxidized, calcium salt
68425–35–4	Raffinates (petroleum), reformer, Lurgi unit-sepd.
68425–39–8	Alkenes, C>10 .alpha, oxidized
68441-09-8	Hydrocarbon waxes (petroleum), clay-treated microcryst., contg. polyethylene, oxidized
68459–78–9	Alkenes, C18-24 .alpha, dimers
68475-57-0	Alkanes, C1-2
68475–58–1	Alkanes, C2-3
68475–59–2	Alkanes, C3-4
68475–60–5	Alkanes, C4-5

CAS Registry Number	Product
68475–61–6	Alkenes, C5, naphtha-raffinate pyrolyzate-derived
68475–70–7	Aromatic hydrocarbons, C6-8, naphtha-raffinate pyrolyzate-derived
68475–79–6	Distillates (petroleum), catalytic reformed depentanizer
68475–80–9	Distillates (petroleum), light steam-cracked naphtha
68476–26–6	Fuel gases
68476-27-7	Fuel gases, amine system residues
68476–28–8	Fuel gases, C6-8 catalytic reformer
68476–29–9	Fuel gases, crude oil distillates
68476–30–2	Fuel oil, no. 2
68476–31–3	Fuel oil, no. 4
68476–32–4	Fuel oil, residues-straight-run gas oils, high-sulfur
68476–33–5	Fuel oil, residual
68476–34–6	Fuels, diesel, no. 2
68476–39–1	Hydrocarbons, alipharomC4-5-olefinic
68476–40–4	Hydrocarbons, C3-4
68476–42–6	Hydrocarbons, C4-5
68476–43–7	Hydrocarbons, C4-6, C5-rich
68476–44–8	Hydrocarbons, C>3
68476–45–9	Hydrocarbons, C5-10 arom. conc., ethylene-manufby-product
68476–46–0	Hydrocarbons, C3-11, catalytic cracker distillates
68476–47–1	Hydrocarbons, C2-6, C6-8 catalytic reformer
68476–49–3	Hydrocarbons, C2-4, C3-rich
68476–50–6	Hydrocarbons, C>5, C5-6-rich
68476–52–8	Hydrocarbons, C4, ethylene-manufby-product
68476–53–9	Hydrocarbons, C>20, petroleum wastes
68476–54–0	Hydrocarbons, C3-5, polymn. unit feed
68476–55–1	Hydrocarbons, C5-rich
68476–56–2	Hydrocarbons, cyclic C5 and C6
68476–77–7	Lubricating oils, refined used
68476-81-3	Paraffin waxes and Hydrocarbon waxes, oxidized, calcium salts
68476–84–6	Petroleum products, gases, inorg.
68476–85–7	Petroleum gases, liquefied
68476–86–8	Petroleum gases, liquefied, sweetened
68477–25–8	Waste gases, vent gas, C1-6
68477–26–9	Wastes, petroleum
68477–29–2	Distillates (petroleum), catalytic reformer fractionator residue, high-boiling
68477–30–5	Distillates (petroleum), catalytic reformer fractionator residue, intermediate-boiling

CAS Registry Number	Product
68477–31–6	Distillates (petroleum), catalytic reformer fractionator residue, low-boiling
68477–33–8	Gases (petroleum), C3-4, isobutane-rich
68477–34–9	Distillates (petroleum), C3-5, 2-methyl-2-butene-rich
68477–35–0	Distillates (petroleum), C3-6, piperylene-rich
68477–36–1	Distillates (petroleum), cracked steam-cracked, C5-18 fraction
68477–38–3	Distillates (petroleum), cracked steam-cracked petroleum distillates
68477–39–4	Distillates (petroleum), cracked stripped steam-cracked petroleum distillates, C8-10 fraction
68477–40–7	Distillates (petroleum), cracked stripped steam-cracked petroleum distillates, C10-12 fraction
68477–41–8	Gases (petroleum), extractive, C3-5, butadiene-butene-rich
68477–42–9	Gases (petroleum), extractive, C3-5, butene-isobutylene-rich
68477–44–1	Distillates (petroleum), heavy naphthenic, mixed with steam-cracked petroleum distillates C5-12 fraction
68477–47–4	Distillates (petroleum), mixed heavy olefin vacuum, heart-cut
68477–48–5	Distillates (petroleum), mixed heavy olefin vacuum, low-boiling
68477–53–2	Distillates (petroleum), steam-cracked, C5-12 fraction
68477–54–3	Distillates (petroleum), steam-cracked, C8-12 fraction
68477–55–4	Distillates (petroleum), steam-cracked, C5-10 fraction, mixed with light steam-cracked petroleum naphtha C5 fraction
68477–58–7	Distillates (petroleum), steam-cracked petroleum distillates, C5-18 fraction
68477–59–8	Distillates (petroleum), steam-cracked petroleum distillates cyclopentadiene conc.
68477–60–1	Extracts (petroleum), cold-acid
68477–61–2	Extracts (petroleum), cold-acid, C4-6
68477–62–3	Extracts (petroleum), cold-acid, C3-5, butene-rich
68477–63–4	Extracts (petroleum), reformer recycle
68477–64–5	Gases (petroleum), acetylene manuf. off
68477–65–6	Gases (petroleum), amine system feed
68477–66–7	Gases (petroleum), benzene unit hydrodesulfurizer off
68477–67–8	Gases (petroleum), benzene unit recycle, hydrogen-rich
68477–68–9	Gases (petroleum), blend oil, hydrogen-nitrogen-rich
68477–69–0	Gases (petroleum), butane splitter overheads
68477–70–3	Gases (petroleum), C2-3
68477–71–4	Gases (petroleum), catalytic-cracked gas oil depropanizer bottoms, C4-rich acid-free
68477–72–5	Gases (petroleum), catalytic-cracked naphtha debutanizer bottoms, C3-5-rich
68477–73–6	Gases (petroleum), catalytic cracked naphtha depropanizer overhead, C3-rich acid-free
68477–74–7	Gases (petroleum), catalytic cracker
68477–75–8	Gases (petroleum), catalytic cracker, C1-5-rich
68477–76–9	Gases (petroleum), catalytic polymd. naphtha stabilizer overhead, C2-4-rich
68477–77–0	Gases (petroleum), catalytic reformed naphtha stripper overheads

CAS Registry Number	Product
68477–79–2	Gases (petroleum), catalytic reformer, C1-4-rich
68477–80–5	Gases (petroleum), C6-8 catalytic reformer recycle
68477–81–6	Gases (petroleum), C6-8 catalytic reformer
68477–82–7	Gases (petroleum), C6-8 catalytic reformer recycle, hydrogen-rich
68477–83–8	Gases (petroleum), C3-5 olefinic-paraffinic alkylation feed
68477–84–9	Gases (petroleum), C2-return stream
68477–85–0	Gases (petroleum), C4-rich
68477–86–1	Gases (petroleum), deethanizer overheads
68477–87–2	Gases (petroleum), deisobutanizer tower overheads
68477–88–3	Gases (petroleum), deethanizer overheads, C3-rich
68477–89–4	Distillates (petroleum), depentanizer overheads
68477–90–7	Gases (petroleum), depropanizer dry, propene-rich
68477–91–8	Gases (petroleum), depropanizer overheads
68477–92–9	Gases (petroleum), dry sour, gas-concnunit-off
68477–93–0	Gases (petroleum), gas concn. reabsorber distn.
68477–94–1	Gases (petroleum), gas recovery plant depropanizer overheads
68477–95–2	Gases (petroleum), Girbatol unit feed
68477–96–3	Gases (petroleum), hydrogen absorber off
68477–97–4	Gases (petroleum), hydrogen-rich
68477–98–5	Gases (petroleum), hydrotreater blend oil recycle, hydrogen-nitrogen rich
68477–99–6	Gases (petroleum), isomerized naphtha fractionater, C4-rich, hydrogen sulfide-free
68478-00-2	Gases (petroleum), recycle, hydrogen-rich
68478-01-3	Gases (petroleum), reformer make-up, hydrogen-rich
68478-02-4	Gases (petroleum), reforming hydrotreater
68478-03-5	Gases (petroleum), reforming hydrotreater, hydrogen-methane-rich
68478-04-6	Gases (petroleum), reforming hydrotreater make-up, hydrogen-rich
68478-05-7	Gases (petroleum), thermal cracking distn.
68478-08-0	Naphtha (petroleum), light steam-cracked, C5-fraction, oligomer conc.
68478-10-4	Naphtha (petroleum), light steam-cracked, debenzenized, C8-16-cycloalkadiene conc.
68478–12–6	Residues (petroleum), butane splitter bottoms
68478–13–7	Residues (petroleum), catalytic reformer fractionator residue distn.
68478–15–9	Residues (petroleum), C6-8 catalytic reformer
68478–16–0	Residual oils (petroleum), deisobutanizer tower
68478–17–1	Residues (petroleum), heavy coker gas oil and vacuum gas oil
68478–18–2	Residues (petroleum), heavy olefin vacuum
68478-19-3	Residual oils (petroleum), propene purifn. splitter

CAS Registry Number	Product
68478–20–6	Residues (petroleum), steam-cracked petroleum distillates cyclopentadiene conc., C4-cyclopentadienefree
68478-22-8	Tail gas (petroleum), catalytic cracked naphtha stabilization absorber
68478–24–0	Tail gas (petroleum), catalytic cracker, catalytic reformer and hydrodesulfurizer combined fractionater
68478-25-1	Tail gas (petroleum), catalytic cracker refractionation absorber
68478–26–2	Tail gas (petroleum), catalytic reformed naphtha fractionation stabilizer
68478–27–3	Tail gas (petroleum), catalytic reformed naphtha separator
68478-28-4	Tail gas (petroleum), catalytic reformed naphtha stabilizer
68478–29–5	Tail gas (petroleum), cracked distillate hydrotreater separator
68478-30-8	Tail gas (petroleum), hydrodesulfurized straight-run naphtha separator
68478-31-9	Tail gas (petroleum), isomerized naphtha fractionates, hydrogen sulfide-free
68478-32-0	Tail gas (petroleum), saturate gas plant mixed stream, C4-rich
68478-33-1	Tail gas (petroleum), saturate gas recovery plant, C1-2-rich
68478-34-2	Tail gas (petroleum), vacuum residues thermal cracker
68512-61-8	Residues (petroleum), heavy coker and light vacuum
68512–62–9	Residues (petroleum), light vacuum
68512–78–7	Solvent naphtha (petroleum), light arom., hydrotreated
68512–91–4	Hydrocarbons, C3-4-rich, petroleum distillates
68513-02-0	Naphtha (petroleum), full-range coker
68513-03-1	Naphtha (petroleum), light catalytic reformed, aromatic-free
68513-11-1	Fuel gases, hydrotreater fractionation, scrubbed
68513-12-2	Fuel gases, saturate gas unit fractionater-absorber overheads
68513-13-3	Fuel gases, thermal cracked catalytic cracking residue
68513-14-4	Gases (petroleum), catalytic reformed straight-run naphtha stabilizer overheads
68513-15-5	Gases (petroleum), full-range straight-run naphtha dehexanizer off
68513–16–6	Gases (petroleum), hydrocracking depropanizer off, hydrocarbon-rich
68513-17-7	Gases (petroleum), light straight-run naphtha stabilizer off
68513-18-8	Gases (petroleum), reformer effluent high-pressure flash drum off
68513-19-9	Gases (petroleum), reformer effluent low-pressure flash drum off
68513-62-2	Disulfides, C5-12-alkyl
68513-63-3	Distillates (petroleum), catalytic reformed straight-run naphtha overheads
68513-65-5	Butane, branched and linear
68513–66–6	Residues (petroleum), alkylation splitter, C4-rich
68513-67-7	Residues (petroleum), cyclooctadiene bottoms
68513-68-8	Residues (petroleum), deethanizer tower
68513-69-9	Residues (petroleum), steam-cracked light
68513-74-6	Waste gases, ethylene oxide absorber-reactor

CAS Registry Number	Product
68514–15–8	Gasoline, vapor-recovery
68514–29–4	Hydrocarbons, amylene feed debutanizer overheads nonextractable raffinates
68514-31-8	Hydrocarbons, C1-4
68514–32–9	Hydrocarbons, C10 and C12, olefin-rich
68514–33–0	Hydrocarbons, C12 and C14, olefin-rich
68514–34–1	Hydrocarbons, C9-14, ethylene-manufby-product
68514–35–2	Hydrocarbons, C14-30, olefin-rich
68514–36–3	Hydrocarbons, C1-4, sweetened
68514–37–4	Hydrocarbons, C4-5-unsatd.
68514–38–5	Hydrocarbons, C4-10-unsatd.
68514-39-6	Naphtha (petroleum), light steam-cracked, isoprene-rich
68514–79–4	Petroleum products, hydrofiner-powerformer reformates
68515–25–3	Benzene, C1-9-alkyl derivs.
68515–26–4	Benzene, di-C12-14-alkyl derivs.
68515–27–5	Benzene, di-C10-14-alkyl derivs., fractionation overheads, heavy ends
68515–28–6	Benzene, di-C10-14-alkyl derivs., fractionation overheads, light ends
68515–29–7	Benzene, di-C10-14-alkyl derivs., fractionation overheads, middle cut
68515–30–0	Benzene, mono-C20-48-alkyl derivs.
68515–32–2	Benzene, mono-C12-14-alkyl derivs., fractionation bottoms
68515–33–3	Benzene, mono-C10-12-alkyl derivs., fractionation bottoms, heavy ends
68515–34–4	Benzene, mono-C12-14-alkyl derivs., fractionation bottoms, heavy ends
68515–35–5	Benzene, mono-C10-12-alkyl derivs., fractionation bottoms, light ends
68515–36–6	Benzene, mono-C12-14-alkyl derivs., fractionation bottoms, light ends
68516–20–1	Naphtha (petroleum), steam-cracked middle arom.
68526–52–3	Alkenes, C6
68526–53–4	Alkenes, C6-8, C7-rich
68526–54–5	Alkenes, C7-9, C8-rich
68526–55–6	Alkenes, C8-10, C9-rich
68526–56–7	Alkenes, C9-11, C10-rich
68526–57–8	Alkenes, C10-12, C11-rich
68526–58–9	Alkenes, C11-13, C12-rich
68526-77-2	Aromatic hydrocarbons, ethane cracking scrubber effluent and flare drum
68526–99–8	Alkenes, C6-9 .alpha
68527-00-4	Alkenes, C8-9 .alpha
68527-11-7	Alkenes, C5
68527–13–9	Gases (petroleum), acid, ethanolamine scrubber
68527–14–0	Gases (petroleum), methane-rich off

CAS Registry Number	Product
68527–15–1	Gases (petroleum), oil refinery gas distn. off
68527-16-2	Hydrocarbons, C1-3
68527–18–4	Gas oils (petroleum), steam-cracked
68527-19-5	Hydrocarbons, C1-4, debutanizer fraction
68527–21–9	Naphtha (petroleum), clay-treated full-range straight-run
68527–22–0	Naphtha (petroleum), clay-treated light straight-run
68527–23–1	Naphtha (petroleum), light steam-cracked arom.
68527–26–4	Naphtha (petroleum), light steam-cracked, debenzenized
68527–27–5	Naphtha (petroleum), full-range alkylate, butane-contg.
68553-00-4	Fuel oil, no. 6
68553-14-0	Hydrocarbons, C8-11
68602–79–9	Distillates (petroleum), benzene unit hydrotreater dipentanizer overheads
68602-81-3	Distillates, hydrocarbon resin prodn. higher boiling
68602-82-4	Gases (petroleum), benzene unit hydrotreater depentenizer overheads
68602-83-5	Gases (petroleum), C1-5, wet
68602–84–6	Gases (petroleum), secondary absorber off, fluidized catalytic cracker overheads fractionater
68602–96–0	Distillates (petroleum), oxidized light, strong acid components, compds. with diethanolamine
68602–97–1	Distillates (petroleum), oxidized light, strong acid components, sodium salts
68602–98–2	Distillates (petroleum), oxidized light, strong acid components
68602–99–3	Distillates (petroleum), oxidized light, strong acid-free
68603-00-9	Distillates (petroleum), thermal cracked naphtha and gas oil
68603-01-0	Distillates (petroleum), thermal cracked naphtha and gas oil, C5-dimer-contg.
68603-02-1	Distillates (petroleum), thermal cracked naphtha and gas oil, dimerized
68603-03-2	Distillates (petroleum), thermal cracked naphtha and gas oil, extractive
68603-08-7	Naphtha (petroleum), aromcontg.
68603-09-8	Hydrocarbon waxes (petroleum), oxidized, calcium salts
68603-10-1	Hydrocarbon waxes (petroleum), oxidized, Me esters, barium salts
68603-11-2	Hydrocarbon waxes (petroleum), oxidized, Me esters, calcium salts
68603-12-3	Hydrocarbon waxes (petroleum), oxidized, Me esters, sodium salts
68603-13-4	Petrolatum (petroleum), oxidized, ester with sorbitol
68603-14-5	Residual oils (petroleum), oxidized, calcium salts
68603-31-6	Alkenes, C10, tert-amylene concentrator by-product
68603–32–7	Alkenes, C15-20 .alpha, isomerized
68606–09–7	Fuel gases, expander off
68606–10–0	Gasoline, pyrolysis, debutanizer bottoms
68606–11–1	Gasoline, straight-run, topping-plant
68606–24–6	Hydrocarbons, C4, butene concentrator by-product

CAS Registry Number	Product
68606–25–7	Hydrocarbons, C2-4
68606–26–8	Hydrocarbons, C3
68606–27–9	Gases (petroleum), alkylation feed
68606–28–0	Hydrocarbons, C5 and C10-aliph. and C6-8-arom.
68606–31–5	Hydrocarbons, C3-5, butadiene purifn. by-product
68606–34–8	Gases (petroleum), depropanizer bottoms fractionation off
68606–36–0	Hydrocarbons, C5-unsatd. rich, isoprene purifn. by-product
68607-11-4	Petroleum products, refinery gases
68607–30–7	Residues (petroleum), topping plant, low-sulfur
68608-56-0	Waste gases, from carbon black manuf.
68647-60–9	Hydrocarbons, C>4
68647–61–0	Hydrocarbons, C4-5, tert-amylene concentrator by-product
68647–62–1	Hydrocarbons, C4-5, butene concentrator by-product, sour
68650–36–2	Aromatic hydrocarbons, C8, o-xylene-lean
68650–37–3	Paraffin waxes (petroleum), oxidized, sodium salts
68782–97–8	Distillates (petroleum), hydrofined lubricating-oil
68782–98–9	Extracts (petroleum), clarified oil solvent, condensed-ring-aromcontg.
68782–99–0	Extracts (petroleum), heavy clarified oil solvent, condensed-ring-aromcontg.
68783-00-6	Extracts (petroleum), heavy naphthenic distillate solvent, arom. conc.
68783-01-7	Extracts (petroleum), heavy naphthenic distillate solvent, paraffinic conc.
68783-02-8	Extracts (petroleum), intermediate clarified oil solvent, condensed-ring-aromcontg.
68783-04-0	Extracts (petroleum), solvent-refined heavy paraffinic distillate solvent
68783-05-1	Gases (petroleum), ammonia-hydrogen sulfide, water-satd.
68783-06-2	Gases (petroleum), hydrocracking low-pressure separator
68783-07-3	Gases (petroleum), refinery blend
68783-08-4	Gas oils (petroleum), heavy atmospheric
68783-09-5	Naphtha (petroleum), catalytic cracked light distd.
68783-12-0	Naphtha (petroleum), unsweetened
68783-13-1	Residues (petroleum), coker scrubber, condensed-ring-aromcontg.
68783-15-3	Alkenes, C6-7 .alpha
68783–61–9	Fuel gases, refinery, sweetened
68783-62-0	Fuel gases, refinery, unsweetened
68783-64-2	Gases (petroleum), catalytic cracking
68783-65-3	Gases (petroleum), C2-4, sweetened
68783–66–4	Naphtha (petroleum), light, sweetened
68814–47–1	Waste gases, refinery vent
68814–67–5	Gases (petroleum), refinery

CAS Registry Number	Product
68814–89–1	Extracts (petroleum), heavy paraffinic distillates, solvent-deasphalted
68814–87–9	Distillates (petroleum), full-range straight-run middle
68814–90–4	Gases (petroleum), platformer products separator off
68814–91–5	Alkenes, C5-9 .alpha
68855–57–2	Alkenes, C6-12 .alpha
68855–58–3	Alkenes, C10-16 .alpha
68855–59–4	Alkenes, C14-18 .alpha
68855–60–7	Alkenes, C14-20 .alpha
68911–58–0	Gases (petroleum), hydrotreated sour kerosine depentanizer stabilizer off
68911–59–1	Gases (petroleum), hydrotreated sour kerosine flash drum
68915–96–8	Distillates (petroleum), heavy straight-run
68915–97–9	Gas oils (petroleum), straight-run, high-boiling
68918–69–4	Petrolatum (petroleum), oxidized, zinc salt
68918–73–0	Residues (petroleum), clay-treating filter wash
68918–93–4	Paraffin waxes and Hydrocarbon waxes, oxidized, alkali metal salts
68918–98–9	Fuel gases, refinery, hydrogen sulfide-free
68918–99–0	Gases (petroleum), crude oil fractionation off
68919–00–6	Gases (petroleum), dehexanizer off
68919–01–7	Gases (petroleum), distillate unifiner desulfurization stripper off
68919–02–8	Gases (petroleum), fluidized catalytic cracker fractionation off
68919–03–9	Gases (petroleum), fluidized catalytic cracker scrubbing secondary absorber off
68919–04–0	Gases (petroleum), heavy distillate hydrotreater desulfurization stripper off
68919–05–1	Gases (petroleum), light straight run gasoline fractionation stabilizer off
68919–06–2	Gases (petroleum), naphtha unifiner desulfurization stripper off
68919–07–3	Gases (petroleum), platformer stabilizer off, light ends fractionation
68919–08–4	Gases (petroleum), preflash tower off, crude distn.
68919–09–5	Gases (petroleum), straight-run naphtha catalytic reforming off
68919–10–8	Gases (petroleum), straight-run stabilizer off
68919–11–9	Gases (petroleum), tar stripper off
68919–12–0	Gases (petroleum), unifiner stripper off
68919–15–3	Hydrocarbons, C6-12, benzene-recovery
68919-16-4	Hydrocarbons, catalytic alkylation, by-products, C3-6
68919–17–5	Hydrocarbons, C12-20, catalytic alkylation by-products
68919–19–7	Gases (petroleum), fluidized catalytic cracker splitter residues
68919–20–0	Gases (petroleum), fluidized catalytic cracker splitter overheads
68919–37–9	Naphtha (petroleum), full-range reformed
68920–06–9	Hydrocarbons, C7-9

CAS Registry Number	Product
68920-07-0	Hydrocarbons, C<10-linear
68920–64–9	Disulfides, di-C1-2-alkyl
68921-07-3	Distillates (petroleum), hydrotreated light catalytic cracked
68921-09-5	Distillates (petroleum), naphtha unifiner stripper
68921-08-4	Distillates (petroleum), light straight-run gasoline fractionation stabilizer overheads
68921–67–5	Hydrocarbons, ethylene-manufby-product distn. residues
68952–76–1	Gases (petroleum), catalytic cracked naphtha debutanizer
68952-77-2	Tail gas (petroleum), catalytic cracked distillate and naphtha stabilizer
68952–78–3	Tail gas (petroleum), catalytic hydrodesulfurized distillate fractionation stabilizer, hydrogen sulfide-free
68952-79-4	Tail gas (petroleum), catalytic hydrodesulfurized naphtha separator
68952-80-7	Tail gas (petroleum), straight-run naphtha hydrodesulfurizer
68952-81-8	Tail gas (petroleum), thermal-cracked distillate, gas oil and naphtha absorber
68952-82-9	Tail gas (petroleum), thermal cracked hydrocarbon fractionation stabilizer, petroleum coking
68953-80-0	Benzene, mixed with toluene, dealkylation product
68955–27–1	Distillates (petroleum), petroleum residues vacuum
68955–28–2	Gases (petroleum), light steam-cracked, butadiene conc.
68955–31–7	Gases (petroleum), butadiene process, inorg.
68955–32–8	Natural gas, substitute, steam-reformed desulfurized naphtha
68955–33–9	Gases (petroleum), sponge absorber off, fluidized catalytic cracker and gas oil desulfurizer overhead fractionation
68955–34–0	Gases (petroleum), straight-run naphtha catalytic reformer stabilizer overhead
68955–35–1	Naphtha (petroleum), catalytic reformed
68955–36–2	Residues (petroleum), steam-cracked, resinous
68955–76–0	Aromatic hydrocarbons, C9-16, biphenyl derivrich
68955–96–4	Disulfides, dialkyl and di-Ph, naphtha sweetening
68956–47–8	Fuel oil, isoprene reject absorption
68956–48–9	Fuel oil, residual, wastewater skimmings
68956–52–5	Hydrocarbons, C4-8
68956–54–7	Hydrocarbons, C4-unsatd.
68956–55–8	Hydrocarbons, C5-unsatd.
68956–70–7	Petroleum products, C5-12, reclaimed, wastewater treatment
68988–79–4	Benzene, C10-12-alkyl derivs., distn. residues
68988–99–8	Phenols, sodium salts, mixed with sulfur compounds, gasoline alk. scrubber residues
68989–88–8	Gases (petroleum), crude distn. and catalytic cracking
68990–35–2	Distillates (petroleum), arom., hydrotreated, dicyclopentadiene-rich
68991–49–1	Alkanes, C10-13, aromfree desulfurized
68991–50–4	Alkanes, C14-17, aromfree desulfurized

CAS Registry Number	Product
68991–51–5	Alkanes, C10-13, desulfurized
68991–52–6	Alkenes, C10-16
69013–21–4	Fuel oil, pyrolysis
69029-75-0	Oils, reclaimed
69430–33–7	Hydrocarbons, C6-30
70024–88–3	Ethene, thermal cracking products
70528–71–1	Distillates (petroleum), heavy distillate solvent ext. heart-cut
70528-72-2	Distillates (petroleum), heavy distillate solvent ext. vacuum overheads
70528–73–3	Residues (petroleum), heavy distillate solvent ext. vacuum
70592–76–6	Distillates (petroleum), intermediate vacuum
70592–77–7	Distillates (petroleum), light vacuum
70592–78–8	Distillates (petroleum), vacuum
70592–79–9	Residues (petroleum), atm. tower, light
70693-00-4	Hydrocarbon waxes (petroleum), oxidized, sodium salts
70693-06-0	Aromatic hydrocarbons, C9-11
70913–85–8	Residues (petroleum), solvent-extd. vacuum distilled atm. residuum
70913–86–9	Alkanes, C18-70
70955–08–7	Alkanes, C4-6
70955-09-8	Alkenes, C13-14 .alpha
70955–10–1	Alkenes, C15-18 .alpha
70955–17–8	Aromatic hydrocarbons, C12-20
71243–66–8	Hydrocarbon waxes (petroleum), clay-treated, microcryst., oxidized, potassium salts
71302-82-4	Hydrocarbons, C5-8, Houdry butadiene manuf. by-product
71329–37–8	Residues (petroleum), catalytic cracking depropanizer, C4-rich
71808–30–5	Tail gas (petroleum), thermal cracking absorber
72230–71–8	Distillates (petroleum), cracked steam-cracked, C5-17 fraction
72623–83–7	Lubricating oils (petroleum), C>25, hydrotreated bright stock-based
72623–84–8	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based, contg. solvent deasphalted residual oil
72623–85–9	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, high-viscosity
72623–86–0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based
72623-87-1	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based
73138-65-5	Hydrocarbon waxes (petroleum), oxidized, magnesium salts
92045-43-7	Lubricating oils (petroleum) hydrocracked nonaromatic solvent deparaffined
92045-58-4	Naphtha (petroleum), isomerization, C6-fration
92062-09-4	Slack wax (petroleum), hydrotreated
93762-80-2	Alkenes, C15-18

CAS Registry Number	Product
98859-55-3	Distillates (petroleum), oxidized heavy, compounds with diethanolamine
98859-56-4	Distillates (petroleum), oxidized heavy, sodium salts
101316-73-8	Lubricating oils (petroleum), used, noncatalytically refined
164907-78-2	Extracts (petroleum), asphaltene-low vacuum residue solvent
164907-79-3	Residues (petroleum), vacuum, asphaltene-low
178603-63-9	Gas oils (petroleum), vacuum, hydrocracked, hydroisomerized, hydrogenated, C10-25
178603-64-0	Gas oils (petroleum), vacuum, hydrocracked, hydroisomerized, hydrogenated, C15-30, branched and cyclic
178603-65-1	Gas oils (petroleum), vacuum, hydrocracked, hydroisomerized, hydrogenated, C20-40, branched and cyclic
178603-66-2	Gas oils (petroleum), vacuum, hydrocracked, hydroisomerized, hydrogenated, C25-55, branched and cyclic
212210-93-0	Solvent naphtha (petroleum), heavy aromatic, distillation residues
221120-39-4	Distillates (petroleum), cracked steam-cracked, C5-12 fraction
445411-73-4	Gas oils (petroleum), vacuum, hydrocracked, hydroisomerized, hydrogenated, C10-25, branched and cyclic

Partially Exempt Chemical Substances Under 40 CFR 711.6(b)(2)

CAS Registry Number	Chemical Name	
50-70-4	D-Glucitol D-Glucitol	
50-81-7	L-Ascorbic acid	
50-99-7	D-Glucose	
56-87-1	L-Lysine	
56-81-5	1,2,3-Propanetriol	
57-50-1	.alphaD-Glucopyranoside, .betaD-fructofuranosyl	
58-95-7	2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[(4R,8R)-4,8,12-trimethyltridecyl]-,acetate, (2R)-	
59-02-9	2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[(4R,8R)-4,8,12-trimethyltridecyl]-, (2R)-	
59-51-8	Methionine	
69-65-8	D-Mannitol	
87-79-6	L-Sorbose	
87-99-0	Xylitol	
96-10-6	Aluminum, chlorodiethyl-	
97-93-8	Aluminum, triethyl-	
100-99-2	Aluminum, tris(2-methylpropyl)-	
123-94-4	Octadecanoic acid, 2,3-dihydroxypropyl ester	
124-38-9	Carbon dioxide	
137-08-6	.betaAlanine, N-[(2R)-2,4-dihydroxy-3,3-dimethyl-1-oxobutyl]-, calcium alt (2:1)	
142-47-2	L-Glutamic acid, monosodium salt	
150-30-1	Phenylalanine	
563-43-9	Aluminum, dichloroethyl-	
1070-00-4	Aluminium, trioctyl	
1116-70-7	Aluminum, tributyl-	
1116-73-0	Aluminum, trihexyl-	
1191-15-7	Aluminum, hydrobis (2-methylpropyl)-	
1317-65-3	Limestone	
1333-74-0	Hydrogen	
1592-23-0	Octadecanoic acid, calcium salt	
7440-37-1	Argon	
7440-44-0	Carbon	
7727-37-9	Nitrogen	
7782-42-5	Graphite	
7782-44-7	Oxygen	
8001-21-6	Sunflower oil	
8001-22-7	Soybean oil	
8001-23-8	Safflower oil	
8001-26-1	Linseed oil	
8001-29-4	Cottonseed oil	
8001-30-7	Corn oil	

Partially Exempt Chemical Substances Under 40 CFR 711.6(b)(2) (Continued)

CAS Registry Number	Chemical Name
8001-31-8	Coconut oil
8001-78-3	Caster oil, hydrogenated
8001-79-4	Castor oil
8002-03-7	Peanut oil
8002-13-9	Rape oil
8002-43-5	Lecithins
8002-75-3	Palm oil
8006-54-0	Lanolin
8016-28-2	Lard, oil
8016-70-4	Soybean oil, hydrogenated
8021-99-6	Charcoal, bone
8029-43-4	Syrups, hydrolyzed starch
11103-57-4	Vitamin A
12075-68-2	Aluminum, dimuchlorochlorotriethyldi-
12542-85-7	Aluminum, trichlorotrimethyldi-
16291-96-6	Charcoal
26836-47-5	D-Glucitol, monooctadecanoate
61789-44-4	Fatty acids, castor-oil
61789-97-7	Tallow
61789-99-9	Lard
64147-40-6	Castor oil, dehydrated
64755-01-7	Fatty acids, tallow, calcium salts
65996-63-6	Starch, acid-hydrolyzed
65996-64-7	Starch, enzyme-hydrolyzed
67701-01-3	Fatty acids, C12-18
68002-85-7	Fatty acids, C14-22 and C16-22-unsatd.
68131-37-3	Syrups, hydrolyzed starch, dehydrated
68188-81-8	Grease, poultry
68308-36-1	Soybean meal
68308-54-3	Glycerides, tallow mono-, di- and tri-, hydrogenated
68334-00-9	Cottonseed oil, hydrogenated
68334-28-1	Fats and Glyceridic oils, vegetable, hydrogenated
68409-76-7	Bone meal, steamed
68424-45-3	Fatty acids, linseed-oil
68424-61-3	Glycerides, C16-18 and C18-unsatd. mono- and di-
68425-17-2	Syrups, hydrolized starch, hydrogenated
68439-86-1	Bone, ash
68442-69-3	Benzene, mono-C10-14-alkyl derivs.
68476-78-8	Molasses
68514-27-2	Grease, catch basin

Partially Exempt Chemical Substances Under 40 CFR 711.6(b)(2) (Continued)

CAS Registry Number	Chemical Name
68514-74-9	Palm oil, hydrogenated
68525-87-1	Corn oil, hydrogenated
68648-87-3	Benzene, C10-16-alkyl derivs.
68918-42-3	Soaps, stocks, soya
68952-94-3	Soaps, stocks, vegetable-oil
68956-68-3	Fats and glyceridic oils, vegetable
68989-98-0	Fats and Glyceridic oils, vegetable, residues
73138-67-7	Lard, hydrogenated
120962-03-0	Canola oil
129813-58-7	Benzene, mono-C10-13-alkyl derivs.
129813-59-8	Benzene, mono-C12-14-alkyl derivs.
129813-60-1	Benzene, mono-C14-16-alkyl derivs.

Appendix D

Descriptions of Codes for Reporting Processing or Use Operations, Industrial Sectors, Industrial Function Categories, and Consumer and Commercial Product Categories

The following descriptions were developed by EPA to assist persons submitting information in response to 40 CFR 711.15(b)(4) and reported in Part III of CDR Form U. For more information, see EPA's document, "Inventory Update Rule (IUR) Amendment Technical Support Document: Exposure-Related Data Useful for Chemical Risk Screening" and "Inventory Update Rule (IUR) Technical Support Document: Selection of Consumer and Commercial Product Categories" located in the rulemaking record (EPA-HQ-OPPT-2004-0054).

Table D-1: Processing or Use Operation Descriptions

Code	Operation	Description
PC	Processing as a reactant	Chemical substance is used in chemical reactions for the manufacturing of another chemical substance or product.
PF	Processing—incorporation into formulation, mixture, or reaction product	Chemical substance is added to a product (or product mixture) prior to further distribution of the product.
PA	Processing—incorporation into article	Chemical substance becomes an integral component of an article distributed for industrial, trade, or consumer use.
PK	Processing—repackaging	Preparation of a chemical substance for distribution in commerce in a different form, state, or quantity. This includes transferring the chemical substance from a bulk container into smaller containers. This definition does not apply to sites that only relabel or redistribute the reportable chemical substance without removing the chemical substance from the container in which it is received or purchased.
U	Use—non-incorporative activities	Chemical substance is otherwise used (e.g., as a chemical processing or manufacturing aid).

Table D-2: Industrial Sector (IS) Code Descriptions

NAICS	IS Code	IS Title
11	IS1	Agriculture, Forestry, Fishing and Hunting
211	102	Oil and Car Deilling Extraction and Council Autilities
213	IS2	Oil and Gas Drilling, Extraction, and Support Activities
212	IS3	Mining (except Oil and Gas)
22	IS4	Utilities
23	IS5	Construction
311	106	
312	IS6	Food, beverage, and tobacco product manufacturing
313		
314	IS7	Tautiles annoyal and leather manufacturing
315	15/	Textiles, apparel, and leather manufacturing
316]	
321	IS8	Wood Product Manufacturing
322	IS9	Paper Manufacturing
323	IS10	Printing and Related Support Activities
32411	IS11	Petroleum Refineries
32412	IS12	Asphalt Paving, Roofing, and Coating Materials Manufacturing
324191	IS13	Petroleum Lubricating Oil and Grease Manufacturing
324199	IS14	All Other Petroleum and Coal Products Manufacturing
32511	IS15	Petrochemical Manufacturing
32512	IS16	Industrial Gas Manufacturing
32513	IS17	Synthetic Dye and Pigment Manufacturing
325182	IS18	Carbon Black Manufacturing
32518	IS19	All Other Basic Inorganic Chemical Manufacturing
325192	IS20	Cyclic Crude and Intermediate Manufacturing
32519	IS21	All Other Basic Organic Chemical Manufacturing
325211	IS22	Plastic Material and Resin Manufacturing
325212	IS23	Synthetic Rubber Manufacturing
32522	IS24	Organic Fiber Manufacturing
3253	IS25	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing
3254	IS26	Pharmaceutical and Medicine Manufacturing
32551	IS27	Paint and Coating Manufacturing
32552	IS28	Adhesive Manufacturing
3256	IS29	Soap, Cleaning Compound, and Toilet Preparation Manufacturing
32591	IS30	Printing Ink Manufacturing
32592	IS31	Explosives Manufacturing
325991	IS32	Custom Compounding of Purchased Resin
325992	IS33	Photographic Film Paper, Plate, and Chemical Manufacturing
325998	IS34	All Other Chemical Product and Preparation Manufacturing
3261	IS35	Plastics Product Manufacturing
3262	IS36	Rubber Product Manufacturing
327	IS37	Nonmetallic Mineral Product Manufacturing (includes clay, glass, cement, concrete, lime, gypsum, and other nonmetallic mineral product manufacturing.

NAICS	IS Code	IS Title
331	IS38	Primary Metal Manufacturing
332	IS39	Fabricated Metal Product Manufacturing
333	IS40	Machinery Manufacturing
334	IS41	Computer and Electronic Product Manufacturing
335	IS42	Electrical Equipment, Appliance, and Component Manufacturing
336	IS43	Transportation Equipment Manufacturing
337	IS44	Furniture and Related Product Manufacturing
339	IS45	Miscellaneous Manufacturing
42		
44	1	
45	IS46	Wholesale and Retail Trade
48		
49		
51		
52		Services
53		
54		
55		
56	IS47	
61	104/	
62		
71		
72		
81		
92		
	IS48	Other (requires additional information)

Table D-3: Industrial Function Category Descriptions

Code	Industrial Function Categories	Description
U001	Abrasives	Chemical substances used to wear down or polish surfaces by rubbing against the surface. Examples include sandstones, pumice, silex, quartz, silicates, aluminum oxides, and glass.
U002	Adhesives and sealant chemicals	Chemical substances used to promote bonding between other substances, promote adhesion of surfaces, or prevent seepage of moisture or air. Examples include epoxides, isocyanates, acrylamides, phenol, urea, melamine, and formaldehyde.
U003	Adsorbents and absorbents	Chemical substances used to retain other substances by accumulation on their surface or by assimilation. Examples of adsorbents include silica gel, activated alumina, and activated carbon. Examples of absorbents include straw oil, alkaline solutions, and kerosene.
U004	Agricultural chemicals (non-pesticidal)	Chemical substances used to increase the productivity and quality of farm crops. Examples include phosphates, lime, nitrates, potash compounds, alum, ammonia and ammonium salts, urea, and mineral supplements.
U005	Anti-adhesive agents	Chemical substances used to prevent bonding between other substances by discouraging surface attachment. Examples include anti-adherents, antiblock agents, detackifiers, dusting agents, mould release agents, and parting agents.
U006	Bleaching agents	Chemical substances used to lighten or whiten a substrate through chemical reaction, usually an oxidative process which degrades the color system. Examples generally fall into one of two groups: chlorine containing bleaching agents (e.g. chlorine, hypochlorites, N-chloro compounds and chlorine dioxide); and, peroxygen bleaching agents (e.g. hydrogen peroxide, potassium permanganate, and sodium perborate).
U007	Corrosion inhibitors and antiscaling agents	Chemical substances used to prevent or retard corrosion or the formation of scale. Examples include phenylenediamine, chromates, nitrates, phosphates, and hydrazine.
U008	Dyes	Chemical substances used to impart color to other materials or mixtures (i.e. substrates) by penetrating into the surface of the substrate. Examples types include azo, anthraquinone, amino azo, aniline, eosin, stilbene, acid, basic or cationic, reactive, dispersive, and natural dyes.
U009	Fillers	Chemical substances used to provide bulk, increase strength, increase hardness, or improve resistance to impact. Fillers incorporated in a matrix reduce production costs by minimizing the amount of more expensive substances used in the production of articles. Examples include calcium carbonate, barium sulfate, silicates, clays, zinc oxide and aluminum oxide.
U010	Finishing agents	Chemical substances used to impart such functions as softening, static-proofing, wrinkle resistance, and water repellence. Substances may be applied to textiles, paper, and leather. Examples include quaternary ammonium compounds, ethoxylated amines, and silicone compounds.
U011	Flame retardants	Chemical substances used on the surface of or incorporated into combustible materials to reduce or eliminate their tendency to ignite when exposed to heat or a flame for a short period of time. Examples include inorganic salts, chlorinated or brominated organic compounds, and organic phosphates/phosphonates.

scription
ate mechanical or thermal energy
which are added to a fuel for the
f reaction or limiting the production of
s, or which provide other benefits such
on, or detergency. Examples of fuels
arious grades of diesel fuel. Examples
ated compound such as ethers and
enylenediamines and hindered
h as carboxylic acids, amines, and
such as ethanol.
tances used for one or more
d system. Examples include: heat
d refrigerants) such as polyalkylene
ropane, and carbon dioxide;
ch as mineral oils, organophosphate
ycol; and dielectric fluids such as
lash point kerosene. This code does
ants.
tances used for one or more
system. Examples include
ich as ethylene and propylene glycol,
ate, and, sodium acetate. This code
rated into metal working fluids.
in a reaction to produce other chemical
ntage. A residual of the intermediate
separate function may remain in the
1 0 0 1:1
the form of a solid matrix, that are
ted ions from a solution. Examples
rophobic matrix such as styrene-
Idehyde, cross-linking polymer such as onal groups including sulfonic,
This code also includes
Tims code also includes
uce friction, heat, or wear between
urfaces, or that enhance the lubricity of
ubricants include mineral oils, silicate
l, greases, and solid film lubricants
nples of lubricant additives include
gsten disulphide.
atrol odors, remove odors, mask odors,
ide benzenoids, terpenes and
phatic aldehydes, aliphatic cyanides,
J / F J
er the valence state of another
ng electrons or by the addition or
nce. Examples of oxidizing agents
hexavalent chromium compounds, and
mples of reducing agents include
nd coke produced from coal.

Code	Industrial Function Categories	Description
U020	Photosensitive chemicals	Chemical substances used for their ability to alter their physical or chemical structure through absorption of light, resulting in the emission of light, dissociation, discoloration, or other chemical reaction. Examples include sensitizers, fluorescents, photovoltaic agents, ultraviolet absorbers, and ultraviolet stabilizers.
U021	Pigments	Chemical substances used to impart color to other materials or mixtures (i.e. substrates) by attaching themselves to the surface of the substrate through binding or adhesion. This code includes fluorescent agents, luminescent agents, whitening agents, pearlizing agents, and opacifiers. Examples include metallic oxides of iron, titanium, zinc, cobalt, and chromium; metal powder suspensions; lead chromates; vegetable and animal products; and synthetic organic pigments.
U022	Plasticizers	Chemical substances used in plastics, cement, concrete, wallboard, clay bodies, or other materials to increase their plasticity or fluidity. Examples include phthalates, trimellitates, adipates, maleates, and lignosulphonates.
U023	Plating agents and surface treating agents	Chemical substances applied to metal, plastic, or other surfaces to alter physical or chemical properties of the surface. Examples include metal surface treating agents, strippers, etchants, rust and tarnish removers, and descaling agents.
U024	Process regulators	Chemical substances used to change the rate of a chemical reaction, start or stop the reaction, or otherwise influence the course of the reaction. Process regulators may be consumed or become part of the reaction product.
U025	Processing aids, not otherwise listed	Chemical substances used to improve the processing characteristics or the operation of process equipment or to alter or buffer the pH of the substance or mixture, when added to a process or to a substance or mixture to be processed. Processing agents do not become a part of the reaction product and are not intended to affect the function of a substance or article created. Examples include buffers, dehumidifiers, dehydrating agents, sequestering agents, and chelators.
U026	Processing aids, specific to petroleum production	Chemical substances added to water-, oil-, or synthetic drilling muds or other petroleum production fluids to control viscosity, foaming, corrosion, alkalinity and pH, microbiological growth, hydrate formation, etc., during the production of oil, gas, and other products from beneath the earth's surface.
U027	Propellants and blowing agents	Chemical substances used to dissolve or suspend other substances and either to expel those substances from a container in the form of an aerosol or to impart a cellular structure to plastics, rubber, or thermo set resins. Examples include compressed gasses and liquids and substances which release ammonia, carbon dioxide, or nitrogen.
U028	Solids separation agents	Chemical substances used to promote the separation of suspended solids from a liquid. Examples include flotation aids, flocculants, coagulants, dewatering aids, and drainage aids.
U029	Solvents (for cleaning or degreasing)	Chemical substances used to dissolve oils, greases and similar materials from textiles, glassware, metal surfaces, and other articles. Examples include trichloroethylene, perchloroethylene, methylene chloride, liquid carbon dioxide, and n-propyl bromide.

Code	Industrial Function Categories	Description
U030	Solvents (which become part of product formulation or mixture)	Chemical substances used to dissolve another substance (solute) to form a uniformly dispersed mixture (solution) at the molecular level. Examples include diluents used to reduce the concentration of an active material to achieve a specified effect and low gravity materials added to reduce cost.
U031	Surface active agents	Chemical substances used to modify surface tension when dissolved in water or water solutions, or reduce interfacial tension between two liquids or between a liquid and a solid or between liquid and air. Examples include carboxylates, sulfonates, phosphates, carboxylic acid, esters, and quaternary ammonium salts.
U032	Viscosity adjustors	Chemical substances used to alter the viscosity of another substance. Examples include viscosity index (VI) improvers, pour point depressants, and thickeners.
U033	Laboratory chemicals	Chemical substances used, often in small quantities, in a laboratory for chemical analysis, chemical synthesis, extracting and purifying other chemicals, dissolving other substances, and similar activities. Examples of laboratory chemicals include substances that change color to indicate pH, redox potential or other endpoints, halogenated and non-halogenated solvents, chemicals used in titrations and chromatography, Grignard reagents used in organic synthesis, laboratory reagents, and inorganic acids and bases.
U034	Paint additives and coating additives not described by other codes	Chemical substances used in a paint or coating formulation to enhance properties such as water repellence, increased gloss, improved fade resistance, ease of application, foam prevention, etc. Examples of paint additives and coating additives include polyols, amines, vinyl acetate ethylene emulsions, and aliphatic polyisocyanates.
U999	Other (specify)	

Table D-4: Consumer and Commercial Product Category Descriptions

Code	Product Category	Description	
Chemical S	Chemical Substances in Furnishing, Cleaning, Treatment/Care Products		
C101	Floor coverings	Chemical substances contained in floor coverings that are intended for consumer or commercial or use should be reported under this code. Examples of floor coverings include carpet, rugs, vinyl, linoleum, laminate, tile, and stone products. This code does not include wood and pressed wood flooring products included in Building/Construction Materials – Wood and Engineered Wood Products code.	
C102	Foam seating and bedding products	Chemical substances contained in foam mattresses, pillows, cushions, and similar foam seating, furniture and furnishings that are intended for consumer or commercial use should be reported under this code. Examples of foam seating and bedding products include sofas and chairs for residential/office use, automobile and truck seats, airplane seats, and mattress pads.	
C103	Furniture and furnishings not covered elsewhere	Chemical substances contained in furniture and furnishings made from metal, wood, leather, plastic or other materials that are intended for consumer or commercial use should be reported under this code. Examples of products include movable and installed furniture such as tables, chairs, benches, desks, cabinets, shelving, stools, television stands, display cases, book cases, and storage units. This code does not include foam seating and bedding products.	
C104	Fabric, textile, and leather products not covered elsewhere	Chemical substances contained in fabric, textile and leather products to impart color and other desirable properties such as water/soil/stain repellence, wrinkle resistance, or flame resistance that are intended for consumer or commercial use should be reported under this code. Examples of products include apparel (outerwear, sportswear, and sleepwear), footwear (sandals and athletic shoes), window treatments (curtains and blinds), table linens (table coverings, place mats, and cloth napkins), bed linens (sheets, pillow cases/coverings, and blankets/bed coverings), bath linens (towels, wash cloths, and bath mats) and fabric, textile and leather products that are not covered elsewhere.	
C105	Cleaning and Furniture Care Products	Chemical substances contained in products that are used to remove dirt, grease, stains, and foreign matter from furniture and furnishings, or to cleanse, sanitize, bleach, scour, polish, protect, or improve the appearance of surfaces and intended for consumer or commercial use should be reported under this code. Examples of cleaning and furnishing care products include cleaners used on glass, floors, tub and tile, ovens and drains; scouring powders; dusting products; waxes; polishes; and stain repellent sprays. This code does not include laundry and dish washing products.	
C106	Laundry and dishwashing products	Chemical substances contained in laundry and dishwashing products and aids formulated as liquid, granular, powder, gel, cakes, and flakes that are intended for consumer or commercial use should be reported under this code. Examples of laundry and dishwashing products include detergents, fabric softeners, pre-soaks and prewashes to remove soil and stains, dryer sheets, bleach, rinse aids, and film, lime and rust removers.	

Code	Product Category	Description
C107	Water treatment products	Chemical substances contained in water treatment products that are designed to disinfect, reduce contaminants or other undesirable constituents, and condition and/or improve aesthetics of water and intended for consumer or commercial use should be reported under this code. Examples of water treatment products include pH adjusters, filter media, water treatment tablets/drops, and point of use/point of entry ion exchangers. U.S. ONLY: Excludes any substance that is manufactured, processed, or distributed in commerce for use as a pesticide as defined in the Federal Insecticide, Fungicide, and Rodenticide Act. CANADA ONLY: Excludes any substance contained in pest control products as defined under the Pest Control Products Act.
C108	Personal care products	Chemical substances contained in personal care products that are used for cleansing/grooming/improving or altering skin/hair/or teeth, and intended for consumer or commercial use should be reported under this code. Examples of personal care products include bath and shower products; make-up products; hair, nail, oral and skin care products; sunscreen and suntan products; deodorants; and perfumes. U.S. ONLY: Excludes any cosmetic, drug or device as such terms are defined in section 201 of the Federal Food, Drug, and Cosmetic Act.
C109	Air care products	Chemical substances contained in products that are used to odorize or de- odorize indoor air in homes, offices, motor vehicles, and other enclosed spaces and intended for consumer or commercial use should be reported under this code. Examples of air care products include aerosol sprays, liquid/solid/gel diffusers, air fresheners, scented candles and incense.
C110	Apparel and footwear care products	Chemical substances contained in apparel and footwear care products intended for consumer and commercial use and that are applied post-market should be reported under this code. Examples of apparel and footwear care products include footwear polishes/waxes, garment waterproofing sprays, and stain repellents.
Chemical S	ubstances in Construction, Pa	nint, Electrical, and Metal Products
C201	Adhesives and sealants	Chemical substances contained in adhesive and sealant products used to fasten other materials together or prevent the passage of liquid or gas that are intended for consumer or commercial use should be reported under this code. Examples of adhesive and sealant products include glues, binders, adhesives, pastes, sealants, fillers, putties, and caulking compounds.
C202	Paints and coatings	Chemical substances contained in paints or coatings that are intended for consumer or commercial use should be reported under this code. Examples of paint and coating products include interior and exterior architectural and marine paints, bridge/iron coatings, varnishes, lacquers, paint thinners, removers, wood stains and shellac.
C203	Building/construction materials – wood and engineered wood products	Chemical substances contained in building and construction materials made of wood and pressed/engineered wood products that are intended for commercial or consumer use should be reported under this code. Examples of products include lumber, posts and timbers, exterior siding, moulding, mill work, cabinetry, paneling, veneer, flooring, stair parts, plywood and sheathing, railings and decking.

Code	Product Category	Description
C204	Building/construction materials not covered elsewhere	Chemical substances contained in building and construction materials not covered elsewhere that are intended for consumer or commercial use should be reported under this code. Examples of products include insulation materials such as foams and fibers, roofing and gutters, ceiling products, exterior siding, drywall, concrete, masonry and cement, building hardware, fencing, decking, hardware and fasteners (nuts, bolts, screws, nails, and tacks), plumbing, duct work, abrasive and sanding products, sheet metal, plaster, weather stripping, wire or wiring systems, and bricks.
C205	Electrical and electronic products	Chemical substances contained in electrical and electronic products that are intended for consumer or commercial use should be reported under this code. Examples of electrical and electronic products include computers, office equipment, appliances, electric lighting, electrical wire and cables, radios, televisions and monitors, telephones, multi-media devices, digital cameras, adapters, alarms (burglar, fire, smoke), and communication equipment.
C206	Metal products not covered elsewhere	Chemical substances contained in metal products not covered elsewhere that are intended for consumer or commercial use should be reported under this code. Examples of metal products not covered elsewhere include metal products produced by forging, stamping, plating, turning, and other processes; hand tools; metal tubing/pipes/duct work; wire fencing; tableware; and small appliances and cookware (frying pan, waffle iron, electric kettle).
C207	Batteries	Chemical substances contained in non-rechargeable and rechargeable batteries including dry and wet cell units that store energy that are intended for consumer or commercial use should be reported under this code. Examples of battery products include zinc carbon, alkaline, lead-acid, lithium-ion, nickel-metal hydride, and other batteries used in electrical and electronic products, cell phones, computers, remote controls, toys, and cars.
Chemical Su	bstances in Packaging, Paper	r, Plastic, Hobby Products
C301	Food packaging	Chemical substances contained in single or multi-layered packaging consisting of paper, plastic, metal/foil or other materials which have or may have direct contact with food and are intended for consumer or commercial use should be reported under this code. Examples of food packaging include container and wrappings products such as food storage containers, plastic cling wrap, bags (microwavable popcorn bags, boil-in-bags, and freezer storage bags) and other food packaging items (bottles, cans, boxes and trays).
C302	Paper products	Chemical substances contained in paper products intended for consumer or commercial use should be reported under this code. Examples of paper products include newsprint coated and uncoated papers for writing, printing and photocopying; facial and toilet tissue, paper napkins, paper tablets/notepads, paper forms, envelopes, texts and published materials (books and magazines); file folders; wrapping papers; and specialty papers. This code does not include paper used in food packaging.
C303	Plastic and rubber products	Chemical substances contained in rubber and plastic products not covered elsewhere that are intended for consumer or commercial use should be reported under this code. Examples of plastic and rubber products not covered elsewhere include tires, shower curtains, non-metal cookware (non-electric), non-food specific containers (bags, bottles, and jars), rubber bands, and waders.

Code	Product Category	Description
C304	Toys, Playground, and Sporting Equipment	Chemical substances contained in toys, playground, and sporting equipment made of wood, metal, plastic or fabric that are intended for consumer or commercial use should be reported under this code. Examples of products include toys (dolls, cars, puzzles, and games), playground equipment (gym sets, playhouses and structures, swing sets) and sporting equipment (bicycles, skates, balls, team sports equipment) intended for indoor or outdoor use, and playground surfaces (rubber, mulch).
C305	Arts, crafts, and hobby materials	Chemical substances contained in arts, crafts, and hobby materials that are intended for consumer or commercial use should be reported under this code. Examples of arts, crafts, and hobby materials include art/hobby paints, markers and other writing and drawing materials; natural and synthetic clays used in pottery, ceramics and sculpture; jewellery-making supplies including glass, stone and lapidary materials; stained-glass making supplies; picture framing supplies; and, building and science hobby kits.
C306	Ink, toner, and colorant products	Chemical substances contained in ink, toners and colorants used for writing, printing, creating an image on paper and other substrates, or applied to substrates to change their color or hide images that are intended for consumer or commercial use should be reported under this code. Examples of products include black or colored powders used in copy machines and printers to produce xerographic images; pigmented liquids contained in cartridges, bottles, or other dispensers used for writing or printing; and, correction fluids and tapes. This code does not include pigments or colorants added to paints and coatings which should be reported under the paints and coatings code.
C307	Photographic supplies	Chemical substances contained in photographic supplies, film, photoprocessing chemicals, and photographic paper that are intended for consumer or commercial use should be reported under this code. Examples of products include processing solutions (for developing, stopping, and fixing photos), slide and negative film, and, glossy and matte photographic paper.
Chemical Su	bstances in Automotive, Fue	l, Agriculture, Outdoor Use Products
C401	Automotive care products	Chemical substances contained in products used in automotive cleaning and care of exterior and interior vehicle surfaces that are intended for consumer or commercial use should be reported under this code. Examples of automotive care products include car waxes, polishes, cleaners, and sealers; car wash solutions; vinyl/rubber/plastic protectants; automotive carpet and upholstery cleaners; wheel and tire care products; exterior trim protectants; and touch-up paint products. This code does not include antifreeze, de-icing products, or lubricants.
C402	Lubricants and greases	Chemical substances contained in products to reduce friction, heat generation and wear between solid surfaces that are intended for consumer or commercial use should be reported under this code. Examples of lubricants and greases include engine oils; transmission, brake and hydraulic fluids; gear oils; and, calcium, sodium, lithium, and silicone-based greases.
C403	Anti-freeze and de-icing products	Chemical substances added to fluids, especially water, to reduce the freezing point of the mixture, or applied to surfaces to melt or prevent build up of ice that are intended for consumer or commercial use should be reported under this code. Examples of products include antifreeze liquids, windshield deicers, aircraft de-icers, lock release agents, ice melting crystals, and rock salt.

Code	Product Category	Description
C404	Fuels and related products	Chemical substances burned to produce heat, light or power, or added to inhibit corrosion, provide lubrication, increase efficiency of use, or decrease production of undesirable by-products that are intended for consumer or commercial use should be reported under this code. Examples of fuels and related products include gasoline, diesel fuels, propane, butane, kerosene, lamp oils, white gas (naphtha), natural gas, stabilizers, anti-knock agents, corrosion inhibitors, detergents, fuel dyes, oxygenates, antioxidants, odor agents, non-scented candles, lighter fluids, and, matches.
C405	Explosive materials	Chemical substances capable producing a sudden expansion usually accompanied by the production of heat and large changes in pressure upon initiation, that are intended for consumer or commercial use should be reported under this code. Examples of products include pyrotechnics, high explosives and propellants, igniter, primer, initiatory, illuminants, smoke and decoy flares, and, incendiaries.
C406	Agricultural products (non-pesticidal)	Chemical substances used to increase the productivity and quality of plant, animal and forestry crops produced on a commercial scale should be reported under this code. Examples of agricultural products (non-pesticidal) include fertilizers, additives (time release agents, adjuvants and surfactants which promote even distribution of herbicides and pesticides but are added separately), colorants (used to mark fields and improve the appearance of Christmas tress), application aids (defoamers and foamers), pH adjusters, moisture retention agents, soil conditioners, and, seed coatings. U.S. ONLY: Excludes any substance that is manufactured, processed, or distributed in commerce for use as a pesticide as defined in the Federal Insecticide, Fungicide, and Rodenticide Act. CANADA ONLY: Includes animal feed (any substance or mixture of substances for consumption by livestock, providing the nutritional requirements of livestock, or the purpose of preventing or correcting nutritional disorders of livestock, as defined in the Feeds Act and Regulations).
C407	Lawn and garden products	Chemical substances contained in lawn, garden, outdoor or potted plant, and tree care products that are intended for consumer or commercial use should be reported under this code. Examples of lawn and garden care products include fertilizers and nutrient mixtures, soil amendments, mulches, pH adjustors, water retention beads, vermiculite, and perlite. U.S. ONLY: Excludes any substance that is manufactured, processed, or distributed in commerce for use as a pesticide as defined in the Federal Insecticide, Fungicide, and Rodenticide Act. CANADA ONLY: Excludes any substance contained in pest control products as defined under the Pest Control Products Act.
Chemical Su	bstances in Products Not Des	scribed by Other Codes
C980	Non-TSCA Use	Chemical substances contained in products intended for consumer or commercial use that are not regulated by TSCA should be reported under this code. Examples of products with non-TSCA uses include pesticide, insecticide, rodenticide and fungicide formulations; food or drink for humans or animals; articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in humans or animals; substances intended to be applied to the human body other than soap; any radioactive source material, special nuclear material, or byproduct material; pistols, revolvers, fire arms, or ammunition; and tobacco or tobacco products.
C999	Other (specify)	