Instructions for Reporting for the 2006 Partial Updating of the TSCA Chemical Inventory

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Training Agenda

- Background Information
- Reporting Requirements
- Completing Form U
- Special Topics
  - *Importers/Exporters*
  - *TSCA/non-TSCA Use*
  - *CBI*
- Case Study 1 – Ammonium Phosphate
- Case Study 2 – MEK
- Electronic Reporting
- Case Study 3 – Xylene
- Question and Answer Session

Background Information

If you…

manufacture (including import) a chemical substance at a single site in volumes of 25,000 pounds or more during calendar year 2005, you may need to report under the Inventory Update Reporting (IUR) regulation 40 CFR Part 710 subpart C.

What is the IUR?

- The TSCA Inventory, initiated in 1977, lists over 80,000 chemicals in commerce in the U.S.
- The IUR updates production, processing, and use information for a subset of chemicals on the TSCA Inventory.
- The next submission occurs in 2006 and will require reporting on chemicals on the TSCA Inventory manufactured (including imported) during calendar year 2005.

Who needs to report under the IUR in 2006?

- Manufacturers (including importers) of chemicals listed on the TSCA Inventory:
  - If you manufacture (including import) 25,000 lbs or more of a chemical substance (during calendar year 2005 at a site), then report site identification and manufacturing information (Parts I and II of Form U).
  - If your manufacture (including import) 300,000 lbs or more of a chemical substance (during calendar year 2005 at a site), also report downstream processing and use information (Part III of Form U).

Applicability and reporting exemptions will be covered in greater detail in the next section.

Available IUR Information

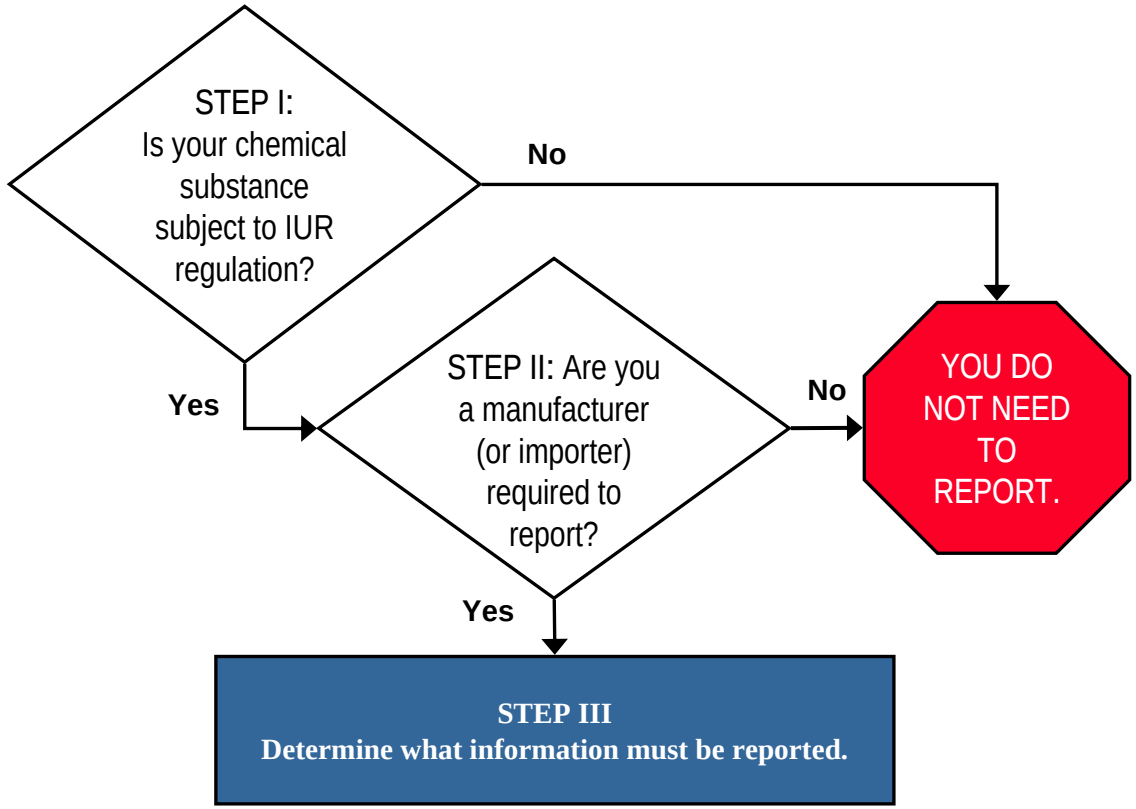
- The IUR Web site is being updated to include the 2006 IUR reporting requirements and all supporting documents (www.epa.gov/oppt/iur).
- Please direct any general questions or comments on the IUR requirements to Susan Sharkey at sharkey.susan@epa.gov.
- If you need additional assistance when completing Form U, contact the TSCA hotline at 202-554-1404 or TSCA-Hotline@epamail.epa.gov.

Recent Changes to IUR – December 19, 2005 Amendment

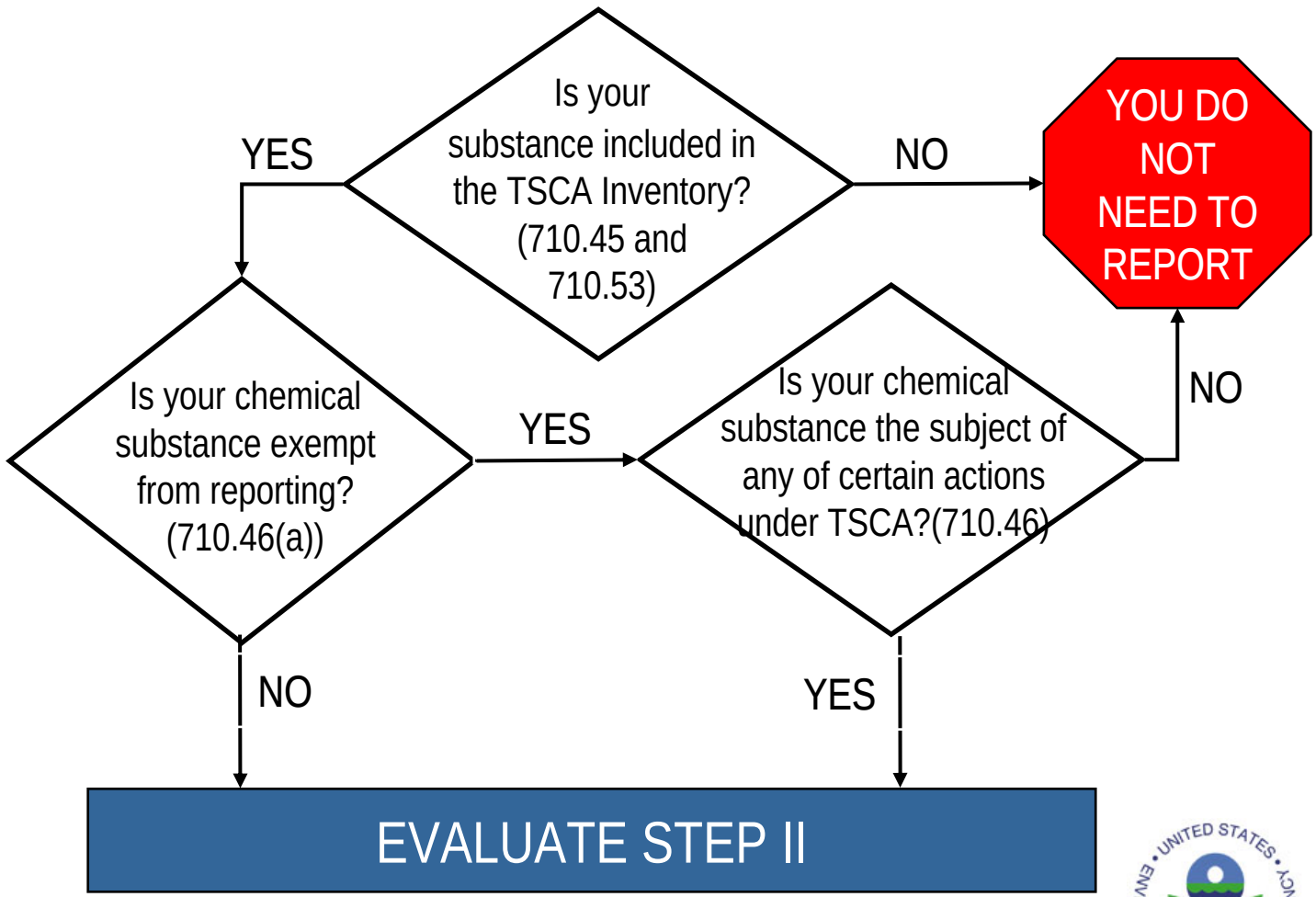
- Reporting frequency has changed from every 4 years to every 5 years.
- Beginning in 2011, the submission period will change to June 1 through September 30. The submission period for 2006 remains August 25 through December 23, 2006.
- Manufacture and import volumes will be reported separately.
- The 5-year record retention period begins on the last day of the submission period.
- A new commercial and consumer use category for agricultural products (non-pesticidal) was added.
- Processing/Use information is restricted to domestic activities.
- Information on production volume range is not required.
- Administrative changes to Form U

Reporting Requirements

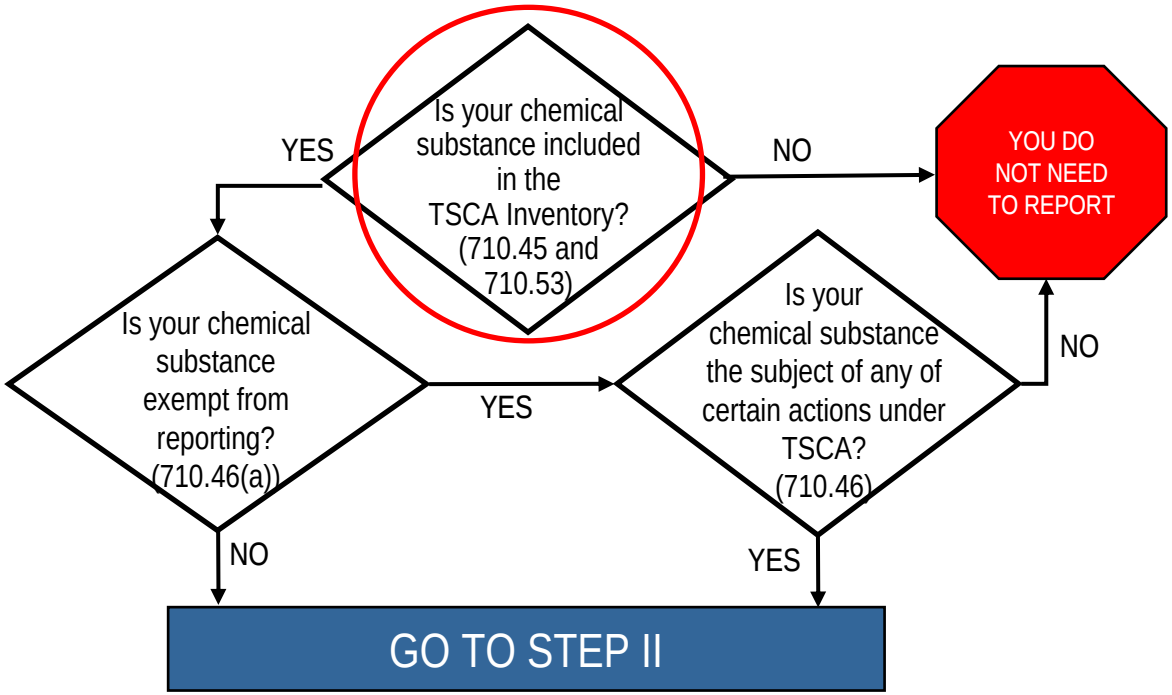
Determining Reporting Requirements



STEP I


Is your substance included in the TSCA Inventory? (710.45 and 710.53)
YES
NO
YOU DO NOT NEED TO REPORT
Is your chemical substance exempt from reporting? (710.46(a))
YES
Is your chemical substance the subject of any of certain actions under TSCA?(710.46)
NO
NO
YES
EVALUATE STEP II

Is the substance on the TSCA Inventory?



- Chemical substances subject to IUR must appear on the TSCA Inventory at the beginning of the submission period (August 25, 2006).

What is the TSCA Inventory?

- EPA classifies chemicals as “existing” or “new”.
- All existing chemicals are compiled in a list called the *Toxic Substances Control Act Chemical Substance Inventory* or *TSCA Inventory.*
- The Inventory was originally compiled in 1978 and 1979.
- EPA adds new chemicals to the *Inventory* when companies submit a Notice of Commencement following completion of Premanufacture Notification procedures.
- Over 80,000 chemicals are listed.

How do you determine if your substance is on the TSCA Inventory?

- Locate the substance in the Public Inventory.
- Information on obtaining the Public Inventory in hardcopy or electronic format can be found at http://www.epa.gov/opptintr/newchems/pubs/invntory.htm.
- Search company records to determine if the substance was previously reported to EPA under IUR.
- Search company records for a Notice of Commencement of manufacture or import for a PMN substance.

Hydrates and Mixtures

- Hydrates are not listed in the TSCA Inventory. You are required to report using the corresponding anhydrous form.
- Mixtures are not subject to TSCA. You are required to report for the chemical substances making up the mixture.

Example #1 - Hydrate

Thrifty Chemical Company manufactured 1,000,000 pounds of sodium hypochlorite pentahydrate, NaOCl•5 H_2O (CAS# 10022-70-5). How does Thrifty report this chemical substance?

Answer: Thrifty should report the amount of anhydrous NaOCl (CAS# 7681-52-9) manufactured. The MW of NaOCl is 74.44 and the MW of NaOCl•5 H_2O is 164.52.

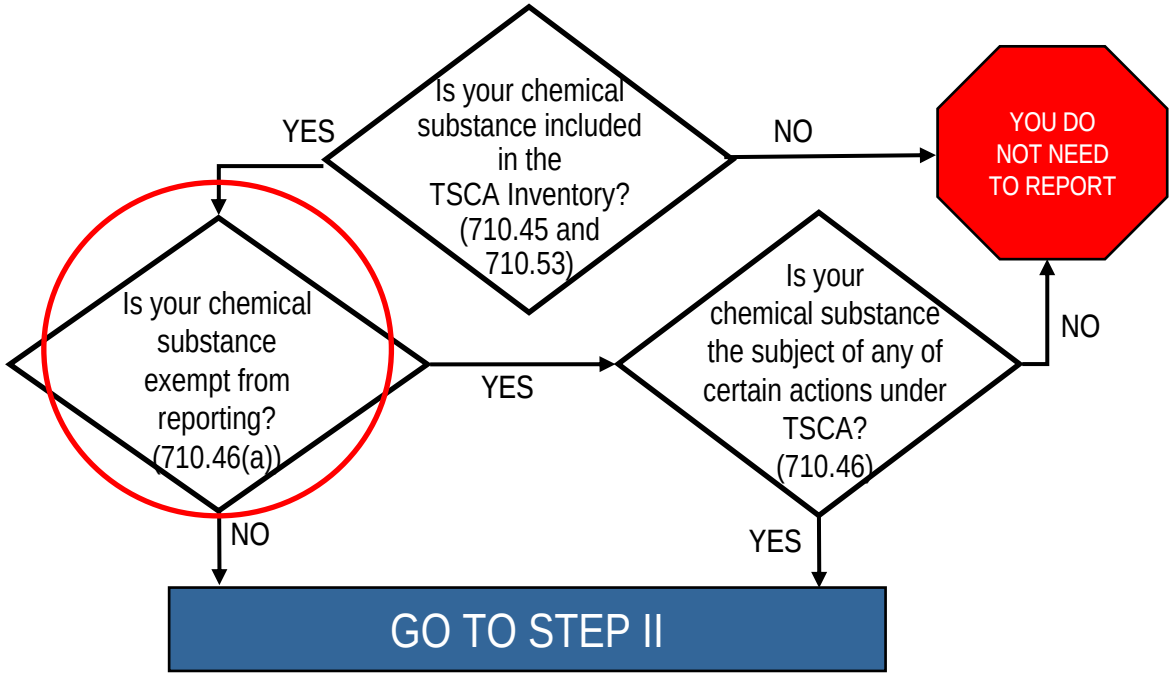
74.44 ÷ 164.52 = 45.25% NaOCl in NaOCl•5 H_2O

45.25% x 1,000,000 lbs = 452,500 lbs NaOCl

What if you cannot find your chemical in the Inventory?

- You can request that EPA search the Master Inventory File, including confidential substances.
- Because searches are labor-intensive, you should request a search only if your search of the Public Inventory and company records fails to resolve your question.
- EPA can not guarantee a response for requests received after the beginning of the submission period.
- Follow the instructions listed in Section 2.1.1.3 of the Instructions for Reporting for submitting your request.

Is the substance exempt?



- Polymers, certain natural gas streams, microorganisms, and naturally occurring substances are exempt from IUR.
- Exempt substances are noted with an 'XU' flag in the TSCA Inventory.

Polymers (40 CFR 710.46(a)(1))

- The IUR definition of polymer is sufficiently broad to include all those substances that are generally considered polymers. These include polysaccharides, such as starches and gums, and all classes of proteins. However, substances that result from hydrolysis, depolymerization, or chemical modification, regardless of the extent of these processes, of polymers so that the final products are no longer polymeric (e.g., a mixture of amino acids that is the result of hydrolysis of a polypeptide) are not considered to be polymers and must be reported if not otherwise excluded.

Microorganisms (40 CFR 710.46(a)(2))

- 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 organism is reportable unless otherwise excluded. 40 CFR 725.3 defines microorganism as an organism classified, using the 5-kingdom classification system of Whittacker, in the kingdoms Monera (or Procaryotae), Protista, Fungi, and the Chlorophyta and the Rhodophyta of the Plantae, and a virus or virus-like particle.

Natural Gas (40 CFR 710.46(a)(4))

- Certain forms of natural gas are exempt for IUR reporting. These forms are listed in 40 CFR 710.46(a)(4), Table 2-1 of the Instructions for Reporting, and below:

Form of Natural Gas	CAS 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

Naturally Occurring Substances (40 CFR 710.46(a)(3))

- A naturally occurring substances (as defined in 40 CFR 710.4(b) 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. Examples of such substances are: raw agricultural commodities; water, air, natural gas, and crude oil; and rocks, ores, and minerals.

Naturally Occurring Substances

- Whether a substance is naturally occurring depends on the manner in which it is produced and isolated. For this reason, minerals and certain agricultural products are sometimes considered not to be naturally occurring because of their method of production.

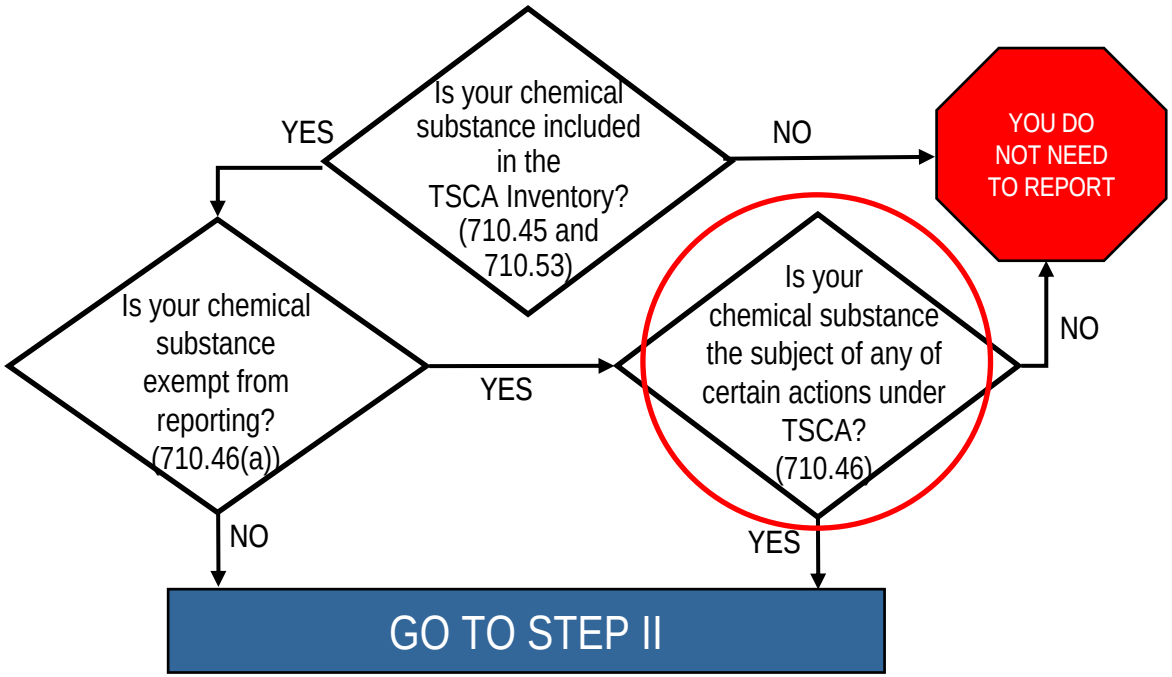
  Examples:

  1. Removing small particles by electrostatic precipitation is treated similarly to a filtration or gravitation separation. Processing a naturally occurring substance by this means does not negate the exemption.

  2. Using a solvent to extract a naturally occurring substance is not a natural means, therefore the substance would need to be reported.

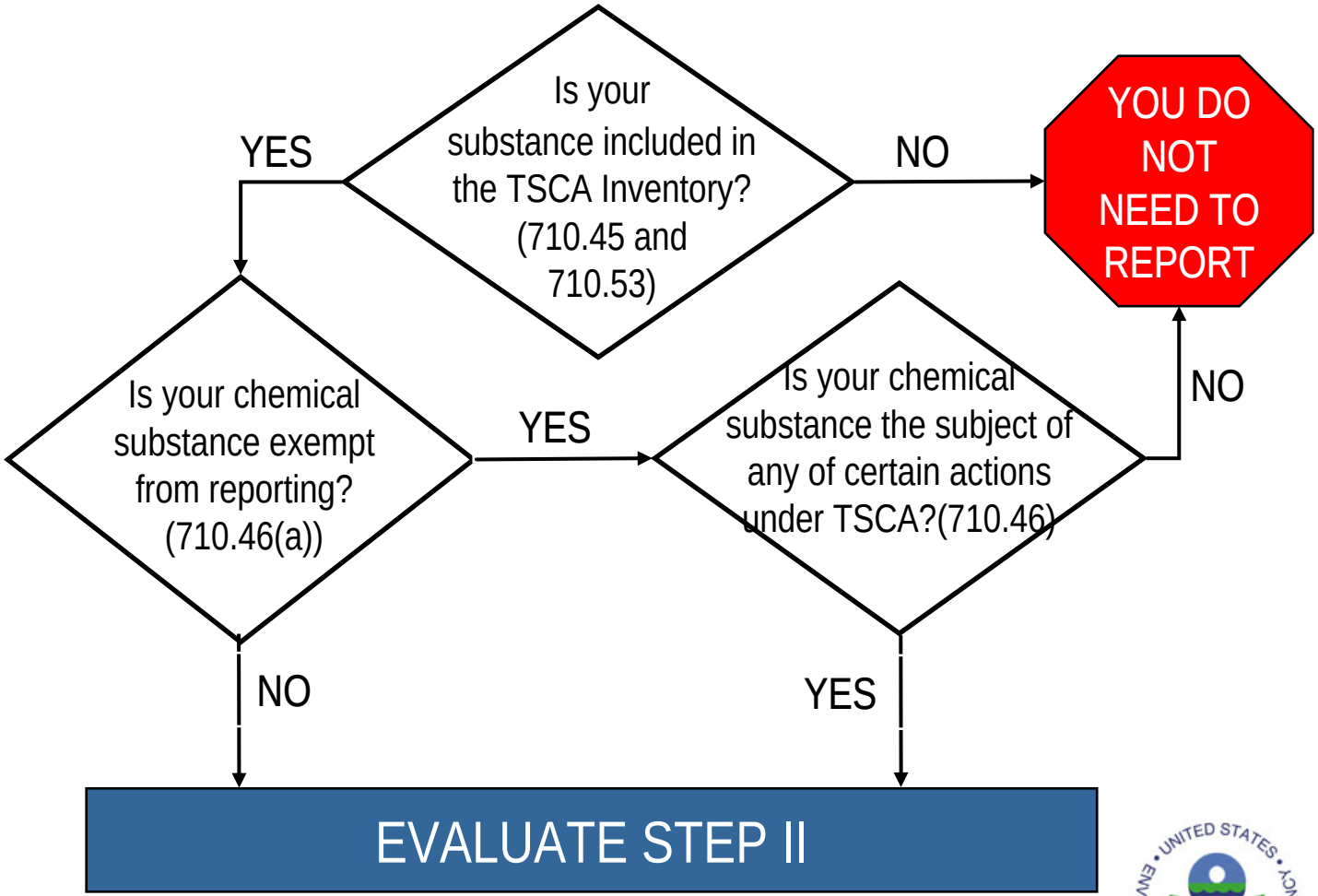
  Additional examples related to naturally occurring substances will be presented in Case Study 1.

Is the substance subject to a special action?

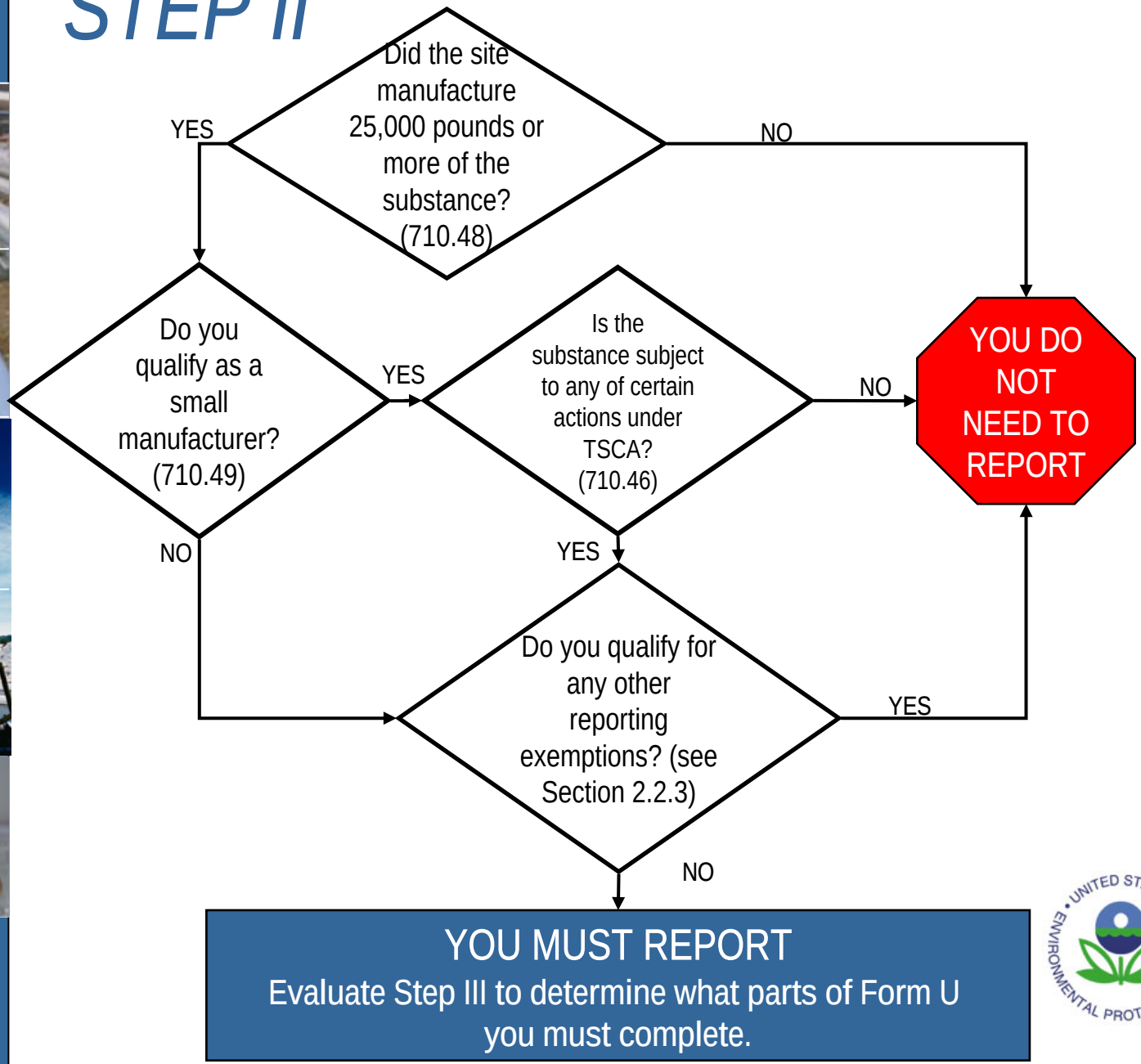


- Polymers, certain natural gas streams, and microorganisms are not exempt when they are the subject of certain actions (a rule proposed or promulgated, an order, or civil action) under certain sections of TSCA.
- See Section 2.1.3, 40 CFR 710.46, and Appendix C of the Instructions for Reporting for additional details.

STEP I Summary



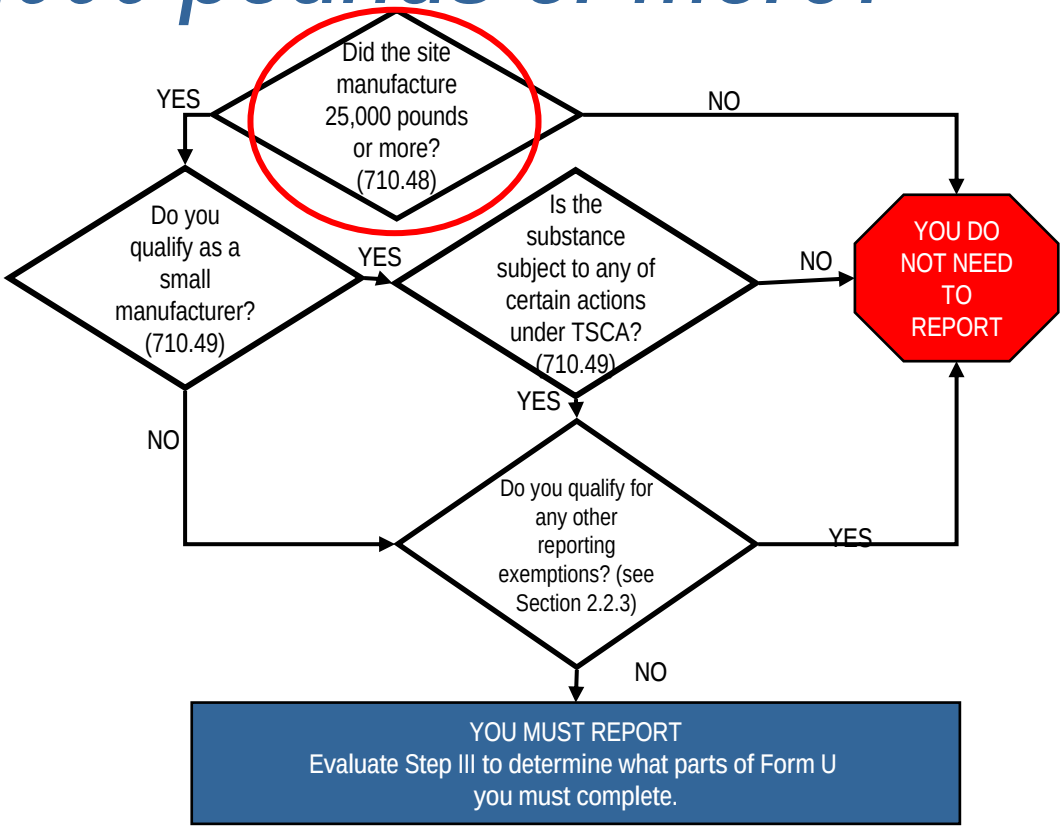
STEP II


Did the site manufacture 25,000 pounds or more of the substance? (710.48)
YES
NO
Do you qualify as a small manufacturer? (710.49)
YES
Is the substance subject to any of certain actions under TSCA? (710.46)
NO
YOU DO NOT NEED TO REPORT
NO
YES
Do you qualify for any other reporting exemptions? (see Section 2.2.3)
YES
NO
YOU MUST REPORT
Evaluate Step III to determine what parts of Form U you must complete.

Definition of Manufacture

- Manufacture means to manufacture, produce, or import for commercial purposes (40 CFR 710.3). Note the definition of manufacture includes import.

Do you manufacture quantities of 25,000 pounds or more?



- Only report a chemical substance if you manufactured (including imported) 25,000 pounds or more at any single site.
- Report the substance for all sites at which you manufactured (including imported) 25,000 pounds or more. Form U should be completed for each site.

Example #2- Annual Production Volume Threshold

Green Chemical Company
Annual Sales $50 Million

Pennsylvania Site	New Jersey Site	New York Site
Manufactures 21,000 pounds and imports 5,000 pounds of acetylene	Manufacturers 50,000 pounds of a 50% acetylene mixture	Manufactures 30,000 pounds of a 50% acetylene mixture and 5,000 pounds of 100% acetylene

Which sites need to report?

Pennsylvania and New Jersey

The Pennsylvania and New Jersey sites manufacture 25,000 pounds or more of acetylene. The New York Site manufactures only 20,000 pounds of acetylene.

Mixtures

"Mixture means any combination of two or more chemical substances if the combination does not occur in nature and is not, whole or in part, the result of a chemical reaction; except that mixture does include:

(1) Any combination which occurs, in whole or in part, as a result of a chemical reaction 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 and if, after the effective date or premanufacture notification requirements, none of the chemical substances comprising the combination is a new chemical substance, and

(2) Hydrates of a chemical substance or hydrated ions formed by association of a chemical substance with water." (40 CFR 710.3)

Are Mixtures Subject to IUR?

- Mixtures are not subject to IUR, but the chemical substances comprising the mixture are subject to IUR.
- If you import a mixture, you must evaluate your reporting obligations for all chemical substances in the mixture.
- If you produce a mixture by combining existing substances that your company does not manufacture and no chemical reaction occurs (i.e., blending and formulating), do not report those substances.

Example #3 – Imported Mixtures

Company A imports 50,000 pounds of Mixture Z which contains 20,000 pounds of Chemical X and 30,000 pounds of Chemical Y. Company A sells Mixture Z directly to consumers. Does company A meet the IUR reporting requirements?

Answer: Company A is a manufacturer required to report. Company A should evaluate the IUR reporting requirements for each component of the mixture. Company A should complete Form U for Chemical Y since it is imported at 25,000 pounds or more per year.

Example #4 - Mixtures

Company A purchases 25,000 pounds of Chemical X and 25,000 pounds of Chemical Y from Domestic Manufacturer B. Company A mixes the two chemicals to form Mixture Z with no chemical reaction and sells the mixture directly to consumers. Does company A meet the IUR reporting requirements?

Answer: Company A is not a manufacturer required to report. Company A formulates a mixture and does not manufacture the component chemical substances. Domestic Manufacturer B should complete Form U for Chemicals X and Y.

What is an Alloy?

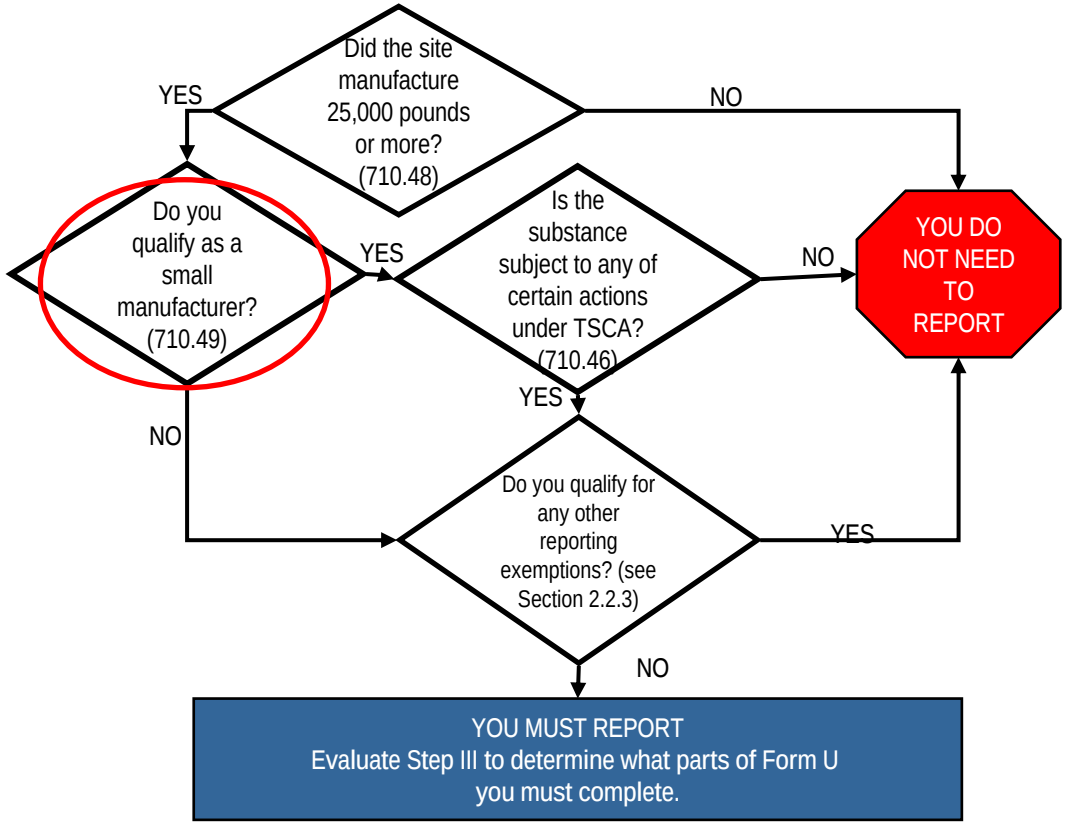
- An alloy is a solid mixture containing two or more elements, at least one of which is a metal.
- If you blend chemical substances to create an alloy, but do not manufacture any of the component substances, then you are not subject to IUR reporting.
- If you import an alloy, evaluate whether you need to report for each chemical substance present in the alloy.

Example #5 - Alloy

A circuit board manufacturer imports 100,000 pounds of lead solder from a non-domestic supplier. The solder contains 40% tin and 60% lead and is received as wire or bars. The solder is used to manufacture electronic circuit boards.

Answer: The circuit board manufacturer should report for importing 40,000 pounds of tin and 60,000 pounds of lead. The solder qualify for an exemption from reporting as an article because it is melted during use and does not retain its original shape.

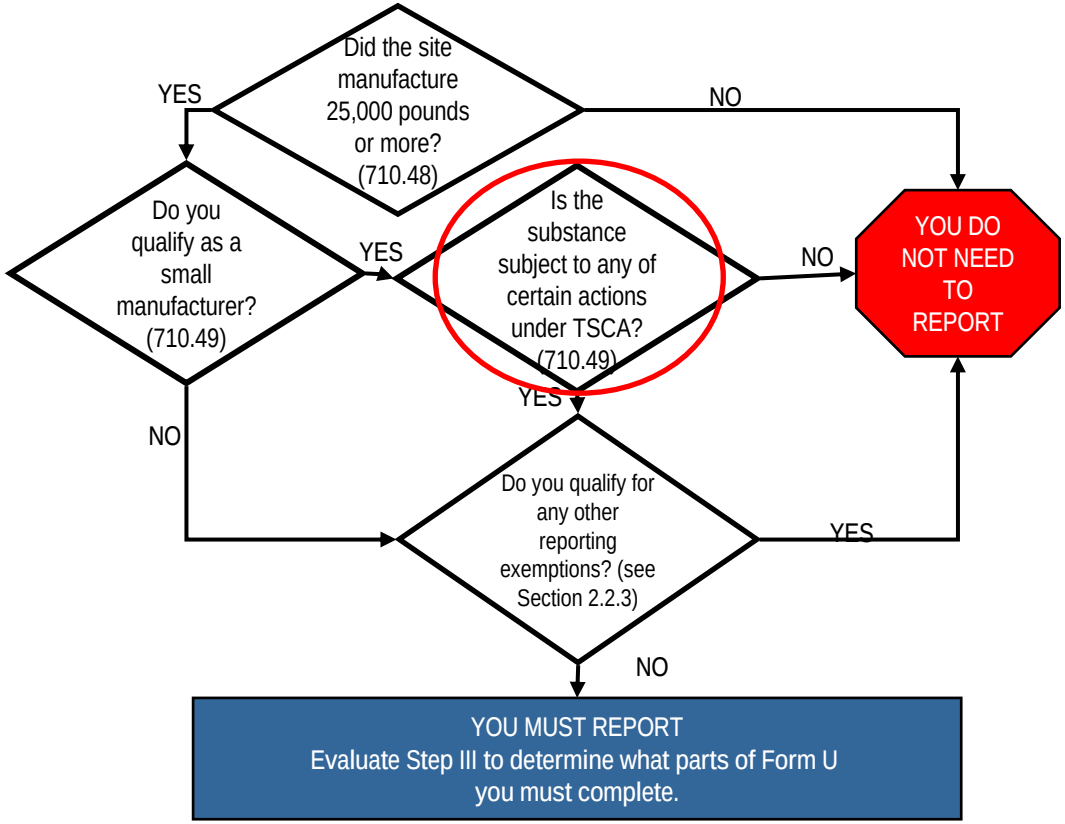
Do you qualify as a small manufacturer?



- Total annual sales < $4 million (company wide) OR
- Total annual sales < $40 million (company wide); and Production volume < 100,000 lbs. (for a chemical substance at a single plant site)

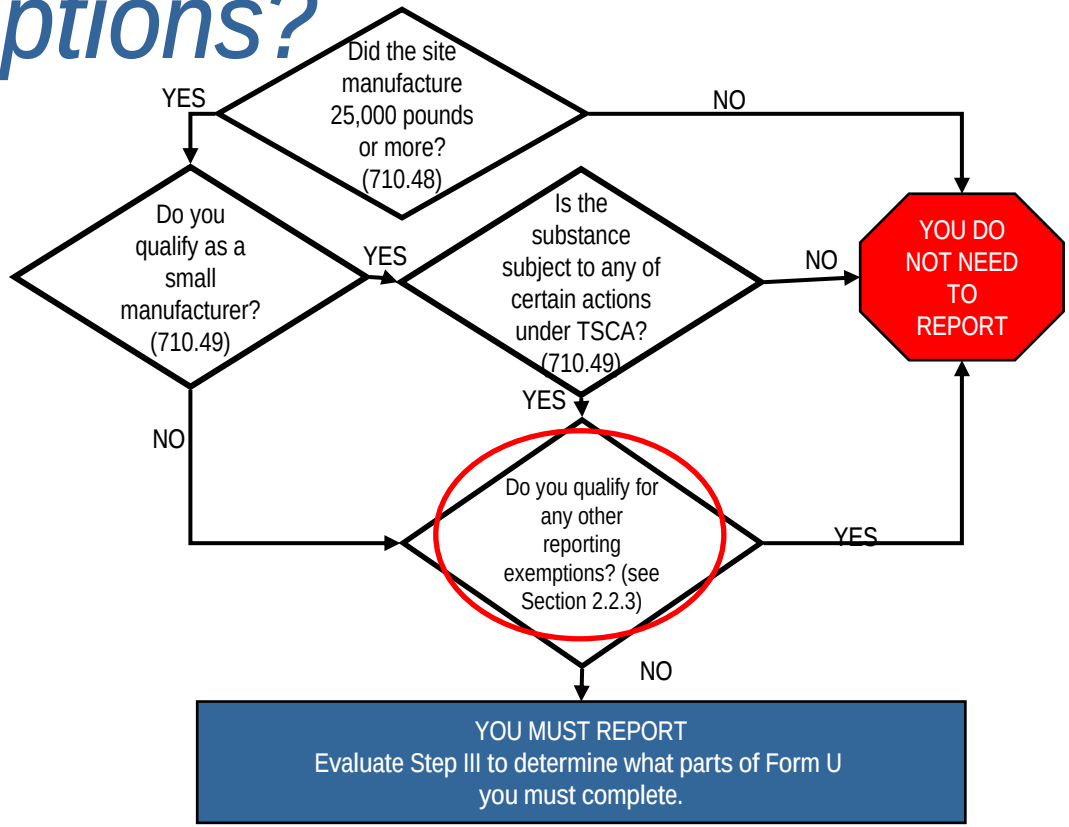
NOTE: Small manufacturers are still required to report on substances subject to a rule proposed or promulgated under certain sections of TSCA (710.49).

Is the substance subject to a special action?



- Substances must be reported if they are subject to a special action.
- See Section 2.1.3, 40 CFR 710.49, and Appendix C for additional details.

Do you qualify for additional exemptions?



- If you manufacture or import under the following circumstances you are not required to report:
  - Substance is imported as part of an article (710.50(b)).
  - Substance is manufactured as an impurity, by-product, or non-isolated intermediate (710.50(c), 720.30(g) and (h)).
  - All IUR information was submitted in response to another TSCA Section 8(a) rule within the last year (CFR 710.55).

Article Exemption

- "An article is any manufactured item that:
  (1) is formed to a specific shape or design during manufacture,
  (2) has end-use function(s) dependent in whole or in part upon its shape or design during its end use, and
  (3) has either no change of chemical composition during its end use or only those changes of composition that have no commercial purpose separate from that of the article." (40 CFR 710.3)

By-product and impurities

- "By-product is a chemical substance produced without separate commercial intent during the manufacture or processing of another chemical substance(s) or mixture(s)." (40 CFR 710.3)
- "Impurity is a chemical substance which is unintentionally present with another chemical substance." (40 CFR 710.3)

Do I Report Byproducts and Impurities?

- Chemicals listed on the TSCA Inventory may be generated as byproducts from chemical reactions.
- You do not need to report byproducts that are not manufactured for distribution in commerce per se and have no commercial purpose separate from the substance, mixture or article of which they are a part.
- IUR does not recognize a *de minimus* value.
- Do not report byproducts disposed as waste or only combusted as fuel.
- Do not report impurities.

Example #6 - Byproduct

An energy company operates a sulfur recovery plant as a pollution control device to minimize sulfur oxide emissions. This sulfur plant generates 100,000 pounds of elemental sulfur; 40,000 pounds is sold to customers and 60,000 pounds is landfilled as waste. Does this site need to report for sulfur?

Answer: The 100,000 pounds of sulfur is considered a byproduct. The 40,000 pounds of sulfur sold to customers is used for a commercial purpose and should be reported under IUR.

Example #7 - Impurity

Organo Chemicals Co. imports styrene. The styrene may contain small quantities of toluene and benzene. Does Organo Chemicals need to report for the benzene and toluene?

Answer: No. Benzene and toluene are impurities in styrene and do not need to be reported.

Non-isolated intermediates

- "Non-isolated intermediate means any chemical substance 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 710.3)

Non-isolated intermediate status

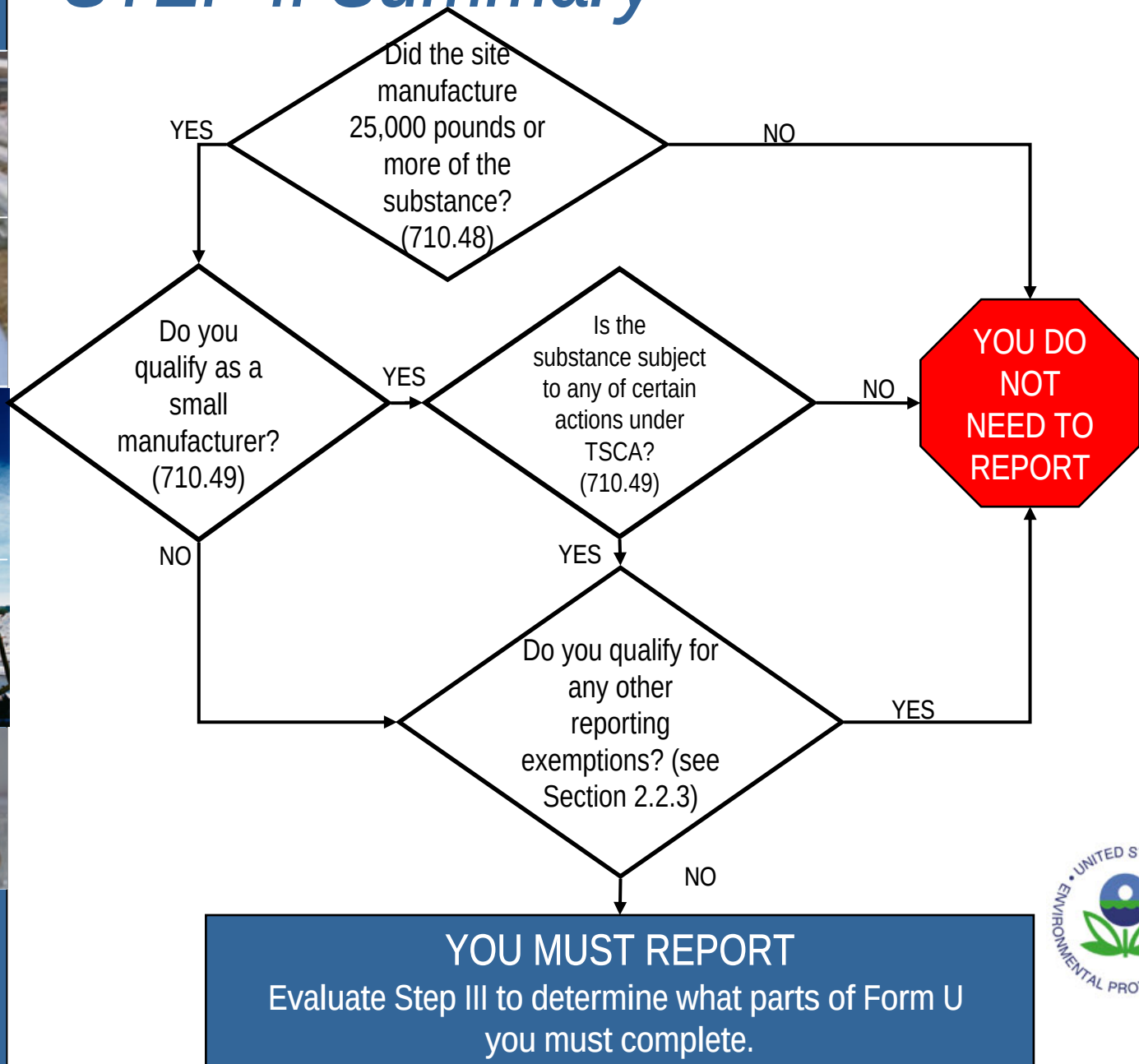
- Taking laboratory samples of an intermediate does not negate the non-isolated status of the substance.
- Any storage, even storage within the reaction vessel, negates the non-isolated status of the intermediate.

Example #8 - Non-Isolated Intermediate Exemption

Reactants A and B are charged to a vessel where they react to form Chemical Substance X. Reactant C is then added to the same vessel. Chemical Substance X reacts completely with Reactant C to form Chemical Substance Y. Is Chemical Substance X non-isolated?

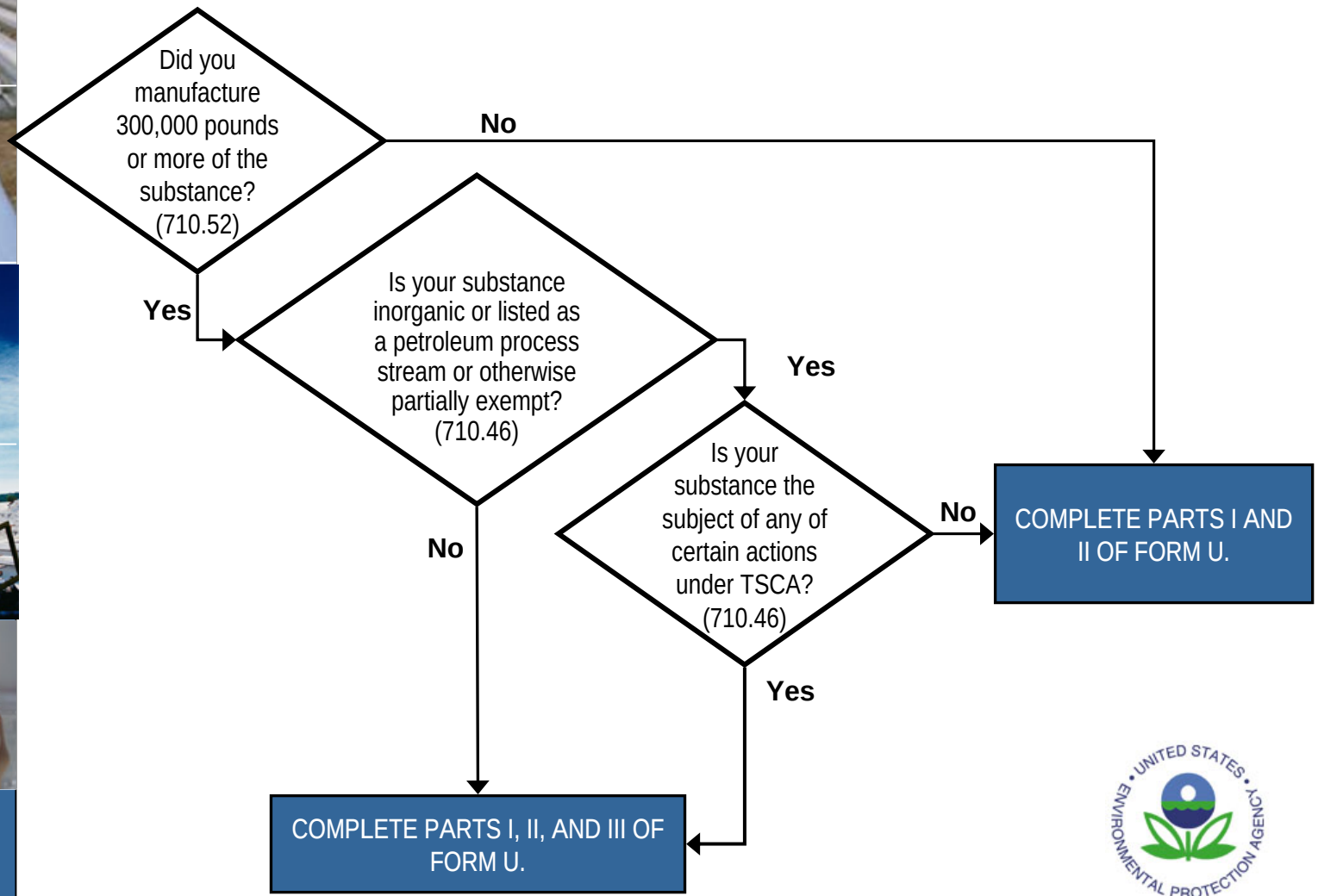
Answer: Yes. Chemical X is non-isolated since it is not removed from the reaction vessel and it is not stored.

STEP II Summary



STEP III

What information do you need to report?



What information do you need to report?

Summary of Reporting Requirements

Parts I and II	Part III
Complete for all reportable substances manufactured (including imported) in quantities of 25,000 pounds or more.	Complete if you produce 300,000 pounds or more per year except for the following: 1) Petroleum process streams listed in 40 CFR 710.46(b)(1) and in Appendix D. 2) Specific chemical substances listed in 40 CFR 710.46(b)(2)(iv) and in Appendix D. 3) Inorganic substances as defined in 40 CFR 710.46(b)(3).

Example #9- Reporting Requirements

Zero Pollution Chemical Company
Annual Sales $50 Million

California Site	Arizona Site	New Mexico Site
10,000 pounds of organic pigment	30,000 pounds of organic pigment	350,000 pounds of organic pigment

What does this company submit?

California Site – No Reporting Required

Arizona Site – Parts I and II

New Mexico Site – Parts I, II, and III

Summary

- Form U must be submitted if
  - The chemical is on the TSCA chemical substance inventory
  - The chemical is manufactured or imported in an amount of 25,000 pounds or more
- Exemptions
  - Polymers, certain forms of natural gas, microorganisms, naturally occurring substances
  - Small manufacturers
  - Substance is manufactured as an impurity, non-isolated intermediate, or byproduct without separate commercial intent
  - Substance is imported as a part of an article

Note: Additional information on Reporting Requirements can be found in Chapter 2 of the Instructions for Reporting

Completing Form U

Completing Form U

- General Requirements
- Part I – Site Identification Information
- Part II – Manufacturing Information
- Part III – Processing and Use Information

General Requirements

- Separate forms are required for each plant site (40 CFR 710.52).
- If you are reporting for more than one chemical, you should make the required number of copies of Parts II and III.
- Information pertaining to calendar year 2005 should be reported during the 2006 submission period.
- Information can be submitted either through the Central Data Exchange (CDX), on electronic disk, or a printed version of Form U (40 CFR 710.52). Information should not be submitted via email.

Note: The eIUR client tool (electronic reporting software) will be demonstrated in a later section.

Reporting Standards

- EPA expects all information in Parts I and II of Form U to be reported if it is known to or reasonably ascertainable by the submitter.
- Report all readily obtainable information in Part III. If any information is not readily obtainable, enter 'NRO' (not readily obtainable) in the block for that data element.

Reporting Standards

- Report all information that is known to or reasonably ascertainable by you in Parts I and II of Form U.

  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 710.45)

- Report readily obtainable information in Part III of Form U.

  Readily obtainable information is information known to or readily obtainable by management and supervisory employees of the submitter company who are associated with manufacturing, processing, distributing, technical services, or marketing of the reportable chemical substance. Extensive file searches are not required. Readily obtainable information may include using best professional judgment based on past experiences for similar chemical substances in the same or similar markets. (40 CFR 710.45)

Known to or Reasonably Ascertainable

- Examples of information that is known to or reasonably ascertainable by a person reporting IUR information include:
  - Files maintained by your company that are associated with research, development, test marketing or commercial marketing of the chemical substance.
  - Information contained in standard references such as MSDSs.
  - Information from Chemical Abstracts Service (CAS), Dun & Bradstreet, and NAICS.
  - Common market research information.

Readily Obtainable Information

- Intended to be a less inclusive standard than the known to or reasonably by ascertainable by standard.
- May include use of your best professional judgment based on past experiences for similar chemical substances in the same or similar markets.
- Does not include surveying your downstream customers. However, if you have information that would reasonably allow you to provide estimates, you should report the estimated information on Part III of Form U.

Certification

CERTIFICATION

Certification Statement: I hereby certify to the best of my knowledge and belief that Parts I and II have been completed in compliance with the requirements of 40 CFR 710.52(c)(1), (2), and (3); Part III of this form has been completed in compliance with the requirements of 40 CFR 710.52(c)(4); and the confidentiality statements at the end of this form are true and correct as to that information for which a confidentiality claim has been asserted.			
Signature		Date signed	
Name (printed)		Official Title	

- This section should be completed by an authorized official of your company. The certification statement attests to the accuracy, completeness, and truthfulness of the submitted information to the best of your knowledge.

Part I, Section A: Parent Company Information

PART I. SITE IDENTIFICATION INFORMATION

SECTION A. COMPANY INFORMATION*	
1.A.1 Company Name	
1.A.2 Company Dun & Bradstreet Number	

Make sure you enter the company Dun & Bradstreet number.

Part I, Section B: Plant Site Identification

Make sure you enter the site Dun & Bradstreet number.

SECTION B. SITE INFORMATION*			
1.B.1 Site Name			
1.B.2 Site Dun & Bradstreet Number		EPA Facility Identification Number	FOR EPA USE ONLY LEAVE BLANK
1.B.3 Street Address (Line 1)			
1.B.4 Street Address (Line 2)			
1.B.5 City		1.B.6 County / Parish	
1.B.7 State		1.B.8 Zip Code	

- Dun & Bradstreet assigns separate numbers to subsidiaries and parent companies. Be sure to provide the correct number for both the company and site.
- You can request a number from your local Dun & Bradstreet office. See www.dnb.com/us for more information.

Facility Identification Number

SECTION B. SITE INFORMATION*			
1.B.1 Site Name			
1.B.2 Site Dun & Bradstreet Number		EPA Facility Identification Number	FOR EPA USE ONLY LEAVE BLANK
1.B.3 Street Address (Line 1)			
1.B.4 Street Address (Line 2)			
1.B.5 City		1.B.6 County / Parish	
1.B.7 State		1.B.8 Zip Code	

EPA will assign a facility identification number.

Part I, Section C: Technical Contact

SECTION C. TECHNICAL CONTACT INFORMATION*					
1.C.1 Name				1.C.2 Telephone	
1.C.3 Email Address					
1.C.4 Mailing Address (Line 1)					
1.C.5 Mailing Address (Line 2)					
1.C.6 City		1.C.7 State		1.C.8 Zip Code	

- The technical contact should be able to answer questions regarding all of the information submitted on Form U. The submitter is responsible for identifying the technical contact.
- Form U should be completed for each chemical manufactured in sufficient quantity at each site. Therefore, you may have different technical contacts for each site and for each chemical.

Part II Manufacturing Information

- Section A. Chemical Information
  - Chemical Identification Number and Code
  - Chemical Name
- Section B. Manufacturing Information
  - Manufacturing Activities and Production Volume
  - Number of Potentially Exposed Workers
  - Maximum Concentration
  - Physical Form(s) of the Substance

Part II, Section A: Chemical Identification

SECTION A. CHEMICAL IDENTIFICATION			CBI†	
2.A.1 Chemical Identifying Number		2.A.2 ID Code		
2.A.3 Chemical Name				

- Enter the CAS Registry number for the substance in Block 2.A.1. If the CAS number is not known, then you may use the EPA Accession or PMN number.
- Specify the type of identifying number in Block 2.A.2 by using the codes in Table 4-1 of the Instructions for Reporting.
- Enter the Chemical Abstracts Index/Preferred names if available in Block 2.A.3. Trade names may not be used unless the supplier refuses to disclose the specific chemical identity of the substance.
- You may claim the identity of your substance as confidential by checking the CBI box and submitting a separate written substantiation. Note that you can not claim the identity of any chemical on the public portion of the TSCA Inventory to be confidential.

Part II, Section B: Manufacturing Information

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)		
2.B.5	Activity (Check all that apply)	☐ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)		
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form		b. Percent of Production Volume in Each Physical Form	
		Check All That Apply	CBI	Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

- Checking the CBI box in Block 2.B.1 asserts a confidentiality claim for the link between the chemical substance and the information about the parent company.
- Checking the CBI box in Block 2.B.2 asserts a confidentiality claim for the link between the site of manufacture/import and the chemical identity.
- Checking the CBI box in Block 2.B.3 asserts a confidentiality claim for the link between the technical contact and the site of manufacture/import.

Part II, Section B: Manufacturing Information

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)		
2.B.5	Activity (Check all that apply)	☐ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)		
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

- Mark 'Y' in Block 2.B.4 if the substance is site-limited. Mark 'N' if it is not.
- Site-limited means a chemical 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.
- An imported chemical is never site-limited.

Part II, Section B: Manufacturing Information

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)		
2.B.5	Activity (Check all that apply)	☐ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)		
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form		b. Percent of Production Volume in Each Physical Form	
		Check All That Apply	CBI	Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

- In Block 2.B.5, report if you are domestically manufacturing and/or importing the chemical substance by checking the appropriate box or boxes.
- In Block 2.B.6, report the domestically manufactured production volume.
- In Block 2.B.7, report the imported production volume.

Number of Workers - Block 2.B.8

- EPA requires that you report your estimate of the total number of workers "reasonably likely to be exposed" to a chemical substance. (40 CFR 710.52(c)(3)(vi))
  - Include exposures through any route of entry – inhalation, ingestion, skin contact.
  - Do not exclude workers wearing personal protective equipment.
- Reasonably likely to be exposed – Exposure to a chemical substance under foreseeable conditions of manufacture, processing, distribution in commerce.

Estimating Number of Exposed Workers

- Include workers who, as part of their daily activities, may potentially be exposed to the chemical substance.
- Include any temporary, seasonal, or contract workers if they may be potentially exposed.
- Report individual workers, not full-time equivalents.
- Use the range codes listed in 40 CFR 710.52(c)(3)(v) and Table 4-3 of the IUR Instructions for Reporting.

Estimating Number of Exposed Workers

- Use the range codes listed below which can also be found in 40 CFR 710.52(c)(3)(v) and Table 4-3 of the IUR Instructions for Reporting.

W1	Fewer than 10
W2	At least 10 but fewer than 25
W3	At least 25 but fewer than 50
W4	At least 50 but fewer than 100
W5	At least 100 but fewer than 500
W6	At least 500 but fewer than 1,000
W7	At least 1,000 but fewer than 10,000
W8	10,000 or greater

Example #10 - Number of Workers

My site produces isopropyl alcohol and formaldehyde. Six employees are involved in the production of each chemical (12 total). On a few occasions throughout the reporting year, two employees from the isopropyl alcohol production line were moved to the formaldehyde production line to provide additional assistance. These two employees had minimal exposure to formaldehyde. How many workers should be reported for the production of formaldehyde?

Answer: Eight employees are reasonably likely to be exposed. Report code W1 (fewer than 10 workers). Include all workers potentially exposed regardless of frequency and duration.

Example #11 - Number of Workers

I employ 12 workers to operate three different chemical production lines (X, Y, and Z). The workers rotate between the different lines. Only four workers work on the production for Chemical X at any given time. However, any of the 12 workers may be assigned to Chemical X production. How many workers are reasonably likely to be exposed during the manufacture of Chemical X?

Answer: 12 workers are reasonably likely to be exposed to Chemical X because any of the 12 workers may work on the production line during the reporting year. Report code W2 (at least 10 but fewer than 25).

Example #12 - Number of Workers

My site uses 15 workers during the production of my chemical substance. This chemical is then stored until needed for shipment. These same 15 workers package the final product for shipment. Should these workers be counted twice since they are involved in two separate activities?

Answer: No. 15 workers are reasonably likely to be exposed. Report the total number of workers exposed to each chemical. You do not need to report by worker activity. Report code W2 (at least 10 but fewer than 25).

Maximum Concentration – Block 2.B.9

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)		
2.B.5	Activity (Check all that apply)	☐ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)		
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form: Check All That Apply	a. Physical Form: CBI	b. Percent of Production Volume in Each Physical Form: Percent	b. Percent of Production Volume in Each Physical Form: CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

- In Block 2.B.9, report the maximum concentration, measured by weight, at the time the chemical leaves the plant site or is reacted on-site. (40 CFR 710.52(c)(3)(vi))

Maximum Concentration

- Round estimates to the nearest 1% using standard rounding procedures. Numbers ending in 0.5 to 0.9 should be rounded up to the nearest percent. Reporting code M1 should be reported for concentrations less than 1% by weight.
- Concentrations of a chemical substance measured in laboratory samples for monitoring the process and quality control do not need to be considered when reporting the maximum concentration.

Maximum Concentration

- Use the range codes listed below which are also listed in 40 CFR 710.52(c)(3)(vi) and Table 4-4 of the IUR instructions for reporting.

M1	Less than 1% by weight
M2	From 1% to 30% by weight
M3	From 31% to 60% by weight
M4	From 61% to 90% by weight
M5	Greater than 90% by weight

Example #13 - Maximum Concentration

My company manufactures a solution of Chemical Q. During the manufacturing process several samples are taken for quality control, which may contain Chemical Q at concentrations up to 80 percent. The samples are sent off-site for laboratory analysis. The final solution at 50 percent concentration is packaged and shipped to customers. What do I report for the maximum concentration?

Answer: The maximum concentration should be reported at the time the chemical leaves the site. Samples taken for purposes of quality control do not need to be considered. Therefore, you should report the code corresponding to a maximum concentration of 50 percent.

Physical Form – Block 2.B.10 – 2.B.15

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)		
2.B.5	Activity (Check all that apply)	☐ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)		
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

- Report all physical forms of the chemical at the time it leaves your site or is reacted on-site and the percentage of production volume for each physical form.
- Round estimates to the nearest 10%.

Example #14 - Completing Part II Sodium Hydroxide (NaOH)

Company A, Delaware Site

Company A manufactures
100,000,000 lbs of NaOH
(208,300,000 lbs of a 48% solution)

- 20,000,000 lbs purified to a 72%wt solution
- 74,000,000 lbs sold as a 48%wt solution
- 6,000,000 lbs crystallized to a solid at >97% concentration

Sold for laboratory and industrial uses.

Note that further information about Company A's production of NaOH is included in your handouts.

Example #14 (cont'd)

SECTION A. CHEMICAL IDENTIFICATION			CBI†	
2.A.1 Chemical Identifying Number	1310-73-2	2.A.2 ID Code		C
2.A.3 Chemical Name	Sodium Hydroxide			

- The CAS number for NaOH is 1310-73-2.
- Since a CAS number is entered in Block 2.A.1, enter 'C' in Block 2.A.2.
- The Chemical Abstracts Index/Preferred name is Sodium Hydroxide.
- Since NaOH is on the nonconfidential Public Inventory, the CBI box may not be checked for chemical identity

Example #14 (cont'd)

Is NaOH site-limited?

No, NaOH is not site-limited. It is both imported and sold to customers. Enter 'N'.

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information*		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	☒ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)		
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

Does Company A manufacture or import?

Company A domestically manufactures NaOH.

Example #14 (cont'd)

What is the production volume? 100,000,000 lbs.

SECTION B MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information*		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	☒ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	100,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

Company A manufactures 100,000,000 lbs.

Do not use scientific notation or abbreviations. (i.e. 1.0E7, 10M, or 10,000K.)

Example #14 (cont'd)

How many workers should be reported in Block 2.B.8?

Activity	Workers per Shift	Exposed Workers per Shift	Number of Shifts	Total Exposed Workers
Load raw materials into storage tanks	2			
Operate and monitor NaOH process	3			
Transfer NaOH to other processes	4			
Sample the NaOH	1			
Package the NaOH for shipment	3			
Load drums onto truck trailers	2			
Support other manufacturing operations	42			
Maintenance staff	8			
Administrative personnel	25			
Process engineers	10			
			Total	

These numbers represent the total number of workers at Company A listed in the handout.

Example #14 (cont'd)

How many workers should be reported in Block 2.B.8?

Activity	Workers per Shift	Exposed Workers per Shift	Number of Shifts	Total Exposed Workers
Load raw materials into storage tanks	2	0		
Operate and monitor NaOH process	3	3		
Transfer NaOH to other processes	4	4		
Sample the NaOH	1	1		
Package the NaOH for shipment	3	3		
Load drums onto truck trailers	2	0		
Support other manufacturing operations	42	0		
Maintenance staff	8	2		
Administrative personnel	25	0		
Process engineers	10	3		
			Total	

Note that not all of the workers at Company A are reasonably likely to be exposed to NaOH.

Example #14 (cont'd)

How many workers should be reported in Block 2.B.8?

Activity	Workers per Shift	Exposed Workers per Shift	Number of Shifts	Total Exposed Workers
Load raw materials into storage tanks	2	0	4	0
Operate and monitor NaOH process	3	3	4	12
Transfer NaOH to other processes	4	4	4	16
Sample the NaOH	1	1	2	2
Package the NaOH for shipment	3	3	4	12
Load drums onto truck trailers	2	0	4	0
Support other manufacturing operations	42	0	4	0
Maintenance staff	8	2	4	8
Administrative personnel	25	0	1	0
Process engineers	10	3	1	3
			Total	53

By multiplying by the number of shifts per activity, the total number of exposed workers can be estimated.

Example #14 (cont'd)

What code should be entered for the number of workers?

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information*		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	X Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	100,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)	W4	
2.B.9	Maximum Concentration (code)		

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

W4. At least 50 but fewer than 100. 53 workers support manufacturing activities.

Example #14 (cont'd)

What code should be entered for the maximum concentration?

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information*		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	☒ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	100,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)	W4	
2.B.9	Maximum Concentration (code)	M5	

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

M5. Greater than 90% by weight. Since Company A manufactured solid NaOH at greater than 90% concentration, you should enter code M5, even though this only accounts for 6% of the production volume.

Example #14 (cont'd)

What physical forms and percent of production volume associated with each form should be reported?

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information*		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	☒ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	100,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)	W4	
2.B.9	Maximum Concentration (code)	M5	

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals	X		10	
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid	X		90	

10% Pellets or Large Crystals and 90% Liquid. 6,000,000 lbs (or 6%) of NaOH leave the site as crystals, and 94,000,000 lbs (or 94%) leave as a liquid solution. Round estimates to the nearest 10%.

Part III: Processing and Use Information

- Complete Part III for chemical substances manufactured in quantities of 300,000 pounds or more (40 CFR 710.52(c)(4))
- Report readily obtainable information about the industrial processing and use for each chemical substance:
  - Sites under your control
  - Sites that receive a reportable substance

Part III, Section I: Industrial Processing and Use

Report up to 10 **unique** combinations of the following codes: Process or use; NAICS; and IFC.

SECTION A. INDUSTRIAL PROCESSING AND USE DATA — N/A

	a. Type of Process or Use		b. (5-digit) NAICS Code		c. Industrial Function Category		d. Percent Production Volume		e. Number of Sites		f. Number of Workers	
	Code	CBI	Code	CBI	Code	CBI	Percent	CBI	Code	CBI	Code	CBI
3.A.1												
3.A.2												
3.A.3												
3.A.4												
3.A.5												
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

Part III, Section I: Industrial Processing and Use

If you have **less than** 10 combinations, leave the remaining lines blank.

If you have **more than** 10 combinations, report only the 10 unique combinations that cumulatively represent the largest percentage of production, by weight.

SECTION A. INDUSTRIAL PROCESSING AND USE DATA | N/A

	a. Type of Process or Use		b. (5-digit) NAICS Code		c. Industrial Function Category		d. Percent Production Volume		e. Number of Sites		f. Number of Workers	
	Code	CBI	Code	CBI	Code	CBI	Percent	CBI	Code	CBI	Code	CBI
3.A.1												
3.A.2												
3.A.3												
3.A.4												
3.A.5												
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

Process or Use Code

- Report the process or use code corresponding to the appropriate processing or use operation. These codes are also found in 40 CFR 710.52(c)(4)(i)(A) and Table 4-4 in the Instructions for Reporting.

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

NAICS Codes

- The North American Industry Classification System (NAICS) codes have superseded the 1987 Standard Industrial Classification (SIC) code system.
- Report the five-digit NAICS code corresponding to the site(s) that processes or uses the reportable chemical substance or that receives the reportable chemical substance.
- For definitions of NAICS codes and tables cross-referencing NAICS and SIC codes, see http://www.census.gov/epcd/www/naics.html.

IFC Code

- 33 Industrial Function Categories (IFC)
- Report the IFC code that corresponds to the function of the industrial process or use. The codes are listed in 40 CFR 710.52(c)(4)(i)(C) and Table 4-5 of the Instructions for Reporting. Descriptions of the codes are listed in Appendix E of the IUR Instructions for Reporting.

Part III, Section A – Industrial Processing and Use Data

SECTION A. INDUSTRIAL PROCESSING AND USE DATA — N/A

	a. Type of Process or Use		b. (5-digit) NAICS Code		c. Industrial Function Category		d. Percent Production Volume		e. Number of Sites		f. Number of Workers	
	Code	CBI	Code	CBI	Code	CBI	Percent	CBI	Code	CBI	Code	CBI
3.A.1												
3.A.2												
3.A.3												
3.A.4												
3.A.5												
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

- For each unique combination of Process or Use, NAICS, and IFC codes, report the following:
  - Percent of production volume associated with the use
  - Number of sites
  - Number of workers reasonably likely to be exposed

Percentage of Production Volume

- Round estimates to nearest 10% (40 CFR 710.52(c)(4)(i)(D)).
- If the amount is less than 5% of the production volume and the amount is less than 300,000 pounds, reporting is not required. If the amount is less than 5% and the amount exceeds 300,000 pounds, round to the nearest percent.
- The total percentage production volume may add up to more than 100% since you are reporting for sites under your control as well as downstream sites.

Number of Sites

- Report an estimate of the total number of sites. Use the codes listed in 40 CFR 710.52(c)(4)(i)(E) or Table 4-7 corresponding to the appropriate range.
- If a chemical substance is both manufactured and processed/used at a site, that site should be counted as both a manufacturing site in Part II and a processing or use site in Part III.

Number of Workers

- Report an estimate of the total number of workers reasonably likely to be exposed to the chemical substance including those at sites not under your control. Follow the same guidelines as in reporting the number of exposed workers during manufacturing (40 CFR 710.52(c)(3)(v)).

Example #15 - Part III, Section A: Industrial Processing and Use Data

What unique combinations of Process or Use, NAICS, and IFC codes should Company B report for xylene?

Company B manufactures 25,000,000 lbs of xylene

1,000,000 lbs sold to paint formulators for use as a solvent in architectural paints

PF: Processing - incorporation into a formulation
32551: Paint and Coating Manufacturing
U28: Solvents (which become part of the product formulation or mixture)

24,000,000 lbs sold to organic chemical manufacturers as a chemical intermediate

PC: Processing as a reactant
32519: Other Basic Organic Chemical Manufacturing
U16: Intermediates

Example #15 (cont'd)

SECTION A. INDUSTRIAL PROCESSING AND USE DATA — N/A

	a. Type of Process or Use		b. (5-digit) NAICS Code		c. Industrial Function Category		d. Percent Production Volume		e. Number of Sites		f. Number of Workers	
	Code	CBI	Code	CBI	Code	CBI	Percent	CBI	Code	CBI	Code	CBI
3.A.1	PC		32519		U16		100					
3.A.2	PE		32551		U28		4					
3.A.3												
3.A.4												
3.A.5												
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

What %PV should be entered for each use?

Chemical intermediate: 24,000,000 lbs ÷ 25,000,000 lbs = 96%

Paints: 1,000,000 lbs ÷ 25,000,000 lbs = 4%

Key Points:

- Round estimates to the nearest 10%
- You cannot round down to 0% if the PV associated with the use is greater than 300,000 lbs. Report to the nearest 1%
- The total %PV may add up to more than 100%

Example #15 (cont'd)

SECTION A. INDUSTRIAL PROCESSING AND USE DATA — N/A

	a. Type of Process or Use	CBI	b. (5-digit) NAICS Code	CBI	c. Industrial Function Category	CBI	d. Percent Production Volume	CBI	e. Number of Sites	CBI	f. Number of Workers	CBI
	Code		Code		Code		Percent		Code		Code	
3.A.1	PC		32519		U16		100		S2		W3	
3.A.2	PF		32551		U28		4		S1		W4	
3.A.3												
3.A.4												
3.A.5												
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

S2 – at least 10 but fewer than 25
S1 – fewer than 10

W3 – at least 25 but fewer than 50
W4 – at least 50 but fewer than 100

What codes should be reported for the number of sites and exposed workers for each use?

Company B sells xylene to 12 chemical manufacturing sites and estimates 4 workers are exposed per site.
(12 sites x 4 workers/site = 48 workers)

Company B sells xylene to 6 paint formulators and estimates 12 workers are exposed per site.
(6 sites x 12 workers/site = 72 workers)

Part III, Section B:Commercial and Consumer End Use

Commercial Use - Use of a chemical substance or mixture in a commercial enterprise providing saleable goods or a service (e.g., dry cleaning establishment, painting contractor).

Consumer Use - Use of a chemical substance that is directly, or as part of a mixture, sold to a consumer for their use in or around a permanent or temporary household or residence, in or around a school, or in or around recreational areas.

Part III, Section B:Commercial and Consumer End Use

SECTION B. COMMERCIAL AND CONSUMER USE DATA			N/A							
	a. Commercial and Consumer Product Category		b. Used in Product(s) Intended for Children		c. Percent Production Volume associated with each category		d. Maximum Concentration associated with each category			
	Code	CBI	Y/N/NRO	CBI	Percent	CBI	Code	CBI		
3.B.1										
3.B.2										
3.B.3										
3.B.4										
3.B.5										
3.B.6										
3.B.7										
3.B.8										
3.B.9										
3.B.10										

- Designate up to 10 commercial and consumer product categories that represent the predominant uses.
- Determine if the chemical is present in or on any consumer product intended for use by children.
- Report the percent production volume and maximum concentration associated with each use.

Commercial and Consumer Product Categories

- 20 commercial and consumer product categories
- Report the code that corresponds to the use. The codes are listed in 40 CFR 710.52(c)(4)(ii)(A) and Table 4-9 of the Instructions for Reporting. Descriptions of the codes are provided in Appendix E.
- If more than 10 codes apply, report only the codes that represent the largest percentage of production volume, measured by weight.

Intended for Use by Children

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. If you answer yes to any of the following questions, you should report 'Y' for children's use.

(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 for use by children age 14 or younger?

(3) Is the advertising, promotion, or marketing of the product aimed at children age 14 or younger?

Children's Use Examples

- Examples of products specifically intended for use by children:
  - Plastic parts for toys, car seats, or cribs
  - Art supplies such as crayons, water colors, and markers
  - Flame retardants intended for application to children's pajamas
- Examples of products not intended for use by children:
  - Interior paint – This product is not specifically intended for use by children even though it may be used to paint children's rooms.
  - Paper – This product is not specifically intended for use by children even though it may be used by children.

Example #15 (cont'd)- Part III, Section B: Commercial and Consumer End Use

Industrial Processing and Uses

Company B manufactures 25,000,000 lbs of xylene

1,000,000 lbs sold to paint formulators for use as a solvent in architectural paints

24,000,000 lbs sold to organic chemical manufacturers as a chemical intermediate

Commercial and Consumer Uses

Architectural paints containing <15% xylene

Xylene destroyed (no commercial and consumer uses)

C12: Paints and Coatings

Example #15 (cont'd)

SECTION B. COMMERCIAL AND CONSUMER USE DATA — N/A

	a. Commercial and Consumer Product Category		b. Used in Product(s) Intended for Children		c. Percent Production Volume associated with each category		d. Maximum Concentration associated with each category	
	Code	CBI	Y/N/NRO	CBI	Percent	CBI	Code	CBI
3.B.1	C12		N		4		M2	
3.B.2								
3.B.3								
3.B.4								
3.B.5								
3.B.6								
3.B.7								
3.B.8								
3.B.9								
3.B.10								

Is the architectural paint intended for use by children?

No. While children may be exposed to the paint, it is not intended to be used by children under the age of 14.

What Percent Production Volume and Maximum Concentration should be Reported?

1,000,000 lbs ÷ 25,000,000 lbs = 4%. Use rounding rules from Part II Section A, and round to 4%.

M2 – from 1% to 30% by weight. The maximum concentration of xylene in the paint is 15%.

Where does reporting end?

- Reporting ends when either:
  - The chemical is consumed to form another chemical substance.
  - The final processing and use of the chemical substance is reported.
- For the purposes of IUR reporting, the final consumer use for a fertilizer is land application described by C08, Lawn and Garden Products.
- Reporting of processing or use information ends once the chemical has been converted into a new chemical substance. However, you should evaluate your IUR reporting requirements for any new substances manufactured.

Example #16 – End of Reporting

I manufacture anhydrous ammonia and ship it to 5 agricultural supply wholesalers. They react the anhydrous ammonia with water to form ammonium hydroxide. The wholesalers then sell the ammonium hydroxide to farmers for use as a fertilizer. What should I report in Part III?

Answer: Anhydrous ammonia is an inorganic chemical substance. You do not need to complete Part III for this substance.

Imported and Exported Chemicals

Importer

- "Importer means any person who imports any chemical substance or any chemical substance as part of a mixture or article into the customs territory of the U.S. and includes:
  (1) The person primarily liable for the payment of any duties on the merchandise, or
  (2) An authorized agent acting on his/her behalf (as defined in 19 CFR 101.1)." (40 CFR 710.3)
- Chemical importers have the same reporting obligations as chemical manufacturers.

Imported Chemicals

- Report information for domestic sites only.
- Report for each chemical substance in a mixture, if it meets the reporting requirements.
- Do not report chemical substances that are imported as a part of an article. For example,
  - Coolants contained in refrigeration units
  - Chemicals contained in batteries
  - Chemicals contained in electronic devices
  - Plastic parts whose shape does not change (not including pellets)
  - Metal products whose shape is retained during use (not including ingots)

Import Using a Broker

- The party primarily liable for the payment of any duties is responsible for reporting.
  - If the broker plays an active role, ordering the chemical substance, arranging for shipment, directing delivery, paying import duties etc., then the broker controls the transaction and has primary responsibility for reporting.
  - If the broker merely puts you in touch with a supplier, and you make the individual orders, then you should report.
- If no one reports an imported chemical, the EPA can hold all parties involved in the transaction responsible for any violations. See 40 CFR 710.55(b).

Example #17 - Importer

My chemical company imports a chemical substance, pays the import duties, and ships the chemical directly to sites that sell the product for commercial and consumer use and does not handle the substance. Who is responsible for reporting this chemical to IUR?

Answer: The party primarily liable for the payment of any duties is responsible for reporting. In this case, your chemical company pays the duties; therefore, you should report to IUR.

Example #18 - Importer

I imported a chemical to two different sites within my company during the reporting year – 15,000 pounds to one site and 10,000 pounds to a second site. Do I need to report?

Answer:

- If you are primarily liable for the payment of any duties then you are subject to reporting. The aggregate amount imported is 25,000 pounds; therefore, you may be required to report.
- If each of the two sites imported the chemical independently of one another, then each site is subject to IUR regulations. For this example, both sites imported less than 25,000 pounds and therefore do not need to report.

Exporting a Chemical

- Report information for domestic sites only.
- If you manufacture a chemical solely for export (distribute it to a customer(s) outside the U.S. territory), you still need to complete a Form U if you meet the reporting requirements.
  - Complete Parts I & II (Chemical Identification and Manufacturing Information sections)
  - Check the "NA" box for both sections in Part III
- If you manufacture a chemical and distribute it to both domestic and foreign customer sites, you still need to complete a Form U if you meet the reporting requirements.
  - Complete Parts I & II for the entire PV
  - Complete Part III for domestic industrial and consumer uses.

Non-TSCA Uses

Non-TSCA Uses

- Non-TSCA uses are regulated by other federal acts, including:
  - Federal Food, Drug, and Cosmetic Act
  - Federal Insecticide, Fungicide, and Rodenticide Act
  - Atomic Energy Act

What are Non-TSCA Uses?

- Pesticide active ingredients
- Tobacco or any tobacco product
- Food and food additives
- Pharmaceutical drugs
- Cosmetic products
- Nuclear source, special nuclear, and nuclear by-product material

What are Non-TSCA Uses?

- Intermediates for chemicals used in certain non-TSCA uses (e.g. pesticides) are still reportable under IUR.
- Solvents, catalysts, and other chemicals used in the synthesis of certain non-TSCA use chemicals (e.g. pesticides) are still reportable under IUR.
- Inert ingredients in pesticides must still be reported; however, inert ingredients in pharmaceuticals, food additives, and cosmetics regulated by the Federal Food, Drug, and Cosmetic Act are exempt.

Example #19 - Non-TSCA Uses

- Company A manufactures 500,000 lbs of an intermediate for an active ingredient in commercial and consumer insecticide products.
- Company B manufactures 500,000 lbs of an active ingredient in commercial and consumer insecticide products.
- Company C manufactures 500,000 lbs of a solvent used in commercial and consumer insecticide products.

Which company manufactures a chemical for a non-TSCA use?

Company B - Only active ingredient in pesticides qualify as non-TSCA use chemicals.

Reporting a Chemical with a Non-TSCA Use

- If the chemical is only used for non-TSCA uses, you do not need to report under IUR.
- If the chemical is used for both TSCA and non-TSCA uses, complete Form U for the portion of the production volume that is associated with TSCA uses.

Example #20 - Non-TSCA Use

Company D manufactures 10,000,000 pounds of benzoic acid. Company XYZ uses 9,000,000 lbs of benzoic acid as a chemical intermediate and formulates 1,000,000 lbs of benzoic acid into mixtures and products for use as food preservatives. How should Company D complete Form U for benzoic acid?

Answer: Use as a food preservative is a non-TSCA use. Company D should complete Form U for the production volume used as a chemical intermediate (9,000,000 lbs).

Claiming Confidential Business Information (CBI)

Overview

- Claiming CBI for information submitted to EPA
- Additional requirements for claiming CBI for:
  - Chemical identity
  - Manufacturing plant site identity
- Example
- Discussion

To claim confidentiality on Form U:

- In general, information submitted to EPA is entitled to confidential treatment if:
  - An authorized official signs the certification statement and the submitter asserts a claim for confidentiality by marking the appropriate box on IUR Form U;
  - The submitter has taken reasonable measures to protect the confidentiality of the information;
  - The information is not reasonably ascertainable without the consent of the person submitting the information; and,
  - The disclosure of the information is likely to cause substantial harm to the competitive position of the submitter (40 CFR part 2).

To claim confidentiality on Form U:

- An authorized official must sign Part I, Section I.
- Must mark the appropriate boxes on Form U.
- Must file a written substantiation for:
  - Chemical Identity
  - Manufacturing Plant Site Identity
- Note: CBI should not be submitted by email.

Chemical Identity

- Must file a separate written substantiation, signed and dated by an authorized official, for each chemical substance.
- May only assert a confidentiality claim if EPA treats the identity as confidential in the TSCA Inventory.
- Address all questions in 40 CFR 710.58(b) and Table 5-2.
  - Harmful effects to competitive position
  - Length of time information must remain confidential
  - Patent and licensing status
  - Publication in technical journals or trade literature
  - Ability of others to analyze products or wastes

Manufacturing Plant Site Identity

- Check the CBI box next to Block 2.B.2.
- Submit a written substantiation, signed and dated by an authorized official, answering the questions in 40 CFR 710.58(c) and Table 5-3.
  - Has site information been linked with a chemical identity in any other reporting scheme (e.g. through an MSDS).
  - What harmful effect to your competitive advantage would result from the identity of the site and chemical substance?
- Upfront substantiation is not required for company information CBI claims (Block 2.B.1).

Company Identity versus Plant Site Identity

Checking this box asserts a confidentiality claim for the link between your company and the chemical substance.

Checking this box asserts a confidentiality claim for the link between your plant site and the chemical substance.

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)		
2.B.5	Activity (Check all that apply)	☐ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)		
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form		b. Percent of Production Volume in Each Physical Form	
		Check All That Apply	CBI	Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

Claiming CBI on Form U

SECTION A. CHEMICAL IDENTIFICATION			CBI†	X
2.A.1 Chemical Identifying Number	1310-73-2	2.A.2 ID Code	C	
2.A.3 Chemical Name	Sodium Hydroxide			

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		X
2.B.2	Site Information†		X
2.B.3	Technical Contact Information		X
2.B.4	Site Limited (Y/N)	N	X
2.B.5	Activity (Check all that apply)	X Manufacture ☐ Import	X
2.B.6	Manufactured Production Volume (LB)	100,000,000	X
2.B.7	Imported Production Volume (LB)		X
2.B.8	Number of Workers (code)	W4	X
2.B.9	Maximum Concentration (code)	M5	X

		a. Physical Form: Check All That Apply	a. CBI	b. Percent of Production Volume in Each Physical Form: Percent	b. CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals	X	X	10	X
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid	X	X	90	X

Claiming CBI on Form U

SECTION A. INDUSTRIAL PROCESSING AND USE DATA — N/A

	a. Type of Process or Use		b. (5-digit) NAICS Code		c. Industrial Function Category		d. Percent Production Volume		e. Number of Sites		f. Number of Workers	
	Code	CBI	Code	CBI	Code	CBI	Percent	CBI	Code	CBI	Code	CBI
3.A.1	PC	X	32519	X	U16	X	100	X	S2	X	W3	X
3.A.2	PF	X	32551	X	U28	X	4	X	S1	X	W4	X
3.A.3												
3.A.4												
3.A.5												
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

SECTION B. COMMERCIAL AND CONSUMER USE DATA — N/A

	a. Commercial and Consumer Product Category		b. Used in Product(s) Intended for Children		c. Percent Production Volume associated with each category		d. Maximum Concentration associated with each category	
	Code	CBI	Y/N/NRO	CBI	Percent	CBI	Code	CBI
3.B.1	C12	X	N	X	4	X	M2	X
3.B.2								
3.B.3								
3.B.4								
3.B.5								
3.B.6								
3.B.7								
3.B.8								
3.B.9								
3.B.10								

Sending CBI to EPA

- Send any CBI in a double-wrapped package.
- Label the inner package with the recipient's name and 'Confidential Business Information'.
- Label the outer wrapper with the name and address of the recipient and your return address. Do not place anything on the outer wrapper that would indicate that the package contains CBI.
- Send the package by certified or registered mail, return receipt requested, or by courier service or U.S. Postal Service Express Mail.
- Reports containing CBI completed using the eIUR client tool may also be submitted electronically using the Central Data Exchange (CDX).

Case Study 1 – Ammonium Phosphate Production

Mining Operation: PQR, a subsidiary of KLM, surfaces mines 4 billion lbs of phosphate rock containing 25% net phosphate.

Beneficiation Plant: Phosphate rock is crushed, washed, and deslimed. Ore is ground into approximately 2.9 billion lbs of phosphate slurry using a ball mill. The slurry contains 35% net phosphate.

Sulfuric Acid Plant: At a nearby plant also owned by KLM, sulfur dioxide emitted as a waste product from copper smelting is converted to sulfur trioxide, and then to 2.1 billion lbs of 98% sulfuric acid. Neither sulfur dioxide nor sulfur trioxide are isolated or stored.

Phosphoric Acid Plant

Case Study 1 – Ammonium Phosphate Production

Beneficiation Plant

Sulfuric Acid Plant

Phosphoric Acid Plant: The phosphate slurry is combined with sulfuric acid to produce 1.65 billion lbs of 78% phosphoric acid. During this reaction, 2.7 billion pounds of gypsum crystals (>99% anhydrous $CaSO_4$) are formed as a byproduct and sold to a wallboard manufacturer.

Ammonia Plant: Hydrogen (extracted from natural gas) and nitrogen (extracted from air) are reacted to produce of ammonia immediately after extraction. PQR produces 235 million lbs of ammonia.

Granulation Plant: Phosphoric acid is reacted with ammonia to form a liquid slurry. The slurry is granulized and dried to produce 1.5 billion pounds of fertilizer containing 98% ammonium phosphate and 2% diammonium phosphate.

Sold to Customers

Which chemical substances need to be reported?

- Phosphate rock ore?

Answer: Phosphate rock ore does not have to be reported under IUR. The phosphate rock is mined and therefore meets the definition of naturally occurring chemical substance (40 CFR 710.46(a)(3)).

Which chemical substances need to be reported?

- Phosphate rock following beneficiation?

  Answer: The phosphate ore is ground, filtered, and stored. Since the ore is processed only by manual, mechanical, or gravitational means, the resulting slurry meets the definition of naturally occurring chemical substance and is not reportable under IUR (40 CFR 710.46(a)(3)).

Which chemical substances need to be reported?

- Sulfur dioxide?

Answer: Even though sulfur dioxide is a waste product from the copper smelting operation, it is not exempted from IUR requirements because it has a commercial purpose. However, it is a non-isolated intermediate and therefore does not need to be reported (40 CFR 710.50(c) and 710.43).

Which chemical substances need to be reported?

- Sulfur trioxide?

Answer: The sulfur trioxide is a non-isolated intermediate and therefore does not need to be reported (40 CFR 710.50(c) and 710.43).

Which chemical substances need to be reported?

- Sulfuric acid?

Answer: Sulfuric acid is manufactured by KLM Mining. KLM should report the sulfuric acid production under IUR at their copper mining and smelting site.

Which chemical substances need to be reported?

- Phosphoric acid?

Answer: Phosphoric acid is manufactured by PQR Fertilizers from the reaction of the phosphate slurry with sulfuric acid; therefore, PQR should report the manufacture of phosphoric acid.

Which chemical substances need to be reported?

- Gypsum?

  Answer: Gypsum is formed as a byproduct during the manufacture of phosphoric acid. However, PQR sells the gypsum to a facility that manufacturers wallboard. Byproducts used for a commercial purpose need to be reported under IUR.

Which chemical substances need to be reported?

- Hydrogen?

Answer: Hydrogen is extracted from natural gas in a closed-loop reactor and then reacted to form ammonia. Hydrogen is a non-isolated intermediate and therefore does not need to be reported.

Which chemical substances need to be reported?

- Nitrogen?

  Answer: Substances, such as nitrogen, which are extracted from air are included in the IUR category of naturally-occurring chemical substances for which information need not be reported under the IUR Rule (710.46(a)(3)).

Which chemical substances need to be reported?

- Ammonia?

  Answer: PQR manufactures 215 million pounds of ammonia through the reaction of hydrogen and nitrogen; therefore, ammonia should be reported by PQR.

Which chemical substances need to be reported?

- Ammonium phosphate?

  Answer: PQR manufactures 1.47 billion pounds of ammonium phosphate. PQR should complete Form U for ammonium phosphate.

Which chemical substances need to be reported?

- Diammonium phosphate?

Answer: Diammonium phosphate is not manufactured for distribution in commerce per se and has no commercial purpose separate from the mixture with ammonium phosphate of which it is a part; therefore, it does not need to be reported under the IUR Rule.

Case Study 1 – Part I

The following is an example of how PQR should report for ammonium phosphate.

CERTIFICATION

Certification Statement: I hereby certify to the best of my knowledge and belief that Parts I and II have been completed in compliance with the requirements of 40 CFR 710.52(c)(1), (2), and (3); Part III of this form has been completed in compliance with the requirements of 40 CFR 710.52(c)(4); and the confidentiality statements at the end of this form are true and correct as to that information for which a confidentiality claim has been asserted.			
Signature		Date signed	4/5/06
Name (printed)	John Smith	Official Title	Plant Manager

SECTION A. COMPANY INFORMATION*	
1.A.1 Company Name	KLM Mining Company
1.A.2 Company Dun & Bradstreet Number	153426785

Case Study 1 – Part I, Section B

SECTION B. SITE INFORMATION*			
1.B.1 Site Name	**PQR Fertilizers, Inc.**		
1.B.2 Site Dun & Bradstreet Number	**598316473**	EPA Facility Identification Number	FOR EPA USE ONLY LEAVE BLANK
1.B.3 Street Address (Line 1)	**321 Tombstone Road**		
1.B.4 Street Address (Line 2)			
1.B.5 City	**Sierra Vista**	1.B.6 County / Parish	**Chochise**
1.B.7 State	**Arizona**	1.B.8 Zip Code	**85635**

Case Study 1 – Part I, Section C

SECTION C. TECHNICAL CONTACT INFORMATION*					
1.C.1 Name	Tom Jones			1.C.2 Telephone	520-555-1400
1.C.3 Email Address	JonesT@KLM.com				
1.C.4 Mailing Address (Line 1)	321 Tombstone Road				
1.C.5 Mailing Address (Line 2)					
1.C.6 City	Sierra Vista	1.C.7 State	AZ	1.C.8 Zip Code	85635

Note that PQR could complete one copy of Part I, and then Parts II and III for each chemical.

Case Study 1 – Part II, Section A

SECTION A. CHEMICAL IDENTIFICATION			CBI†	
2.A.1 Chemical Identifying Number	7722-76-1	2.A.2 ID Code		C
2.A.3 Chemical Name	Ammonium phosphate, monobasic			

2.A.1 - CAS Registry Number for ammonium phosphate.

2.A.2 - 'C' should be entered in this block because a CAS Registry Number was entered in Block 2.A.1.

2.A.3 - Chemical abstracts/preferred name for ammonium phosphate.

Case Study 1 – Part II, Section B

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	☒ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	1,470,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form: Check All That Apply	a. Physical Form: CBI	b. Percent of Production Volume in Each Physical Form: Percent	b. Percent of Production Volume in Each Physical Form: CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

2.B.4 - Ammonium phosphate is sold to customers and transferred off-site.

2.B.5 - Ammonium phosphate is manufactured domestically and not imported.

2.B.6 - 1.5 billion lbs of fertilizer x 98% concentration of ammonium phosphate = 1.47 billion lbs

Case Study 1 – Part II, Section B

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	X Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	1,470,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)	W3	
2.B.9	Maximum Concentration (code)	M5	

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals	X		100	
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

2.B.8 - While PQR employs 250 people, only 40 work in the granulation plant and are potentially exposed to ammonium phosphate. W3 – At least 25 but fewer than 50

2.B.9 - Ammonium phosphate is shipped off site at over 98% concentration. M5 – Greater than 90% by weight

2.B.11 - Ammonium phosphate is shipped off-site only in solid pellet form.

Case Study 1– Part III

What information should be completed for Part III?

Ammonium Phosphate is an inorganic compound and is exempt from Part III reporting for 2006. Check the 'N/A' boxes for Part III.

SECTION A. INDUSTRIAL PROCESSING AND USE DATA — N/A: X

	a. Type of Process or Use		b. (5-digit) NAICS Code		c. Industrial Function Category		d. Percent Production Volume		e. Number of Sites		f. Number of Workers	
	Code	CBI	Code	CBI	Code	CBI	Percent	CBI	Code	CBI	Code	CBI
3.A.1												
3.A.2												
3.A.3												
3.A.4												
3.A.5												
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

SECTION B. COMMERCIAL AND CONSUMER USE DATA — N/A: X

	a. Commercial and Consumer Product Category		b. Used in Product(s) Intended for Children		c. Percent Production Volume associated with each category		d. Maximum Concentration associated with each category	
	Code	CBI	Y/N/NRO	CBI	Percent	CBI	Code	CBI
3.B.1								
3.B.2								
3.B.3								
3.B.4								
3.B.5								
3.B.6								
3.B.7								
3.B.8								
3.B.9								
3.B.10								

Case Study 2 – MEK

Manufacturing

AAA Chemicals, Inc. manufactures 70,000,000 lbs of Methyl Ethyl Keytone (MEK) at >99% conc.

Industrial Processing and Use

30,000,000 lbs used on-site as a chemical reactant

Chemical reacted

40,000,000 lbs shipped off-site

next page

Case Study 2 – MEK

Industrial Processing and Use

40,000,000 lbs of >99% conc. MEK shipped off-site

10,000,000 lbs shipped to 20 formulators of commercial and consumer spray paints

30,000,000 lbs used as a chemical reactant at 7 other sites

Chemical reacted

Commercial and Consumer Use

10,000,000 lbs used as a component in commercial and consumer spray paints at concentrations less than 10%.

Case Study 2 – Worksheet #2 Form U, Part II, Section A

SECTION A. CHEMICAL IDENTIFICATION			CBI†	
2.A.1 Chemical Identifying Number	78-93-3	2.A.2 ID Code		C
2.A.3 Chemical Name	2-butanone			

2.A.1 - CAS Registry Number for MEK.

2.A.2 - 'C' should be entered in this block because a CAS Registry Number was entered in Block 2.A.1.

2.A.3 - Chemical abstracts index preferred name for MEK.

Case Study 2 – Worksheet #2 Form U, Part II, Section B

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	☒ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	70,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)		
2.B.9	Maximum Concentration (code)		

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

2.B.4 - MEK is transferred off site and is not site limited.

2.B.5 - MEK is manufactured domestically and not imported.

2.B.6 - AAA manufactures 70,000,000 lbs of MEK.

Case Study 2 – Worksheet #1

Number of Workers Potentially Exposed During Manufacturing

Activity	Total Workers	Exposed Workers per Shift	Number of Shifts	Exposed Workers
Operate and monitor equipment	4	4	4	16
Maintenance and equipment cleaning	2	2	4	8
Operate production equipment using MEK as a reactant for other chemicals	6	0	4	0
Load MEK into drums, tank trucks, and rail cars	2	2	1	2
Engineering staff	>4	4	1	4
Administrative personnel	30	0	1	0
		Total		30

Case Study 2 – Worksheet #2 Form U, Part II, Section B

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information*		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	☒ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	70,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)	W3	
2.B.9	Maximum Concentration (code)	M5	

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid				

2.B.8 - As calculated in Worksheet #1, 30 workers are exposed during manufacturing activities.
W3 – At least 25 but fewer than 50

2.B.9 - MEK is shipped off site at over 99% concentration.
M5 – Greater than 90% by weight

Case Study 2 – Worksheet #2 Form U, Part II, Section B

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information*		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	X Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	70,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)	W3	
2.B.9	Maximum Concentration (code)	M5	

		a. Physical Form: Check All That Apply	CBI	b. Percent of Production Volume in Each Physical Form: Percent	CBI
2.B.10	Dry Powder				
2.B.11	Pellets or Large Crystals				
2.B.12	Water or Solvent Wet Solid				
2.B.13	Other Solid				
2.B.14	Gas or Vapor				
2.B.15	Liquid	X		100	

2.B.15 - MEK is produced only in liquid form.

Case Study 2 – Worksheet #3

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	# of Sites	# of Workers
Organic Chemical Production On-Site	30,000,000	PC	32519	U16	1	0
Organic Chemical Production Off-Site						
Formulation of Spray Paints						

Intermediate for the Production of Other Chemical Substances On Site

PC – Processing as a reactant

32519 – Other Basic Organic Chemical Manufacturing

U16 – Intermediates

The transfer of MEK to this process is enclosed. AAA estimates no workers are exposed to MEK, although workers may be exposed to the reaction products.

Case Study 2 – Worksheet #3

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	# of Sites	# of Workers
Organic Chemical Production On-Site	30,000,000	PC	32519	U16	1	0
Organic Chemical Production Off-Site	30,000,000	PC	32519	U16	7	112
Formulation of Spray Paints						

Intermediate for the Production of Other Chemical Substances Off Site

PC – Processing as a reactant

32519 – Other Basic Organic Chemical Manufacturing

U16 – Intermediates

7 sites x 4 workers/site-shift x 4 shifts = 112 workers

Case Study 2 – Worksheet #3

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	# of Sites	# of Workers
Organic Chemical Production On-Site	30,000,000	PC	32519	U16	1	0
Organic Chemical Production Off-Site	30,000,000	PC	32519	U16	7	112
Formulation of Spray Paints	10,000,000	PF	32551	U28	20	300

Formulation of Spray Paints

PF – Processing – incorporation into formulation, mixture or reaction product

32551 –Paint and Coating Manufacturing

U28 – Solvents (which become part of product formulation or mixture)

AAA knows that 15 workers/site are exposed at two of the formulation sites. Using best professional judgment, they estimate that 15 workers are exposed at each of the 20 sites. 20 sites x 15 workers/site = 300 workers

Case Study 2 – Worksheet #3

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	# of Sites	# of Workers
Organic Chemical Production On-Site	30,000,000	PC	32519	U16	1	0
Organic Chemical Production Off-Site	30,000,000	PC	32519	U16	7	112
Formulation of Spray Paints	10,000,000	PF	32551	U28	20	300

Case Study 2 – Worksheet #3

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	# of Sites	# of Workers
Organic Chemical Production On-Site	30,000,000	PC	32519	U16	1	0
Organic Chemical Production Off-Site	30,000,000	PC	32519	U16	7	112
Formulation of Spray Paints	10,000,000	PF	32551	U28	20	300

Notice that these two uses have identical combinations of Process or Use, NAICS, and IFC codes; therefore, the production volume, number of sites, and number of workers should be aggregated before entry onto Form U.

Case Study 2 – Worksheet #4

Data Aggregation for Proc/Use Code PC, NAICS 32519, and IFC U16 (Chemical Intermediate)

Process or Use Description	Amount, lbs	Sites		Exposed Workers	
		#	Code	#	Code
Organic Chemical Production On-Site	30,000,000	1		0	
Organic Chemical Production Off-Site	30,000,000	7		112	
Total	60,000,000	8	S1	112	W5

Enter the aggregated data as one use, using one line on Form U.

Case Study 2 – Worksheet #5 Form U, Part III, Section A

SECTION A. INDUSTRIAL PROCESSING AND USE DATA — N/A

	a. Type of Process or Use		b. (5-digit) NAICS Code		c. Industrial Function Category		d. Percent Production Volume		e. Number of Sites		f. Number of Workers	
	Code	CBI	Code	CBI	Code	CBI	Percent	CBI	Code	CBI	Code	CBI
3.A.1	PC		32519		U16		90		S1		W5	
3.A.2												
3.A.3												
3.A.4												
3.A.5												
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

Aggregated Information for Proc/Use Code PC, NAICS 32519, and IFC U16 (Chemical Intermediate) from Worksheet #4

Process or Use Description	Amount, lbs	# of Sites Code	# of Workers Code
Total Used as an Intermediate	60,000,000	S1	W5

60,000,000 lbs / 70,000,000 total lbs = 85.7%, Round to 90%

Separate rows should not be used for on-site and off-site use of MEK as a chemical intermediate. Instead the aggregated total should be entered on one row of Form U.

Case Study 2 – Worksheet #5 Form U, Part III, Section A

SECTION A. INDUSTRIAL PROCESSING AND USE DATA — N/A

	a. Type of Process or Use		b. (5-digit) NAICS Code		c. Industrial Function Category		d. Percent Production Volume		e. Number of Sites		f. Number of Workers	
	Code	CBI	Code	CBI	Code	CBI	Percent	CBI	Code	CBI	Code	CBI
3.A.1	PC		32519		U16		90		S1		W5	
3.A.2	PF		32551		U28		10		S2		W5	
3.A.3												
3.A.4												
3.A.5												
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

Information from Worksheet #3

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	# of Sites	# of Workers
Formulation of Spray Paints	10,000,000	PF	32551	U28	20	300

10,000,000 lbs / 70,000,000 total lbs = 14.3%, Round to 10%

S2 – At least 10 but fewer than 25 sites

W5 – At least 100 but fewer than 500

Case Study 2 – Worksheet #6 Form U, Part III, Section B

End Use	Amount, pounds	Comm. & Cons. Product Category Code	Used in Children's Products (Y, N, NRO)	Maximum Concentration

SECTION B. COMMERCIAL AND CONSUMER USE DATA — N/A

	a. Commercial and Consumer Product Category		b. Used in Product(s) Intended for Children		c. Percent Production Volume associated with each category		d. Maximum Concentration associated with each category	
	Code	CBI	Y/N/NRO	CBI	Percent	CBI	Code	CBI
3.B.1								
3.B.2								
3.B.3								
3.B.4								
3.B.5								
3.B.6								
3.B.7								
3.B.8								
3.B.9								
3.B.10								

Case Study 2 – Worksheet #6 Form U, Part III, Section B

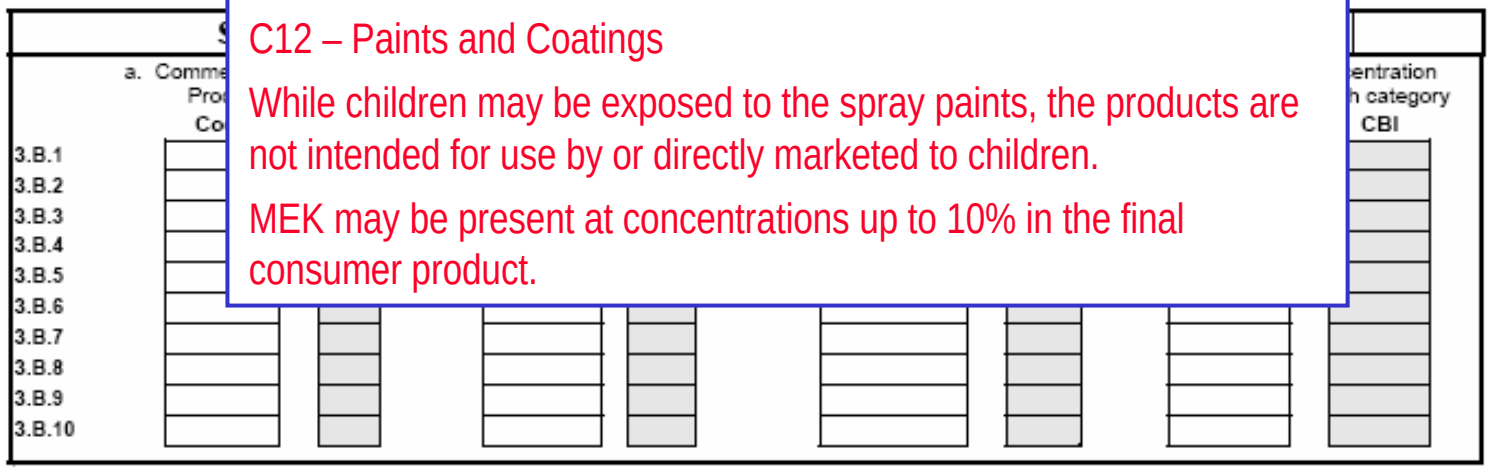
End Use	Amount, pounds	Comm. & Cons. Product Category Code	Used in Children's Products (Y, N, NRO)	Maximum Concentration
Spray Paints	10,000,000	C12	N	10%

Spray Paints

C12 – Paints and Coatings

While children may be exposed to the spray paints, the products are not intended for use by or directly marketed to children.

MEK may be present at concentrations up to 10% in the final consumer product.



Case Study 2 – Worksheet #6 Form U, Part III, Section B

End Use	Amount, pounds	Comm. & Cons. Product Category Code	Used in Children's Products (Y, N, NRO)	Maximum Concentration
Spray Paints	10,000,000	C12	N	10%

SECTION B. COMMERCIAL AND CONSUMER USE DATA — N/A

	a. Commercial and Consumer Product Category		b. Used in Product(s) Intended for Children		c. Percent Production Volume associated with each category		d. Maximum Concentration associated with each category	
	Code	CBI	Y/N/NRO	CBI	Percent	CBI	Code	CBI
3.B.1	C12		N		10		M2	
3.B.2								
3.B.3								
3.B.4								
3.B.5								
3.B.6								
3.B.7								
3.B.8								
3.B.9								
3.B.10								

Spray Paints

10,000,000 lbs / 70,000,000 total lbs = 14.3%, Round to 10%

M2 – From 1% to 30% by weight

Case Study 2 – Worksheet #6 Form U, Part III, Section B

SECTION B. COMMERCIAL AND CONSUMER USE DATA							N/A	
	a. Commercial and Consumer Product Category		b. Used in Product(s) Intended for Children		c. Percent Production Volume associated with each category		d. Maximum Concentration associated with each category	
	Code	CBI	Y/N/NRO	CBI	Percent	CBI	Code	CBI
3.B.1	C12		N		10		M2	
3.B.2								
3.B.3								
3.B.4								
3.B.5								
3.B.6								
3.B.7								
3.B.8								
3.B.9								
3.B.10								

Case Study 2 – MEK

Industrial Processing and Use

40,000,000 lbs of >99% conc. MEK shipped off-site

10,000,000 lbs shipped to 20 formulators of commercial and consumer spray paints.

30,000,000 lbs used as a chemical reactant at 7 other sites

MEK reacted

How do the facilities receiving MEK report?

Case Study 2 – MEK

30,000,000 lbs used as a chemical reactant at 7 other sites

↓

MEK reacted

These facilities are not manufacturing or importing MEK; therefore, they do not need to complete Form U for MEK. However, these facilities should evaluate the IUR reporting requirements for the other chemical substances formed using MEK.

Case Study 2 – MEK

10,000,000 lbs shipped to 20 formulators of commercial and consumer spray paints

These facilities are only mixing MEK into spray paints and therefore do not need to complete Form U for MEK. The use of MEK in spray paints is captured in the downstream information reported by AAA Chemicals, the MEK manufacturer.

Case Study 2 – Summary

- Aggregate identical combinations of Process or Use, NAICS, and IFC codes.
- Once a chemical has been reacted, the downstream uses are not reported.
- Workers wearing personal protective equipment should still be reported.

Submitting Form U

Submission Period: August 25 - December 23, 2006

Submitting via Mail

- Submit your completed written form in hardcopy or on electronic media and/or an electronic (encrypted XML) file certified by an authorized official, along with any CBI substantiation letters, to EPA at the following address (40 CFR 710.59(d)):

OPPT IUR Submission Coordinator
Mail Code 7407M
ATTN: Inventory Update Reporting
Office of Pollution Prevention and Toxics
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460.

- Follow standard procedures when submitting CBI.

Submitting via eIUR Client Tool

- Download eIUR Client Tool.
- Use the tool to insert information on Form U.
- The eIUR client tool will encrypt your file once your submission is validated.
- You may submit eIUR information using two mechanisms:
  - Save an encrypted XML file from the eIUR tool and send on electronic media along with a signed copy of the certification statement to EPA via mail.
  - Use the CDX link incorporated in the client tool to submit an encrypted XML file directly to EPA using your CDX login.

Submitting via CDX

- You must first register online at http://cdx.epa.gov/epa_home.asp.
- Complete and print the registration form from the site.
- The person authorized to submit IUR information must sign the form; by signing the form, you agree to the terms and conditions for reporting through CDX. You must also submit a form signed by a witnessing official authorizing you to submit documents on behalf of your facility.
- Send the signed form to

OPPT IUR Submission Coordinator
Mail Code 7407M
ATTN: Inventory Update Reporting
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460.

Submitting via CDX

- EPA will activate your username and password and notify you by email that you will be able to submit information through CDX.
- You can submit encrypted XML files over the internet using your CDX login.

EPA encourages electronic reporting of IUR information (i.e. mailing the encrypted file on disk to EPA or uploading the file through CDX).

Am I already registered if I use CDX to file TRI reports?

- No. You must register specifically for the eIUR program before you can submit IUR reports through CDX.

Do I have to register and send in a sponsor letter for each report I submit through CDX?

- Once you have registered for the eIUR program, you are registered to submit all IUR reports as authorized by your organization for 2006.
- If you are submitting reports for programs other than IUR, you must register for those programs separately.

How will I know that EPA received my electronically submitted IUR report?

- You can check the status of your submission through the CDX website.
- After you submit, the CDX system will provide a transaction identifier.
- After your file is processed and your signature validated, you will receive a confirmation message that will be sent to your registered email address and in your CDX inbox.
- You can download the encrypted file from your CDX inbox.

How will my confidential business information be protected?

- The IUR Reporting Tool encrypts IUR submissions using a Federal Information Processing Standards (FIPS) compliant encryption module.
- The file remains encrypted during transmission to CDX, while stored and archived in CDX, and during transmission from CDX to EPA's operation data repository.
- The file can only be decrypted when it has reached its final destination.
- EPA is the only party that can convert the encrypted text back into readable text.

How do I know that what I submitted electronically to EPA has not been altered?

- You may obtain a readable copy of the file stored in EPA's operational data repository by submitting a request, with your transaction identifier, to:

  OPPT IUR Submission Coordinator
  Mail Code 7407M
  1200 Pennsylvania Avenue, N.W.
  Washington, DC 20460-0001.

- A paper copy of your submission will be mailed to the mailing address included on the registration form.
- If you find any discrepancies between the paper copy and the PDF copy, notify the IUR Submission Coordinator immediately at the above address.

Electronic Reporting Using eIUR Software

eIUR Features

- Platform independent – Java based program runs with any operating system.
- “Validate” feature checks for submission errors.
- “Add Chemical” feature allows an unlimited number of chemicals associated with one site to be submitted.
- “Clone Chemical” feature duplicates relevant chemical information for similar chemicals.
- Links to the Central Data Exchange (CDX) for direct submission of Form U using CDX ID and password.
- Automatically creates the required fields for each submission.
- Automatically generates an encrypted version of the file that can be sent electronically.

eIUR Client Tool Demonstration

Case Study 3 – Flow Diagram

Manufacturing

Company G manufactures a total of 20,000,000 lbs xylene at 99% max. conc.

Industrial Processing and Use

6,000,000 lbs shipped directly to 3 customers at 99% for use as a chemical reactant

Xylene reacted to form a different chemical

14,000,000 lbs shipped to 15 customers for formulation into products at 0.5 – 95% conc.

Case Study 3 – Flow Diagram

Industrial Processing and Use

14,000,000 lbs shipped to 15 customers for formulation into products at 0.5 – 95% conc.

6,000,000 lbs sold to 150 to 200 hardware manufacturers at 95% concentration for use as a metal degreaser

5,000,000 lbs formulated into automotive care products at 35% maximum concentration

800,000 lbs formulated into paint at 15% concentration at an unknown number of sites

2,000,000 lbs blended into pesticide formulations at 10% concentration

200,000 lbs formulated as a component of consumer products at 95% maximum concentration

Case Study 3 – Flow Diagram

Industrial Processing and Use

5,000,000 lbs formulated into automotive care products at 35% maximum concentration

2,000,000 lbs blended into pesticide formulations at 10% concentration

Commercial and Consumer Use

Automotive care products used by consumers and commercial users at 35% concentration or less

Pesticide sold for commercial and consumer applications

Case Study 3 – Flow Diagram

Industrial Processing and Use

800,000 lbs formulated into paint at 15% concentration

200,000 lbs formulated into as a component of consumer products at 95% maximum concentration

Commercial and Consumer Use

Paint sold for commercial and consumer applications

Used by consumers for various uses (e.g., rubber cement, adhesives, solvents)

Case Study 3 – Worksheet #1

Number of Workers Potentially Exposed During Manufacturing

Activity	Total Workers	Exposed Workers per Shift	Number of Shifts	Exposed Workers
Operating and monitoring equipment	8	8	4	32
Maintenance and equipment cleaning	2	2	4	8
Analyze samples (lab technicians)	2	2	1	2
Drumming operations	4	4	4	16
Transferring xylene to bulk storage	2	2	4	8
Loading tank trucks and rail cars from bulk storage	6	6	1	6
Engineering staff	>4	4	1	4
Administrative personnel	20	0	1	0
		Total		76

Case Study 3 – Worksheet #2

Manufacturing Information

Block	Block Title	Entry
2.A.1	Chemical ID Number	1330-20-7
2.A.2	ID Code	C
2.A.3	Chemical Name	Benzene, dimethyl-
2.B.3	Site limited (Y/N)	N
2.B.4	Activity (M, I, or both)	Manufacture
2.B.5	Production Volume (lbs)	20,000,000
2.B.7	Number of Workers and Number of Workers Code	76 workers W4
2.B.8	Maximum Concentration and Maximum Concentration Code	99% M5
2.B.9 - 2.B.14	Physical Form and Percent of PV	Liquid 100%

Case Study 3 – Form U

SECTION A. CHEMICAL IDENTIFICATION		CBI†	
2.A.1 Chemical Identifying Number	1330-20-7	2.A.2 ID Code	C
2.A.3 Chemical Name	Benzene, dimethyl-		

SECTION B. MANUFACTURING INFORMATION

			CBI
2.B.1	Company Information		
2.B.2	Site Information†		
2.B.3	Technical Contact Information		
2.B.4	Site Limited (Y/N)	N	
2.B.5	Activity (Check all that apply)	☒ Manufacture ☐ Import	
2.B.6	Manufactured Production Volume (LB)	20,000,000	
2.B.7	Imported Production Volume (LB)		
2.B.8	Number of Workers (code)	W4	
2.B.9	Maximum Concentration (code)	M5	

	a. Physical Form		b. Percent of Production Volume in Each Physical Form	
	Check All That Apply	CBI	Percent	CBI
2.B.10 Dry Powder				
2.B.11 Pellets or Large Crystals				
2.B.12 Water or Solvent Wet Solid				
2.B.13 Other Solid				
2.B.14 Gas or Vapor				
2.B.15 Liquid	X		100	

Case Study 3 – Worksheet #3

Industrial Processing and Use Information

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	%PV	Sites		Exposed Workers	
						#	Code	#	Code
Chemical reactant	6,000,000	PC	32519	U16	30%	3	S1	24	W2

Chemical Reactant
PC – Processing as a reactant
32519 – Other Basic Organic Chemical Manufacturing
U16 – Intermediate
6,000,000 lbs / 20,000,000 lbs = 30%
3 sites x 8 workers/site = 24 workers

Case Study 3 – Worksheet #3

Industrial Processing and Use Information

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	%PV	Sites		Exposed Workers	
						#	Code	#	Code
Chemical reactant	6,000,000	PC	32519	U16	30%	3	S1	24	W2
Metal degreaser	6,000,000	U	33251	U27	30%	150 - 200	S4	1,500-4,000	W7

Metal Degreaser
U – Use nonincorporative activities
33251 – Hardware manufacturing
U27 – Solvents (for cleaning or degreasing)
6,000,000 lbs / 20,000,000 lbs = 30%
150- 200 sites x 10-20 workers/site = 1,500 - 4,000 workers

Case Study 3 – Worksheet #3

Industrial Processing and Use Information

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	%PV	Sites		Exposed Workers	
						#	Code	#	Code
Chemical reactant	6,000,000	PC	32519	U16	30%	3	S1	24	W2
Metal degreaser	6,000,000	U	33251	U27	30%	150 - 200	S4	1,500-4,000	W7
Formulated into automotive care products	5,000,000	PF	32561	U28	30%	15	S2	150	W5

Formulated into automotive care products
PF – Processing – incorporation into formulation, mixture, or reaction product
32561 – Soap and Cleaning Compound Manufacturing (which includes Automotive Polishes and Cleaners Manufacturing)
U28 – Solvents (which become part of product formulation or mixture)
5,000,000 lbs / 20,000,000 lbs = 25%; Round to 30%
15 sites x 10 workers/site = 150 workers

Case Study 3 – Worksheet #3

Industrial Processing and Use Information

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	%PV	Sites		Exposed Workers	
						#	Code	#	Code
Chemical reac									
Meta									
Forr auto products									
Blended into pesticides	2,000,000	PF	32532	U04	10%	15	S2	150	W5

Blended into pesticides
PF – Processing – incorporation into formulation, mixture, or reaction product
32532 –Pesticide and other agricultural chemical manufacturing
U04 – Agricultural chemicals
2,000,000 lbs / 20,000,000 lbs = 10%
15 sites x 10 workers/site = 150 workers

Case Study 3 – Worksheet #3

Industrial Processing and Use Information

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	%PV	Sites		Exposed Workers	
						#	Code	#	Code
Chemical reactant	6,000,000	PC	32519	U16	30%	3	S1	24	W2
Meta									
Form auto prod									
Blen pesticides	2,000,000	PF	32532	U04	10%	15	S2	150	W5
Formulated into paints	800,000	PF	32551	U28	4%	15	S2	150	W5

Formulated into paints
PF – Processing – incorporation into formulation, mixture, or reaction product
32551 – Paint and coating manufacturing
U28 – Solvents (which become part of product formulation or mixture)
800,000 lbs / 20,000,000 lbs = 4%; cannot round to 0% because the PV associated with this use is greater than 300,000 lbs.
15 sites x 10 workers/site = 150 workers

Case Study 3 – Worksheet #3

Industrial Processing and Use Information

Process or Use Description	Amount, pounds	Proc / Use Code	NAICS Code	IFC Code	%PV	Sites		Exposed Workers	
						#	Code	#	Code
Chemical reactant	6,000,000	PC	32519	U16	30%	3	S1	24	W2
Metal degreaser	6,000,000	U	33251	U27	30%	150 - 200	S4	1,500-4,000	W7
Formulated into automotive care products	5,000,000	PF	32561	U28	30%	15	S2	150	W5
Blended into pesticides	2,000,000	PF	32532	U04	10%	15	S2	150	W5
Formulated into paints	800,000	PF	32551	U28	4%	15	S2	150	W5
Various consumer products	200,000	Do not need to report because PV < 300,000 lbs and the amount less than 5% of total PV.							

Case Study 3 – Form U

SECTION A. INDUSTRIAL PROCESSING AND USE DATA | N/A

	a. Type of Process or Use		b. (5-digit) NAICS Code		c. Industrial Function Category		d. Percent Production Volume		e. Number of Sites		f. Number of Workers	
	Code	CBI	Code	CBI	Code	CBI	Percent	CBI	Code	CBI	Code	CBI
3.A.1	PC		32519		U16		30		S1		W2	
3.A.2	U		33251		U27		30		S4		W7	
3.A.3	PF		32561		U28		30		S2		W5	
3.A.4	PF		32532		U04		10		S2		W5	
3.A.5	PF		32551		U28		4		S2		W5	
3.A.6												
3.A.7												
3.A.8												
3.A.9												
3.A.10												

Case Study 3 – Worksheet #4

Commercial and Consumer End-Use Information

End Use	Amount, pounds	Comm. & Cons. Product Category Code	Children's Products (Y, N, ?)	%PV	Maximum Concentration	
					%	Code
Use of automotive care products	5,000,000	C03	N	30%	35%	M3
Blended into pesticides	2,000,000	Once the xylene is blended into pesticides, it is covered by FIFRA.				
Painting applications	800,000	C12	N	4%	15%	M2
Various consumer products	200,000	Do not need to report Part III of Form U because PV is less than 300,000 lbs and is less than 5% of total PV.				

Commercial and Consumer Uses
C03 – Automotive Care Products
C12 – Paints and Coatings

Case Study 3 – Form U

SECTION B. COMMERCIAL AND CONSUMER USE DATA									N/A	
	a. Commercial and Consumer Product Category		b. Used in Product(s) Intended for Children		c. Percent Production Volume associated with each category		d. Maximum Concentration associated with each category			
	Code	CBI	Y/N/NRO	CBI	Percent	CBI	Code	CBI		
3.B.1	C03		N		30		M3			
3.B.2	C12		N		4		M2			
3.B.3										
3.B.4										
3.B.5										
3.B.6										
3.B.7										
3.B.8										
3.B.9										
3.B.10										

Case Study 3 – Summary

- Combine manufactured and imported production volumes
- Non-TSCA uses (pesticides) are exempt from IUR reporting