

TRINITY INDUSTRIES, INC.

June 21, 2000

Emergency Planning and Community
Right -to- Know Information Hotline
U.S. Environmental Protection Agency
401 M St., SW (5101)
Washington, DC 20406

Trinity submits under cover of this letter, additional information in support of the Article Exemption definition as it applies to Lead, (Pb), in Zinc, in response to the recent conversation between Trinity Industries, Inc., (Trinity), and the U.S. Environmental Protection Agency, (Agency), regarding a clarification of terms and definitions. This information is subsequent to the Agency's written response, dated January 15, 1998, to Trinity's original letter dated December 22, 1997 requesting written clarification of Toxic Chemical Release Inventory Form R, Section 313, Article Exemption as it applies to Pb in Zinc slabs, (Zinc), used in the hot dip galvanizing process.

Article exemption, as codified in State and Federal regulations, 40 CFR Part 372 et. seq., and published in the SARA Title III, TRI Section 313, Form R instruction book, is granted when an [article] is either Processed', or Otherwise used at a covered facility. Additional guidance regarding the definition of "Process" is provided in Section 13.3 Activity Determination². In order for a facility to claim [article exemption] under one of these two scenarios the article must meet the three tests as established in 40 CFR 372-3 and 372.38.

Article Exemption applies when a covered facility receives an article from another facility, in this case Zinc is received from other facilities that manufacture the Zinc with listed 313 toxic chemicals, in this case Pb. The exemption applies only to the quantity of toxic chemical present in the article. For a toxic chemical in an item to be exempt as part of the article, the item must meet all of the following criteria in Part 1, Section B.3.b. of the Form R instructions³.

40 CRF 372.38, Exemptions, (b) Articles, states that **"if a toxic chemical is present in an article at a covered facility, a person is not required to consider the quantity of the toxic chemical present in such article when determining whether an applicable threshold has been met under 372.25, 372.27, or 372.28 or to determine the amount of release to be reported under 372.30"**(emphasis added). This exemption applies whether the person received the article from another person or, the person produced the article.

The argument made by the Agency in its letter dated January 15, 1998, paragraph 3, 3rd sentence,

"We believe the lead does not qualify for the article exemption. If the zinc slabs containing the lead are melted in the galvanizing bath, the dimensional characteristics of the slabs are retained neither in whole

nor in part. Also, if the dimensions are totally altered in the process, the end use functions are not dependent upon the shape [of], (emphasis added), design during end use."

is inconsistent with, and overlooks the definitions provided in the regulations regarding Shape or Design as it is clearly explained in the Form R instructions Section B.3 Activity Determination B.3.a. Definitions of "Manufacture," "Process," and "Otherwise Use." Furthermore, as stated during the previous conference call with the Agency, the Agency said the regulations governing shape or design were intended to mean physical shape [of] design, as written in Agency's letter. Although the Agency has some discretionary powers to interpret the regulations, it has neither the power nor the authority to change the wording of any regulation so that a selective interpretation may be obtained.

To clarify the factual definition of Shape **[or]** Design as established by law, Shape **[or] Design** is further explained in the following example; [Your company receives a prepared mixture of resin and chopped fiber to be used in the injection molding of plastic products. (In Trinity's case it receives a prepared mixture of Zinc and Pb to be used in the hot dip galvanizing of steel products). The resin contains a listed section 313 chemical that becomes incorporated into the plastic, which the company distributes in commerce [Your facility processes the toxic chemical. In the case of resin, it is clear that resin is used for its chemical form not physical shape and is clearly processed. Again, the definition of "Process" explains the chemical form, thus giving allowance to the article exemption. If the intention was to mean only shape *[of]* design as the Agency implies, then how could the Agency explain the PCB or Resin examples? The Section 313 toxic chemical PCB example;

"A closed item containing a toxic chemical (e.g., a transformer containing PCBs) that does not release the toxic chemical during normal use is considered an article if a facility uses the item as intended and the toxic chemical is not released."

In this example the Section 313 toxic chemical PCB is purchased as a fluid for its **[chemical form] design** not its shape. The manufactured item, formed to the specific **[chemical form]** during its manufacture, is then incorporated into a transformer for its end use functions either in whole or in part as intended during manufacture. It is clear this definition refers to **its [chemical form / design]**, not to its physical state, **[shape]**. If the intention, as the Agency suggests, meant physical dimension as shape *[of]* design, then the article exemption would be lost when the fluid changed its physical dimension as it changed its shape from the 55-gallon round container to the physical shape of the transformer, many of which exist in rectangular, square, or cylinder shape, thus negating the Form R example. One could argue the article in this case would not be the transformer but the oil in which the manufacturer added the toxic chemical PCB.

In this case the item Zinc, containing Pb, the toxic chemical, is added to Zinc during the manufacturing process by the manufacturer formed to a specific shape or design, **[chemical form]**, that has end use functions in whole or in part upon its chemical form⁴, **[design]**, during end use. Zinc's and use provides a metallurgical bond and protective surface, the Pb aids in the fluidity and metallurgical bond of Zinc as it is applied to the product thus meeting the definition

of end use in whole or in part.

As the product, manufactured at the facility processing the item, passes through the galvanizing bath, molten zinc, containing the toxic chemical Pb, is deposited on the manufactured product, The Pb, a section 313 toxic chemical, is intentionally incorporated into the product⁵, without a release of the toxic chemical under normal circumstances of processing or otherwise use of the item at the facility.

Furthermore, any Pb removed from the bath (with some dissolved zinc) in the form of Zinc skimming or Dross is collected and sent off site for recycle⁶. Zinc skimmings are a result of the bath temperature while Dross forms as a result of low iron solubility, (see explanation in letter from Trinity dated December 22, 1997).

The aforementioned explanation of bath chemistry and process flow conclusively show the item is manufactured with the toxic chemical, distributed in commerce, has end use functions as intended in whole or in part, the toxic chemical is not released during normal use⁷, is intentionally incorporated in the products manufactured at the covered facility for distribution in commerce, and any Section 313 toxic chemical not incorporated in the final product is completely captured and sent for recycling / reuse onsite or off-site. Hence, Zinc, as used in this application⁸, meets the requirements of article exemption. Therefore the toxic chemical Pb should not be considered in threshold determination nor release calculations for Form R reporting.

The agency's concurrence regarding the aforementioned will substantially reduce the reporting burden placed on Trinity. Please respond accordingly with written clarification of this matter to the address on this letterhead. Your response is greatly appreciated.

Sincerely,

Scott Spear, R.E.M
Northeast / International Environmental Compliance Manager

Example 3: Otherwise Use

When your facility cleans equipment with toluene, you are otherwise using toluene. Your facility also separates two components of a mixture by dissolving one component in toluene, and subsequently recovers the toluene from the process for reuse or disposal. Your facility otherwise uses toluene.

Otherwise Use: The term “otherwise use” encompasses any activity involving a listed toxic chemical at a facility that does not fall under the category of “manufacture” or “process.” A chemical that is otherwise used by a facility is not intentionally incorporated into a product distributed in commerce (see Part II, Section 3.3 of these instructions for further clarification).

B.3.b Activity Exemption

Use Exemptions. Certain uses of listed toxic chemicals are specifically exempted:

- Use as a structural component of the facility;
- Use in routine janitorial or facility grounds maintenance;
- Personal uses by employees or other persons;
- Use of products containing toxic chemicals for the purpose of maintaining motor vehicles operated by the facility; or
- Use of toxic chemicals contained in intake water (used for processing or non-contact cooling) or in intake air (used either as compressed air or for combustion).

Article Exemptions. Quantities of a listed toxic chemical contained in an article do not have to be factored into threshold or release determinations when that article is processed or otherwise used at your facility. An article is defined as a manufacturing item that is formed to a specific shape or design during manufacture, that has end-use functions dependent in whole or in part upon its shape or design during end-use, and that does not release a toxic chemical under normal conditions of the processing or otherwise use of that item at the facility.

If the processing or otherwise use of similar articles results in a total release of less than 0.5 pounds of a toxic chemical in a calendar year to any environmental media, the EPA will allow this release quantity to be rounded to zero, and the manufactured items remain exempt as articles. EPA requires facilities to round off and report all estimates to the nearest whole number. The 0.5 pound limit does not apply to each individual article, but applies to the sum of all releases from processing or otherwise use of like articles.

The article exemption applies to the normal processing or otherwise use of an article. It does not apply to the manufacture of an article. Toxic chemicals processed into articles produced at a facility must be factored into threshold and release determinations.

A closed item containing toxic chemical (e.g., transformer containing PCB's) that does not release the toxic chemicals during normal use is considered an article if a facility uses the item as intended and the toxic chemicals are not released. If a facility services the closed item (e.g., a transformer) by replacing the toxic chemicals, the toxic chemicals added during the reporting year must be counted in threshold and release calculations.

Example 4: Article Exemption

Lead that is incorporated into a lead battery is processed to manufacture the battery, and therefore must be counted toward threshold and release determinations. However, the use of the lead acid battery elsewhere in the facility does not have to be counted. Disposal of the battery after its use does not constitute a “release;” thus, the battery remains an article.

Metal rods that are extruded into wire are not articles because their form changes during processing.

If an item used in the facility is fragmented, the item is still an article if those fragments being discarded remain identifiable as the article (e.g., recognizable pieces of a cylinder, pieces of wire). For instance, an 8-foot piece of wire is broken into two 4-foot pieces, without releasing any toxic chemicals. Each 4-foot piece is identifiable as a piece of wire; therefore, the article status for these pieces of wire remains intact.

Toxic chemicals received in the form of pellets are not articles because the pellet form is simply a convenient form for further processing of the material.

The article exemption applies to the normal processing or otherwise use of an article. This exemption does not apply to the manufactured article. Toxic chemicals processed into articles produced at a facility must be factored into threshold and release determinations.

If as a result of processing or otherwise use, an item retains its initial thickness or diameter, in whole or in part, it meets the first part of the definition. If the item's basic dimensional characteristics are totally altered during processing or otherwise use, the item does not meet the first part of the definition. An example of items that do not meet the definition would be items that are cold extruded, such as lead ingots, which are formed into wire or rods. On the other hand, cutting a manufactured item into pieces, which are recognizable as the article, would not change the original dimensions as long as the diameter or the thickness of the item remained the same; the article exemption would continue to apply. Metal wire may be bent and sheet metal may be cut, punched, stamped or pressed without losing their article status as long as the diameter of the wire or tubing, or the thickness of the sheet are not totally changed.

An important aspect of the article exemption is what constitutes a release of a toxic chemical. Any processing or otherwise use of an article that results in a release to the environment (of more than 0.5 pounds) negates the exemption. Cutting, grinding, melting or otherwise processing of a manufactured item could result in a release of a toxic chemical during normal conditions of processing or otherwise use and therefore, negate the exemption as an article. Scrap pieces, which are recognizable as an article, do not constitute a release.

De Minimis Exemption. The de minimis exemption allows facilities to disregard certain minimal concentrations of chemicals in mixtures or trade name products they process or otherwise use when making threshold determinations and release and other waste management determinations. The de minimis exemption does not apply to the manufacture of a toxic chemical except if that toxic chemical is manufactured as an impurity and remains in the product distributed in commerce, or if the toxic chemical is imported below the appropriate de minimis level. The de minimis does not apply to a byproduct manufactured coincidentally as a result of manufacturing, processing, otherwise use, or any waste management activities.

When determining whether the de minimis exemption applies to a listed toxic chemical, the owner/operator should consider only the concentration of the toxic chemical in mixtures and trade name products in process streams in which the toxic chemical is undergoing a reportable activity. If the toxic chemical in a process stream is manufactured as an impurity,

imported, processed, or otherwise used and is below the appropriate de minimis concentration level, then the quantity of the toxic chemical in that process stream does not have to be applied to threshold determinations nor included in release or other waste management determinations. If a toxic chemical in a process is below the appropriate de minimis level, all releases and other waste management activities associated with the toxic chemical in that stream are exempt from EPCRA 313 reporting. It is possible to meet an activity (e.g. processing) threshold for a toxic chemical on a facility-wide basis, but not be required to calculate releases or other waste management activities associated with a particular process because that process involves only mixtures or trade name products containing the toxic chemical below the de minimis level.

Once a toxic chemical concentration is above the appropriate de minimis level in the process stream, threshold determinations and release and other waste management determinations must be made, even if the chemical later falls below the de minimis level in the process stream. Thus, all releases and other quantities managed as waste that occur after the de minimis level has been exceeded are subject to reporting. If a toxic chemical in a mixture or trade name product above de minimis is brought on-site, the de minimis exemption never applies.

The 0.1% de minimis levels are dictated by determinations made by the National Toxicology Program (NTP), Annual Report on Carcinogens, the International Agency for Research and Cancer (IARC) Monographs, or 29 CFR part 1910, subpart Z. Therefore, once a chemical's status under NTP, IARC, or 29 CFR part 1910, subpart Z indicated that the chemical is a carcinogen or potential carcinogen, the reporting facility may disregard levels of the chemical below the 0.1% de minimis concentration provided that the other criteria for the exemption is met. De minimis levels for chemical categories apply to the total concentration of all chemicals in the category within a mixture, not the concentration of each individual category member within the mixture.

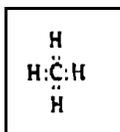
De Minimis Application to the Processing or Otherwise Use of a Mixture

The de minimis exemption applies only to the processing or otherwise using of a listed toxic chemical in a mixture. Threshold and release calculations begin at the point where the chemical exceeds de minimis. If a listed toxic chemical is present in a mixture at a concentration below the de minimis level, this quantity of the substance does not have to be included for threshold determination.

FORMULA PRODUCT

(5) Electronic: A structural formula in which the bonds are replaced by dots indicating electron pairs, a single bond being equivalent to one pair of electrons shared by two atoms.

Example: the electronic formula for methane is:



formula product. A list of the ingredients and their amounts or percentages required in an industrial product. Such formulas (or recipes) are mixtures, not compounds; they are generally used in such industries as adhesives, food, paint, rubber, and plastics. See also formulation.

Formulation. Selection of components of a product formula of mixture to provide optimum specific properties for the end use desired. Formulation by experienced technologists are essential for products intended to meet specifications or special service conditions.

Formula Weight. The sum of the atomic weights represented in a chemical formula. Thus, since the atomic weight of hydrogen is 1 and that of oxygen is 16, the formula weight of water (H₂O) is 18 (approximate atomic weights used).

2-formyl-3,4-dihydro-2H-pyran. See acrolein dimer.

Formyl fluoride. CAS 1493-02-3. HCOF.

Properties: Gas at normal temperature and pressure, decomposes slowly with formation of hydrogen fluoride and carbon monoxide, soluble in water (decomposes), bp -26C, fp -142C.

Derivation: Interaction of benzoyl chloride and a formic acid solution of potassium fluoride.

Grade: Technical.

Hazard: Toxic by inhalation, strong irritant to tissue. TLV (as fluorine): 2.5 mg/m³ of air.

Use: Organic synthesis (acetylating agent).

I-formylpiperidine.



Properties: Colorless liquid, liquid form -30 to 222C, aprotic, low-volatility. Miscible with alcohols, esters, ketones, amines, amides, inorganic acids, organometallics: soluble in water and hexane.

Use: Solvent for polar and nonpolar compounds as well as many high polymers, gas absorption, plastics modifiers.

See also N,N-dimethylformamide.

Forster reaction. Formation of secondary amines by

condensation of a primary amine with an aldehyde, addition of alkyl halide to the Schiff base, and subsequent hydrolysis.

“FORTEX” [Petrolite]. TM for an oxidized hydrocarbon wax.

“Forticel” [Hoechst Celanese]. TM for a cellulosic thermoplastic for use in injection molding, extrusion, rotational casting, and blow molding.

Properties: Pellets (crystals, translucent, metallic, and opaque colors), d 1.20, highest use temperature 80C, soluble in organic solvents, insoluble in mineral oils. Combustible. Use: Pen and pencil barrels, telephone bases, spectacle frames, tool handles, sheeting, steering wheels, etc.

Fortification. In food technology, addition to a food ingredient or product of nutrients that are not normally present, for example, addition of vitamin D to milk or of Vitamin C to cake fillings. Nutritionists apply this term to foods especially designed. Nutritionists apply this term to food especially designed for school children and elderly persons.

See also nutrification, enrichment.

“Fortiflex” [Hoechst Celanese]. TM for a high-density polyethylene consisting mainly of long molecules with occasional short side branches. Thermoplastic.

Properties: Milk-white, translucent pellets (colors are also available); density 0.95; melt index 0.2-8; tensile strength 3,100 - 3,700 psi; highest use temperature 225F.

Combustible.

See polyethylene.

“Fortisan” [Hoechst Celanese]. TM for a cellulosic fiber manufactured by partial saponification of stretched cellulose acetate. A semisynthetic product. It resembles cellulose (cotton) in many dry respects. The high-tenacity product has a dry strength of 5-7 lb/denier (100,000 - 130,000 psi), wet strength is 85% of dry strength, it has relatively low elongation under stress, elastic recovery is approximately 70% after extension to break, immediate elastic recovery is 46%, delayed recovery 30% at 5% strain; Young's modulus 1650; can be dyed in the same way as cotton. The monofilament can be produced to a fineness of one denier; d 1.50, resists stretching both dry and wet. Combustible.

“Fortrel” [Hoechst Celanese]. TM for a polyester-type synthetic fiber.

“Fosfodril” [FMC]. TM for glassy phosphate of high molecular weight (sodium hexametaphosphate).

Use: Thickener for drilling muds, water treatment in oil-well flooding operations.

SECTION 1

1998 EPCRA Section 313 Questions & Answers

Threshold Determination

97. Are the thresholds for *manufacture* and *process* considered separately? That is, if a *covered facility* manufactures 24,000 pounds of *toxic chemical A* and *processes* 24,000 pounds of *toxic chemical A*, does the *facility* need to report for *toxic chemical A*?

No. The *facility* does not have to report because it has not independently exceeded either threshold. Thresholds are considered separately for *manufacture*, *process*, and *otherwise use* of the same *toxic chemical*. Assuming that no individual threshold is met for chemical A (i.e., *manufacturing*, *processing*, or *otherwise use*), the *facility* does not trigger reporting for chemical A.

Manufacture, Process

98. A chemical manufacturing *facility* manufactures 20,000 pounds of benzene on-site for distribution and sale. The same *facility* purchases and then repackages and sells a cleaning *mixture* that contains benzene. Over the calendar year the *facility* repackages and sells (i.e., *processes*) 10,000 pounds of benzene in the cleaning *mixture* and sells the 20,000 pounds of benzene that is *manufactured* on-site. How many pounds of benzene should the *facility* count toward its *processing* threshold?

The *facility* should consider 30,000 pounds of benzene (the 10,000 pounds in the cleaning solution plus the 20,000 pounds of benzene *manufactured* and sold) toward the *facility's* *processing* threshold. When determining if a *facility* meets a chemical use threshold, owners and operators of *covered facilities* must consider each chemical use activity separately to determine if any one threshold has been met. For the purposes of EPCRA Section 313, *process* means "the preparation of a toxic chemical, after its *manufacture*, for distribution in commerce..." (40 CFR Section 372.3) A *facility* that creates a listed *toxic chemical* and then prepares it for distribution in commerce is both *manufacturing* and *processing* the listed *toxic chemical* and must consider the amount of the *toxic chemical* *manufactured* and *processed* towards both thresholds.

Threshold Determination, Warehouse

99. How are warehouses affected by Section 313?

A warehouse located within the physical boundary of a *covered facility* is part of the *facility*. *Toxic chemicals* *manufactured*, *processed*, or *otherwise used* at the warehouse are included in making threshold determinations and *release* and other *waste management* calculations for the *toxic chemicals*. If the warehouse is not within the physical boundary of the *covered facility*, it may be covered as an auxiliary *facility*. (See auxiliary *facility* discussion in Section 1H of this document.)

Activity Threshold, Process, Otherwise Use, Incorporation

116. What is the difference between *process* and *otherwise use* for the purposes of EPCRA Section 313 threshold determinations?

Process implies incorporation; the function or intent of the *toxic chemical* is dependent upon becoming a part of a product. *Otherwise use* implies non-incorporation; The function of the *toxic chemical* is not dependent upon becoming a part of a product. Beginning with reporting year 1998, *otherwise use* will include the on-site *disposal*, *treatment for destruction* and *stabilization* of *toxic chemicals* in wastes received from off-site for the purposes of further *waste management*. *Otherwise use* will also include the on site *disposal*, *treatment for destruction*, or *stabilization* of *toxic chemicals* produced from the management of wastes received from off-site.

Activity

117. If I *manufacture* 74,000 pounds of a *toxic chemical* and *otherwise use* 9,000

Threshold

pounds, am I covered?

Yes. The *facility* has exceeded the *manufacturing* threshold of 25,000 pounds for the *toxic chemical*. *Releases* and other *waste management* from all activities including the 9,000 lbs *otherwise used* of the *toxic chemical* at the *facility* are reportable.

*Reclamation,
Processing,
Distribution in
Commerce*

118. Is the reclamation of elemental mercury from mercury retorting (e.g., recycled fluorescent lamps, contaminated phosphor powder, mercury batteries, and other sources) and the subsequent sale of the recovered mercury (e.g., for use in thermometers and other equipment) subject to the 25,000 pound *processing* threshold?

Yes. Mercury retorted from wastes and subsequently distributed into commerce should be counted towards the 25,000 *processing* threshold.

*Activity
Threshold,
Recordkeeping*

119. A covered facility exceeds a threshold for manufacturing copper compounds and keeps documentation to justify its manufacturing threshold determination. The facility frequently otherwise uses various mixtures containing copper compounds during the year. Must the facility track their otherwise use of copper compounds and document that usage?

Yes, the *facility* must track its *otherwise use* of the copper compounds. However, because the *facility* has already exceeded the threshold for manufacturing, the *facility* does not have to track the copper compounds for the purpose of determining if the *otherwise use* threshold has been exceeded, but instead must track its *otherwise use* of the copper compounds to properly fill out all applicable sections of the reporting form. In short, if a *facility* exceeds an activity threshold it must report on all activities at the *facility* involving the chemical, except for those activities that qualify for an exemption provided for in 40 CFR Section 372.38. (40 CFR section 372.25(c)) And because the *facility* must report the *otherwise uses*, the *facility* must satisfy the record keeping requirements of 40 CFR section 372.10.

*Coincidental
Manufacture,
Metal
Compounds*

154. Do covered facilities need to consider the inadvertent conversion of one metal compound to another as manufacturing? For example, a pulp and paper mill inadvertently converts metal carbonates and oxides in wood to metal sulfides during pulping. Is this a covered manufacturing activity?

Yes. *Manufacturing* is not limited to intentional *manufacturing*; it also includes coincidental *manufacture* or, inadvertent *manufacture*. In general, anytime one metal compound has been converted to another metal compound, the *facility* must count the new metal compound towards the *manufacturing* threshold. The fact that the parent metal is the same in both compounds does not negate the fact that a new metal compound has been *manufactured*.

*Activity
Threshold,
Process*

155. A facility draws steel rods into a smaller diameter and then distributes the rods in commerce. Is this manufacture, process, or otherwise use?

This activity is considered *processing* because the *toxic chemical* remains incorporated in the final product distributed in commerce.

*Otherwise Use,
Manufacturing
Aid, Processing
Aid*

156. What is the difference between a manufacturing aid and processing aid?

A chemical *processing* aid is added directly to the reaction *mixture* or is present in a *mixture* used to aid in *processing* and its function is such that it does not remain in the product. Examples include catalysts, solvents, and buffers. A manufacturing aid

helps to run the equipment and is never incorporated into the product. Examples include lubricants, coolants, and refrigerants. Since, in either case (manufacturing aid or processing aid), incorporation of the *toxic chemical* into the final product is not required for the chemical to perform its function, *toxic chemicals* that are used as manufacturing aids or as processing aids are considered *otherwise used* under EPCRA Section 313.

*Manufacture,
Chemical
Qualifier,
Fume or Dust,
Coincidental
Manufacture,
Mold, Fumigants,
Aluminum*

157. A covered facility has purchased in excess of 100,000 pounds of aluminum material in block form to make a mold which stays on-site. When making the mold, fumes and dust are byproducts. Do we report these as the *toxic chemical*?

Aluminum appears on the list of *toxic chemicals* as “aluminum (fume or dust).” You must determine if you *manufacture, process, or otherwise use* Aluminum fume or dust. In this case you do not *process* or *otherwise use* the Fume or dust, but you do *manufacture* aluminum fume or dust coincidentally as a byproduct of making molds. Therefore, you must report for aluminum (fume or dust) if you exceed the 25,000 pound *manufacture* threshold for the reporting year.

52
*Activity
Threshold,
Otherwise
Use, Solvents*

165. If a solvent that is a listed *toxic chemical* is used to clean an apparatus but does not become part of the final product, is the chemical covered for reporting purposes under EPCRA Section 313?

If a solvent is not incorporated into a product distributed in commerce, then for the purposes of Section 313, it would be considered *otherwise used*. It would be subject to reporting if used in quantities exceeding 10,000 pounds per year.

*Activity Threshold,
Otherwise Use*

166. A covered facility uses paint thinners in its operations. The thinners are evaporated or baked out of the finished painted products. Are those chemicals subject to Section 313 regulations?

If the chemical evaporates or is baked out of a finished coating, it has been *otherwise used* and is subject to the 10,000 pound threshold.

Process

167. Is soldering light bulbs with lead solder considered *processing* of the solder?

Yes, it incorporates the solder into a product for distribution in commerce.

*Activity
Threshold,
Process,
Otherwise Use*

168. A covered facility uses methanol in its gas-carburizing heat treatment of steel. The main purpose of methanol in the *facility's* operations is to provide the source of carbon that is deposited on the steel. Is this *processing* or *otherwise use* of the methanol?

The methanol is being *processed*, not *otherwise used*, because the ethanol is the source of the carbon for the carburization activity. The methanol is being reacted, and the carbon from it is being incorporated into the steel.

*Activity
Threshold,
Process,
Repackage*

169. Does the placing of a bulk liquid containing a small percentage of a Section 313 *toxic chemical* into small bottles for consumer sale constitute a reportable/threshold activity of the *mixture*?

Yes, repackaging for distribution in commerce is a type of *processing* (40 CFR Section 372.3). If the bulk liquid contains a Section 313 listed *toxic chemical* in excess of the de minimis level, the *toxic chemical* in the liquid would have to be factored into calculations in determining whether the *processing* threshold is exceeded for that *toxic chemical*.

Repackaging,
Processing

170. A covered facility receives a chemical in bulk and repackages it into smaller containers that are sent to consumers. Are amounts repackaged considered toward an activity threshold?

Amounts of the *toxic chemical* that a *covered facility* repackages for Distribution in commerce must be considered toward the *processing* threshold amount of 25,000 pounds per listed *toxic chemical*.

SECTION 2

1998 EPCRA Section 313 Questions & Answers

Article
Exemption,
Light Bulbs

377. A facility subject to EPCRA Section 313 crushes light bulbs and uses the crushed glass in their process. The light bulb stems are not used in the process and are disposed. There is a lead “button” in each light bulb stem which is disposed. Is this button considered an article and therefore exempt from threshold and release and other waste management calculations under 40 CFR Section 372.38(b)?

No, the lead buttons from crushed light bulbs would not be considered *articles* and the lead would not be exempt from threshold determinations and *release* and other *waste management* calculations. The lead in these buttons would not be counted toward any threshold. The *facility* would only be required to report the release of lead buttons if a threshold for lead was exceeded by a covered activity or other *waste management* elsewhere at the *facility*.

Article Exemption,
PCB
Transformers

378. A covered facility uses PCB transformers. Are these considered to be articles, and therefore exempt from reporting under Section 313?

PCB transformers are considered to be *articles*, as long as PCBs are not released from the transformers during normal use or if the *facility* does not service the transformer by replacing the fluid with other PCB-containing fluid. (See also: Section 313 Policy Directives - Directive #6: PCBs Threshold Determinations and *Release* and other *Waste Management* Reporting.)

Article
Exemption,
PCB
Transformers,
Ancillary Use

379. A covered facility has a PCB transformer on-site which it uses for energy. The PCBs were removed from the transformer and disposed. Is the amount of PCB removed for disposal counted towards the otherwise use threshold? How is this activity covered under EPCRA Section 313?

If the *facility* removes the entire transformer including the PCB-laced oil as an *article*, the amount of PCB in the *article* would not be included in Section 313 threshold determinations and *release* and other *waste management* calculations. If a *toxic chemical* is present in an *article* at a *covered facility*, the owner/operator is not required to consider the quantity of the *toxic chemical* present in such *article* when determining whether an applicable threshold has been met or when determining the amount to be reported as a *release* or other *waste management*. If the *facility* removes the PCB-laced oil from the *article*, this removal would negate the *article* exemption. To determine if the *facility* exceeds a threshold, the operator of the *facility* must count the amount of the chemical added to the recycle/reuse operation during the reporting year (40 CFR Section 372.25(e)). If a *facility* has a transformer that leaks PCB-laced oil, this leaking would also negate the *article* exemption. To determine if the *facility* exceeds a threshold, again, the owner/operator of the *facility* must count the amount of the chemical added to the recycle/reuse operation during the reporting year. The *facility* would be *otherwise using* the PCB added to the transformer (ancillary use). Only the amount of PCB added to the transformer needs to be aggregated for threshold determination, and the *facility* will most likely not be adding PCB-laced oil to the transformer. Therefore, it is unlikely that the *facility*

will exceed the 10,000 pound *otherwise use* threshold. The *facility*, therefore, would not be required to report *releases* and other *waste management* of the PCBs for Section 313. If, however, the *facility* exceeds the 10,000 pound threshold and needs to report PCBs, the PCBs removed from the transformer and sent off-site for final *disposal* would be a reportable *release*.

1998 EPCRA Section 313 Questions & Answers

APPENDIX A

DIRECTIVE #6 – PCBs THRESHOLD DETERMINATION AND RELEASE AND OTHER WASTE MANAGEMENT REPORTING.

Polychlorinated biphenyls (PCBs) are a listed chemical under Section 313.

1. PCBs in Articles are Exempt

EPA has stated that transformers are *articles* (and thus exempt from threshold determinations), but that the *release* or removal of fluid from the transformer negates the *article* status. The *article* status of only those transformers that have fluids removed (e.g., servicing or retrofilling), or have fluids escape are affected. However, the PCBs are still not considered if no new PCB-containing fluid is added, since the threshold determination is based on fluid added, not lost.

EPA has stated that disposal or removal of *articles* does not constitute a *release*. Therefore, disposal on-site, or off-site transfer of the whole Transformer with fluid content undisturbed, does not negate the *article* status. The transformer is not included in threshold determinations and does not have to be reported as a *release* or an off-site transfer of PCBs for purposes of Section 313 reporting.

When calculating the threshold for *otherwise use*, a *facility* must consider only the amount of PCBs added to transformers during the reporting year (e.g., “topping off” a transformer), not the amount of working fluid contained in the transformer.

2. Coincidental Manufacture of PCBs is Subject to EPCRA Section 313

Facilities involved in coincidental *manufacture* of PCBs and further *processing of mixtures* containing PCBs (in excess of the 0.1 percent de minimis level) must count the amount *manufactured* or *processed* toward these thresholds.

3. Treatment or Disposal of PCBs May Require EPCRA Section 313 Reporting

Facilities in the SIC codes 20 through 39, as well as the newly *covered SIC codes*, may be subject to Section 313 reporting if they treat or dispose of PCBs. Effective January 1, 1998, the interpretation of activities considered *otherwise used* includes *treatment for destruction*, *disposal*, and *waste stabilization* when the *covered facility* engaged in these activities receives materials containing any chemical (not limited to EPCRA Section 313 listed *toxic chemicals*) from off-site (regardless of whether the generating and receiving *facilities* have common ownership) for purposes of further *waste management*.

Processing represents a potentially covered activity. However, *facilities* are not likely to be incorporating PCBs into items distributed in commerce or to be using PCBs as starting or intermediate material for the production of other chemical substances that are distributed in commerce, or used on site.

(1) the *toxic chemical* that was disposed, stabilized or treated for destruction was received from off-site for the purposes of further *waste management*; or

(2) the *toxic chemical* that was disposed, stabilized, or treated for destruction was manufactured as a result of *waste management* activities on materials received from off-site for the purposes of further *waste management* activities. Relabeling or redistributing of the *toxic chemical* where no repackaging of the *toxic chemical* occurs does not constitute *otherwise use* or *processing* of the *toxic chemical* (40 CFR Section 372.3).

Overburden - the unconsolidated material that overlies a deposit of useful materials or ores. It does not include any portion of ore or waste rock (40 CFR Section 372.3).

Process - the term *process* means the preparation of a *toxic chemical*, after its *manufacture* for distribution in commerce: (1) in the same form or physical state as, or in a different form or physical state from, that in which it was received by the person so preparing such substance, or (2) as part of an *article* containing the *toxic chemical*. *Process* also applies to the *processing* of a *toxic chemical* contained in a *mixture* or *trade name product* (40 CFR Section 372.3).

RCRA approved test method – includes Test Method 9095 (Paint Filter Liquids Test) in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992 (40 CFR Section 372.3).

Release - any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles) of any *toxic chemicals* (40 CFR Section 372.3).

Senior Management Official -an official with management responsibility for the person or persons completing the report, or the manager of environmental programs for the *facility* or *establishment*, or for the corporation owning or operating the *facility* or *establishments* responsible for certifying similar reports under other environmental regulatory requirements (40 CFR Section 372.3).

State - any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, and any other territory or possession over which the United States has jurisdiction (40 CFR Section 372.3).

Endnotes

¹40 CFR 372-3 and 372.38; Process means the preparation of a toxic chemical, after its manufacture, for distribution in commerce: In the same form or physical state, or in a different form or physical state from that in which it was received by the person so preparing such substance, or as part of an article containing the toxic chemical. Process also applies to the processing of the toxic chemical contained in the mixture or trade name product.

²Process: The term "process" means the preparation of a listed Section 313 chemical, after its manufacture, for distribution in commerce. Processing is [usually the intentional incorporation] of a section 313 chemical into a product, processing includes preparation of the EPCRA Section 313 chemicals in the same physical state or (chemical form), (design), MS that received by your facility, or preparation that [produces] a change in physical state or [chemical form].

³That is, (1) It must be a manufactured item that is [formed] to a specific shape or design during manufacture. (2) that has end use function dependent in whole or in part upon its shape or [design] and (3) which does not release a toxic chemical under normal circumstances of processing or otherwise use of the item at the facility.

⁴Ref, Library of Congress Catalog No. 21606; Definition of Formula: 1. An exact or prescribed method at [form] for doing something. 3. A prescription or recipe: Also, the mixture; prepared by prescription or recipe. Also, Ref, Hawley's Chemical Dictionary, Definition of Formulation; Selection of components of a product formula or mixture to provide optimum specific properties for the end use desired.

⁵Form R instruction book, pg. C-1 Appendix C. Common Errors, Section 3.2 "Process" means the preparation of an EPCRA Section 313 chemical after its manufacture, which incorporates the Section 313 chemical into the final product, for distribution in commerce.

⁶As defined in section If all releases of like articles over a reporting year are completely captured and sent for recycling / reuse on-site or off-site, the items may remain exempt as articles.

⁷ Article Exemption: 3rd paragraph, The article exemption applies to the normal processing or otherwise use of an article,

⁸ 1998 EPCRA Section 313 Q & A Section 1, Question 167; Is soldering light bulbs with lead solder considered processing of the solder? Answer: Yes, it incorporates the solder into the product for distribution in commerce. Similarly, Zinc, like solder, containing lead is applied to the galvanized products thus, it is processed