



Environmental
Guidance



Technical
Assistance
Project

Emergency Planning and Community Right-To-Know Act
Section 313 Toxic Release Inventory Reporting

*Questions & Answers
Update*

May 1999

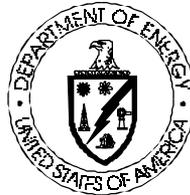
U.S. Department of Energy
Office of Environmental Policy & Assistance
RCRA/CERCLA Division, EH-413
Washington, D.C.



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Toxic Release Inventory Reporting***

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Update***



May 1999

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Introduction

The purpose of this Technical Assistance Project (TAP) guidance is to address specific questions posed by DOE Field Elements regarding DOE facility TRI reporting requirements under the Emergency Planning and Community Right-to-Know (EPCRA) Section 313, which is the legislation that established the Toxic Chemical Release Inventory (TRI). Federal facilities are required to report under EPCRA Section 313 by Executive Order (E.O.) 12856, issued in 1993. E.O. 12856 does not alter or remove any existing legal obligation of the private contractor of a government-owned, contractor-operated (GOCO) Federal facility to report.

This Q&A guidance is a continuing series of questions and answers on the topic, building upon the Office of Environmental Policy and Assistance's (EH-413) initial guidance issued March 1994 entitled *Toxic Chemical Release Inventory Reporting Qs&As* and subsequent TAP guidance issued September 1997 entitled *EPCRA Section 313 TRI Reporting Q&A Update*. DOE facilities also should refer to EPA's Revised 1997 *EPCRA Section 313 Question and Answer Document* and its supplement for federal facilities, the *1998 EPCRA Section 313 Question and Answer Document for Federal Facilities*, soon to be published by EPA. These materials are applicable to TRI reporting year 1998 and are intended solely for guidance. They do not alter or supersede any statutory or regulatory requirements but should be used in conjunction with them.

This Q&A guidance has been coordinated with the EPA Office of Pollution Prevention and Toxics, Environmental Assistance Division, TRI Branch; comments received are reflected herein and are greatly appreciated.

Background

Under E.O. 12856, TRI reporting applies to all Federal facilities with 10 or more employees (or 20,000 hourly equivalent) that annually manufacture or process more than 25,000 pounds, or otherwise use more than 10,000 pounds of a



listed toxic chemical. For each chemical manufactured, processed, or otherwise used in excess of the established threshold quantity, facilities must prepare an annual TRI report using EPA's Form R, the Toxic Chemical Release Inventory Reporting Form. While the applicability of the TRI reporting (i.e., section 313 reporting) requirements is based on the quantity of a listed toxic chemical manufactured, processed, or otherwise used at a facility, the actual TRI report includes releases, transfers, and waste management activities of the chemical.

For purposes of TRI reporting, the term **“manufacture”** means to produce, prepare, compound, or import a listed toxic chemical. The term manufacture also includes coincidental production of a listed toxic chemical (e.g., as a byproduct or impurity) as a result of the manufacture, processing, otherwise use, or treatment of other chemical substances. The term **“process”** means the preparation of a listed toxic chemical, after its manufacture, for distribution in commerce. Processing is usually the intentional incorporation of a listed toxic chemical into a product. For purposes of DOE reporting, sending a product containing a listed toxic chemical off-site is considered equivalent to being distributed in commerce. For example, a facility that reuses lead block on-site by melting and fabricating lead into waste containers that are subsequently used off-site at another DOE facility would be “processing” the lead for threshold determination purposes. DOE facilities also should recognize that sending toxic chemicals off-site for recycling is a processing activity and the amounts should be counted toward a facility's processing threshold.

The definition of “**otherwise use**” means any use of a toxic chemical that is not covered by the terms manufacture or process. This would include uses as a processing or manufacturing aid, or ancillary uses as a cleaner, degreaser, lubricant, fuel or use in treating wastes. A chemical that is otherwise used by a facility is not intentionally incorporated into a product distributed in commerce. In the previous processing example, if the lead reuse includes the melting and fabricating of lead into waste containers that are subsequently used on-site (not used off-site at another DOE facility), the lead is considered to be “otherwise used” because although the lead was incorporated into the waste containers, it was not distributed in commerce.

Prior to January 1, 1998, the disposal of a toxic chemical, in and of itself, did not constitute manufacture, process, or otherwise use. Beginning in the 1998 reporting year, the definition of **otherwise use** was modified to include the disposal, stabilization or treatment for destruction of a toxic chemical that was received from off-site for the purposes of further waste management; and the disposal, stabilization or treatment for destruction of a toxic chemical that was manufactured as a result of waste management activities on materials received from off-site for the purposes of further waste management activities. Waste management includes the following activities: recycling, combustion for energy recovery, treatment for destruction, waste stabilization, and release, including disposal.

Questions and Answers

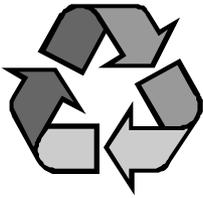
Q A DOE facility dismantles used shipping/storage casks by cutting the lead casks into smaller sections for shipping. The clean lead from this Cask Dismantlement Project is shipped off-site as scrap metal to a lead smelter that melts the lead into ingots for reuse. These ingots are not returned to the DOE site. Does the facility need to submit a Form R for lead? If they need to report, should the facility report the amount of lead sent to the smelter as



recycled off-site? The facility's interpretation of Q&A #435 of the revised 1997 version of the *EPCRA Section 313 Questions and Answers* document suggests the lead may not need to be reported. The site requested an EPA regulatory determination on whether the scrap metal lead requires reporting.

A Q&A #435 poses the following question: "If a covered facility sends metal scraps containing chromium off-site to be remelted and subsequently reused, does it report the amount of toxic chemical in the metal as recycled off-site?" The answer provided is: "Because the chromium in the metal scraps is not actually being recovered but merely melted and reused, the amount of the toxic chemical in the metal scraps would not be reportable anywhere on the Form R including in Section 8." The revised 1998 version of the *EPCRA Section 313 Questions and Answers* kept the same question under Q&A #588, but modified the response to read: "Assuming no contaminants are removed during the melting process, the chromium in the metal scraps is not actually being recovered but merely melted and reused. Therefore, the amount of the toxic chemical in the metal scraps would not be reportable in Part II, Sections 6.2 or 8 of the Form R. However, because the facility is repackaging and distributing the toxic chemicals in commerce, it should consider these amounts of the toxic chemical towards the facility's processing threshold. If the covered facility exceeds a chemical activity threshold, it is required to file a TRI Report for that chemical." In the revised response, EPA is making clear that, in cases such as the Cask Dismantlement Project, the determination of whether a Form R for lead is required is based on whether an activity (in this case processing) threshold is exceeded, even if there are no releases. If the amount of lead that is cut up and sent to the lead smelter, when added to any other reportable lead processing activities at the facility, exceeds the 25,000 pound processing threshold in a reporting year, then a Form R for lead must be submitted. What quantities get reported on the Form R depend upon what releases, transfers and waste management activities occur. Because the lead is simply being

sent to be remelted, with no listed toxic chemicals being removed from the lead at the smelter, EPA considers that to be reuse and not recycling. Reuse is not considered a waste management activity and, therefore, the quantity of lead sent to the lead smelter would not be reported on Form R. However, all non-exempted releases of lead, such as any releases during cutting operations, and any non-exempted off-site transfers of lead for disposal would be reported on the Form R since the activity threshold for lead was



exceeded at the facility. Alternately, if the lead cask pieces contained other listed toxic chemicals, for instance copper or zinc compounds, that were removed at the smelter, EPA considers that to be a form of recycling, which is a waste management activity, and the lead sent to the smelter would therefore be reported in Part II, Section 6.2 and 8.5 of the Form R.

Finally, if the lead casks were not cut into pieces, but simply emptied, cleaned out without any resulting release of lead and sent to the smelter as a whole unit, then the casks may qualify for the article exemption. Under this exemption, the lead casks would not count toward the processing threshold, and would not be reported (if reporting lead were required due to some other activity) as recycled off-site even if the lead contained other toxic chemicals that were being removed at the smelter.

Q A covered DOE facility uses nitrate compounds in its operations in excess of the 10,000 pound otherwise use threshold. They also use fertilizer containing nitrate as part of their facility grounds maintenance. The Forest Service also conducts operations at the facility and they also use fertilizer containing nitrate as part of their operations. Nitrate is detected in the stormwater outfalls. The facility does not have any firm data to show the contributions of all the sources of nitrate, but they believe that some of it comes from their grounds maintenance fertilizer usage and from the Forest Service operations. Management will not fund research to quantitatively determine

the sources of nitrate. When reporting nitrate releases, can the facility use reasonable assumptions to subtract the amount of nitrate coming from fertilizer usage by facility grounds maintenance and the Forest Service from the amount of nitrate in the stormwater, which is based on monitoring data?

A Yes, for facility grounds maintenance sources and maybe for Forest Service sources. Because the nitrate compounds contained in the fertilizer used for facility grounds maintenance are exempt from threshold and release and other waste management calculations, under the exemption found at 40 CFR Section 372.38(c)(2) for products used in routine janitorial or facility grounds maintenance, the nitrate releases from that source do not have to be reported. However, several factors need to be considered when determining thresholds and releases for nitrate compounds.

First, the nitrate compounds category under Section 313 has a qualifier that limits threshold determinations and reporting to nitrate compounds that dissociate in water, generating nitrate ions. Only aqueous forms of nitrate compounds are considered for threshold determinations and reporting. Thus, if the Forest Service uses dry fertilizer, the nitrate compounds in the fertilizer do not count toward threshold determinations and do not need to be reported. The nitrate in dry fertilizer is only converted to a reportable form when in solution and in this case the solution is not created until after the chemical has been released into the environment. Facilities are not required to report on conversions that take place in the environment. However, if the Forest Service uses aqueous nitrate fertilizer, that use does count toward thresholds and is reportable if a threshold is exceeded. For the purposes of threshold determinations the entire weight of the nitrate compound must be included in all calculations. That determination does not include, for example, the weight of the water or any other constituent in the solution other than the nitrate compound. For the purposes of

reporting releases and other waste management quantities, only the weight of the nitrate ion should be included in the calculation of these quantities. EPA adopted this approach because most available monitoring data only measure the dissociated nitrate ion released and not the amount of the total nitrate compounds from which the nitrate ion dissociated.

Second, in determining releases, you must use all readily available data (including relevant monitoring data and emissions measurements) collected at your facility to meet other regulatory requirements or as part of routine plant operations, to the extent you have such data. You must use your best judgment to determine whether data are readily available. When relevant monitoring data or emission measurements are not readily available, reasonable estimates of the amounts released must be made using published emission factors, material balance calculations, or engineering calculations. You may not use emission factors or calculations to estimate releases if more accurate data are available. No additional monitoring or measurement of the quantities or concentrations of any toxic chemical released into the environment, or of the frequency of such releases, beyond that which is required under other provisions of law or regulation or as part of routine plant operations, is required for the purpose of completing Form R.

Third, you should carefully document your decision making. For example, if you decide to use an average value estimate for nitrate coming from fertilizer usage sources, you should document how the average was calculated and why it is considered to be reasonable.

Finally, you should also remember that you are not required to use an exemption provision. The amount of time to document the exempted quantity may not be worth the effort. Also, if the amount of nitrate coming from non-reportable sources is determined to be large, you should consider altering the amount and way fertilizer is used so that less ends up in stormwater runoff.

Further discussions on the calculations involved in determining

threshold, release and other waste management quantities for reporting under the nitrate compounds category are described in a separate EPA directive titled *List of Toxic Chemicals within Water Dissociable Nitrate Compounds Category and Guidance for Reporting* (EPA document #745-R-96-004, Revised May 1996). This document can be obtained through the EPCRA Hotline at (800) 535-0202. The other referenced EPA documents are (or will be) available on EPA's TRI website at <http://www.epa.gov/opptintr/tri/>.

