

(In addition, any releases of the hazardous secondary materials to the environment would also be considered discard under RCRA.)

In some recycling situations, a hazardous secondary material could be used as a substitute for a raw material that has very different physical characteristics, and thus would not be considered “analogous” for the purposes of this criterion. This could be the case, for example, if a secondary material is in dry powder form, while the raw material is a solid material that is not susceptible to dispersal by wind or rain. Similarly, if the secondary material contains hazardous constituents that the raw material it replaces does not, it also might not be considered “analogous” for the sake of this criterion. Similarly, there may be some situations where there is no “analogous” raw material, such as where the recycling process is uniquely designed to use a specific secondary material.

In these types of situations, where it may be difficult to compare management of secondary materials with “analogous” practices for raw materials, consideration of this specific legitimacy criterion should focus on whether or not the secondary material is managed to minimize the potential for releases into the environment. This is consistent with the idea that normal manufacturing processes are designed to use valuable material inputs efficiently, rather than allowing them to be released into the environment. Thus, in situations where it is not feasible to compare management practices for hazardous secondary materials with analogous practices, assessment of this legitimacy criterion would involve examining the effectiveness of a facility’s equipment and systems in preventing releases of the hazardous secondary materials into the environment.

How Does This Criterion Compare to Existing Guidance?

Although worded somewhat differently, this criterion is essentially the same as the fifth criterion in the previously cited 1989 guidance memorandum (“Is the secondary material handled in a manner consistent with the raw material/product it replaces?”). The 1985 preamble similarly asked whether recyclable secondary materials were “handled in a manner consistent with their use as raw materials or commercial product substitutes * * *.” In one respect, however, today’s proposed criterion is less restrictive—the 1989 guidance posed an additional question “Is the

secondary material stored on the land?,” implying that storage on the land is an indication of sham recycling. However, the Agency is aware of situations where storage of raw materials on the land is a normal part of the manufacturing process (this is the case with certain large-scale mineral processing operations, for example). Thus, today’s proposal does not identify land storage as a specific indicator of sham recycling. EPA notes, however, that land storage may result in releases to the environment that constitute discard.

2. Criterion #2: “The secondary material provides a useful contribution to the recycling process or to a product of the recycling process and evaluating this criterion should include consideration of the economics of the recycling transaction. The recycling process itself may involve reclamation, or direct reuse without reclamation.”

This criterion expresses the fundamental principle that secondary materials should actually be useful (*i.e.*, contribute value) to a recycling process. This is intended to prevent the practice of adding secondary materials to manufacturing operations simply as a means of disposing of them, which is sham recycling. An example of a recycling operation that would fail to satisfy this criterion would be a wastewater treatment sludge that is fed into a metals smelter, but that contains no recoverable amounts of metal, and does not otherwise contribute to the smelting process. Another example would be using a toxic metal-bearing sludge as a feedstock to make ceramics, where neither the toxic metals or other components of the sludge contribute valuable properties to the ceramic products. There may also be situations where some amount of a secondary material is useful to a recycling process, but much larger volumes of the material are actually introduced into the process. A material that is added in excess of the amount actually needed to make an end-product might also fail to meet this criterion for useful contribution.

Not every component of a secondary material would necessarily have to contribute to the product or process to satisfactorily meet this criterion. For example, a legitimate recycling operation involving recovery of precious metals might not recover all of the components of a hazardous secondary material, but would recover precious metals with sufficient value to justify the recycling. A similar example might be where recycling involves recovery of the hazardous component of a secondary material (*e.g.*, cadmium in batteries), where the more inert constituents of the secondary material

are not recovered or reused, but the recovered portion is of sufficient value to justify reclamation.

This proposed criterion consolidates and clarifies existing guidance that addresses how useful or valuable a hazardous secondary material should be to a recycling process. In practice, this issue has often been viewed primarily as an economic question, such as whether the secondary material is marketable as a valuable commodity, or whether it has a marketplace value comparable to an analogous virgin material. EPA is not proposing a particular economic test for evaluating this criterion, nor do we necessarily believe that a secondary material must be marketable to the public in order for it to have sufficient value for the recycling process to be legitimate recycling. In general, we believe that evaluation of the usefulness of a secondary material to the recycling process should be based on the nature of the material and its value to the recycling process. The question of who pays whom, the amounts of money involved, and other aspects of the transaction between the generator and recycler can be an indicator as to whether or not the recycling is legitimate or is disposal in the guise of recycling. It is EPA’s experience that in many legitimate recycling transactions the generator pays the recycler to accept the material to be recycled. However, the Agency is also aware that in many sham recycling cases the recycler has received payment from the generator. The usefulness of the secondary material to the recycling process (whether established through knowledge of the material and process or consideration of the economics of the transaction) needs to be evaluated along with the other legitimacy criteria articulated in today’s proposal in evaluating whether the recycling is legitimate.

Another issue that could arise in evaluating this “useful contribution” criterion is the efficiency of a recycling process in recovering or regenerating the useful component of a recyclable material. For example, if the objective of a recycling process were recovery of copper from a secondary material, but only a small fraction of the copper in the material is actually recovered, sham recycling could be indicated. If, however, the recycling process was reasonably efficient and recovered all but a small amount of the copper (*e.g.*, 90 to 95 percent), it would likely meet this criterion and thus indicate legitimate recycling. A pattern of mismanagement of the residues by the recycling facility may also be an indicator of sham recycling.