

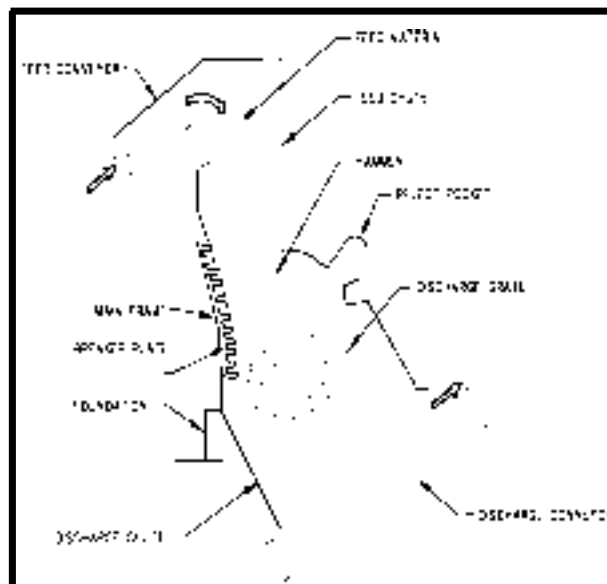
2.2 Types of Mechanical Units Included Under Subpart X

2.2.1 Shredder Units

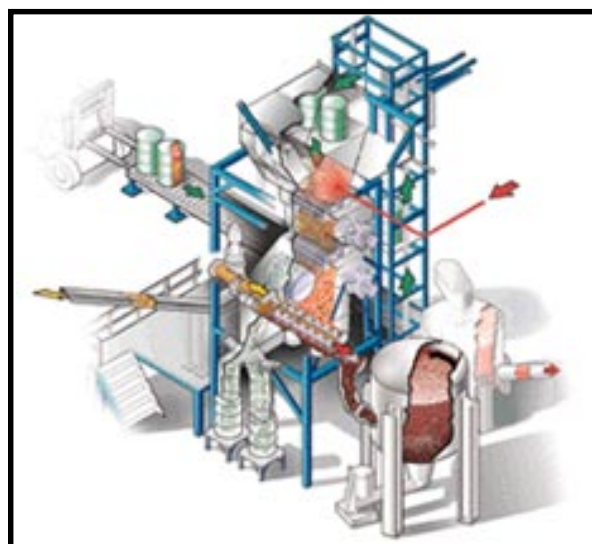
Shredders typically are used to make waste more amenable to subsequent treatment in other units, such as thermal desorbers, regeneration units, or incinerators, through reduction in size, and blending. Shredders may be regulated under Subpart X based on the material managed. Refer to [June 24, 1988 Policy Memo](#). Drum shredders are found at a number of facilities. If the unit is managing “RCRA empty” containers, then the unit is exempt from RCRA Subtitle C regulations. (Refer to [40 CFR §261.7](#) for the definition of RCRA empty). Several types of shredders are used, the major examples of which are hammer mills, shear shredders, and auger shredders.

A hammer mill is a type of shredder that reduces the size of the waste by impaction and that works best with friable materials. The mill can handle a wide range of solids but must be matched well with the waste to prevent problems related to excessive equipment wear and jamming. Stringy or sticky materials also can jam the mechanism. Shear and auger shredders use low-speed knives or counter-rotating augers to shred solid materials, such as drums.

A mechanical feed system, typically consisting of a feed hopper and some type of conveyance system, should be available to avoid the need for plant personnel to be near the opening of the hopper during operation. To prevent flying debris and to minimize emissions, the feed system should be enclosed. The shredder also must be designed to contain dusts and mists of toxic materials, as well as, in the case of hammer mills, particulate matter escaping the unit at high velocity. Dust and fumes can be controlled by drawing them into an air pollution control device associated with the shredder. In some cases, flame-suppression devices may be necessary to prevent explosion and fire in the feed hopper and the shredder.



Schematic of Hammer Mill Shredder.



Schematic of Shear Shredder.

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