Best Practices in Wood Waste Recycling

Upgrading Low-Grade Wood Waste Supplies

Material: Wood Waste

Issue: *Low-grade wood waste is defined by the feedstock quality requirements set by the regional end-users. These quality requirements are typically driven by the finished products. Therefore, there is a direct correlation between the value of the low-grade material and the marketability of the processed product. Low-grade wood includes railroad ties, and demolition, painted, and pressure-treated wood. Wood wastes having the lowest or no value to the processor or end-user are classified as low-grade wood. Also, wood requiring special handling is considered low-grade because of the additional processing and marketing costs.*

Best Practice: This Best Practice recommends low-grade wood be identified at the scale house upon arrival to the facility. Immediate identification of the low-grade wood allows the appropriate fee to be charged. The different fee charges should reflect the level of labor and equipment effort required to process the wood waste, as well as, the lower potential market value of the load. Once the low-grade wood is identified, the load should be directed to a separate tipping area from the higher quality material. This practice assumes an on-site tipping space exists for several waste stream classifications.

An important step in upgrading low-grade wood waste is to keep the various categories of feedstocks segregated. Many of the newer facilities realized this variability of the supply and prepared the receiving tipping area with sufficient space to store several different feedstock piles. This allows for the different processing of feed streams based on customer specifications. The amount of processing efforts and steps required to upgrade the material depends on whether a market for the lower value wood waste could be negotiated. If the low-grade wood fraction consisted of smaller pieces (e.g., less than 3- to 4-inch pieces), an air or a water float system might be appropriate to concentrate the material and eliminate some of the ancillary contaminants. An air system would work well if the wood waste stream does not contain a separation amount of light organics or pieces of plastic film. These pieces would tend to ride the initial air flow separation system.

Implementation: There are three different techniques for upgrading: identification, segregation, and processing effort. A differential fee schedule should be clearly posted at the scale house to communicate and encourage the delivery of high-grade wood waste. The established fee schedule should reward the high-grade loads with lower fees and penalize the low-grade loads with a more substantial fee. However, the low-grade fee should remain lower than the local sanitary-landfill tip fee. The scale house operator should keep track of the source and make-up of the stream of incoming wood materials. An inspection platform could be established alongside the check-in area to allow the attendant to view the incoming loads. Additionally, it is recommended that a facility establish a “spotter” at the discharge area of the trucks to confirm the type of load that was assumed to be delivered by the scale house attendant. Sometimes, the heavy materials that have vibrated to the bottom of the load is worse than the materials on the top.

Once the responsible processing staff member gets to know the drivers and source generators, identifying the type of incoming materials would become easier. Low-grade wood waste should be dumped into a separate receiving pile to process separately for lower quality markets. However, this practice depends upon the percentage of low-grade wood waste versus the total plant capacity. Additionally, this practice might require different equipment and personnel shifts along the equipment lines.

Benefits: Upgrading low-grade wood waste could increase the throughput volumes and the financial margins of a processing operation. Unfortunately, upgrading efforts are difficult and problematic. The processing system must be designed and managed well using some of the recommendations discussed in this Best Practice.

Use of low-grade wood waste supplies limits the range and types of output feedstocks. It also detracts from marketing higher quality products and reduces the price of the finished product. Handling low-grade wood waste supply streams introduces more contaminants and more problems, adding to the complexity of the overall processing system. This increases the likelihood of an occasional product quality problem. Manufacturing or product performance problems experienced by the end-users might effect their satisfaction and loyalty to the facility.

Application Site: Processing Facility.

Contact: For more information about this Best Practice, contact CWC (206) 443-7746, e-mail info@cwc.org.

References:

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