

the infeed of the belt conveyor dryers. As not all green chip material needs to be processed through the green hammermill, smaller sized material will be screened out and approximately one third of the green chip throughput will be processed in the green hammermill. The green hammermill will be limited to a throughput of 337,968 green tpy. Exhaust from the green hammermill will be routed to a cyclone followed by a regenerative catalytic oxidizer (RCO) for emissions control.

## **2.3 Wood Drying**

Renewable Biomass Group is proposing to install one (1) biomass dryer system to dry the wood chips. The dryer processes the wood chips to approximately 10% moisture content in preparation for the pelletizing operation. The wood chips and sawdust are mixed with hot gases from the dryer burner within the dryer. The dryer will be designed to ensure good mixing of wood chips with hot gases and sufficient retention time.

The dryer processes the residual mix containing approximately 40-50% moisture to dried wood with a moisture content of approximately 10%. The exhaust gases will be controlled by a wet electrostatic precipitator (WESP) for particulate matter (PM) and metal HAP and by a regenerative thermal oxidizer (RTO) for volatile organic compounds (VOC), carbon monoxide (CO), and organic HAP control. Heat for the dryer will be provided by biomass combustion in the burner. The RTO burner will combust natural gas only and have a total maximum heat input capacity of 32 million British Thermal Units per hour (MMBtu/hr).

Storage bins or silos will be used to hold dry chips at various points in the post-dryer part of the process.

## **2.4 Dry Hammermilling**

From the dryer, the material will be conveyed into one of three (3) dry hammermills. The dry hammermills are designed to further reduce the material size. As not all dried chips need to be processed through the dry hammermill, smaller sized material will be screened out and a lower throughput will be processed in the dry hammermill. The dry hammermill system will be limited to a throughput of 246,234 tpy. Exhaust from the dry hammermills will be routed to a cyclone followed by the aforementioned RCO for emissions control.

## **2.5 Pelletizing Operation**

Following the dry hammermilling process, the wood fiber will be conveyed to the pelletizing area, which will include pelletizers and pellet coolers. Renewable Biomass Group plans on installing eleven (11) pelletizers. The pelletizers compress the wood fiber into pellets by rolling and squeezing the material through holes in a die. The process of squeezing the wood material generates heat which causes the wood's natural lignin to flow. The wood's natural lignin produces a natural glue which holds the pellet together.

Immediately after the pellets are produced, they will be directed to the pellet cooler in the pelletizing area, which consists of three (3) pellet coolers. Ambient air will be used as a cooling medium in a direct contact process of heat exchange. Exhaust air from this pellet press system and cooling process will be routed to cyclones followed by the aforementioned RCO.

## **2.6 Pellet Storage and Loadout**

Pellets produced will be transferred into two (2) pellet loadout storage silos. The pellets will feed out of the storage silos into open top railcars for transfer off-site, with a potential annual throughput of 497,000 tons of pellets per year.