START-UP AND SHAKEDOWN OF
ALBANY NEW YORK SOLID WASTE ENERGY
RECOVERY SYSTEM (ANSWERS)

ANTHONY R. NOLLET and ROBERT H. GREELEY
AENCO, Inc.
Albany, New York

Discussion by

Kenneth L. Woodruff
Banyan Resource Recovery, Inc.
Morrisville, Pennsylvania

The paper is a good presentation and discussion of a plant startup. However, there are several items which could be clarified or explained in more detail which would enhance its meaningfulness.

What type of materials were handsorted and removed during the test program?

How much ferrous metal is removed? Apparently there is much scrap since the paper indicates that one-third of the steel is removed from the tipping floor.

What type of feed inspection is presently employed? What materials are now removed?

AUTHORS' REPLY

During the test program, we removed by handsorting substantially the same materials that we are now removing in a production situation — namely any item that might damage the hammermills, cause an explosion or cause a jam in the hammermill. These categories of material include mattresses, cans of unknown substances, pieces of heavy metal, long pieces of stringy material, and tires. Tires are removed only because the operating permit of the state boiler plant prohibits them from burning tires. During the early test program, before the explosion vents were installed, we handsorted the test material on the tipping floor — in order to be certain that we removed all items that might cause an explosion.

The business of handsorting on the tipping floor is clearly unsatisfactory, as one cannot process much tonnage of material if it must be spread on the tipping floor and handsorted.

Before the plant went into full production, explosion vents and other explosion alleviation systems were installed in the plant (see related paper "New Concepts for Explosion Alleviation in Shredded Solid Waste Plants" in the Proceedings). Also, before the plant went into full production, the picking stations were modified to make it easier to pick undesirable material from the Infeed Conveyor — usually without stopping the conveyor.

During normal plant operations, the Traffic Director on the Tipping Floor and the two Front-End Loader Operators look for undesirable material, but do not spread out the material for a careful look. These people simply pick the undesirable materials that they happen to see. Removal of such material is not their primary responsibility.

All material passes the Picking Stations, which are manned by people who carefully inspect the material that is passing them. Obviously, they cannot see all undesirable material, as some is covered by large pieces of paper or corrugated material.

The net result is that about 1.5 percent by weight of the incoming material is picked on the Tipping Floor. Approximately 1.7 percent by weight, is picked at the picking stations. Of the total of about 3.2 percent by weight that is picked,
about one third is ferrous scrap; about 1 percent of the incoming material is handpicked ferrous scrap.

The Dings Magnets pull about 3.1 percent by weight, of the incoming material as ferrous scrap. A total of about 4.1 percent of the incoming material is ferrous scrap that is removed. Separate tests have shown that we remove about 93 percent of the ferrous scrap in the waste stream. A total of about 6.3 percent of the incoming material is either handpicked or is removed by the magnets. Magnetic removal occurs after shredding.