Material Recovery Facilities General Safety Meeting Kit

Material Recovery Facilities General Safety Talk

Material recovery facilities (MRFs), are essential to help reduce the amount of waste sent to landfill sites and maximize recycling that takes place in the country.

COMMON HAZARDS AT MATERIAL RECOVERY FACILITIES

- Horseplay and improper use of mobile equipment is forbidden.
- Bloodborne pathogens such as blood, bodily fluids, and needles create a serious hazard when handling waste.
- In all areas that a person could be exposed to moving parts, pinch points, or other hazards.

HOW DOES A MATERIALS RECOVERY FACILITY WORK

A Materials Recovery Facility, MRF, is where recycling goes after it is picked up by a hauler.

1. Recycling is picked up throughout an area at residential homes and businesses by a hauler.
2. Various haulers in the area then bring the recycling they have collected to a Materials Recovery Facility.
3. At the Materials Recovery Facility, the recycling gets loaded onto a conveyor belt where workers manually remove contamination. The contaminates usually are plastic film like plastic bags and candy wrappers, but also wires, textiles, and organics. This is an important step because if not removed, these items can cause severe damage to the sorting equipment.
4. Cardboard and paper products are the first recyclables to be separated. As the recycling stream moves down the conveyor belt, large wheels divert and propel the cardboard and paper up as the heavier items fall through.
5. As the lightweight paper materials is sorted out, the remaining glass, metals, and plastics continue down the conveyor belt.
6. The metals are the next material to be removed. Large magnets collect steel cans and other magnetic metal as it passes by.
7. After the steel is drawn out by magnets, an eddy current is created by a magnet field which repels aluminum and other non-ferrous metals into a separate bin.
8. Glass bottles and jars are then separated from the remaining plastics using a density blower. A jet air stream hits each item, blowing the lightweight plastics onto a different route.

9. The heavier glass does not get redirected by the air and continues down the original conveyor belt to be hammered or grinded into finely crushed glass, known as cullet.
10. The remaining plastic is sorted by optical lasers that determine the resin type and sort each plastic into its appropriate bin.

BEST PRACTICES TO MITIGATE COMMON HAZARDS AT MATERIAL RECOVERY FACILITIES

Here are specifics of mitigation at an MRF facility.

Mobile Equipment

- Prior to operating powered industrial trucks (PITs), such as forklifts or any other mobile equipment, employees must be trained on the specific equipment being operated.
- Mobile equipment must be operated as intended by the manufacturer. Horseplay and improper use of mobile equipment is forbidden.
- Be aware of trucks, trailers, and other equipment entering the MRF. Never step in the path of the equipment as the operator may not see you.

Sorting Stations

- Bloodborne pathogens such as blood, bodily fluids, and needles create a serious hazard when handling waste. Proper gloves and other personal protective equipment (“PPE”) must always be worn when this hazard is present.
- Be aware of potentially sharp items such as glass, metal, or sharp plastic items that could be in the waste. Always look before grabbing items in order to help reduce this exposure. Also ensure to wear proper gloves that offer the protection needed.
- Use proper lifting methods, maintain proper posture, and take frequent breaks from repetitive motions when working at a sorting station.

Conveyors, Processing Machines, and Systems

- Machine guarding should be in place in all areas that a person could be exposed to moving parts, pinch points, or other hazards. Never remove or modify machine guards.
- Never step on, get on top of, or place any body part in a conveyor or any other machine.
- If you service or maintain machines or equipment that could start up unexpectedly or release hazardous energy, be sure that a qualified person follows OSHA’s lockout/tagout (LOTO) procedures. Never try to clear a jam without first performing LOTO.

Material Storage Areas

- Only stable, homogenous, properly labeled, and tied bales should be stacked.
- Bale stacking should be limited to four high. When stacking higher than four, a stair-stepped method should be used.
- Be cognizant of floor and lateral wall loading limits when placing bales.
- Stacked bales should be inspected daily for integrity.

FINAL WORD

There are countless hazards that exist at material recovery facilities. In fact, the waste industry is one of the most hazardous industries that exist. Using safe working practices, is critical to reduce the likelihood of accidents taking place. It is vital to remain aware of your surroundings and never take safety short cuts in this industry. If unsafe working conditions are discovered, stop working and report it to

management immediately.