MEMORANDUM

TO: Professor Jo Archibald
FROM: Kaitlin McKie
SUBJECT: ENGR 115 Lab 8: Recology Resource Recovery Center
DATE: 10/25/19

PURPOSE

The purpose of this memorandum is to report on the ENGR 115 field trip to Recology's Resource Recovery Center in Samoa, California on October 18, 2019.

DISCUSSION

The tour of the recycling center began with an introduction to the center. Recology is the 5th largest solid waste hauler in California. The Samoa center receives waste from the greater Humboldt region, including the Arcata, Eureka, and Fortuna municipalities. We were brought into the processing line, where the municipal recycling is initially brought, collected, and sent onto a conveyer belt. It is manually sorted initially, and non-recyclable material is pulled out. A disc separator mechanically sorts the different types of recycling. It breaks glass, and the broken pieces are separated by gravity and falls into a collection bin. Paper products that don't weigh very much are too light to go through the separator and blow over it, where it is collected and sent to a bailer. A magnet pulls metal cans from the plastic, and is sent to a compacter. The remaining plastic products are manually sorted by grade. The sorted glass is sent to Strategic Materials in the Bay Area. 20% of the sorted cardboard is sent to Oregon and 80% is exported. 100% of newspaper, plastics, and cans are exported overseas. Recently, the market value on scrap material has been down by 15%, drastically reducing the profit margins of sorted material. In order to optimize profits, the recovery center's goal is to keep contamination below 10%. We were presented with a variety of waste material and were given the opportunity to sort it according to what we believed was recyclable, and what should be sent to landfill. We were surprised by the amount of material that actually can't be recycled. The center believes that recycling is not a perfect solution to the waste problem, as many of the international importers of waste material are low income and have been overloaded with waste material from other countries. The solution to reducing the amount of waste created lies in increased education and awareness that would lead to reduced consumption.

CONCLUSION

The field trip was a great opportunity for the ENGR 115 students to learn about the solid waste recovery process in their own community, to put the impact of their own waste into perspective, and to gain insight into the solid waste impact on a global scale.