



Arrow Electronics, Inc. began as a small electronics store in New York, but has blossomed into a major electronics distributor and e-cycler since its founding in 1935. Now a Fortune 150 company, Arrow has set its sights on controlling the growing problem of e-waste in landfills by offering electronics recycling and refurbishing services.



Figure 1-1

The Coppell facility, where I conducted my internship, is exclusively a Value Recovery¹ and Reverse Supply Chain¹ site. At this site, Arrow receives used electronics from other companies, resells what can be repaired, and dismantles the rest to send the various components to qualified recyclers. Reverse Supply Chain allows electronics companies to gain additional profit from items that have already been manufactured.¹ Figure 1-1 is part of Arrow's Reverse Supply Chain and Aftermarket Solutions ad campaign. Microchips, hard drives, copper parts, CPUs, and LCD screens are just a few of the most common elements in electronics that require special handling to avoid releasing heavy and precious metals. They are also some of the most expensive components to manufacture. The best way avoid these releases and reclaim the precious metals is to prevent the parts from ending up in landfills by recycling them to make new parts. Recycling the precious metals in old electronics also offers the opportunity to profit from what could be mistaken as waste.

Internship Objectives

- Gain working knowledge of Environmental, Health, and Safety (EHS) principles, environmental regulations, and the process of managing a successful EHS department.
- Become familiar with the policies and standard operating procedures of an electronics recycling facility.
- Apply previously learned information in a real world scenario including, but not limited to, environmental and OSHA regulations, ISO 9001 and 14001 certifications, and Six Sigma ideology.



- Learn to perform safety audits and recognize frequent safety concerns.
- Take part in frequent interactions with environmental and quality professionals nationwide to increase networking opportunities.
- Interact with floor personnel to enhance compliance with standard operating procedures.

Description of Experience

When I started my internship with Arrow Electronics, I knew they were an electronics distributor, but was unaware of their need for an EHS department at all. I learned very quickly that their biggest asset is not selling electronics, but connecting their customers to offer unique and perfectly-priced services that appeal to companies who strive to be environmentally-friendly.

The E-waste Crisis

- The average lifespan of a computer in 1997 was 6 years. By 2005, it dropped to 2 years.²
- Mobile phones have a lifespan of only 18 months. In Britain, consumers replace their old phones at a rate of 1,700 per hour.²
- 40% of the heavy metals in landfills comes from e-waste.²
- 80% of the electronic waste in the US ends up in China.²

Figure 1-2

I was exposed to the ever-growing problem of e-waste (illustrated by Figure 1-2) and the regulations, certifications, and downstream monitoring required to ensure that electronics do not end up in the waste stream. Maintaining these stringent certifications requires diligent attention to the sorting of electronic components as they are removed from retired devices, compliance with safety measures put in place to protect employees and electronics, as well as regularly training employees on the importance of following guidelines and how to do so efficiently.

Relationship to Career Goals

Working hands-on with Arrow's EHS department as an EHS-management intern has confirmed my interest in the environmental, health, and safety field. My attention to detail, thirst for knowledge, and desire to better the workplace will prove useful as I pursue a career in the very near future.

The shift in Arrow's focus from selling internal components to recycling components already sold demonstrates the world-wide shift from manufacturing to reclaiming. As we lose the ability to mine minerals as heavily as we once could, the importance of regaining precious metals is becoming more of a driving force for the economy as a whole. And where there are environmental regulations restricting how these tasks can be accomplished, there will be jobs for those who know the regulations and can apply their knowledge.

References

1. <http://www.arrowvaluerecovery.com/>
2. <http://edition.cnn.com/2007/BUSINESS/12/03/eco.ewaste/>

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