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How to Select an Electronics Recycler

Recommendations for businesses, institutions, governmental entities and other organizations procuring electronic scrap recycling services

There are numerous electronics recycling companies that offer a wide range of recycling services and different levels of expertise to different types of businesses, organizations or individuals.

How do you pick one that meets your needs? Even though at this time the Florida Department of Environmental Protection (DEP) has no specific requirement for electronics recyclers, we strongly recommend that the following four issues be taken into consideration when selecting a recycler:

1. Does the recycling facility have a DEP/EPA Identification Number?
2. What kind of insurance does the recycling facility have?
3. Where exactly does your electronic scrap end up?
4. How does the recycler ensure that the data on your electronic scrap is destroyed?

Evaluating these issues not only protects the environment but also helps protect your company or organization from becoming the victim of illegal disposal of electronics in landfills or common areas (dumping) and improper recycling in the US or foreign countries. There are US and international regulations governing the export of scrap electronics that must be complied with.

These recommendations should be read in conjunction with (and not as a substitute for) any applicable federal and state regulations that could apply to the disposal of unwanted electronics. Requirements may change because of amendments to the regulations, new interpretations or guidance from EPA or DEP, judicial rulings, etc. Ultimately, it is your facility's responsibility to stay current with the regulations and be in compliance with all applicable environmental regulations.

Here are three ways to select an electronics recycler that meets your needs:

1. Investigate the four issues listed above. DEP and your county/city recycling department may be able to provide helpful information; or
2. Look for a recycler with a third-party audited certification; or
3. Do both.

Method 1: Investigate the issues yourself

1. Does the recycling facility have a DEP/EPA Identification number?

While the state of Florida has no specific regulations that apply to electronics recyclers, the DEP does have the authority to issue a facility identification number. This number is not any type of certification or approval for an electronics recycling facility. At this time, recyclers are not required to get a facility identification number. The facility identification number does, however, demonstrate that the facility has notified the DEP of who they are, where they are and what they are doing. After the information on the notification form is reviewed and deemed complete, the facility receives a letter from the DEP confirming that the facility has notified the Department of its location and recycling activities and that the facility management is aware that it must meet federal, state and local rules and regulations governing its recycling activities. The DEP does periodically inspect electronics recycling facilities that have such an identification number. Since the facility is aware that the DEP can inspect them, a facility that has an identification number knows to be prepared for a DEP inspection. An electronics recycling facility that has an identification number is probably more likely to be complying with environmental regulations than a facility that does not have an identification number. It is important to understand, however, that having a facility identification number does not guarantee that the facility is in compliance. Further investigation may be required to verify regulatory compliance.

While there is no state requirement for a registration or permit, some city and county governments do require a registration or permit. Check with the city and county environmental agency to see if any registration or permit is required. If one is required, ask the recycler for documentation that their facility has the required registration or permit.

2. What kind of insurance and business practices does the recycling facility have?

While there is no state requirement that an electronics recycling facility have any type of insurance, most businesses - and not just electronics recyclers - carry general liability and workers compensation insurance as a prudent business practice. Some companies also elect to provide an additional level of protection at the request of their clients by carrying optional environmental impairment insurance. Such insurance is a good business practice, is commonly required when doing business with institutions or national corporations and underscores the recycler's commitment to good management. Here are some suggested amounts of coverage for such insurance:

- General Liability - \$1,000,000/occurrence, \$1,000,000 aggregate
- Workers Compensation - coverage meeting Florida workers compensation law and regulations
- Environmental Impairment - \$1,000,000/occurrence, \$1,000,000 aggregate

In light of concerns with data security, some companies have personnel policies such as background and driver license checks on applicants prior to hiring and a Drug Free Workplace program in accordance with state statutes. Such policies are another indicator of good business practices and management.

Good communication with clients is another indicator of good business practices and management. Does the company provide easy-to-find communication channels (phone, fax, email) and promptly respond to phone calls, faxes and email?

3. Where exactly does your electronic scrap end up?

An electronics recycler should be able to document exactly where your equipment and its component parts and materials finally end up. Such documentation should answer questions such as:

- Where is the equipment actually recycled or resold? This is also referred to as the final disposition, the end markets or the downstream vendors for the equipment, recovered components and base materials.
- Is the equipment processed at the recycler's own facility?
- Is the scrap equipment sold or otherwise transferred to other facilities that fix and resell it or tear it down into components and base materials like circuit boards, metal, glass and plastic?
- Are the recovered components and base materials sold or otherwise transferred to other facilities, e.g. scrap metal dealers, metal smelters, or other recyclers that refurbish and resell used equipment? Where are these other facilities located? In the US? North America? Overseas? If the recycler exports any scrap products or materials, does it comply with applicable international laws and regulations?
- What does the recycler do to ensure that the recycling processes protect public health, worker health and the environment? For example, what materials if any are disposed of instead of recycled? Is the scrap stored indoors or under cover outdoors prior to processing? What type of personal protective equipment are workers required to use?
- Does the company comply with state and federal environmental and worker health and safety (OSHA) laws and regulations?

There are no “right” and “wrong” answers to many of these questions. For example, equipment can be processed appropriately either at the recycler’s own facility or at another facility, even an overseas facility. Also, scrap equipment, recovered components and base materials may be legitimately sold to either US markets or overseas markets. It is important to know both where your scrap finally ends up and that the scrap is recycled in compliance with regulations.

Audit Packages: Many electronics recyclers have recycling process diagrams or descriptions showing what recycling processes are used and at which facilities. Electronics recyclers may also have prepared information (hard copy or posted to their website), often called an Audit Package, that documents processes, facilities and environmental compliance.

Certificates of Recycling: Many electronics recycling facilities issue certificates of recycling that state that a particular batch or list of scrap electronic products has been recycled. These are typically issued by the recycler on some type of hard copy or electronic document bearing the recycler’s name, address, identification number, and sometimes additional information, such as what organization the scrap came from, a list of scrap electronics that were recycled and where and how the scrap was recycled. There is no approved or official “certificate of recycling” form

approved or issued by the DEP or the U.S. Environmental Protection Agency (US EPA). Nor is one required. A certificate of recycling can be a part of the documentation that shows that scrap electronics have been recycled properly but, by itself, it probably would not be sufficient documentation. You still need to know where your scrap finally ends up.

4. How does the recycler ensure that the data on your electronic scrap is destroyed?

In the last few years, the illicit procurement and use of electronic data from computer hard drives, copiers/printers and other data storage devices has become increasingly widespread. Confidential business data, governmental data and law enforcement data have been particular targets. Several federal, state and county laws and regulations require institutions and corporations, large and small, to protect individuals' privacy by safeguarding confidential data.

When electronic data storage equipment is recycled, there are various ways by which confidential data can be destroyed. These range from various computer programs that erase, scramble, degauss or otherwise "wipe" data from the data storage device to processes that physically damage or completely destroy the data storage device. Some wiping programs can later be illicitly bypassed, reversed or over-written to retrieve data which has been removed, scrambled, degaussed or wiped from the data storage device. Physical damage or destruction makes it very difficult or impossible to later illicitly retrieve data from the data storage device. A good reference for data security methodologies is publication SP 800-88 of the Computer Security Division and Resource Center of the National Institute of Standards and Technology (www.csrc.nist.gov).

Ask the recycler which methods of data destruction it uses and the level of security that method provides.

Site visit: As an additional level of verification and if you have the time and resources, you may want to visit the recycler's facility during operating hours and directly observe things like how the facility operates, how personnel handle the scrap electronics, what kind of safety procedures and personal protective equipment are used, facility housekeeping and data destruction procedures.

Method 2: Look for a recycler with third-party audited certification

There are several certifications that must be audited (verified) by an impartial third party. To receive certification, the recycling facility describes what processes it uses and how it ensures compliance with various applicable laws and rules and other standards. A third party then audits (verifies) that the recycling facility actually does what it says it does. The certification is not issued until the third party satisfactorily completes the audit. If an electronics recycling facility has received one or more of these certifications, you can be confident that most or all of the four issues mentioned above have been addressed.

Currently, the DEP is aware of three certifications, ISO 14001, R2/RIOS and e-Stewards, whose standards are applicable to electronics recycling facility operations, especially compliance with

environmental laws. A fourth certification, NAID, applies specifically to the issue of data security.

1. ISO 14001

The International Organization for Standardization (ISO) [www.iso.org] offers ISO 14001 as an international environmental standard for an environmental management system [EMS]. An EMS meeting the requirements of ISO 14001:2004 is a management tool enabling an organization of any size or type to:

- Identify and control the environmental impact of its activities, products or services;
- Improve its environmental performance continually; and
- Implement a systematic approach to setting environmental objectives and targets, to achieving these and to demonstrating that they have been achieved.

[www.iso.org/iso/iso_14000_essentials, accessed 8/6/2012]

2. R2/RIOS

This certification is a combination of two certifications: R2 and RIOS.

R2 is shorthand for the Responsible Recycling Practices for Use in Accredited Certification Programs for Electronics Recyclers and is offered by R2 Solutions [www.r2solutions.org/]. This standard was developed by a multi-stakeholder process led by the U. S. Environmental Protection Agency (US EPA). R2 focuses on the performance of electronics recyclers in the areas of:

- Environmental and public health;
- Worker health and safety;
- Security (data and facility); and
- The whole of the recycling process and chain of custody of materials through final disposition.

[www.r2solutions.org, select “R2 Standard” under “R2Practices”, accessed 8/6/2012]

RIOS [Recycling Industry Operating Standard] is the recycling industry’s third-party audited standard for quality, environmental, and health and safety management systems for scrap recyclers of all sizes and scrap materials, including electronic scrap. The Institute of Scrap Recycling Industries [ISRI] offers the RIOS certification.

[www.isri.org (select “Program and Services”), accessed 8/6/2012]

3. e-Stewards

The e-Stewards certification was developed under the leadership of environmental advocacy organizations. Besides ensuring compliance with international waste trade laws and adherence to

worker health and safety, e-Stewards prohibits use of municipal landfills and incinerators and the use of prison labor. The Basel Action Network [www.ban.org] offers the e-Stewards certification.

[<http://e-stewards.org>, accessed 8/6/2012]

4. NAID

There is an additional certification issued by the National Association for Information Destruction (www.naidonline.org) dealing strictly with data destruction at electronics recycling facilities.

“The NAID Certification Program is offered on a voluntary basis to all NAID member companies providing information destruction services. Through the program, NAID members may seek certification audits for Mobile and/or Plant-based operations in paper or printed media, micro media, computer hard drive destruction and/or computer hard drive sanitization. The NAID Certification Program establishes standards for a secure destruction process including such areas as operational security, employee hiring and screening, the destruction process, responsible disposal and insurance.”

[<http://www.naidonline.org/nitl/en/cert/history-purpose.html>, accessed 8/6/2012]

Method 3: Do your own investigation AND look for certification

If you want even more assurance that an electronics recycler meets the needs of your organization, you can do your own investigation (Method 1) and look for certification (Method 2).

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