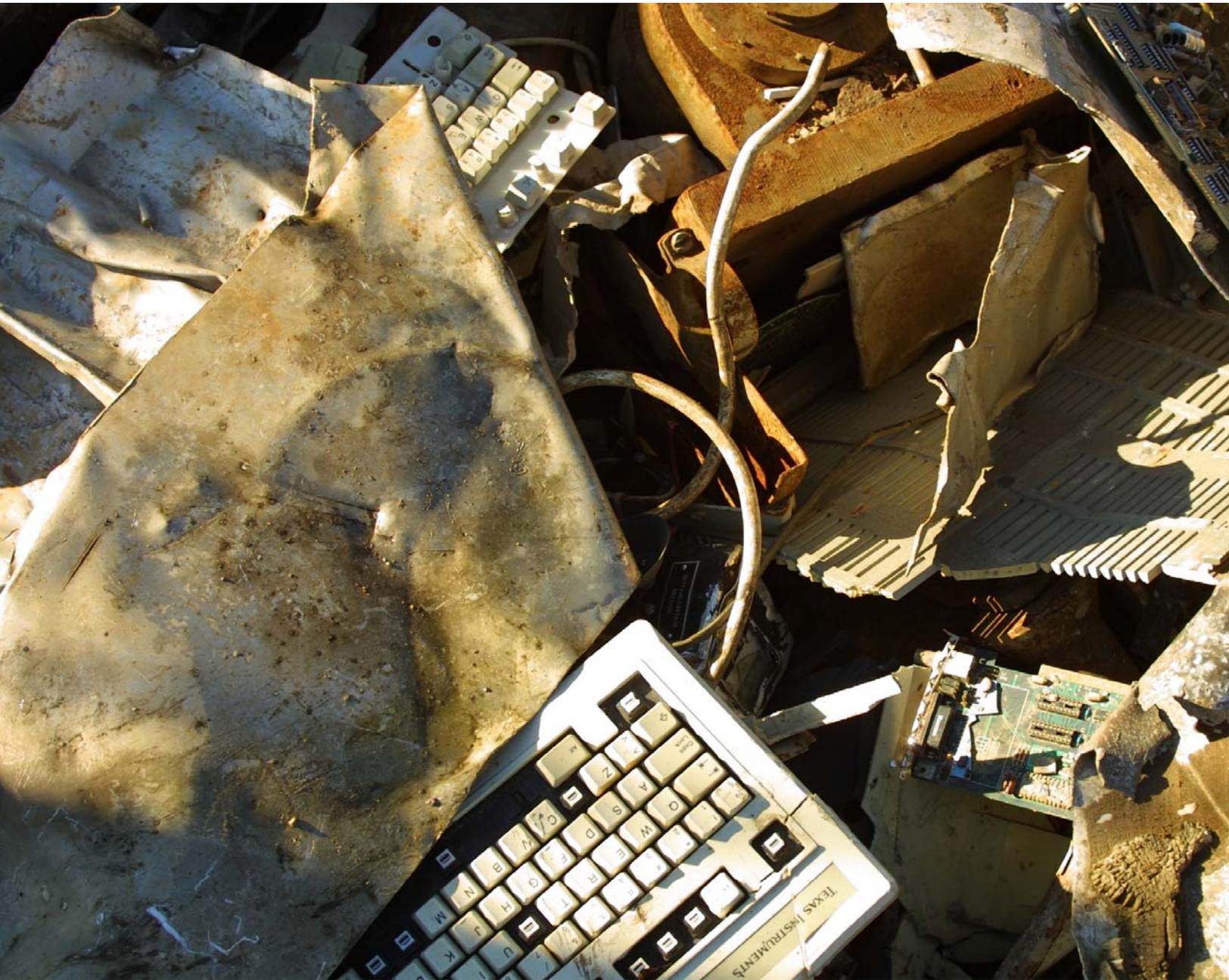


What You Need to Know About QC 080000



Introduction: The challenge of controlling e-waste

The global growth of technology has brought an unforeseen side effect: electronic waste (e-waste). The statistics are staggering:

- The **United States** generates at least 4 million tons of e-waste in landfills annually, including 130 million cell phones in 2005 alone (per the EPA).
- The **European Union** generates at least 6 million tons of e-waste annually (equal to 13 kg per person), and is expected to generate 12 million tons annually by 2015. 90% of this e-waste is incinerated or ends up in landfills.
- **China** generates at least 1.1 million tons of e-waste annually. This includes 5 million TVs, 4 million refrigerators, 5 million washing machines, 5 million PCs, and 10 million cell phones. Assuming each of those items contains 1,000 ppm of lead, this means China's annual e-waste alone contains 1,100 tons of lead.

Governments around the world have started to demand, by law and regulation, that the hazardous substances found in these electric and electronic products be properly managed and controlled *before* they become e-waste. At the same time, consumers are increasingly showing preference for environmentally-friendly products and "green" processes. What's more, electronics manufacturers such as Apple, Canon, Dell, Ericsson, IBM, Microsoft, Motorola, Panasonic, and Sony have banned the use of components containing hazardous substances in their products.

In order to remain competitive *and* respond to these emerging customer and government demands, industry must find and implement a solution to effectively manage hazardous substances. Product-testing methods can be successful, but are often too expensive or inconsistent. Also, product testing does not address any production process controls for hazardous substance restriction.

The role of the IECQ

The mission of the IECQ (International Electrotechnical Commission Quality Assessment System for Electronic Components) is to provide “visibility and independent verification that electronic components and related materials and processes, including those below the user’s level of specification in the supply chain, are compliant to appropriate standards, specifications or other documents.”¹

The IECQ understood that the electronic components industry needed to establish a set of internationally-recognized criteria for assessing hazardous substance compliance. Using the standard EIA/ECCB 954 (which was developed by the Electronic Components Certification Board, in conjunction with key OEMs) as a base, they developed the specification **IECQ QC 080000 HSPM** to define Hazardous Substance Process Management (HSPM) system requirements for manufacturers of electrical or electronic components or products.

International Trade Structure

World Trade Organization (WTO)
Ensures the integrity of international trade



International Electrotechnical Commission (IEC)
Supplies the global market with multilateral standards and conformity assessment programs key to EEE international trade



IEC Quality Assessment for Electronic Components (IECQ)
Conformity assessment and product certification arm for electronic components, processes and materials



Member Body
The Member Bodies of the IECQ manage the system in their respective countries



Electronic Components Certification Board (ECCB)
The U.S. counterpart to the National Authorized Institutions (NAIs)



Supervising Inspectorate (SI)
A certification body; responsible for performing assessments and determining the compliance of manufacturers

What is QC 080000?

QC 080000 is an international IECQ technical specification for hazardous substance process management. It is a proactive, effective, and cost-efficient approach to

¹ <http://www.iecq.org/about/introduction.htm>

managing, minimizing, and eliminating hazardous substances in electronic and electrical products and their production processes.

QC 080000 provides a foundation for the comprehensive, systematic, and transparent management and control of the processes designed to meet customer, statutory, and regulatory HSF (Hazardous Substance Free) requirements. It ensures the value-added management of HSPM processes from concept through product realization to product end-of-life.

By providing a comprehensive process management specification, QC 080000 allows for better management of all hazardous substance processes, regardless of the exact HSF requirements a company is trying to meet. The specification is designed to help you:

- satisfy both customer HSF requirements and international HSF regulatory requirements,
- determine and document the technical aspects of the hazardous- or restricted-substance levels in products and processes,
- develop procedures and process controls to ensure technical compliance with hazardous substance restriction requirements, and
- provide the necessary training, process tools, and infrastructure to ensure sustainability.

QC 080000 and ISO 9001

QC 080000 was written to correspond to the framework of ISO 9001:2000, the international standard for quality management systems. While ISO 9001 provides a basis for the optimization of business systems, QC 080000 takes it a step further to emphasize the management of hazardous substances.

Alongside ISO 9001, QC 080000 provides the specifics of process management for hazardous substance restriction:

- Focused on hazardous substance processes for delivering products compliant with WEEE, RoHS, and/or Green Process requirements
- Must have record management for technical proof of compliance
- Must have measurement and testing controlled by the organization
- Continuous improvement of hazardous substance processes to drive organizational and product realization process improvement
- Must show conformance with scope objective

Third-party certification: benefits and process

IECQ-recognized, third-party certification to QC 080000 can indicate to regulators that a manufacturer's processes are effectively controlling hazardous substances. It indicates that the organization has processes in place to properly manage product realization specifically for HSF. In addition, third-party certification:

- Ensures uninterrupted access to global markets
- Ensures a sustained competitive advantage
- Provides a strong showing of compliance with applicable laws
- Assists in driving business integration and continuity of process control throughout the supply chain

Prior to seeking certification to QC 080000, your organization must be certified to ISO 9001 or one of its derivatives (such as ISO/TS 16949, ISO 13485, TL 9000, or AS9100). Both standards may be assessed concurrently.

The audit process for QC 080000 is very similar to that of ISO 9001, with annual assessments and a certificate validity of three years. However, there are a few minor differences:

- There can be no Opportunities For Improvement (OFIs), only major or minor non-conformities.
- All requirements and functions shall be covered during the annual surveillance audit. No sampling assessments are allowed; all sites must be assessed during every audit.
- Technical product and process factors shall be evaluated, such as: material/product risk analysis, testing reports, supply chain management, risk control, or calculations for conformity.

The scope statement on the certificate will cover applicable legal and other requirements (RoHS, WEEE, Batteries, Packaging, etc.) in addition to a product scope (such as "design and manufacture of...") such as what would be shown on an ISO 9001 certificate.

Once your organization is certified, the certificate will be posted on IECQ's website at www.iecq.org.

Intertek: Your partner beyond the moment of certification

As an IECQ-recognized Supervising Inspectorate (SI), Intertek is fully qualified to provide certification to QC 080000. But we give you more than a certificate – we give you the tools to improve your business. Our auditing services focus on minimizing business risk while assessing the effectiveness of your HSPM processes in achieving your HSF goals. With a high level of technical expertise and an unparalleled focus on customer satisfaction, Intertek is dedicated to supporting you throughout the life of your QC 080000 certification and beyond.