

International Challenges in Environmental Compliance, Auditing, and Supply-Chain Sustainability

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Abstract

Safety, Health, and Environmental (SHE) professionals face a more complex business environment as they are asked to either directly audit or consult on auditing their employer's overseas operations. Evolving legal requirements throughout the world have added complexity to what was once a matter of the simple application of US and Corporate Standards. This paper details some of the challenges faced by SHE professionals as they approach the compliance, auditing, and sustainability needs of their overseas operations and suppliers. Drawing from practical experience gained over the course of 20 years of international auditing, examples of compliance and auditing systems, as well as approaches to ensuring a compliant and sustainable supply chain will be discussed.

Introduction

In January, 2008, manufacturing employment in the US hit 13.75 million (BLS, 2008). This represents a continuing decline and the lowest manufacturing employment rate since July, 1950 (CBO, 2004). Continued softness in the economy could lead to manufacturing employment reaching a level not seen since the Great Depression. In addition to softness in manufacturing jobs, the US has been suffering a manufacturing trade deficit since 1971 (Census, 2008), which has grown from a 2.6 Billion (USD) surplus in 1970 to a deficit of more than 815 Billion in 2007. Most of these manufacturing losses have resulted from off-shore production.

Further, some of the US' largest "manufacturers" actually own manufacturing facilities. As an example, Nike – a \$15 Billion revenue company – operates only two manufacturing facilities in the US, operations manufacturing the proprietary air insoles for Nike shoes. Cisco Systems - a \$28.5 Billion revenue company - directly owns no manufacturing operations for its main products, and owns only a small amount of manufacturing for smaller subsidiaries. Increasing globalization of business has driven the factors of production out of the US. US manufacturing largely consists of those products too local to ship, too bulky to ship, or too light to ship.

As a result of this globalization, Safety, Health, and Environmental (SHE) employees are increasingly called upon to assist with issues of compliance in overseas locations and/or are asked

to support initiatives to improve supply chain “corporate social responsibility” or “sustainability.” Further, US manufacturers have faced increasing pressure in off-shoring manufacturing jobs to ensure that foreign operations meet standards similar to those achieved by domestic operations in practice.

International compliance auditing is not a new practice. Major international manufacturers such as Kodak and Johnson & Johnson have had long-standing practices of conducting EH&S audits for all of their manufacturing facilities, without exception. For example, the J&J audit program was initiated almost 20 years ago, with audits against a broad corporate standard that was nearly all-inclusive.

What has changed in today’s business climate is the shift to increased regulation in international markets and increased pressure on the supply chain to comply and not shift compliance costs to low-cost providers and low labor rate countries. The following addresses some of the issues associated with regulatory compliance auditing in this business environment.

Understanding International Compliance

The USEPA was formed in 1970 as a result of the Reorganization Plan No. 3 of 1970 (USEPA, 2008). From then until the formation of the European Union by the Treaty of Maastricht in 1993, the USEPA was the primary environmental regulatory body in the world. With an increase in power of the EU, more and more environmental regulations are being driven by the decisions of the European Community.

In fact, the transition from a “command and control” regulatory scheme to a more market-driven scheme (favored by the EU) has been a direct response to the international regulations, treaties, and agreements that have resulted from EU regulations.

It is with this background then, that we consider international regulatory compliance. In the 1980s, international compliance largely consisted of applying some form of interpretation of US regulatory requirements to international operations. Major international manufacturers developed international audit programs, following the landmark Arthur D. Little publication - *Environmental Auditing: Fundamentals and Techniques* (Greeno, et al., 1987). Generally, audit programs focused on either best management practices or the enforcement of a rigorous corporate environmental (and, to a lesser extent, health and safety) standard on such facilities.

International compliance in the 1990s was the purview of the management systems experts with the 1996 publication of the ISO 14001 standard. ISO 14001 moved the focus from regulatory compliance and from rigorous international environmental standards to a looser, more management system oriented approach. As a result, ISO 14001 conformance auditing replaced regulatory compliance auditing as industry approached the new millennium.

The year 2000 brought with it increased regulation throughout the developed and developing world. The EU had spent much of the 1990s finalizing approaches to a broad range of regulation, including the implementation of specific hazardous waste requirements, the development of air quality control guidelines, and the development of chemical specific

regulation. The EU development of Integrated Pollution Prevention and Control (IPPC) directive in 1996 (EU, 2008), led to a new paradigm in the assessment and control of multimedia environmental emissions. The IPPC requires that permits for new and existing facilities take into account the whole environmental performance of the facility evaluating emissions to air, water and land, generation of waste, use of raw materials, energy efficiency, noise, prevention of accidents, and restoration of the site upon closure.

In addition to the impact in Europe, the development and expansion of environmental regulation in the EU has led to the shift from US-patterned to EU-patterned regulation in the developing world. The development of permits in countries such as China, Malaysia, and India now follow closely the requirements of the EU, making it more difficult for US-based compliance professionals to understand the requirements or the basis for the requirements in the permits.

The increasing complexity in international regulation has given rise to an increase in the number of offices of environmental consulting firms in international locations, an increase in the number of lawyers practicing international environmental affairs, and an increase in services catering to compliance professionals offering to provide regulatory affairs information. Such services have taken the form of commercial ventures, while some (such as EIA-Track) have been developed as cooperative efforts of industry associations.

Determining effective compliance with international regulations has now evolved to a complex effort involving an assortment of information sources, a broader and deeper SHE organization, and more use of local consultants and attorneys. Multinational companies now rely more on metrics and monitoring of specific environmental benchmarks. Collection of waste generation, water and energy use data have become surrogates for environmental compliance with the best programs able to determine a facility's performance based on such "remote-sensing."

International Auditing

International auditing programs have evolved alongside the regulatory imperatives. Auditing programs in the 1990s were relatively simple projects, in many cases involving US-based employees sent off to the developing world with a camera and a checklist to evaluate "conformance" to US requirements.

Modern-day SHE auditors often arrive at international sites with extensive protocols (or audit checklists), compendia of regulations (often filling one or more DVD-ROM), and the occasional local consultant or interpreter in tow. Auditing has become more of a contact sport as more is expected and anticipated at international locations.

Corporate programs have been expanded to include international regulations as well as the US standards. In many cases, local regulations are more aggressive than those experienced in the US. For example, the Israeli Ministry of the Environment requires (under the Hazardous Substances Law of 1993) that anyone using hazardous materials to apply for a "Poisons Permit." The terms of the Poison Permit are often detailed and complex (and must be translated for an English-only audience) and represent a considerable compliance burden on a facility.

International regulations may also be similar but have significant differences in their application. For example, the Canadian National Pollutant Release Inventory (NPRI) and the US Toxic Chemical Release Inventory (TRI) are virtually identical on their face. However, the implementation and reporting requirements of the NPRI are substantially different – understanding of one regulation does not guarantee knowledge of the other.

A further challenge faced by international auditors is the fact that operations may not be concerned with the “letter of the law,” but are adhering to a standard based on communications with local or state officials or an appreciation of the regulations derived from prior operating practices. In particular, this becomes an issue when auditing recent acquisitions, or in the case of China, former state-owned operations or joint ventures which have reverted to wholly foreign-owned enterprise status.

In China, as well as a number of other developing countries, it is not uncommon for rules to be applied “unequally.” This double-standard applies when a long-standing locally owned business is acquired by a foreign entity. What was formerly an approved activity or what was previously viewed as “business as usual,” is now subject to the scrutiny of full regulation. Stories of plants shut down by local authorities for a variety of reasons abound throughout the developing world.

Care needs to be taken, in the developing world, to fully understand the requirements of a facility’s operating permit or operating authorization. In many cases, a facility may have been granted an authorization based upon operating projections or scenarios that have not been fully reviewed or updated. Given the fact that such permits or authorizations are not in English and translations can be faulty, accurately determining compliance can be a substantial challenge.

Prior to a compliance audit for a facility in the developing world, auditors are well advised to thoroughly review compliance obligations and develop a framework for a compliance assessment. This can be accomplished by purchasing a protocol (a number of organizations and for-profit companies are engaged in provision of these services), meeting with an environmental consultant with experience or offices in the country of interest, or engaging a colleague who has facilities in the country of interest.

In particular, auditors should focus on the generation of hazardous waste, the ultimate disposition of such waste, and the appropriate national requirements for managing waste. In many cases, what is considered a waste may be subject to different interpretations depending on local officials.

Lastly, auditors should consider any environmental monitoring provisions (e.g., wastewater monitoring, air quality) which exist in the environmental authorization. In many cases (e.g., Korea, China, Taiwan) the environmental monitors may be independent state entities, state subcontractors, or the same agency that issued the original permit. As such, an assessor may want to consider using a third-party to complete testing at the facility to confirm or validate these results. By the same token, it is often recommended that SHE auditors consider reviewing hazardous waste disposal locations and practices.

Safety & Health Considerations Internationally

Finally, as safety & health auditors, we are concerned with how and what to audit in the safety and health arena. Of course, OSHA rules and requirements do not apply internationally. The framework for safety regulations is a true patchwork quilt. While jurisdictions in Western Europe, Canada, and Australia (as examples) have established health and safety regulations, the specifics of those regulations may be dissonant to US practitioners. For example, requirements for fall protection and other construction-safety related items vary considerably in international jurisdictions.

In the developing world, health and safety regulations are generally non-existent. While China requires new facilities to complete a health and safety assessment before permitting, there is little enforcement of safety permits once they are issued. In general, facilities are adopting US standards for health and safety. However, wholesale implementation of US requirements is fraught with problems.

As an example, consider the use of personal protective equipment in many Asian cultures. In some cases (especially in China), workers are asked to wear respirators to protect them against lower levels of particulates than they experience in their home environment. In a like fashion, they are being asked to wear hearing protection in circumstances where noise exposures are lower than they will experience on their commute home on a motor scooter.

Further, Asian workers are unlikely to willingly change out personal protective equipment, and often remove PPE (especially safety glasses) in a misguided attempt to extend the useful life. Workers are also often uninformed regarding the purpose of PPE. Auditors have observed employees with Tyvek suits used for contaminant protection with holes cut from the armpits or back to provide employee cooling.

Of special interest in the construction arena is safety associated with scaffolding and working at height. Again, in many developing economies, there are no safety standards associated with the quality of scaffolding and correspondingly, no requirements for employee safety while working at heights. Employees who have not used fall protection routinely will often find it confining and will try to defeat it at every turn. Auditors need to explore the systemic reasons for non-conformance with requirements, otherwise changes made to meet the requirements of the audit or assessment will be cosmetic and short-lived.

Supply-Chain Sustainability

International businesses, especially those headquartered in the US, have found themselves under increasing pressure to impose safety, health, and environmental mandates on their supply-chain. In particular, non-governmental organizations (NGOs) have highlighted worker health and safety and environmental non-conformances as methods for multi-national firms to avoid costs by shifting production overseas. If operations are part of a company's owned operations, pressure from the NGOs is often lessened through the development of a consistent program across all operations. However, when production is conducted by third-parties, this control no longer exists and concerns are raised.

In order to address these concerns, many manufacturers have begun to conduct supply chain audits, examining not only SHE concerns, but also issues of labor fairness and ethics. Amongst such efforts, one of the most prominent is the electronic industry code of conduct (www.eicc.info), which includes participation from many of the largest electronics manufacturers, including HP, Cisco, Lenovo, Samsung, and IBM.

The EICC have developed a five-step supplier engagement model which provides a useful insight into developing supply-chain sustainability:

1. **Introduction:** In this phase, the EICC works with a supplier to introduce the code of conduct to suppliers and to conduct an initial assessment or baseline for future comparisons.
2. **Assessing:** During this phase, EICC suppliers conduct self-assessments to review their progress towards meeting the goals of the code of conduct. During this time, they also develop implementation plans to meet their goals.
3. **Validation:** During this phase, the suppliers receive a formal audit from the EICC or a member company, and develop a corrective action plan.
4. **Reporting:** During this phase, the supplier is requested to provide specific data regarding performance to the requirements of the code of conduct. These reports are reviewed and trends and risks are identified.
5. **Sustaining:** At this point, a base has been built to sustain the supply chain's conformance with the requirements of the code. Efforts in continuous improvement are made, and progress is reviewed. Where needed, additional audit and assessment activities are completed.

The EICC model is one that works well for the development of supplier compliance within the SHE space. Suppliers held to regular and routine assessments, as well as capacity-building opportunities, are more likely to provide consistent SHE results.

Conclusions

International SHE compliance, auditing, and supply chain issues have changed substantially since the early 1980s. The growth in international regulation has moved the compliance space from one patterned after issues and opportunities in the US to one more focused on local regulatory systems, many derived from EU regulations. SHE professionals addressing multi-national compliance need to adapt their methods and programs to address the shifting environment.

Models for auditing and maintaining the integrity of the supply-chain need to include a close examination of the international regulatory and cultural climate. Specific provisions need to be made to assess compliance on a sustaining basis rather than as a snapshot in time.

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