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Environmental Management System Certification

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Abstract

ISO 14001 prescribes the requirements for a system, not environmental performance itself. Similarly, certification is of the management system itself, not environmental performance. An audit is not conducted to ascertain whether your flue gas emissions are less than X part per million nitrous oxide or that your wastewater effluent contains less that Y milligrams of bacteria per litre. Consequently, the procces of auditing the system for compliance to the standard entails checking to see that all of the necessary components of a functioning system are present and working properly.

A company can have a complete and fully functional EMS as prescribed by ISO 14001 without being certified. As certification can add to the time and expense of EMS development, it is important for you to establish, in advance, whether certification is of net benefit to you. Although most companies that develop an EMS do in fact certify, there are cases where certification does not add immediate value. Certification is not always beneficial to small and medium sized companies. Certification is not always necessary for companies with one or two large clients with environmental demands who are satisfied that you have a functional EMS (second-party declaration). Whatever decision you make, it is important to remember that just as a driver's licence does not automatically make you a good driver, ISO 14001 certification does not automatically make your company environmentally benign or ensure that you will continually improve environmental performance. The system is only as good as the people who operate it.

Keywords: EMS, environmental performance, ISO 14001, the management system.

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1. Intoduction

All components of the environmental management system should be coordinated with other important functions of the organization, especially at the policy level. For example, the policies, objectives and targets of the finance, operations and safety departments must be considered and, if possible, be compatible with those of the environmental department.

If an organization is alredy ISO 9000 certified or at least close to it, considerable time can be saved. For example, the following materials alredy prepared for ISO 9000 certification can be used for ISO 14000 with only minor change: organization and personnel procedures, records and control of documents, audits and reviews. Many other sections from ISO 9000 documents can be used as a starting point; however, considerable modification would need to be done, for example on the procurement section, to bring them up to ISO 14000 standards (Rothery, 2009).

Most organizations are alredy in the process of environmental management. Therefore the starting point in the certification process will be different for each organization depending on how long they have been in operation and how detailed their present environmental system is.

2. Initial assessment and definition of purpose

Before an organization begins massive design and implementation efforts, and initial assessment should be done. This will help determine the most critical needs exist for new environmental management systems. For example, has an effective policy been established by executive management? If most major systems are in place then the initial assessment will suggest where upgrades are needed. A formal initial assessment document is not required for certification. The assessment should identify documents, actions and procedures that are required for certification, such as a policy statement, the management system, planning, operations, personnel, training and goals.

A definition of purpose should be made in association with the initial assessment. The purpose could be to better protect the environment, to become ISO 14001 certified, to become more cost effective, to improve community relations, to improve market appeal and numerous other purposes.

To be successful, the entire certification effort should be summarized and presented in the initial assessment and approved by top management of the organization. The initial assessment should be presented to top management in a fashion that will attract their attention. This presentation may come from

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the organization's environmental manager or an outside consultant. The initial approach can be either verbal or written, depending upon the situation . For example, it may be suggested at a routine meeting of company management.

A preferable method of introduction over casual mention during a meeting is by an internal letter to one or two of the executive managers. Figure 1-1 is an example of a letter or memeo that could be used. It is important to make the correspondence clear and brief. A telephone call or a letter from a consultant briefly suggesting the need for the certification and offering to outline further details and benefits are other possible introductory ways.

Whoever approaches management initially must, without fail, be thoroughly familiar with ISO 14000 and how these standards will apply to the specific organization. They should be prepared to briefly outline at the first meeting the background of the standards and their impact on the organization, consumers and the public. The individual's knowledge and presentation at this meeting will determine the degree of acceptance of

TO: CEO

FROM:

SUBJECT: ISO 14001 certification

I need to bring to your attention that there is currently a monumental effort by cuntries throughout the world to establish a universal standard for environmental management. These standards will affect all phases of our operation. Organizations who meet and achieve these standards applicable to their areas of endeavor will be certified by independent ISO auditors, as was the case with ISO 9000. Certification is not mandated by any country or political organization but effectively becomes necessary if one is to remain competitive in business.

We have followed the development of these standards and are in a position to be of service to you to obtain certification. I suggest a preliminary meeting with you to discuss this in greater detail.

Fig. 1 Example of an ISO 14000 Concept Introduction Letter.

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the certification process by management. The advocate must be prepared to answer searching questions in all areas relating to certification. An outline to obtain certification could also be presented at this time.

The initial assessment can be conducted by a consultant or by inhouse personnel. Whoever is responsible for the assessment must view the work and environmental effects created by the company from an entirely neutral or independent view. If not, a genuinely effective policy based upon this assessment will not be developed. The resulting program will not attain the necessary results and certification will be delayed or never obtained. One can say, therefore, that the future of the organization may depend upon the thoroughness, accuracy and integrity of the initial assessment. All initial assessment work with results and conclusions must be documented for reference during certification procedures.

The initial assessment should include the followind:

- *Copies of ISO 14000 Standards* – At least the standards generated by SC1 or the EMS standards should be attached along with the annexes and guidance documents SC1. The standards prepared by other subcommittees, which are not required, would not have to be attached.

- *A Listing of Major Applicable Regulations* – A listing of applicable regulations and the sections of the most important regulations should be assembled. If this is too great of a volume of paper, then it might be more meaningful to attach regulation summaries, guidance documents or regulatory summary charts.

- *A Listing of major Impacts of the Operation* – Considerable attention to detail is especially important for this step. All impacts, no matter how small, should be identified. Quantification and elimination of insignificant impacts will occur later. Impacts should be identified that are associated with the site/operation, raw materials, vendors, product and/or service.

- *Current Environmental Controls* – A listing of current actions should include their effectiveness, completeness, staffing, funding and present top management support. This would also include procedures in place, use of consultants and any major environmental control system currently operating.

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- *Additional Activities Needed and Areas to Be Covered* - At this point in time a best guess should be made of what systems should be added to protect the environment. These may later become recommendations made to management to improve environmental controls and/or allow certification. As the assessment and planning continues, more systems will become obvious.

- *Estimated Cost and Benefits* – When all these recommendations are made to management, the first questions asked will probably pertain to the costs and benefits. If they are at least estimated roughly at this point, funding activities can be started earlier.

3. Policy Preparation

A comprehensive environmental policy statement that will cover all of the employees in the organization should be prepared. The policy should address impacts and regulations in a broad sense. It should also be supported by senior management and communicated to all employees and interested public. The policy preparation should start very early in the process and be continually upgraded.

Policy preparation needs to be done very early in the proces since upper management approval is key to success. Even if the policy is only roughed out at this point, it will at least provide overall direction to the process when it is especially needed. A rough draft of the policy should be widely circulated for upgrades and input from as many employees as physically possible. This will increase acceptance to the maximum extent possible.

3.1. Obtain up – Front Resources

Certain resources will need to be obtained early in the process in order to complete the rest of the steps. Financial resources are the first that must be made available. Organization resources, such as personnel, may also have to be established, if they are not already in place. Once this occurs training resources can be identified and provided. Purchase of supplies and other support should also occur.

3.2. Prepare Procedures for Identification of Impacts and Requirements of Others

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Procedures for identification, assembly, and analysis of impacts and regulations into the organization's systems are needed. Even though they are not required for certification, it is a good idea to actually obtain the regulations and impacts and assemble them into one or two binders. This step is essential and allows for the meaningful design of environmental management procedures and controls.

3.3. Objective and Targets

Objectives and targets should next be prepared in order to achieve the policy statement. The impacts and regulations previously identified should also be considered when the objectives and targets are prepared. The objectives would include statements such as establishment of a waste minimization program. Targets would be specified for each objective and present numerical goals, such as 10 tons of acetone waste recycled in 2006. As with the policy statement, the objective and target preparation should start early and be continually upgraded.

3.4. Utilization of Existing Documents and Resources

If documents alredy exist for successful programs that address some of the ISO 14000 considerations, they should be utilized. These could include most of the good environmental management procedures and many of the quality systems already in place. For example many ISO 9000 documents and systems, such as training, could be used as is or with very little adaptation since there are many common links or elements. Appendix B of the actual SC1 specification lists the documents that are common to both ISO 14000 and ISO 9000.

3.5. Preparation of New Operating Procedures and Action Plans

Once the above steps have been completed it is time to prepare the new procedures that are missing. Far too often many environmental management systems are composed of unwritten procedures and standards. This usually leads to confusion, lack of direction and negative environmental impacts. Even if an individual plans to an environmental control action only one time, it is still good to put it in writing so that questions can be answered when they come up about what was done.

An environmental management manual(s) should be set up if one does not alredy exits to contain all the different procedures and standards. It should also contain a copy of the company policy. A procedure or binder that deals with regulations and one that presents the procedure for identifying and dealing with

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impacts are additional examples. If a very rough draft or initial collection of existing materials is done quickly, the task will not seem as overwhelming.

3.6. Implementation of Programs

Now that the paperwork is done, it is time to start the real action. Far too often some organizations only write and talk about environmental protection. The environmental management systems need to be implemented to actually help the environment. This may seem obvious; however, in real life administrative delays, apathy, and inadequate personnel and training can prevent environmental protection and improvement from happening. A good top management policy, energetically pursued will assure success. Knowing that continued operation depends upon innovative environmental protection, good management will create the necessary authority and funding for an effective program. The bottom line is that certification will require implementation in addition to the preparation of procedures and documents.

3.7. Ongoing Auditing, Management Reviews, Correcion and Follow – Up

By continually auditing or reviewing the progress an organization is making in environmental management, it is possible to suggest meaningful correction and follow-up. This field is changing so rapidly that adjustments need to be made almost daily. Once the audits are completed, the corrective actions need to be made promptly. Liability problems develop if the file shows correction was needed but not done. The audits, reviews, correction and follow-up will result in continuous of the environmental management system. It is always possible to improve the quality of the environmental controls with a net positive impact on the organization and the living things within and around it.

3.8. Is ISO 14001 Registrations Required?

This simple example illustrates how European environmental directives can affect American manufacturers and the processes they use. But would this change in process operations, required to adapt to the Italian market demand for heavy metal-tree paper, automatically require American suppliers to achieve ISO 14001 certification/registration? Drawing on the ISO 9000 experience, I believe that the reasonable answer would be yes. Why? Suppose that Italian government now adopts a national directive stating that all suppliers to the Italian government must be ISO 14001-certified. Would that affect non-European suppliers? Probably yes. Indeed, since italian suppliers will now have to become registered to ISO 14001 or an equivalent, the legal requirement is very likely to move down the supplier chain until foreign suppliers eventually become affected by the directive. Indeed, if an Italian supplier obtains some of his products,

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subassemblies, or even raw materials from overseas, he will have little choice but to require his (overseas) suppliers to become ISO 14001-certified/registered. The global process will begin. Within a couple of years, U.S. suppliers will begin requiring ISO 14001 certification from their own (national) suppliers.

The above scenario is not far-fetched. In fact, some countries are already incorporating ISO 14001 requirements into their own legal requirements. In Brazil, for example, companies have been financially motivated to achieve ISO 9000 certification. Brazilian firms registered to one of the ISO 9000 standards can apply low-interest loans, which in Brazil can be as low as 4 percent per month, an excellent rate when compared to the 45 percent a month experienced in July 1994! Encouraged by the program (Brazil has the highest number of ISO 9000-registered firms in Latin America), the Brazilian government decided, in 1995, to implement a similar program with ISO 14001. No doubt, other countries will follow. It remains to be seen, however, if Brazilian firms that import goods from the United States will require their U.S. suppliers to be ISO 14001-registered/certified.

3.9. Internal ISO Standard Audit

When an organization feels it is close to completing the items noted above, it is a good idea to do an internal audit. This type of a practice audit will help identify last minute corrections that still need to be done. The audit is only valuable if the internal auditors are trained to be critical of their own organization, which is sometimes hard to do. A properly performed audit by well-trained internal auditors who are given sufficient latitude to perform their jobs will save the organization time and money in the long run. It will be far cheaper for an internal team to identify and facilitate correction of as many problems as possible than to hire external auditors.

3.10. Outside Auditor Audit

The actual audit for certification purposes is usually done by outside independent auditors. More credibility is usually given to these thirdparty audits because they are felt to be less subjective. On the other hand the auditors may not be familiar with the particular industry being audited. If this is the case it is a good idea to start a positive relationship with the auditors by providing some up-front technology education. Overall, however, the auditors must be qualified to do environmental management auditing and approved by ISO before they can give certifications. These individuals are highly trained in auditing and pride

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themselves in being tough. If ISO 9000 is any indication it would not be surprising to see a 50 percent certification failure rate for first-time audits.

3.11. Certification

Based upon ISO 9000, if the organization passes most components of the audit, the certification will be awarded. This would apply only if the failed components are no considered major deficiencies. Failure requires corrective actions and reassessment within a specified period of time.

Certification can occur in three different ways. If it is done by an outside independent auditing firm that is approved by ISO, the certification will carry the most weight. A second-party certification occurs when it involves suppliers under contract. In this case the audit could be done by the organization that uses the supplier. Self-certification obviously carries the least weight; however, it is better than no certification at all. No matter which type of certification method is selected, it is at least a proactive step in the right direction.

TC207 is promoting integration and certification of ISO 14000 with ISO 9000 via a coordinating committee (TC176/TC207). Integration is recommended by some since they are related and could complement one another in certain aspects. Integration, however, could threaten certification of both if one is not up to the standard. Whether they are officially combined or not, they must at least be compatible.

3.12. Continual Improvement

By doing routine internal audits and monitoring, it will become evident that the policy, objectives, targets and plans will have to be modified. Frequently upgrading the entire system will keep it cost-effective and impacts will be reduced to the maximum extent possible. Continual improvement is not really a last step. It is an integral part of every step in environmental management whether it is mentioned or not.

4. Conclusion

As was true for the ISO 9000 series, the ISO 14001 standard will mean very different things to different companies. Large chemical plants, particularly those that already satisfy Responsible Care, should have little difficulty understanding the intent of the standard; they may nonetheless experience some difficulties implementing ISO 14001. Small to medium-size companies will most likely experience the most difficulty with the standard. The obvious challenge for small to mediumsize businesses will be the lack of available human resources needed to implement and maintain ISO 14001. For companies that are alredy ISO 9000-registered, the task should be much easier because, in essence, ISO 14001 is nothing more the principles of quality assurance extended to the quality of the environment in general. Thus, whereas ISO 9000 focuses on

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product characteristics and customer satisfaction, ISO 14001 emphasizes environmental characteristics and the demands of the community surrounding an organization.

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