

ISO 14000: IMPACT ON MINING AND RECLAMATION

by

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Abstract: Environmental regulation and compliance in the mining and reclamation industry is in a position to take advantage of the ISO 14000 standards being developed by the International Organization for Standardization. The purpose of this paper is to provide environmental managers in the mining and reclamation industry with a basic understanding of the ISO 14000 environmental standards which have traditionally been implemented by conventional manufacturing industries. The paper covers the history of the ISO, its acceptance by industry generally, the ISO 14000 standards being utilized currently and those which are proposed for the future, the benefits associated with implementation and compliance with the standards, and a discussion of ISO 14000 standards' applicability in the mining and reclamation industry. There are seven areas which constitute the ISO 14000 set of standards: (1) Environmental Management Systems; (2) Environmental Auditing; (3) Environmental Labeling; (4) Environmental Performance Evaluation; (5) Life Cycle Assessment; (6) Terms and Definitions; and (7) Environmental Aspects in Product Standards. A commitment to regulatory compliance and sound environmental practices along with ISO certification can potentially provide greater access to capital because lenders will view an environmentally healthy organization as a better risk, it can provide defenses against products liability or personal injury lawsuits, and protect against criminal liability. Implementation of ISO standards can help avoid risks associated with business practices, ensure early detection of potential regulatory violations, and hence ensure company profitability by avoiding discovery of a violation by state and/or federal agencies. It can demonstrate a sincere commitment to regulatory compliance which may in turn provide reduced oversight by state and federal regulatory agencies.

Additional Key Words: International marketplace, EMS requirements, EMS guidelines, ISO 14000, environmental compliance, environmental audits.

Introduction

In the past two decades, environmental regulation compliance has become a major issue for business and industry in the United States. With thousands of pages of federal environmental regulations, and even more state regulations in effect, every business must tailor its programs toward compliance with several different environmental regulatory programs. This is especially true of the mining and reclamation industry; an industry that must deal with a wide range of issues related to permitting, air, water, waste disposal, enforcement actions, and reclamation activities.

Environmental regulation and compliance are no longer limited to the United States. International corporations are now faced with environmental compliance in many countries with different regulations. As the world market opens up, there is an increasing need for uniformity in environmental compliance. The International Organization for Standardization (ISO) 14000 set of international environmental management standards may provide that uniformity. ISO/DIS 14001, Environmental Management Systems, et. seq. (August, 1995). The mining and reclamation industry is not insulated from the international marketplace.

The primary purpose of this paper is to provide environmental managers in the mining and reclamation industry with a basic understanding of the ISO 14000 environmental standards and how they may impact current and future environmental management in the United States. Although the ISO 14000 standards are being developed primarily for the benefit of manufacturing industries, there are certain aspects of the standards that should be beneficial to the mining and reclamation industry.

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International Standards (ISO 9000 and 14000)

As the international marketplace has expanded in recent years, there has been an increasing demand for uniformity in certain business practice standards. The drive for such uniformity has been led by the European common market countries and driven by international industries such as the semi-conductor industry.

In response to this demand for basic international business standards, the International Organization for Standardization (ISO), based in Switzerland, formed technical committees (TCs) to actually develop international standards to facilitate international trade. ISO initially developed a set of quality control standards that were adopted as the ISO 9000 standards.

ISO 9000 was developed in the late 1980s to address quality management issues. Since its development, the 9000 series of standards has met with international acceptance and credibility. ISO 9000 has become an accepted condition of commerce for many organizations worldwide. The widespread acceptance of the ISO 9000 standards led to a demand for similar standards related to environmental compliance. The developing ISO 14000 standards are ISO's response to that demand.

The ISO 14000 standards are a series of environmental standards that relate to both environmental management and compliance. Contrary to popular belief, the ISO 14000 standards are not simply a set of environmental audit protocols or specific compliance regulations. The technical committee responsible for the creation of the 14000 series of standards, TC 207 is made up of representatives from approximately fifty countries and has been working since 1991. Although the ISO 14000 standards focus on environmental management, they are similar in form and focus to the ISO 9000 series of quality standards.

It is critical to understand that the ISO 14000 standards do not set specific regulatory compliance standards, but instead assure that a management structure is present which guarantees compliance with applicable environmental regulations. It is this management structure which makes the ISO 14000 standards important for mining and reclamation companies, even though they are not traditional manufacturing businesses. Also, environmental auditing and the ISO 14000 standards go hand-in-hand. ISO 14010 provides a standard audit format that will allow companies throughout the world to utilize the same

general guidelines to monitor their environmental activities and compliance.

ISO 14000 Standards

Seven main areas constitute the ISO 14000 set of standards. These include: (1) Environmental Management Systems; (2) Environmental Auditing; (3) Environmental Labeling; (4) Environmental Performance Evaluation; (5) Life Cycle Assessment; (6) Environmental Labeling; (7) Terms and Definitions; and (8) Environmental Aspects in Product Standards. At first glance not all of these standards appear relevant to the mining and reclamation industry, although in practice, they may well be applicable. ISO 14001, the standard for Environmental Management Systems (EMSs), was formally published on September 1, 1996. It is the basic standard for business certification. The other standards act only as guidance to achieve and maintain certification. The other standards are in various stages of development.

The ISO 14000 standards begin with a different premise than most environmental compliance programs in the United States. United States businesses generally view environmental issues in terms of regulatory compliance. Their environmental and health and safety programs are organized and defined based on the regulatory constraints they are facing. ISO 14000 begins with the premise that environmental excellence is a management, not a regulatory, issue. The environmental regulations must be met, but legal compliance is only the first step. The ISO 14000 standards take the approach that a well-planned, proactive environmental management system can prevent liability *and* provide competitive benefits. This is a significant difference in management perspective.

The EMS standards contained in ISO 14001 describe the elements of an effective environmental management system that can be integrated with other business management functions. The purpose is to help companies achieve both environmental and economic goals. ISO 14001 only specifies the requirements of an EMS; it neither proscribes absolute requirements for environmental performance nor does it set new environmental regulations. It simply requires companies to comply with all applicable statutes and regulations and to commit to continual improvement of their environmental systems. This approach allows companies the flexibility to customize their own environmental management policies to both their own

special needs and the regulatory requirements that are applicable.

As discussed above, ISO 14001 specifies the requirements of an EMS, which include:

- (1) a commitment by top company officials to develop an environmental management policy that is committed to regulatory compliance, integrates sound environmental practices, and is made available to the public;
- (2) procedures to identify the "environmental aspects" of the company's activities and products and the control the company has to influence those aspects;
- (3) definitions of the roles and responsibilities of individuals and groups within the company that can facilitate better environmental management;
- (4) an appropriate emergency-response procedure; and
- (5) monitoring and corrective action measures.

Compliance with ISO 14001 requires that a company identify the environmental impacts of its business, improve its environmental performance, document its improvements, and maintain an emergency response capability. A company can show conformance with ISO 14001 in two ways. It can either make a self-declaration of conformity or it can use an independent third party to certify conformance. It is expected that independent certification will be the method used by most companies.

EMS Guidelines on Principles, Systems and Supporting Techniques

ISO 14004 is a companion guidance document to ISO 14001. ISO 14004 is used to help companies develop and implement their EMSs. The guidance document establishes key principles for an EMS and provides information and suggestions on how to implement an EMS.

At this time the other ISO 14000 standards exist only in draft form. These standards include: (1) Environmental Auditing; (2) Environmental Performance Evaluation ("EPE"); (3) Life Cycle Assessment ("LCA"); (4) Environmental Labeling; (5) Environmental Aspects in Product Standards; and (6) Terms and Definitions. The following discussion is based on the drafts currently being circulated.

Environmental Auditing

The Environmental Auditing standards outline the general principles of environmental auditing (ISO 14010), provide guidelines for auditing environmental management systems (ISO 14011), and define the appropriate qualifications for environmental auditors (ISO 14012). The ISO believes that environmental audits are an essential part of an effective environmental management system and need to be performed on a regular basis. The importance of environmental auditing and the various standards that apply will be discussed briefly later. However, environmental auditing is not a primary focus of this paper.

Environmental Performance Evaluation

Environmental Performance Evaluation (ISO 14031) is a process to measure, analyze, assess, and describe an organization's environmental performance against criteria set by management. The EPE process includes gathering data, sorting the data, assessing how effectively targets and objectives were met, and reporting the results to interested parties. EPE measures the environmental impacts that can be controlled by the organization. This process is expected to assist companies in continuously improving their environmental performance.

Life Cycle Assessment

Life Cycle Assessment (ISO 14040 et seq.) is a tool for evaluating the environmental attributes associated with a product, process, or service. LCA looks at the product from "cradle to grave," assessing its impacts from raw material extraction, through manufacturing and use, to final disposal. LCA includes four standards: (1) goal and scope definition (ISO 14040); (2) inventory analysis (ISO 14041); (3) impact assessment (ISO 14042); and (4) impact assessment interpretation (ISO 14043). LCA identifies the life cycle stages where the greatest environmental impacts occur, and feeds into the standards for Environmental Aspects in Product Standards and Environmental Labeling.

Environmental Labeling

Environmental Labeling (ISO 14021) provides guidelines for the standardization of the criteria used to determine what sorts of products may use "ecolabels." This is a "truth in advertising" standard that will apply to those companies that make environmental performance claims about their products. The ISO Labeling Standard will provide requirements for three types of labels: (1) a "seal of approval" for products that meet specified requirements within a product class; (2) "single-claim labels" for such things as recycled content or energy efficiency; and (3) an "environmental report card" that uses a life cycle approach, allowing comparison of the environmental effects of the manufacturing and use of products.

Terms and Definitions

The Terms and Definitions standard identifies and defines the technical terms used throughout the 14000 series of environmental standards. Because definitions and usage can differ in the international context, clear and unambiguous definitions for these terms are necessary to ensure uniformity throughout the world.

Environmental Aspects

The Environmental Aspects in Product Standards (ISO 14060) are intended to raise awareness that product design can affect the environment in both negative and positive ways. It recommends the use of life cycle thinking and recognized scientific methodologies in developing product standards that integrate environmental aspects.

Implementation Of ISO 14000

A brief review of the above-described ISO 14000 standards might result in a determination that these standards have no application in the mining and reclamation industry. Such a determination would be mistaken. While all parts of the ISO 14000 standards may only apply to the traditional manufacturing industries, the basic standards are applicable to mining and reclamation. In fact, some members of the mining and reclamation industry already have active environmental management and audit systems similar to those required by the ISO 14000 standards. An upgrade of those systems to the ISO 14000 standards would be a logical step.

When considering whether to implement the ISO 14000 standards, a mining company should also consider the possibility of a new de facto "reasonable person" standard that may be established in legal proceedings. If a mining company implements ISO 14000, it is certifying that it complies with all applicable environmental statutes and regulations and that it is committed to continual improvement in environmental performance. Even though these standards are only voluntary, a plaintiff in a products liability or personal injury case may argue that a company which has not implemented the ISO 14000 standards has demonstrated that it is not committed to environmental compliance and improvement. The reverse of this may also be true: a company that is ISO 14000 certified may be able to use that certification as a defense against such claims. In other words, ISO 14000 certification could become the industry standard of care under the common law "reasonable person" standard.

Environmental Audits

Environmental audits (ISO 14000 or otherwise) are formal, self-evaluations that allow facilities to determine whether they are in compliance with federal, state, and local environmental regulations. The information obtained in the audit provides assurance to management that a facility is in compliance with the appropriate regulations and provides security to corporate officers that a facility is aware of and in compliance with laws that affect the company's profitability as well as civil and criminal liability. The audit can be used to assess the risks associated with existing business practices and can provide information useful to financial and operation auditors and insurance underwriters. Audits can help facilities to identify and correct any potential violations before they are discovered during a state or federal inspection.

The ISO auditing standards, found in ISO 14010, describe environmental audit requirements, objectives and scope, criteria, evidence and findings, conclusions, and reporting. The standards define an environmental audit as a "systematic, documented verification process of objectively obtaining and evaluating audit evidence to determine whether specified environmental activities, events, conditions, management systems, or information about these matters conform with audit criteria, and communicating this process to the client." ISO/DIS 14010 Guidelines for Environmental Auditing - General Principles, Draft International Standard Section 3.9 (August, 1995). In

this respect the ISO 14000 audit standards are similar to present audit practices in the mining industry.

Environmental audits can be very costly both in terms of time commitment and financial resources, but environmental attorneys generally agree these costs are frequently less than a major environmental agency enforcement action. Conducting the audit, and thus being proactive, can save the time and money that would otherwise be spent in lengthy enforcement actions.

Some mining companies already have active environmental audit programs. Upgrading those audit programs to ISO 14000 standards should not require a significant financial investment, but could reap significant dividends. One form of those dividends could be more favorable treatment by state and federal environmental agencies.

An extensive analysis of state and federal audit issues is beyond the scope of this paper; however, a discussion of the relationship between state and federal audit issues and ISO 14000 is necessary. Presently, an increasing number of states are encouraging environmental self-audits by offering incentives in the form of statutory evidentiary privilege and/or immunity from prosecution.

Texas adopted an audit privilege law--the *Environmental, Health, and Safety Audit Privilege Act* (TEX. REV. CIV. STAT. ANN. art. 4447cc (West 1976 & Supp. 1997))--in 1995. The Texas law may be more comprehensive than any other state law because it contains both privilege and immunity and extends them to audits conducted to ascertain compliance with both environmental laws and health and safety laws. At a minimum, the Texas audit law is representative of the most expansive state audit laws now in effect.

The United States Environmental Protection Agency (EPA) has encouraged environmental audits, but also has stated that it is "firmly opposed" to the establishment of a statutory evidentiary privilege or immunity from prosecution. EPA released a new audit policy on December 22, 1995 which provides some limited incentives to self-audit. While the EPA has been critical of many state audit laws, it continues to support the basic idea of environmental self-audits.

EPA has been an active participant in the development of the ISO 14000 standards, so the agency is fully aware of the environmental audit aspects of the standards. There is now ongoing agency discussion

regarding EPA acceptance of ISO 14000 certification in lieu of traditional EPA oversight of business activities with environmental impacts. Several states and federal agencies, as well as the EPA, are exploring ways to relieve ISO certified companies from routine inspections and reporting requirements. The EPA is considering a program that will offer reduced inspections and reporting as well as expedited permitting to facilities that use environmental management systems such as those identified in ISO 14000. For example, over a six-year period, selected facilities may be required to complete annual compliance reports, and they would be audited only during the second and fifth years of the program. All of these initiatives are encouraging methods of replacing traditional command and control oversight with common sense environmental regulation.

There is a significant negative ISO 14000 issue that has been raised by some commentators. That issue is confidentiality of internal company documents and information related to environmental activities. Traditionally, the attorney-client privilege and other legal mechanisms have protected specific documents and information from discovery in evidentiary proceedings, such as an agency enforcement action. State audit privilege laws have extended that traditional protection. In contrast, ISO 14000 is built on a foundation of extensive self-review and public involvement. Arguably, many companies will be reluctant to participate in ISO 14000 if sensitive information is not protected. Some commentators have argued that ISO 14000 requires public access to all ISO related internal company documents and information. A close review of ISO 14000 standards reasonably leads to the opposite conclusion.

ISO 14010 emphasizes that the relationship between the audit team and the client should be one of confidentiality and discretion. The standards prohibit the audit team from disclosing the information or documents obtained and generated during the audit to any third party. The audit team is only allowed to disclose audit information with the express approval of the client unless disclosure is required by law. While there is no direct conflict between the ISO 14000 audit standards and traditional or statutory evidentiary privilege, this is a issue that should be carefully reviewed by any company prior to active involvement in the ISO 14000 certification process.

Future Of ISO 14000 in the Mining and Reclamation Industry

Certification under the ISO 14000 series of environmental management standards may provide

several diverse benefits to the mining and reclamation industry. ISO 14000 certification may lead to better access to capital since lenders are beginning to realize that companies with EMSs are exceeding compliance standards, and thus, lending to them is safer. Certification may lead to lower insurance premiums because companies with EMSs should face fewer environmental liabilities and be better prepared to correct those which arise. In a related matter, companies with ISO 14000 certification should be in a better position to defend lawsuits and/or agency enforcement actions related to environmental problems. Eventually, ISO 14000 may also become the "standard of care" measure of environmental compliance in legal proceedings.

ISO 14000 certification should provide greater access to international markets. Some countries may use the lack of ISO 14000 certification as an international trade barrier. Also, some companies may require that the companies with which they do business be ISO 14000 certified.

Finally, and perhaps most importantly, ISO 14000 certification may provide regulatory relief in the United States. It is not unreasonable to expect that once the ISO 14000 standards are fully implemented, those companies with ISO 14000 certification will receive less oversight and more favorable treatment from EPA as well as state regulatory agencies. Therefore, in the United States, ISO 14000 may provide a tool to assist companies in complying with the existing regulatory requirements in a much more cost effective manner.

For all of these reasons, it is important for members of the mining and reclamation industry to closely watch the ISO 14000 implementation process. For some mining companies it may be wise to incorporate ISO 14000 standards into current environmental compliance practices and, perhaps, seek ISO 14000 certification. For others it may be better to watch and wait. Regardless, the ISO 14000 standards are sure to impact the mining and reclamation industry in varying degrees in the near future.

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