

ISO 14001 and the Mining Metals & Minerals Industry

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WHEN YOU NEED TO BE SURE

SGS



SGS Group

- Founded in 1878
- World's largest management systems registrar and world's largest organization in the field of third-party inspection and verification
- SGS has registered and certified over 60,000 companies
- Over 1100 Offices located in 145 countries



Who in Mining is Registering to 14001?

- Many Mining, Metals & Minerals Companies
- Exploration to production
- Mining, milling, smelting, refining
- Service providers (contract mining, suppliers)

Drivers

- Required or encouraged by parent organization
 - 89% of publicly traded corporations
 - 67% of privately owned companies
- 78% of facilities with publicly traded parent organizations mandated by parent company
- **Regulatory Expectations – most important external influence**
 - Anticipation of regulatory benefits or desire to improve compliance

<http://www.eli.org/isopilots/NDEMS2000Compendium.pdf>

<http://ndems.cas.unc.edu/>

Drivers

- Customer & Stakeholder Demands:
 - 25% (publicly traded & private companies)
 - customer pressures
 - 25% (publicly traded & private companies)
 - stakeholder requests
 - 26% of publicly traded companies
 - shareholder pressure

<http://www.eli.org/isopilots/NDEMS2000Compendium.pdf>

Drivers Continued

- Cost Reduction:
 - 62% All organizations
- Marketing & PR Benefits:
 - 62% Publicly Traded
 - 75% Privately Owned
 - 63% Government
- Environmental Performance/Pollution Prevention:
 - 62% Publicly Traded
 - 93% Privately Owned

Drivers

- Cambior suffered tailings dam failure in South America with resultant bad publicity
- Had difficulty raising new money
- Had EMS but banks were looking for external validation
- ISO brought existing EMS up to speed
- “ISO 14001 has been invaluable in assuring bankers and insurance companies as well as our shareholders that we do things right.” (Grant Feasby, Environmental Coordinator, Cambior, Omai, Guyana)

Drivers

- Important because the Sudbury Smelter relies heavily on the international community as a custom feed smelter and Falconbridge expects to conduct business with reputable companies operating with high environmental standards
- To assist management team to define the organization's environmental mission and determine the methods needed to accomplish these goals
- Falconbridge corporate position was simple..."It was the right thing to do." (Marc Butler, Environmental Supervisor, Falconbridge Smelter)

Drivers

- Better management of compliance requirements and environmental issues (past violations, fines, delayed permits)
- Corporate requirement to build EMS at all key assets
- Legal requirement – negotiated settlement with State of Alaska to have EMS in conformance with ISO 14001 (Gary Coulter, Senior Environmental Coordinator, EMS, Teck Cominco, Red Dog Mine, Alaska)

Drivers

- Environmental Performance Agreements (EPAs)
 - <http://www.ec.gc.ca/epa-epe/en/index.cfm>
- Voluntary
- Environment Canada can stipulate EMS registration in agreement
- Specialty Graphic Imaging Association agreement contains condition “Implementing and sustaining an EMS”
- Section 7 of agreement – strong focus on objectives and targets – reductions of specific substances

**Have the expected
benefits been
realized?**



Benefits (perceived)

- 86% of NDEMS* facilities reported benefits of EMS
- 94% reported improvements in management efficiency
- >75% reported improvements in operational efficiency (non quantified)
 - Reduction in inputs – energy, water, materials
 - Reduced waste generation and disposal
- 53% reported reductions in liability
 - Reductions in insurance costs
 - Improved relationships with regulators – improved compliance, reduced violation fines, expedited permits

*National Database on Environmental Management Systems
<http://ndems.cas.unc.edu/>

Benefits (Quantified)

- Average savings \$90,320
- Reduced materials use – saved average \$45,077 per facility
- One facility (only one) reported increased revenue (\$40,000) by reducing VOCs and selling excess credits
- One facility reported \$273,000 savings-reduced raw materials-more efficient chemical process and reduced packaging
- Highest reported saving \$1,217,000, lowest \$24,000

<http://ndems.cas.unc.edu/>

Specific Benefits

- Credibility in overseas markets (Scott Grant, Cogema, March 2004 CIM Bulletin)
- Better trained staff and contractors and suppliers
–reduced risk on spills and incidents (Marc Butler, Environmental Supervisor, Falconbridge Smelter, Sudbury)
- Consistent Documentation, procedures – better access to documents (Marc Butler)
- Consultants have better sense of company direction
–better focused discussion (Marc Butler)

Specific Benefits

- Forces you to look at continual improvement...not maintain status quo (Linda-Byron Fortin – formerly Falconbridge, now principal in Blue Heron Environmental)
- Forces you to reduce waste (Linda Byron-Fortin)
- Succession Planning:
 - Allows for smoother transition when employees leave and are replaced
- “We found negotiating environmental issues with our suppliers and outsourcing partners much easier as a certified company.”
- “It is much easier to select stocks of ISO 14001-certified companies for a green and or ethical fund.” (Otti Bisang, Credit Suisse)(ISO 9000+ISO 14000 News, 4/2000)

Benefits of registration vs conformance

- Internal: there is more leverage within the organization to ensure continuity of the system...when operations people know that auditors will be coming, they perform
- External: registration gives third party validity and more credibility within the industry
- More credibility with regulators and business partners
(Gary Coulter, Senior Environmental Coordinator, EMS, Teck Cominco, Red Dog Mine, Alaska)
- "... I view EMS as a program that maximizes the workforce's involvement in the environmental requirements of an organization." (Jim Kulas, Manager, Environment, Teck Cominco, Red Dog Mine, Alaska)
- Opportunity to participate in **U.S. EPA Performance Track** – (www.epa.gov/performance-track)
- Once accepted there are rewards for the organization...



Performance Track Rewards

- Less frequent regulatory inspections
- Faster Agency Turnaround and a Designated Contact for PERFORMANCE TRACK facilities



Criteria for Performance Track

- Environmental Management System in place for at least one full cycle **that has been assessed by an independent party**
- History of sustained compliance
- Past environmental achievement and commitment to continuous environmental improvement
- Community outreach



Is there a Canadian equivalent to Performance Track?

- Short answer is No
- Ontario Government proposal to go to risk based inspections (not yet in place)
- Environmental Performance Agreements (EPA)
 - <http://www.ec.gc.ca/epa-epe/pol/en/framework1.cfm>
- Agreements with
 - Refractory Ceramic Fibre Industry
 - Specialty Graphic Imaging Association – Ontario
 - Automotive Parts Manufacturer's Association
 - Dow Chemical Canada Inc. for manufacture of 1,2-Dichloroethane
 - Canadian Chemical Producer's Ass'n – Canada, Ontario, Alberta
 - Dofasco Inc.
 - Algoma Steel Inc.

EPAs - Core Design Criteria

- Senior-level commitment from participants
- Clear environmental objectives and measurable results
- Clearly defined roles and responsibilities
- Consultation with affected and interested stakeholders
- Public reporting
- Verification of results
- Incentives and Consequences
- Continual improvement

Value of third party audits

- Common thread among those interviewed ... one of the values derived from third party audits is that the environment department can drive performance from operations using the threat of the auditors
- Another common thread...value of third party audits... you need to maintain the system to keep certification
- And another...external auditors bring added value in an expertise that calibrates companies against others in that industry sector and against other industry sectors

Value of third party audits

- External and independent
- Internal auditors may become too sensitive to the people they are auditing
- Internal auditors may overlook problems that have become accepted in the organization (Scott Grant, Cameco, formerly with Cogema)
- Internal auditors become very familiar with the system and the people (ie, less objective)
- Internal audits can become “paint by number” (Alan Hair, VP, Hudson Bay Mining and Smelting)

Value of third party audits... continued

- “Not the external audit itself, but knowing we’re going to be audited forces the discipline needed to keep it up”
- “Not counting on external auditor to tell us what’s wrong...we have to do that ourselves” (Pulp and paper company, Environment and Quality Manager)

Conclusions

- Mining and metallurgical companies are realizing the benefits.
- An EMS maximizes workforce involvement in environmental requirements
- Risks reduced
- Share holders and stake holders are assured
- Registration provides credibility.
- Registration is a market tool.
- Registration and external auditing are good drivers for continual improvement.
- Registration and external auditing do bring added value to the process