

Fifth National Consultation Workshop
Environmental Performance Standards

Iron and Steel Sector

March 27, 28 2003 Ottawa

ENGO Report

- **Review of Workshop: Comments, Feedback**
- **Summary of ENGO Perspectives/Presentations**
- **Recommendations**

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Workshop Review, Comments and Recommendations

A. Preface:

This report is a summary of views of Environmental Non-Governmental Organizations (ENGOs) participants in the fifth national consultation workshop on the “Environmental Performance of the Iron and Steel Sector”¹. It includes comments on specific agenda items as well as other relevant issues; highlights of the ENGO presentations, and recommendations from the ENGO community to Environment Canada on the appropriate path forward.

Five environmental Non-Governmental Organization representatives were selected through the Canadian Environmental Network to participate in this workshop.

- Burke Austin, Community Action Parkdale East (Hamilton, ONT)
- Lynda Lukasik, Environment Hamilton (Hamilton, ONT)
- Peter Ormond, Sierra Club (Hamilton, ONT)
- Anna Tilman, Save the Oak Ridges Moraine Coalition (Aurora, ONT)
- Jim White, Ecology Action Centre (Halifax, Nova Scotia)

Other participants included representatives from labour, industry, Federal Departments (other than Environment Canada) included Health, Industry, and NRCAN and the provinces of Ontario and Quebec.

The objectives identified by Environment Canada were as follows:

- To update participants and exchange information and advice on the status of environmental activities related to the iron and steel sector;
- To review the environmental performance of this sector; and
- To plan next steps for further development of environmental performance initiatives.

Specific topics on the agenda included:

- ✓ Strategic Options Report (SOR) - implementation of recommendations
- ✓ Canada-wide Standards for dioxins and furans
- ✓ Ontario’s Clean Air Plan for Industry (CAPI)
- ✓ Ongoing Research Projects:
 - ⇒ Technical Pollution Prevention Options
 - ⇒ Environmental performance review
 - ⇒ Environmental Standards Development
- ✓ Next steps: Proposal for Steel Multi-Stakeholder Advisory Group (SEMAG)

In addition to these talks, the Canadian Steel Producers Association (CSPA) and ENGOs (Lynda Lukasik and Anna Tilman) made presentations from their perspectives. Further to the specified agenda topics, other pertinent issues were raised; many of them

¹ The initial workshop occurred in November 1999, while the previous (fourth) workshop was held February, 2001.

by ENGO delegates. These issues sparked a considerable amount of open and frank discussion.

B. Comments on Process Issues

The workshop was well-facilitated, with ample time allotted for discussion and exchange of views. Nevertheless, there were shortcomings and room for improvement – particularly in the planning of the workshop.

Stakeholder Consultation on Workshop Agenda Development

Pre-workshop teleconference calls with **all** ENGO participants and Environment Canada present would have assisted participants in being better prepared for the workshop – particularly for those individuals attending the first time. It would have given an opportunity to examine the agenda together, and identify changes beforehand as well as background material necessary. (One-to-one calls between participants and the facilitator were useful, but not nearly to the same degree as a call with all ENGOs present).

Provision of Supporting Documentation:

While some preparatory material was provided beforehand, it was not sufficiently detailed to allow delegates to prepare for the workshop. Again, new participants were particularly impacted by this situation. In addition, major background documents should be made available to new participants as well (e.g., Strategic Options Report, Codes of Practice, etc.). Presenters should also have all supporting documents available to accompany their power point presentations.

Shortcomings of Workshop Agenda:

The Environmental Codes of Practice per se were not on the agenda but were frequently referenced throughout the workshop. It is not clear why this important matter was not made front and center as an agenda item in its own right.

Participation of Jurisdictions:

Only two out of the 5 jurisdictions with steel mills participated in the workshop; there was no representation from Saskatchewan, Alberta or Manitoba. This is disturbing in that the workshop is national in focus and jurisdictions have a role and responsibility in the implementation of many of the initiatives, such as Codes of Practice and Canada-wide Standards.

C. Comments on Proceedings and Presentations

1) Status of Recommendations of the Strategic Options Report (SOR):

Environment Canada provided an update on the status of implementation of the 12 recommendations to the Ministers of Health and of the Environment set out in the 1997 Strategic Options Report for the Management of Toxic Substances from the Steel Manufacturing sector (SOR).

These recommendations addressed a number of issues ranging from federal-provincial harmonization to CEPA-toxic emissions, sintering plants, contaminated sites, pollution prevention plans, environmental audits and a ministerial review.²

Note:

- The 12th recommendation calls for Environment and Health Canada to submit a report on the implementation and effectiveness of the SOR recommendations to ministers by March 1999.
- The SOR also recommended the development and adoption of Environmental Codes of Practice for steel mills (by 1998 for specific recommendations).

The SOR is the kernel for the unfolding tableau of initiatives related to this sector. But 6 years after the SOR recommendations were presented to Ministers and nearly eight years after the onset of the Strategic Options Process, the progress on their implementation is “mixed”, to say the least. While some recommendations have been satisfactorily addressed, others are moving forward at a pedestrian rate through various initiatives. Other recommendations remain in limbo with no initiation of implementation efforts to date.

The following list highlights the progress and deficiencies in implementation of SOR:

- Reductions in Benzene, PAHs and metals in effluent are according to target.
- Dioxins and Furans – Canada-wide standards have been developed for electric arc furnaces and iron sintering – endorsed by all ministers (March 2003).
- Environmental audits (third party verification) have been done for all integrated mills for benzene and PAHs; over half the mills have internal audits in place³.
- The reduction in air emissions of metals and overall emissions in sintering plants was primarily a result of the closure of Algoma in 1998 which led to 85% reductions in overall emissions.
- Mercury emissions – Electric Arc Furnaces (EAF)s are the primary target as significant source of mercury – status report in 2000, CCME initiative on mercury switches (auto scrap).
- Contaminated sites – assessment, development of options – progress has been slow and it is questionable whether community views and concerns were adequately reflected in the stakeholder process undertaken for Randle Reef in Hamilton. A true consensus was not reached on the preferred option for remediation of this site.
- Pollution Prevention– no evidence that any plans have been brought forward for discussion and subsequent implementation.

² The Strategic Options Process (SOP) a multi-stakeholder process, was launched in 1995 for 14 sectors, including the Canadian Steel Manufacturing Sector to address the management of substances declared toxic under the *Canadian Environmental protection Act* (CEPA). The Strategic Options Report on stakeholder consultations and recommendations was published in 1997.

³ Environment Canada is encouraging mills to include Code of Practice within audit programs and is conducting a public survey on conformance with codes

- The 12th recommendation, calling for a report on the status of implementation and effectiveness of the SOR recommendations by March 1999 has yet to be fulfilled.
- The Codes of Practice for both integrated and non-integrated mills have been developed (first edition, March 2001) but have not yet been formally adopted.

While the reductions in benzene, PAHs and metals in effluent are on target, ENGOs are disappointed in the lack of implementation of a number of the recommendations, the lack of facility-specific quantitative data to support claims that targets are being met and the infrequent intervals between status reports⁴ and the descriptive nature of their content. This current approach is an inadequate method of delivering status reports. The audits (self or third part) have been “done”, but have not been brought forward for review and examination by participants.

Without having numerical data and comparisons with previous years, it is difficult to assess the degree of progress over time, that is, the trend in emission reductions and to assess the progress in implementing these recommendations overall.

Of particular concern to ENGOs is the lack of action on Recommendation #12, part of which follows:

“It is recommended that a report, developed by Environment Canada and Health Canada staff, on the implementation and effectiveness of the SOR recommendations and relevant provincial toxics managements programs, be submitted to Ministers of Environment and Health by March 1999, so that regulatory action or further non-regulatory action can be taken, as appropriate.

The report to Ministers would be developed in consultation with provincial counterparts, the Canadian Steel Producers Association and industry representatives, other federal departments, and public interest groups. The report would include commitments and performance of voluntary programs and recommendations for regulatory and further non-regulatory actions as appropriate.

Based in part on the findings of this report, Ministers of Environment and Health may decide to regulate toxic substances released from the Steel Manufacturing Sector under Part 2 of CEPA.”

Recommendations - SOR Implementation:

- **Status Reports** are to be provided annually and include emissions data and trend analysis over time and facility-specific implementation plans on recommendations.
- Outstanding SOR recommendations: Environment Canada must **commit** to necessary actions to bring satisfactory closure to these items as soon as possible, in particular, the 12th recommendation, namely, the report to ministers on the implementation and effectiveness of the SOR Recommendations.
- Specific targets indicated in the SOR recommendations need to be revisited and updated in light of more recent developments and improvements.

⁴ The last status report was at the February 2001 workshop.

2) Canada-wide Standards (CWS) - Dioxins and Furans, Iron and Steel Sector

Previous national workshops have focused to a large degree on dioxins and furans. The iron and steel sector was one of the first sectors to develop Canada-wide Standards for the virtual elimination of dioxins and furans. The CWSs for dioxins and furans for Iron Sintering Plants and Electric Arc Furnaces were completed approximately two years ago and finally endorsed by ministers on March 27, 2003⁵. It is now in the hands of the provinces to implement these standards. A review of these CWS standards and their associated P2 plans is to be completed by December 2003.

i) Implementation of the CWS for Dioxins & Furans for Iron Sintering Plants

The first effort to implement the CWS for dioxin and furan emissions from iron sintering plants was initiated at the only operating sinter plant in Canada - Stelco Inc.'s sinter in Hamilton, Ontario. The Ontario Ministry of the Environment (MOE) chose to implement the CWS for dioxin & furan emissions by incorporating the standard as a condition in the sintering facility's existing provincial certificate of approval (CofA) for air emissions. In taking this action, the MOE effectively made the CWS legally enforceable, as conditions specified within CofAs are legally enforceable within the province of Ontario.

STELCO appealed the MOE's efforts to incorporate the CWS into the sinter's CofA (air) to the provincial Environmental Review Tribunal, but withdrew the appeal on March 14, 2003 after a resolution was reached prior to commencement of the formal hearing. This case is explored in more detail in a later section in this report focusing on ENGO concerns regarding effective implementation of CWSs.

As efforts proceed to see the CWS implemented at the sintering plant, stakeholder concerns have emerged regarding timely access to sinter stack test results. The most recent stack test was carried out at the facility in October of 2002. While the results have yet to be released, Stelco representatives have confirmed that emission levels were higher than measured during stack testing done in May of 2001. In both instances, however, the company has indicated that test results bring the sinter into compliance with the CWS dioxin/furan emission limit to be met by December 2002. But, to date, neither the May 2001 nor the October 2002 test results have been made publicly available to stakeholders.

ENGO representatives are not satisfied with this situation. These stack tests are done using a standard protocol and verification process that can be undertaken within a reasonable timeframe and there is therefore no excuse for any delay in issuing the results. The company indicated at the March 2003 workshop that the October 2002 results will not be released until the cause of the increase in dioxin/furan emissions over May 2001 levels have been confirmed. This is also not an acceptable approach. Stakeholders involved in this process claim to be committed to an open and transparent process. Such a process requires that industry stakeholders share verified stack testing results as soon as they are available with interested parties (i.e., federal and provincial governments, ENGOs, community advisory panels). Non-industry stakeholders have no other way to gauge industry progress in meeting CWSs.

⁵ CWS programs fall under the Harmonization Accord. Quebec is not a signatory to the Accord.

ii) Implementation of CWSs for Dioxins & Furans for Electric Arc Furnaces

The CWS emission levels were originally established primarily on the basis of emission factors. However, current dioxin and furan test results for electric arc furnaces (EAFs) indicate 11 out of the country's 12 EAFs are well below the 2006 CWS level of 150 pg/m³ TEQ⁶. This brings to question the effectiveness and relevance of the CWSs and whether they are sufficiently robust to provide incentive to further reduce emissions of dioxins and furans to the ultimate goal of virtual elimination.

Further, test data presented by Environment Canada at the workshop was not up to date even though several EAF facilities did offer updated results. The issue appeared to be one of poor communication between the provinces and federal government and possible issues of confidentiality. However industry indicated that results of tests should be shared between governments and that confidentiality was not the issue in this case.

iii) Technical Pollution Prevention (P2) Options

The CCME has initiated a preliminary study to examine technical aspects of P2 as mandated by the CWS for dioxins and furans. The ENGO community wants to emphasize that end-of-pipe controls should not be interpreted as preventative. Further, there are other dimensions to P2 that need to be brought into the picture, and this should be happening alongside the work on technical options.

Recommendations - Dioxins and Furans CWS:

- A multi-stakeholder review of the CWSs for the Iron and Steel Sector is to commence **forthwith** for completion by December 2003..
- Stack test results must be made available to all multi-stakeholder members according to a timeframe agreed upon by all participants.
- The goal of virtual elimination for dioxins and furans should be **explicitly** stated in CWSs with a specified timeline⁷.
- P2 plans regarding dioxins and furans are to be drafted according to requirements of the CWSs. While a technical P2 project has been undertaken, a much wider scope is needed in considering pollution prevention at the source. More attention needs to be paid to issues such as feedstock, alternative practices to operations such as sintering, energy conservation and efficiency, and cross-media transfers.

3) Environmental Performance Review - Questionnaire

A review of environmental management practices and performance of the iron and steel sector is currently being undertaken by the consulting firm Stratos. This review is being done through a questionnaire soliciting information from the steel mills⁸. At the time of the workshop, the ENGO participants were not provided with a copy of the questionnaire

⁶ The range was 44 – 112 pg/m³ TEQ for 11EAFs, while IPSCO (Saskatchewan) tested at 254 pg/m³ TEQ.

⁷ Virtual elimination as defined by CEPA99, is the “ultimate reduction of the quantity or concentration below the LOQ, the level of quantification”. (The LOQ for dioxins and furans is 32pg/m³ TEQ for air.)

⁸ The questionnaire is designed to assess the extent to which mills have implemented recommendations from the Codes of Practice (March 2001) and the sector's performance relative to specific targets, guidelines and commitments and to report on the implementation and effectiveness of the SOR recommendations.

nor were we made aware of which mills have responded to date or the nature of the responses. This made it difficult to comment on any aspect of the review.

Recommendation:

The results of facility-specific surveys should be made available to all participants and members of related multi-stakeholder groups.

4) Jurisdictional Plans

Ontario gave an overview of the Clean Air Plan for Industry (CAPI), an initiative for developing NO_x and SO₂ limits for the industry sector, including the iron and steel sector. The CAPI program is a derivative of Ontario's Anti-Smog Action Plan and other air-related commitments⁹. The plan has come under severe criticism by the environmental community. One of the most disturbing features of this plan is its proposal for emissions trading between sectors and its convoluted mechanisms to achieve emission reductions. Other issues relate to its use of NO (instead of NO₂); the veracity of emission trend forecast, and the application of emission intensity limits for some sectors rather than absolute tonnage reductions. Ontario is the only province to date to present a "plan" on air quality that specifically includes the steel sector.

Recommendation: Jurisdictional Plans

All 5 jurisdictions with steel mills are to present the status of their plans relevant to the iron and steel sector to stakeholder participants by December 2003.

5) Steel Environmental Multi-stakeholder Advisory Group (SEMAG)

Environment Canada has proposed establishing a multi-stakeholder group, referred to as SEMAG, as a mechanism to provide advice on a number of environmental issues and initiatives affecting the steel manufacturing sector. The formation of this group has been discussed in previous workshops. It is now appropriate to move forward on SEMAG and clarify its terms of reference.

Recommendations on SEMAG:

- SEMAG is to be constituted in the Spring of 2003 as a multi-stakeholder umbrella group to examine a number of initiatives of relevance to the steel sector in a cohesive manner. Priority items include but are not limited to:
 - ✓ Fulfillment of outstanding SOR recommendations, in particular, recommendation #12 (report to Ministers).
 - ✓ Develop management controls for all CEPA-toxic substances identified in the SOP for which no such controls are in place.
 - ✓ CWS for dioxins and furans - review and pollution prevention planning, and
 - ✓ Adoption and Implementation of the Codes of Practice
- The Iron-Sintering MAG should be re-constituted as a stand-alone group led by the Ontario Ministry of Environment and be linked to the SEMAG.

⁹ Other commitments include the Canada-Wide Acid Rain Strategy for Post 2000 and Canada-wide Standards for PM_{2.5} and ozone for achievement by 2010.

- The existing Electric Arc Furnaces Multi-Stakeholder Advisory Group (MAG) can operate as a sub-group of the SEMAG.
- ENGO and labour representatives at the National Workshop have agreed to work together to ensure appropriate and co-ordinated representation on SEMAG and associated Multi-Stakeholder Advisory Groups (MAGs).

D. On-Going & Emerging Issues of Concern to ENGO Delegates

1) Implementation of CWSs – Are Voluntary Measures Good Enough?

A fundamental concern that has been repeatedly raised by ENGO delegates since the initiation of the Strategic Options Process in the mid-1990s is the use of voluntary instruments rather than regulations to curb emissions of CEPA-toxics from the iron and steel sector. The management of CEPA-toxics - particularly in the case of those slated for virtual elimination - is a critically important endeavour from both a human and environmental health perspective. ENGOs therefore believe very strongly that it is inappropriate to rely solely on voluntary instruments to achieve such an important goal.

It is likely that it was the initial expression of these very concerns from ENGOs that led to the inclusion of Recommendation 12 in the 1997 Strategic Options Report – a recommendation requiring that Environment Canada and Health Canada report to the ministers by March of 1999 on the effectiveness of voluntary instruments for reducing the iron and steel sector's emission of CEPA-toxics and whether regulations or enhanced voluntary instruments were necessary.

Four years later, with the March 1999 report requirement yet to be satisfied, efforts continue with the voluntary implementation of iron & steel sector CWSs within affected provinces. But outcomes to date leave a great deal to be desired, underscoring concerns of the ENGO community that voluntary instruments have created an implementation framework that is not accountable to the public and, even worse, potentially places a greater burden on the public to ensure that successful implementation is realized.

ENGOs are not alone in voicing such concerns. In fact, in two reports (1999 and 2002), the Commissioner of Environment and Sustainable Development has remarked on the increased reliance by government on voluntary initiatives to reduce industrial emissions of toxic substances, noting that the process for determining the use of such instruments and the instruments themselves are not robust enough¹⁰.

The 2002 Report also raises specific concerns over the lack of implementation and oversight exercised over the Strategic Options Processes (SOPs) since 1999, noting that departments had not estimated resources required to implement recommended actions (such as regulations, codes of practice, monitoring); the status of implementation of

¹⁰ The 2002 Report of the Commissioner of the Environment and Sustainable Development to the House of Commons, Chapter 1 – Toxic Substances Revisited. The 2002 report is a follow-up audit on the progress of 6 federal departments, (Environment Health, Industry, Natural Resources, Fisheries and Oceans, and Agriculture) in addressing the 27 recommendations of the Commissioner's 1999 report.

recommendations on CEPA toxic substances remains unclear; and Environment Canada's knowledge of actions taken by industry has apparently weakened¹¹.

In particular, the Commissioner recommended that;

- 1) If Environment Canada chooses to use voluntary initiatives to manage priority toxic substances (as well as substances not identified as priorities), it should establish rigorous requirements that include:
 - Clearly identifiable environmental objectives
 - Release levels that exist at the beginning of the agreement
 - Measurable targets and timelines
 - Release or performance measures
 - Clearly defined roles and responsibilities
 - Consequences for failing to meet targets and recognition for achieving them
 - A reporting requirement and provision for credible verification; and
 - Regulator evaluation of the initiative to determine progress and consider whether corrective action is necessary.
- 2) Environment Canada should ensure that releases of priority toxic substances are reliably monitored and reported through either the National Pollutant Release Inventory (NPRI) or other appropriate means, and should periodically publish progress made toward achieving release reduction targets.

The 2002 follow-up report commented on the limited progress in both these cases,

Lessons Learned from CWS Implementation Efforts - The Stelco Sinter Plant

As explained earlier, the Ontario Ministry of the Environment (MOE) decided to implement the CWS for dioxin/furan emissions from the Stelco sinter plant by incorporating the standard as a condition of the plant's provincial certificate of approval for air emissions. By incorporating the standard as a condition in the certificate, the province made the CWS legally enforceable. The company responded by initiating an appeal of the MOE's incorporation of the standard to the Ontario Environmental Review Tribunal.

Using rights provided through the Ontario Environmental Bill of Rights, ENGO Environment Hamilton¹² was able to seek and successfully secured party status in order to fully participate in the hearing. While not obligated to do so, the MOE did confer with all parties to the hearing during the pre-hearing phase – including Environment Hamilton. Discussions between Stelco, the MOE, and Environment Hamilton eventually led Stelco to withdraw its appeal in March of 2003 – prior to the start of a formal Environmental

¹¹ The report did note that some of the CEPA toxic substances are being managed through the 2 codes of practice (non-integrated and integrated mills) with the steel sector.

¹²Environment Hamilton's Lynda Lukasik along with Save the Oak Ridges Moraine's Anna Tilman – both on-going delegates in the national consultations on the environmental performance of the iron and steel sector – participated in the intervention in the Stelco appeal. Anna Tilman sought to secure participant status in the hearing, but any decision on her status was deferred.

Review Tribunal hearing. The appeal was withdrawn with the understanding that the company could seek a future amendment to the certificate and challenge the inclusion of the CWS for dioxins and furans at that point¹³.

While the outcome of the appeal withdrawal was positive in that the CWS remains as an enforceable condition in the sinter certificate of approval, there is no guarantee that this condition will not be challenged in the future by the company.

ENGO lessons learned and concerns emerging from the Stelco appeal:

- The company's decision to appeal the incorporation of the CWS raises concerns about genuine commitment to the implementation of the standard. If truly committed to the CWS, why would a company appeal an effort to make that standard legally enforceable?
- While Ontario's decision to incorporate the CWS into enforceable instruments should be lauded, the Stelco sinter case highlights the shortcomings of this approach. Proponents (i.e., facilities) will always have the right to appeal the inclusion of CWSs as conditions in instruments. Given the potential for such cases to go to full-blown hearings, one must wonder what impacts a successful appeal resulting in removal of the CWS from an operating certificate would have on subsequent efforts to implement CWSs in Ontario.
- The Ontario strategy for implementation is also problematic in that it works on a facility-by-facility basis. There is no indication that the MOE has formally committed to any sort of across the board policy for implementing CWSs in this manner. The ENGO community is left wondering whether the MOE will proactively amend relevant operating certificates in order to incorporate the CWSs. Or will the MOE continue in the present manner – amending certificates to incorporate CWSs as the opportunity arises? This piecemeal approach is cause for concern.
- The Ontario MOE's approach to CWS implementation introduces new challenges and potential burdens for citizens keen to see CWSs properly implemented. The Stelco sinter appeal, for instance, created a situation in which ENGOs felt obligated to intervene and, with the limited powers available to intervenors particularly in the pre-hearing stages, to ensure that effective implementation of the CWS was achieved. But there are costs associated with such interventions. Participation in these hearings requires ENGOs to devote time (usually unpaid) and potentially invest financial resources for the legal and expert support necessary to facilitate effective involvement.

¹³ The CWS emission limits from sinter plants is phased in, with more stringent limits set for the end of 2005 and the end of 2010.

- The recent experience in Ontario is only one example. What is happening with implementation efforts in other provinces? In Ontario, ENGOs worry about how consistent implementation of CWSs will be realized. What about the potential for inconsistencies in implementation from province to province? The potential exists for the emergence of a system characterized by geographic disparities, and the danger exists that we will see the emergence of provinces ‘sheltering’ industries who are CEPA-toxics polluters.

The recent experience with CWS implementation in Ontario underscores the need for swift fulfillment of SOR Recommendation #12. An integral part of this review must be a thorough evaluation of commitments and performance of voluntary programs to date and recommendations for regulatory or further non-regulatory actions as appropriate. This evaluation must include consultation with various stakeholders in order to include differing perspectives on progress with implementation to date.

2) Environmental Codes of Practice:

These Codes of Practice did not come up for discussion but were very prevalent in the workshop. These codes are guidance documents that are to be adopted by Environment Canada. Individual steel sector corporations and facilities **may** adopt the codes *on a voluntary basis*. While provinces can adopt elements of the codes as regulatory standards if they so choose, they can impose more stringent requirements if deemed appropriate (i.e., site-specific ecological or health concerns).

ENGOs question whether the Codes of Practices, if and when adopted, are in themselves effective. While these codes draw on the expectation that industry members will live up to their commitments, what is the safeguard to ensure that individual mills will conform to the codes? The importance placed on these codes stresses the need for an in-depth discussion of their contents and the status of “adoption” by government and facilities.

Recommendations – Codes of Practice:

- The Codes of Practice must be a major element of discussion at the next steel meeting (SEMAG) – prior to summer 2003.
- ENGOs retain support for a regulatory framework as an integral component of Codes of Practice.
- If the Codes of Practice are adopted, measures to assess their effectiveness and compliance/conformance with the codes need to be determined.

3) Health and Environmental Concerns

The iron and steel sector is a major source of pollutants known to have many adverse effects, from being carcinogenic, leading to respiratory diseases, to impacting adversely on organs such as the heart, kidney and liver and developmental and neurological systems. Some of these pollutants are persistent and remain in the environment for decades. The effects of many of the substances are irreversible.

While the impacts of chronic (long-term low-level) exposure and *cumulative and synergistic* effects of multi-pollutant exposure through air, water and soil are not well understood, they add to the confounding health and environmental pressures faced by local communities as well as regions thousands of kilometres away.

Indicative of issues faced by communities with steel mills, a recent health study done at McMaster University, Hamilton, has revealed that human and wildlife populations in the proximity of steel mills may be at risk of developing germline mutations more frequently than the population at large because of the inhalation of airborne chemical mutagens¹⁴.

The development and implementation of effective standards and practices for the Iron and Steel sector are critical if the protection of human health and the ecosystem are true priorities.

4) Regulation /Voluntary Instruments

The trend to favour voluntary instruments over regulation is a serious concern to the ENGO community who repeatedly stress the importance of effective regulation to ensure that industries comply with (or conform to) “standards” and perform the appropriate monitoring and reporting requirements in an “open and transparent” manner. Regulatory action has been shown to be the main driver for research and innovation and the most appropriate tool to incur public confidence and accountability¹⁵. Stand-alone “voluntary initiatives” lack the force of law and thus, compliance and enforceability are moot issues.

A Question of Trust

The continuing debate over regulatory versus voluntary instruments is tied to the question of trust. To earn trust with ENGOs and respective communities requires accountability, transparency and commitment on the part of industry to adhere to codes and regulations, and for government to exercise their responsibilities to provide resources to ensure commitment through inspection and enforcement. Only then will the public have some reassurance that industry is accountable and committed to comply (or conform) to standards and that governments are prepared to enforce these measures. Voluntary initiatives that compliment and exceed regulatory requirements are indicative of corporate responsibility and commitment to the community and the environment.

5) Electric Arc Furnaces and Mercury Switches – The Connection

Scrap steel from automobiles is a significant feed source for electric arc furnaces (EAFs). However, many North American automobiles contain mercury in tilt switches for lighting and other safety applications. When these vehicles are “retired”, salvageable parts are

¹⁴ Somers, Yaug, White, Parfett, Quinn; Proc. Natl. Acad. Sci., USA, 10.1073/pnas.252499499, Dept. of Biology, McMaster University, Hamilton. Previous investigations of herring gulls in the Great Lakes demonstrated elevated DNA mutation rates near steel mills but could not determine the importance of airborne or aquatic routes of contaminant exposure, or eliminate possible confounding factors such as nutritional status and disease burden.

¹⁵ “Environmental Regulation and Technological Innovation.” New England States for Coordinated Air Use Management (NESCAUM), September 2000.

removed and sent to shredders to recover metal or directly to electric arc furnaces (EAFs)¹⁶. Mercury switches are unlikely to be removed prior to shredding, and thus contribute to the release of mercury from EAFs into the atmosphere

The Canadian Council of Ministers of the Environment (CCME)¹⁷ has established a multi-stakeholder committee, “Mercury Switch Life-Cycle Management Initiative” to discuss and recommend various approaches regarding life-cycle management of mercury switches to reduce and avoid the emissions and release of mercury from these switches.

Saskatchewan is exploring an industry-driven proposal to recycle the mercury from mercury switches that involves the electric arc furnace (EAF) and the electric power generation (EPG) sectors. Specifically, the EPG sector would initiate actions for the recycling of the mercury from switches, and receive “recognition for early actions”¹⁸ since the mercury would no longer be in the scrap.

ENGOS are concerned about this proposal and its likely ramifications. ENGOS expect each sector to reduce their own mercury emissions and not resort to exchanges of this nature as a means of meeting their obligations under the CWS for mercury.

6) CCME: Industrial Multi-Pollutant Emission Reduction Strategies (I-MERS)

The Industrial MERS process (I-MERS) is a one of a number of initiatives for governments to meet commitments made under a number of programs¹⁹. Phase 1 generated technical reports for 6 industries, including the steel sector that explored processes, emissions data and regulations, reduction options, costs and recommended actions.

ENGO participants expressed concerns about the outcomes of this process²⁰. In particular, phase 2 of I-MERS makes jurisdictions responsible for drafting plans to achieve emissions reductions and to implement these plans. ENGOS doubt both the political will and the capacity of jurisdictions to implement or use any of the material or recommendations in the Phase 1 reports. Further, many provinces do not offer opportunities for multi-stakeholder intervention.

Finally, ENGOS are unclear as to how I-MERS fits into the big picture with respect to the Iron and Steel Sector.

¹⁶ There are currently 12 electric arc furnaces (EAF) operating in Canada in Alberta, Saskatchewan, Manitoba, Ontario and Quebec, and numerous automotive recycling and some shredding facilities.

¹⁷ The Canadian Council of Ministers of the Environment's (CCME's) Mercury Canada-wide Standards (CWS) Development Committee (DC) has been developing sectoral and product (life-cycle management) standards with the objective of minimizing mercury emissions and releases in Canada.

¹⁸ This proposal may be considered in the management of any future requirements through the establishment of a Canada-wide Standard for Mercury in the Electric Power Generation (EPG) Sector.

¹⁹ e.g., PM and Ozone CWS, the US Canada-Ozone Annex, Acid Rain Strategy

²⁰ A multi-stakeholder workshop on Phase 1 of I-MERS workshop was held in June 2002,

7) Particulate Matter (PM) and other Criteria Air Contaminants (CACs)²¹

Particulate Matter was not discussed this workshop. In previous workshops, a great deal of discussion took place regarding the potential relationship between emission of fine particulate matter and dioxins/furans. However, two factors are likely to bring PM emissions to the forefront, namely, the declaration of PM₁₀ (and likely its precursors) as CEPA- toxic and the addition of Criteria Air Contaminants (which include PM) to the National Pollutant Release Inventory (NPRI) for the 2003 reporting year.

8) Greenhouse Gases (GHGs) and the Kyoto Accord – Steel Sector

The significance of greenhouse gas emissions relevant to the steel sector is critical, in particular, with Canada endorsing the Kyoto Accord. This issue was brought forward a number of times during the workshop by Labour and ENGO participants, but was not discussed. Granted that Natural Resources Canada (NRCAN) is the lead on GHGs, this should not exclude discussion on such an important item at a national workshop. While there may have been insufficient time to place this on the agenda, it is expected that GHG emissions will be discussed as part of the SEMAG or other national stakeholder forums on steel.

E. Concluding Remarks

The following diagram summarizes the myriad of processes involving the steel sector, starting with the Strategic Options Process initiated in 1995 to the present. Many of the issues of the past have yet to be resolved – and as new processes are initiated the accumulation of leftover residues builds. At the same time, the delay in resolving and implementing outstanding issues should not become an impediment to progressing in establishing standards and improving environmental performance in this sector. It is time to bring closure to these issues, deal with outstanding concerns, improve co-ordination of the various programs, and move on from the Strategic Options Process.

On a closing note, ENGOs appreciate the opportunity and support that enables us to submit our comments and actively participate in these ongoing processes.

²¹ CACs include SO₂, NO_x, CO, VOCs, total PM, PM₁₀ and PM_{2.5}.

A History of Process and Programs on the Iron and Steel Sector

Where it began – and Where it is now

