Analysis and Evaluation of The EPA

Common Sense Initiative

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July 29, 1999

Dear Common Sense Initiative Stakeholders:

In 1998, the U.S. Environmental Protection Agency (EPA) initiated an independent review of the four-year Common Sense Initiative (CSI). EPA launched CSI in 1994 with the broad purpose of seeking "cleaner, cheaper, and smarter" sector-based approaches to protecting human health and the environment and has been a primary component of EPA's regulatory reinvention efforts. The evaluation was conducted by an independent third party, Kerr, Greiner, Andersen and April, Inc., under contract with the Office of Reinvention. This evaluation considers (1) the extent to which CSI succeeded in meeting its goals, (2) what was gained from the sector-based, multi-stakeholder, and consensus aspects of the Initiative, and (3) the extent to which EPA took actions in response to recommendations that were made in two major mid-course studies of CSI, and the impact of those actions on the last two years of CSI. The results of the evaluation are described in the attached report titled, *Analysis and Evaluation of the EPA Common Sense Initiative*.

EPA believes that the themes and findings articulated in the evaluation are particularly reflective of the good work and hard-earned experience of the six CSI Subcommittees. And in response to the themes of the evaluation, EPA examined our current, sector-based activities and priorities, and we have found much that is consistent with the themes and recommendations of this report. We recognize that our sector-based work, including our continuing CSI activities, represents work in progress – we have learned a great deal about how to conduct sector-based efforts and some of the benefits and challenges of those efforts, and we are still exploring the ultimate environmental improvements that will result. Reports such as this help us refine our sector-based activities as we transition from special initiatives, such as CSI, to a "mainstreaming" of sector-based approaches into the day-to-day operations of the Agency.

As EPA has effected this transition, it intended that the Sector-Based Environmental Protection (SBEP) Action Plans for Fiscal Years 1999 and 2000 would provide the means for its accomplishment. These Action Plans provide a framework and broad strategy for sector-based work and support sector-based activities throughout EPA Headquarters and Regional offices. They describe how EPA is following through on CSI commitments, as well as embarking on new sector-based activities in response to new needs and lessons learned from CSI and other sector-based initiatives. The SBEP Action Plans are where reviewers and stakeholders should look to find EPA's transitional and longer-term commitments to ongoing CSI and sector-based activities.

Several key themes of the Kerr report are consistent with current EPA priorities. First, we recognize the importance of ongoing **senior management commitment and leadership** to sector-based

activities. The SBEP Action Plans grew out of a desire by Administrator Browner to build on our lessons learned for CSI and develop new actions for sector-based environmental solutions. Our new Associate Administrator for Policy and Reinvention Richard Farrell has agreed to lead the transition efforts. One of the principal themes in the transition is to build the Agency's management capacity to more effectively conduct sector work. In this regard, we have fully engaged the Reinvention Action Council (RAC), which is an Agency-wide group of senior career managers. The RAC meets quarterly to focus management attention on reinvention priorities and to discuss issues and potential solutions. Also, the Fiscal Year 2000 SBEP Action Plan proposes a permanent Office Director level forum to annually coordinate and plan sector activities.

A second theme of the *Analysis and Evaluation of the EPA Common Sense Initiative* that is consistent with current EPA priorities as described in the Action Plan is improving the **link between sector-based activities and core functions**. EPA is taking several specific steps to address this issue. For example, a senior level work group has been established to identify opportunities for coordinated, multimedia rulemakings in an effort to demonstrate the benefits of this approach. As another example, several sector-based permitting projects are underway, including demonstration of a Pollution Prevention in Permitting Pilot's Clean Air Act Title V permit for the pharmaceutical sector and the PrintSTEP permitting project for the printing sector.

A third theme is the importance of **stakeholder involvement**. EPA has adopted the Stakeholder Involvement Plan, which was endorsed by the CSI Council and has taken steps to increase the capacity of EPA employees to conduct stakeholder involvement activities wherever appropriate, not just in sector-based activities. Also, to demonstrate its commitment to this approach, the Agency continued to seek stakeholder involvement in sector-based work through the establishment of a Federal Advisory Committee Act (FACA) committee, to ensure balanced stakeholder participation. The newly created Standing Committee on Sectors in the National Advisory Committee on Environmental Policy and Technology (NACEPT), will ensure
follow-through on CSI recommendations and projects, and it will also address important evolving sector-based issues.

Continued **assessment of the value and benefit of sector-based approaches** is a fourth theme that EPA strongly supports. In addition to evaluating CSI, the Agency has committed resources to evaluating specific sector-based projects. These evaluations are used to inform current efforts, develop new projects, draw lessons that could be applied to different sectors, and document the costs and benefits of sector-based approaches. EPA is also working with its partners to develop performance measures that are designed to relate sector-based activities to the Agency's goals as reported under the Government Performance and Results Act (GPRA).

There are, however, two areas in which EPA believes that additional information is needed to provide a more complete picture of CSI, beyond the information presented in *Analysis and Evaluation of the*

EPA Common Sense Initiative. First, the report provides very useful, often detailed information on the activities and products of the six CSI Subcommittees; however, the activities and products of the CSI Council should also be highlighted. Although the Subcommittees clearly generated greater outputs, the Council produced several important recommendations during its final two years. These are listed as bullets in several places. The report, however, does not describe the process leading to these recommendations or the results of the recommendations, which EPA believes are significant. Specifically, the CSI Council played its own role in providing a forum for this effort and in making valuable progress in the issues of Reinventing Environmental Information, environmental data quality, and environmental data gaps; integrating and mainstreaming a sector-based approach within the Agency; and building Agency capacity for stakeholder involvement. Second, the report does not credit the CSI Council for its role in increasing the visibility and sense of legitimacy of sector-based work. Further, while the report cites the importance of commitment from top Agency managers to CSI, it does not note the vital role of the Council in providing the forum for the Administrator and other top managers to interact with CSI participants.

Finally, the language in the report states that CSI is "closing down." In truth, much of the work initiated under CSI is ongoing. The Administrator has stressed that CSI "transitioned" from a special initiative to a mainstreamed, sector-based approach to environmental protection. During this transition, she has emphasized that ongoing CSI projects will continue to receive support, new sector-based activities will be identified and supported, and these efforts will be aligned to the core work of the Agency. The NACEPT Committee, the Reinvention Action Council, and the SBEP Action Plans for Fiscal Years 1999 and 2000 are some of the mechanisms she has chosen to ensure that this transition occurs. The concept of a transitional phase is a more accurate reflection of the Administrator's and the Agency's continuing commitment to sector-based approaches, built on our experiences with CSI.

In conclusion, the themes and findings articulated in the *Analysis and Evaluation of the EPA Common Sense Initiative* are reflective of the experience of the six CSI subcommittees and are consistent with current Agency priorities. The CSI Council also had its own distinct role in forwarding the value of the initiative, and forging both transitional and longer-term goals for sector-based approaches in EPA. And finally, the NACEPT Committee on Sectors, the involvement of the Reinvention Action Council, and the Fiscal Year 1999 and 2000 Action Plans are visible embodiments of the Administrator's and the Agency's continuing commitment to sector-based approaches to public health and environmental protection.

Sincerely,

[signature]
Lisa Lund
Deputy Associate Administrator
Office of Reinvention Programs

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EXECUTIVE SUMMARY

Purpose of This Report

The Common Sense Initiative (CSI) was launched in 1994 by the U.S. Environmental Protection Agency (EPA) with the broad purpose of seeking "cleaner, cheaper, and smarter" sector-based approaches to protecting human health and the environment. CSI has been a primary component of EPA's regulatory reinvention efforts aimed at changing the environmental regulatory system to meet current and future challenges.

The purpose of this study is to provide an independent review of the four-year Common Sense Initiative effort. It considers both the extent to which CSI succeeded in meeting its goals and what was gained from the sector-based, multi-stakeholder, and consensus aspects of the Initiative. This study also reviews the extent to which EPA took actions in response to recommendations that were made in two major mid-course studies of CSI, and the impact of those actions on the last two years of CSI.

This evaluation was conducted by an independent third party, Kerr, Greiner, Andersen and April, Inc., under contract with the Office of Reinvention.

Background of CSI

CSI was officially established in October 1994 under a Federal Advisory Committee Act (FACA) charter as a Common Sense Initiative Council with specialized industrial sector subcommittees. The formal role of the Council was to advise and make recommendations to the Administrator on matters falling within the scope of the Initiative, either on its own or based on ideas developed by sector subcommittees. The Administrator's charge to the Council underlined its responsibility for identifying cross-cutting issues or potential joint projects affecting several sectors. Six industry sectors were selected to test this new tailored approach. These sectors comprised a broad range of experiences with a mix of large and small companies, as well as older and newer industries: Automobile Manufacturing, Computers & Electronics, Iron & Steel, Metal Finishing and Plating, Petroleum Refining, and Printing. In the fall of 1998, an announcement was made that the CSI would conclude in December 1998. Three of the former CSI sectors (Metal Finishing, Printing and Petroleum Refining) are continuing as workgroups under the newly created Standing Committee on Sectors in the National Advisory Committee on Environmental Policy and Technology (NACEPT)[1].

Overview of Productivity

This study concludes that CSI was extremely productive in terms of projects developed and recommendations submitted to the Agency for action, representing a tremendous amount of effort on

[1]NACEPT is an EPA Advisory Committee created in 1988 to provide advice to the Administrator on a variety of environmental policy, economics, finance and technology issues.

the part of the subcommittees and the Council. The Council and subcommittees worked on over 40 projects, including both individual projects and larger, multi-project efforts. And nearly 30 subcommittee recommendations were endorsed by the Council and submitted to the Administrator for Agency action. These projects and recommendations addressed all eight of the CSI program elements (i.e., regulation, pollution prevention, record keeping and recording, compliance and enforcement, permitting, environmental technology, community involvement, and future issues). Four projects lead to recommended rule revisions that are being acted on by EPA.

Previous evaluations showed that the pace of progress in the first two years of CSI was hampered by process-related problems, including: inadequacies in the consensus-process groundrules, timelines and facilitation; insufficient technical assistance; and the relationship of the Council to the subcommittees. This study found that the pace of development of CSI's recommendations and project implementation increased for most of the subcommittees and the Council during the last two years of CSI. This increased productivity can be attributed to: 1) increased mutual understanding of participants' issues and concerns; 2) subcommittees' improvements in identifying and focusing on actual opportunities for success; 3) participants' increased familiarity with the use of consensus decision making; 4) adoption of project deadlines by the subcommittees and Council; and 5) a stronger leadership role by EPA.

The CSI Council was thought to have played a lesser role in the actual productivity of the Initiative by the CSI participants interviewed—including Council and subcommittee members. Nevertheless, the Council mounted three major cross-cutting efforts during the last two years of CSI: 1) commenting on Agency plans for improving environmental information and reporting through the Reinventing Environmental Information (REI) initiative, resulting, in part, in the creation of, and action plan on, data gaps, a strategy to address data quality and the formation of a new information office; 2) supporting the Agency's efforts to provide effective future stakeholder involvement in environmental decision making, resulting in the Stakeholder Involvement Plan; and 3) supporting the Agency's integration of the lessons learned form CSI into Agency core functions through the development of a sector-based approach in the Sector Based Environmental Protection (SBEP) Action Plan.

Understanding CSI's Results

CSI participants interviewed stated that they gradually came to believe that the Initiative would not be the vehicle for gaining far-reaching change to EPA's rules and regulations. The participants modified their goals and expectations in response, particularly in the final two years of CSI. Nonetheless, most of the participants interviewed felt that there were significant project accomplishments. Most importantly, improved stakeholder relationships, better mutual understanding and co-learning, and progress in trust building are widely viewed by participants as not only valuable, but significant outcomes of the multi-stakeholder process. Stakeholders shared perspectives, knowledge, and information in order to gain a better understanding of each other's industries, and gained a new appreciation of each other's core concerns. In many cases, participants felt that these changes in relationships were responsible for progress in CSI, and would lead to the creation of long-term

networks outside the CSI framework. Some participants also felt that, as a direct or indirect result of CSI, there were projects or activities occurring or under consideration outside of CSI that would not otherwise have happened, and that traditional patterns of interaction between stakeholders on environmental issues would improve.

Several sectors developed comprehensive projects that show considerable progress in addressing non-regulatory areas, such as industry operations, pollution prevention, community involvement, and permitting. Also, some sectors offer the potential for going beyond compliance in regards to environmental performance and creating measurable environmental benefits that meet the CSI goal of "cleaner," and a few have developed environmental performance measures. Other projects address "process" issues, such as record keeping and reporting or community involvement, and while these projects are within the scope of "cheaper" and "smarter," they are not expected to achieve a "cleaner" result.

Many CSI projects have been completed, but others are still underway. For those projects that are in the early stages of implementation, it is too soon to tell whether success has been achieved. However, the potential success of each project can be evaluated based on both the promise it offers (i.e., its design) and the likelihood for implementation. There is concern among stakeholders that these ongoing projects may experience difficulty reaching completion since the CSI FACA has ceased operations. Interviewees feel that EPA has the key leadership role in sustaining these projects through staffing and funding. However, participants agree that the commitments of other stakeholders to implement these projects are also important. While recognizing that the NACEPT Sector Standing Committee, the Stakeholder Involvement Action Plan, and the SBEP Action Plan address the importance of stakeholder involvement and commitment, many stakeholders continually stressed the need for EPA to plan for multi-stakeholder consensus processes in sector-based programs.

Recognizing the need to develop measures of success, all active subcommittees developed specific performance measures to assess the outcomes of CSI projects. However, more general measures of the outputs of CSI subcommittees and the Council were developed too late in the CSI process to provide an effective basis for assessment.

Key Factors Influencing CSI Results

This study explored the factors that played a role in the quality of CSI's results. These factors, related either to the multi-stakeholder, consensus process or to the characteristics of each individual sector, were examined in light of how they led to differences in effectiveness and results between subcommittees and either aided or inhibited Council and subcommittee efforts.

Multi-Stakeholder/Consensus Factors

So that all participants would have an equal voice, CSI used a consensus-based, decision-making process. CSI's multi-stakeholder, consensus-based process, however, both contributed to and inhibited the Initiative's success, particularly in the early stages of the

Initiative. Process-related problems such as lack of clarity in the operational definition of consensus resulted in confusion and frustration among CSI stakeholders. The subcommittees individually moved to clarify the definition of consensus, with mixed results. The Council clarified the definition on a slower track, relying on the issuance of an EPA-developed white paper on consensus that offered an approach maximizing flexibility in the consensus process. Once operating more effectively, the multi-stakeholder consensus process played a critical role in some of the most creative of the subcommittees' and Council's accomplishments. Ultimately, many participants saw the process as useful and a welcome alternative to the usual litigious and adversarial policy dialogue between stakeholders.

Several other process-related factors—including inadequate ground rules, poor facilitation, lack of deadlines, lack of technical assistance for non-governmental organizations (NGOs), and Council-subcommittee relations—also impeded subcommittee and Council efforts during the first two years of CSI. EPA identified and overcame many of these problems early in CSI at the subcommittee level, and improved the Council's processes after the 1997 creation of the Office of Reinvention. Though major improvements were instituted, the adverse effects of these process-related factors lingered throughout the four years of CSI.

CSI participants identified two roles they believed were critical for EPA to undertake to ensure the Initiative's success: providing leadership for CSI's mission and linking the Initiative to EPA's regulatory programs. The Administrator's leadership role drew praise from participants, but their assessment of other senior managers varied by subcommittee. Where senior management were actively engaged, their subcommittees were more successful. The Office of Reinvention was seen by many as a valuable step in creating accountability for follow though of CSI's efforts in the context of other Agency reinvention programs. There is still concern, however, that EPA has been limited in its ability to produce a well-defined strategy for integrating the results of CSI, with its cross-media, sector-based approaches, to single media-program regulatory initiatives—particularly since this key objective was envisioned at the outset of the Initiative.

Sector-Related Factors

While the sectors with a preponderance of smaller firms garnered the most success in CSI, this study concludes that the factors contributing to their success can be cultivated in sectors dominated by larger firms. Participants suggested a number of factors that may provide an explanation for why these smaller-company sectors were more successful during CSI: participation of senior decision makers at the table; incentives to negotiate, such as pending regulations or the need for flexibility for competitive reasons; increased access to EPA decision makers; and less contentious past stakeholder relationships due to fewer community and

national impacts. EPA demonstrated through the CSI experience that careful preparatory and analytical work with a sector prior to multi-stakeholder negotiations can prove useful in identifying sectors with the greatest potential to apply innovative approaches and facilitate successful negotiations. This analysis should focus on factors that can contribute to success, such as understanding the needs and expectations of all stakeholders, and identification of interested and viable subsectors.

Recommendations

Although the formal CSI process has ended, there are a number of new and continuing EPA efforts that will continue to use sector-based, multi-stakeholder collaborative approaches. There are opportunities for EPA to further test the use of this tool to support the regulatory process. EPA should view CSI as a jumping off point for learning. The Agency should:

- support and further study multi-stakeholder, collaborative decision making as a tool, both within the Agency and in the regions and states; one option might be to engage in reasonable risk taking, for an appropriate sector, by experimenting with applying the multi-stakeholder, collaborative model as an alternative to the traditional Agency rulemaking process;

- provide rewards for EPA staff to support priority reinvention efforts;

- follow-through on key CSI recommendations, projects and ideas;

- build on existing capabilities in sector work, and support multi-stakeholder "incubator programs;"

- assure a role for early stakeholder involvement in policy dialogues focusing on innovative solutions;

- at least track spin-off activities and projects and perhaps formally study and provide resource support to them as well; and

- in future multi-stakeholder efforts, give priority to technical and regulatory education of non-industry, non-regulatory participants.

INTRODUCTION

A. Overview of the Common Sense Initiative

In 1994, as part of the federal government's reinvention efforts, EPA launched CSI with the broad purpose of using an industry sector-based, multi-stakeholder, consensus-based approach to achieve "cleaner, cheaper, and smarter" ways of protecting human health and the environment. Administrator Browner first announced the Agency's intention to experiment with an industry-specific approach to environmental protection in her November 1993 speech to the U.S. Chamber of Commerce. Noting that in spite of major environmental accomplishments over the previous two decades, there were major shortcomings in the nation's environmental policy, namely:

- the polarized, adversarial nature of developing environmental policy among stakeholders;
- regulating by media (e.g., air and water) rather than integrating multi-media approaches that focus on facility and sector operations as a whole; and
- regulatory strategies that meet environmental goals, but not necessarily cost effectively.

In order to change the current environmental regulatory system to address these challenges, EPA decided to combine "commitment to the nation's environmental goals ... with common sense innovation and flexibility." CSI was designed as a forum for realizing this fundamentally different approach for creating environmental policy, encouraging collaborative "out-of-the-box thinking" to find more effective solutions to environmental problems. It was distinguished from EPA's traditional approach by uniquely combining a series of elements:

- focusing on industrial sectors (e.g., automobile manufacturing) instead of on media (e.g., air, water and soil);
- promoting multi-media and pollution prevention approaches to environmental problems;
- involving a wide range of stakeholders from industry, state and local government, national and local environmental organizations, national and local environmental justice groups, and labor; and
- making environmental policy decisions on a consensus basis with all stakeholders.

CSI was officially established in October 1994 under a FACA charter as a council with specialized industrial sector subcommittees. The formal role of the Council was to advise and make recommendations to the Administrator on matters falling within the scope of CSI, either on its own impetus or based on ideas developed by sector subcommittees.

Six CSI Sectors

Six sectors representing a cross-section of American industries were selected to test this new, tailored approach:

- Automobile Manufacturing,
- Computers & Electronics,
- Iron & Steel,
- Metal Finishing and Plating,
- Petroleum Refining, and
- Printing.

At the time CSI began, these sectors comprised 11 percent of the U.S. gross national product, employed more than four million people, and accounted for more than 12 percent of industry-reported toxic releases.

The CSI charter identified six program elements in which the Council and sector subcommittees should explore opportunities for innovative, less costly, and more effective ways to achieve a cleaner environment:

- **regulation:** looking for opportunities for better results at lower cost, and improved rules through increased coordination with stakeholders in developing rules;

Major CSI Dates

11/93	U.S. Chamber of Commerce address by Administrator Browner announcing sector-based approach
10/94	Advisory Committee Charter for the CSI Council completed by EPA
1/95	First CSI subcommittee meetings begin
5/95	First CSI Council meeting held
2/97	Announcement of creation of EPA Office of Reinvention (OR) and it's responsibility for managing CSI
2/97	First Independent CSI Program Evaluation by the Scientific Consulting Group
3/97	Final meeting of Automobile Manufacturing Subcommittee
7/97	GAO evaluation of the first two years of CSI
10/97	White Paper clarifying Consensus prepared by OR
2/98	Announcement that an Agency Sector-Based Environmental Action Plan would be developed based on CSI experience
2/98	Announcement of NACEPT Standing Committee on Sectors formation
12/98	Final meetings of CSI Council and the five remaining subcommittees
4/99	Continuation of Printing, Metal Finishing and Petroleum Refining Sectors under Standing Committee on Sectors in NACEPT

- **pollution prevention**: promoting pollution prevention[2] and reducing the use of toxics as a standard business practice;
- **recordkeeping and reporting**: developing simpler, more transparent ways for industry to provide information to EPA;
- **compliance and enforcement**: identifying innovative ways to promote compliance and encourage companies to improve performance beyond compliance;
- **permitting**: developing more efficient permits and permitting systems with incentives for innovation and more effective public involvement; and
- **environmental technology**: providing incentives for innovative, environmentally beneficial technologies.

In October 1996, EPA renewed this original two-year CSI charter for an additional two years. Then, in its 1997 guidance to the subcommittees, the Council added two additional program elements:

- **involving the community**: creating opportunities for greater involvement by residents and community groups in solving environmental problems; and
- **future environmental issues**: considering emerging issues and proactive solutions

The CSI Council concluded in December 1998. Three of the former CSI sectors (Metal Finishing, Printing, and Petroleum Refining) are continuing as workgroups under the newly created Standing Committee on Sectors in the NACEPT. This transition is part of the Administrator's strategy to integrate the sector-based approach, learned by working on CSI, into the Agency's core functions.

B. Purpose of Report

The purpose of this study is to provide an independent review of the four-year CSI effort. It considers both the extent to which CSI succeeded in meeting its goals of progress toward a "cleaner, cheaper, and smarter" system of national environmental management, and what was gained from the sector-based, multi-stakeholder and consensus aspects of the Initiative. Key questions this study has sought to answer include:

- Did the CSI approach—involving a full range of stakeholders in a consensus-based effort to define and resolve major sector-related environmental issues— demonstrate value and meet its goals?
- Did the stakeholder process generate innovative, beneficial results?

[2]Pollution prevention means source reduction—preventing or reducing waste where it originates, at the source—including practices that conserve natural resources by reducing or eliminating pollutants through increased efficiency in the use of raw materials, energy, water, and land.

- Were issues raised or resolved that have not traditionally been part of environmental policymaking?
- Did the sector orientation allow EPA to define some environmental problems and solutions more efficiently and effectively?
- Do the lessons learned from this effort point to a broader opportunity—with necessary improvements in process design and execution—for using multi-stakeholder decision-making approaches in the future?

In early 1997, two major studies assessed the accomplishments of the Common Sense Initiative over its first two years, and made several recommendations as to how it could be improved. These studies were:

- *Review of the Common Sense Initiative* by the Scientific Consulting Group (SCG), which was commissioned by EPA in late 1996 and completed in February 1997, and
- *Regulatory Reinvention: EPA's Common Sense Initiative Needs an Improved Operating Framework and Progress Measures*, a General Accounting Office Report (GAO/RCED-97-164), requested jointly by several Congressional House and Senate committees, completed in July 1997.

Therefore, this study also reviews the extent to which EPA took actions in response to recommendations from the SCG and GAO reports, and the impact of those actions on the last two years of the Common Sense Initiative.

To develop the information in this report, Kerr, Greiner, Anderson and April, Inc. (KGAA) conducted over 100 interviews of CSI stakeholders and EPA staff and facilitators, and reviewed relevant literature, documents, and reports[3]. The distinctive features of the Common Sense Initiative included its sector orientation and its use of multi-stakeholder, consensus-based negotiations to develop "cleaner, cheaper, smarter" environmental management solutions. In assessing the benefits of the multiple features and combined effect of the Initiative, this evaluation is stakeholder-driven; stakeholder perceptions regarding the value and innovative nature of CSI provide the raw material for the evaluation. The evaluation is, therefore, based primarily on the results of the interviews, supplemented by information from document reviews and transcripts of CSI meetings. The evaluation also employed a focus group of key CSI participants to serve as a resource at the outset of the study.[4]

[3]See Appendix 2 for a list of works consulted.

[4]Appendix 1 contains more detail on the methodology of the study.

In looking retrospectively at CSI, it is important to know the specific results and accomplishments of the Initiative, as well as the factors that either cultivated productive efforts or hampered progress. To explore these different facets of CSI, the report has the following sections: *Section I: Overview of CSI's Productivity* briefly describes CSI's accomplishments and how the initiative's projects and recommendations covered the eight program elements; *Section II: Understanding CSI's Results* describes actual results and stakeholder perceptions of the initiative's achievements and disappointments; and *Section III: Key Factors Influencing CSI Results* explores the multi-faceted issues that appear to have been most important for success or failure. Finally, this report wraps up with *Section IV: Summary and Recommendations,* which provides our overall findings and recommendations, for the new and continuing Agency sector efforts.

Section I:
Overview of CSI's Productivity

PROJECTS AND RECOMMENDATIONS ADDRESS ALL EIGHT PROGRAM ELEMENTS

The CSI projects and recommendations address each of the eight program elements, though some areas were covered more comprehensively than others. Over the four years of CSI, the six subcommittees worked on over 40 projects, many composed of multiple components, and nearly 30 recommendations were endorsed by the Council and submitted to EPA for action. The sheer volume of this work effort is impressive, and represents a tremendous amount of effort on the part of the subcommittees and Council. This section provides a summary of the projects and recommendations and highlights examples that illustrate the work done in a particular area.

In Table 1 below, we show how many CSI projects and recommendations covered each program element identified in the CSI Charter. This summary is meant to illustrate the breadth of approaches used to test methods of achieving "cleaner, cheaper, and smarter" environmental protection. Since many projects were multi-faceted, a single project or recommendation may cover more than one program element. For example, the Petroleum Refinery Subcommittee's Refinery Air Information Reporting System (RAIRS) involves components of both "Recordkeeping and Reporting" and "Involving Communities."

Table 2 provides a more complete listing of the specific projects/reports developed by each of the six subcommittees and the Council, including those formally endorsed as recommendations by the Council.

Table 1: Number of Projects and Recommendations Covering Each CSI Program Element

CSI Program Element	***Number of Recommendations***	***Number of Projects***
Regulation	11	12
Pollution Prevention	4	18
Recordkeeping and Reporting	7	14
Compliance and Enforcement	1	13
Permitting	4	6
Environmental Technology	4	8
Involving Communities	5	15
Future Issues	8	11

Below, we give a thumbnail sketch of the productivity (i.e., number of projects) and highlight some of the approaches taken for each of the eight Program Element categories.

Program Element 1: Regulations

The CSI subcommittees worked on 12 projects that related to regulations. Four projects lead to recommended rule revisions covering very narrow, sector-specific issues that are being considered by EPA that, when implemented, will result in cleaner, more efficient environmental management**.** These include:

1) As part of the Metal Finishing Strategic Goals Program (SGP), EPA proposed a rule under Resource Conservation and Recovery Act (RCRA) that provides a regulatory incentive to recycle (instead of land disposing) F006 hazardous waste. This incentive increases the time that wastes can be accumulated on site by offering a 90 day extension to the current 90 day RCRA accumulation requirement (total 180 days storage) to those facilities that will recycle the waste. The proposal, making waste management more flexible and cost effective, was published in the Federal Register on February 1, 1999 (Metal Finishing Subcommittee).
2) Final changes to the New Source Performance Standard (NSPS) requirements for monitoring pressures in electric arc furnaces were issued as a direct final rule in Spring 1999 (Iron & Steel Subcommittee).
3) Streamlined requirements for managing cathode ray tubes are to be proposed in Summer 1999 as modifications to RCRA Best Management Practices for non-listed hazardous wastes (Computer & Electronics Subcommittee).
4) EPA is considering proposing an alternative standard recommended for the automobile manufacturing Maximum Achievable Control Technology (MACT) rule; this alternative standard would allow for better auto-by-auto comparability when measuring environmental performance in Volatile Organic Compounds (VOC) reductions (Automobile Manufacturing Subcommittee).

The Metal Finishing Strategic Goals Program is also affecting change beyond the RCRA rule change mentioned above. In addition, the SGP seeks regulatory flexibility for exceptional environmental performers, and has secured a formal commitment from EPA "to integrate the [SGP] into the rulemaking process for all future regulations that have a direct impact on the metal finishing industry." According to the December 1998 meeting of the Metal Finishing Subcommittee, EPA is working to incorporate SGP into at least two upcoming rules:

- Pretreatment Streamlining Rule proposal under the Clean Water Act (under government review); and
- Metal Products & Machinery Effluent Guidelines.

Several projects focused on general regulatory framework issues, and resulted in discussion papers and reports (e.g., the Alternative Sector Regulatory System Principles developed by the Automobile Manufacturing Subcommittee), but did not lead to recommendations for specific changes to current regulations. Other projects and recommendations addressing regulations resulted in changes to EPA guidance, policy, or interpretation of rules. For example, as a result of feedback from participants in the Public Access Project (Computer & Electronics Subcommittee), EPA developed and plans to implement in the first half of 1999 a system to provide easy public access on the Internet to compiled and clearly stated regulatory interpretations and policy decisions that apply to the Computer & Electronics industry. EPA also improved its guidance to

The Strategic Goals Program Approach to Regulatory Reinvention

Officially launched in January 1998, the SGP is a comprehensive Metal Finishing Sector program that establishes industry-specific environmental goals and commitments. It is a sector-specific environmental stewardship program with the mission of going beyond baseline compliance and substantially reducing hazardous emissions and exposure. As of December 1998, over 150 facilities have signed onto the National Goals Agreements as well as 17 states and 34 Publicly Owned Treatment Works (POTWs). By 2002 these goals include a 90 percent reduction in organic Toxic Release Inventory (TRI) emissions and a 50 percent reduction in metals emitted to air and water (compared to baseline 1992 year levels). These performance goals are not linked to formal regulatory changes. However, a major commitment to integrate the SGP into the rulemaking process is described in *National Performance Goals and Action Plan* (December 1997). Specifically:
"Each of these integration decisions would be made by the appropriate EPA program offices, and may vary based on the circumstances of each prospective regulation...The term "integrate" means several things:

(1) to be cognizant of the environmental benefits achieved by metal finishers in the [SGP] at the time a particular rulemaking gets underway;
(2) to consider whether the achievements of the [SGP] should affect the objectives and content of prospective rules;
(3) if deemed appropriate, to consider innovative regulatory options for dealing differently with the metal finishing industry (or participating facilities in the SGP). Such options might include (but are not limited to) a separate set of regulatory requirements for firms that demonstrate strong performance, elimination or modification of requirements based on achievements in the [SGP], and delay or deferral of rulemaking deadlines during the timeframe of the Program."

Progress of the SGP will continue to be tracked by EPA and stakeholders through a metal finishing working group under NACEPT.

iron and steel facilities on implementing EPA-witnessed tests for air emissions as the result of a recommendation from the Iron & Steel Subcommittee. Similarly, as a result of the work of the Petroleum Refining Subcommittee, EPA is considering Alternative Work Practices Monitoring Guidance as an alternative to determining mass emissions using Method 21 of the Clean Air Act Amendments Methods Manual for leak detection and repair; the Alternative Work Practices Monitoring Guidance proposes innovative, laser-based, leak-detection technology for determining and potentially reducing mass emissions at petroleum refineries. While these are not formal rule changes, sector-informed improvements to EPA guidance and policies can have an impact on performance and may provide flexibility and certainty for individual businesses in meeting environmental regulations.

Program Element 2: Pollution Prevention

The CSI subcommittees worked on more projects with pollution-prevention components (18 total) than any of the other program element. Four of the nearly 30 CSI formal Council recommendations involved projects with pollution-prevention components: the SGP (Metal Finishing Subcommittee); the Electronic Product Recovery and Recycling Roundtable (Computer & Electronics Subcommittee); the Leak Detection Project (Petroleum Refining Subcommittee); and the Life-cycle Management (Automobile Manufacturing Subcommittee). The SGP (Metal Finishing Subcommittee) alone had nine separate projects with pollution prevention components. The PrintSTEP design (Printing Subcommittee) is another fairly comprehensive project with multiple pollution prevention elements.

Other projects with pollution prevention components that did not result in formal recommendations include: the Multimedia Permitting Pilot (Iron & Steel Subcommittee) and the New York City Education Project (Printing Subcommittee).

Program Element 3: Recordkeeping and Reporting

Five of the six subcommittees worked on projects addressing recordkeeping and reporting issues. In total, 14 projects addressed reporting issues. One of the most extensive pilot efforts to consolidate reporting requirements was the Computer & Electronics Subcommittee's consolidated Uniform Report on the Environment (CURE). The same subcommittee developed The Basic Online Disaster and Emergency Response (BOLDER) software, which is a planning tool that consolidates over 500 pages of federal, state, and local agency response plans into one 30-page plan that is easy to access, understand, and implement. In addition, the CSI Council

Consolidated Uniform Report for the Environment

This Computer & Electronics Subcommittee project consolidates information required by 12 different federal and state environmental reports for the computer & electronics sector, reduces by 60 percent the data elements reported, and streamlines the reporting process. The development of CURE was led by the Texas Natural Resource Conservation Commission. CURE's goal is to comply with existing reporting requirements.

worked on the Reinventing Environmental Information (REI) Action Plan, the Data Quality Strategic Plan, and the Data Gaps Strategy, and developed recommendations addressing all three.

Program Element 4: Compliance and Enforcement

There were 13 projects addressing compliance and enforcement issues, the majority of them in the Metal Finishing Subcommittee. Most notable are the Metal Finishing 2000 Pilots that seek to give flexibility to top performers (Tier 1 firms); the Environmentally Responsible Exit Strategy for poor performers who would like to close down (Tier 3 firms); and the Targeted Enforcement Strategy for chronic non-compliers (Tier 4 firms).

Program Element 5: Permitting

Four of the six subcommittees worked on projects related to permitting. The Iron & Steel Subcommittee, for example, developed a multimedia permitting model for mini-mills. Both the Computers & Electronics Subcommittee and the Metal Finishing Subcommittee looked at issues surrounding the permitting of zero discharge systems. The Printing subcommittee developed the PrintSTEP design, an integrated, incentives-based partnership that seeks to collect all of a printer's different media permits into a single document, with a single permitting agency point of contact.

PrintSTEP

With PrintSTEP (Printing Simplified Total Environmental Partnership), the Printing Subcommittee has provided a design for consolidating and simplifying permitting for printers, providing incentives for preventing pollution, promoting community participation, and providing operational flexibility. Sector participation will continue in a working group under NACEPT.

Program Element 6: Environmental Technology

Environmental technology was the subject of eight CSI projects in three subcommittees. The Petroleum Refining Subcommittee promoted the use of an innovative laser leak detection technology as a means of complying with EPA requirements. The Metal Finishing Subcommittee completed several pollution prevention technology demonstration projects, including one that sought to demonstrate the value and compliance efficacy of using pollution prevention technologies to comply with the Chrome Maximum Achievable control Technology (MACT) standard. The Computer & Electronics Subcommittee addressed barriers to using zero waste water discharge technology, presented by current application of RCRA requirements.

Program Element 7: Community and Stakeholder Involvement

All of the subcommittees worked on projects addressing community and stakeholder involvement – 15 projects total. For example, the Iron & Steel Subcommittee addressed community involvement in its Brownfields project and created a Community Advisory Committee pilot, while the Printing Subcommittee made a community involvement plan an integral component of its PrintSTEP pilot design.

The Computer and Electronics Subcommittee developed *A Resource Guide for Constructive Engagement* that will assist companies, communities, and governments in successfully collaborating on environmental issues by telling users where to find resources, but also provides practical advice and case studies. These projects and recommendations were consistent with other ongoing EPA efforts to improve stakeholder and community involvement in Agency actions, and involved issues which cut across all of the sectors. Therefore, at the request of EPA, the CSI Council, created a workgroup to support the Agency's effort to develop a more extensive and consistent policy on stakeholder involvement. The Council produced a formal recommendation on improving stakeholder involvement in Agency activities. The recommendation led to the creation of an Agency-wide Stakeholder Involvement (SI) Action Plan.

Program Element 8: Future Issues

The Council and two subcommittees—Computers & Electronics and Metal Finishing— completed projects that dealt with future issues. This category includes the Metal Finishing Environmental R&D Plan and the Computer & Electronics Subcommittee's recommendation on Worker and Environmental Health. All of the CSI Council's recommendations include an element on future issues facing the Agency, including recommendations on:

- the SBEP Action Plan, defining strategies for integrating sector approaches into the work of the Agency;
- the Stakeholder Involvement Action Plan, including recommendations relating to common vocabulary related to stakeholder techniques, analytic tools to integrate stakeholder involvement and decision making, and establishment of internal coordinating mechanisms within EPA to ensure that EPA staff is made more aware of stakeholder involvement approaches;
- the REI Action Plan, focusing on improved access and efficiency in information availability and management, which helped to lay the groundwork for EPA's new Office of Information Resources Management;
- issues related to data gaps and data quality in the Agency's management of environmental information.

Table 2: CSI Projects By Program Elements[5]

Element	Automobile Manufacturing	Computers and Electronics	Iron & Steel	Metal Finishing	Petroleum Refining	Printing	Council
Regulations	Alternative Regulatory System Regulatory Initiative Project (mass per unit)	Alternative System of Environmental Protection Barriers to Closed-loop Water Recycling Compilation of Regulatory Interpretations and Determinations CRT recycling	NSPS rule revision for monitoring pressure in EAF's Early stakeholder involvement in rule making Modified Guidance for non-witnessed tests	RCRA MF F006 Wastewater Sludge Benchmarking Study F006 90-day Storage Rule Extension	Alternative Work/ Monitoring Practices Program		

[5]See list of acronyms in Appendix 6

Element	Automobile Manufacturing	Computers and Electronics	Iron & Steel	Metal Finishing	Petroleum Refining	Printing	Council
Pollution Prevention	Life Cycle Management	Electronic Product Recovery and Recycling Barriers to Closed-looped Water Recycling RCRA Barriers to CRT Recycling	Permitting Improvements	Access to Capital Approaching Zero Discharge Chromium Pollution Prevention Tech. Demo CLEAN-Pollution Prevention National Metal Finishing Environmental R&D Plan Environmental Technical Verification RCRA MF F006 Wastewater Sludge POTW Training Education & Incentive MF Guidance Manual Environmental Responsible Site Transition for Tier 3 Firms	Alternative Work/ Monitoring Practices Program Laser Leak Detection Technology Testing	PrintSTEP New York City Education Project	

Element	Automobile Manufacturing	Computers and Electronics	Iron & Steel	Metal Finishing	Petroleum Refining	Printing	Council
Recordkeeping and Reporting		Reporting and Public Access Texas CURE BOLDER 3R Project	Consolidated Multi-media Reporting	RIITE Report RIITE Pilots Electronic Reporting Pilots PEERL Prototype Reporting and Resource Link (web site)	Refinery Air Information Reporting System (RAIRS)	PrintSTEP	REI Data Gaps Data Quality
Compliance and Enforcement			Alternative Compliance Strategy Analysis and reporting of compliance data Expanded use of SEPs	Metal Finishing 2000 Flexible Track Program, Pilots, and Report Clean Pollution Prevention National Metal Finishing Resource Center (NMRC) MF Guidance Manual Tier 4 Facility - Targeted Enforcement Environmentally Responsible Site Transition Exit Strategy for Tier 3 Firms Compliance Assistance Tools Industrial Pretreatment		PrintSTEP	

Element	Automobile Manufacturing	Computers and Electronics	Iron & Steel	Metal Finishing	Petroleum Refining	Printing	Council
Permitting		Barriers to Closed-Loop Water Recycling	General Permitting Issues Multi-Media Permitting for Mini-Mills Effective NPDES sampling Computerized permitting system	Environmentally Responsible Site Transition for Tier 3 Firms RIITE Approaching Zero Discharge		PrintSTEP	
Environmental Technology		Barriers to Closed-Loop Water Recycling		Access to Capital (Pilots, Report, Meeting) National MF Environmental R&D Plan Approaching Zero Discharge Chromium Pollution Prevention Tech Demo Environmental Technology Verification Project	Alternative Work and Monitoring Practices Program Laser Leak Detection Technology Testing		

Element	Automobile Manufacturing	Computers and Electronics	Iron & Steel	Metal Finishing	Petroleum Refining	Printing	Council
Involving Communities	Community Technical Assistance/ Demographic Environmental Tool	Electronic Product Recovery and Recycling (EPR2) Collection pilots Constructive Engagement	Community Advisory Committee Brownfields Iron & Steel Liaison Code of Conduct 7 of 12 Permitting Recommendations Early public involvement in Rules	National MF Environmental R&D Plan Ad Hoc Risk Characterization Workgroup	Refinery Air Information Reporting System (RAIRS) Refinery Accidental Release Information Communication (Pilot in Norco, La.)	PrintSTEP New York City Education Project	Stakeholder Involvement
Future Issues		Electronic Product\ Recovery and Recycling (EPR2) Worker Environmental Health		SGP National MF Environmental R&D Plan Ad Hoc Risk Characterization Workgroup Strategic Goals Agreement and Program State/Region/City mini-goals program pilots			Stakeholder Involvement REI Data Gaps Data Quality SBEP

PRODUCTIVITY INCREASED IN THE FINAL TWO YEARS

Many stakeholders noted that the pace of development and implementation of projects and recommendations by the CSI Council and many of the subcommittees increased during the last two years of CSI. For example, the Printing Subcommittee had explored a range of options related to permitting over the first two years, but agreement over the ultimate shape of the PrintSTEP program and the development of a multi-faceted, detailed pilot design were accomplished during the latter half of CSI. The Computer & Electronics Subcommittee developed four new recommendations during the last two years, developed the Constructive Engagement guide, and made significant progress in developing and field testing both the CURE and BOLDER projects. Petroleum Refining reorganized and re-started its efforts over the last two years, both initiating and completing its primary projects during this period.

It is important to recognize the "learning curve" represented by the first two years of CSI. CSI participants suggested several factors that contributed to the increased productivity during the second two years of CSI and, as a result, improved its overall image:

- development of a better understanding of the issues and concerns of other stakeholders;
- gradual improvements in recognizing which areas provided the greatest opportunity for progress;
- increased comfort with the consensus negotiation process;
- adoption of deadlines (both self-imposed and resulting from the announced ending of CSI); and
- a stronger leadership role by EPA.[6]

With respect to the pace of productivity, the experiences of the subcommittees varied. For example, the factors noted above were already in place prior to 1997 for at least one subcommittee: Metal Finishing. Work on the SGP began in early 1996, and much of the significant stakeholder negotiations were completed in that year. The SGP was endorsed by the CSI Council in late 1997, building on the success of 14 subcommittee projects (most of which were substantially underway in the pre-1997 timeframe). The second two years of CSI for Metal Finishing were characterized by *continued* productivity and progress in actual SGP implementation.

[6]For additional analysis of these and other factors, see Section III, which includes a table showing the actions EPA took in response to the recommendations for improvement presented in the SCG and GAO reports.

The Automobile Manufacturing Subcommittee completed its work early in the third year of CSI operation (March 1997), and was cited frequently by participants as one of the less-productive subcommittees. However, this sector exhibited productivity once the official decision to discontinue the subcommittee was announced in Fall 1996. For example, most of the projects the subcommittee worked on were developed and completed within the last nine months of its existence. These projects addressed regulations, pollution prevention, and community involvement.

Unlike many of the other subcommittees, participants on the Iron & Steel Subcommittee noted that significant progress was made in the first two years of the program. Of the 16 projects worked on by the Iron & Steel Subcommittee, 12 projects were completed or in the implementation phase before 1997. After having these early successes, the Subcommittee came back to the broader issues of goals for the sector as a whole. This change in focus was the result of a self-evaluation of sector progress done in Fall 1996. One of the findings of this self-evaluation showed that stakeholders believed they were not addressing the larger, important issues for the industry. Over the last two years, the subcommittee tried to reach consensus on issues to work on tried to address a larger, more strategic framework for the sector. But stakeholders said that the discussion of these broader goals became polarized, and ultimately, no agreements were reached. As a result, limited progress was made covering new ground in the last two years of CSI for the Iron & Steel Subcommittee.

The CSI Council mounted three major efforts separate from the subcommittee efforts during the last two years of the initiative:

- launching Agency plans for improving environmental information and reporting through the REI initiative, resulting, in part, in the creation of a new information office, and analyzing issues related to data gaps and data quality;
- developing a report on stakeholder involvement at EPA and making three recommendations for improvement (resulting in the development of the EPA Stakeholder Involvement Action Plan); and
- supporting EPA planning for future sector-based approaches, which has been incorporated in the SBEP Action Plan.

Section II:
Understanding CSI's Results

If stakeholders agreed on one thing, it was that success in CSI cannot be disentangled from implementation. To the stakeholders, CSI was about making change happen, getting ideas and concepts on the table, and ultimately making changes in how we pursue environmental goals. It was about measuring real environmental improvement. To assess the value and success of CSI, in this section we look at the results that emerged and ask, "Did it make a difference?" For many CSI projects, it is too soon to tell. But the potential can be evaluated, based on the design ("What does it promise?") and on the likelihood for implementation ("What, where, and how strong are the commitments?"). In this section, we present stakeholder perceptions of what CSI accomplished.

A COMPREHENSIVE APPROACH TO PROBLEM SOLVING

A few CSI projects successfully used a comprehensive approach that tackled a broad range of environmental issues, such as industry operations, pollution prevention, community involvement, and permitting. In terms of environmental improvements, several sector subcommittees developed comprehensive projects that show considerable progress in non-regulatory areas, and others offer the potential for environmental gains that go beyond regulatory compliance. Three CSI efforts were generally described by stakeholders as the most successful to address a range of these issues (e.g., industry operations, pollution prevention, community involvement, and permitting) and offer environmental gains:

- SGP (Metal Finishing Subcommittee);
- PrintSTEP (Printing Subcommittee); and
- CURE (Computers & Electronics Subcommittee).

Although each effort is viewed as successful by many of those interviewed, a wide range of participants described the SGP as the most comprehensive outcome of CSI. This sector-wide, national program has taken on large issues such as industry commitments to reduce emissions, incentives for beyond-compliance behavior, and integration of reporting, information, and new technology research and development as tools toward promoting a broader change of environmental management within the sector.

The Printing Subcommittee's pilot design for PrintSTEP addresses a range of industry operations, community involvement, and permitting issues. Many stakeholders on the Printing Subcommittee feel

that they have succeeded in developing a multimedia, one-stop approach to permits for printers that incorporate incentives for pollution prevention and provides a potentially strong role for communities in reviewing and commenting on the local impact of printing facilities. The design provides for integration of all permitting requirements under a single agreement, but does not alter any regulatory requirements. The specific requirements for any printer seeking a PrintSTEP agreement are determined by the levels of its environmental releases to all media. Participation in PrintSTEP is voluntary, and some subcommittee stakeholders are concerned that, while relatively comprehensive, the design may not offer strong enough incentives for companies to participate.

CURE, developed by the Computer & Electronic Subcommittee, is another project viewed by many CSI participants as an innovative success of CSI. The project focused on consolidating and simplifying reporting, and providing information that is more readily understood by and accessible to communities. Participants pointed out that a series of stakeholder focus groups were some of the tools used to ensure that a wide range of stakeholder concerns and interests were addressed, and that issues of information and reporting were not approached only as narrow technical concerns.

UNFINISHED BUSINESS

Many CSI projects have been completed, but others are still underway. Some of these ongoing efforts face uncertain implementation since the CSI FACA has ceased operations. Interviewees generally feel that EPA has the key leadership role in sustaining these projects. However, they believe that the commitments of other stakeholders to these ongoing projects are also important. Representatives from all stakeholder groups stressed that even the most outstanding achievements of CSI are still very much "works in progress." Due to the multi-year nature of implementing regulatory changes and voluntary programs, few of the more visionary CSI projects have been fully implemented. There is stakeholder concern that some of the larger, more comprehensive projects—ones with longer timeframes or which take on complex issues—may experience difficulty reaching completion. Table 3 is a summary and characterization of the implementation status of selected projects and recommendations about which stakeholders from the various subcommittees frequently expressed concerns.[7]

For example, implementing the Metal Finishing SGP requires multi-year funding by the Agency, and extensive coordination and commitment of numerous EPA offices, the regions, state and local governments, industry, and other stakeholders. SGP is a comprehensive partnership, and while EPA commitment to its implementation is very strong, the effort's size, scope, and timeline all contribute to

[7]See Appendix 3 for a more complete listing of CSI projects and recommendations.

stakeholder concerns that difficulties could arise. Many stakeholders fear that the high levels of motivation, interest, and program visibility—cited by stakeholders as important for successful implementation—may prove hard for EPA to sustain over time. As one stakeholder put it, "It has to be more than EPA speeches; mid-level managers have got to come through with performance. The SGP needs to get integrated into regional [EPA Offices'] Work Plans. It needs to get institutionalized." Concerns were expressed about the need for accountability and empowerment of the EPA managers.

The Printing Subcommittee's PrintSTEP project provides a useful illustration of stakeholder perspectives on the need for both EPA follow through and stakeholder commitment. While the Printing Subcommittee completed a project design for PrintSTEP, implementation has just begun. At the time we completed our interviews, many subcommittee participants were concerned and uncertain about EPA follow through. In fact, it appears that PrintSTEP currently has both strong EPA senior leadership and commitment of resources (the Office of Enforcement and Compliance Assurance has dedicated staff over the next 2-3 years, $500,000-$600,000 to support state implementation, plus additional funds for facilitation and other support). But even with solid EPA commitment stakeholders also pointed to other potential weak links on the path to full implementation, particularly state commitment to implement pilot projects and industry commitment to educate and persuade its members to volunteer for PrintSTEP.

Some subcommittees sought to systematically identify key persons and offices to take responsibility for implementing projects and recommendations. For example, the Computers & Electronics Subcommittee stakeholders tried to find an EPA "home" for each of the sector's nine recommendations. EPA staff identified offices and persons with the authority and interest to take ownership of these efforts. In one case, based on a Computers & Electronics Subcommittee recommendation on "obscure" policy determinations, EPA identified and developed meta-data on about 4,000 documents which will be included in a Policy and Guidance Collection, accessible (scheduled to begin in Spring 1999) through the EPA Home Page. However, while this project is close to completion, most of the subcommittee's projects were developed less than one year ago and implementation is only recently underway.

While there is high support and commitment by EPA for most projects, some subcommittee participants noted that two of the three Automobile Manufacturing Subcommittee recommendations have had weak or no follow through by EPA and do not appear likely to progress:

- One recommendation asked EPA to explore how to organize reporting requirements to take advantage of pollution prevention opportunities in life-cycle management (LCM). While the Office of Reinvention facilitated discussions on data needs to support LCM concepts and promote opportunities for its use, there is no official LCM home, project, or plan in place that further develops or promotes LCM concepts.
- The Alternative Regulatory System/Community Technical Assistance recommendation asked EPA to experiment with a new sector-based information tool to improve the utility of data and address quality issues. Other than placing the information work product (a sector report on Automobile Manufacturing plants and demographics) on the Center for Environmental Information and Statistics' (CEIS) and CSI Web sites, EPA has not initiated plans that builds on this effort.

Some of the participants indicated they had originally expected further follow through by EPA but, that with the closing of the Automobile Sector, attention to these projects faded.

CSI participants were clear that without EPA follow through on these projects, the sense of success, that many stakeholders now share, would vanish quickly. In spite of the leadership they believe EPA has, however, they recognize that, unlike traditional regulatory programs where EPA and the state agencies are responsible for implementation, CSI has been a collaborative, multi-stakeholder process. Many CSI projects go outside the usual boundaries and therefore require EPA to find strong and effective partners, not only in the states, but in local governments, industry, and (in some cases) environmental and environmental justice groups and labor.

Table 3: Summary of Stakeholder Perceptions of Implementation Status of Selected CSI Projects/Recommendations Based on Interviews

Sector	**Implementation underway and completion highly likely**	**Implementation underway, but stakeholders skeptical of full completion**	**Implementation absent or weak, and stakeholders skeptical of future completion**
Automobile Manufacturing	Regulatory Initiative Project (alternative mass/area painting standard)		LCM Project Community Technical Assistance Data Project/ Alternative Regulatory System
Computers & Electronics	Barriers to Closed-loop Water Recycling	BOLDER CURE	
Iron & Steel	Early Stakeholder Involvement in Regulatory Development	Iron & Steel Web site	Multimedia Reporting Pilots
Metal Finishing	RIITE Program Pilots Prototype Reporting and Resource Link (PERRL) Exit Strategy for Tier 3 Firms[8]	Strategic Goals Program	Targeted Enforcement Strategy for Tier 4 Firms
Petroleum Refining	Laser leak-detection approach and standard		
Printing		PrintSTEP	New York City Project

[8]The Metal Finishing Subcommittee identified four tiers of metal finishing facilities according to differing environmental performance: top performers (Tier I); average performers (Tier II); old, poor performers (Tier III); and rogue firms (Tier IV).

MEASURABLE ENVIRONMENTAL BENEFITS STILL ANTICIPATED

Some projects are anticipated to have measurable environmental benefits (e.g., reduced air emissions) if implemented and successful. While many projects in CSI address "process" issues about how to meet current environmental regulations in a cheaper, smarter, and faster manner, they did not cover actions with environmental results (e.g., recordkeeping and reporting).

A few projects, however, are anticipated to have direct, potentially measurable environmental benefits; a smaller number have developed environmental results performance measures. The eight projects shown in Table 4 below focused on issues that will have direct environmental results.

Table 4: Summary of Projects with Environmental Results

Sector	***Projects***	***Environmental Goals/Actions***
Automobile Manufacturing	Not applicable	Not applicable
Computer & Electronics	Closed-Loop Recycling/ Eliminate Zero-Discharge Barriers	Promote elimination of wastewater discharges by Computer & Electronics plants
	Cathode Ray Tube Recycling	Reduce lead waste through Cathode Ray Tube glass recycling
	Electronic Product Recovery and Recycle	Collect, recycle, and reuse end-of-life residential computer and electronic equipment, reducing disposal and need for new materials
Iron & Steel	Brownfields	Clean up brownfields sites for redevelopment in Alabama and Northwest Indiana
	Multimedia Permitting Pilot	Reductions identified by facility in Pollution Prevention Plan (limited to a single facility pilot; no further actions planned)
Metal Finishing	Strategic Goals Program	Tier I and Tier II - 90% reduction in organic Toxic Release Inventory emissions - 50% reduction in metals emissions to air and water - 50% reduction in land disposal of sludges Tier III exit strategy (which is Brownfields Prevention) Tier IV chronic non-complier enforcement strategy
Petroleum Refining	Equipment Leaks	Reduce air emissions from refineries with better leak detection
Printing	PrintSTEP	Reductions in Volitile Organic Compound/hazardous air pollutants emissions by participating printers

Stakeholders interviewed stressed that most of these projects are in the early implementation phase and that environmental benefits should be measured only after the projects are implemented. This was particularly true for the PrintSTEP project, since it is in the very early stages of implementation with the detailed design being recently completed. EPA is currently seeking 3—5 states to participate in three-

year pilots for PrintSTEP. However, no pilots were initiated at the time of our interviews. Also, while the SGP's early implementation phase is well underway, it still has a considerable number of steps to complete.

PARTICIPANTS BRING HIGH EXPECTATIONS

While most CSI participants were able to cite specific accomplishments, few felt that they had succeeded in addressing issues of the scope they had anticipated at the outset of CSI. In particular, the initiative did result in a small number of narrow, sector-specific rule modifications, but CSI made very little progress in addressing broad regulatory changes. The Administrator's original description of EPA's goals created expectations (and sometimes concerns) that CSI would provide an opportunity to rethink all environmental regulations from a sector perspective, using a multi-stakeholder process. In light of the broad mandate for the CSI effort, many stakeholders brought a variety of ambitious goals to the CSI negotiations. The types of goals varied by stakeholder, with some objectives more widely shared, and others mostly specific to particular stakeholders, including:

- developing alternative regulatory frameworks,
- increasing regulatory flexibility;
- developing pollution prevention-incentive approaches to promote significant changes in environmental management;
- reducing reporting burdens;
- increasing access to and transparency of environmental information;
- increasing efforts to reduce cumulative environmental impacts on communities; and
- improving conditions for worker safety and health.

At the outset of CSI, the EPA Administrator raised expectations that the initiative would search for ways to improve environmental performance and fundamentally "change the regulatory system." Therefore, early CSI participants joined with an expectation that they would be working on far-reaching changes to the regulatory system, including both existing rules and rules under development. For example, four of the six sectors (Automobile Manufacturing, Computers & Electronics, Iron & Steel, and Printing) were interested in pursuing New Source Review issues. It became clear, however, that this regulatory area was not "on the table," since modifications to NSR issues were being explored in a number of other Agency efforts (e.g., NSR Reform Initiative). Similarly, the Metal Finishing Subcommittee wanted to take on potential changes to the upcoming Metal Products and Machinery effluent guideline, but initially found resistance by EPA to addressing these potential regulatory issues as part of the development of the SGP. The Metal Finishing Subcommittee's initiative did ultimately lead to a formal commitment from EPA to integrate flexibility into the rulemaking process, directly impacting metal finishing, and it also led to four recommended rule revisions. But this was not as far reaching as many participants had hoped.

The 1997 evaluation of CSI by the Scientific Consulting Group noted that the gradual realization that changing regulations would not be readily accomplished within the context of CSI led to a variety of responses by CSI participants—from focusing on narrower projects, to looking for non-regulatory routes to make significant changes in environmental management policies toward or practices within a sector, to frustration. The following examples highlight this transformation.

- Almost from the start, the Metal Finishing Subcommittee adhered to an agenda that sought to address many broad issues of concern to the stakeholders. The subcommittee was able to tackle some specific issues of regulatory flexibility (e.g., extending the storage period for hazardous wastes; MF2000 pilots with local requirements flexibility), but was not able to incorporate federal regulatory and enforcement discretion components of their original goals into the SGP. In addition, labor representatives[9] felt that their concerns for worker health and safety were not met. Nonetheless, the rest of the Subcommittee members interviewed generally expressed satisfaction with the scope of what they accomplished.
- The perspectives of those interviewed from the Printing Subcommittee were not as uniform. The representatives of the largest printers and of the environmental groups,[10] respectively, expressed that the subcommittee dealt insufficiently with the regulatory flexibility and pollution prevention issues in which they had been interested at the outset. Among other participants, however, views were mostly in agreement with the characterization of an EPA staff person that the subcommittee "took on the kind of issues CSI was really intended for," and an industry participant who felt that "we did really well in meeting the goals."

Outside of these two subcommittees, there was far less sense of having effectively addressed the “original” goals or *expected* scope of CSI. Participants interviewed from the other four subcommittees were nearly unanimous in their view that they were not successful in developing approaches to the issues which were most important to them at the outset of CSI, with many expressing disappointment with the lack of overall accomplishment. Even from these subcommittees, however, most of the participants we interviewed said that they felt there were significant project accomplishments.

[9] In general, labor representatives participating in CSI felt that since two other federal agencies—the National Institute of Occupational Safety and Health and the Occupational Safety and Health Administration—were not CSI participants, it was not possible for the Initiative to address labor’s priority environmental and worker health issues in an effective way.

[10] All the environmental group representatives resigned from the subcommittee about a year before the conclusion of CSI, though two representatives continued to comment on PrintSTEP.

- Automobile Manufacturing Subcommittee members, for example, widely agreed that LCM was innovative and that such discussions had not previously taken place between stakeholder groups or even within the industry, but they wished that the discussion could have gone further. For example, reluctance on the part of several participants to reveal information that they viewed as confidential hampered efforts to carry the discussion beyond hypothetical examples, resulting in a lack of conclusions drawn from real data and diminishing the usefulness of the LCM effort as a real tool. Participants (especially environmental justice participants) also felt positively about the community-based information tool.
- Participants on the Computers & Electronics Subcommittee were unanimous in their view that they had made significant progress where projects addressed practical issues such as cathode ray tube glass recycling, pilots for recovering end-of-life computer and electronics equipment, the emergency response software planning tool (BOLDER), consolidated reporting (CURE), and public access to EPA regulatory determinations. Moreover, some did feel that they met their original individual goals, even if the subcommittee as a whole did not, and vice versa. For example, in the alternative strategies workgroup, environmental groups were successful in achieving their goal of adding worker health and safety issues to the agenda, but the overall workgroup goal of testing a conceptual framework for an alternative environmental management system was not met. The barriers workgroup as a whole thought they had met the overall goal of more efficient and cost-effective recycling of cathode ray tube glass recycling, however, one individuals' stated goal of total deregulation was not achieved.
- Iron & Steel and Petroleum Refining Subcommittee members noted the incremental benefits of projects such as the community-based redevelopment process and SEPs initiatives for Brownfields projects; the recommendations on permitting issues and air monitoring requirements; and the establishment of iron and steel liaisons.
- The Petroleum Refining Subcommittee members noted the benefits of their efforts on streamlined air information reporting and equipment leaks technology.

SIGNIFICANT INTANGIBLE BENEFITS

Regardless of regulatory or environmental results, improved stakeholder relationships, better mutual understanding and co-learning, and progress in trust building are widely viewed by participants as not only valuable, but a significant outcome of the multi-stakeholder CSI process. Some benefits have already been realized through the development of new networks of relationships, including new stakeholder collaborations, project partnerships, and educational initiatives.

The 1997 evaluation of CSI by the Scientific Consulting Group concluded that "CSI has had considerable success in the area of process."[11] At that mid-point, participants were getting to know and understand the other stakeholder groups. Those new relationships and a movement toward trust helped some subcommittees begin to focus on and resolve substantial issues. The 1997 evaluation found that, "The involvement of multiple stakeholders...and the ensuing process of developing understanding, working relationships, and sometimes trust and respect were viewed as valuable by almost all participants."[12] The four-year evaluation, at the close of CSI, both supports the earlier finding and indicates ways in which these new networks of relationships may be a step toward changing some of the traditional patterns of interactions between stakeholders on environmental issues.

Building Networks

A majority of the CSI participants interviewed cited improved stakeholder relationships, better mutual understanding, and progress in trust building as significant and important outcomes of CSI . This view is common whether or not the participant considered his or her subcommittee's projects successful, or if CSI as a whole did or did not meet his or her expectations—though somewhat more prevalent in those subcommittees that also had substantive successes. This was true even for the Council, which Subcommittee and Council participants generally felt had a limited substantive role; one Council member commented, for example, that the Council played a very important role in "developing conversations between people who normally didn't talk to each other outside of a courtroom."

The growth in relationships took some time to develop; in general, participants felt that it was a more marked characteristic of the final two years of CSI than the first two. Toward the end of a focus group involving diverse stakeholders from the Council and various subcommittees, one member commented, "The beauty of the process is that we all tend to agree here [about the value and potential for long-term results of the CSI process and ways to strengthen it]; that would not have happened two years ago."

Participants did not consider improved relationships to be simply a matter of good feelings. Across all the CSI subcommittees, participants stressed the importance of the educational aspect of the CSI experiment: diverse stakeholders sharing perspectives, knowledge, and information in order to gain a better common understanding of an industry; the values gained from its technical processes, regulatory complexities, and economic realities; and its potential environmental, community, and worker impacts. Many said this mutual learning outcome has been invaluable, and noted that better mutual understanding is a necessary foundation for the reinvention of any regulatory framework.

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[11] Scientific Consulting Group, Review of the Common Sense Initiative, February 1997, p.35.

[12] Ibid. p. 38.

Educational Benefits

The educational benefit was both technical and motivational. Stakeholders gained a new appreciation of each other's core concerns by reaching a higher level of understanding:

- Regulators (federal, state, and local government) learned more about different industries, hopefully making them better and more informed regulators.
- Industry, depending on their previous level of interaction with regulators, gained a new appreciation for the level of sophistication and complexity of environmental management in the United States. This was especially true for subcommittees predominately characterized by small businesses, such as printing and metal finishing. Participants from all subcommittes said they gained a new understanding of environmental and community concerns.

Environmental, labor, and environmental justice participants sometimes found greater understanding for the interests and concerns of some companies or industries. They gained improved technical understanding of particular industry sectors, the sometimes difficult economic balancing act of a company, and the financial barriers that may be in the way of doing more environmentally. For example, the "Access to Capital" workshop involving Metal Finishing and Computers & Electronics participants, brought lenders into the dialogue of gaining capital investments for pollution prevention. Some environmental stakeholders gained slightly more comfort with the concept of the flexibility in responding to some regulatory requirements that industry wants (but only with built-in safeguards and results that go beyond compliance); as a tradeoff, some industry participants became more willing to consider providing the more transparent information and increased accountability sought by the environmental and community groups.

CSI Seeds Spin-Off Efforts

In many cases, participants felt that the CSI experience and the new network of relationships would lead to long-term and expanded networks with stakeholder groups that participated in CSI as well as others they now understand better or perhaps see as less threatening. Building new relationships beyond the framework of other CSI participants was integral to some parts of CSI projects—e.g., the regional pilots of the SGP for metal finishers, which require multi-stakeholder processes to identify more local concerns.

But a few participants also mentioned that, as a direct or indirect result of CSI, there were projects or activities occurring or under consideration elsewhere that either would not otherwise have happened, or not have happened in that form. Many stakeholders expressed the expectation that these kinds of spin-off effects will multiply over time. Some examples include:

- During dialogue in various CSI subcommittees (e.g.,Computers & Electronics; Automobile Manufacturing), it became clear to a handful of academics and environmentalists that the non-governmental community needed leadership in the area of products and product stewardship. From their perspective, some NGO representatives were blocking constructive progress—for example, in LCM discussions in the Automobile Manufacturing Subcommittee—because they were new to the topic and suspicious of "industry's issue." As a result, a university stakeholder secured grant money to develop a course to educate NGOs on product stewardship issues and explore avenues for NGOs to play a leadership role.
- Industry and environmental stakeholders from the Computers & Electronics Subcommittee developed a good CSI working relationship. As a result, their respective organizations (Electronics Industry Alliance and the World Resources Institute) have completed a joint report and are developing a follow-up report, both on climate change and the electronics industry.
- At a Ford automobile manufacturing plant in Deerborn, MI, Ford Motor Company, the Environmental Defense Fund, and the Ecology Center of Ann Arbor worked cooperatively to involve the community in the complex's permitting process. According to the Ford representative, his CSI experience gave him insight into access for local communities and mitigated his fear of bringing neighbors into the permit process.
- In the Iron & Steel Subcommittee, a good measure of the value of improved relationships is the number and types of projects the participants are engaged in outside the formal CSI process. Many stakeholders identified projects and activities they are working on now with CSI participants they had no or limited involvement with prior to CSI. Examples include:

  - expanded use of multi-stakeholder groups to explore environmental impacts, and possible solutions, of plants on local communities;
  - joint efforts of labor and NGO stakeholders to identify common concerns with respect to new or expanded facilities at several locations; and
  - joint continuing industry discussions (involving both integrated mills and mini-mills) on developing an overarching environmental policy for the steel industry.

- From the Printing Subcommittee, an industry representative has undertaken an effort to promote greater awareness of environmental justice issues and the potential role printers can play through his industry association.
- A senior state government representative who served on the Metal Finishing Subcommittee stated that because he found the CSI multi-stakeholder approach a valuable tool for creating improved relationships and developing out-of-the-box solutions, he is encouraging his staff to look for opportunities to use this approach for tackling selected state environmental challenges.
- The Electronic Products Recovery and Recycling Roundtable (EPR2) created by the Computers & Electronics Subcommittee provides a permanent vehicle for multi-stakeholder exploration of issues, such as institutional barriers to recycling and environmentally preferable designs for recycling and reuse of electronic equipment.

PERFORMANCE MEASURES DEVELOPED LATE IN THE PROCESS

Specific performance measures have been developed to assess outcomes of some CSI projects. More general measures of the outputs of CSI subcommittees and the Council were developed too late into the CSI process to provide an effective basis for assessment. Recognizing this oversight, the 1997 SCG and GAO reports recommended that EPA develop performance measures to evaluate all levels of CSI, including results-oriented performance measures to assess how actions taken as a result of CSI have led to measurable environmental improvements. Two kinds of performance measures have been developed:

- Subsequent to the SCG and GAO reports, EPA launched an effort to develop performance measures for the Council and subcommittees.
- Both prior to and since the reports, all active subcommittees developed performance measures tied to specific subcommittee projects.

Measures of Council and Subcommitte Efforts

Subsequent to the recommendations of the GAO and SCG reports, EPA initiated an effort to develop performance measures for the Council and subcommittees. While no measures were developed for the CSI program as a whole, performance measures were developed for the Council activities and four of the sector subcommittees (Computers & Electronics, Iron & Steel, Petroleum Refining, and Printing). For two subcommittees, there were no measures developed: the Automobile Manufacturing Subcommittee, which had already ended its work, and the Metal Finishing Subcommittee, which had already developed project-related measures for the SGP.

Measures for Projects/Programs

Three subcommittees developed performance measures to evaluate the success of particular projects or products: Computers & Electronics, Printing, and Metal Finishing. While the Printing and Metal Finishing Subcommittees both have developed measures of environmental performance (for PrintSTEP and SGP, respectively), the SGP performance measures are far more extensive, and include specific performance goals (which the PrintSTEP measures do not). The Computer & Electronics Subcommittee developed performance measures to gauge the impact of specific initiatives. For example, CURE's performance measures include the number of data elements reduced and the amount of time spent preparing reports.

Metal Finishing

Prior to the SCG and GAO reports, the Metal Finishing Subcommittee was in the process of developing quantifiable, results-based performance measures for the SGP. Metal finishers who sign up to the SGP commit to voluntarily reduce hazardous air, water, and solid-waste emissions; to reduce both water and energy use; and to increase metals utilization in their metal finishing operations. Table 5 summarizes the environmental improvement goals.

Table 5. Environmental Improvement Results Expected from SGP

Reduced Hazardous Emissions (“Cleaner” Goals)	90 percent reduction in organic TRI emissions 50 percent reduction in toxic metals emissions 50 percent reduction in hazardous sludge disposal Reduced sludge generation Reduced worker & community exposure
Improved Resource Utilization (“Smarter” Goals)	98 percent metals utilization 50 percent reduction in water use 25 percent reduction in energy use

The metal finishing industry has pledged, as part of their goals commitment, that 80 percent of metal finishers nationwide will achieve these facility-specific goals. An online tracking system has been established in the Metal Finishing Compliance Assistance Center to measure both individual facility and industry-wide performance in meeting these goals. Facilities fill out a 1992 baseline year sheet that documents that year’s performance with respect to organic TRI emissions, metals emissions, sludge generation/disposal, energy and water use, and metals utilization. They also fill out a yearly performance sheet (starting in 1998 and continuing out to 2002, the last year of the five-year program) to gauge improvements in performance compared to the baseline year.

PrintSTEP

The Printing Subcommittee has developed draft measures for evaluating the effectiveness of the PrintSTEP program.[13] Environmental impacts will be assessed by measuring pollutants released prior to and after facilities begin participation in PrintSTEP, normalizing for production. Pollutants measured will include specific indicators in wastewater, VOC and HAP emissions, and volumes of waste previously disposed and now recycled. While these measures do not include specific goals, they address:

- reductions in waste and emissions,
- relative success in achieving compliance,

[13] "Evaluation Strategy for the PrintSTEP Pilot Projects," draft (February 1999).

- use of pollution prevention approaches,
- increased ease of facilities in meeting regulatory requirements,
- ease of administration for state agencies,
- involvement of the public, and
- cost-effectiveness for all stakeholders.

The effort to develop performance measures just began during Winter and Spring 1998, while CSI came to a close in December 1998. In this context, activity- and output-oriented measures (e.g., schedules or objectives for reports, and recommendations) were developed by the Designated Federal Officers for the subcommittees and the Council. They either related to the work to be completed before the end of CSI or, in some cases, retrospectively established measures for activities already completed. According to CSI participants, there was little interest in these measures on the part of subcommittee or Council members. Although a few members of the Computers & Electronics Subcommittee suggested that it was useful to have a clear statement of project endpoints, the development of the measures had little to no impact on the work. The principal reason members gave for lack of interest was that the measures-development effort came so late in the CSI process.

Section III:
Key Factors Influencing CSI Results

In this section we analyze the factors that played a role in the quality of CSI's results. This section explores, for example, what factors led the Metal Finishing Subcommittee to create a wide-ranging agenda, and what factors influenced other subcommittees to focus on projects much narrower in scope. Understanding the factors that led to CSI's results is a complicated endeavor, since the initiative was far ranging, involved a wide array of stakeholders, extended over a four-year timeframe, and produced a myriad of work products. Drawing out these factors is made even more complex because the Council and six subcommittees operated very independently of one another.

The first part of this section covers *Multi-stakeholder/Consensus Factors* and examines how process factors—such as consensus, Council-subcommittee relationships, groundrules, facilitation, deadlines, technical assistance, and leadership—were enabling or limiting factors in Council and subcommittee efforts. The second part of this section covers *Sector Factors* and examines how factors such as industry size, participation of decision makers, access to EPA, and pre-CSI sector studies aided or inhibited Council and subcommittee results. This section concludes with a table that summarizes the various SCG and GAO recommendations regarding these factors and EPA's responses.

A. Multi-stakeholder/Consensus Factors

The CSI process is a significant departure from the traditional EPA policy development process. The process involved representatives from industry, environmental organizations, environmental justice and community groups, labor unions, and regulatory agencies that brought different perspectives and priorities to the table for discussion (the multi-stakeholder dimension of CSI). So that all participants would have an equal voice, CSI used a consensus-based, decision making process. This presents a series of findings that reflect stakeholders' perspectives on how CSI's multi-stakeholder, consensus-based process contributed to or inhibited the Initiative's success.

STRUGGLES TO DEFINE AND IMPLEMENT CONSENSUS

This four-year study and the SCG two-year study found that many participants felt that the CSI consensus requirement had been an obstacle to achieving results, particularly in the early stages of the Initiative. The June 1996 CSI Council Operating Principles defined consensus as follows: "Consensus will be considered reached when all the council members at the table can accept or support a particular position, even though the position may not be their first choice." Despite this, participants reported that some CSI stakeholders viewed consensus as a requirement for unanimity and a license to wield veto power. Without effective groundrules and strong facilitation, even a single participant could use this

extreme approach to consensus to bring the efforts the workgroup or subcommittee to a halt. The SCG report, describing process-related problems in several of the subcommittees, recommended that EPA clarify the meaning of "consensus."

The struggle to define concensus in a clearer way followed two paths. First, following the SCG report, the Office of Reinvention developed a White Paper entitled “Consensus Decision-Making Principles and Applications in the EPA Common Sense Initiative” (October 1997) to clarify the operational meaning of "consensus" for CSI, and the responsibilities of participants for helping to make the consensus process work. The White Paper suggested several options providing flexibility for parties to have a voice in consensus decision making:

- fully support;
- accept, though not the first choice;
- allow agreement to go forward without dissent;
- provide an alternative view on a certain issue within the context of allowing an agreement to move forward; and
- indicate no consensus.

In the case involving “no consensus,” the White Paper stated that "all parties are responsible for fully articulating their interests and identifying alternatives."

The White Paper put forward an approach maximizing the flexibility in the consensus process, and indicated that the groundrules for decision making should not include a veto-oriented approach. The White Paper proved to be an important step for the Council in clarifying that body’s application of consensus, but had less impact on the subcommittees.

Second, the subcommittees had addressed the definition of consensus before the publication of the SCG report and the White Paper—demonstrating the extent to which subcommittees and the Council tended to operate autonomously on procedural issues. Subcommittees’ approaches to the consensus process were, however, extremely uneven. Examples from the Metal Finishing, Printing and Automobile Manufacturing Subcommittees illustrate how varied these approaches were:

- In March 1995, the draft Operating Principles for the Metal Finishing Subcommittee suggested flexibility in the operation of consensus:

  “Subcommittee Members agree to strive for as broad, inclusive, and informed a consensus as possible when making Subcommittee decisions, particularly with respect to final recommendations ... If agreement among all Subcommittee

Members cannot be reached on a decision, a Subcommittee Member may express a minority view that will be reflected in the meeting summary and/or the Subcommittee's final recommendations."[14]

- The draft Operating Principles also stressed the expectation for "good faith" participation, and dealt with issues such as not characterizing other members' views or positions to the press— problems which plagued some of the other subcommittees.
- In 1996, the Printing Subcommittee created its own procedures workgroup to resolve both operating rules and agenda-setting issues. The subcommittee also brought in an outside, nationally-recognized expert in early 1997 to spend a day training members on how to negotiate most effectively to achieve their interests in the consensus process.
- The Automobile Manufacturing Subcommittee did not resolve its approach to the consensus process. At the point where the industry participants announced their intention to withdraw from CSI and the subcommittee planned the timeline to end its CSI work, the Automotive Manufacturing Subcommittee still lacked any defined operating procedures.

However, CSI's use of the consensus requirement proved valuable to more than one subcommittee project. The evolution of the three projects in particular demonstrate this value: Metal Finishing's SGP, Printing's PrintSTEP, and Computer & Electronics' CRT Recycling Project, as described in the section below.

CONSENSUS SUPPORTS CREATIVE SOLUTIONS

The process of making decisions by consensus played a critical role in some of the most creative of CSI's accomplishments. The strongest example of CSI's multi-stakeholder, consensus-based process as an innovative policy development tool is the Metal Finishing Sector's Strategic Goals Program. The metal finishing industry came to CSI having participated in EPA's Sustainable Industry (SI) Program since 1990, where they had forged good stakeholder relationships with regulators at the national, state, and local government level. The industry and regulators worked on projects that improved their mutual understanding of the sector, including the sector's traits, trends, future environmental regulatory outlook, and the barriers—both economic and regulatory —affecting the sector's ability to improve environmental performance. The major SI result was the concept of industry tiers: categories of different levels of environmental performers who would have different policy options and environmental

[14] Environmental Protection Agency, "Common Sense Initiative/Metal Finishing Industry Sector Subcommittee: Operating Principles" (Draft, 3/4/95).

improvement incentive mechanisms applied to them (e.g., regulatory flexibility for Tier I, compliance assistance for Tier II, transition to responsible closure for Tier III, and targeted enforcement for rogue outfits in Tier IV).

However, the new stakeholders representing environmental, environmental justice, and labor interests who were not part of the SI dialogue initially felt that the agenda of the new Metal Finishing Subcommittee was "rigged," by the regulators and industry representatives who had been working in SI. The new stakeholders thought they were wasting their time and threatened a walk-out. Out of necessity to convince the new stakeholders their views mattered and that they had procedural standing on par with industry, the subcommittee developed operating ground-rules defining how the consensus-process should function and a working definition of reasonable consensus. This increased the environmental, environmental justice, and labor participants' comfort with sitting at the table and working collaboratively.

Metal Finishers Rely on Consensus For Goals Agreement

One of the critical incentives for EPA to conduct consensus-based processes is that decisions carry more weight, not only because they address the critical issues and concerns, but because they offer the Agency policies that begin with a broad base of support. Metal Finishing Subcommittee participants credited the consensus process as critical to the development of the Goals Agreement. It took two years of hard work to hammer out that agreement, and to design the action plan to implement it. The SI "backwards mapping" analysis, identifying drivers and barriers for changes in environmental management practices, did not foresee the pollution-prevention oriented, voluntary goals-based, beyond-compliance partnership national program that was to become the SGP. The pollution prevention elements of the SGP are due largely to environmental NGO stakeholder contributions (with strong support from environmental justice and labor participants) to the SI tiering policy concept, and resulted from extensive negotiations on the shape of the SGP between all stakeholder participants. The labor stakeholders were successful in writing a single goal committing the industry to demonstrate improvements in worker and community exposure reductions. In Metal Finishing, consensus-empowered representation served to bring forth a result that was creative, collaborative, and as close to a win-win situation as anyone got in CSI.

Printers Rely On Consensus To Develop PRINTStep

The Printing Subcommittee's PrintSTEP Project is another example where consensus was critical to a creative CSI accomplishment. PrintSTEP came out of stakeholder interest in: 1) more efficient and flexible permitting, 2) involvement of communities in environmental decision making, and 3) increased incentives for pollution prevention. One of the more unique outcomes of the PrintSTEP agreement was the extent to which the level of community involvement is linked to the opportunities for one-stop permitting and permitting flexibility—an outcome resulting from extended negotiations to reconcile the concerns of industry and environmental justice stakeholders. While not nearly as comprehensive as the SGP, this was still a very intense and prolonged process of working to achieve consensus. In 1998 alone there were 20 project team and workgroup meetings (usually two-day) and numerous conference calls. It is unlikely that a non-consensus process would have generated a project of this sort (i.e., linking flexibility to community involvement).

In addition to the Metal Finishing SGP and Printing PrintSTEP projects, there are many other examples of creative accomplishments resulting from a consensus process: the consensus negotiations around data elements for inclusion in the Computer & Electronics Subcommittee CURE; the Automobile Manufacturing Subcommittee's consensus document on "U.S. Automobile Assembly Plants and Their Communities;" and alternative regulatory systems developed in the Automobile Manufacturing Subcommittee (Principles of an Alternative Sector Regulatory System) and the Computers & Electronics Subcommittee (Alternative System of Environmental Protection). The Computers and Electronics Subcommittee CRT Recycling Project is one such example. In the case of CRT recycling, the industry trade association had tried on a number of occasions to convince EPA of the viability of recycling CRT glass. For example, on one such occasion, the Electronics Industry Association argued that the RCRA Total Concentrate Leachate Procedure (TCLP) was not applicable to CRT glass since the test that abrades glass on glass and tests the surface for lead leaching is a phenomenon that does not occur in a landfill. Frustrated with the lack of progress with EPA's Office of Solid Waste, industry took the issue into CSI hoping to show that applying the hazardous waste definition of RCRA to CRT glass was excessive. Industry's goal was to remove CRT glass from regulation as a RCRA hazardous waste.

Environmentalists and states were supportive of the concept of recycling CRT glass— particularly because of the environmental benefits of such recycling, which include less lead dispersed into the environment and large energy savings from usingrecycled glass versus virgin materials. However, these stakeholders were concerned about potential environmental and human health impacts were CRT glass mishandled—for example, ground into a leaded glass dust and either dumped or made into a food container product such as a soda bottle. Other concerns with the deregulation of CRT glass included how another sector (mining for example) might use the precedent as a loophole to avoid related RCRA waste management requirements.

CSI's multi-stakeholder, consensus-based process provided an avenue out of these conflicting stakeholder concerns. The subcommittee developed a recommendation that included a set of management standards regarding CRT glass handling that, if followed, allows firms to handle CRT apart from RCRA hazardous waste requirements—requirements that render handling and transportation of CRT glass uneconomical. While from industry's perspective the management standards still impose considerable cost (since CRTs must be transported as tubes as opposed to crushed glass, which takes up less space), the recommendation marks a significant step forward in making CRT glass recycling cost effective. CSI's multi-stakeholder, consensus-based process played an important role in achieving the recommendation. In the absence of multi-stakeholder buy-in, industry believes such a recommendation would have been met with a lawsuit by the environmental community.

While there were many multi-stakeholder, consensus-related problems, many of those interviewed, especially from the subcommittees that had achieved greater success, saw the process as useful and a welcome alternative to the usual litigatious and adversarial policy dialogue between stakeholder groups. With the Initiative leaving the stage of EPA's reinvention efforts, many stakeholders expressed concern that EPA not miss the lesson that while stakeholder-based collaboration has high transaction costs, it can also be the best approach to achieve creative win-win. Stakeholders were clear about the many shortcomings of CSI, but most stressed that EPA should be able to learn from the many CSI design and execution problems (see next finding below), to more clearly recognize the challenges and to help channel the efforts of future multi-stakeholder efforts more effectively.

PROCESS-RELATED FACTORS SLOW PROGRESS

While interviewees felt that the requirement for consensus-based decision making played a major role in some of the most creative CSI accomplishments, the two-year CSI evaluations by SCG and GAO described problems associated with a consensus approach. Stakeholders interviewed for this four-year study mentioned many of the same issues.

Several process-related factors—including inadequate groundrules, absent or poor facilitation, a lack of deadlines, a lack of technical assistance for NGOs, and Council-subcommittee relations— impeded subcommittee and Council efforts during the first half of CSI. EPA identified and overcame many of these problems early in CSI at the subcommittee level, and improved the Council's processes after the 1997 creation of the Office of Reinvention. Even though these reforms were instituted, many of the adverse effects of these process-related factors lingered throughout the four years of CSI.

The following are the major process-related problems found in the two-year evaluations as well as this study:

- inadequacies in consensus-process groundrules, timelines, and facilitation;

- insufficient process and support for providing education on technical, regulatory issues critical to a level playing field; and
- the relationship of the CSI Council to the subcommittees, and the overall role of the Council.

These process-related problems are outlined in great detail in the earlier SCG and GAO reports. This finding summarizes the issues, delineates EPA's efforts to address the problems, and summarizes the progress the subcommittees and the Council made in the last two years of CSI.

Inadequate Groundrules, Facilitation, and Deadlines

During the first two years of CSI, there were numerous conflicts that prevented the CSI Council and subcommittees from effectively pursuing their goals. These conflicts were, at least in part, a result of: the absence of groundrules and clear operating procedures, inadequate facilitation, a narrow definition of consensus, and a lack of definite and realistic timelines. Although the 1997 GAO and SCG two-year reports described the need for improvement in these areas, in many cases, EPA had already taken steps to resolve these problems. Although there were major improvements, many participants felt that the initial process breakdowns limited the final accomplishments of CSI.

Groundrules

Running a multi-stakeholder, consensus-based process requires attention to the procedures necessary to ensure that conflicts and common interests can be explored in as constructive an atmosphere as possible. Those interviewees who had participated at the beginning of CSI felt that, at the outset, in the absence of overarching operating rules, each subcommittee had to develop its own set of groundrules (covering, for example, issues such as the nature of consensus, approach of members to resolving conflicts and seeking solutions, treatment of subcommittee discussions outside the subcommittee, level of participation, and development of agendas) with uneven results. According to participants, for example, the Metal Finishing and Iron & Steel Subcommittees accomplished this relatively quickly while the Petroleum Refining Subcommittee spent a large part of the first two years on groundrule discussions. For the most part, the various subcommittees developed their groundrules independently. The subcommittees described by participants as more successful in developing groundrules included Metal Finishing, Printing, Computers & Electronics, and Iron & Steel. Those subcommittees with the most difficult groundrule-related problems were Petroleum Refining and Automobile Manufacturing.

One specific groundrule-related problem that many members described as affecting subcommittee efforts in the first two years of CSI was the absence of clearly defined criteria for removing (or not re-inviting) members not participating in a "responsible" manner in CSI. EPA chose to deselect stakeholders in the Printing (environmental justice representative), Computers & Electronics (environmental representative), and Petroleum Refining (environmental and industry representatives)

Subcommittees. Many participants, including those agreeing with the specific decisions, felt that the deselection process was dealt with on an ad hoc basis. Although EPA and many CSI stakeholders perceived the deselected subcommittee members as contentious representatives and distracting for the subcommittees, the process of deselecting those individuals likewise distracted the subcommittee from working together.

Many interviewees commented that general groundrule problems delayed their efforts—even in the subcommittees which overcame them—and contributed to the failures of some subcommittees to build effective problem-solving relationships. While it is not possible to say, for example, whether the Automobile Manufacturing Subcommittee would have been more productive in the absence of its problems with groundrules, it is reasonable to say that these problems at least increased the difficulty of the challenge.

Facilitation

Many of the early CSI-problems, including difficulty developing groundrules and following those groundrules once established, are related to CSI facilitation problems. Facilitation problems were noted during stakeholder interviews and are well documented in the SCG report.

At the onset of the Initiative, only three subcommittees had trained neutral facilitators (Metal Finishing, Printing, and Petroleum Refining), instead, other subcommittees used either EPA staff or volunteer stakeholders to facilitate. According to CSI participants, the absence of professional neutral facilitation at the start-up of CSI slowed the relationship-building process in several subcommittees (Automobile Manufacturing , Iron & Steel, and Computers & Electronics). Ultimately, the use of trained facilitators for the Metal Finishing and Printing Subcommittees was lauded by many participants. Participants interviewed from both of these subcommittees believed that the roles of their facilitators were critical to the development of the SGP and PrintSTEP. Trained facilitators also particularly improved subcommittee and workgroup function for the Petroleum Refining Subcommittee. However, participants in the Automobile Manufacturing Subcommittee noted that, for most of the life of the subcommittee, the facilitators had difficulty keeping some of the more outspoken stakeholders on agenda. As one industry stakeholder put it, keeping the group in line and on agenda was "like herding cats." Despite the improvement in facilitation made by EPA after the beginning of CSI, many stakeholders stated that, for some subcommittees, effects of conflicts stemming from the lack of adequate facilitation early in the process lingered throughout the remaining years of CSI.

Deadlines

Participants on some subcommittees commented that one barrier to progress during the first two years was the lack of any clear sense of timelines for completing the work of the sectors. Once deadlines were imposed in these subcommittees, they helped to galvanize action. The motivating effect of deadlines after a slow start seems to have been a factor for four of the subcommittees: the Automotive Manufacturing Subcommittee after it decided on a date to shut down, the Printing and Computer & Electronics Subcommittees after first setting their own deadlines, and both of these and the Petroleum Refining Subcommittees after a discussion earlier in 1998 of CSI's transition and potential completion. Setting deadlines separate from other elements in the flow of project development seems not to have been an issue to participants on either the Iron & Steel or Metal Finishing Subcommittees.

Technical Assistance for Non-governmental Organizations

In a sector-based, multi-stakeholder consensus process, education of participants without strong technical or regulatory background can be an important factor for building the necessary knowledge for collaborating on innovative approaches. No systematic provision was made under CSI to provide this kind of technical support to environmental organizations or environmental justice representatives.

The SCG report recommended that EPA provide technical training for environmental organizations or environmental justice representatives prior to the initiation of new subcommittees. However, no new sectors were added to CSI, and this issue was never addressed overall for on going CSI work. The need for technical support was addressed in a variety of ways by the six subcommittees. For example, in the Computers & Electronics Subcommittee, environmentalists were allowed to contract (at EPA's expense) with their own technical consultants. With increased understanding of the technical issues from a trusted source, the environmental stakeholders felt more confident of the technical details of particular projects, and more willing to take risks—an important factor in the agreements on CRT glass recycling and the zero discharge project. In the Automobile Manufacturing Subcommittee, by contrast, environmental and environmental justice stakeholders were not given the freedom to select project consultants. Industry wanted veto authority over any possible consultants. In the end, no consultants were hired, and the environmental representatives lacked adequate technical expertise to feel confident about making compromises or strategy decisions.

Relationship of Council to Subcommittees

During the first two years of CSI, the CSI Council lacked a clear role, as noted in the 1997 SCG Report. The original goal for the Council was both to review the work of the sector subcommittees and to tackle issues that cut across several sectors (e.g., duplicative reporting and common regulatory issues such as flexibility under air regulations). However, the SCG study reported that many participants felt that the Council served largely as a barrier to bringing forward ideas or recommendations to the Administrator by blocking consensus agreements on recommendations hammered out in the

subcommittees. Several stakeholders interviewed from the Iron & Steel Subcommittee, for example, noted that after what they regarded as an overly critical review by the Council of part of the Subcommittee's work on Brownfields, the Subcommittee declined to send a revised recommendation back to the Council and focused instead on promoting two related pilot projects. Council and subcommittee participants felt that the subcommittee and Council relationship improved in the last two years of the initiative, but that the Council added little value to the work of the subcommittees.

The ambiguity of the role of the Council was rooted in its origin. Since there was an Administration limitation on creating new FACA committees at the time EPA initiated CSI, a council with subcommittees was necessary rather than a series of sector-specific FACA committees. But the subcommittees began meeting (in late 1994 and early 1995) several months before the first meeting of the Council (May 1995), and the Council had difficulty defining a unique role for itself.

EPA made an initial effort to improve the working relationship between the Council and the subcommittees in 1996. In June 1996 the Council adopted revised operating principles for reviewing work of the subcommittees which included a three-part framework under which Council reviews of subcommittee work would be tailored to the level of support required by the subcommittee:

- a variety of information-sharing mechanisms to keep the Council informed of the work of the subcommittees ("Framework A");
- mechanisms for dialogue and feedback between the Council and the subcommittees on issues that are nearing the recommendation stage ("Framework B"); and
- more formal review of recommendations proposed to the Council, with a range of consensus, minor modification, or no consensus decisions, and a stipulation that the Council indicate to the subcommittee changes that might make consensus possible.

A more comprehensive effort to define the Council's role and improve its operations was undertaken following the creation of the Office of Reinvention (OR) in 1997. OR focused both on:

- continuing to improve the relationship between the Council and subcommittees, and
- directing the Council's efforts to assist the Agency on several cross-cutting issues common to many of the subcommittees' efforts.[15]

[15]This ultimately led to the Council's work on Agency initiatives on environmental information, stakeholder involvement, and future sector-based approaches.

OR worked with the Council to develop a broader framework for review of subcommittee efforts. One aspect of OR's approach involved guidance from the Council to the subcommittees on the stages for developing effective plans and recommendations, and the program elements subcommittees should consider in the development of their projects and recommendations.[16] The other aspect (discussed previously) involved clarification of the concept of "consensus," using an approach that provided greater flexibility in the application of the requirement for consensus.

Among the CSI participants we interviewed, those who were members of the Council (many of whom were also subcommittee members) generally commented favorably on the efforts initiated by OR—both on the fact that the Council now had a specific role, and on the smoother relationship that had emerged with the subcommittees. Even these Council members, however, often indicated that the real work of CSI was being done by the subcommittees, and the role of the Council in that work was limited. Among CSI participants serving only on subcommittees,
there was some awareness of the changes at the Council level, but little feeling that it affected subcommittee work, except in reducing lingering concerns about Council micromanagement. Most indicated that their subcommittees operated fairly autonomously from the Council, and that the Council provided little added value to their work.

SUCCESS IS TIED TO SENIOR LEADERSHIP AND LINKAGES WITH CORE AGENCY PROGRAMS

Most participants felt that, for CSI to succeed, EPA must provide strong leadership, technical support, and linkages of CSI initiatives to the Agency's core programs. In general, they felt that the Agency's actual performance had been mixed. The 1997 SCG report had focused on the need for continued or improved effort by EPA in two of these areas. Its recommendations called for:

- continued demonstration of commitment to CSI by the Administrator and other senior managers; and
- clarification of linkages between CSI and the accomplishments and goals of the enforcement office and of the program offices' statutory mandates.

Administrator Browner Leads by Example

For providing leadership of the mission of CSI, participants in every subcommittee lauded Administrator Browner for such a bold, out-of-the-box experiment. Her demonstration of leadership

[16]Memorandum from Lisa Lund (EPA Deputy Associate Administrator, Office of Reinvention) to CSI Council Members (September 9, 1997); "Proposed Guidance from the Council to the Sectors: Key Elements of A Sector Approach to Environmental Protection." (September 1997)

and her belief in the possibilities of CSI is what brought—and kept—many stakeholders to the table. Her chairing of the Council convinced stakeholders that CSI was taken seriously. Both from industry and environmental participants' perspectives, this commitment at the highest political level of EPA was a strong motivator. As one stakeholder put it, when asked what prevented her from leaving the table after numerous discouragements and setbacks, "I figured if Carol could sit there, so could I."

Active Leadership in Subcommittees Pays-off

At the level of EPA leadership of the subcommittees, the perceived importance to participants of EPA leadership was also clear. Participants noted that where senior management (i.e., the Assistant Administrator, Regional Administrator, and Deputy Assistant Administrator) demonstrated leadership and were actively engaged in their CSI subcommittees, significant results were more likely to be achieved. Subcommittees with less-involved cochairs experienced more difficulties. It was especially critical to industry participants that EPA senior management be visible and involved.

Metal Finishing and Printing were the two subcommittees where EPA leadership was most widely noted and appreciated in our interviews. Participants commented, often without prompting, on the crucial roles played by senior EPA political and career leaders in the successes of these two subcommittees. The key in both cases was described as the active leadership played by EPA managers in working closely with participants at the most detailed level that helped them hammer out key agreements. With respect to the Petroleum Refining Subcommittee, some members noted that EPA senior managers had played a key leadership role in persuading industry participants to stay at the table reorganizing the subcommittee and re-directing the subcommittee's efforts; without that leadership, they felt the Petroleum Refining subcommittee would have ceased operating similarly to the Automobile Manufacturing Subcommittee. By contrast, participants on some other subcommittees felt, as the discussions became difficult or contentious, senior EPA leadership waned; yet they felt this was exactly when the EPA leaders could have made the most difference.

Some of the EPA staff and managers interviewed questioned whether it was appropriate for participants to expect EPA to take a leadership role in the actual negotiation of agreements. They noted that EPA was actually a stakeholder on the subcommittees as well, and that had EPA presented its own agenda, it would have defeated the purpose of encouraging a multi-stakeholder definition of the issues. But there were cases, particularly in the case of the Iron & Steel and Petroleum Refining Subcommittees, where some members were looking for EPA to outline the issues and present the range of possible solutions. The types of leadership envisioned by stakeholders included forcing participants to find areas where they do agree as a means of defining a sector agenda, and emphasizing the overriding preeminence of pollution prevention in the subcommittee's work. Another version of the appropriate role was offered by one of the EPA managers: "One of the things EPA should have been doing was to be the manager at the table: let's get these pieces done and out to work on. You have to

know when to push; let the group find its own direction, but make sure there is a direction and something is getting done."

Trouble Linking to EPA's Core Programs

Several participants, particularly on the subcommittees that had struggled hardest and unsuccessfully with addressing core regulatory issues, commented that EPA was never able to effectively link its CSI initiative to the day-to-day regulatory business of the Agency. Several of the EPA staff we interviewed also commented that the CSI initiative failed to get buy-in from Agency regulatory staff, and in particular, that CSI efforts involved almost no career managers from the core regulatory programs. While the creation of the Office of Reinvention was seen by many as valuable in creating a home for CSI and other reinvention efforts, there was still concern that EPA's leaders had been unable to define a strategy for linking the CSI effort to ongoing relevant media-program regulatory initiatives—particularly if the objective was to re-focus some of the media program efforts into cross-media, sector-based approaches. As an example, some participants noted that several of the subcommittees had tried to deal with similar air pollution issues (New Source Review and Title V), but that no concerted CSI-wide effort had been made to explore the possibility of sector-oriented approaches to some of those issues.

Summary of SCG and GAO Recommendations and EPA's Responses

Table 6 summarizes the discussion above on the various SCG and GAO recommendations and the actions taken by EPA in response to the recommendations.[17]

[17] Additional recommendations of the studies concerned performance measures, which are discussed under Section II.

Table 6: EPA Responses to Recommendations by SCG and GAO

Topic Area #1: Steps to Improve CSI

Recommendation	EPA Action
EPA should provide more leadership, guidance, and clearer operating framework on expected results and most useful types of projects and recommendations. [SCG/GAO]	OR worked with the Council to define support needed by EPA on cross-cutting issues on sector approach, information and reporting, and stakeholder role. OR worked with Council to develop guidance on "Key Elements of a Sector Approach to Environmental Protection." EPA provided leadership/direction in Metal Finishing and Printing Subcommittees at time of report.
EPA and Council need to clarify the role of the Council with respect to subcommittees.[SCG]	"Key Elements" guidance used to better define the role of the Council with respect to subcommittees. Built on previously developed "ABC" approach to presentation of subcommittee work to the Council.
EPA should modify or clarify use of "consensus" concept. [SCG]	White paper on "consensus" issued in Fall 1997.
EPA should develop screening process for new participants and guidelines for continued participation. [SCG]	No systematic guidelines.
For new CSI sectors: EPA should examine opportunities for and barriers to change prior to selection and provide key technical training where needed for participants prior to initiation. [SCG]	Not applicable; no new CSI sectors.
EPA should require development of performance measures to evaluate all levels of CSI, including results-oriented performance measures to assess how actions have led to measurable environmental improvements. [SCG, GAO]	Council and four subcommittees developed performance measures focused largely on activities and process. Two subcommittees developed performance measures to evaluate impacts (including environmental impacts) of projects.

Topic Area #2 Steps to Institutionalize Successful Elements of CSI

EPA should consider non-FACA approaches for some sector objectives. [SCG]	EPA developed the SBEP Action Plan with support of the Council and concurrence of senior EPA management. EPR2 was created through Computers & Electronics Subcommittee as a non-FACA forum for recovery and reuse of electronics components.
EPA should continue to demonstrate commitment of Administrator and other senior managers. [SCG]	Both Administrator and several other senior officials continued to play active roles in CSI.
EPA should build additional management and staff support for CSI, including dedicated organizational unit to coordinate CSI with other reinvention efforts. [SCG]	EPA created OR, with major management and staff commitment to CSI. Little development of new commitment in other program offices.
EPA should clarify linkages between CSI and the accomplishments of the program offices' statutory mandates. [SCG]	No action.
EPA should clarify connection between CSI and enforcement. [SCG]	No new action. The EPA Office of Enforcement and Compliance had issued memoranda in 1995 on relationship of enforcement efforts and CSI.
There should be an increase of participation of EPA Regional and state/local agencies.[SCG]	No new action overall. Some state programs involved in pilots.

B. Sector-related Factors

Multi-stakeholder, consensus-type factors played a significant role in CSI's successes and shortcomings. However, could CSI have worked equally well for all industry sectors had there been no early process problems with the Council and subcommittees? What can we learn from CSI regarding sector-related factors that could prove important to other sector-based efforts?

This section examines the characteristics of the industrial sectors involved in CSI and reviews how these factors fostered or inhibited the work of various subcommittees. Based on the comments by participants, and the experiences of the subcommittees, the following sector-related factors, discussed below, stand out:

- typical firm size for the sector (i.e., small versus big companies);
- participation of decision makers;
- incentives to negotiate;

- regular access to EPA decision makers;
- history of stakeholder relationships; and
- level of up-front preparations in advance of CSI.

SECTORS WITH SMALLER FIRMS WERE MORE SUCCESSFUL, HOWEVER SUCCESS FACTORS COULD BE APPLIED UNIVERSALLY

CSI worked best for sectors with a preponderance of smaller firms. However, the factors of success for smaller-company sectors suggest that the right circumstances and setting can be cultivated to promote a successful multi-stakeholder approach for sectors dominated by larger firms.

Of the six CSI sector subcommittees:

- three were composed of industrial giants (Automobile Manufacturing, Iron & Steel, and Petroleum Refining);
- one involved a mixture of giant and smaller firms in which the giants played a stronger role (Computer & Electronics); and
- two were composed mainly—even in terms of economic output—of smaller firms, but with some important larger companies (Printing and Metal Finishing).

CSI participants generally agreed that the subcommittees most successful at meeting the broader goals were the Metal Finishing Subcommittee and the Printing and Computer & Electronics Subcommittees (which were moderately successful). The three large-company sectors were least successful. So what accounts for the smaller company sectors' ability to undertake a CSI multi-stakeholder exploration?

Participants suggested a number of factors, which, taken together, may provide part of the explanation for why these smaller-company sectors were more successful:

- Participation of Decision-makers,
- Incentives to Negotiate,
- Lack of Regular Access to EPA, and
- History of Contentious Stakeholder Relationships.

Participation of Decision Makers

CSI participants noted the importance of having decision makers at the table—for industry, government, and national NGO decision makers. Decision makers were visibly involved in the subcommittees of the sectors with small firms (Metal Finishing and Printing). Stakeholders commented on the value of relationship building among industry decision-makers and the fact that key commitments could be made in workgroup and subcommittee meetings. The lack of senior government leadership at

the subcommittee level affected the participation of senior industry leadership, for example, the lack of industry decision maker participation was strongly noted in two sectors—Iron & Steel and Automobile Manufacturing. In Iron & Steel, industry representatives repeatedly had to confer with senior management on key decisions. In Automobile Manufacturing, key national NGO environmental representatives were not at the table but had a significant influence on their peers' reluctance to discuss New Source Review (Clean Air Act) requirements, which was an important industry agenda item. In these two subcommittees, the industry and environmental representatives at the table consulted with more senior decision makers who were not at the table, and who also instructed their subordinates and peers not to make particular agreements under discussion.

CSI's experience contrasts with efforts in the Netherlands, which achieved broad negotiated agreements on sectoral approaches to achieving environmental goals with some large-company sectors. One of the crucial early steps the Netherlands took with the first large-company sector (the chemical industry) was to involve corporate CEOs in the first phases of the negotiations that established the basic parameters for future discussions. Later, the more technical phases of the negotiations were handled by environmental or other technical staff. Involving key industry decision makers did not guarantee results (Netherlands' negotiations with the petroleum refining sector failed), but was a necessary step where success was achieved.[18]

Pending Regulations as an Incentive to Negotiate

CSI participants described a sector's major incentives to negotiate as potentially including pending regulations or the need for flexibility for business efficiency or competitive reasons. Virtually all the sectors included in CSI faced significant future potential federal regulations. For example, the large companies in five of the six sectors were interested in addressing New Source Review issues under the Clean Air Act, metal finishing firms were concerned both with Brownfields issues and the upcoming Metal Products and Machinery Effluent Guideline, and firms in Computers & Electronics were looking for regulatory flexibility that would make it easier for them to respond quickly in a rapidly changing, competitive market. The only significant exception may have been some of the smaller types of printing operations represented on the Printing Subcommittee. But even those firms were concerned about permitting and reporting burdens and, along with the companies of the other sectors, were interested in increasing flexibility and reducing those burdens.

[18] See Paul E. de Jongh, The Netherlands Approach to Environmental Policy Integration, prepared for Enterprise for the Environment, Center for Strategic and International Studies, 1996; Robert Kerr, The Netherlands Target-Group Covenants: Setting Priorities and Driving Changes, prepared for EPA/OSW, 1996.

Lack of Regular Access to EPA

For the small-company sectors (e.g., Metal Finishing and Printing), participants indicated that access to decision makers at EPA was a significant benefit of participating in CSI. They felt that this provided a level of access that they did not have through other avenues. For the large-company sectors, such access was also valuable—however, these sectors already have other avenues through which to access EPA. Examples of the other avenues of access to EPA large companies typically enjoy include:

- participation on environmental advisory committees;
- direct access to the Administrator; and
- business lobbying of other key decision-makers in Congress or the Administration.

The lack of regular access is an important issue. In the case of large-company sectors, there are almost always ongoing, multi-stakeholder efforts at the Agency (e.g., the Clean Air Act Advisory Committee) to address these industries concerns. Thus, as noted by several industry participants, they saw CSI as one of many possible venues to meet their regulatory reform goals. If CSI had turned out to be the only, or the major, venue for dealing with their particular sector-related concerns on these regulatory agendas, it might have attracted greater large-company attention. Since, as discussed previously, CSI did not succeed in addressing larger media regulatory issues, the large-company sectors continued to rely on their roles in those other venues.

History of Stakeholder Relationships

Interviewees noted that stakeholder relationships in CSI were more contentious for heavy- polluting industries—defined as Iron & Steel, Petroleum Refining, Automobile Manufacturing, and, to a lesser extent, Computers & Electronics—both historically and within CSI. These sectors have far greater community and national environmental impacts than the two sectors with more successful subcommittees (Metal Finishing and Printing), which were dominated by smaller firms.

In conclusion, responses by the interviewees suggest that it is the combination of these factors (participation of decision-makers, lack of regular access to EPA, and history of contentious stakeholder relationships) that accounts for the importance of a small-company sector's success as a subcommittee. Small company size thus seems to be one important indicator of the potential for a sector to be involved in a successful broad exploration of new approaches, but the particular circumstances of a sector are more important to consider.

Finally, several participants suggested an important caveat about sectors dominated by small companies. They noted that, among small-company sectors, it was important to select sectors (such as

Metal Finishing and Printing) with strong industry networks and associations which could communicate and support new national initiatives.

CAREFUL ANALYSIS OF SECTORS, PRIOR TO NEGOTIATIONS, PAYS OFF

It was also found that careful preparation and analytical work with a sector prior to multi-stakeholder negotiations can help identify sectors with the greatest potential for developing and supporting innovative approaches and facilitate successful negotiations. Several of those interviewed, particularly participants on the Metal Finishing Subcommittee, suggested that a critical pre-process step for effectively exploring innovative approaches to environmental improvement in sectors may be to methodically explore the industrial and regulatory contexts of the sector with potential stakeholders before starting negotiations. Prior to the beginning of CSI, EPA and the Metal Finishing sector had been engaged, through EPA's SI program, in an extensive process of analysis and dialogue on potential future approaches to environmental problems in the sector.

Work with the Metal Finishing sector began under SI in 1990. While this work involved extensive technical studies of the sector, the central element involved getting industry and state and federal regulators together to explore the industry's perceptions of its needs and the expectations and objectives of the other stakeholders. While it is difficult to determine the degree to which this prior groundwork was critical in establishing the basis for the sector's success under CSI, many participants and EPA staff involved with the Metal Finishing Subcommittee emphasized its importance. At the beginning of CSI, the principle of a tiered approach to the industry based on environmental performance, had already been conceptualized. While the other stakeholders in CSI (environmental groups, environmental justice, and labor) had not been involved in the SI work, and there were major initial tensions as a result, the SI groundwork provided a strong starting point. Even though the Goals Agreement was a major new concept that emerged from CSI, the understanding of perspectives on the regulatory and economic contexts and perspectives developed during SI made it possible to move more quickly to identify viable alternatives.

Interviewees also called attention to some previous groundwork in two of the other sectors, Automobile Manufacturing and Printing. In both cases, however, they noted significant limitations. The Automobile Manufacturing sector participated on the President's Council on Sustainable Development (PCSD), and there had been initial discussions there of an alternative performance-based approach to environmental management in the Automobile Manufacturing industry; these discussions, however, did not involve either all of the industry or all of the stakeholders. For the Printing sector, the Great Printers Project in several of the Great Lakes states involved a voluntary, consensus-based, multi-stakeholder effort to combine incentives for pollution prevention with reduced reporting burdens for lithographic printers. But lithographic printing was only one of five of the printing sub-sectors involved in CSI, and the Great Printers Project approach had little appeal for many of the larger printers in the other sub-sectors.

COMBINED FACTORS CONTRIBUTE TO CSI SUCCESS

With respect to the six sectors that participated in CSI, it is difficult to pinpoint with precision which specific sets of factors contributed most to their different levels of success in meeting the goals of CSI, or to say with certainty the extent to which multi-stakeholder process issues and sector-characteristic issues predominated. There is, however, some revealing information:

- The CSI sector generally regarded by stakeholders and EPA staff as most successful (Metal Finishing): participated in previous sector analyses prior to CSI; was facing both cleanup and water regulatory issues; comprises largely smaller firms; and was described by interviewees as having one of the most effectively managed multi-stakeholder processes, with strong EPA leadership, participation of stakeholders who were decisionmakers, and one of the less contentious histories of stakeholder relationships. Some of the subcommittee participants also commented on the opportunity for contact with EPA officials provided by CSI.

- The three sectors with predominantly large companies (Automobile Manufacturing, Iron & Steel, and Petroleum Refining), which met only one of the likely sector success-factors (incentive of pending regulations), were described by participants as having less-successful process experiences. Interviewees described the Automobile Manufacturing and Petroleum Refining Subcommittees as having the most process problems: no initial facilitation; slow development of groundrules; and strongly adversarial histories between participants. While there are significant regulatory and environmental concerns for both sectors, many participants had alternative venues for presenting their concerns to EPA (e.g., other advisory committees and regular direct contacts with EPA decision makers or Congressional representatives). The Automobile Manufacturing Subcommittee shut down early in 1997 with, from the perspectives of most Subcommittee members interviewed, limited substantive results.

- Descriptions offered by Petroleum Refining Subcommittee participants for the first two years of the subcommittee were similar to those of the Automobile Manufacturing Subcommittee in many respects. A major difference in interviewees' descriptions, however, was the strong EPA leadership provided at the time the Petroleum Refining Subcommittee was on the verge of closing down at the midway point in CSI. The strong EPA leadership persuaded industry stakeholders to stay at the table, and led to the reorganization of the

subcommittee membership to involve participants less weighted down by past conflicts. Iron & Steel Subcommittee participants described a smoother experience initially with the multi-stakeholder process and with EPA leadership, and were able to generate several significant results in the first two years, but were unable to continue making progress when they tried to take on broader sector issues. Participants noted the inability of stakeholders to "leave their baggage at the door" with respect to these broader issues, the existence of alternative venues, and the fact that participants at the table were often unable to negotiate agreements because decision makers not at the table vetoed ideas that were being discussed by the Subcommittee.

- Interviewees generally considered the Printing and Computers & Electronics Subcommittees to have had some significant substantive successes, though not at the level of the Metal Finishing Subcommittee and the SGP. Participants described both the Printing and Computer & Electronics Subcommittees as having some initial process problems, but ultimately resolved them. The Printing sector was most similar to metal finishing in terms of limited initial adversarial history, typical size of companies, and previous stakeholder and analytic work involving the sector (e.g., Great Printers Project and EPA's Design for the Environment). However, some of the participating printing sub-sectors were composed of large firms with very different environmental and regulatory concerns, and previous stakeholder and analytic work involving the sector had focused on the smaller firms. Fewer Printing company decision-makers were involved in the Printing Subcommittee, than on the Metal Finishing Subcommittee, but most industry representatives from large and small companies commented on the value of CSI in providing contact with EPA decision makers and access to other venues for discussing their concerns with the Agency.

- The Computers & Electronics Subcommittee involved industry participants that represented firms of widely divergent sizes and concerns. Subcommittee participants indicated that this diversity affected various workgroups differently. One Computer & Electronics workgroup, which focused on overcoming a variety of specific problems (e.g., CRT recycling, obscure regulations, recycling collection pilots, zero discharge), included strong leadership by small companies. The workgroup on reporting (i.e., CURE and BOLDER) involved both large and small industry participants, and a wide range of active state and local government representatives; while there were conflicts over some issues

on the scope and nature of the information to be integrated/and required, past conflicts were not predominant, and relevant decision makers for all parties were involved. Participants described the workgroup on alternative strategies (worker health, studies of cancer rates, and constructive engagement) as most dominated by large corporation and national NGO concerns, and most hamstrung by preexisting adversarial positions.

Section IV:
SUMMARY AND RECOMMENDATIONS

A. Summary

Initial expectations of the Common Sense Initiative were high. The program was launched with a flourish of optimism. It promised, as Administrator Browner announced in July 1994, "a fundamentally different system of environmental protection that replaces the pollutant-by-pollutant approach of the past with an industry-by-industry approach of the future." It was ambitious: six sectors covering a range of industries and business sizes, some fairly new sectors such as Computers & Electronics, and other more traditional sectors like Iron & Steel and Petroleum Refining. It was hampered by both design and process problems. "Great idea, poor execution," was a comment often made by CSI stakeholder participants. Some of CSI's projects may be very meaningful, while several are less than satisfactory, when compared to the original concept of "fundamental change."

In the view of most of the stakeholders we interviewed, at least one sector produced a fairly remarkable product, despite these limitations: Metal Finishing's SGP. In addition, many stakeholders feel that at least one other sector has developed an innovative project design, which, when implemented, offers the opportunity for permitting reform, beyond-compliance environmental improvements, and increased community involvement: Printing's PrintSTEP. Participants on the Metal Finishing Subcommittee and to a lesser extent those on the Printing Subcommittee, generally felt that their accomplishments could be said to be the first steps in the beginning of "a fundamentally different system." But participants on these subcommittees, as well as other CSI stakeholders, did not feel that they had successfully tackled fundamental regulatory change. Essentially, in the case of the SGP, they felt that they successfully (for the present) circumvented regulatory obstacles, but that the regulatory issues still remain to be dealt with.

Two "alternative regulatory systems" were developed or recommended for EPA consideration, one by the Automobile Manufacturing Subcommittee (Alternative Sector Regulatory System Principles), the other by the Computers & Electronics Subcommittee (Performance Track Program). Both of these products, while innovative, were presented to the Council at the conceptual level and there was insufficient time for the subcommittees to form solid recommendations and pilot them within CSI**.** Moreover, stakeholders perceive that these projects may become dormant at EPA and that the core programs in the Agency are committed in only the most limited way to the alternative systems conceptualized in these two efforts.

This CSI evaluation effort has documented findings that span a range of both successes and failures of the Initiative. But two overall findings from the participant interviews stand out:

1) CSI participants widely believe that consensus-based[19], multi-stakeholder collaboration can be a valuable policy development tool; and

2) Many participants feel that the inability of CSI to affect the regulatory regimes of the participating sectors should not be viewed as a failure, *but as a missed opportunity*. Participants feel that there was very little risk taking on the part of EPA and other stakeholders in the area of regulatory change, and a lack of coordination with ongoing, sector-relevant regulatory efforts in the media program offices.

B. Recommendations

Although CSI has formally ended, there are a number of both new and continuing EPA sector efforts, such as the SBEP Action Plan and continuing, voluntary, sector-oriented programs such as SI and Design for the Environment (DfE). These efforts—it is hoped—will continue to pursue multi-stakeholder collaborative approaches. Moreover, participants widely believe there are opportunities for EPA to further test the use of this tool, to support regulation development at EPA, and to support the work of states and local governments.

A wide range of stakeholders with otherwise diverse perspectives believe that EPA should view CSI as a jumping off point for learning. They feel that the Agency should:

- provide recommendations;
- continue to test, support, and study multi-stakeholder approaches;
- provide rewards for EPA staff to support priority reinvention efforts;
- follow through on key CSI recommendations, projects, and ideas;
- build on existing capabilities in sector work, and support multi-stakeholder "incubator programs;"
- assure early stakeholder involvement in policy dialogues focusing on innovative solutions;
- track CSI spin-off activities and projects and perhaps formally study and provide resource support to them as well; and
- provide regulatory and technical assistance to non-technical, non-regulatory participants.

[19] I.e., "Reasonable" consensus, as outlined in the EPA White Paper on Consensus, backed by good operating groundrules, competent facilitation, fixed deadlines, and other process and execution improvements, as described in the September 1997 Guidance to Subcommittees.

CONTINUE TO TEST, SUPPORT, AND STUDY MULTI-STAKEHOLDER APPROACHES

Support and further study multi-stakeholder, collaborative decision making as a tool, both within the Agency and in the regions and states. One option might be to engage in reasonable risk taking, for an appropriate sector, by experimenting with applying the multi-stakeholder collaborative model as an alternative to the traditional Agency rulemaking process. In the National Academy of Public Administrator's (NAPA) report, *Resolving the Paradox of Environmental Protection: An Agenda for Congress, EPA, and the States* (September 1997), a summary finding in the chapter on reinventing regulation, reads: "EPA's reinvention initiatives have yet to change the basic programs or attitudes of the agency." The stakeholders and EPA staff we interviewed also felt that EPA's core work of developing regulations and managing the nation's compliance and enforcement system has been little touched by CSI. They noted that unless the career managers and rulemaking staff at EPA are more involved in, and held accountable for, contributing to overall reinvention, no fundamental change can occur. Some interviewees suggested identifying a rulemaking (or set of rulemakings) for an appropriate sector (one which had already gone through an "incubator" process) and the multi-stakeholder collaborative approach in developing new sector objectives and requirements, rather than the traditional rulemaking process.

PROVIDE REWARDS FOR EPA STAFF TO SUPPORT PRIORITY REINVENTION EFFORTS

Stakeholders and EPA staff were concerned that (outside the OR) there were substantial disincentives and few rewards for most Agency staff to support CSI. We heard frequent comments that staff had to "steal" time from their "real" work to support CSI, that work on CSI was "not a career builder," and that it was not taken into account in performance evaluations by managers for whom it was anything but a priority. All stakeholders were concerned that this issue must be addressed to achieve meaningful integration of reinvention initiatives into core Agency programs. EPA staff and state stakeholders, particularly, suggested that a number of critical measures be considered, such as clear inclusion of priority reinvention activities in the performance evaluation criteria for managers and staff, clearly defined budget support within core programs for those efforts, and priority consideration for awards to staff (both from the Administrator and from program managers).

FOLLOW THROUGH ON KEY CSI RECOMMENDATIONS, PROJECTS, AND IDEAS

Interviewees were insistent on the importance of follow through on major CSI recommendations and projects. One industry participant on the Printing Subcommittee, when asked whether CSI was worth the effort he and other stakeholders had put into it, replied that if PrintSTEP were implemented, the time and resource drain was a drop in the bucket; if not, it was a colossal waste of time. In less dramatic, but equally emphatic terms, we heard the same message from the vast majority of the most committed participants. Many were concerned about the likelihood of follow through due to the

transition from CSI to a less visible venue (even for those sectors carried over into NACEPT), particularly given the challenges CSI has faced in institutionalizing changes. There is some doubt about even the most visible CSI efforts (e.g., SGP, PrintSTEP, and CURE), and more concern about the others. Minimally, most stakeholders would like to see a clear delineation of responsibility and accountability for outstanding CSI recommendations and projects, as well as a clear statement of any Agency decisions that particular projects are not priorities for follow through.

BUILD ON EXISTING CAPABILITIES IN SECTOR WORK AND THE SUPPORT OF MULTI-STAKEHOLDER "INCUBATOR PROGRAMS"

Metal Finishing Subcommittee participants believe that the SI program has demonstrated its value in providing a foundation on which the SGP could be built during CSI. SI is also working with a number of other sectors (e.g., the NJ Batch Chemical Sector Project). SI is well respected by industry and most other stakeholder groups. There are also programs such as Design for the Environment which have provided technically oriented support to sectors. Focusing adequate resources on EPA sector-oriented programs, and linking them effectively to Agency core media programs, was an area in which interviewees expressed considerable concern. Interviewees who raised this concern were asked their perspectives on the extent to which SBEP addressed their concerns. In general, non-governmental stakeholders were usually uncertain, often feeling that they lacked adequate understanding of Agency operations. State and local stakeholders generally felt that the adequacy of SBEP depended entirely on how it was connected to the Agency's budgeting process. EPA interviewees from media program and regional offices who were supportive of sector-based approaches were concerned that SBEP largely collated existing Agency efforts, and might not prove to be a budgetary driver for further integration of sector-based approaches; they felt that active Agency management leadership would be necessary to make the SBEP a strong basis for sector-oriented initiatives.

ASSURE EARLY STAKEHOLDER INVOLVEMENT IN POLICY DIALOGUES FOR FOCUSING ON INNOVATIVE SOLUTIONS

Stakeholders who believed they worked on innovative CSI projects emphasized that one of the most valuable aspects of the Common Sense Initiative was the active engagement of all stakeholders in negotiations. In particular, the most fruitful negotiations began with a discussion of which problems were most important to address and the range of possible answers to those problems. This up-front involvement of a wide range of stakeholders in identifying issues and solutions resulted in some of the most creative CSI products. While the Stakeholder Involvement Action Plan, the SBEP Action Plan, and the NACEPT Sector Standing Committee address the continuing importance of stakeholder involvement, many stakeholders stressed that it is especially important to emphasize that EPA needs to include an up-front, formative role for multi-stakeholder consensus processes to help identify issues and policy options.

TRACK CSI SPIN-OFF ACTIVITIES AND PROJECTS, AND PERHAPS FORMALLY STUDY AND PROVIDE RESOURCE SUPPORT TO THEM AS WELL

The Agency needs to pursue information on spin-offs, links, stakeholder contact networks, etc., to better understand ways in which multi-stakeholder collaborative projects have worked outside of the FACA constraints of CSI. Part of EPA's objective in CSI was to foster culture change. Many stakeholders feel it is important to track this—both with sectors that "succeeded" and "failed"—in order to understand long-term ramifications.

PROVIDE TECHNICAL AND REGULATORY EDUCATION TO NON-INDUSTRY, NON-REGULATORY PARTICIPANTS

Environmental NGO and environmental justice representatives stressed that such educational support is crucial to creating a better process and more-even playing field in multi-stakeholder negotiations. Environmental justice representatives and environmental groups often deal with broad issues of environmental protection and are not necessarily sector-savvy, nor familiar with the often technical details of specific sector regulations and of the complex interrelationships among national, state, and local government regulatory programs.

LIST OF ACRONYMS

3R	Reporting & Recordkeeping Requirements Inventory
BOLDER	Basic On-line Disaster and Emergency Response
CLEAN-P2	Compliance Leadership through Enforcement, Auditing and Negotiation
CRT	Cathode Ray Tube (recycling project)
CSI	Common Sense Initiative
CURE	Consolidated Uniform Report for the Environment
DfE	Design for the Environment
DFO	Designated Federal Officers
EAF	Electric Arc Furnace
EPR2	Electronics Products Recovery and Recycling Roundtable
F006	Metal Plating Waste Water Sludge
GAO	General Accounting Office
HAP	Hazardous Air Pollutant
LCM	Life-Cycle Management
MACT	Maximum Achievable Control Technology
NACEPT	National Advisory Committee for Environmental Policy and Technology
NGO	Non-Governmental Organization (generally refers to non-profits)
NMRC	National Metal Finishing Resource Center
MP&M	Metal Products and Machinery Effluent Guideline
NSR	New Source Review (Clean Air Act)
NSPS	New Source Performance Standards
OECA	Office of Enforcement and Compliance Assurance
P2	Pollution Prevention
PERRL	Prototype Reporting and Resource Link
POTW	Publicly Owned Treatment Works
PrintSTEP	Printing Simplified Total Environmental Partnership
RAIRS	Refinery Air Information Reporting System
REI	Reinventing Environmental Information
RCRA	Resource Conservation and Recovery Act
RIITE	Regulatory Information Inventory Team Evaluation
SBEP	Sector-Based Environmental Protection Action Plan
SCG	Scientific Consulting Group
SEP	Supplemental Environmental Project
SI	Stakeholder Involvement Action Plan
SI	Sustainable Industry Program
TRI	Toxics Release Inventory

APPENDICES

APPENDIX 1: Methodology

The distinctive features of the Common Sense Initiative included its sector orientation and its use of multi-stakeholder, consensus-based negotiations to develop "cleaner, cheaper, and smarter" environmental management solutions. In assessing the benefits of the multiple features and combined effect of the Initiative, this evaluation is stakeholder-driven; stakeholder perceptions regarding the value and innovative nature of CSI provide the raw material for the evaluation. The evaluation is based on an interview approach, supplemented by document review and attendance of CSI meetings. The evaluation also employed a focus group of key CSI participants to serve as resources at the outset of the study.

1. Documents, Reports and CSI Meetings

KGAA reviewed both the extensive documentary record of the Common Sense Initiative and some of external reviews and discussions of CSI as a step in defining the issues and detailing the outcomes of CSI. Documents reviewed included subcommittee and Council reports, analyses, recommendations, project designs, process-related guidance, performance measures and other documents and meeting minutes of the Council and subcommittees. In addition, KGAA reviewed external reports and articles on CSI. As discussed above, this specifically included looking at the mid-CSI evaluations by SCG and GAO for information on CSI issues, concerns, and progress through early 1997, and as a baseline of recommendations against which to compare subsequent changes in CSI.[20]

During the course of the research, KGAA also attended CSI Council and subcommittee meetings. These included:

- Council meetings on October 15, 1998 and December 17, 1998;
- a meeting of the Printing Subcommittee on December 2-3, 1998; and
- a meeting of the Petroleum Refining Subcommittee on December 10-11, 1998.

2. Interviews and Focus Group

KGAA initially interviewed EPA staff who were highly involved in CSI. KGAA sought to interview a mix of staff including some who had been involved during the initial phase of CSI, some involved over the entire four years, and some involved only more recently (e.g., since the creation of OR). We also

[20] A list of relevant documents and reports is in Appendix 2: Sources Consulted.

had a few preliminary interviews with some non-EPA CSI participants. The purpose of these initial interviews was to provide KGAA with additional information on:

- background and perspectives on workgroup, subcommittee, and Council processes and how they evolved over time;
- the development and implementation of specific CSI projects, recommendations, and other accomplishments (both direct and indirect); and
- identification of possible Council or subcommittee members to participate in a preliminary focus group.

KGAA conducted a telephone focus group with eight non-EPA CSI participants in November 1998. The purpose of the focus group was to gain a broad perspective on the evolution of CSI and to collect information that would help refine the data collection strategy and interview scripts. In addition, KGAA sought advice on potential stakeholders to contact during the evaluation.

Using the information from the literature review, initial interviews, and focus group, KGAA developed a set of interview guides—one tailored specifically for each of the six subcommittees, a seventh for the CSI Council, and some additional questions for specific stakeholder groups, facilitators, and EPA staff and managers.[21] Questions posed during interviews by KGAA fell into nine categories:

- Goals/expectations for CSI,
- Participants/roles,
- CSI organization/structure,
- Relationships,
- EPA role,
- Accomplishments/shortcomings,
- Effects outside of CSI,
- Decision-making processes/ownership of outcomes, and
- Lessons learned/next steps.

[21] See Appendix 5 for lists of questions.

Through conversations with EPA representatives, focus group participants, and initial sector calls, KGAA developed a list representing industry, labor, environmental group, environmental justice, and state or local stakeholders from the six subcommittees and the Council. Since EPA was also a stakeholder in the process, KGAA interviewed numerous EPA staff and managers; these were divided between senior managers who participated on or chaired subcommittees and the Council, Designated Federal Officers (DFOs) for the Council and subcommittees, and the EPA staff who provided technical support to the subcommittees. KGAA also interviewed several of the independent facilitators for the CSI process.

The following tables show the total number of participants in each stakeholder group, including Council members who did not serve on any of the subcommittees, and the total number of stakeholders by subcommittee, including those who were interviewed because of their roles on the Council or their perspectives on specific stakeholder issues. For purposes of these tables, EPA stakeholders include only DFOs and senior managers who were formally CSI participants, since these were the EPA participants with the most direct responsibility for EPA's role on the Council and subcommittee. Including both those serving exclusively on the Council and those also serving on subcommittees, 21 Council members and DFOs were interviewed.[22]

Table 1: Interviewees by Stakeholder Group

Stakeholder	**No.**
Environmental Justice	5
Environmental NGOs	13
EPA	19
Industry	26
Labor	4
State/Local	17

[22]Since some CSI participants served only on the Council, and some EPA participants changed subcommittees, the subcommittee totals and stakeholder totals are not the same.

Table 2: Interviewees by Sector Subcommittee

Subcommittee	**No.**
Automobile Manufacturing	12
Computers & Electronics	12
Iron & Steel	13
Metal Finishing	12
Petroleum Refining	13
Printing	17

In addition to these stakeholders, KGAA also interviewed four of the independent CSI facilitators, and 18 additional EPA staff who played a variety of technical and management roles in support of CSI, for a total of 106 interviewees. (See Appendix 4 for a complete list of those interviewed.)

3. Data Analysis and Limitations

Analysis

Interview data was collated by stakeholder group and sector or Council, and information was developed on the issues relevant to the sectors and stakeholders in terms of the issue areas developed through the questions. After the information from stakeholders and other interviewees was analyzed for sector findings, sector results were combined to identify cross-sector trends, success factors, and limiting factors.

Limitations

The interview data has not been analyzed on a statistical basis, nor would it have been meaningful to do so with small samples by either stakeholder group or sector. Since Office of Management and Budget approval was not obtained for use of a formal survey instrument, the interviews followed a general interview guide, varied by subcommittee and stakeholder group, and obtained qualitative information. In addition, the selection of those to be interviewed was not done on a random basis.

APPENDIX 2: WORKS CONSULTED

Administrative Conference of the US Dispute Systems Design Working Group. (1995 March). *Evaluating ADR Programs: A Handbook for Federal Agencies* .

Andress, Carol. (1998 Autumn). *P2 Collaboration: Lessons From the Great Printers Project*. Pollution Prevention Review.

Canadian Round Tables. (1993 August). *Building Consensus for a Sustainable Future: Guiding Principles*.

EPA Common Sense Initiative Council. *Stakeholder Involvement Work Group Report.*

EPA, Office of the Administrator. (1997 October). *Reinventing Environmental Protection: The Strategic Goals Program for Metal Finishing*. EPA100-F-97-004.

EPA, Office of Reinvention. (1998 December). *Lessons Learned About Protecting the Environment in Common Sense, Cost-Effective Ways.* EPA100-R-98-011.

EPA, Office of Solid Waste. *(*1999 February). *Proposed Rule Aims to Promote Metals Recovery from Waste Treatment Sludge (F006)*. EPA530-F-99-009.

General Accounting Office. (1997 July). *EPA's Common Sense Initiative Needs an Improved Operating Framework and Progress Measures*. RCED-97-164.

ICF Kaiser. (1998 December). *Compressor Seal Controls and Costs*. Final Report.

ICF Kaiser. (1998 December). *Compendium of Sensing Technologies to Detect and Measure VOCs and HAPs in the Air*. Draft Final Report.

ICF Kaiser. *Development of a Straw Alternative Work/Monitoring Practices Program*. Draft for Refining Subcommittee.

ICF Kaiser. (1998 December). *Rupture Disks/Costs Report*. Draft Final Report.

Kerwin, Cornelius and Langbein, Laura. (1995 September). *An Evaluation of Negotiated Rulemaking at the Environmental Protection Agency, Phase I* .

Keystone Center. (1997 May). *Regulatory Reinvention Assessment: Summary of Stakeholder Comments.* Prepared for U.S. EPA, Regulatory Reinvention Team.

Langbein, Laura I. and Kerwin, Cornelius. (1997 November 20). *Regulatory Negotiation Versus Conventional Rulemaking: Claims, Counter-Claims, and Empirical Evidence.*

National Academy of Public Administration. (1997 September). *Resolving the Paradox of Environmental Protection.*

National Academy of Public Administration. (1995 April). *Setting Priorities, Getting Results: A New Direction for the Environmental Protection Agency.*

Otis, Andrew. (1998 Summer). *EPA's Metal Finishing Strategic Goals Program: Sector-Based Environmental Protection*. Pollution Prevention Review.

Pritzker, David M. and Dalton, Deborah S. (1995 September). *Negotiated Rulemaking Sourcebook.*

Scientific Consulting Group. (1997 February 18). *Review of the Common Sense Initiative*. Prepared for U.S. EPA, Regulatory Reinvention Team.

Society of Professionals in Dispute Resolution. (1997 January). *Best Practices for Government Agencies: Guidelines for Using Collaborative Agreement-Seeking Process.*

CSI C&E Sector Report. *Accomplishments and Lessons Learned from a Multi-Stakeholder Sector-Based Effort: The Final Report of the Computer & Electronics Sector Common Sense Initiative.* EPA PUB#743-R-98-001. Draft #1.

CSI Automobile Manufacturing Sector Document. *Alternative Sector Regulatory System/Community Technical Assistance Project Team.* Final and Support Documents.

Background Briefing Materials on the Data Gaps Strategy for the CSI Council. (1998 October 15).

CSI Iron & Steel Sector Document. *Brownfields Work Group Guiding Principles*.

CSI Iron & Steel Sector Document. *Brownfields Work Group Notebook.* (1997 May).

Charge for the Standing Committee on Sectors of the National Advisory Council for Environmental Policy and Technology. EPA. (1998 December).

PrintSTEP Pilot Program. *Community Handbook Template.* CSI Printing Sector. (1998 November).

"*Consensus Decision Making Principles and Applications in the EPA Common Sense Initiative*." (1997 October 1) White Paper prepared for the CSI Council.

"*Data Quality Strategic Plan*" (Draft) (1998 October 15) CSI Council.

"*EPA Stakeholder Involvement Action Plan*" (1998 December) Presented to CSI Council.

"*Instruction Manual for EPA Regions, States, and POTWs: Recommended First Steps in Implementing the Strategic Goals Program*" CSI Metal Finishing Sector Document.

CSI Metal Finishing Sector Document *Lessons Learned and New Project Guidance: Developing a Flexible Track System for Top Environmental Performers* (1998 July).

CSI Sector Document *Life-Cycle Management/Supplier Partnerships Project Team: Conclusions Document.* (1997 March 27).

CSI Automobile Manufacturing Sector Document *Life-Cycle Management/Supplier Partnership Project Team (Final and Support Documents).*

Meeting Minutes for the CSI Council and Sector Subcommittees, 1995-1998. (Many available at *www.epa.gov/csi*).

CSI Printing Sector *New York City Education Project, Summary and Assessment Report*.

CSI Refining Sector document (1998 December) *One-Stop Reporting and Public Access Project, Development of a Sector-Based Air Emission Reporting System* Draft Report.

CSI Refining Sector Document *Petroleum Refining Subcommittee Lessons Learned* (1998 December) Presentation to Council.

CSI Iron & Steel Sector Document *Permit Issues and Recommendations*.

CSI Printing Sector (1998 November) *Plain Language Workbook Template*.

CSI Metal Finishing Sector Document (1997 August 22) *Putting the Pieces Together in 1997: Strategic Goals Program Summary Materials.*

CSI Automobile Manufacturing Sector Document *Regulatory Initiative Project Mass Per Unit Area Summary Report and Recommendations*.

Presented to CSI Council (1998 December) *Sector Based Environmental Protection Action Plan*.

CSI Printing Sector (1998 June 30) *State Guide to PrintSTEP*..

CSI Metal Finishing Sector Document (1997 December 16) *Strategic Goals Program: National Performance Goals and Action Plan*.

CSI Council (1998 December 15) *Summary and Status of Performance Measures*.

CSI Automobile Manufacturing Sector Document (1997 July 15) US Automobile Assembly Plants and Their Communities.

CSI Metal Finishing Sector Document (1998 September) *Workgroup Report: F006 Benchmarking Study*.

APPENDIX 3: PROJECT SUMMARY

Project	CSI Recommendation	Implementation Status	CSI Program Elements	Midpoint Changes (Dec 96)	Addressing Larger/more controversial Issues	Rule changes or Guidance changes	Direct Environmental Results	Performance Measures
Autos								
Life Cycle Management	yes	inactive; leads are OPPTS/OR	pollution prevention	somewhat, flurry of activity as auto shutdown Spring 97	somewhat large -- most innovative Auto product	no	could indirectly lead to results	not aware of any
Regulatory Initiatives	yes	active (?) OAQPS	regulation	see above	very small	yes - possibly but the recommendation is very meager	no	not aware of any
Auto Plant Community Economic, Demographic and Environmental Profile	yes	inactive CEIS	involving communities	see above	community based environmental protection -- unique data tool, no further work known	no	no	not aware of any
Alternative Sector Regulatory System Principles and Progress	no but several consensus documents	OR	regulation	see above	large issues but a conceptual document	no	no	not aware of any

Project	CSI Recommendation	Implementation Status	CSI Program Elements	Midpoint Changes (Dec 96)	Addressing Larger/more controversial Issues	Rule changes or Guidance changes	Direct Environmental Results	Performance Measures
Computers & Electronics								
Product Stewardship C EPR2 C Collection Pilots	no no	active completed	P2, future issues P2, involving communities	held conferences completed pilots and evaluation	medium, a start at big future issues	no	yes but difficult to measure	yes evaluated collection pilot results
CRT Recycling	yes	active OSW	regulation	yes significant progress	mediumyes	yesyes measure CRT recycle potential		
Barriers to Closed-loop Water Recycling	yes	active OW	regulation environmental technology permitting	yes significant progress	potentially large	potentially yes	conceptually yes	somewhat examined media transfers and P2 implications in study.
Public Access	yes	active OECA	record keeping and reporting	no	small	no rather coordination of policies	no	EPA has identified metrics: i.e., the number of policies that need clarification
BOLDER	yes	Active Regions 9 & 6 OPPTS	Record Keeping and Reporting	significant -- pilots in 2 states, plans for better BOLDER	medium to small	no	indirectly yes	yes, paper work reduction, others
CURE	yes	active OPPTS	record keeping and reporting	significant, pilot in TX, resolved data issues	potentially large	somewhat decided to drop some data elements	no	yes

Project	CSI Recommendation	Implementation Status	CSI Program Elements	Midpoint Changes (Dec 96)	Addressing Larger/more controversial Issues	Rule changes or Guidance changes	Direct Environmental Results	Performance Measures
Worker Health	yes	active OPPTS	?		small	no	no	no
Alternative Regulatory System C Principles C Performance Track C Constructive Engagement C Worker Health	yes yes yes yes	active OR OPPTS	regulation regulation community inv. future issues	significant progress on the last three bullets in the last year of CSI. The principles were completed in '96	large but conceptual	no	not in its current conceptual state	no
Iron and Steel								
Brownfields	no draft recommendations to council for comments, but not finalized	active pilots in Indiana and Alabama	involving communities		low			
Supplemental Environmental Projects (SEPS) and Redevelopment	no	compliance and Enforcement	low					
Consolidated Multi-media Reporting	no		record keeping and reporting		medium			if implemented would have measured transaction costs by industry and state agency

Project	CSI Recommendation	Implementation Status	CSI Program Elements	Midpoint Changes (Dec 96)	Addressing Larger/more controversial Issues	Rule changes or Guidance changes	Direct Environmental Results	Performance Measures
Alternate Compliance Strategy	no		compliance and enforcement		high			

Common Sense Initiative

Project	CSI Recommendation	Implementation Status	CSI Program Elements	Midpoint Changes (Dec 96)	Addressing Larger/more controversial Issues	Rule changes or Guidance changes	Direct Environmental Results	Performance Measures
SEPs and Improved Compliance	no		compliance and enforcement		low			
Iron and Steel Web Sites			environmental technology,		low			
Iron and Steel Liaisons	yes	liaisons established at HQ and Region V. Part of Sector Based Action Plan	involving communities	initiated before Dec. 96 formal recommenda-tion in Feb 97	low			
Regulatory Barriers Pilot	yes recommendations on stakeholder involvement in rules	included in analytical blueprint for rule making	regulation, involving communities		medium			
Steel Pickle Liquor Workshop	no	white paper by EPA OSW pending	regulation		medium			
Permit Issues	yes series of 12 permitting recommendations	included in Permit Reform Action Plan	permitting		medium			
Multi-Media Permitting	no		permitting, pollution prevention		high		pollution prevention reductions identified in pollution prevention plan	
Community Advisory Committee	no	active pilot at Bethlehem Steel Burns Harbor, Indiana	involving communities		low			
Compliance Data	no	EPA OECA revising draft report	compliance and enforcement	initiated prior to Dec. 1996 first draft report in March 97	low			

Project	CSI Recommendation	Implementation Status	CSI Program Elements	Midpoint Changes (Dec 96)	Addressing Larger/more controversial Issues	Rule changes or Guidance changes	Direct Environmental Results	Performance Measures
Monitoring	no	rule revision adopted to amend NSPS requirements for monitoring internal furnace pressure	regulations initiated after Dec 1996.	low rule revision to amend NSPS requirements for monitoring internal furnace pressure				
Substantial Compliance	no		compliance and enforcement	initiated and ended after Dec. 1996	low			
Code of Conduct	no		involving communities	initiated and ended after Dec. 1996	low			
Metal Finishing								
Strategic Goals Program	yes	well underway National goals agreement signed. 250+ companies. 17 states. 34 POTWs. Mini Goals Programs in 10 areas across the country. Key ones underway in Chicago, LA, NY.	all	yes	large small and in-between.	Federal level: FOO6 storage rule (definite); F006 delisting (possible); input to the MP&M effluent guideline.	yes	voluntary achievement of 12 goals, including 90% reduction in TRI emissions, 50% reduction in land disposal of hazardous sludge, etc.
Petroleum Refining								
Equipment Leaks Workgroup	yes							
Refinery Air Information System (RAIRS)	no							

Project	CSI Recommendation	Implementation Status	CSI Program Elements	Midpoint Changes (Dec 96)	Addressing Larger/more controversial Issues	Rule changes or Guidance changes	Direct Environmental Results	Performance Measures
Refinery Accidental Release Information Communication Workgroup								
Printing								
PrintSTEP	no	EPA seeking 3-5 states to undertake 3-year pilot projects	1-stop notifi-cation/agree-ment for permits (w. goal of single permit) ·flexibility for operational changes ·Community participation ·P2 incentives	almost all design work; design com-pleted 12/98if success-fully implemented, potentially broad impact on environ-mental performance in the printing sector.	noprojected reductions in environmental releases by participating printers.	performance measures designed to account for behavioral changes & environ-mental impacts during pilots.		
New York City Education Project	no	project handed off to EPA Region 2	multistake-holder pilot for providing P2 & compliance assistance to small printers. Outreach effort uses community groups.	design & initial implementation through 1996. community based outreach began in 1997.	potentially innovative pilot design for technical assistance	no		no

APPENDIX 4: INTERVIEWS

Council and Subcommittee Participants Interviewed
(Includes EPA Senior Managers and DFOs)

Name/Affiliation	Council	Sector
Jeff Adrian, The John Roberts Company		Printing
Carol Andress, Environmental Defense Fund		Printing
Guy Aydlett, Hampton Roads Sanitation District	Yes	Metal Finishing
Kathleen Bailey, EPA, DFO	Yes	
Bob Banks, Sun Company		Petroleum Refining
Dan Bartosh, Texas Instruments	Yes	Computer & Electronics
Bob Benson, EPA DFO		Metal Finishing
John Bowser, EPA DFO		Computer & Electronics
Gina Bushong, EPA, DFO		Printing/C&E
Diane Cameron, Natural Resources Defense Council		Metal Finishing
Doreen Carey, City of Gary	Yes	Iron & Steel
David Carlson, Chrysler		Automotive
Robert Collin, University of Oregon		Printing
Andy Comai, United Automobile Workers		Metal Finishing
Todd Crawford, Missouri Dept of Natural Resources, Division of Environmental Quality		Printing
Lisa Doer, Citizens for a Better Environment		Automotive
Kerry Drake, TNRCC		Printing
Lois Epstein, Environmental Defense Fund		Petroleum Refining
Brock Evans, Endangered Species		Iron & Steel
Charles Fox, EPA AA, Office of Water	Yes	
Jeanne Fox, EPA RA, Region II, Co-Chair		Printing
George Frantz, Mass. Office of Environmental Affairs		Printing
Ken Geiser, TURI, University of Mass		Computer & Electronics
David Gardiner, EPA, AA, Office of Policy	Yes	Metal Finishing
Prudence Goforth, EPA DFO & former CSI Dep. Dir.	Yes	
Charles Griffith, ECAA		Automotive
John Glenn, Louisiana DEQ		Petroleum Refining
Frank Grimes, USW		Iron & Steel
John Hamilton, Indiana Dept of Envir Mgmt	Yes	

Russ Harding, Michigan DEQ	Yes	Automotive
Judy Hecht, EPA Office of Water, Alternate DFO		Iron & Steel
John Iannotti, NY State Dept of Env Conservation		Metal Finishing
David Isaacs, Electronic Industries Association		Computer & Electronics
Hazel Johnson, People for Community Recovery	Yes	
Gary Jones, Graphic Arts Technical Foundation		Printing
Walter Jones, International Brotherhood of Teamsters		Printing
Dale Kalina, RR Donnelley and Sons, Co.		Printing
Vicki Keenan, Association of Graphic Communications		Printing
Marci Kinter, Screenprinting and Graphic Imaging Association		Printing
Rich Lahiere, Honda		Automotive
Jessica Landman, Natural Resources Defense Council (representative for John Adams & served on workgroups)	Yes	
Jeff Lowry, Environmental Control and Laboratory Techenglas		Computer & Electronics
Mark Mahoney, EPA Reg. 1, Alt DFO		Metal Finishing/C&E
David Marsh, Marsh Plating Corporation	Yes	Metal Finishing
Keith Mason, EPA, Alternate DFO		Automotive
Terry McManus, Intel	Yes	Computer & Electronics
Bob McBride, A. C. Plating		Metal Finishing
Stuart McMichael, Custom Print, Inc.	Yes	Printing
Stan Meiberg, EPA DRA, Region IV		Automotive/Refining
Ed Meyer, Minn. Pollution Control Agency		Printing
Kevin Mills, EDF		Automotive
Frank Mirer, United Auto Workers	Yes	Automotive
Robin Morris Collin, University of Oregon	Yes	Printing
Andrew Neblett, TNRCC		Computer & Electronics
Dianne Nielson, Utah DEQ	Yes	
Tim O'Brien, Ford	Yes	Automotive
Robert Perciasepe, EPA, AA, Office of Air and Radiation	Yes	Iron & Steel
Mike Peters, Structural Metals		Iron & Steel
Bob Phillips, GM		Automotive
Mahesh Podar, EPA Office of Water, DFO		Iron & Steel

Alan Powell, EPA Region IV, DFO		Automotive
Bowdin Quinn, Grand Calumet Task Force		Petroleum Refining
Wayne Raush, Shell Oil		Petroleum Refining
Charlotte Read, Save the Dunes		Iron & Steel
Rick Reibstein, Mass Office of Technical Assistance		Computer & Electronics
Chris Rhodes, Institute for Interconnecting and Packaging Electronic Circuits		Computer & Electronics
Margie Richard, Deep South Center for Environmental Justice		Petroleum Refining
William Riley, Bethlehem Steel		Iron & Steel
Steve Rowley, NUCOR Steel		Iron & Steel
Bill Saas, Taskem, Inc.		Metal Finishing
Ted Smith, Silicon Valley Toxics Coalition		Computer & Electronics
Velma Smith, Friends of the Earth		Iron & Steel
Bill Sonntag, National Association of Metal Finishers		Metal Finishing
Steve Souders, EPA Alt DFO		Petroleum Refining
Mike Stahl, EPA OECA AA,		Printing
Wilma Subra, Louisiana Environmental Action Network		Petroleum Refining
Steve Thompson, Oklahoma DEQ		Petroleum Refining
Dave Ulrich, EPA DRA, Region V		Iron & Steel
Frank Villalobos, Barris Planners Inc.		Metal Finishing
Stoney Vining, Marathon		Petroleum Refining
Craig Weeks, EPA DFO		Petroleum Refining
Gordon Wegwart, Minnesota Pollution Control Agency		Iron & Steel
David Yetter, Texaco, Inc.	Yes	Petroleum Refining
Ken Zarker, TNRCC		Petroleum Refining

Other EPA Staff Interviewed

Name/Affiliation	**Sector**
John Alter, EPA OPPTS	Computer & Electronics
Warren Beer, EPA Region IX	Computers & Electronics
Deborah Craig, EPA, Region II	Printing
Vivian Daub, EPA, Former CSI Director	
Jim Durham, EPA RTP	Petroleum Refining

Ken Garing, EPA NEIC	Petroleum Refining
Dave Jones, EPA Region IX	Computer & Electronics
Carol Kemker, EPA Region IV	Automotive
Lisa Lund, Dep.Associate Administrator, OR	
Dave Markwordt, EPA OAQPS	Petroleum Refining
Tom Ripp, EPA OECA	Petroleum Refining
Gary Rust, EPA, OAQPS	Printing
Dave Salmon, EPA RTP	Automotive/ Printing
Eric Schaeffer, EPA OECA	Petroleum Refining
Stan Siegel, EPA Region II	Printing
Chris Tirpak, EPA OPPTS	Computers & Electronics
Julie Winters, EPA OPPTS	Computers & Electronics
Elaine Wright, EPA Region III, Former CSI Director	

Facilitators

Name	**Sector**
Greg Bourne	Printing
John Ehrman	Council/Automotive
John Lingelbach	Metal Finishing
Debra Nudelman	Printing

APPENDIX 5: INTERVIEW QUESTIONS

Interview Questions for Printing Subcommittee Participants

What were your original reasons for participating in the work of the printing sector of CSI Did those reasons change over time? What were your reasons for continuing [discontinuing] participation?

The two projects developed by the printing subcommittee are the NYC Education project and PrintSTEP. Were other projects considered?

What were the major factors leading to the selection of these projects as the focus of effort for the subcommittee? What role did various stakeholders play in the selection?

To what extent do you feel these projects address major environmental issues of the printing sector? What is their potential for significant impact on the environment? On the complexity and cost for printers of meeting environmental requirements?

What were the most difficult/positive factors in developing projects?

Would the (a) PrintSTEP/(b) NYC Education project have happened without CSI?

Was development of the PrintSTEP (or NYC Education) project the major benefit of being involved with CSI? What were other (or more important) benefits?

How would you describe the relationships between the stakeholders on the printing subcommittee/workgroups? How did they change over time? What were the major factors in those changes?

Were the right people involved on subcommittee and/or workgroups to achieve CSI goals? For example, were there enough people who were technically knowledgeable about printing, with hands-on expertise? Were members able to represent the concerns of the stakeholder groups they represented? To make decisions? To build consensus?

How actively involved were subcommittee or workgroup members? To what extent were members able to take a leadership role in defining problems and projects?

How did the absence of representatives of the environmental groups during the last year of the subcommittee's work affect the subcommittee's work?

What changes would you suggest for the selection of members in any future stakeholder efforts for the printing sector?

What would you say about the level of trust during the course of the four years? Benefits of the process in building trust?
What was the most important role played by EPA with respect to the work of this subcommittee/ workgroup? How would you describe EPA's support and follow through for the subcommittee's work? Leadership in defining goals or identifying opportunities?

What changes have you seen in how EPA works with the printing sector generally as a result of CSI?

How would you describe the relationship between the work of the subcommittee and the work of the Council? Were there changes in this relationship over the course of the four years?

What lessons can be learned from the development of the NYC Education project? The development of PrintSTEP? From the overall work of the subcommittee and workgroups?

There has been a lot of discussion of the costs of CSI in relation to the outcomes and benefits. How would you evaluate the benefits against the work/costs involved in participation?

To what extent did the work of the printing subcommittee and workgroups meet the goals of CSI?

One effect of CSI that some people have described is that CSI model has impacted activities outside of CSI—that is, that new activities and relationships have been started outside of CSI as a result of the relationships and work developed through CSI. Do you know of any examples of this kind of cross-fertilization?

For the future after CSI:

> What is needed to make PrintSTEP work from here?
>
> What lessons have been learned generally from CSI which should be applied to future relationships between EPA and the printing sector?
>
> Are there lessons from CSI which could be applied elsewhere (e.g., at regional, state, or local levels)?
>
> What would you like to see as next steps?

Questions for Metal Finishing Subcommittee/Workgroup Participants

1) Goals

In your subcommittee experience, were goals clearly defined? When did the goals get defined and how did they change over time? Could you describe the process for goals development?

In your workgroup experience, were the goals for particular projects understood at the outset? Were the goals clear in context of the larger Metal Finishing sector goals (i.e., the SGP)?

What was your experience with developing the National Performance Goals Agreement Document? Why did it take almost two years to craft? What were the major points of contention from different stakeholders' perspectives?

Do the Performance Goals represent your best expectations for facility and sector environmental performance, from your stakeholder group's perspective? Are they as ambitious as you would have liked? Are they too ambitious?

2) Participation/Role

Selection

It is often remarked that the Metal Finishing Subcommittee CSI was a success because it dealt with mostly small businesses, with the inference that success via a CSI-type process is more difficult to achieve with large industries. To what extent do you believe this is true?

Was it helpful that groundwork had been laid with the Metal Finishing sector and key stakeholders, via EPA's Sustainable Industry Program? On a scale of 1 to 10 (with 10 being of highest importance), how would you rank the significance of the Sustainable Industry pre-CSI work with Metal Finishers to the ultimate success of the subcommittee outcomes?

What is your perspective on the makeup of the subcommittee? Were the right people at the table? The right mix? How significant was it that key industry leaders played a hands-on role in both subcommittees and workgroups?

Participant Expectations/Reasons for Participating

What brought you to the table? What made you stay?

Do you feel the Metal Finishing CSI work has fallen below, met, or exceeded your original expectations? Did your expectations for Metal Finishing sector success change over time?

Level/Continuity of Participation

Were the same people involved at the start as are currently involved in Metal Finishing CSI sector work? How have any changes affected the process and products of the sector?

Both the number and the "mission" of workgroups seemed to fluctuate significantly (evolve, may be better word...) over time. To what extent did that affect continuity—or was it clear, at the working level, what issues/projects each workgroup was handling, albeit under a different name.

How would you characterize the leadership of the different stakeholder groups?

Participant Capabilities
Did particular stakeholder groups have difficulty engaging? Were there barriers in technical understanding of both the industry and its complex regulatory picture? Was there an improvement in understanding and engagement as time went on?

3) CSI Organization/Structure
How would you characterize the relationship between the subcommittee and the CSI Council? Overall, was the Council a help or a hindrance?

How important were the facilitators to the success of your sector?

To what extent did the bureaucratic structure of a FACA process limit or enable success?

4) Relationships
Could you describe your relationship with other stakeholders prior to the convening of the Metal Finishing Sector? How has that changed with your involvement in CSI?

Do you make use of relationships established or improved via your CSI participation in non-CSI work in your organization/Agency/business? Has the relationship-building aspect of CSI been valuable?

5) EPA Role
How would you characterize the level and quality of EPA follow through on subcommittee recommendations? Were good working relationships established with media offices (OW, OSW) at EPA for Metal Finishing Actions? Has implementation met your expectations?

Do you see any fundamental ways EPA has changed as a result of interacting with or being informed by the Metal Finishing Subcommittee and its workgroups?

How important were the DFOs to the success of your sector?
What role has the Office of Reinvention played, in your experience?

How important were the subcommittee co-chairs to the success of your sector?

6) Accomplishments/Shortcomings

Projects and Programs

What is the most significant accomplishment of your sector? Given that most people point to the Metal Finishing SGP as the ultimate success story of CSI, could you offer your opinion as to the critical factors that went into the realization of that success? Which of these factors are unique to the sector, and which could be taken away as lessons learned for future sector-based, consensus-driven, multi-stakeholder efforts?

How were the major issue areas arrived at for the Action Plan, and how did ideas for projects ("Enabling Actions") arise—from the ground up via the workgroups or from the subcommittee (or Council) on down?

Which of the projects/actions do you feel contribute the most to helping the Metal Finishing industry reach their performance goals? Are there projects that ought to have been brought forward that didn't make it? Do the projects under-represent certain stakeholders and has there been any discord because of this?

Did you think the activity of developing recommendations for the Council to be productive for your sector?

Results

What actions resulted from recommendations to the Council, and were these valuable? What is your sense of the level and commitment of implementation of any recommendations made to the Council?

Do you have any concerns for full realization/implementation of the SGP, as CSI is ending?

Could the SGP have happened without CSI?

Costs

What is the status of the analysis of burden reduction and other cost-benefits study? Do you feel that the SGP was achieved at an unreasonably high transaction cost? Have you seen data as to exactly how much EPA has invested in SGP specifically, and in your subcommittee CSI work, in general?

7) Cross-fertilization

Could you offer examples of the way relationships or project ideas and/or results have been used by you or your organization outside of the direct context of CSI?

Are there any CSI-seeded pilots and/or activities, either never funded or currently unfunded by CSI, that are going on out in the states or local government arena?

Are there any other cross-fertilization benefits you can think of?

8) Decision-making Processes/Ownership of Outcomes

Were operating principles for consensus-based, multi-stakeholder committees developed for/by your Subcommittee? How important was this activity (developing the principles) to making the process run smoother?

9) Lessons Learned/Next Steps

What are the most significant lessons learned that came out of the Metal Finishing sector, and do you believe these lessons are informing EPA as it moved into this "beyond CSI" phase?

What are your personal lessons learned, arising out of your participation in the sector?

Petroleum Subcommittee/Workgroup Questions

1) Goals

What are the major environmental issues facing the petroleum sector? How were these issues addressed in the goals/objectives and products of the subcommittee and workgroups?

Were any known major environmental issues facing the petroleum sector "tabled" or "passed over?" If so, what were the reasons?

What are the critical economic and market conditions faced by the petroleum sector? Did these conditions affect the goals/objectives and selection of projects for the work groups?

What are the biggest regulatory burdens within the petroleum sector? How did these issues impact the selection of work group topics and products?

2) Participation/Role

How did changes in the stakeholders over time affect the work and outcomes of the subcommittee and workgroups?

Did the stakeholders have appropriate knowledge of issues facing the petroleum sector? Were any gaps in knowledge addressed as the projects moved forward?

Are you involved in the implementation of any products of the petroleum sector?

Did the projects/outcomes of the petroleum sector address the issues that originally got you to participate in the process? If not, did your experience with CSI help your current/future efforts to address those issues?

3) CSI Organization/Structure

What comments did the subcommittee and Council make on the One Stop Reporting and Public Access Project (now RAIRS)? Comments on other petroleum sector projects and recommendations?

Did the general approach of the subcommittee and Council review of projects and recommendations change over time?

How did the subcommittee decide which actions would go to the Council as recommendations?

What was the role of the facilitators in the petroleum sector?

4) Relationships

Are you working with petroleum sector participants on any other projects not initiated by CSI?

Did you have any previous history with the petroleum sector CSI participants?
Given the historical adversarial relationship of stakeholders in the petroleum sector, did these relationships improve as a result of the CSI process? If so, what were the biggest factors for improvement? If not, what could have facilitated improved relationships?

5) EPA Role

EPA staff is involved in the detailed technical issues for the Equipment Leaks and alternative LDAR requirements projects. What was EPA's role in initiating these projects and how will their continued involvement affect the ultimate success of these projects?

Would more EPA involvement in the larger issues facing the petroleum sector have made a difference in the types of projects the work groups selected?

6) Accomplishments/Shortcomings

There are three main projects for the petroleum sector: Equipment Leaks/LDAR, RAIRS, and Accidental Releases. What other projects were considered?

Would these projects have been implemented without CSI? Are the issues that these projects are designed to address closer to resolution as a result of the petroleum subcommittee/workgroup efforts?

Do the projects address the major environmental issues in the petroleum sector?

Do the projects address the issues you hoped to address when you agreed to participate in the petroleum sector?

7) Cross-Fertilization

Could you offer examples of the way relationships or project ideas and/or results have been used by you or your organization outside of the direct context of CSI?

Are there any other cross-fertilization benefits you can think of?

8) Decision-making Processes/Ownership of Outcomes

Were certain stakeholders critical to success/problems addressing specific issues?

Did the consensus process affect the progress of specific projects in the petroleum sector? How did consensus issues shape the design of the three primary projects of the petroleum sector? How did consensus issues affect the type of projects selected by the petroleum subcommittee?

9) Lessons Learned/Next Steps

What are the key lessons learned from the One-stop/RAIRS project?

What is needed to make one-stop reporting work from here?

What is needed to move onto streamlining multimedia reporting?

What are the key lessons learned from the Equipment leaks/LDAR projects?

What is needed to increase the use of innovative LDAR protocols?

Could lessons learned from the petroleum sector projects be applied elsewhere? (Other states, other industries, etc.)

Questions for Iron and Steel Sector of CSI

1) Goals

What are the major environmental issues facing the iron and steel sector? How were these issues addressed in the goals/objectives and products of the subcommittee and workgroups?

Were any known major environmental issues facing the iron and steel sector "tabled" or "passed over?" If so, what were the reasons?

What are the critical economic and market conditions faced by the iron and steel sector? Did these conditions affect the goals/objectives and selection of projects for the work groups?

What are the biggest regulatory burdens within the iron and steel sector? How did these issues impact the selection of work group topics and products?

2) Participation/Role

How did changes in the stakeholders affect the work and outcomes of the subcommittee and workgroups?

Are you involved in the implementation of any products of the iron and steel sector?

Did the projects/outcomes of the iron and steel sector address the issues that originally got you to participate in the process? If not, did your experience with CSI help your current/future efforts to address those issues?

3) CSI Organization/Structure

How would you assess the review process by the subcommittee and Council on the Guiding Principals for the Brownfields project? Comments on other projects?

Did the general approach to review and comments on projects/recommendations by the subcommittee and Council change over time?

What was the role of the facilitators in the iron and steel sector? Were they a major factor in the success/failure of the sector?

4) Relationships

Are you working with iron and steel sector participants on any other projects not initiated by CSI?

Did you have any previous history with the iron and steel participants?

How did your work on the subcommittee/workgroup affect your relationships with other stakeholders?

5) EPA Role

What was the EPA's role in moving forward with the "12 general permitting recommendations?"

Which EPA offices and staff were involved with acting on these permitting recommendation? Was the staff directly involved in the iron and steel sector, or, was EPA staff outside the sector involved?

What EPA involvement is critical to get the most out of the iron and steel sector recommendations and projects?

6) Accomplishments/Shortcomings

At first, the iron and steel sector seemed to focus on specific projects and recommendations. Later, the sector focused on broader issues impacting iron and steel. Which focus (specific or broad) was more successful and why?

What is the most successful accomplishment of the iron and steel sector? The Brownfields pilot projects are often discussed as an accomplishment of the iron and steel sector. What factors led to the success of the Brownfields pilots?

Do the projects implemented by the iron and steel sector address the issues you hoped would be addressed when you agreed to participate in the iron and steel CSI project?

7) Cross-fertilization

Could you offer examples of the way relationships or project ideas and/or results have been used by you or your organization outside of the direct context of CSI?

Are there any other cross-fertilization benefits you can think of?

8) Decision-making Processes/Ownership of Outcomes

Were certain stakeholders critical to success/problems addressing specific issues?

Did the consensus process affect the progress of specific projects in the iron and steel sector? How did consensus issues shape the design of the primary projects of the iron and steel sector? How did consensus issues affect the type of projects selected by the iron and steel subcommittee?

9) Lessons Learned/Next Steps

What are the key lessons learned from the iron and steel sector projects?

Did any specific project(s) result in key lessons on issues important to you?

Could any of the lessons from iron and steel be applied elsewhere?

Automotive Sector Questions

1) Goals

What are the major environmental issues facing the automotive industry? Were the definitions of the major issues shared by all parties at the onset of CSI? Did these definitions "meld" as the subcommittee worked to generate a profile of the industry? Were projects chosen by the subcommittee based upon these major issues? If not, what deciding criteria were used to select a project to work on?

How did the goals of the subcommittee change over time? What aspects of the original goals (that were later jettisoned) are difficult to deal with in a CSI-type process? Why?

2) Participation/Role

What were your expectations reasons for participating in the work of going into CSI? How did these expectations change over time?

How did the level of participation on the subcommittee/workgroup and commitment to CSI change over time? In particular, did the NSR project discussed by the subcommittee in Fall 1996 affect your commitment or participation?

Do you believe that EPA chose the "right" set of stakeholders to participate in the automotive subcommittee and workgroups?

What was the level and continuity of participation of all stakeholders in subcommittee and workgroup? How did that affect the outcomes?

Did stakeholders have sufficient resources and capabilities to fully participate in your subcommittee's work—particularly with regard to technical issues surrounding air permitting for auto manufacturing plants? If not, what recommendations would you make to improve stakeholder capacity?

3) CSI Organization/Structure

To what extent was the subcommittee and workgroup structure helpful in terms of selecting projects and making recommendations to the Council? What was the effect of combining the workgroups on alternative regulatory and community technical assistance and involvement?

How would you evaluate EPA's facilitation of CSI (for example, in terms of quality, independence, value added)? Were ground rules clear, adequate, and followed?

4) Relationships

Please characterize your working relationship with the other stakeholders at the outset of your involvement in the subcommittee/workgroup. How did your relationships change? What were the chief causes of these changes?

What value do you place on CSI relationship building? Please explain.

Have the relationships you developed during CSI moved forward since the subcommittee shut down (i.e., are you in contact with other stakeholders in a way that differs from your pre-CSI relationships)?

5) EPA Role

Was EPA's role in the automotive sector well defined? In your opinion, did EPA provide too much or not enough direction and leadership? How did EPA's direction, leadership, and agenda-setting role change over time?

What changes, if any, would you recommend for EPA's role?

Did EPA adequately support the efforts of the automotive subcommittee and work groups?

6) Accomplishments/Shortcomings

What were the chief accomplishments of the automotive sector—in terms of actual work products, environmental improvement, and relationships? Please delineate any benefits in terms of:

- human health and environment?
-cost savings and paperwork reduction?
-regulatory streamlining?

What were the chief shortcomings of the automotive sector? How could these shortcomings have been better addressed? What would have made it useful to continue the work of the subcommittee?

Do you consider any of the automobile sector results (be they of a process/relationship nature or actual work products) to be truly groundbreaking?

How would you weigh the transaction costs of your involvement in CSI relative to its outcomes?

7) Cross-fertilization

What benefits have occurred as a result of CSI outside of the direct CSI context? (For example, state or local stakeholder efforts, or other new stakeholder relationships, processes inspired by CSI ?)

8) Decision-making Processes/Ownership of Outcomes

To what extent was the requirement for consensus an asset to CSI? To what extent was consensus a liability to CSI? Was the consensus requirement one of the more important elements in the shutdown of the subcommittee, or was it secondary?

9) Lessons Learned/Next Steps

What do you think are the chief lessons learned for the automotive sector?

Has CSI shown a new potential role for EPA in regulatory development and stakeholder interaction in the automotive manufacturing sector? Please explain.

How does CSI compare with EPA's traditional way of dealing with the automotive sector?

Questions for Computers & Electronics Subcommittee/Workgroup Participants

1) Goals

Do you believe that the work of the Computers & Electronics Subcommittee and workgroups has met the goals of CSI? Do you feel those goals are well understood by all participants?

Was there a common definition of the major issues facing the Computers & Electronics sector going into the process? Did the definition of issues change over time?

To what extent did the competitive and secretive nature of the computer industry affect the openness of the goal/agenda setting process?

2) Participation/Role

What was your motivation for participating in the work of the Computers & Electronics sector? Did that motivation change over time?

Were the right people involved on the subcommittee and/or workgroups? Did you have any concerns about how stakeholder representatives were chosen? Was the mix appropriate for the kind of work you were doing? What changes would you suggest for selection of members in any future stakeholder efforts for this sector?

How would you categorize the level of participation of subcommittee or workgroup members? Were there difficulties that arose out of differing technical understanding?

Did you have sufficient resources and capabilities to fully participate? If not, what recommendations would you make for future stakeholder efforts to improve this capacity?

3) CSI Organization/Structure

Could you characterize the relationship between the work of the subcommittee and the work of the Council? Did this relationship change over the course of the four years?

Compared to some of the other CSI sectors, Computers & Electronics seemed to make greater use of formal recommendations to the Council, as a means to forward work. Was this part of an overall subcommittee strategy? Did you find it a useful way of working? How could the recommendations process be improved?

Did you find the FACA process to be a help or a hindrance, overall? What aspects of FACA were most helpful or caused the most difficulties? Do you feel that future sector work needs to be done under a full FACA process?

4) Relationships

How would you describe the relationships between the stakeholders on the Computer & Electronics Subcommittee/workgroups? How did they change over time? What were the major factors in those changes?

What would you say about the level of trust during the course of the 4 years? Benefits of the process in building trust? Has any of the relationship-building carried over into your other non-CSI work?

5) EPA Role

What EPA role with respect to the work of the subcommittee/workgroups was most significant? Was EPA's support and follow through for the subcommittee's work adequate? Did EPA exhibit leadership in defining goals or identifying opportunities?

Have you seen any changes in how EPA works with the Computers & Electronics sector as a result of CSI? For example, was there any value-added to XL projects brought forth by sector firms due to relationships or trust-building that occurred via CSI?

6) Accomplishments/Shortcomings

In May 1996, the Computers & Electronics Subcommittee agreed upon "a vision" for a facility-based Alternative System of Environmental Protection. This seems to have been carried forward in terms of the Performance Track Program recommendation. Were there difficulties in tacking the concept to a more concrete product within the context of this subcommittee? Did the "vision" guide any of the other projects/products the workgroups focused on (other than the recommendation that was put forth)?

Which of the sector projects/products do you feel is most significant? Could any be characterized as "breakthrough?" Did the subcommittee take a strategy of developing smaller, do-able projects that dealt with specific issue areas?

To what extent do you feel these projects address major environmental issues of the Computers & Electronics sector? Potential for significant impact on the environment?

How significant was it that the sector was unable to engage other co-regulators in the CSI process, such as OSHA and NIOSH? Do you feel this kind of integration is essential to your sector in particular? To all sector-based work?

Would projects such as CURE or BOLDER have happened without CSI? How necessary was a consensus-based, multi-stakeholder model to designing and carrying out these projects?

How would you weigh the transaction costs of your involvement in this subcommittee relative to its benefits?

7) Cross-Fertilization

New activities and relationships often have been started outside of CSI as a result of the relationships and work developed through the CSI. Do you know of any examples of this kind of cross-fertilization in your sector or organization?

8) Decision-Making Processes/Ownership of Outcomes

To what extent were participants able to define problems and projects? Did the consensus process aid or hinder the decision making?

9) Lessons Learned/Next Steps

What are the overall lessons-learned out of the work of the subcommittee and workgroups?

What is needed in terms of follow-through on Computers & Electronics sector recommendations? On projects, such as CURE and BOLDER?

Questions for Council Participants

1) Goals

From your perspective, what were the major goals of Council?

How did the work of the Council support those goals?

Were there changes over time either in the goals themselves or in the work of the Council in relation to those goals?

2) Participation/Role

What were your original expectations/reasons for participating on the CSI Council?

Were there unrealistic expectations for success at the outset of CSI, and how did these affect the early work of the Council?

Did those expectations change over time?

How did the mix of sectors chosen for CSI affect the work of the Council? Do you feel that the sectors chosen best fit what CSI could accomplish?

Did stakeholders have the right level of participant at the table for the work of the Council?

What was the intensity, consistency, continuity of participation of stakeholders on the Council? How did that affect the outcomes?

To what extent did various Council participants/stakeholders provide leadership in defining the goals and activities of the Council?

How would you describe your role as a member of the Council?

Were all stakeholders able to fully participate in the work of the Council? Are there changes which could have facilitated stronger participation?

3) CSI Organization/Structure

Did you participate on a subcommittee as well as on the Council? How would you evaluate the role of the Council with respect to the work of your subcommittee/sector? Other subcommittees?

How would you describe the special role of the Council?

4) Relationships

How effectively did various stakeholders work together on the Council?

How did relationships change over time? What led to those changes?

5) EPA Role

How effective was the role of the Council in providing recommendations to EPA?

How strong has EPA follow-through been on recommendations of the council?

How would you describe EPA's role in defining the agenda and objectives of the Council? Any changes in EPA role over time?

Have there been changes in the way EPA does business as a result of CSI?

6) Accomplishments/Shortcomings

What are the most important products/projects/ recommendations coming out of the Council's work?

Did the Council successfully tackle core environmental/regulatory issues?

How would you evaluate the work of the Council on:

-developing a plan for future sector-based approaches by the Agency?
-developing better approaches for EPA's work with stakeholders?
-promoting a revised approach to use and management of information by EPA?

How would you describe the costs of participating on the Council specifically, or in CSI generally, relative to the outcomes?

7) Cross-fertilization

What benefits have occurred as a result of CSI outside of the direct CSI context?

8) Decision-Making Processes/Ownership of Outcomes

What have been the strengths/weaknesses of the Council's process for making decisions?

How has that process changed during the course of CSI?

9) Lessons Learned/Next Steps

What do you regard as the key lessons of CSI generally? Of the work of the Council specifically?

Has CSI shown a new potential role for EPA in environmental policy? If so, how describe?

Adequacy of current steps for CSI follow up? Any additional steps that EPA should be taking to follow up on CSI?

Any concerns with respect to implementation of Council recommendations now that CSI is ending?

How does CSI compare with other EPA ways of doing business with regulatees and stakeholders?