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EPA

# Creating A U.S. Environmental Protection Agency That Works Better And Costs Less

## *Phase I Report*

## *National Performance Review*

The following report **"Creating A U. S. Environmental Protection Agency That Works Better & Cost Less - Phase I Report"** is the product of a very dedicated group of over 400 EPA employees. This report, formerly titled "Using The Workforce In New Ways", contains over 400 recommendations for improvement developed by 20 subject area teams.

This report has been reviewed by the National Performance Review Implementation Steering Committee. The Committee's goal was to sort through all the recommendations and prioritize them according to which recommendations would have the most positive overall impact. The Committee's recommendations for what the Agency should act on immediately is contained in the report entitled **"Creating A U. S. Environmental Protection Agency That Works Better & Cost Less - Phase II Report."** This report will be available by mid-December, 1993.

# Creating A U.S. Environmental Protection Agency That Works Better And Costs Less

## Phase I Report
## National Performance Review
## December 1993

NATIONAL PERFORMANCE REVIEW



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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# *Introduction & Overview*

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ACKNOWLEDGEMENT

The employees who participated in the EPA's internal NPR wish to acknowledge the foresight of the current Administration in providing EPA employees with this opportunity. President Clinton, Vice President Gore, and Administrator Browner have begun a journey toward continuous improvement of the Federal Government. We recognize the need for further application of the NPR at the EPA and acknowledge and appreciate the Administrator's commitment to this process. The NPR teams also wish to thank the EPA employees who accepted the responsibility to provide their opinions, perspectives and suggestions for this improvement effort.

The challenges that senior management will face in prioritizing and implementing these recommendations will be enormous. It will be difficult to evaluate and make decisions about the teams, findings and recommendations (i.e., the feasibility and practicality of reinvention ideas; possible timetables and schedules -- short-term versus long-term; reallocation of resources [investment and disinvestment]; ideas which need further study and refinement; and, proposed strategy for statutory and regulatory changes.) We wish them luck!!

# REINVENTING EPA

## Introduction and Overview

### I. Vision/Goal

The vision of EPA's internal NPR effort is for EPA to emerge as a national and world leader in preparing for the environmental challenges that lie ahead in the 21st century, while meeting the pressing needs of this decade. Our goal is to invent an Agency equipped to fulfill its vision by restructuring, redesigning, or reorganizing our environmental missions and administrative operations. We are searching for ways to change -- to work better and smarter so that the Agency can deliver high quality results at a reduced cost. Our aim is to treat citizens as customers, improve the service and delivery of our programs, and eliminate waste and inefficiency. The NPR has given us an opportunity to examine the way we conduct our business and identify internal opportunities for improvement.

Toward this end, our objectives have been to empower employees from across EPA and to capitalize on their diversity. The employees were asked to identify improvement and reinvention opportunities.

### II. EPA's Internal NPR Process

#### A. Organization of the NPR

To achieve the goal of the NPR, EPA focused on its mission and on the barriers that impede the fulfillment of the mission. The Administrator identified topics and appointed a Leadership Team and 19 Policy/Process Teams to formulate the ideas for change. Selection of individual participants began with a process of self-nomination and recommendations from senior managers.

The NPR effort used a multi-disciplinary, cross-functional approach which was free of organizational constraints. Participants in the reinvention effort were encouraged to think "outside the box," not to focus exclusively on administrative systems, processes or EPA programs, and to think in terms of structural changes outside EPA's control which could significantly improve the operations of government in general. The teams were also encouraged to identify opportunities for significantly improving the quality of the environment for ourselves and for future generations.

The Senior Leadership Council was involved in reviewing the initiatives and will work with representatives of the EPA's internal NPR teams to devise an implementation strategy.

Policy/Process Teams. The 19 Policy/Process Teams were staffed with over 400 EPA employees, from Headquarters, Regional Offices, laboratories, and other locations. These teams were truly diverse (i.e.; discipline, culture, program, time employed, location, etc.). The teams also provided the forum for reinvention ideas submitted by other EPA employees.

Team members identified a wide range of improvement opportunities for administrative and management systems, as well as the policies that form the foundation for how EPA approaches and accomplishes its mission. The teams formulated innovative alternatives to address the specific problems which were identified, and they prepared reports which are included in this document. The 19 Policy/Process Teams are:

Awards/Recognition
Ecosystems
Environmental Justice
Environmental Technology
Extramural Resources
Financial Management
Intergovernmental Partnership
Internal Communications
Management and Leadership Development
Performance Management
Permit Streamlining
Planning and Budgeting
Pollution Prevention
Position Classification
Quality Management
Quality Science
Regulatory Development
Workforce Capacity
Workforce Diversity

Leadership Team. The Leadership Team was established to provide guidance and assistance to the Policy/Process Teams; to focus on issues not being addressed by the other teams; and to coordinate preparation of the final report.

Senior Leadership Council. The Senior Leadership Council, which is comprised of the Administrator, Deputy Administrator, and the Assistant and Regional Administrators and their deputies, is charged with advising the Administrator on EPA's internal NPR recommendations and working with representatives of EPA's internal NPR to develop an implementation plan.

Quality Advisory Group (QAG). The EPA's QAG is responsible for coordinating the Agency's TQM efforts. The QAG staff provided consultation, facilitation, and logistical support to the NPR, and they will continue to do the same for the Senior Leadership Council during the implementation of EPA's NPR reinvention ideas.

B. Process Activities

EPA's internal NPR was initiated on May 27, 1993, by the Deputy Administrator at a two-day meeting attended by the Leadership Team and the 19 Policy/Process Team Leaders. At that meeting, the Vice President's (VP) NPR staff presented an overview of the government-wide reinvention effort.

After the May meeting, the EPA's internal NPR teams worked independently. The teams used various data gathering techniques and were guided by TQM principles and tools. In addition, the teams were asked to use a peer review process.

The Administrator concurrently invited EPA employees to submit their ideas, recommendations, or suggested areas for improvement. Approximately 1500 ideas were received from employees and referred to the appropriate internal NPR team. The ideas ranged from simple to complex and local to national.

EPA's internal NPR process relied on the six principles adopted by the government-wide NPR initiative:

Measurement: EPA should move from measuring activities to measuring results.

Customer Satisfaction: EPA should continuously evaluate its services and increase its public outreach efforts.

Competition: EPA should improve its overall public service, cost containment, and excellence to products and services, particularly as they relate to the Agency's interactions with its Federal, state, and local partners, the regulated community, and the public.

Market Orientation: EPA should continue to use its leverage to influence market forces positively to help achieve the nation's environmental goals.

Empowerment of Communities: EPA should shift from command and control to a process of empowerment in order to enhance state and local capacity.

Decentralization: EPA should move from a hierarchical style to one of consultation and empowerment, placing value and emphasis on teamwork.

III. Successes

EPA's internal NPR process recorded a very successful beginning. It created a climate for a new way of thinking, and it was a laboratory for piloting a new management process -- gathering people from across the Agency to work on a common goal. The process empowered over 400 employees with diverse backgrounds and varying grade levels from different geographic locations. The internal NPR teams developed a synergy which resulted in the many new ideas which are described in their reports. This effort is just the beginning, and it represents a new management strategy for EPA.

Another success involved the realization that EPA needs to approach problems from a multi-media and/or multi-office perspective. This "common thread" was evident in many of the team reports. Another involved better strategies for using, empowering, and developing employees. It takes motivated employees to help improve management, to develop other staff, to do a good job, and to ensure that EPA customers are satisfied. EPA's reinvention effort is an excellent example of how this type of effort can work -- and work well.

IV. Relationship of EPA's Internal NPR to the Vice President's (VP's) NPR

Although the VP's NPR and EPA's internal NPR began as two separate initiatives, the efforts quickly became complementary. The Administrator independently established EPA's NPR to help find ways to improve and streamline EPA's internal processes. The VP's NPR was established to reinvent the role of the federal government and to find ways to streamline its processes. Since the VP's NPR staff worked very closely with EPA's internal teams, their issues and recommendations were consistent and complementary. The VP's NPR report addresses issues from a macro perspective while the EPA's internal NPR report provides a more detailed perspective on how these changes can be addressed throughout the Agency.

V. Major Cross-Cutting Issues

During "Reinventing EPA," several major cross-cutting themes and issues emerged, and this section addresses those themes/ issues which appeared to be the most significant: (1) "EPA's Current Organization" -- the need to restructure how we do our

work; (2) "Oversight" the need to eliminate excessive scrutiny; and, (3) "Quality" the need for an Agency commitment to the concepts of quality and continuous improvement.

Human resources, intergovernmental partnerships, tribal relationships, internal communications, and pollution prevention were issues that appeared in many of the team reports. These issues are fully developed in the individual team reports and are included elsewhere within this document.

The Administrator's themes (environmental leadership, partnerships, sustainable development, pollution prevention, sound science, integrated environmental management, environmental justice, and management of human and financial resources) emerged as subjects of specific reports or are included in a combination of reports.

A. ORGANIZATIONAL STRUCTURE OF EPA

The teams were asked to provide a wide range of recommendations, including those that might result in organizational change. The teams found organizational and "traditional mindset" barriers that have negatively impacted EPA's ability: to address multi-media or ecosystem types of problems and to institutionalize pollution prevention.

Media-specific approaches often create duplication among program offices. Some team reports (e.g., permit streamlining, pollution prevention, environmental technology) suggest that these barriers and hindrances to problem-solving can be overcome by reorganizing, by making more use of cross-media work groups, or by making special efforts to collaborate on special areas (e.g., sectors, industries, or customer base.) Using the same multi-media processes, similar improvements could be made in the development of budgets.

Proposals, for overcoming organizational barriers, range from changing the organizational structure of the EPA to using more cross-program work groups. The need to tackle more complex issues through prevention and control, in a more "holistic" fashion, appears to require a new organizational approach. As EPA strives to solve more complex issues, its current structure works to inhibit or impede success. The EPA also needs to address the barriers which are created by multiple pieces of enabling legislation.

<u>Option - Reorganization</u>. EPA could be organized by function, geographic area, specific ecosystem problems, or industry. Centralizing enforcement and compliance functions is one way to view EPA from a functional perspective. There should

be efficiency and accountability benefits associated with any change (e.g., eliminate duplication and waste, increase responsiveness to priorities, expand multi-media capacity.)

The Agency conducted a functional assessment of its 1994 budget base (e.g., regulation and standards development; compliance monitoring and enforcement; technical assistance, education and public outreach; permitting and licensing; emergency response, site cleanups, and remediation; environmental data and environmental information management; research; and management.) Although it was not a perfect budget exercise, it did look at EPA's organizations from a functional basis.

Option - Multi-media Work Groups. EPA should establish an infrastructure to enable cross-media teams to be organized quickly in order to work on specific issues related to ecosystems, geographic locations, or pollution prevention initiatives. The Agency has demonstrated success in similar efforts (i.e.; team building, breaking down organizational barriers, and solving problems, Clusters, the ten Regional National Geographic Initiatives, cross-program scientific review RfD/RfC Workgroup, and the 1993-1995 Strategic Plan Initiatives/Action Plans.) The Agency needs to resolve the sensitive issues related to the responsibility, accountability, and financing (ownership of FTEs and financial resources) of multi-media work groups.

B. OVERSIGHT

Oversight is an issue that affects all EPA employees and its customers. It has been addressed in many of the Team Reports. The gridlock experienced across government appears to be heightened in EPA. The key question is how to balance appropriate oversight and accountability while maintaining trust.

Example - Hierarchical Oversight. Regional offices review the work of state agencies with respect to the implementation of Federal rules and regulations. Headquarters offices (e.g., the Program offices, the Office of Enforcement, and sometimes the Office of General Counsel) review the Regional Offices' work and their review of the State work. In order to reduce oversight and duplication of effort, more trust is required among the partners along with a clarification of roles. EPA needs to get rid of oversight that adds no value.

Example - External Administrative Oversight. The Inspector General, General Accounting Office and other Congressional oversight activities and inquiries are repeatedly being conducted in areas like management of extramural funds. Recently, there

has been an increased level of oversight, and EPA should conduct a comprehensive assessment of the positive and negative impacts of administrative oversight on program services and administrative operations.

Team reports, employee suggestion forms, and discussions at the Vice President's Town Meeting at EPA indicate that the current level of oversight is adversely affecting the contracting process. Employee fears of making mistakes and fear of disciplinary (including criminal) actions, are alleged to be causing delays in the contracts, management process. Employees believe that these effects are documented because of the time now required for contracts and grants to be awarded and for work assignments to be issued.

Those who advocate reduced oversight are often criticized for trying to escape accountability. The impact of reduced oversight may have the opposite effect, and current management trends (supported by research and data) indicate that empowered, trusted employees accept greater responsibility and accountability. There are internal control systems within the government (e.g., FMFIA) which, if staffed and operated effectively, should provide redundancy to external oversight groups, such as GAO.

Example - Internal Management Oversight. A third example of oversight is within EPA. There are multiple reviews, changes, reviews of the field units, and there are always numerous changes in the preparation of senior management briefing papers, reports and draft regulations. One way of dealing with excessive internal oversight is to flatten the organization -- A primary recommendation of the Workforce Capacity Team is to "flatten management hierarchy." This was echoed in several reports and by EPA employee suggestions to the internal NPR teams.

Example - Cross-Program Oversight. The final example of what may be defined as oversight, is within EPA and across Program Offices. This occurs when EPA staff from different offices review draft regulations and reports through EPA work groups. This results in an oversight that promotes duplication of effort, rework and "second guessing." EPA must be able to calculate the added value of this oversight, and determine whether the time invested is worth the return.

3. QUALITY

Quality is a concept that appears in team reports, and it is also one of the major motivators behind the EPA internal NPR effort. TQM is not an end, an objective, or a goal -- it is a way of conducting business. It is a tool that assumes a

consultative and participative culture. This overall finding by the EPA's internal NPR teams is consistent with the President's strategy on "Reinventing Government" to make government work better and cost less.

An Agency commitment to TQM will require a cultural change and re-evaluation of priorities. Senior leadership must provide the vision, and employees must strive to share in achieving the vision and the values it holds.

The Quality Science Team recommends that EPA focus on quality, not quantity. Both the Quality Science and Workforce Capacity Teams independently identified impediments to quality at EPA, and they have suggested improvement ideas. Quality is greatly hindered by what has been described as EPA's "balkanized" structure and by EPA's reliance on contractors.

Improving the basis for Agency decisions means the science-policy interface needs to be better addressed. Scientists and policy-makers need to understand each other's positions, needs, and expectations. The affected parties must be integrated into the regulatory development process at an early stage.

Delivering a quality product -- a safe and healthful environment at a reasonable cost to the American people -- will require the retention and development of a highly qualified staff. Team reports addressing human resources issues identified a number of very important recommendations that must be seriously considered.

## VI. Lessons Learned/Process Improvements

Throughout EPA's internal NPR process, several lessons were learned, and a number of process improvements flow from these lessons. These suggestions assume that the NPR process will endure at EPA. It is important to note that these observations apply to the NPR process rather than the content of the reports.

### A. Need for Management Support and Understanding

One of the principal lessons learned from EPA's internal NPR experience is that political and career managers must demonstrate commitment to the concept of reinventing government and middle managers must share in that commitment. All senior managers must have a thorough understanding of the process and how the workforce is to be used in new ways during the process.

Commitment to the NPR process starts at the top, and senior management must assure that the importance of reinvention is communicated to the entire workforce. It must be made clear that

reinvention is a top Agency priority, and achievement of this goal must involve all EPA employees.

B. Need to Identify and Prioritize Outcomes

Most of EPA's internal NPR team reports were written without reference to the relative importance of individual reinvention ideas or with guidance for strategically linking the ideas. The implementation process was started when the Administrator formed an implementation task force, co-chaired by the Deputy Administrator and the Leadership Team chairperson. The roles of the task force will be to prioritize the ideas from team reports and to develop an implementation plan for these ideas. This prioritization and implementation plan should include consideration of the proposed reinvention laboratories which have been received.

C. Need to Identify Disinvestment Opportunities

The VP's goal for the NPR was to "make government work better and cost less." A common characteristic of the team reports is the conviction that each proposed initiative is a panacea for the Agency's problems. It is not surprising that most teams did not calculate the costs associated with implementing their proposals. Similarly, the teams rarely identified opportunities for disinvestment to counteract proposed investments as part of their initiatives.

The implementation task force will be obligated to perform cost analyses to determine which proposals to accept and activate, and which to defer or reject. Many proposals require initial start-up costs but may ultimately result in substantial savings to the government (e.g., avoiding duplication of oversight). Some proposals are essentially revenue neutral and simply represent an innovative way of doing business (e.g., restructuring.) Future reinvention exercises should require a more rigorous identification of opportunities for disinvestment, as well as the costs of proposed initiatives. This omission in the current process is mostly due to the limited time available to undertake and complete the NPR effort.

D. Need for Adequate Time

Several Policy/Process teams were already operational when EPA began its internal NPR effort, but most teams were formed in May. For logistical and other reasons, some of the new teams were unable to begin the work immediately. In some instances, time constraints precluded new and in depth consideration of every possible barrier. The analysis performed by the different teams varied with the availability of, and

access to, relevant information. Future reinvention endeavors should allocate adequate time to fully develop and analyze the ideas generated.

## VII. Conclusions

Through discussions with team members and observations of the process, the EPA's internal NPR Leadership Team concludes that the initial EPA NPR effort was a good experience and a successful beginning. Employees within and across the Agency have started thinking and communicating differently. However, the process can backfire if employees do not see concrete, follow-up actions in a timely manner.

Although individuals brought different perspectives to issues and problems, it was relatively easy to agree on our "desired state" and what we believe must happen within EPA in order to succeed. We should strive to:

- be an organization that welcomes change; be comprised of people that are flexible;
- be an organization that is quick to respond to new challenges and knowledge;
- be comprised of people that think holistically (e.g., to better address ecosystem and health protection);
- form effective partnerships with states, industry, and the public, all of whom share a common goal;
- nurture ourselves and each other - invest in ourselves;
- have trust present in all areas at all levels (e.g., EPA must regain the public trust; have no turf among organizational units).

EPA was founded by people who care about the public. EPA employees are driven by the desire to be of service to people and the desire to protect the World's natural resources. Such commitment is evidenced by the level and quality of participation in the EPA NPR process. As a group, the workforce wants to do well and wants the Agency to succeed. In many ways, EPA is succeeding, but continual improvement must always its goal. EPA must find ways to harness and focus the energy of its employees and to develop a high performance organization and teams at EPA.

# REPORT OF THE *AWARDS/RECOGNITION* TEAM

NATIONAL
PERFORMANCE
REVIEW

**EXECUTIVE SUMMARY**

In compiling this report on the EPA Awards and Suggestion Programs, the National Performance Review (NPR) Team studied previous reports on the same subject. One such report, "An Inquiry into the Effectiveness of the EPA Awards Program," was completed in 1992 by a Quality Action Team (QAT) composed of employees at all organizational levels and representing thirteen different program offices, including a Regional and Laboratory office. This Final Report is an adaptation the work of that group.

The purpose of the **EPA Awards Program** is to motivate and reward employees. Focus groups and a nationwide survey showed widespread dissatisfaction with some aspects of EPA's Awards Program, centering on the issue of fairness. There is a perception that important work which does not have high visibility is not properly recognized, that employees in support/technical positions are slighted, that favoritism influences awards, and that managers receive too many awards. However, employees believe there is much that is good about the program. This was especially evident in the focus groups where participants could speak at length and share ideas. Most feel that much can be done to improve the program. Eleven recommendations address the perceived deficiencies in the Awards Program.

**EPA's Suggestion Program** is seen as generally inactive and ineffective. Efforts to revitalize it over the years have been unsuccessful. A "Two-Pronged Solution" is suggested:

1. REVAMP THE EXISTING PROGRAM. Three factors severely limit the effectiveness of the existing program: 1) suggestions about employees' current jobs are not allowed; 2) there is no money set aside for the program; and 3) there is competition from other awards, such as time-off and on-the-spot. Six recommendations, most notably adequate funding, address the deficiencies,

2. CREATE A NEW SUGGESTION PROGRAM. The study, including benchmarking with other organizations, recommends supplementing the OPM-mandated Suggestion Program with a new program more responsive to EPA employees' needs. Several recommendations are made for the new program, including allowing suggestions about employees' current jobs, and simplifying the entire process.

## VISION - Awards Program

EPA employees show widespread dissatisfaction with some aspects of the EPA Awards Program, but few would do away with it and many have suggested changes to improve it. These ideas can build an Awards program that motivates and rewards employees.

### Findings and Recommendations

- **Overall, 61% of employees think the Awards Program is unfair. Among non-whites it is 73%.**

****** 1. Important work of excellent quality, that does not have high visibility and is not "hot" or "glitzy," should receive much more recognition than it does now.**

73% of the Survey respondents felt this way. In Labs it was 83%. The Focus Groups showed this even more emphatically; participants in all groups, some with strong feeling, spoke about this neglect of good behind-the-scenes work. No one spoke against this recommendation, although one or two supervisors said such work could be rewarded at performance evaluation time.

****** 2. Employees in assistant/technician positions should receive more recognition than they do now.**

62% overall think this group receives too few awards. 79% of those in grade 10/below feel that way, as do 69% of non-whites, and 67% of females. The smallest majority for any group was 59%. There is a general feeling among employees, and not just among assistants and technicians, that employees in these positions are left out or slighted. The Survey data is consistent with and reinforced by the Focus Group findings.

**3. Employees in administrative support/clerical positions should receive more recognition than they do now.**

57% overall think this group receives too few awards. 84% below grade 10 agree, as do 64% of females and 63% of non-whites. The smallest majority was 55%. Focus group survey data reinforced these findings.

***** 4. The results of Awards Program should be made public**

**and readily available to interested employees. It should include the number of awards by category and organization, the amounts of the awards, grades of recipients, and other relevant data. It should not include identities of individuals.**

This recommendation partially addresses the concern of many employees about the fairness of the program. 71% overall think there should be an Agency group to monitor equity in the Awards Program. Among non-whites it is 90%, and for grade 10/below. 84%. Clearly, there is much concern. In the Focus Groups, things were not so clear cut - employees, though acknowledging the problem, were not much in favor of creating another layer of bureaucracy. Several employees made suggestions similar to the above recommendation.

This recommendation would also help address another expressed employee concern: that managers receive too many awards for too much money. (This sentiment was very strong in non-supervisory Focus Groups; it did not exist in supervisory groups.) One item on the Survey asked which categories of employees receive too many awards. 103 employees responded, and 66 (64%) wrote in some form of management. (This was not one of the check-off choices and had to be written in.)

If implemented, the recommendation would also address the concern of some about the secrecy of the process. It would put everything in plain view.

- **Overall, 71% of employees believe the Awards Program fails to motivate employees to be the best they can be. In the labs it is 80%.**

*** 5. **Each Lab, Region, and Program Office or Assistant Administrator should maintain its own Awards Cash Pool. The amount that each organization sets aside should be made open to comparison.**

This was the most lopsided response in the Survey. 85% overall wanted the Pool, and every subgroup was heavily in favor of it. The Focus Groups were also for it, although not so heavily.

Money is a good indicator or organizational priorities. Publicizing award pools would help to eliminate disparities.

*** 6. **Whenever possible employees should be allowed**

**to choose the type of award, e.g., cash vs. time off.**

76% overall were in favor of choice. 89% in grade 10/below, and 88% of non-whites like this option. The smallest majority was 75%. The Focus Groups were very much in favor of it. Most supervisors, while believing that employees should be consulted about their preferences, think the final decision should rest with management.

** 7. **Peer awards and employee nominations of supervisors for awards should continue, but care should be exercised.**

66% overall are in favor of peer awards; 91% of non-whites and 64% of whites. 76% overall are in favor of employees nominating supervisors for awards; 85% for grade 10/below. Focus Groups pointed out that awards like those already exist in some offices. Employees were worried about such things as collusion --"you scratch my back, I'll scratch yours." Several said such awards can be very useful, but they should be for relatively small amounts to avoid pressure, collusion, and other complications. In the offices where such awards exist, the dollar amounts are small. In fact, the award does not necessarily have to be cash.

*** 8. **The process for nomination and award should be made as simple and straightforward as possible.**

In the Focus Groups supervisors, especially, complained about the time it takes to write up award nominations, the time of the year that they are due, etc. Both employees and supervisors know that whether one gets an award often depends as much on the knowledge and skill of the nominator as on the work of the nominee. Something needs to be done about this.

- **Other concerns of employees regarding giving of awards for process rather than results, lack of awareness of all aspects of the Awards Program, and possible differences in concerns in different components of the Agency**

** 9. **Great caution should be exercised in giving awards <u>just</u> for practicing the principles of Total Quality Management (TQM) in one's work.**

Only about 25% of employees believe that the Awards

Program rewards and encourages those who practice TQM in their work. In the Focus Groups the feeling was very strong that there should not be recognition just for practicing TQM. Emphasis should be on results, not process. Some negativity and hostility is directed at TQM. A few did say that since TQM is a "hot" topic, those involved with it are more likely to get awards. Others pointed out that if the Agency wants to encourage TQM, its practice must be rewarded. This recommendation addresses these various issues.

**** 10. EPA should launch a comprehensive, long-term effort to educate all employees about the Awards Program. It should include the kinds of awards, criteria for awards, processes for nomination, tips on how to write the nomination, etc.**

This strong recommendation came mainly from Focus Group employees and supervisors who said they knew too little about various awards to apply for them or nominate others. Nearly all said they needed to know more. Each group had people who were unaware of some of the awards discussed.

**** 11. Further studies should be considered in components of the Agency.**

The data indicates variation in awards practices among organizations and locations. Laboratory employees seem to be especially dissatisfied with the Awards Program; particularly about recognizing low visibility work and the work of assistants and technicians. This level of dissatisfaction in the Labs points to a need for further study. This may also be true for other locations or Agency components.

## VISION - Suggestion Program

EPA's Suggestion Program should be active and effective. In FY 1991, 102 suggestions were received Agency-wide, 19 were adopted and $8,110 was paid to the successful suggesters. Efforts to revitalize it over the years have been unsuccessful. We can and should do better, and envision a "Two-Pronged Solution" to: 1) Revamp the existing suggestion program; and 2) Establish new programs at the AA/RA/LD levels.

## Findings and Recommendation

- The existing OPM-mandated program is limited by three factors: First, suggestions about employees' current jobs are not allowed. Second, there is no money set aside for the program. Finally, there is competition from other awards, such as time off and on-the-spot. Implementation of the following suggestions will improve the existing Suggestion Program:

** 1. **Make $100,000 available annually for the program.**

As it stands now, the office which adopts a suggestion has to pay any award to the suggester - a strong disincentive to adopt the suggestion.

** 2. **The program should be actively and continuously publicized, and it should receive support from the highest levels of the Agency.**

* 3. **The national program office should maintain and publicize a master status list of suggestions including all relevant data.**

* 4. **Evaluators should be recognized by some non-monetary token when suggestions are adopted.**

* 5. **There should be a Review Board for suggestions having an Agency-wide impact.**

* 6. **Other recommendations: a) include a tear-off on the suggestion form so suggestions can be acknowledged immediately; b) have a contest to come up with a new name for the program; c) design attractive boxes and display them prominently.**

- **After much study, including bench marking with several organizations, the QAT concluded that the OPM program should be supplemented by an entirely new program, more responsive to EPA employees' needs, more aligned with the principles of TQM, and which avoids major problems with the existing program. Implementation of the following recommendations will get the new suggestion program up and running:**

***** 1. Delegate to each AA/RA/LD the authority to create an improvement award system (they can pick the name) within their organizations, with the option of redelegating the program to a lower level.**

****** 2. Consider all suggestions whether or not they fall within the scope of the suggester's current duties.**

***** 3. Give "winners" the choice of cash or time-off awards whenever feasible**

***** 4. Keep the program very simple, with a minimum of paperwork.**

*** 5. Send top improvement ideas from each AA/RA/LD to a Selection Board each year.**

The Board will select the top 1-3 from the entire Agency. These would be recognized at the Annual Awards Ceremony and would receive an additional, appreciable cash award, funded from the Suggestion Program pool.

## CONCLUSION

We believe that EPA's Awards Program can become a model for the Federal government. The recommendations, while likely causing some organizational discomfort, are not difficult or costly to implement. Employees will be pleased to see tangible results of their participation, the EPA Awards Program will be perceived in a more favorable light, and EPA will be an even better place to work.

As the recommendations for the dual Suggestion Program are implemented, EPA's existing Suggestion Program will be improved by adequate funding, increased organizational support, publicity, and process streamlining. The New Program will revitalize the employee suggestion concept by making it more relevant, placing it closer to suggesters, providing options in awards and minimizing paperwork.

Attachment

TEAM MEMBERS --
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# REPORT OF THE *ECOSYSTEMS* TEAM

NATIONAL
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The Ecosystem Protection Paper was prepared by members of the NPR Ecosystem Protection Team with input from other EPA staff. This paper resulted from review of previous documents on ecosystem protection, several day-long meetings, soliciting ideas from colleagues and other experts, and reviewing EPA staff suggestions. Issues raised, background information, and recommendations were all developed by the Team. Three writing groups were set-up to prepare the paper. Peer review consisted of individual comments from offices of the Team members, other EPA staff, and the Senior Leadership Council.

**ECOSYSTEM PROTECTION TEAM MEMBERS**

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## EXECUTIVE SUMMARY

Ecosystem protection is often seen as a goal which is in conflict with other societal and economic values and interests. There is increasing recognition, however, that economic stability is in fact interrelated with healthy, functioning ecosystems. Many sectors of our society are directly and indirectly affected by past and present ecosystem degradation. The Florida Everglades and the Chesapeake Bay are both examples showing how the cumulative effects of human activity can destroy the inherent capacity of natural systems to sustain themselves, leading to significant economic dislocation. The unabated destruction of these natural systems, which sustain us today and our children tomorrow, must be halted. A national effort is needed to promote balanced and sustainable uses of our natural resources. To fulfill its obligation to, and role in, this effort the federal government and the EPA must change the way in which they function.

First, a broad national vision for change is needed. The federal government must focus this vision by creating and implementing a cohesive and comprehensive national policy on ecosystem protection. To reduce the fragmentation and inconsistency which rendered ineffectual prior ecosystem and natural resource management efforts, the Executive Branch should: (1) develop a national ecosystem management policy which is implemented jointly by the appropriate federal agencies pursuant to an executive order; (2) develop and implement coordinated ecosystem protection initiatives among federal, state, and local governments, such as inventories, resource assessments, joint budget proposals; and, (3) eliminate gaps and inconsistencies in existing laws and pass new laws such as establishing a "Green Bank Program," and other programs.

Second, EPA should be a catalyst to the national vision for change by establishing and disseminating a set of organizing principles for ecosystem protection that can be used by federal, state, and local governments, citizens and other organizations. EPA should also implement structural changes through an ecosystem protection policy issued by the Administrator which establishes ecosystem task forces and ecosystem plans, and institutionalizes ecosystem management principles. EPA should make better use of its existing tools by: (1) amending guidances and regulations to promote ecosystem protection; (2) improving the implementation of the National Environmental Policy Act and the Endangered Species Act; (3) more fully utilizing grants, education, and nonregulatory programs such as ecosystem training and educating the public; and (5) improving the ecological science

base and sharing data. Further, the Agency should practice ecosystem protection through geographic enforcement initiatives and regional landscape initiatives, while promoting ecosystem protection to others through coordinated grants and using anticipatory planning.

## VISION

**The United States will develop and implement a national policy to protect the sustainability of the natural systems which provide economic prosperity and a high standard of living for the American people. The Environmental Protection Agency will play an important role in developing and implementing this policy by providing leadership, by promoting the sustainable use of our natural resources, and thereby protecting our natural heritage for present and future generations.**

## INTRODUCTION

Ecosystems -- the complex of living and non-living components that function together as a unit in a given area such as wetland communities, estuaries and prairies -- form the core organizational structures of the natural world. Ecosystems have a degree of inherent stability which helps them to resist some disruption. Significant man-made stressors, however, such as over-grazing, unbridled commercial and residential development, over-population, pollution and a host of others, can alter ecosystems, affecting their ability to sustain life, including human life. The quality of life for humans is thus linked inextricably to the sustainability of ecosystems.

Ecosystem sustainability can be defined in a variety of contexts. For purposes of this document, it is the concept that humankind's interaction with the environment should strike a balance between the need to: (1) use natural resources to maintain a good standard of living; (2) prevent the destruction of natural resources; and, (3) accommodate future uses by subsequent generations.

Sustaining the ecosystems that comprise our natural world will require us to shift to a more holistic and coordinated approach to environmental protection -- one which recognizes that protecting human interests ultimately requires us to protect the natural systems upon which we depend for survival. Only in this manner will our efforts begin to match the interrelatedness that is the defining characteristic of ecosystems themselves. Recognition of this interrelatedness should be the first step toward reinventing our governmental and societal approach to ensure the protection and sustainability of ecosystems and natural resources.

The Executive and Legislative branches must undertake specific and coordinated actions in order to overcome existing barriers to ecosystem protection, which are both numerous and fundamental. A national ecosystem management strategy should be based on: (1) cooperative interagency institutional structures and public support; (2) sound scientific principles

and research; (3) ecological rather than political boundaries; (4) resolving conflicting agency missions and statutory mandates; and, (5) addressing connections between social, political, and environmental concerns.

EPA should be a catalyst for Executive Branch leadership by developing ecosystem protection principles, by working to integrate federal actions, and by establishing ecosystem protection partnerships with state and local governments and private entities. EPA must also enact internal changes to integrate principles of ecosystem management at every level and in all functions of the Agency. Agency planning, decision-making, and actions must be guided by the underlying principles of ecosystem management and protection, such as sustainability.

Ultimately, through "environmental protection" statutes, the EPA protects the various attributes of ecosystems--for example, clean air and clean water. An ecosystem, however, is more than a simple sum of its parts. Disruptions to one part of an ecosystem ripple throughout the whole ecosystem, sometimes in unpredictable ways. Thus, government intervention to address one component of the system will not effectively protect the entire system.

Although existing environmental statutes require in varying degrees that EPA consider the impacts on the entire environment in the development of standards, most standards are based primarily on human health impacts. Moreover, to the extent that environmental impacts are considered in standard development, such assessments are generally confined solely to those impacts which are of immediate concern to the program office developing the standard. Regulatory standards therefore often fail to consider cross-media impacts that can impair ecosystem viability, such as heavy metal air deposition into water bodies, or contaminated sediment resuspension.

Although changes must occur within governmental institutions and at different levels of society, they must be phased over a period of time in a coherent and integrated approach. This paper presents a national strategy for ecosystem protection and EPA's role in ecosystem protection. Specific timeframes for implementing the recommendations contained in this document vary depending on their complexity and scope, and on the differing capacities of governments and

society to change. Also, several key aspects of this integrated approach need to be highlighted at the outset to emphasize central themes that infuse many of the recommendations contained in this document.

First, a stronger link between science and policy is stressed in many of the recommended actions. The concept of ecosystem sustainability involves many areas of policy, for example economics and land-use planning. In approaching environmental protection from the ecosystem standpoint, however, the government, and EPA in particular, needs to ensure that sound science is available and part of the ultimate decision-making process. Second, more than any other form of environmental protection, achieving ecosystem sustainability will involve partnerships between all levels of government and its citizenry. The need to arm governments and citizens with information and education is paramount to achieving the goals set forth herein.

## I. A NATIONAL STRATEGY FOR ECOSYSTEM MANAGEMENT

In order to manage, protect and restore our vital natural resources and ecosystems, the United States needs to develop a national strategy for ecosystem management. Past efforts to protect the environment and to manage natural resources have been fragmented, often working at cross purposes. Most of the man-made and natural problems that have led to degradation and loss of ecosystems are still present. Policies and programs of federal, state, and local agencies, as well as private organizations have in some cases resulted in degradation of our ecosystems and component natural resources. The President and Executive Branch should provide leadership by setting forth this national policy that establishes a means for protecting ecosystems and directs federal agencies to coordinate and collaborate to implement this national policy.

**Target/Action Category: A national policy should be established through Executive Branch leadership for the protection of ecosystems based on the principles of sustainable use. This policy should be applicable to all federal agencies responsible for protecting the environment, managing natural resources, and infrastructure development.**

Initiatives:

- **Coordinated Approach to Ecosystem Management.** Coordinated approaches to ecosystem management are necessary for federal agencies to have a common understanding of the ecosystems for which they are charged to protect and manage. The Office on Environmental Policy (OEP) should organize a series of "sustainable ecosystem summits" comprised of agency representatives, academics and stakeholders to establish this operational government definition and to set common goals for ecosystem management.

- **Better Use of the NEPA Process:** The President should direct agencies to more effectively implement the NEPA process to plan, coordinate, and integrate other environmental statutes for ecosystem protection. The NEPA process can serve to coordinate consideration of the substantive requirements of other environmental statutes, and can serve as a tool by which agencies can consider overall ecosystem-related issues. NEPA also requires a broad examination of environmental impacts not necessarily addressed by media-specific laws, and it is this integrated assessment that is particularly well suited to address ecosystem management.

- **Executive Order:** The President should issue an Executive Order that establishes a national policy for ecosystem management and establishes a process for interagency cooperation. This policy should set goals for ecosystem management such as viable populations, sustainable use, and maintenance of biodiversity.

**Target/Action Category: All federal agencies should establish and incorporate ecosystem protection goals at all levels of activity.**

Initiatives:

- **Regulatory Coordination:** Federal agencies should coordinate the implementation and enforcement of environmental laws with a view toward achieving protection at the ecosystem level. Federal agencies will also need to identify barriers to full implementation of ecosystem protection, and identify statutory mandates and policies which conflict with the national policy of ecosystem protection.

- **Impacts of Federal Subsidies:** Federal agencies should assess impacts of federal subsidies, and where appropriate modify them to ensure ecosystem protection (e.g., grazing fees, mining, timber, agricultural water-use commodities).

- **Budgets Based on Ecosystem Priorities:** The Executive Branch should submit a re-structured budget that is fully consistent with the interagency coordination and research needed for ecosystem protection.

**Target/Action Category: A federal policy should be developed that accounts for ecological values equally with economic values.**

Initiatives:

- **Developing Measures of Ecological and Economic Value:** The Executive Branch should form a national task force comprised of ecologists, social scientists and economists, to develop measures which reflect the true value of ecological resources both in ecological and economic terms.

- **Revising GDP Indices:** The Executive Branch should direct OMB and the Council of Economic Advisors (CEA) to work with all federal agencies to review existing natural resource accounting methods and to revise GDP indices and other economic measures to include the loss of natural resources through exploitation.

- **Executive Order 12291:** The Executive Branch should revise Executive Order 12291 requiring cost-benefit analyses to reflect all societal and ecological costs and benefits over the long term (e.g., 100 years), including non-market values.

**Target/Action Category: The United States should ensure that national policies take into account protecting global ecosystems.**
Initiatives:

- **International Ecosystem Management:** Natural resource and environmental agencies, particularly EPA, USDI, and NOAA, should join with U.S. Agency on International Development to develop a joint strategy (and accompanying budget request) for the use of U.S. government expertise to assist in integrated ecosystem protection in other countries and in areas beyond national jurisdiction. This effort would both help the United States to fulfill its existing international obligations (e.g., Convention on Biological Diversity, Agenda 21), to suggest future directions in international policymaking in the ecosystem protection area, and to provide a useful international perspective on more effective ecosystem protection domestically. The Department of State should work closely with the agencies involved in this effort to promote innovative ecosystem management approaches in cooperation with other countries and in the negotiation of future international agreements.

- **Evaluating National Policies/International Obligations:** The Executive Branch should direct federal agencies to evaluate national policies on environmental protection and resource management in light of international policies and obligations, and to amend national policies to more effectively achieve international objectives. The State Department, USDI, EPA, USFS, NMFS, and other involved agencies should be directed to further develop national and international policies related to ecosystem management. In addition, the U.S. should develop human population policies that are consistent with sustainable economies and ecosystems.

**Target/Action Category: Federal agencies should work with each other, as well as state and local governments to use all available mandates in a cooperative and integrated manner.**

Initiatives:

- **Geographic Initiatives:** Interagency work groups should develop coordinated ecosystem management programs in specific geographic areas (e.g., ecoregions, watersheds,

physiographic provinces) in which multiple agencies or multiple-programs are currently operating (e.g., San Francisco Bay Delta, Gulf of Mexico, Oak Savannah).

- **Coordinated Budget Submissions:** Federal agency budget proposals should reflect intra-agency and interagency efforts to coordinate ecosystem protection (e.g., a specific percentage of budget must be joint submissions for ecosystem-related activities).

- **Managing Sustainable Ecosystems:** Federal agencies should convene summits for negotiating change in regional economics as a means for managing sustainable ecosystems. Coalitions of stakeholders in an ecosystem should examine ways in which to accomodate their respective interests while protecting the ecosystem.

- **Coordinated Inventory and Resource Assessments:** Agencies with primary responsibilities for biological inventory, monitoring, and assessment (e.g., NBS, EPA, EMAP, and USGS) should coordinate resource expenditures in carrying out these essential but costly functions. EPA should cooperate with the USDI's National Biological Survey (NBS) in ecological inventories. EPA should improve the coordination of monitoring and resource assessments currently being done by different agencies (such as the Interagency Task Force on Monitoring).

**Target/Action Category: The Administration and Congress should work together to promote coordinated ecosystem management efforts.**

Initiatives:

- **Coordinating Legislative Mandates:** An OEP-led interagency task force should identify conflicts and gaps in pollution control and resource management laws and present recommendations to Congress for legislative changes necessary to ensure national laws are consistent with the national policy for protecting ecosystems. For example, the task force would recommend federal legislation that provides agencies with the authority to anticipate and prevent biodiversity loss.

- **Directing Appropriations:** The Administration and Congress should work together to direct appropriations so that ecosystem protection plans are implemented through coordinated efforts of federal agencies.

- **Establish "Green Bank":** The Executive Branch (e.g., DOJ, OMB, Treasury, EPA) should work with Congress to develop appropriate legislation that establishes a "Green Bank Program," in which permit fees, use fees, and enforcement penalties collected by federal agencies (e.g., USFS, USDI, NOAA, NMFS) can be earmarked for ecosystem protection and restoration.

- **Congressional Committee Coordination:** The Committee on Congressional Reform should examine opportunities to coordinate the functions of the various committees that have jurisdiction over ecosystem management.

- **Ecosystem Protection Act:** An Ecosystem Protection Act (similar to the Pollution Prevention Act of 1990) should be developed which requires federal agencies to integrate ecosystem management principles into their various functions, including their scientific, regulatory, permitting, policy, and enforcement activities.

## II. EPA's ROLE IN ECOSYSTEM PROTECTION

EPA has both the legislative authorization and expertise to play a crucial role in federal ecosystem efforts. Agency regulations, however, under these existing statutes have not been developed with full regard to ecosystem protection. As the regulator of the environment and a sponsor of basic ecological research, EPA is uniquely situated to expedite the dynamic two-way exchange of understanding between researchers and practitioners of ecosystem management, and to assure that

current knowledge advances the protection of ecosystems. Success ultimately depends on EPA integrating ecosystem management at every level and function of the Agency. In particular, Agency planning and actions should be guided by underlying principles of ecosystem management and protection, and effects on ecosystem sustainability should be routinely weighed in EPA decisions.

Historically, EPA has primarily focused on the protection of human health with less consideration of the impacts on ecosystem issues. Congress has developed, in response to immediate concerns with critical environmental issues (e.g., toxic wastes, safe drinking water), media specific legislation. These actions have been translated into the organization and decisionmaking of the Agency. In order to achieve a successful cultural change, senior management must be fully committed to the underlying principles of ecosystem protection, provide the necessary training, and make organizational adjustments as needed. EPA must make ecosystem protection a primary goal of the Agency, on par with human health, as recommended by the EPA Science Advisory Board.

Gaps in the science and information base, an insufficient investment in EPA information management, and inexperience in new risk assessment methods hinder EPA's progress in ecosystem management. As the foundation for ecosystem management, EPA should use a comparative risk-based approach for setting long-term priorities and making Agency decisions. EPA can improve the scientific tools for ecosystem protection through its support of ecological research, environmental monitoring and assessment, and ecological information management.

EPA is now challenged to successfully integrate its risk-based methods, science and information base, and its varied authorities into a cohesive and effective ecosystem management approach. Outlined below are a series of initiatives, presented in a temporal sequence, that will build upon on-going Agency efforts at ecosystem protection. These initiatives emphasize pollution prevention, multi-media enforcement, research into the causes and cures of environmental stress, education, and constituency building - all to sustain the integrity of our nation's natural resources and the ecosystems that support them.

**Actions that should be implemented immediately.**

**Target/Action Category: The Administrator should issue a policy statement mandating the integration of ecosystem protection principles into all Agency programs and actions.**

Initiatives:

- **Ecosystem Task Force:** An intra-agency task force should be convened to develop the Agency policy statement and provide guidance on its implementation. Coordination of ecosystem protection initiatives and actions would also be a function of the task force. The task force will be staffed on a full time basis with representatives from Headquarters and regional offices. Members of the Senior Leadership Council would serve as advisors to this task force.

- **Incorporating Ecosystem Principles:** Each AA and RA should prepare an ecosystem protection implementation plan as part of their overall Strategic Plans and Agency Operating Guidance, with assistance from the Ecosystem Task Force. Additionally, specific changes to programmatic and Regional priorities should include: dedication of portions of the EPA budget specifically to fund ecosystem protection projects; reorientation of the STARS system to give credit for ecosystem management accomplishments; and use of regional/state ecological status and trends reports in planning and as a means of holding the Agency accountable for ecosystem protection. Ecosystem management principles should be incorporated into Agency operations such as performance standards, training for management and staff, performance awards, and Agency hiring.

- **Comprehensive Evaluation of Opportunities for Ecosystem Protection:** To better utilize existing authorities, EPA should undertake a comprehensive evaluation of each program, to determine whether each fulfills its potential in ecosystem protection. Moreover, EPA should promote more explicit ecosystem protection mandates in the reauthorization of EPA's statutes, where applicable, and in any new environmental legislation. In conducting a review of its authorities, each office should identify opportunities for ecosystem protection and barriers that may interfere. Subsequently, program offices should determine priorities for action to overcome the barriers and explore new opportunities. One example is including ecosystem values in the cost/benefit analysis during the regulatory process (e.g., regulation of chemical substances under Section 6 of TSCA).

- **Implementing Ecosystem Management in Program Activities:** Each program office should amend existing regulations and guidance as appropriate to allow for and promote ecosystem protection. For example, the Superfund program could institutionalize ecological risk assessment by revising the Remedial Investigation/Feasibility Study Guidance to integrate ecological and human health risks. In addition, each program office should integrate regulatory authorities (e.g., permitting decisions) into resource planning initiatives (e.g., Watershed Protection Approach, Wetlands Advance Identification) where appropriate.

  Barriers:

  1. lack of knowledge regarding ecosystem issues
  2. ecosystem level data is unavailable or difficult to access
  3. resistance to organizational change
  4. lack or senior management support

  Measures of Success:

  1. track specific ecological functions/values for improvement
  2. substantive change in organizational structure, and cross-program initiatives

**Actions that should be completed in the next 6 to 12 months.**

**Target/Action Category: The Agency should focus its regulatory efforts as a means to protect ecosystems.**

Initiatives:

- **Improved Implementation of the National Environmental Policy Act (NEPA):** NEPA can serve to coordinate consideration of overall ecosystem-related issues. To make more effective use of the Agency's NEPA authorities, the Office of Federal Activities should develop criteria and guidance to ensure the assessment of cumulative impacts during NEPA review and require program offices to support NEPA documentation review to consider ecosystem impacts. Also, EPA should use Clean Air Act Section 309 authorities to require ecological considerations in NEPA analyses and reviews of regulations by other Federal agencies. If EPA programs continue to rely on procedures deemed to be functionally equivalent to NEPA, they should still ensure that the goals of NEPA are fully met.

- **Improved EPA Implementation of Endangered Species Act (ESA):** The ESA is a statutory tool available to the agency for ecosystem protection, with multimedia and terrestrial applicability. Each EPA office should fully comply with the requirements of the ESA. Each program office should enter into an agreement (e.g., MOU) with the Fish and Wildlife Service and National Marine Fisheries Service to clarify EPA's roles and responsibilities to ensure full compliance with Endangered Species Act (ESA). Clear guidance for ESA compliance on a program-by-program level should be developed and provided to regions and states.

  Barriers:

  1. lack of knowledge
  2. ecosystem level data is unavailable or difficult to access
  3. medium-specific nature of EPA's statutes

  Measures of Success:

  1. track specific ecological functions/values for improvement
  2. number of ecosystem-based enforcement actions taken

**Target/Action Category: The Agency has the opportunity to focus its enforcement efforts on ecosystem level activities to more effectively protect human health and the environment.**

Initiatives:

- **Multi-media Enforcement Approach:** Given limited enforcement resources, the Office of Enforcement should issue a policy statement emphasizing the importance of a multi-media approach (e.g., air, water, land) in inspections and, where applicable, enforcement actions. The Office of Enforcement staff should coordinate with the program offices to ensure consistency with program goals through regularly scheduled ecosystem protection meetings. Moreover, the Office of Enforcement should provide multi-media training to Regional/State inspectors and other compliance staff.

- **Including Ecological Considerations in Enforcement Actions:** The Office of Enforcement should cluster enforcement actions on a geographic/ecosystem basis to address the cumulative impact of multiple facilities on ecosystems. These multi-media enforcement initiatives would focus on specific ecosystems (e.g., San Francisco Bay Delta). Ecosystem status and trends on a landscape basis should be used, with some measure of program-

specific flexibility, to direct compliance inspections and enforcement activity at those facilities adversely impacting vulnerable and/or endangered ecosystems. In addition, opportunities for the restoration, enhancement, and protection of local ecosystems should be mandatorily assessed in every enforcement action undertaken by EPA, and where appropriate, should be incorporated into all settlements negotiated by Agency enforcement officials.

Barriers:

1. lack of knowledge
2. ecosystem level data is unavailable or difficult to access
3. primacy of state enforcement
4. medium-specific nature of EPA's statutes

Measures of Success:

1. track specific ecological functions/values for improvement
2. number of ecosystem-based enforcement actions taken
3. number of Supplemental Environmental Projects

**Target/Action Category: EPA should support state, local and private activities that lead to ecosystem protection and restoration.**

Initiatives:

- **Awarding Grants:** Each EPA grant program should develop ecological management and assessment criteria for awarding grants, where appropriate, to benefit priority ecosystems. In addition, the Office of Information Resources Management (OIRM) should develop a network for grant managers to coordinate grant efforts. For example, EPA could favor providing funding to farmers, through the states, who practice Integrated Pest Management. The Clean Lakes Program could increase the weight of criteria in ranking applications that place a high priority on aquatic habitat restoration. The same could be done for Outstanding Natural Resource Waters.

- **Increasing the Use of Anticipatory Planning:** EPA regional programs should increase the use of anticipatory planning approaches (e.g., watershed protection, comparative risk assessment and ranking, critical terrestrial systems identification) to protect key ecosystems and to enhance public awareness and involvement.

Barriers:

1. lack of information on where and what to protect
2. lack of sense of priorities
3. local political reluctance to do this
4. EPA has little influence over state and local policies

Measures of Success:

1. number of grants conditioned on ecosystem management practices implemented by state and local governments
2. improvements in state capacity

**Actions that should be completed in the next 1 to 2 years.**

**Target/Action Category: EPA should continue to support efforts to determine ecosystem status and trends and to make information readily available as an effective tool for decisionmakers.**

Initiatives:

- **Secondary and Cumulative Impacts:** Each program and regional office should assess secondary and cumulative impacts on ecosystems resulting from individual permit actions, as appropriate. For example, pesticide risk assessments should take into account cumulative impacts of all pesticides used in a given area such as a watershed.

- **Coordinating Status and Trends Data:** EPA should closely coordinate with FWS, NOAA, USGS and other federal agencies on the timing, geographic coverage, and methods of their environmental monitoring programs to better document national ecological status and trends. Specifically, EPA should coordinate data on ecosystem extent, distribution, and changes, location and abundance of stressors, and the occurrence of widespread patterns of ecosystem impairment through its Environmental Assessment and Monitoring Program (EMAP).

- **Assessing Ecosystem Values:** EPA/ORD should develop methods for assessing the relative ecological and economic value of ecosystems that can be applied at the national, regional or state level. Regions, with partners, should use these methods to identify a priority list of areas that are critical to region-wide ecosystem sustainability.

- **Improving the Incident Monitoring of Ecosystems:** The Agency should develop an improved system of monitoring the status and trends of ecosystems. An Incident Monitoring Program should be established that indicates the effects of all toxicants that can result in detrimental effects to the environment (i.e., fishkills, birdkills, etc.)

- **National Geographic Information System (GIS):** EPA should strongly endorse the development of a national GIS data base as a key component of the Vice President's national information initiative. To date, establishment of a national GIS infrastructure has not been included in this initiative.

  Barriers:

  1. inconsistent data and information among agencies
  2. reluctance to develop coordinated efforts for information exchange
  3. ecosystem issues have not traditionally been an Agency priority in developing information resources
  4. reluctance to invest in information collection and management systems

  Measures of Success:

  1. greater accessibility of data to agency staff, other agencies and the public
  2. coordinated or at least complementary data/information systems
  3. generation of information on status and trends

**Target/Action Category: An informed workforce and educated public are essential to developing and implementing ecosystem management initiatives.**

Initiatives:

- **Ecosystem Training:** EPA should develop training modules for EPA management and staff on ecosystem management principles, including general ecology, underlying Agency goals, and the fundamentals of ecological risk assessment.

- **Ecological Risk Management:** EPA/ORD and other EPA programs should accelerate technical transfer of ecological risk management principles and methods through the development of guidance and training courses for EPA programs and staff, as well as other federal and state agencies and non-governmental organizations.

- **Environmental Education:** The Office of Environmental Education (OEE) should evaluate environmental education curricula and other Agency outreach programs to assess how well ecosystem values and protection are being addressed. OEE should also educate the public on how they can take actions to protect ecosystems. This would include efforts to reach the state and local land use decision makers.

  In addition, OEE should direct its work within the Agency to determine each EPA office's projected staffing and skill mix needs.

  Barriers:

  1. conflicting priorities
  2. education and training are not always priorities
  3. reluctance to participate in education/training programs
  4. conflicting priorities

  Measures of Success:

  1. number of trained EPA staff
  2. number of cooperative education efforts
  3. number of guidance packages generated

**Target/Action Category: EPA should support state, local and private activities that lead to ecosystem protection and restoration.**

Initiatives:

- **Coordinating EPA Programs within the Agricultural Community:** EPA should conduct a state-level pilot to coordinate all EPA programs affecting a particular sector of the agricultural community to assist farmers in complying with these programs (e.g., pesticides, non-point source pollution, wetlands, groundwater protection).

- **Local Geographic Initiatives:** Regional comparative ecological risk analyses should be followed by new, local scale initiatives that enhance or maintain critical priority ecosystems. Such initiatives may include, restoration or rehabilitation of priority areas (or their critical components as a means of protecting whole ecosystems), targeted enforcement, and acquisition programs.

- **Ecosystem Protection Partnership Project:** No single agency has the resources or expertise to independently address the threats to the nation's ecosystems. EPA currently maintains numerous clearinghouses for technology and information transfer, a number of which could be consolidated into an ecosystem clearinghouse. To facilitate information transfer among all agencies and the formation of inter-agency partnerships for ecosystem protection at all levels, EPA would promote the wide use of this resource by locating it on the Internet platform. The Ecosystem Protection Partnership Project would serve as a clearinghouse for information transfer as well as for matching partners with complementary skills, interests, and funding.

- **Regional Landscape Planning:** EPA can take a number of actions that would stimulate land use planning by state and local governments in a constructive manner, and which would not result in an overly intrusive federal role in land use planning. EPA should direct grants to states and local governments to form regional planning units around ecosystem protection and sustainability values. EPA should provide technical assistance to the state and local governments, and will develop a list of suggested criteria for use by the state and local governments in their planning decisionmaking.

Barriers:

1. lack of information on where and what to protect
2. lack of sense of priorities
3. local political reluctance to do this
4. EPA has little influence over state and local policies

Measures of Success:

1. number of grants conditioned on ecosystem management practices implemented by state and local governments
2. improvements in state capacity

**Actions that should be completed within the next 2 to 4 years.**

**Target/Action Category: EPA should continue to support efforts to determine ecosystem status and trends and to make information readily available as an effective tool for decisionmakers.**

Initiatives:

- **Consistency and sharing of Data:** EPA should continue to cooperate with USGS, NOAA, and USFWS to develop national, up-to-date land cover/land use maps and remote sensing tools and make these data available to all EPA regional GIS programs and users. The Office of Information Resources Management (OIRM) should increase its information exchange with other agencies and organizations.

- **Linking Data Networks:** OIRM should explore ways to link all ecological stressor-related information from the Agency's data bases in a comprehensive network. This effort could involve developing an inventory of all facilities which includes references to specific EPA program data bases. Potential non-point sources may be included via interpretation of GIS and other data.

- **Promoting the Sharing of Information** : Internet is the world's largest computer network that stores and provides access to information on an array of subjects. To promote information sharing, EPA should be fully connected to the Internet and put its databases and other information on Internet. Access to information on the Internet will aid EPA in its data collection efforts, and reduce duplication of research efforts. By providing EPA's data, other federal and state agencies, the international community, and local groups and communities will have access to the information. EPA should use its money from the High Performance Computing Act of 1991 to fund grants to local groups and communities to enable them to connect to the Internet.

- **Addressing Scientific Information Gaps:** With funding from EPA and other sources, the EPA Office of Research and Development (ORD) should address critical ecological science gaps as a high priority. These gaps generally include ecosystem structure and function relationships, indicators of ecological condition or stress, predictive methodologies for ecosystem-level response to stress, techniques for ecological restoration, creation and enhancement, and spatial and temporal scale issues.

Barriers:

1. inconsistent data and information among agencies
2. reluctance to develop coordinated efforts for information exchange

3. ecosystem issues have not traditionally been an Agency priority in developing information resources
4. reluctance to invest in information collection and management systems

Measures of Success:

1. greater accessibility of data to agency staff, other agencies and the public
2. coordinated or at least complementary data/information systems
3. generation of information on status and trends

**Potential Reinvention Laboratories**

Listed below are several geographic areas that should be considered as possible reinvention laboratories in which to test the ecosystem protection recommendations.

1. Ecological risk assessment in an ecosystem/watershed context: Snake River, Clinch River, Middle Platte River, Waquoit Bay

2. Emphasis on ecosystem protection in a terrestrial context: Adirondacks, Greater Yellowstone Ecosystem, Southern Appalachians

3. Interagency cooperation to determine the effectiveness of using land cover/land use information (GIS) for ecosystem level enforcement, pollution prevention, and education: Savannah River, Pacific Northwest

4. Establish a case study to compare conventional management criteria (e.g., chemical) to biological/ecological criteria: Upper Tennessee River

5. Developing a framework, in partnership with others, for ecological restoration: Oak Savannah, Indiana Dunes (Lake dunes)

6. Working with its federal partners, EPA will develop a joint plan on how to recover endangered, threatened, and candidate species on an ecosystem basis: Clinch River, South Florida (Florida Bay, Everglades), Southern California

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# REPORT OF THE *ENVIRONMENTAL JUSTICE* TEAM

NATIONAL
PERFORMANCE
REVIEW

# E N V I R O N M E N T A L  J U S T I C E

## EXECUTIVE SUMMARY

The National Performance Review Environmental Justice Team believes the Agency has an opportunity to set policy and to develop an Agency-wide **ACTION PLAN** to implement and sustain Environmental Justice throughout EPA. This also allows EPA to serve as a model for the Federal sector and with our partners in state/local governments.

## CURRENT STATE

The Agency continues to fall short, in spite of making much progress, in recognizing Environmental Justice as a very critical and significant issue. EPA must address the disproportionate impact of environmental pollution on minority and low-income persons and communities and the risk associated with such pollution through specific programs and funding mechanisms.

To date, many of the Agency's efforts have been somewhat disjointed. EPA lacks an effective process to ensure accountability and to direct and implement a viable environmental justice focus that ensures Environmental Justice is **incorporated and sustained** in the daily work of EPA in all aspects of EPA programs and activities.

The identification of these eight areas will highlight where EPA, through the environmental justice focus, must initiate and continue to address the short and long-term issues affecting people of color in predominantly low income and rural communities.

## MAJOR RECOMMENDATIONS

| TIMELINE | INITIATIVE |
|---|---|
| 6 mos | The Administrator should immediately empower the existing Environmental Justice Team or a reconfiguration of the Team to develop an ACTION PLAN to address the three major themes: Policy; Communication/Education; and Data Needs and Uses. Action on this recommendation will ensure the following are addressed:<br><br>Support and ensure implementation of goals of the Environmental Justice Executive Order, Environmental Justice Act and EPA Cabinet Bill. [Administrator]<br><br>Appoint/designate one person with the accountability and authority to oversee the Environmental Justice issue in the Agency. [Administrator] |

Create and provide the resources for one office reporting directly to the Administrator with overall responsibility for coordinating all Environmental Justice issues and activities. [Administrator]

Treat Indian matters as a unique issue in need of a well-focused and coordinated effort to ensure appropriate application of environmental justice laws and practices. (May require a separate ACTION PLAN.)

Establish a government-wide strategy and coordinating body to ensure incorporation of environmental justice principles throughout all levels of government. [Administrator]

Look for opportunities to target compliance and enforcement actions to protect Native Americans, minority, and low-income populations to reduce disproportionate burden of environmental pollution exposure and risk. [Office of Enforcement]

Through the implementation of these major recommendations and the identification of barriers, we will be better able to develop and measure viable actions.

**ENVIRONMENTAL JUSTICE VISION STATEMENT**

Environmental Justice must be consistently and routinely integrated into the agency's strategic planning, operational and policy decisions. This includes, but is not limited to, decisions in the following areas: rulemaking, permitting, enforcement, education, hiring, grants, contracts and outreach efforts.

STRATEGIC POLICY DEVELOPMENT

**VISION: Ensure strategic development and implementation of environmental laws, regulations, and policies to prevent the disproportionate adverse impact(s) to vulnerable populations. Apply all civil rights laws to appropriate federal and federally-delegated environmental activities.**

RECOMMENDATIONS FOR INITIATIVES:

| TIMELINE | INITIATIVE |
|---|---|
| 2-6 mos. | Identify major relevant program actions, regulations, policies |
| 3-12 mos | Set draft policy objectives for major actions with appropriate offices |
| 3-20 mos. | Develop workplans for actions which require Fed. Register or EPA guidance for states, local governments, or other agencies |

**BARRIERS:**

- Lack of Commitment to address problem
- Commitment to existing cultural mindset
- Absence of accountability
- Political resistance (esp. state & local)
- Lack of Knowledge (awareness/sensitivity)
- Lack of contact/communication with communities

**PROJECT RESOURCES:**

- Part-time workgroup assignment in policy development and coordination with other offices (unknown FTE, partial)
- Shifting of some existing priorities, merging with other existing priorities and program actions, development of measures and reporting operations, oversight and feedback (FTE details and shifts)

**VALUE/BENEFITS:**

- Coordinated strategy, credibility, consistency with risk priorities, protection of most polluted populations, consistency in implementation of federal and state programs

- Full/fair implementation of environmental laws

## POLICY AND STRATEGY

**VISION: EPA will develop a coordinated structure with authority and resources to implement a comprehensive environmental justice policy and strategy for the Agency.**

**RECOMMENDATIONS FOR INITIATIVES:**

- Reorganize the existing Environmental Equity Office and place it within the immediate office of the Administrator. This office should include a Policy Coordination Unit, an Outreach Unit, and a Native American Coordination Unit. These units would be charged with the following responsibilities:

  A. Policy Coordination Unit

  * Coordinates all environmental justices issues and activities
  * Serves as liaison for intra- and inter-agency coordination on environmental justice issues
  * Develops and issues policy guidance
  * Consults and coordinates with program offices on program specific environmental justice issues
  * Coordinates the implementation of environmental justice
  * Identifies environmental justice issues where programs or offices fail to identify or implement
  * Assists in resolving intra- or inter-program office conflicts
  * Coordinates environmental justice policies with other regulatory bodies
  * Reviews the implications of environmental justice on previous decisions, policies and regulations

  B. Outreach Unit

  * Outreach and communication with community groups
  * Educates the agencies on environmental justice issues
  * Provides technical and financial assistance to community groups and other bodies
  * Provides community economic development assistance and establish pilot projects

  C. Native American Coordination Unit

  * Specifically deals with the unique Native American and tribal issues through all activities described above.

- Creation of at least one full-time Environmental Justice Program Manager (EJPM) in each program, regional office, and laboratory.

  * Dedication of new FTEs and/or reallocate existing staff resources within these organizations.

* Coordinates and monitors environmental justice issues within each organization by advising organizations' managers regarding application of environmental justice to daily activities.
* Serves as liaison to the Agency Environmental Justice Office by ensuring that existing and future program specific regulation and policies incorporate the environmental justice element

• Provide ongoing Environmental Justice training for EPA decision-makers at every level. Recommendations include:

| TIMELINE | INITIATIVE |
|---|---|
| 2/94 | Develop and continually update appropriate definitions for, understanding of, and training of Environmental Justice and establish training agenda for EPA decision makers. (EJ/OARM) |
| 2/94 | Incorporate established Environmental Justice training module into current program specific training requirement all managers/employees. (OARM) |
| 2/94 | Make managers accountable for ensuring training participation of staff. (OARM) |

• Provide improved involvement opportunities for affected communities, which include:

| | |
|---|---|
| 8/93 | Establish Environmental Justice review team with participation from all programs and environmental justice advocates. (Administrator) |
| 12/94 | Review permitting, enforcement and grant procedures that improve the opportunities for participation of affected communities. (EJ Team) |
| 12/93 | Review levels of decision making to determine need for diversity to ensure environmental justice considerations. (EJ/OARM) |
| 6/94 | Review and approve changes and timeliness for incorporating changes into agency procedures. (EJ Team/Senior Managers) |
| 8/94 | Identify opportunities for piloting effectiveness and success of new procedures. (EJ Team/Senior Managers) |

• Community involvement at grassroots level is absolutely imperative to environmental justice activities, credibility, and acceptance (see Outreach to Grassroots Communities, Native American Tribes, and US Territories)

• EPA develops an Environmental Justice budget sufficient to successfully implement and sustain this initiative

* line item in the budget
* designated funding for affected community groups to implement their own Environmental Justice programs (e.g. community outreach and education)

* allocate sufficient FTE's in all program offices and regions

**BARRIERS:**

- Lack of management recognition that Environmental Justice issues are equally as important as the Agency's other initiatives (i.e., pollution prevention mission)

- Mid-level leadership are not be prepared to accept the legitimacy of environmental justice concerns

- Media-specific nature of EPA organizational structure tends to preclude effective coordination across media lines

- Reluctance to re-invest limited resources (or shift under-utilized staff) to environmental justice activities

- An apparent lack of comprehension of the unique relationship between the Federal and tribal governments (see discussion on Indian/Tribal Programs)

- Inadequate external support to allocate more funding for environmental justice issues

- Lack of accountability for implementing strategies (e.g. lack of performance management criteria for environmental justice)

- The dynamics of Environmental Justice require anticipatory and proactive strategies as opposed to reactive crisis management.

## COMMUNICATIONS

**VISION: EPA establishes an effective integrated approach to internal and external communication of environmental justice issues, uniformly across programs to convey a consistent message.**

**RECOMMENDATIONS FOR INITIATIVES:**

| TIMELINE | INITIATIVE |
|---|---|
| Immediate | Establish workgroup to conduct analysis and develop standardized communication protocol (product w/in 1 yr) |
| 1yr | Implement protocol agency-wide, work in conjunction with Equity/Justice office |
| On-going | Provide regular and continuous updates of the protocol<br>Develop new and creative methods to effectively communicate with affected communities (i.e. radio broadcasts, plays, musicals) |

**BARRIERS:**

Internal

- Lack of effective communication of environmental justice priorities
- Lack of senior management buy-in
- Resources
- Resistance to changing the way we do business

External

- Lack of EPA credibility in community, industry, academia, etc.
- Statutory limitations
- Environmental Justice issues currently are not required under all statutes
- Political forces
- Conservatively-owned media resisting the message
- Industry's influence on media
- Hardline resistance (Old Boy's Network)

**PROJECT RESOURCES:**

- Workgroup of approximately 3 FTEs, travel and staff time; 1 year

**VALUE/BENEFITS:**

- Better informed, involved and empowered communities and other constituents
- Increased credibility for the agency
- Formal communications vehicle in place
- Consistency of the message
- Motivational sense of mission

## EDUCATION, TRAINING AND DEVELOPMENT

**VISION: Institute a comprehensive multilingual and multicultural approach to environmental education, training and development opportunities relating to environmental justice.**

**RECOMMENDATIONS FOR INITIATIVES:**

**EDUCATION:**
(Implemented by Outreach Unit of Office of Environmental Equity)

| TIMELINE | INITIATIVE |
|---|---|
| 1 yr. | Require current K - 12 education efforts to include environmental justice component |
| 1 yr. | Utilize alternative forms of communication (e.g. Hispanic Radio Network) |
| 6 mos. | Create educational materials to be included as environmental justice component to environmental education |
| 6mo-1 yr | Create Speaker's Bureau on environmental justice (may come under the auspices of the Public Affairs Office) |
| Current | Adopt-a-school program focus on environmental justice; encourage and sponsor student research in environmental justice |
| 1 yr. | Earmark additional grants for community-based organizations and territories |
| 1-2 yrs. | Expand MOUs/MOAs (Memorandum of Understanding, Memorandum of Agreement) to more Historically Black Colleges and Universities (HBCUs), tribal colleges, and other institutions of higher learning with significant enrollment of people of color; and include an environmental justice focus when targeting schools and developing programs |
| 1 yr. | Expand environmental justice education opportunities to grassroots communities (e.g., flyers, pamphlets, community forums, fairs) |

**TRAINING:**
(Implemented by Office of Human Resources Management and EPA Institute)

(a) Internal

| | |
|---|---|
| 6 mos. | New employee orientation package insert |
| 6 mos. | Expand sensitivity training course development |
| 1 yr. | Develop a module on environmental justice for SES candidate training |
| 1 yr. | Include environmental Justice component in media-specific training (CERCLA, RCRA) |
| Current | Include environmental justice discussions during senior management retreats |

(6) External

| | |
|---|---|
| 1 yr. | Improve community/tribal/territory knowledge of TAGs (Technical Assistance Grants), develop TAG guidebook, and make literature on TAGs multi-lingual |
| 6 mos. | Initiate and expand presentations on environmental justice throughout Federal government and other government agencies (state, local, and Native American tribes) |

**DEVELOPMENT:**
(responsibility for implementation lies with Office of Environmental Equity, EPA Education Center, Office of Civil Rights)

| | |
|---|---|
| 1yr. | Enter into joint projects with HUD, Dept. of Commerce, Dept. of Labor to fund initiatives to develop technical/career skills in environmental justice (e.g.,lead, asbestos, PCBs (polychlorinated biphenyls), recycling, solid waste) for people of color, especially members of affected communities |
| 1yr. | Provide multi-lingual career/technical training |

**BARRIERS:**

- Lack of resources - curricula, training personnel, funding

- Managerial support

- Organization culture

- Lack of and poor use of existing information mediums

- Unclear and inconsistent objectives of environmental justice within the agency have made producing materials difficult

**PROJECT RESOURCES:**

- 1 FTE to coordinate speakers bureau (EPA outside, outside leaders to EPA); outreach to school, churches, tribal colleges, etc.; modification of EPA education lesson plans to schools to include environmental justice.

- 1 FTE to modify human resources training, new employee initiation to include environmental justice, sensitivity awareness program, media specific training to include environmental justice

- 1 FTE in public affairs office to initiate dialogue with other Federal agencies/departments to begin environmental justice career development plan

- Cost of developing, distributing etc., training materials

- Funding for minority scholarships in environmental justice topics and student initiated research in this area

- Resources to improve communication methods in affected communities/territories

**VALUE/BENEFITS:**

- Greater diversity in environmental justice discussion with more well-informed citizens of affected communities and territories

- Less opposition, legal challenges etc., from affected communities and territories if brought into the policy discussion early through more equal and free exchange of information

- EPA gains credibility as a provider of good and useful public information for affected communities and territories to make environmental justice decisions and to form opinions

- EPA at forefront of this issue

## OUTREACH TO GRASSROOTS COMMUNITIES, NATIVE AMERICAN TRIBES, AND US TERRITORIES

**VISION: Ensure communities have sufficient information, education, and tools to make informed decisions which affect their communities. Grassroots communities are included throughout the process (i.e., from the onset of specific environmental concern/actions/issues/decisions).**

**RECOMMENDATIONS FOR INITIATIVES:**
(to be carried out by the Office of Environmental Equity and regional offices)

| TIMELINE | INITIATIVE |
|---|---|
| 6 mos. | Agency commitment to openly communicate with grassroots organizations and communities |
| 1 yrs. | Produce Environmental Justice kit (written and video):<br>* FOIA (Freedom of Information Act) process/procedures<br>* Public Advisory Committees<br>* How to review EISs (Environmental Impact Statement)<br>* How to organize as a group<br>* How to obtain financial assistance through public-private partnerships<br>* Public comment period information/explanation<br>* Listing of EPA training classes (to be listed) |
| 1-2 yrs. | Ensure that all information is multi-lingual |
| 1-2 yrs. | Rely more heavily on alternative methods of communicating, i.e. Hispanic Radio Network, church, tribal college visits |
| On-going | Improve community access to EPA data and provide knowledge of how to use data |
| On-going | Provide routine two-way communication with grassroots to provide better understanding of EPA's decision making processes and to seek opportunities for improving current "ways of doing business." |

- Develop and provide appropriate tools to grassroots communities.

**BARRIERS:**

- No buy-in" from some parts of government/private industry

- Resource constraints

- Some affected communities and territories are difficult to access through traditional forms of media

- Lack of internal and external coordination

- Lack of coordination with other Federal Agencies

- Lack of respect for existing grassroots organizations and sovereign governments

- EPA's lack of credibility with grassroots organizations and communities

**PROJECT RESOURCES:**

- 1 FTE to coordinate and develop environmental justice kit. This effort has begun and should continue in the Office of Environmental Equity

- 1 FTE whose sole job it is to communicate with affected communities and territories, respond to inquiries involving environmental justice. Also involved in the planning of all EPA conferences and public meetings concerning environmental justice.

- 1 summer intern to research information to be included in the environmental justice kit

- Empower current Office of Environmental Equity to better achieve these goals

- Devote more resources on the regional level to addressing environmental justice concerns

**VALUE/BENEFITS:**

- EPA is more accessible to affected communities/territories

- Value of environmental decision-making is greater

- Lessen the mistrust toward Agency

- Help create a more informed and active citizenry

- Better quality of life

## INDIAN/TRIBAL PROGRAMS

**VISION: Equitable treatment of Tribes through EPA's reaffirmation of its Indian policy, which recognizes the unique relationship of the Federal government with Tribes. The policy was written based on EPA's Congressional delegated authority to work with Tribes on a government-to-government basis, with recognition of Tribal sovereignty and recognition of EPA's trust responsibility.**

**RECOMMENDATIONS FOR INITIATIVES:**

- Develop a detailed action plan for EPA to integrate legal, policy, personnel, budget, legislative and program considerations to provide for Tribal environmental equity.

- Provide adequate funding for Tribal Environmental Programs by including a line item in the Agency's budget. The EPA Tribal Resources Study Committee, in 1990, recommended an Agency line item of $37M for Tribal programs.

- Review, reaffirm and implement the 1984 EPA Indian Policy, which will honor Tribal sovereignty and provide for a government-to-government relationship and execute EPA's trust responsibility to Tribes.

- There is a need to increase Indian hiring due to the under representation of American Indian staff, both in the Regions and at Headquarters. EPA would have to hire 10 more Indians in the Regions and 26 at Headquarters to be commensurate with the 0.052% national labor statistics for Indians in the work force.

- The Administrator should consider seeking Indian preference hiring authority from President Clinton, creating special hiring registers or allocating FTE's for American Indians.

- Create an Office of Associate Administrator for Indian lands or Assistant Secretary for Indian lands pursuant to Senator McCain's amendment in the EPA cabinet elevation bill.

- Modify EPA legislation to enable Tribes to have both delegated program authority and equitable funding.

- The EPA Tribal Lands Environmental Science Scholarship Program should be included as a line item in the Agency budget at a funding level of $300K/year.

- Create an EPA/Tribal Operations Committee comparable to the EPA/State Operations Committee.

- Create an EPA Tribal Clearinghouse to capture lessons learned by Tribes for technology transfer to other Tribes.

- Establish an EPA wide Tribal news letter to notify Tribes of environmental conferences, funding opportunities and information on program changes.

- EPA should continue to sponsor bi-annual Tribal conferences for full discussion of Tribal issues and joint planning of issue resolution.

**BARRIERS:**

- Lack of support and commitment from top management

- Lack of cultural awareness and sensitivity and under utilization of Indian staff as resource people to provide needed Indian input in all levels of planning and implementation.

- Lack of interest of hiring American Indians at any level particularly at the management level. EPA has no strategy to hire, recruit and retain American Indians, and there has been no outreach efforts on the part of managers and supervisors.

- Some EPA managers and decision makers are still unaware of the obligation EPA has to Tribes and still believe that EPA has the option to exclude Tribes.

- Previous EPA Administrators did not direct subordinates to comply with the EPA Indian Policy and therefore managers were not responsible or accountable.

- There is no mechanism in place to solicit Tribal input on decisions that have an impact on Tribal people and their lands. EPA projects a paternalistic attitude toward Tribes, believing that EPA has the resources, technology and all of the expertise required.

- Many Tribes lack an EPA environmental infrastructure acceptable to EPA to manage their own environmental programs. This is due in part to 23 years of inadequate funding (no line item in the Agency budget for Indians) with the Tribe's fair share of the resources being channeled to the States to assist them in developing their environmental infrastructures.

- Many Tribes lack the resources, monitoring data, technology and expertise to properly assess the environmental threats to their people and lands.

**PROJECT RESOURCES**

- 3 FTE's for 6 months to develop a detailed action plan.

**VALUE/BENEFITS:**

- The implementation of the above recommendations should move EPA forward in meeting the goal of environmental equity for Tribes.

- The position of Native American ombudsman should be created and the incumbent should report to the Administrator to insure that the Administrator in informed fully and on a regular basis of the deficiencies and progress made in the Indian Program.

## GOVERNMENT ROLES

**VISION: EPA is recognized champion for Environmental Justice considerations and that actions are taken at all levels of government in both domestic and international arenas to resolve all related Environmental Justice issues.**

**RECOMMENDATIONS FOR INITIATIVES:**

| TIMELINE | INITIATIVE |
|---|---|
| Immed. | Support and ensure promulgation of an Environmental Justice Executive Order and Environmental Justice Act |
| Immed. | Develop an overall strategy for the government sector. The strategy should establish objectives, targets and initiatives for the major environmental roles of all government agencies including the government as manufacturer/generator, policy maker/regulator and enforcer |
| Immed. | Address tribal issues as a unique entity incorporating the recommendations from the NPR Environmental Justice Indian/Tribal Program Subgroup |
| Immed. | Review existing Environmental Justice initiatives and ensure incorporation in each agency's planning and budgeting process |
| Immed. | Include Environmental Justice in each agency's programmatic components in order to build a national network of strong environmental management. These should include programs comparable to EPA's State/EPA Operations Committee, State Capacity Building Task Force, Local Government Policy Dialogue Advisory Committee, Small Communities Task Force, Local Government Roundtable and Tribal Capacity Task Force |
| 10/93 | Establish effective EPA policy and utilize it to require other federal agencies, state and local (tribal where applicable) agencies to include Environmental Justice considerations in their programs, activities or actions that impact human health and environment |
| 11/93 | Establish a coordinating council chaired by EPA including all stakeholders (e.g., HHS, DOI, DOD, DOA, DOE, FDA, states, tribal and local governments, small or affected communities, etc.) that will ensure implementation of Environmental Justice principles |
| 11/93 | Ensure that Environmental Justice considerations are addressed in the international arena and establish a coordinating council to ensure implementation of Environmental Justice principles |
| 12/94 | Develop partnerships, MOUs and other implementation mechanisms with federal, state, local (tribal) and other agencies, domestic and international organizations to ensure that desired action is taken |
| On-going | Include environmental justice in the regulatory decision-making processes of each agency (e.g., steering committees) to ensure that regional, state, local (tribal) points of view are heard |

On-going Establish outreach and information-sharing efforts through inter and intra-agency data bases that are accessible to all stakeholders

**BARRIERS:**

- Lack of Administration and management recognition, commitment and support for addressing Environmental Justice in a comprehensive manner that impacts international, federal, state, local (tribal) programs and activities.

- Lack of global vision or position relative to developing countries.

- EPA and other federal agencies are not sufficiently engaged in the national Environmental Justice dialogue.

**PROJECT RESOURCES:**

- A minimum of 2 FTEs in each Agency to assure incorporation of environmental justice and increase the outreach efforts through partnerships and MOUs with international, federal, state, local (tribal) agencies.

**VALUE/BENEFITS:**

- Provides leadership in all agencies and create a national network of strong environmental management.

- Restores credibility of government agencies with regard to the issue of Environmental Justice.

- Provides inter- and intra- agency data exchange.

- Establishes measures of success that assures initiatives achieve the desired impact.

## ENFORCEMENT

**VISION: EPA, Native American tribal organizations, and the States should look for opportunities to target compliance and enforcement action to protect Native American, minority and low-income populations to reduce any disproportionate burden of environmental pollution exposure and risk.**

**CURRENT STATUS: Compliance inspections have traditionally been targeted by EPA and States through single media (e.g., CAA, CWA) and without full multi-media consideration of exposure to pollution by highly exposed or multiply-exposed populations.**
**In addition, EPA does not comprehensively interpret and enforce the Civil Rights Act, Native American law and policy, and other civil rights laws to ensure that EPA and delegated federal programs are being implemented consistently with civil rights requirements.**

**RECOMMENDATIONS FOR INITIATIVES:**

| TIMELINE | INITIATIVE |
|---|---|
| 1-8 mos. | Develop environmental justice as an enforcement priority and incorporate into strategic planning mechanisms |
| 1-3 mos. | Develop Native American lands/federal facilities enforcement strategy |
| 2-18 mos. | Finalize and implement Enforcement Management Council recommendations for action and enforcement implementation strategy, identifying resources and data needs |
| 3-18 mos. | Develop data systems and resources to enable environmental justice considerations to be more fully integrated into enforcement |
| 3-18 mos. | Explore opportunities for, provide resources for, and undertake appropriate actions for multimedia and geographic targeting enforcement initiatives |
| 2-18 mos. | Coordinate with other federal agencies, state, Native American, and local authorities on joint opportunities for addressing compliance problems |
| 2-18 mos. | Reevaluate farmworker protection priorities and federal facility priorities and resources |
| 2-18 mos. | Develop adequate civil rights oversight and compliance programs to ensure that civil rights laws apply appropriately to all EPA and delegated federal program implementation activities |
| On-going | Support appropriate citizen compliance and pollution reduction efforts |
| On-going | Look for enforcement case pollution prevention opportunities which reduce risk in enforcement cases |

**BARRIERS:**

- Historical lack of recognition of issues and commitment to address problem result in lack of priority

- Lack of coordinated structure to assure multimedia and geographic approaches to include environmental justice considerations, impeding a more comprehensive approach to protecting highly exposed populations

- Absence of accountability in identification of problems, measurement, oversight, and management

- OCR role in Agency program oversight limited to Title VI programs rather than ensuring equal protection of all EPA programs and delegations

**PROJECT RESOURCES:**

- Workgroup participation in policy/guidance development

- Resource investment (management, inspection, oversight, enforcement case development) in under-utilized programs and new priorities (such as FIFRA)

- Resource priority shift in data needs, planning, coordinating, and evaluating initiatives in targeting

- Workgroup participation to coordinate with other agencies, states, Native American organizations

- Resource investment (policy development, oversight, reporting) in new oversight functions

**VALUE/BENEFITS:**

- Establish environmental justice as a working priority in all aspects of compliance and enforcement

- Consistency with EPA risk priorities, equal protection of most-exposed populations

- Coordinated strategy, consistency in implementation of federal and state programs, full/fair implementation of environmental laws

**SCIENCE**

**VISION: Incorporation of racial, ethnic, economic and cultural data into scientific assessments of exposure and health impacts.**

**RECOMMENDATIONS FOR INITIATIVES:**

| TIMELINE | INITIATIVE |
|---|---|
| 6 mos. | Support annual conference of all potentially affected groups (i.e., women, Native American, minority and low income) on Environmental Justice issues resulting in a collaborative action agenda (note: Such a conference is being planned for Jan., 1994 with EPA, NIEHS, ATSDR, and DOE) |
| 1 yr. | Develop databases that establish risk-based information on affected populations for use by decision makers and contractors |
| 2 yrs. | Develop EPA standardized format for disseminating database information throughout EPA and making it accessible to community groups, state and local governments, academia, industry and general public |
| 1 yrs. | Require all programs to incorporate low income and minority group data into decision-making processes |
| Contin. | Develop and implement pollution prevention strategies for affected communities including low cost remedies and corrective practices. |
| 2 yrs. | Develop and implement evaluation system to measure and monitor improvements/changes in application of database information in science decisions; (monitor, revise and update annually) |

**BARRIERS:**

Internal

- Poor use of or lack of available information on risks to affected populations

- Lack of the mindset of EPA employees to change traditional methods and thinking

- Absence of accountability and understanding of the roles and responsibilities of EPA staff for Environmental Justice issues; "Diffusion of Responsibility"

External

- Industry resistant to including affected group data, they may view it as an impedance to profit making

- Lack of scientific and technical knowledge from grassroots communities

**PROJECT RESOURCES:**

- 5 FTEs for 1 year to complete baseline study (input of all 10 regions for information)

- Contract support to develop standardized collection of information

**VALUE/BENEFITS:**

EPA would have consistent, available, standardized information for monitoring the agency's progress in Environmental Justice in risk assessment and management. There would also be the benefit of not re-inventing procedures every time risk assessments are performed on affected populations. Lastly, an historical record would be established from which the agency could plot its progress and change (from the initial establishment of the baseline incorporating affected population data and later make comparisons).

# REPORT OF THE *ENVIRONMENTAL TECHNOLOGY* TEAM

NATIONAL
PERFORMANCE
REVIEW

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## ABSTRACT

Environmental technology is a big and growing business that spans a wide spectrum, from pollution prevention to site clean-up technologies. EPA is, through its regulations, policies and procedures the major shaper of this market. In order to meet the future environmental needs of the nation at a reduced cost, this market needs to be more competitive, dynamic and innovative, and it needs to be directed more at pollution prevention. There are barriers (both internal and external to EPA) to the development of such a market. To overcome the barriers, our Team identified a series of recommendations listed under five target/action categories. Our recommendations are actions EPA could take which would reshape the environmental technology market by helping to unleash the energy and resources of the private sector and other government agencies. We have also recommended several pilot programs, as a way of moving beyond the "just-talking" stage, to find out exactly what works and what doesn't.

# EXECUTIVE SUMMARY

## ENVIRONMENTAL TECHNOLOGY TEAM
## NATIONAL PERFORMANCE REVIEW

**BACKGROUND:**

Environmental technology plays a fundamental role in the protection of public health and the environment. However, the pace of innovation in this technology has been disappointingly slow in the United States. Unfortunately, what has worked in the past is not working today and will not work in the future. Over the years our ability to define environmental threats to the public and the environment has outstripped the Nation's ability to bring new technology choices to deal with these threats to market. As a result, costs of environmental protection have increased dramatically and many environmental threats are not adequately addressed because of the limitations of current technologies.

Today, the domestic environmental protection industry is a big business: the market for now exceeds $150 billion per year. (The worldwide market is approximately $300 billion per year.) The environmental protection industry can expect growth rates higher than the general economy and increasingly that growth will be expected to occur in source reduction and recycling. In the manufacturing sector, capital investment in process changes for environmental purposes now accounts for approximately one-quarter of total environmental investments as industry increasingly recognizes the long range cost savings of this approach. (According to US Census Bureau surveys, process changes as a percent of total environmental investments in the manufacturing sector have increased from 13% in the early 1983 to 25% in 1991.)

Accelerating the introduction and broad commercialization of innovative environmental technologies will result in many benefits:

- improved ability to solve seemingly intractable environmental problems
- reduced compliance costs
- reduced releases of toxic substances and reduced risk of toxic release
- better environmental performance
- reduced chemical and energy use
- job creation and new company growth
- increased U.S. competitiveness
- expansion of international markets

**VISION:**

Improvements in environmental protection will flow from a thriving environmental technology market characterized by:

- rapid new technology introductions

- increasing use of recently commercialized innovative technologies

- increasing proportion of environmental technology investment in pollution prevention and recycling

**PROBLEMS:**

A. Most of the current investment in environmental technology is still focused on pollution control or clean-up. This focus on end-of-pipe technology reduces the pool of resources available for investment in technologies to prevent pollution at the source or to recycle. Although industry has allocated an increasing proportion of their environmental expenditures to process changes, all parties acknowledge that much more can be done to fully exploit available opportunities.

B. We are not getting innovative technologies at the pace we should expect. Other industries are successfully introducing new products; for example, the medical devices industry, which is heavily regulated by the Food and Drug Administration, successfully brings new technologies to market. However, there are many barriers - both internal and external to EPA - that limit innovative environmental technologies. These barriers include:

1. statutes, regulations, permitting, and enforcement procedures which favor the use of tried-and-true technologies and then lock these technologies into place.

2. mistrust of new technologies due to:

   a) lack of consistent and credible testing protocols and performance data

   b) scarcity of locations where regulations and local communities will allow untried technologies to be tested

   c) lack of an independent review and verification of vendors' performance claims

3. difficulty in obtaining financing for:

   a) development of new pollution control or clean-up technologies

   b) permitting and early commercialization of full-scale application of technology

   c) implementation of fundamental process or product changes to enable recycling or source-reduction efforts.

4. inadequate mechanisms for the dissemination of information among individuals, businesses and Federal agencies on the availability, applicability, costs, and performance of new environmental technologies.

**DEFINITIONS:**

**Environmental Technology -**

Environmental technologies are processes or products that play a direct or indirect role in improving environmental quality. There are many different situations where environmental technologies play an important role:

- Remediation and site cleanup, including natural resource restoration and protection
- Pollution control (capture, control, or management of pollution)
- Recycling (recovery and reuse of waste products and energy)
- Pollution prevention and clean technologies (source reduction and in-process reuse)
- Environmental and manufacturing process monitoring and assessment

**Innovative Technology -**

Innovative technologies are those technologies that represent either a new environmental process or product, or a new application of an existing technology.

**GENERAL APPROACH**

To deal with the problems identified above, the team took the approach looking at the Best Ways to do Preferred Things:

Best Way - Wherever possible, action areas were identified that EPA could take to unleash the energy and resources of the private sector and other Federal agencies (i.e., have EPA do more steering than rowing).

Preferred Thing - This plan addresses the need to direct more effort to the development and use of technologies to either stop pollution at the source or recycle wastes, which are EPA's stated preferences (in that order) for managing environmental problems.

The team has also taken the approach of recommending several "reinvention laboratories." By "reinvention labs" we mean pilot programs that are deliberately designed to break away from business-as-usual and to test new paradigms. Such reinvention labs have the potential to break through the gridlock of talk and no action. Many of the problems and even some of the potential solutions presented in this report have been debated and discussed before. It is now time to experiment and find out what works and what doesn't.

**SUMMARY OF RECOMMENDATIONS:**

These recommendations are organized and listed under five target/action categories (labelled A through E).

A. Clean Technologies

Promote **clean technologies** in order to **advance** the pollution **prevention / resource conservation** goals of the Agency.

1. EPA should develop and promote information and analysis packages to assist industry in identifying pollution prevention opportunities and making informed, responsible choices in the design (or redesign) of their

   - information and analysis tools for assessing performance and costs of environmentally preferable technologies

   - cost accounting systems for properly allocating environmental costs to specific technologies

   - information on current regulations and permitting requirements, as well as the future regulatory outlook.

2. Establish partnerships with industries to re-engineer common products and processes in order to promote environmentally cleaner manufacturing, use and disposal.

   - Each partnership should include the suppliers and customers of the industry

   - One possible Reinvention Lab is the design of more environmentally friendly computer work stations

3. Direct a greater percentage of technology research and development and resulting applications to clean technologies.

B. Statutes and Mainstream Operations

Improve the governing **statutes and the mainstream operations** of EPA (i.e. regulations, permits, enforcement) to encourage the **introduction of environmental technologies.**

1. Develop an action plan for the Agency which:

   - identifies barriers
   - recommends new approaches to writing regulations
   - establishes new implementation policies and procedures

2. Create a Reinvention Laboratory, consisting of a special team of EPA and State implementors, to facilitate permits for innovative technologies and demonstrate new ways to incorporate innovation.

   - This team should be insulated from the current accountability systems that have been recognized as barriers

   - The team should identify regulatory and statutory obstacles that changes to policy and procedures alone cannot penetrate.

3. Create Reinvention Laboratories aimed at one or more problem sectors.

   - For example, DOE and DOD would be encouraged to renegotiate remediation agreements with the State and EPA where there are opportunities for implementing an innovative technology.

   - Likewise, the State and EPA would be encouraged to rapidly evaluate requested to use innovative technologies.

   The Reinvention Laboratory approach could also be used at several model farms in partnership with USDA. The Laboratory would examine innovative techniques to reduce pesticide and nutrient emissions while keeping crop yield high. Innovative approaches could include: establishment of riparian corridors to pretreat and filter pollutants, and development nutrient/yield curves.

C. Credibility

Enhance the **credibility** of new technologies by assessing their **performance**, thereby facilitating their **acceptance** by users, financiers, regulators, and the public.

1. Establish a Reinvention Laboratory to pilot an environmental technology verification program to evaluate and validate the claims of environmental technology vendors.

   - Designate independent group(s) to perform the assessments

   - Develop consistent and credible procedures and test protocols will be developed

2. Expand available sites where developers and vendors can test and evaluate their technologies. A Reinvention Laboratory is being established at McClellan Air Force Base, California.

D. Finance

Improve the ability of vendors to obtain **financing**, thereby **expanding technology options available** in the market place.

1. Establish a small business center as a Reinvention Laboratory to pilot a program to help small business innovators with funding, technology assistance, and environmental marketing information.

2. Explore government funding mechanisms to reduce the risk to parties who are willing to develop and try innovative technology. (Several potential mechanisms are listed later in this report.)

3. Challenge the private sector to develop technologies which address critical environmental needs. For example, fund competitions to produce more environmentally friendly products and establish contingency standards which become self-implementing when a new technology is demonstrated to meet the standard.

E. Information Dissemination

Improve **information dissemination and awareness** of environmental technologies to support their **diffusion.** (Diffusion is defined as the spread and adoption of a technical idea following its first successful commercial-scale use.)

1. Map and evaluate current dissemination mechanisms. Survey the experiences, needs and desires of vendors and users.

2. Develop a strategy to improve these mechanisms

3. Create a clearinghouse for innovative technologies, which includes a library, data bases, and directory of experts, and is tied into a network of other clearinghouses and local information sources.

**CULTURAL CHANGE**

As the Agency confronts the new challenges of the 90's and beyond, it must stand ready to question, and where necessary change, its culture and the associated paradigm and beliefs which successfully guided it in the last two decades. To fully achieve the Vision in this report will require an accompanying effort to inculcate the ideas and recommendations into the culture of the Agency.

What are some of the things that can be done to accomplish this? We considered a recent GAO report entitled, "Organizational Changes: Techniques Companies Use to Perpetuate or Change Beliefs and Values." Adapting these techniques to innovative technology suggests the following steps:

1. Adopt and communicate an Agency **VISION statement.**

2. Establish **measurable GOALS** to determine progress toward the vision statement.

3. Officially designate the **Innovative Technology Council** to **CHAMPION** the vision.

4. Each program office develops a **STRATEGY** that **identifies** its own **programmatic barriers** to change and **develops** an **action plan** to overcome them.

5. Provide **INCENTIVES** and **AWARDS** to programs and individuals that make significant changes.

6. **Discourage "BUSINESS-AS-USUAL"** practices. Identify when people must take individual risk to make changes, recognize those risks, and grant amnesty for those who take them.

7. Top management **COMMUNICATES** the changes **inside** the Agency and train staff on how to implement the changes.

8. Hold up **SUCCESS** stories.

9. **GET THE WORD OUT** on what we plan to accomplish, how we plan to encourage more rapid innovation, and what we would like the private sector to do. Engage key groups to illicit their input and interest.

**CONCLUSION:**

EPA needs to operate with the clear recognition that it creates and shapes the environmental technology market through its policies, procedures, and regulations.

EPA has the influence and EPA has the responsibility, but it needs the will to reshape the market to:

1. insure that the environmental technology market is more dynamic and adaptable to change, i.e. more innovative and,

2. to help continue the shift from pollution control to clean technologies.

## DETAILED RECOMMENDATIONS

The following sections describe the recommendations of EPA's Environmental Technology Team in more detail including, where appropriate, cost estimates. Each section covers this recommendations of one of the five target/action categories.

The recommendations in this report could be funded under the President's Environmental Technology Initiative (ETI). The implementation of these recommendations could be coordinated by the Agency's Innovative Technology Council (ITC).

### A. Encouraging Clean Technologies

**CURRENT STATE:**

Industry, federal agencies and universities are constantly designing and developing new products, processes and systems. Frequently, these designs proceed with little or no consideration for the environment.

**IMPACT:**

Environmental impacts must be dealt with afterwards in the form of costly pollution control and clean-up.

**DESIRED STATE:**

Design and development of new products, processes and systems incorporate environmental considerations into the early design step.

**STATUS:**

Work started in some areas.

**REQUIRED ACTION:**

Promote **clean technologies** in order to **advance** the pollution **prevention resource conservation** goals of the Agency.

1. EPA should develop and promote an information and analysis packages to assist industry in identifying pollution prevention opportunities and making informed, responsible choices in the design or redesign of processes, products and systems. These packages will include:

- information and analysis tools to assess the performance, costs and environmental impacts of various alternative technologies.

- cost accounting systems for realistically assessing and properly allocating the true environmental costs of a specific process or product.

- In some industries much design work is done with the aid of sophisticated computer assisted design software. An effort would be made to integrate these analytical tools and systems into the standard industry software.

Schedule Estimates:

| | |
|---|---|
| Develop information and analytical tools and cost accounting systems | 9/30/94 |
| Complete Pilot Testing | 9/30/95 |
| Complete Dissemination of Tools | 9/30/96 |

Budget Estimates:

| FY | $M | FTE |
|---|---|---|
| '94 | 1.75 | 2 |
| '95 | 2.75 | 2 |
| '96 | 3.00 | 2 |

2. Establish partnerships with industries to re-engineer common products and processes in order to promote environmentally cleaner manufacturing, use and disposal.

   - Build on the Design for Environment (DfE) Program by expanding industry collaboration focussing on those industries that

     - generate large quantities of toxic chemicals and wastes

     - are made up primarily of small businesses (Examples include metal finishing, dry cleaning, printing.)

- The EPA/industry partnerships should include:
  - suppliers and customers of the target industry
  - trade associations representing the business
- The program would attempt to get the trade associations to adopt voluntary environmental goals and codes of conduct for the industry as well as to establish technical assistance programs on alternative technologies to achieve those goals.
- A partnership of EPA, industry, DOE-National Labs and DOE-Manufacturing Centers has already begun an initiative to identify alternative chemicals and technologies to significantly reduce environmental impacts of computer products.

Schedule Estimates:

Establish a total of 5 Partnerships:

| | |
|---|---|
| Two by | 9/30/94 |
| An additional one by | 12/31/94 |
| Two more by | 9/30/95 |

Budget Estimates:

| FY | $M | FTE |
|---|---|---|
| '94 | 4.0 | 8 |
| '95 | 7.0 | 10 |
| '96-98 | 7.0/yr | 10/yr |

3. Direct a greater percentage of technology of research, development, and applications effort by EPA and others to clean technologies.
   - Continue to support the development of new, more environmentally friendly ways to make chemicals through grants to universities and research centers.
   - Create university centers to incorporate pollution prevention and clean technology concepts into engineering curricula.

## B. Statutes and Mainstream Operations

**CURRENT STATE:**

Statutes and regulations are often designed in a way that discourages innovative technology. In the environmental technology field, the market primarily is driven by Federal and State environmental regulatory requirements. A substantial portion of environmental rules in the United States are based in some way or some how on Best Available Technology or "BAT." Usually, the regulations are written in performance terms, but the required performance levels are usually based on what can be achieved by the Best Available Technology.

Short compliance deadlines and enforcement consent orders usually demand fast action and, thereby, favor the adoption of tried and true techniques -- usually BAT. Permit writers and remediation project managers are not encouraged to take risks, and there is no incentive for permit writers to approve innovation technologies.

The Congressional staff have said they think we have the authority to actively promote innovative technologies (and pollution prevention) in regulations and permits. The Agency either feels it does not have the necessary authorities or that we will be criticized for stretching our authority. The permit writers and project managers feel the system does not allow them to take risks. We have got to try to promote innovation in permitting and enforcement and then either:

1. demonstrate that the permitting process can encourage innovative technologies or

2. prove that the problem(s) require regulatory and/or statutory solutions

**IMPACT:**

Existing standards often lock-in existing technologies and lock-out new innovative ones. Often the easiest way to comply with the rules is by simply adopting the technology on which the government has based its standard. Adopting other technologies is risky; because the innovative technologies may not work, even though it might do a better job than the "BAT" levels.

Innovative technologies may face barriers to approval during permitting and enforcement negotiation. It is much easier to approve BAT technology than face the risks of approving innovative technologies that may not work as expected. In addition, those installing innovation technologies face financial "double jeopardy" if the innovative technology fails and must be replaced by the "BAT" to achieve regulatory compliance.

**DESIRED STATE:**

Statutes, regulations, standards and guidelines are designed in a way that encourages the development and use of innovative technologies.

The most promising innovative technologies not only face reduced barriers but are encouraged by the Agency. Permit writers, enforcement officials, and remediation project managers are encouraged to try new technologies and are "allowed to fail."

**STATUS:**

The new Clean Air Act has certain provisions that provide incentives to install technologies that go beyond compliance. However, this is a rare situation.

Very few innovative technologies are being permitted and commercialized.

**POTENTIAL NEXT STEPS:**

Improve the governing **statutes and the mainstream operations** of EPA (i.e. regulations, permits, enforcement) so the **introduction of environmental technologies is encouraged.**

1. Develop an action plan for the Agency which:

   - identifies barriers
   - recommends new approaches to writing regulations
   - establishes new implementation policies and procedures:

     Develop implementation plan by June 30, 1994

     Fiscal impact: None

- The plan should build upon on-going efforts to identify existing barriers to innovative technology development and emphasize implementation actions such as developing new approaches, to address these barriers including new regulatory approaches (such as the use of trading allocation programs), data credibility, and information dissemination. The net result should be new policies and procedures to facilitate permitting for innovative technologies. Implementation of such a plan will encourage the introduction of innovative environmental technology. After the action plan is completed it should be pilot tested and evaluated.

- Establish new policies and procedures for reviewing and processing permits with significant innovative features, including extra compliance time to allow innovative technologies to be adequately tested and installed, providing additional time to install a standard technology if the innovative technology does not work, incentives to encourage innovative technologies (e.g. reduced monitoring), rapid permit and document review, and expedited processing of any other media permits (when there are cross media impacts).

- Using approaches pioneered under the Source Reduction Review Project (SRRP) promote the design of regulations which encourages innovative technologies. Alternative approaches to writing regulations should be clearly articulated and encouraged. Alternative approaches include:

  a. Develop regulatory standards based upon current best technology includes provisions to phase-in incremental improvements over the levels achieved by current technology.

  b. Emission trading provisions which encourage companies to go beyond compliance by allowing them to sell improvements upon regulatory deficits at other installations.

  c. Explore the possibility or contingent regulations that impose a standard <u>based</u> upon a qualifying new technology only if and when that new technology becomes available.

d. Use regulatory approaches that require measurement reporting (like TRI) which encourage action but with maximum flexibility

- Use settlement authorities (e.g. SEPs) and imminent and substantial endangerment enforcement authorities to encourage the adoption of innovative technologies.

- Work with Congress to develop statutes with provisions that will encourage innovative technologies especially of a source reduction nature. Specifically, EPA should:

  a. Analyze the proposed new Clean Water Act with such provisions in mind.

  b. Identify and analyze other environmental statutes that are under development again looking to include such provisions.

  c. Prepare a report for Congress which points out the problems of traditional statutory approaches and gives them a blueprint of better alternatives.

- Streamline state review of water treatment technologies. Small communities are struggling to meet new drinking water requirements and upgrade wastewater systems. EPA is working with western states to develop a common framework of reviewing water filtration technologies. This effort needs to be expanded to the national level.

2. Create a Reinvention Laboratory (consisting of experienced permit writers from EPA and States) to facilitate permits for innovative technologies, demonstrate new ways to incorporate innovation, and identify regulatory and statutory barriers that need to be corrected.

   Establish innovative permitting team by June 30, 1994

   Initiate 20 permit reviews Sept 30, 1995

Fiscal impact:

| FY | $M | FTE |
|---|---|---|
| '95 | 1.0 | 10 |
| '96-98 | 2.0/yr | 20/yr |

- A special team, to be established by June 30, 1994, consisting of permit writers from EPA and the states will initiate 20 new permit reviews. This team would be insulated from the current accountability systems that have been recognized as barriers. The reviews would determine whether the permits could be changed or modified to allow the use of more innovative technology to accomplish the environmental mandate dictated by the permits. This would demonstrate what works, and what doesn't work, from the action plan, and may require changes in the plan. This team will also identify regulatory and statutory obstacles that policy and procedural changes alone cannot penetrate.

- Work with alternative approaches to conventional permitting processes, for example:

  - integrated or coordinated permits under several environmental statutes;

  - waivers of compliance deadlines, which might be eased to allow time to develop, install, and perfect the technology.

  - waivers of substantive requirements;

  - expedited permit processing for innovative approaches, (where the regulated party is willing to bear the risk of non-performance);

  - increased use of expedited permitting authorities for testing;

- It is envisioned that the permitting team would be comprised of a small headquarters staff (1 - 2 FTE), with "leadership directors" coming from headquarters, regional offices and state agency or state organizations. The balance of the team would be comprised of individuals in the Regions and States who review "innovative permits."

3. Create Reinvention Laboratories aimed at one or more problem sectors. For example, DOE and DOD would be encouraged to renegotiate remediation agreements with the State and EPA where there are opportunities for implementing an innovative technology. Likewise, the State and EPA would be encouraged to rapidly evaluate requested to use innovative technologies.

   The Reinvention Laboratory approach could also be used at several model farms in partnership with USDA. The Laboratory would examine innovative techniques to reduce pesticide and nutrient emissions while keeping crop yield high. Innovative approaches could include: construction of wetlands, establishment of riparian corridors to pretreat and filter pollutants, and developing nutrient/yield curves.

C. CREDIBILITY

**CURRENT STATE:**

The credibility of environmental technology performance is limited by a lack of consistent, thorough, and impartial evaluations. In addition, technology performance measurements are limited by a lack of permitted testing venues. Industrial consumers, regulators, financiers, and others are not confident that technologies will perform as touted by technology developers and equipment vendors.

**IMPACT:**

New environmental technologies are under-utilized, slowing the pace of innovation. The impetus for continuing research and development is stifled due to the difficulty of commercializing innovations. Older technologies, therefore, are used to protect communities and ecosystems -- since newer technologies are rarely introduced and commercialized.

**DESIRED STATE:**

The performance of promising innovative technologies are evaluated with the results widely disseminated. The process and specific procedures for bringing innovations into the market place is predictable. Industrial consumers, regulators, investors, and host communities have confidence that they are making decisions based upon the reliable data.

Developers and vendors of innovative technologies have venues in which to test and evaluate the full-scale operation of the technology under realistic conditions, where permitting issues and/or community resistance will not delay testing and evaluation.

**STATUS:**

The Superfund Innovative Technology Evaluation (SITE) Program evaluates the performance and costs of remedial technologies, as well as, monitoring and assessment technologies appropriate for site remediation. The SITE program was the first of its kind at EPA, but has now been followed by the Municipal Waste and Recycling Innovative Technology Evaluation (MITE) program and the Waste Reduction Innovative Technology Evaluation (WRITE) program. MITE evaluates the performance of municipal waste reduction and recycling technologies and WRITE evaluates pollution prevention and waste minimization technologies.

The Department of Defense operates DCAS, the Defense Contracts Audit System, which oversees qualification testing of equipment developed under DOD contract.

EPA has entered into a partnership with McClellan AFB, the State of California, and several companies to test innovative treatment at the air force base.

EPA is beginning the fabrication of testing chambers for in-situ soil remediation technologies.

**POTENTIAL NEXT STEPS:**

Enhance the **credibility** of new technologies by assessing their **performance**, thereby facilitating their **acceptance** by users, financiers, regulators, and the public.

1. Establish a Reinvention Laboratory to pilot an environmental technology verification program to evaluate and validate the claims of environmental technology vendors. EPA would establish third-party(ies) to provide independent assessments of environmental performance.

| | |
|---|---|
| Select third-party organization(s) | Sept 30, 1995 |
| Protocols developed for first technology applications | Sept 30, 1996 |

Fiscal impact[1]:

| FY | $M | FTE |
|---|---|---|
| '95 | 2M | 3 |
| '95-98 | 20M/yr | 5/yr |

- Under this program, EPA would designate an independent group, with the assistance of the National Institutes of Standards and Technology, to perform the assessments. These assessments would be similar to those conducted by Underwriters Laboratories for electrical equipment. The program would provide users, financiers, EPA and others with consistent and credible protocols and testing data, and independent review and verification of performance claims. Finally, the program should be able to provide specific, predictable procedures and processes that are known by people working through the system.

2. Expand available sites where developers and vendors can test and evaluate their technologies. A Reinvention Laboratory is already being established at McClellan Air Force Base, California to test site remediation treatment techniques.

| | |
|---|---|
| Identify two additional partnerships where developers and vendors can test and evaluate site remediation technologies | Mar 31, 1994 |
| Identify three additional partnerships | Dec 31, 1994 |

**Fiscal impact:**

| FY | $M | FTE |
|---|---|---|
| '94-96 | 4.5M/yr | 4.5/yr |

[1] By using third parties EPA FTE requirements are significantly reduced.

- Collaborate with DOD and DOE to designate "test beds" for full-scale testing and evaluation of innovative, environmental technologies under real world conditions. Permitting would be waived under the assurance that releases would meet regulatory requirements with waste releases held and re-treated, when necessary.

- EPA and possibly the National Environmental Labs, should make available environmental simulation chambers for the development and evaluation of innovative, environmental technologies. Chambers, likely would be installed in facilities already permitted for research and testing.

D. Finance

**CURRENT STATE:**

Financing involves both the need for venture capital for start up firms wanting to develop new technologies, and financing for project implementation on the part of companies looking for funding for fundamental changes of processes, products, or end-of-pipe treatment. Currently, venture capitalists are not funding new environmental technology projects. They do not consider innovative technologies to be a worthwhile risk. Over the past five years approximately 90 per cent of the environmental technology projects funded by venture capitalist failed because it took longer and was more expensive than anticipated to reach commercialization.

EPA has the authority to do research but does not have the authority to fund product development.

**IMPACT:**

Technology options available in the market place are limited resulting in the use of existing technologies which are costly and/or don't meet environmental needs.

**DESIRED STATE:**

Financing is available for promising new technologies and for the permitting and commercialization of proven technologies.

**STATUS:**

The problem has been studied by the NACEPT committee but little else has been accomplished.

**POTENTIAL NEXT STEPS:**

Improve the availability of **financing**, thereby **expanding technology options available** in the market place.

1. Establish a business center as a Reinvention Laboratory to help small business expand the technology options available in the market place by helping these businesses overcome barriers to initial commercialization and provide financial information for new technologies.

   - The Reinvention Laboratory would assist the entrepreneur in obtaining those services necessary to commercialize an innovation. Services to be provided will include: aiding in market assessments and cost evaluation efforts; arranging for testing by an independent group to provide the data needed to assure permit writers, users, investors, and the public that the innovation's performance claims are valid; identifying sources for financing, managerial support, sales, and business partners; assisting in the loan application process and locating or researching other funding mechanisms; and advising on EPA, State, and local regulatory permitting and enforcement requirements and procedures.

   - The Lab would have an independent Board made up of businessmen, venture capitalists, regulators, environmentalists, and representatives from the user industry to insure that candidate selection is based on its chances for business success as well as environmental benefit.

   - Direct financial support would not be provided.

   - Laboratory efforts could be combined with other special EPA programs designed to advance innovative technologies by addressing issues such as compliance contingency plans and special monitoring needs.

- The laboratory would be run by an organization independent of EPA (e.g., a NIST center or a non-profit group) to separate it from EPA's permitting and enforcement programs.

- Projects selected for support would have to meet a rigorous set of criteria designed to ensure the environmental desirability of the innovation and maximize its chances for commercial success. Criteria would include: identified market need, significant investment by sponsoring firm, active participation by outside partners, high ranking by an independent advisory panel, and emphasis on pollution prevention oriented solutions.

| | |
|---|---|
| Provide assistance for projects | September 30, 1994 |
| Provide assistance for an additional 20 projects | September 30, 1995 |

Fiscal Impact:

| FY | $M | FTE |
|---|---|---|
| '94 | 0.5M | 1.0/yr |
| '95-98 | 1.0M/yr | 2.0/yr |

2. Challenge the private sector to develop technologies which address critical environmental needs. Programs would include funding competitions to produce more environmentally friendly products and establishing contingency standards which become self-implementing when a new technology is demonstrated to meet standard.

| | |
|---|---|
| Complete report | December 31, 1995 |
| Fiscal impact: | none |

- Some of the mechanisms that should be explored are:

  - Establishing a demonstration fund to cost share the first commercial application(s) of innovative technologies that address critical environmental needs. (Similar to an on-going program for air pollution control technology funded by Germany.)

- Encouraging a contractor to propose an innovation during the life of a contract and share in any savings and be rewarded for technologies that yield improved results.

- Sharing the cost of installing replacement technology with private industry to comply with regulations. Cost sharing by EPA would occur where EPA approved the initial innovative technology installation.

- Using privately developed and publicly authorized securities an insurance policies ("risk premiums") to allow for risk sharing and some amount of certainty in the case of failure.

- Providing financial and technical incubator assistance.

- Establishing an insurance fund to fund developing technologies and to spread the risk.

- Providing a Federal tax credit for companies trying innovations.

3. Offer awards for the first companies that develop technologies which address environmental needs as identified by EPA. Awards could be a financial prize or a standing solicitation to encourage the development of advanced technology.

   Develop two new awards programs in conjunction with the private sector. December 31, 1995

   Fiscal impact:

| FY | $K |
|---|---|
| '95 | 100K |
| '96-98 | 100K per year |

   (EPA provides its "good offices" and "coaching", but no direct financial support)

- The two new awards would take the following forms:

  1. Form partnerships with industry and public interest groups that offer a substantial financial award for the first companies that market a product that meets predetermined specifications or excel above its competitors.

  2. Develop "standing solicitations" (with bonus awards) for the first company(ies) to meet specifications for needed technology, e.g. totally chlorine free craft paper manufacturing.

**OTHER:**

- Embark on collaborative activity with the lender community to educate them on the potential risk and benefits associated with financial support for pollution prevention approaches, green technologies, and innovation.

- Use government procurement authorities to create demand for green products, and the products of environmentally sound technologies.

- Assist business in developing credible technical, economic, and market data for understanding potential markets and developing environmental technologies.

- Offer extended patent protection to selected innovations as a bonus and as a means to offset review times. This action would require an act of Congress.

- Use the Export-Import Bank to support the use of American technology overseas. Similar to the support provided by foreign governments, allow the Export-Import Bank to fund engineering feasibility and design studies conducted by American firms. The country that does the initial feasibility and design studies is often the country that will be most successful in furnishing advance equipment.

## E. Information Dissemination

**CURRENT STATE:**

Although, enhanced EPA technology dissemination programs are considered to be essential to diffusion of new technologies, the EPA and the private sector do not have effective dissemination programs. The lack of strong government or private sector dissemination programs hinders the development, evaluation, and use of innovative environmental solutions.

**IMPACT:**

Inadequate dissemination results in available new technologies not being used because decision makers do not know about them. This increases costs and reinforces the reliance on existing tried and true technologies. It also means that technology developers can be working on products for which there is no market.

**DESIRED STATE:**

Industrial customers and regulators fully understand the technological options available them. Government supports information dissemination methods for diffusing innovative technology. The Agency support partnerships that are oriented toward direct diffusion of technology.

**STATUS:**

EPA has a number of separate technical outreach programs to "get the word out" on technology transfer.

**POTENTIAL NEXT STEPS:**

Improve **information dissemination and awareness** of environmental technologies to support their **diffusion.** (**Diffusion** is defined as the spread and adoption of a technical idea following its first successful commercial scale use.)

1. Map and evaluate current dissemination mechanisms

   - Survey EPA's major technology diffusion programs, and categorize and evaluate the adequacy of the approaches, resources, and relative emphasis on the environmental protection hierarchy.

- Ask vendors and users what happens now when they seek information on markets or available technologies. Determine their needs, how the process could best work for them, and how well their needs are meet by the private sector.

- Determine existing, private sector mechanisms and evaluate what actions EPA could take to use these existing mechanisms.

- Survey the Agency to identify major technology diffusion programs, and evaluate the adequacy of the approaches, resources, and relative emphasis (e.g., prevention vs. treatment vs. remediation);

- Identify what kinds of innovative technologies are available or "out there?"

  - identify goals and "intended" purposes of each technology, key players, and "cross-programs" in the Agency

  - Link with players on Environmental Technology Panel and in other administrative or technology agencies (DOC, DOD, DOE)

- Develop a compendium of public/private sector funding mechanisms

  Complete compendium: June 30, 1995

  Fiscal impact:

| FY | $K |
|---|---|
| '94-95: | 0.2M/yr |

2. Develop a strategy to improve dissemination mechanisms

- Develop a strategy that involves:

  - mapping out a new process;
  - identifying key players;
  - working with them to implement the new process;
  - developing and maintaining communication links.

  Issue strategy: September 30, 1994

- Build on the Design for the Environment model for diffusion environmental technologies. Focus delivery of information to particular industries that can most encourage reduction of toxic use, energy efficiency, and resource conservation.

- Develop awards and recognition programs, modeled on Alaska's "Green Star" program for encouraging the diffusion of prevention approaches and innovative technologies among small business.

- Develop partnerships with other Agencies that provide assistance to industry for purposes of enhancing economic competitiveness. (For example, EPA should work with other Federal agencies to coordinate clearing houses and computer networks.)

- Integrate the Agency's technology diffusion enterprises. The bulk of the Agency's resources for encouraging innovation and diffusing innovative technology are focused on remediation technologies, not prevention.

- Strengthen EPA's support for existing and emerging programs for diffusion of pollution prevention technologies at the State, Regional and local level. This support would include increased funding for these programs, a Pollution Prevention Clearinghouse that serves this network of programs, national support for programs that use retired engineers for technical assistance.

- Build on the Green Programs model for diffusing selected environmental technologies across industries.

- Develop awards and recognition programs, modeled on Alaska's "Green Star" program for encouraging the diffusion of prevention approaches and innovative technologies among small businesses.

- Develop partnerships with other Agencies that provide technical assistance to industry for purposes of enhancing economic competitiveness, to encourage them to support prevention and innovation in their technology diffusion mechanisms.

- Create computerized links among EPA offices and labs and between other technology agencies in the Federal Government.

- Create a focal point for EPA's environmental technology activities which would integrate agency efforts and facilitate dissemination of information.

3. Create a clearinghouse for innovative technologies, which includes a library, data bases, directory of experts, and is tied into a network of other clearinghouses and local information sources.

| | |
|---|---|
| Establish clearinghouse function | December 31, 1995 |

Fiscal Impact

| FY | $M | FTE |
|---|---|---|
| '94 | 0.5M | 2.0 |
| '95-98 | 1.0M/yr | 1.5/yr |

- This central clearinghouse would catalog technologies, experts, training, conferences and publications.

Real World Examples of the **Benefits of Innovative Environmental Technology**

- Pollution Prevention Small Business Support

  EPA assisted a small manufacturer of orthopedic devices switch from harmful TCA (a halogenated solvent that destroys the ozone layer) to a dilute, terpene-based cleaner. Product is now cleaned in a heated ultrasonic bath used to degrease the parts. The new cleaning system is saving the small business $4,800 per year with a pay back of only 4 1/2 months.

- New Microelectronics Manufacturing Process Virtually Eliminates Waste

  Electrochemical micromachining (EMM) is being developed and implemented as an environmentally sound and high speed metal removal process for microfabrication of electronic components. The use of EMM technology significantly reduces (and in some cases eliminates) the generation of wastes -- saving approximately 10 - 25 per cent of total production costs. Similar environmentally clean technologies are being employed for metal plating and chemical etching.

- Pollution Prevention Technology in the Electronics Industry

  EPA and the State of California worked with Hewlett-Packard to develop an advanced reverse osmosis system that allows nickel and other chemicals in the electroplating process to be reused. End of pipe treatment is substantially reduced and purchase of nickel and electroplating chemicals is much less. Annual cost savings are approximately $17,000 per year with a payback period of about 4 1/2 years. This technology has wide applicability in the electronics industry.

- Pollution Prevention Technology - Freon

  The State of California, EPA, and General Dynamics joined forces to reduce GD's use of freon by installing a freon recovery still and water separation equipment to effect recycling of freon. The freon recovery equipment had a pay back of 6.6 months.

- Reusing Dredge Spoils for Wetland Restoration

  EPA and the Corps of Engineers is examining the potential to use dredged material from lower Mississippi River and using this material for wet land restoration. Each year approximately $75 million is spent restoring coastal wetlands in Louisiana. And each year approximately 90 million cubic yards of dredged material is generated.

- Air Pollution Control

  An industry/TVA/EPA consortium is field testing an innovative sulfur removal device that can replace flue gas scrubbers. If successful, savings could exceed $1 billion per year.

- Superfund Site Remediation

  EPA found that the use of innovative treatment solutions saved up approximately $140 million at seven sites. The savings were identified from the feasibility study.

- Immunochemistry Used for Monitoring at Hazardous Waste Sites

  Medical immunoassay techniques are now being used to determine the concentration of some types of organic contaminates at hazardous waste sites. Immunoassays can be conducted in the field at 10 % of the cost of standard laboratory analysis.

- Continuous Water (and Wastewater) Quality Monitoring

  The Automated Volatile Organic Analysis System provided on-site, real-time measurements of a ground water treatment facility. Sampling was done every 8 hours, with results back within one hour -- compared to 3 days to two weeks using conventional laboratories. Cost savings are expected to be substantial for a fully operating system.

**Green Enterprises, Inc:**
**A Hypothetical Case**

The five major target areas identified by the Environmental Technology Team were described in the previous pages. In order to facilitate understanding of the Team's intent in these areas, a hypothetical case study, Green Enterprises, Inc. is presented. The interactions among Green Enterprises, EPA, and others will be described for each of the major action areas. Assume that Green Enterprises consists of a very small, start-up company. Some wonderful concepts in pollution prevention and remediation technologies are found there, but Green requires guidance as to how they can bring those concepts through development and become integrated in the market give the barriers before them.

Following Item 1: Promote Clean Technologies

Our hypothetical start-up firm, Green Enterprises, Inc., is interested in becoming a player in the environmental market. They have a few vague ideas about contributions they can make in this area, but they are not closely affiliated with any major industries and aren't sure which small businesses would require their services.

EPA would make a clearer effort to communicate the pollution prevention problem areas in various small businesses, such as finding alternatives for PCE among dry cleaners, and in larger manufacturing industries,such as finding alternatives for TCE as degreasing solvent, through forum which are easily accessible to Green Enterprises. EPA would also make a clearer effort to communicate these priorities to the subject businesses and industries so that they can extend their search for consulting and R&D expertise to firms like Green Enterprises.

Following Item 2: Improve Statute & Operations

Green Enterprises has now developed a couple of prototype solutions to the PCE and TCE situations above, and in so doing has developed a remediation strategy for PCE and TCE releases which have become environmental contamination. They have developed a prototype, pilot-scale remediation technology as well as an initial plant-scale TCE control system for use while industries phase out their use of TCE and phase in the alternate solvent. Green is now confronted with the problem of attempting to sell their TCE control

system to an industry which cannot obtain a permit for this innovative, unproven technology. While Green can provide laboratory data and theoretical evidence of the technology's probable success, the EPA permit writer is unwilling to risk writing a permit for the technology, and the industrial client cannot accept the risk of operating the TCE control system without the permit writer's approval.

EPA would turn this permitting issue over to a special permitting team focussed on writing appropriate permits for innovative technologies. Meanwhile, a special task force of EPA, State, and others, is examining more broad solutions to the problem of writing permits for innovative technologies.

Following Item 3: Enhance the Credibility

A large part of the reluctance of permit-writers to accept the validity of Green Enterprises' solution to the search for alternatives to processes and practices involving the use of PCE and TCE is in the limited data that Green has been able to generate. This is similar to the college graduate's dilemma: one can't get a job without experience, and can't get experience without a job. Green can't get their technology in the industrial market without operation experience, and can't get operations experience without an industrial client. Likewise, the PCE/TCE remediation technology is rejected for consideration for hazardous waste cleanup activities by EPA Remedial Project Managers and others because little operational data can be provided. EPA would utilize the Environmental Performance Program which had recently been established on the model of the SITE, MITE, and WRITE programs to assess, through independent, reliable evaluation, the ability of the pollution prevention technology to avoid environmental damage, the ability of the TCE control system to remove the solvent from the process or wastewater stream, and the ability of the PCE/TCE remediation technology to achieve destruction or removal of the contaminant.

Following Item 4: Improve availability of Financing

Green Technologies, Inc. had developed a pollution prevention, a pollution control, and a remediation technology. Without a defined and accepting market, however, they could not obtain venture capital or bank loans to finance further development, production, and installation of pilot- or full-scale units.

EPA would utilize a newly established pilot program to a assists Green in locating government or private-sector funding and in obtaining information about the prospective markets for their technologies. Further, Green may have been motivated to develop their technologies due to the EPA program to offer a prize to the first developers who filled the advertised high-priority, unmet needs. The bonus prize may be used by Green to cover some of their development costs or to reduce the price to initial clients. EPA would also share some of the financial risk with the initial clients, such as by offering to cover a proportion of replacement or upgrade costs if Green Enterprises technology failed to perform as expected. Finally, thanks to the EPA-established Environmental Performance Program, Green would have the commercial-scale data required to convince financial backers of the potential for technical as well as market success.

Following Item 5: Improving Information Dissemination for Diffusion

In 1993, Green Enterprises, Inc. has few forums to obtain regulatory acceptance for their innovative technologies. Their pollution prevention application receives little publicity partly because there is no single source of information on innovative technologies in that area. Also, without testing and evaluation by a potential client or independent third party, Green's marketing efforts are rebuffed due to lack of confidence in the performance data. Their pollution control and remediation technologies receive only slightly more attention. Multiple sources of limited information confuse potential clients. The lack independent verification of the technologies performance and publication of the results further hinders diffusion.

Following the Environmental Performance Program evaluation, EPA would help to facilitate the diffusion of Green's technologies into the appropriated markets through continued publicity of their successful efforts. All Environmental Performance Program participants would receive similar public exposure in order to facilitate responsible decision making in the private sector and by Federal, State, and local regulatory and enforcement officials through increasing the awareness of alternatives.

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**REINVENTION LABORATORY**

**Initiative:** **Encouraging Innovation through Environmental Permitting**

**Proposal:** Environmental innovation is often slowed or curtailed at the permit stage. Form a team of "innovative permit writers" (comprised of EPA headquarters, regional offices and States) to encourage the implementation of new technologies and new solutions. Process "innovation permits" quickly, grant additional time to install innovations, arrange for a "soft-landing" if the innovation fails. Set annual targets for permits that contain innovative technology including targeting certain innovative technologies. Designate resources to regional offices and states that set "innovation targets." It is envisioned this permitting team would be lead by a small Headquarters staff (1 - 2 FTE), with several leadership directors coming from a Regional office and a State or State organization. The balance of the team would be comprised of individuals in the Regions and States actually reviewing the "innovative permits."

**Unique Features** This team would identify and resolve policy issues that would need to be resolved to evaluate and grant a permit for the innovation. The team would also monitor annual progress.

**Outcome:** Encouragement of innovative technology and greater use of innovative technologies to solve environmental problems.

**Rules Needing Waivers:** On a case by case basis various rules may require revisions or waivers. The Agency should support innovative permitting in the Clean Water Act reauthorization.

**How Public Benefits** By reversing the culture towards environmental technology innovation, we should see a more rapid pace of innovative technologies being permitted. More choices in available technologies would improve environmental protection and, at the same time, create jobs.

**REINVENTION LABORATORY**

**Initiative:** Evaluation of environmental technologies to support their commercial use.

**Proposal:** Many environmental technologies are not moving from the laboratory and pilot states of development to full scale demonstration and commercialization. The lack of credible performance data for these new environmental technologies is one of the primary limitations. Inadequate cost and performance data impedes permitting and commercialization of technologies.

EPA would establish and oversee the performance evaluation program and would use one or more third parties conducting the tests evaluations. Evaluations could be performed by private institutions or by governmental agencies such as the DOE's National Labs.

**Unique Features:** EPA should use the expertise of third parties to conduct the technical evaluations.

**Outcome:** By using third parties, technical evaluations could be completed sooner.

**Rule Needing Waivers:** None Known.

**How the Public would Benefit:** Using third parties, performance evaluations would be conducted faster than if EPA were to do the evaluations themselves.

**REINVENTION LABORATORY**

**Initiative:** Use Federal Facilities to test and evaluate site remediation technologies

**Proposal:** Evaluate Steam Injection/Vacuum Extraction (SIVE) technologies at McClellan Air Force Base, CA. SIVE would be used in place of incineration

**Unique Features:** Other than EPA and Air Force, private parties are actively involved, lead by Clean Sites Inc. and eight computer, utility and chemical companies.

**Outcome:** There are two expected outcomes: First, the McClellan Air Force Base is in a unique position to test real world problems at hazardous waste sites. The testing of SIVE technology here can be expanded to the evaluation of the environmental technologies at the Federal facilities. Second, the evaluation of the SIVE technology could lead to successful commercialization.

**Rules Needing Waivers:** Not Known. Future technology evaluations may require waivers or rapid and flexible permitting.

**How the Public Will Benefit:** Should SIVE prove to be more effective and/or less costly than incineration, companies (and governments) responsible for remediation cost, which would improve their competitiveness. In addition, SIVE equipment vendors and technical consultants would be able to expand their international market with this technology.

**REINVENTION LAB**

**Initiative:** **Design Computer Work Stations for the Environment**

**Proposal:** Evaluate the technology, processes and chemicals used in the manufacture of computer work station component parts to characterize environmental impacts and to incorporate risk reduction and pollution prevention objectives in computer products. The evaluation would encompass the environmental management hierarchy including evaluating substitutes and would use principles of life cycle analysis and cross media risk characterization methods. The focus would be on developing innovative technologies and processes which would improve environmental impact and in disseminating results across a broad spectrum of small and medium sized businesses.

**Unique Features:** A partnership team made up of EPA, DOE/National Laboratories, DOC/MTCs and industry would work together to develop and disseminate results.

**Outcome:** Identify and put in use alternate chemicals, technologies or processes in manufacturing computer work stations which significantly reduce the environmental impact of computer products.

**Rules Needing Waivers:** Permitting and enforcement; anti-trust and proprietary information rules; industry interns in government.

**How the Public will Benefit:** Reduced impact on the environment of computer manufacturing; increased jobs through enhanced international competitiveness of more environmentally friendly computer products.

# REPORT OF THE *EXTRAMURAL RESOURCES* TEAM

NATIONAL
PERFORMANCE
REVIEW

# EPA Internal National Performance Review

## Extramural Resource Team

## Report


## SUMMARY

As one of several initiatives to integrate management with mission and improve EPA's resource management, EPA Administrator Browner began a series of focus groups to identify cross-Agency issues in extramural (procurement and assistance) resource management. Because of the importance of these issues, EPA included this effort in its internal National Performance Review. The goal of the focus groups is to more efficiently link EPA's stewardship of fiscal resources and EPA's protection of environmental resources. The linkage will occur as a result of increased management attention, as well as improved communication, coordination and guidance processes developed together by EPA's resource management staff and environmental mission staff.


## VISION

Accountable extramural resource management that strengthens EPA's role as a sound fiscal manager as well as strongly supports its mission to protect the environment.

## BACKGROUND

EPA relies very heavily on contracts and grants (extramural resources) for accomplishing its mission. EPA, throughout its history, has awarded contracts for many different activities, such as data processing input, regulatory impact analysis, water quality testing, information systems development and clean up of hazardous waste sites, to name just a few. About two thirds of the Agency budget is spent through contracts and grants.

The regulatory nature of most of EPA's work means that it uses contracts that require an unusually high level of oversight and monitoring by the Government. Since 1984, there have been a series of Inspector General and General Accounting Office audits that identified problems in the way EPA has managed contracts. Problems have included cost control issues, inherently governmental functions, lack of competition, personal services and inadequate oversight of contracts.

EPA, in the past, tended to respond to these reports as individual problems, but recently began to deal with them as an overall Agency-wide problem. Because EPA's work is highly leveraged with contracts and grants, accountable extramural resource management is essential to the overall sound management of the Agency. Congress is holding the Agency accountable for the use of taxpayer's funds, and intends to ensure that these problems are solved.

In the early 1990's, EPA began an effort to correct these problems through comprehensive, systemic improvements rather than on a case-by-case basis. In June 1992, EPA issued a report on Contracts Management at EPA: Managing Our Mission; Recommendations of the Standing Committee on Contracts Management, with actions to improve EPA's contract management.

The Standing Committee on Contracts Management, with top level staff from every office, oversees the implementation of changes. Under the leadership of Administrator Carol Browner, the Agency began to define the problems more broadly in terms of accountable extramural resource management and develop ways to integrate the importance of managing resources into EPA's environmental mission. By June 1993, the scope of the Standing Committee on Contracts Management was expanded to all extramural resources, and was renamed the Resource Management Committee.

Administrator Browner made management, accountability and discipline major priorities that support her determination to make sound management a cornerstone of her Administration. She developed several initiatives to assure that the Agency's approach to these problems is strategic rather than piecemeal, and address not only contracting, but all extramural resources and financial management.

The effort to change the Agency's approach to managing resources has begun to take effect. While the improvements were noted favorably by outside oversight groups, the process of change has been difficult. There are concerns about consistent management involvement, communication problems, longer processing times, and the need to balance stewardship of EPA's fiscal resources with ability to effectively protect the environment.

AFFECTED SECTOR

EPA staff in every office have been affected by EPA's resource management deficiencies. Members of Congress have indicated that the seriousness of these problems have affected their confidence in EPA's ability to manage its budget and administer cabinet status responsibilities.

GOALS and MILESTONES

One of the Administrator's initiatives was to hold a series of Agency focus groups to improve communication between EPA's mission staff and resource management staff. The idea for the focus groups arose from a meeting of the Administrator with EPA Office Directors. There was concern that, although the Agency was dedicating much effort to improving contracts management, there were still many EPA staff whose thoughts and ideas were not heard. The focus groups were meant to be a listening exercise as well as provide feedback on the status of EPA's efforts to improve contracts management.

In April 1993, the Administrator's staff formed an Extramural Resource Focus Group Steering Committee to develop the process and oversee the implementation of the groups.

The results of the group's work, with recommended solutions to identified problems, is to be reported to the Administrator by October 1993. A report will also be made to the Resource Management Committee as feedback on how the actions to improve resource management are taking effect, and what additional measures are needed.

Because of the comprehensive impact on EPA, the focus groups on extramural resources are designed to get input from the widest range of staff, including diverse geographic, cultural, career and other perspectives, to provide the most inclusive views of the issues.

The first series of focus groups held in late June 1993 consisted of working level staff to identify operational problems and opportunities for improvements in contracts and grants. The groups were organized by their professional positions; e.g., Contracting Officers, Grants Managers, Work Assignment Managers; in the Programs and Regions, along with their supervisors.

The focus group team leaders reported preliminary findings to EPA's Senior Leadership Council on July 27, 1993. There was general agreement with the findings, along with more comments that fit into the major categories of concerns.

In addition, one external focus group of contractors and one of grantees is being held by outside non-profit groups to gather ideas from these communities on how to improve EPA's resource management.

CURRENT STATE

The first round of Extramural Resource Focus Groups resulted in over 60 comments regarding contracts and grants. 16 comments were received through NPR Suggestion Forms. In addition to widespread concern about the need for resources to reduce reliance on contractors and improve contract oversight, the comments fall into the following 3 categories:

1. Lack of Agency management consistency in application of extramural resources practices is leading to confusion at staff level.

2. Need to deal with concerns about perceived high risks in managing contracts and grants to improve efficiency.

3. Adequate contract process, training and guidance are needed to continuously improve contracts management.

The comments on need for Agency management consistency and atmosphere of fear were not identified as such in the 1992 Standing Committee on Contracts report. These comments reflect a broad perspective of EPA's highly leveraged status, and require management attention.

TARGET/ACTION CATEGORIES

Action/Initiative 1:

Form a representative focus group of EPA Office Directors and Division Directors, with representative participation from the first focus groups, to:

- recommend solutions to the first two findings, and

- reconcile internal and external perspectives of EPA's contract management, after reviewing the external National Performance Review report on EPA contracts management, which emphasizes accountability, cost control and competition.

Action/Initiative 2:

Because the third finding concerns development of tools and lends itself to TQM processes, refer the comments to the already ongoing efforts in the areas of streamlining the process, improving training and developing "how-to" guidance.

Implementation:

Who: Extramural Resources Focus Group Steering Committee

When:

| | |
|---|---|
| Managers Focus Group meeting: | 8-9/93 |
| Report Out to: | 9-10/93 |

- EPA Office Directors
- Resource Management Committee
- The Administrator
- National Performance Review

Barriers:

Although the process of change in how extramural resources are managed involves many large and small changes in EPA's organizational functions, EPA has already begun to break down the resistance to change. The Agency's resolution to improve will motivate the search for solutions.

Cost:

Because the Administrator, as well as EPA's Congressional oversight groups, have identified as extremely essential the need to improve EPA's resource management, it is clear that the Agency must institutionalize changes in the way it does business. Investment for this vital effort is already being made through reallocation of resources and increased management and staff attention to these issues.

Success:

The work of the focus groups in itself is a means to evaluate the mid-term success of the effort to make comprehensive, systemic changes in the Agency's management of extramural resources.

REFERENCES

The June 1992 Contracts Management at EPA: Managing Our Mission; Recommendations of the Standing Committee on Contracts Management and Monthly Status Reports are available in EPA libraries. For further information on the recommendations or the Resource Management Committee, please contact the Committee staff at (202) 260-9248.

# REPORT OF THE *FINANCIAL MANAGEMENT* TEAM

NATIONAL
PERFORMANCE
REVIEW

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# FINANCIAL MANAGEMENT

## EXECUTIVE SUMMARY

Over the years, insufficient time, attention, and funds have been available to attain the best management of current year funds. The complexity of the various financial management systems and processes has aggravated this situation. Among EPA managers, there is a wide disparity in expertise and in attention paid to financial management as well as a tendency to focus on budgeting for future years rather than on the management of current funds.

The Financial Management Team interviewed over 100 Agency staff and managers to identify barriers to effective financial management and to develop initiatives to remove those barriers. Implementing the initiatives presented in this paper will help to achieve the Team's vision: The Agency has a sound, flexible, user friendly, and readily accessible financial management process which ensures that EPA directs resources in ways that maximize achievement of the Agency's mission.

There are three Target/Action Categories, and nine initiatives:

Target/Action Category #1: Increase Flexibility With Accountability

Initiative #1: Flexibility in Ceilings.

Establish a reinvention lab (pilot) where one or more organizational units are freed from the normal operating constraints (e.g. FTE, travel, administrative expense, ceilings, and quarterly allowances).

Initiative #2: Establish a Collaborative Planning Process.

Substantially decrease the time between passage of the Agency's budget and the time that programs receive their funding targets, with any "taps" taken prior to funds being disbursed. All appropriate parties participate in an open program planning process.

Initiative #3: Automatically Recertify Multi-Year Funds.

Automatically recertify multi-year funds for expenditure in the second or subsequent years.

Initiative #4: Flexibility at OMB/Congress.

Investigate with OMB and Congressional staff ways to eliminate the various funding ceiling categories, limit subappropriation restrictions, and reduce Congressional earmarking of funds.

Target/Action Category#2: Increase the Importance of Financial Management

Initiative #5: Clarify and Explain the Process.

Increase managers' awareness of financial management issues, systems, and processes. Clarify roles, responsibilities and processes, and disseminate the information in a variety of plain English, user-friendly forms.

Initiative #6: Create Incentives for Good Financial Management.

Create incentives for managers to benefit from prudent financial management practices.

Initiative #7: Review Organizational Structure and Career Paths for Financial Management Functions.

Break down barriers between budget and financial management responsibilities. Review career paths and the grade structure for financial management staff and make equivalent to budget formulation staff.

Target/Action Category #3: Improve Financial Management Information Systems

Initiative #8: Short-Term Improvements in IFMS.

Implement a number of short-term actions to increase the access of both staff and managers to the system. Develop and administer a customer survey to determine unmet needs.

Initiative #9: Long-Term Improvements in Financial Management Information Systems.

Develop and maintain a financial management system that efficiently collects, processes, tracks, and reports financial information in a way that optimizes utility for its users and uses, but is not dependent on, contractor employees. The system is readily accessible to all Agency managers.

# FINANCIAL MANAGEMENT

## VISION:

The Agency has a sound, flexible, user friendly, and readily accessible financial management process which ensures that EPA directs resources in ways that maximize achievement of the Agency's mission.

## BACKGROUND:

Financial management is part of a process that includes strategic planning, budget formulation and execution, and sound accounting procedures. The financial management team addressed issues related to the management of current year funds. Although the past decade has generated a proliferation of statutory mandates, appropriations have not kept pace with these requirements. Nevertheless, Agency personnel have generally maximized results in the attainment of a wide variety of important environmental objectives. The focus of this report is to define some improvement opportunities -- particularly focused on giving managers the appropriate authority, incentive, and tools to better manage and account for their resources.

The Financial Management Team included 20 EPA staff representing all of the major headquarters program offices and four regions. Several have had experience in financial management in other agencies. Interviews were conducted with over 100 EPA staff. While not thorough in its analytical methods, the team feels that a number of important issues have been identified and clarified in the peer review process. Additional analysis to more thoroughly analyze the situation and barriers may be appropriate.

## CURRENT STATE:

Over the years, insufficient time, attention, and resources have been available to perform the necessary management of current year expenditures. The complexity of EPA's organizational structure, the various systems, variations in appropriations and allocation processes, and changing procedures and definitions complicate efforts to effectively manage funds. Although some managers devote substantial time and attention to financial management, many delegate such responsibilities solely to their administrative support staff. Financial management expertise is largely confined to staff and managers who directly engage in financial management, with few incentives or opportunities for program managers to acquire essential financial skills. Many managers focus more on out-year budget formulation to obtain resources and less on the execution of the current year operating plans, which are often considered mundane. Knowledge about financial management, systems, processes, accounts, etc., varies widely among program managers.

Several aspects of the current financial system create barriers to effective financial management of current year funds:

1) Lack of certainty in funding levels. "Taps" in contract and administrative expense funds can occur at any time of the year. To avoid the disruption these unpredictable "taps" can cause, managers may attempt to accelerate the spending of available funds. Conversely, funds that are suddenly released at the end of the fiscal year may be "parked" (e.g., added to a level-of-effort contract) until they can be spent. Because these funds do not always find their way back into the coming year's planning process, less than efficient funding can occur. Delays in developing and providing budget levels early in the fiscal year also lead to uncertainty.

2) Lack of flexibility in spending. The many individual (and sometimes duplicative) ceilings and quarterly allowances hamper a manager's ability to efficiently meet program goals.

3) End of year spending. Several factors lead to a large number of funding actions in the fourth quarter which swamp the system. First, quarterly allocations force incremental funding of contracts, requiring that modifications be pushed to year-end. Secondly, uncertainty in funding levels until late in the year leads to a flurry of activity to get the funds obligated before the close of the fiscal year. This leaves little time available to analyze the cost effectiveness of alternatives. Lastly, pressure to spend available funds and limitations (including cut-off dates) on funding mechanisms late in the fiscal year further compound the problem.

4) Multi-year planning is difficult. For example, funding for large pieces of equipment over two years is difficult because of the risk of not receiving carry-over funds and the difficulty in partially funding such procurements.

5) Availability of data is limited. Managers often do not have access to sufficient information about their operating plan to make the best funding decisions due to the limits of the various systems and lack of understanding of data in the system.

6) Career Development Limitations. Generally, grade levels for staff doing financial management are lower than those for budget formulation staff, another indication of the perception that these jobs are of lower importance. In order to get promotions, staff move from financial management to budget formulation.

In addition to these barriers, there are different issues in offices with growing or fully-funded programs than those where programs are being phased down or where appropriations have not been commensurate with mandates. This dichotomy has contributed

to situations where large sums are used to forward fund contracts for the next fiscal year by some programs while in others, urgent priorities, including court orders, cannot be funded.

**IMPACTS:**

Negative impacts include inadequately funded programs, ineffective or unwise year-end spending due to unnecessary forward funding of contracts, and expenditures on "nice to have" items and projects. In some cases, programs cope by trading among various categories of dollars. In underfunded programs, there can be schedule delays with resultant inefficiency as key projects are stopped and restarted in the next fiscal year. There is frustration among staff because of the extra paperwork involved in the stopping and starting of contractor work as well as the difficulty in obtaining information. The Team believes that across the Agency a measurable percentage of the Agency's budget may not be spent on priority needs.

**DESIRED STATE:**

Barriers to effective financial management are removed, with more emphasis placed on planning and achieving controlled expenditures of current year funds. There is a well understood and functional link among strategic planning, budget formulation, and the operating plan, with some staff common to all three processes in program offices as well as the Office of Administration and Resources Management (OARM) and the Office of Policy, Planning and Evaluation (OPPE). Managers have a greater appreciation of the financial management system and develop detailed financial plans, including priorities for activities (developed early in the fiscal year), which are communicated to all involved in executing the plans. There is periodic monitoring of spending, with a mechanism to link funding with results and a process to redirect resources if priorities change. Managers, not just administrative staff, are actively involved in this process. Managers know as early in the fiscal year as possible what resources they will have available, with taps at the Administrator, Assistant Administrator(AA) or Regional Administrator(RA) level taken early in the fiscal year.

Managers have at their disposal effective financial management information systems which are easy to use, readily available, and comprehensive. End of year spending levels decrease because more funds are expended during the fiscal year, according to the programs' needs. Resource management is evaluated at regular intervals, with managers held accountable for the efficiency and efficacy of expenditures. Managers demonstrating sound fiscal management have increased flexibility to use funds to meet program goals (e.g. moving funds among ceiling categories, eliminating quarterly allowances, and recertifying carry-over funds.)

**TARGET/ACTION CATEGORIES:**

Three Target/Action Categories are discussed below. These are 1) Increase Flexibility With Accountability, 2) Increase the Importance of Financial Management, and 3) Improve Financial Management Information Systems. For each initiative under a Target/Action Category there is a discussion of the initiative, who should take action and when, the barriers to implementation, and the potential costs. Since benefits and measures of success are similar for all, they are discussed at the end of the paper.

**TARGET/ACTION CATEGORY #1: INCREASE FLEXIBILITY WITH ACCOUNTABILITY**

Lack of flexibility in budget formulation and execution inhibits effective resource management and leads to perverse incentives and managers "gaming the system." The focus is often full expenditure rather than effective expenditure. Because of ceiling limitations, funds may be available for a lower priority item which can be acquired under a certain account (e.g., contracts), but funds are not available for a higher priority expenditure (e.g., computers for staff so that they can do the work in-house). These constraints also limit the ability of programs to use their funds most effectively (e.g., being unable to purchase and operate videoconferencing equipment to save travel funds). This lack of flexibility (along with other issues discussed) causes excessive forward funding of contracts and the overloading of grants, contracts, and procurement processes during the fourth quarter of the fiscal year.

**INITIATIVE #1: FLEXIBILITY IN CEILINGS**

The Initiative: Establish a reinvention lab (pilot) where one or more organizational units are freed from the normal ceiling constraints (e.g. FTE/travel/administrative expenses, intramural/extramural controls, quarterly allowances). This pilot would run for at least two years in order to get the new systems in place, allow the program to realize the benefits of this flexibility, and evaluate the pilot. If this pilot demonstrates feasibility, allocate to each office or program a single block of funds to implement its management plan.

Who/When: The Senior Leadership Council should choose one or more units (Offices or Divisions in the DC area or field locations and, perhaps, one region) as pilots to receive a total budget without any of the normal constraints. Such a pilot would allow the Agency as a whole to remain within its ceilings as the process is evaluated. If started very soon, this initiative could be implemented in FY94 in at least one location. The Assistant Administrator or Regional Administrator responsible for the pilot office would be responsible for tracking the pilot, and, in conjunction with OARM, evaluating the results.

Barriers: OMB and the Congress may object to this pilot because a successful outcome might result in pressure to provide the Agency with increased flexibility and fewer ceilings thereby limiting their control over the way the Agency spends its funds.

Cost of Implementing: There will be some system development costs to the pilot organization for tracking the block of funds and associating the expenditures with program activities.

**INITIATIVE #2: ESTABLISH A COLLABORATIVE PLANNING PROCESS**

The Initiative: Establish a revised and collaborative planning process within the Agency for determining operating plans and quarterly allowances. This will provide program managers with more flexibility in the timing of expenditures. This process needs to start early in the fiscal year and needs to substantially reduce the time between passage of the Agency's appropriations and the time that programs receive their funding targets, less any taps at the Administrator or AA/RA level. More emphasis should be placed on developing realistic, prioritized operating plans which are then communicated to all involved in executing the plans. Schedule periodic reviews to evaluate and modify the plans. In order to review the plans, develop criteria for effective financial management. Using these criteria, provide constructive feedback to each manager so that they can continuously improve their performance in this area.

Who/When: This initiative could be implemented immediately but there could be some lag in the availability of the data reports. Interim reports could be developed by OARM and by program staff for the current year planning, tracking, and plan modifications.

Barriers: There is likely to be resistance from program managers to any formal review process. There may also be some resistance from managers in the financial management community and managers in programs to the more "open book" process envisioned. Congressional approval of the Agency's operating plan could also cause delays in providing funding targets.

Cost of Implementing: Low. Can be done in-house, with some limited resources to develop additional reports. Increased management involvement in the process should be more than repaid by more focused and effective spending.

**INITIATIVE #3: AUTOMATICALLY RRECERTIFY MULTI-YEAR FUNDS**

The Initiative: Automatically recertify multi-year funds for expenditure in the second or subsequent years to complete the implementation of office and program management plans. The proportion of funds recertified may be linked with the incentives discussed in Initiative #6.

Who/When: In a July 8, 1993 memo, the Acting Assistant Administrator for OARM stated that the Agency's policy for FY93/94 will be to carry over all unobligated AC&C and R&D funds for the programs continued use. If this new policy proves to be successful, it should quickly become permanent Agency policy and be expanded to include all relevant Agency appropriations.

Barriers: There may be some resistance, particularly in the resource community, to these changes. Also, this would limit funds available to be tapped for additional requirements to those tapped at the beginning of the year. (See Initiative #2)

Cost of Implementing: Very low. Part of the Team's recommendation regarding carryover funds was already adopted for FY 93/94.

**INITIATIVE #4: FLEXIBILITY AT OMB/CONGRESS**

The Initiative: Limit the number of appropriations and ceilings. Establish a revised, collaborative planning process between EPA and OMB for the determination or elimination of quarterly fund allocations to EPA. Request the Congress to consider appropriations without sub-appropriation restrictions and earmarking of funds. Eliminate differences in the various appropriations (e.g., training is funded by both the Administrative Expense and Extramural ceiling in the AC&C appropriation, but only the Extramural portion of the Superfund appropriation.)

Who/When: The Administrator or Assistant Administrator for OARM should lead this initiative. Staff support from OARM will be required to develop and present detailed options and to develop and implement necessary modifications to EPA financial systems to accommodate these changes.

Barriers: OMB and the Congress may be reluctant to make such fundamental changes to the Agency budget structure.

Cost of Implementing: Low cost, but high investment of energy to address these issues.

**TARGET/ACTION CATEGORY #2: INCREASE THE IMPORTANCE OF FINANCIAL MANAGEMENT**

Elevate financial management and associated administrative functions to the same level of importance as program activities. Increase managers' understanding of and appreciation for good financial management. Remove barriers to managers' involvement in financial management.

**INITIATIVE #5: CLARIFY AND EXPLAIN THE PROCESS**

The Initiative: Increase managers' awareness of financial management issues, systems, and processes. Clarify roles and responsibilities of all levels in the financial management chain, in both the financial management staff as well as in program staff. Insure that this information is widely disseminated in a "plain English" format, such as a financial management primer, training modules, and interactive computer systems. Include experience in financial management as a key factor in selection of supervisors and managers.

Who/When: A workgroup of staff and managers representing OARM, the program financial management staff, program managers, and the regions should compile available information and clarify gaps in information as well as policies and procedures. The Resource Management Committee may be able to provide assistance. The EPA Institute should have the lead to work with this group to assemble the material in formats that are easy to use by Agency personnel.

Barriers: To the extent that managers do not perceive financial management to be a high priority, it will be difficult to get their support for becoming more informed about, and more involved in the financial management of their organization.

Cost of Implementing: Low. Can be done in-house, with workgroup and some OARM and program resources to develop methods of disseminating information. Some resources will be needed to develop customized interactive computer training.

**INITIATIVE #6: CREATE INCENTIVES FOR GOOD FINANCIAL MANAGEMENT**

The Initiative: Create personal and programmatic incentives for managers who practice prudent financial management practices. These incentives may include 1) personal awards, 2) additional program funding, and 3) having fewer or no ceiling limitations (as discussed in Initiative #1).

Who/When: The same workgroup mentioned in Initiative #5 could be tasked with the development of an incentive program. Work should begin early in FY94 to take advantage of incentives that may affect year-end spending.

Barriers: Some may feel that this is part of management's job and should not require a specific incentives program. Also, funding may be required to implement the system, depending upon the specific recommendations.

Cost of Implementing: Can be done in-house, with a workgroup. Depending upon recommendations, may require shifting of resources or additional funding.

**INITIATIVE #7: REVIEW ORGANIZATIONAL STRUCTURE AND CAREER PATHS FOR FINANCIAL MANAGEMENT FUNCTIONS**

The Initiative: Break down barriers between budget and financial management responsibilities, and review the grade structure for financial management functions. Traditionally, these positions have not been classified as high as comparable budget positions. Also, review the criteria used to assign staff to the various job series and determine any training needs for financial management staff to continue to advance. Encourage career paths which include experience in both financial management and budget formulation. Also, encourage rotational assignments by program staff to financial management positions and vice versa so that there is a better understanding of the needs and responsibilities of these two groups.

Who/When: The Office of Human Resources Management, working with the Comptroller, should undertake a review of the grade and classification structure for financial management positions and develop options for a one or two year program for staff which would include a wide variety of financial and budget tasks. This initiative could begin immediately, depending upon resource availability. All offices should evaluate the organizational hierarchy and develop options to encourage equity between financial management and budget staff. This evaluation should include the identification of opportunities for rotational assignments.

Barriers: Current requirements to reduce staff as well as specific reductions at the higher grade levels create a significant barrier to this initiative. Additional funding may be required to support any increase in grades. Existing OPM requirements for the various job classifications will also impede efforts to encourage breadth of experience.

Cost of Implementing: Can be done in-house, with a workgroup. Depending upon recommendations, may require shifting of resources or additional funding.

**TARGET/ACTION CATEGORY #3: IMPROVE FINANCIAL MANAGEMENT INFORMATION SYSTEMS**

The Agency relies on a system of sometimes incompatible, contractor owned and/or maintained computer systems to store, process, and retrieve financial data. There is a proliferation of information systems within the Agency (including planning, budget, finance, property, program accomplishment) that are not linked in a way that permits managers to use information in making sound program and financial decisions. Data input is often duplicated and information input into multiple systems often cannot be reconciled.

**INITIATIVE #8: SHORT-TERM IMPROVEMENTS IN IFMS**

The Initiative: Implement a number of short-term actions to increase access to the current system. 1) Improve training, both for staff and managers. Also, increase access to data by working with users to set short-term goals for defining data needs and developing more useful reports. 2) Improve communication to all potential users, including managers, about available services such as training and user groups. Evaluate a number of communication methods (e.g., do not assume that everyone has access to E-MAIL). 3) Conduct periodic customer surveys (via written questionnaires to current and potential users, especially managers) and regular meetings of focus groups composed of system developers and users in the program offices.

Who/When: As soon as possible, the Office of Administration and Resource Management should develop additional training, investigate options for increased communication, and develop customer surveys. The EPA Institute may be a resource to assist in training development.

Barriers: Many managers have little interest in financial management and, thus, may be unwilling to devote resources to improving the utility of IFMS or other financial management systems. There are many stakeholders with a vested interest in the current system which was designed to provide Agency level data for external reporting, rather than data needed by individual programs.

Cost of Implementing: There may be some costs involved, particularly in the development of additional training and in the development and administration of the customer surveys.

**INITIATIVE #9: IMPROVED FINANCIAL MANAGEMENT INFORMATION SYSTEM**

The Initiative: Develop a system that continues to meet both the Agency's legal accounting requirements and provides the additional flexibility that program managers require to perform good financial management. The system must efficiently collect, process, track, and report financial information in a way that optimizes utility for all users in the financial process. Utilization of contractors may remain essential to the process, but it is important to maintain control of, and expertise in the system within the Agency.

Develop the system based on uniform global guidelines to assure data compatibility and comparability and require adherence to these guidelines. Allow data from program systems to be summarized and linked to an aggregate system. Output options must be user friendly and available in hard copy or directly from PC applications so that managers have greater access to pertinent financial data. Data collected from the customer surveys and

focus groups discussed in Initiative #8 is critical to the effective design of the new or revised system. Additional input could be obtained through an evaluation of one or more systems currently operating in other Federal Agencies.

The following are three possible implementation options:

1) Continue to improve IFMS with renewed emphasis on linkage to other systems, user interface (especially with program managers) and output needs;

2) Design a new, thoroughly planned custom system, preferably developed in-house with qualified new EPA staff; and

3) Purchase another "off-the-shelf" software package that can be modified and maintained by EPA staff.

Who/When: First, an internal workgroup of representatives from the financial, information management and program communities should evaluate the three options and recommend the best to the Administrator. OARM should have the lead in developing the chosen option, with continued input from the user community. A process to quickly resolve any issues that arise must also be in place. The workgroup evaluation should happen early in FY94 but the development or revision of the system may take several years.

Barriers: There is no "quick fix" for this problem. There are many stake holders and many with a vested interest in the current systems. The integration of program subsystems may lead to resistance from the current owners of those systems because they may fear loss of control. Since some program managers do not see the need to have such data readily available, there may not be support for the potentially large expenditures and time required to achieve the goal. The current dependence on contractor support may hamper the Agency's ability to develop a new/revised system because essential expertise is outside the Agency.

Cost to Implement: The cost to revise the current system or develop a new system is likely to be large. To date, the Agency has spent about $10-$15 million on the development of IFMS. In FY92, a $2 million cut at the beginning of the fiscal year slowed additional planned development and created some start-up problems when funds became available later in the year. It is difficult to estimate the costs for this initiative before the options are evaluated, but an estimate of $10 - $15 million over 3 to 5 years seems reasonable.

**BENEFITS**

The financial management improvements recommended in this report will increase the Agency's ability to direct its limited

resources to the most critical environmental priorities. There will be a better link between strategic planning, budget formulation and budget execution, as well as an increased ability to evaluate spending against the budget and adjust future budgets as necessary. Managers will understand financial management, be involved in the management of their funds, and be able to assure that funds are expended in a cost-effective manner on priority projects. Increasing flexibility will empower managers to seek creative and innovative ways to maximize resources and to realize efficiencies in the overall management of their programs. By more effectively targeting the Agency's resources on key environmental priorities, some resources may become available to fund additional projects.

**MEASURES OF SUCCESS**

Qualitative Measures:

1) The ability of the Agency to direct resources to the most pressing environmental problems.

2) Effective obligation of multi-year funds, but not necessarily in the first year of availability.

3) Management accountability based on real program accomplishments as specified in the office or program management plan.

Quantitative Measures:

4) There is an increase in the number of managers who have control of their budgets and are routinely involved in financial management planning and review of spending.

5) There is a steady, planned flow of obligations and outlays throughout the entire fiscal year as well as a significant decrease in end-of-year spending activity.

6) An integrated financial management system will provide real-time data needed for reporting requirements, day-to-day program operations, and other managerial functions.

7) There is a decrease in the resources required for data entry and reconciliation of data in subsystems because of clearer data requirements and the elimination of redundant systems.

8) There is a decrease in FMFIA vulnerability in financial management areas throughout the Agency.

9) There is a decrease in long-term unliquidated obligations.

# REPORT OF THE *INTERGOVERNMENTAL PARTNERSHIPS* TEAM

NATIONAL
PERFORMANCE
REVIEW

**INTERGOVERNMENTAL PARTNERSHIPS**
August 6, 1993

Executive Summary

In the past decade, there has been a dramatic increase in number of federally mandated environmental programs that state, tribal, and local governments must implement. With numerous competing responsibilities, many states, tribal, and local governments find themselves hard pressed to meet environmental requirements.

EPA needs to build the capacity of state, tribal, and local governments to manage and finance the programs essential to meet environmental goals. Processes that are needlessly complex and resource intensive need to be streamlined. Barriers to innovative technology and cost-effective regional solutions need to be reduced and eventually eliminated. EPA staff assigned to largely oversight roles should be redirected to providing managerial, financial, and technical assistance to state, tribal, and local environmental authorities.

The following initiatives should help "reinvent" the way EPA does business with EPA's intergovernmental partners. Specifically, the initiatives are designed to encourage state, tribal, and local governments to set priorities based on risk; promote innovative technical, financial, and managerial approaches to meeting environmental goals; replace confrontation with a new spirit of collaboration; simplify environmental rules and regulations; and build the infrastructure necessary for the future.

Two decades of operating in a command-and-control mode have created a culture that can not be changed quickly. The initiatives proposed here would experiment with ways to make some difficult transitions in roles and long-standing policies. Depending upon the results, these pilots could provide the basis for more effective intergovernmental partnerships.

## INTERGOVERNMENTAL PARTNERSHIPS INITIATIVES

# ADDRESS MULTIMEDIA PRIORITIES: NEW YORK STATE PILOT

WHAT:
In this project, EPA will work with New York State to conduct multimedia inspections, permitting, and enforcement actions directed toward the most significant sources to achieve greater risk reduction and pollution prevention.

WHO:
This project will involve EPA (Region 2, OAR/OW/OSWER/OE) and New York State training and compliance coordinators for the various programs. In addition, representatives from different regions, NEIC, industry, academia, environmental interests, and associations (such as STAPPA/ALAPCO) will be involved.

WHEN:
This project has three stages. The first consists of developing a multimedia approach to inspections and training staff. New York State has already developed a multimedia inspection protocol and has requested assistance from EPA in training. The second stage will involve evaluation of the multimedia approach, beginning during the 1993 inspection season and continuing through 1994. The final stage will transfer these approaches to other states.

BARRIERS:
Among the barriers are the entrenchment of media-specific programs and staff resistance; need for cross-cutting offices or committees to overcome organizational barriers; the complexity of existing regulations and training inspectors; and lack of flexibility in EPA and state regulations. Understanding of these and additional barriers will be refined during the second stage.

COSTS: Not available at this time.

BENEFITS:
By taking a multimedia approach, true reductions in pollutant loadings can be achieved instead of shifting pollutants among media. By examining a facility comprehensively, the inspector and facility manager can identify the problems that pose the greatest risks. A coordinated enforcement approach would reduce the number of inspections and conflicting reports. Moreover,it should foster a greater sense of partnership as environmental regulators understand the perspectives of facility managers better.

EVALUATION CRITERIA:
Evaluation criteria will include the effectiveness of the training; the success of the multimedia inspection program; adoption of these programs in other states; and pollution prevention measures taken.

CONTACT: Mark Siegler, SSCD/OAR (703-308-8673).

# TARGET GREATEST RISKS: MASSACHUSETTS

WHAT:
In this pilot project, the Commonwealth of Massachusetts will be working with Region 1 to provide greater flexibility to target the highest priority facilities for inspection and enforcement actions. The project will include developing improved protocols for the inspection of facilities under the Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act. In addition, this initiative will develop new parameters and systems for reporting inspection and enforcement data and measures of success.

WHO:
Program staff and attorneys from Region 1 and the Commonwealth of Massachusetts.

WHEN:
The current schedule calls for piloting the protocols for inspection of facilities in fiscal year 1994. The time frame for the development of new parameters and systems for reporting inspection and enforcement data will follow.

BARRIERS:
It will be difficult to reconcile the inspection requirements in the three programs. In addition, there have been long-standing compatibility and data systems problems with state reporting.

COSTS:
A rough estimate for the total state/federal FTE commitment is two workyears, including facilitators. There are no contract dollars required for this.

BENEFITS:
The project should improve the ability to do multimedia inspections which would lead to improved compliance as well as to identifying emission reduction possibilities. Improved reporting will also focus managers more on environmental results.

EVALUATION CRITERIA:
Success will be measured by how well the protocols for inspection of facilities worked in the pilot conducted in FY 1994 and the extent to which they are adopted by Massachusetts and potentially other states. In addition, success will be measured by the extent the data reporting systems are improved from both EPA and the state's perspectives.

CONTACT: Harley F. Laing, ORC, Region I (617-565-3432)

# DETERMINE PRIORITIES FOR NEW ENGLAND COMMUNITIES

WHAT:
This initiative would identify the most significant environmental mandates for communities in New England. It would assess the financial capability of communities to implement competing mandates as required by existing laws. Where a community does not have adequate financial capacity, the states and EPA will assist the community in seeking alternative financing solutions. If that fails, the states and EPA will consider environmental risk and benefits in negotiating alternative schedules with the community.

WHO:
New Hampshire (lead State), other New England States, Region 1.

WHEN:
New Hampshire has already initiated the project. EPA will work with New Hampshire and the other New England States to compile the data on mandates and costs in the Spring of 1994.

BARRIERS:
Cost assumptions are uncertain although EPA will provide guidance on consistency. If alternative schedules are necessary for some communities, affected regional and headquarters programs and attorneys are likely to resist. Also, conducting risk and cost assessments for hundreds of communities may be difficult to do.

COSTS:
The initial costs will be moderate, involving mostly staff time at the states and EPA, and $50,000 of contractor support to refine cost estimates. It would also be beneficial to develop a data management system to input the data. Contractor assistance to help develop risk and benefit evaluations may also be needed.

BENEFITS:
The initial phase of this project will provide invaluable data to the States and Region 1 on the true cost of environmental mandates to communities in New England. If we have to negotiate alternative schedules with some communities, it will demonstrate that all levels of government can successfully work together to assure that the greatest benefits can be attained for the dollars available.

EVALUATION CRITERIA:
The success of the first phase of this project will be judged on the quality of the assessment of New England communities. Ultimately, success will be judged on finding alternative financing or negotiating schedules as needed.

CONTACT: David Fierra (617-565-3478)

# PROVIDE FLEXIBILITY FOR RISK-BASED PRIORITIES: OHIO PILOT

WHAT:
With assistance from EPA and the State of Ohio, eight Ohio cities including Columbus and Cleveland are going to conduct comparative risk studies. Once the results are in, these cities will want flexibility to address the greatest risks first. Over the next two years, EPA will work closely with the state and those cities to develop a process that provides for flexibility.

WHO:
OPPE/OW/OSWER/OAR/EPA; State of Ohio; Columbus, Cleveland, and six other cities; industry, environmental, and citizen representatives; academic experts; Congressional representatives; and other interested parties. This effort may be broadened to include the New England states and their communities as well as others which are developing comparative risk assessments.

WHEN:
Over the next two years.

BARRIERS:
Many environmental statutes are very prescriptive and do not provide for flexibility. EPA may lack the resources to revise problematic regulations. Environmental groups may perceive that efforts to provide flexibility will thwart achievement of national environmental goals.

COSTS:
EPA has already committed $200,000 over 2 years for the risk assessments. Another $250,000 could be used to develop a process for providing greater flexibility.

BENEFITS:
The issue of unfunded mandates is becoming increasingly important. EPA needs to pursue ways to accommodate local governments who can not afford to comply with mandates within the existing compliance schedules or for whom the costs of compliance are not justified by the benefits that would be achieved.

EVALUATION CRITERIA:
Will EPA be able to be flexible and allow local governments to set priorities and address problems in a cost-effective way? Are the national environmental goals being met? Will Congress agree to provide authority, if necessary, to balance costs and benefits and consider alternative strategies to achieving environmental goals?

CONTACT: Mike Pompilli (614-645-6228)

# ENCOURAGE INNOVATIVE APPROACHES TO WATER QUALITY ISSUES

WHAT:
EPA needs to provide flexibility to states and water resource management authorities to achieve water quality objectives by allowing trading and other innovative approaches. This initiative is designed to (1) further our understanding of the role for economic incentives and other environmental innovations in achieving water quality objectives, and (2) advance their use at the local, state, and Regional levels.

WHO:
OW/OPPE/EPA, state, tribal, and local officials; industrial, academic, environmental, and citizen representatives; Congressional officials.

WHEN:
Over the next year, EPA will work with state and local governments to locate potential waterbodies for analyzing the feasibility of trading and develop a trading program. As additional trading programs develop, EPA will promote them by providing fact sheets, sponsoring workshops, and other means. Over the next two years, EPA will develop guidance to states, tribes, and water resource management authorities in the use of non-traditional strategies. Finally, EPA will encourage inclusion of appropriate language in the Clean Water Act.

BARRIERS:
Many states and water resource management authorities may be reluctant to use economic incentives, trading, or other innovative approaches. The Clean Water Act is silent on the use of these approaches. Developing the water quality information necessary for trading can be resource intensive.

COSTS: To be determined.

BENEFITS:
The costs of achieving water quality goals by reductions from uncontrolled or non-traditional sources are far less than trying to ratchet down on conventional sources. With creative, less costly approaches, water quality goals should be met far sooner.

EVALUATION CRITERIA:
Training EPA, state, tribal, and local staff in trading and economic issues; pilot projects; amendments to Clean Water Act.

CONTACT: Richard Kashmanian, OPPE (202-260-5363)

# STREAMLINE STATE REVIEW OF WATER TREATMENT TECHNOLOGIES

WHAT:
This initiative will build upon ongoing work to develop both drinking water and wastewater technology design review protocols. These protocols will establish common frameworks between States so that technologies can be introduced across borders without conflicting requirements.

WHO:
Office of Ground Water and Drinking Water; Office of Wastewater Enforcement and Compliance; state and local governments; and equipment suppliers will be the primary participants.

WHEN:
The Office of Water (OW) has been working for several years on the development of some design review protocols. These efforts will be accelerated. Once the protocols have been reviewed, EPA will engage in training for the state engineers, local officials, and other parties.

BARRIERS:
The major barrier to the success of this effort will be the deeply rooted conservatism of many State design review engineers.

COSTS:
The costs are about $500,000 over 2 years to help develop consensus protocols, provide incentives to States to adopt such protocols, and for training.

BENEFITS:
This project, if successful, would yield enormous benefits. Potentially thousands of small drinking water systems and wastewater systems would be able to utilize lower cost technologies to comply with drinking water and wastewater treatment regulations. Cumulative cost savings could easily be hundreds of millions of dollars. More water systems would be capable of complying with drinking water standards leading to substantial public health benefits as the exposure of thousands of individuals to drinking water contamination is reduced.

EVALUATION CRITERIA:
This is an ongoing, long-term effort. We would hope to see meaningful changes in state design review practices starting in about 2 years. Success would be measured by the number of states which adopt a revised and improved drinking water or wastewater technology design review protocol.

CONTACTS: Peter E. Shanaghan, OGWDW, 202-260-5813, and Sylvia Bell, OWEC, 202- 260-7255.

# CREATE NEW CAPITAL WITH PARTNERS REBUILDING AMERICA

WHAT:
American communities face a severe shortfall in funding the federal and state mandates for environmental services and infrastructure. EPA's Partners Rebuilding America initiative will remove regulatory impediments to private investment in municipal wastewater treatment plants and allow communities to take advantage of a potential new source of capital to meet environmental needs.

WHO:
The partnership would include participating municipalities and sewer districts, private sector investors, and the financial market. OW would have the lead for EPA.

WHEN:
EPA is preparing for public meetings to facilitate broad public involvement in regulatory and policy changes. Because our constituents have advised us to proceed expeditiously and because of the critical need for additional wastewater infrastructure capital we intend to begin the public participation process in early fall of 1993.

BARRIERS:
EPA regulatory and procedural impediments will be addressed by an internal work group. There are no statutory impediments.

COSTS:
The Agency will spend approximately $100,000 to support public meetings and to research the potential market and benefits.

BENEFITS:
Thousands of American communities with little hope for State Revolving Fund loans may replace, expand, or upgrade wastewater treatment works, preserving the infrastructure that made possible our progress toward clean water, and supporting our growing economy. Proceeds can be used for other environmental or high priority needs such as increased police protection or better education. States gain new flexibility to use State Revolving Funds for high priority pollution challenges such as storm water runoff, combined sewer overflows, and non-point source pollution.

EVALUATION CRITERIA:
The number and dollar value of privatized wastewater treatment plants, and the value to ecosystems of improved wastewater treatment and other environmental initiatives undertaken.

Contacts: Ben Lesser (202-260-4060) and Michael Deane (202-260-4060), both of OW.

# FOSTER REGIONAL BOND BANKS TO FINANCE INFRASTRUCTURE

WHAT: Many small communities simply cannot afford to access the capital markets to finance environmental facilities. Most states do not have bond banks or other special environmental finance programs to help small communities access the capital markets. This initiative would create regional (multi-state) pooling mechanisms provides low cost financing for the planning, design, construction, replacement, and rehabilitation of drinking water, wastewater, and solid waste facilities, and best management practices.

The regional bond banks would be federally-chartered to provide finance assistance in at least two ways: (1) purchasing the debt obligations of local communities using the proceeds from the bank's bond sales, or (2) pooling several issues into one large issue and selling it on behalf of the communities involved.

WHO:
The partnership envisioned would include the federal government, participating states, participating local communities, the credit markets, and the regional bond banks. EPA lead is OARM.

WHEN:
In the near-term, the first step is to complete a feasibility analyses of the financial, legal, and institutional requirements inherent in the creation of regional bond banks.

BARRIERS:
There is no precedent for establishing regional bond banks and it would be necessary to fully examine all financial, legal and institutional issues.

COSTS:
There would be no revenue loss to the U.S. government as a result of the bond banks' debt issues since local communities already have the authority to issue tax-exempt debt.

BENEFITS:
The significant cost advantages of regional bond banks lie with the larger credit pools they create. Greater diversification from pooling a large number of small issues improves the banks' credit rating, lowering interest rates for participating communities. The annual savings to a small system of an interest rate reduction of 1.5-2.5 percent amounts to $15,000-25,000 for each million dollars of loan outstanding.

EVALUATION CRITERIA: The feasibility analysis successfully identifies the key requirements to establish regional bond banks and accurately specifies the steps necessary for implementation.
CONTACT: George Ames (202-260-1020) of RMD/OARM/EPA.

# FACILITATE RESTORATION OF CONTAMINATED PROPERTIES

WHAT:
Hundreds of potentially valuable properties in urban and former industrial areas are not undergoing clean up or redevelopment for fear that the site will later be declared a Superfund site. In this pilot project in Elkhart, Indiana, Region 5 will provide technical assistance and possible limits on future liability in order to expedite the assessment and clean up of several of the city's properties.

WHO:
EPA's Superfund program and Region 5; Elkhart, Indiana; State of Indiana; developers, property owners, citizens, and other interested groups.

WHEN:
Region 5 will begin working with Elkhart to assess the properties, characterize the risks, and take removal actions, if necessary. EPA Headquarters will be involved in policy discussions concerning what liability protection EPA can provide for the city, developers, and other parties. The pilot may begin as early as this fall.

BARRIERS:
The extent of protection from future liability under Superfund will be a major issue for the developers. Whether EPA and those interests can reach an agreed upon approach will be critical to the success of the pilot.

COSTS:
The costs associated with EPA's technical assistance to Elkhart will be outweighed by the potential savings of returning inner-city properties to commercial or other purposes in a cost-effective way.

BENEFITS:
If this pilot is successful, millions if not billions of dollars can be saved over time as properties are returned to productive use faster and at far less cost than under the current Superfund approach.

EVALUATION CRITERIA:
The success of the pilot will be measured in terms of how long it takes to return the properties to commercial or other purposes and at what cost, assuming that restored site meets acceptable health and environmental goals.

CONTACT:
Judy Beck, Region 5 (312-353-9391).

# PROMOTE STATE/EPA DIALOGUE ON NONPOINT SOURCE PROGRAM

WHAT:
This initiative is intended to reach agreement on improvements needed in EPA's administration of the nonpoint source programs (NSP) to attain better state nonpoint source programs and overall long term improvement in water quality. An initial meeting of managers and staff of the New England states and New York and New Jersey and Regions 1 and 2 was held on July 8, 1993. At that meeting barriers were identified and action plans developed to address the most significant barriers.

WHO:
The New England States and Region 1; possibly New York, New Jersey and Region 2.

BARRIERS:
The existing EPA culture and guidance, particularly relating to competitive grants, inhibits states from performing long range planning and integration of the NPS program into their overall strategic plans. In addition, some states have not developed an effective management institution of their NPS programs.

COSTS:
The only additional costs will be state and EPA staff time to develop and follow through on action plans and monitor the desired changes.

BENEFITS:
This effort should allow the states to better address the highest priority water quality problems identified in their strategic plans through better long-term planning for their NPS programs, more effective integration of their programs and targeting their highest priority resources. An additional benefit will be the saving of staff time at the states in preparing and managing competitive grants and at EPA in rating and ranking competitive grants. These freed up resources will be used to significantly improve the planning and management of the NPS programs and allow EPA to provide better technical assistance to the States.

EVALUATION CRITERIA:
The states will be able to determine if the nonpoint source program is administered by EPA in a way that furthers the goals in the states' strategic plans. Also, the states will be able to assess the administrative savings in managing the grant. EPA should be able to assess the overall improvement of a state's nonpoint source program. Region 1 will survey the states on the impact of changes made to the program.

CONTACT: David Fierra (617-565-3478)

# BUILD TRIBAL PARTNERSHIPS

WHAT:
Several models now exist for forging strong communication links and partnerships for cooperative efforts across different government levels to address environmental problems. Yet they often do not include tribes or are in effect only in certain parts of the country. A Task Force will explore how the models can be used with tribes and will develop new approaches where none currently exist. These may include establishing an EPA/Tribal Committee, building tribal partnerships with states and/or locals, enhancing communication within EPA on Indian issues, building electronic networks for tribes, and instituting Regional Liaisons to work directly with tribes.

WHO:
Representatives from EPA, tribal, state, and local governments.

WHEN:
Establish Tribal Partnerships Task Force in fall, 1993. Explore successful models of partnerships and communications systems and develop plan for expanding existing models and establishing new models. Report recommendations by fall, 1994, then implement.

BARRIERS:
There are many tribes including some that are quite small with limited resources. There is also a general lack of understanding of Indian issues and EPA's responsibilities to tribes. Tribes will be skeptical given feebleness of past efforts. State power rivalries with tribes may hamper some efforts.

COSTS:
The task force may require 1-2 FTE and $25,000 travel costs. Costs of implementing recommendations will be evaluated later.

BENEFITS:
A strong system of communications will allow tribes to learn from each other what approaches work for them, encourage coalitions to be formed, and help break down the barriers that prevent cooperation. Solutions to environmental problems can be developed quicker and more effectively and relationships will immeasurably improved. Tribes will be better able to negotiate solutions to environmental risks caused outside reservations. Tribal coalitions and partnerships with other governments could lead to significant economies of scale in solving environmental problems.

EVALUATION CRITERIA:
Have tribes become more articulate and effective in solving environmental problems because of the improved communications and partnerships? Is EPA more knowledgeable about tribal issues and dealing more effectively with them?

CONTACT: Catherine Tunis, 202-260-2698

# REGULATORY REVISION TASK FORCE

WHAT:
This initiative would convene state, tribal, and local officials to determine what regulatory requirements interfere with achieving environmental goals in a cost-effective and efficient manner. EPA would identify the most significant regulatory problems and revise them as appropriate. The task force may also identify needed statutory changes.

WHO:
EPA (OPPE lead); State, tribal, and local officials; industrial, environmental and citizen representatives; Congressional officials.

WHEN:
EPA could take advantage of national meetings of state and local government associations (e.g., NGA, NLC, NACo, ICMA) and convene meetings this fall. The project should result one or more regulatory revision initiatives or legislative reform proposals by next spring and become an on-going process, consistent with the section 610 of the Regulatory Flexibility Act which requires rules to reviewed within 10 years after promulgation.

BARRIERS:
Program offices will be reluctant to undertake revisions to existing regulations when they are hard pressed to issue new ones, often with statutory or court-ordered deadlines.

COSTS:
$200,000 over two years to support convening officials and analysis of regulatory issues. Headquarters offices will need to direct resources necessary to develop revised regulations.

BENEFITS:
Regulatory revisions could provide the flexibility that state, tribal and local governments have been seeking to take innovative approaches that meet environmental goals with fewer resources. Millions of dollars could be saved annually, for example, by allowing entities to find alternative ways to meet standards for stream quality rather than installing expensive technologies (Boulder, CO saved $15 million by taking alternative approaches to improving Boulder Creek).

EVALUATION CRITERIA:
EPA could assess the effectiveness of revisions by comparing the costs of compliance to the existing and revised regulations.

REFERENCES: Section 610 of Regulatory Flexibility Activities

CONTACT: Paul Lapsley (202-260-5480)

# ENSURE INPUT INTO REGULATORY DEVELOPMENT PROCESS

WHAT:
The Regulatory Development Team is proposing that before developing a new regulation senior managers consider the extent to which state, tribal, and local governments should be involved. This initiative is to explore alternative ways in which EPA can involve state, tribal, and local governments in EPA's regulatory development process and to pilot these approaches on three to five rulemakings.

WHO:
EPA senior managers (OPPE lead); state, tribal, and local government officials; environmental and industry groups; trade and professional associations; and other interested parties.

WHEN:
In fall 1993, EPA will convene focus groups to analyze the existing barriers to involving state, tribal and local government representatives and develop ways to ensure they have opportunities to have timely input. Three to five rulemakings will be selected to pilot these approaches over the next two years.

BARRIERS:
EPA often finds itself short of time and resources necessary to bring state, tribal, and local officials to Washington, D.C. or other places for meetings. Environmental or industry groups may threaten to sue EPA on procedural grounds if EPA does not strictly follow the Administrative Procedures Act.

COSTS:
To support the focus groups and pilot projects, $150,000 would be needed to identify participants, arrange for meetings, and provide training to workgroup chairmen on the new techniques of involving state, tribal, and local government representatives.

BENEFITS:
Over the past decade, EPA's regulations have placed a significant burden on state, tribal and local governments to manage and finance environmental programs. This initiative would help EPA understand the impacts of various options and develop more flexible, cost-effective regulations.

EVALUATION CRITERIA:
EPA can evaluate the degree to which participation in regulatory development efforts by state, tribal, and local governments has increased, especially in the pilot projects. EPA can also assess the degree to which state, tribal, and local governments are able to implement the requirements in a cost-effective way.

CONTACT: Maryann Froehlich (202-260-4034)

# STREAMLINE REPORTING FOR EMERGENCY PLANNING

WHAT:
State, tribal, and local governments would work closely with industry to define the usefulness of information required under various authorities and attempt to streamline the information reported. The pilot would specifically look at the burden to local governments of storing and making use of this information and propose ways to make the reports more "user friendly".

WHO:
EPA (OCEPP lead), state, tribal, and local officials, industry representatives; Local Emergency Planning Committee (LEPC) members.

WHEN:
This project should begin in fiscal year 1994. Over a period of a year, the pilot should assess the federal and state reporting requirements on industry, which in turn must provide information based on this to local government and LEPCs.

BARRIERS: To do a thorough project, there should be involvement and cooperation from various offices in EPA and possibly other government agencies as well (OSHA, DOT). This could mean a delay in the time frames outlined.

COSTS:
Resources will need to be directed to States to conduct the pilots; an estimated $500,000 over two years to conduct 5 pilots and evaluate the results. EPA would need to allocate 2 FTE (HQ/Region) to oversee the projects, analyze the results, and disseminate the lessons learned from pilots.

BENEFITS:
Local, tribal, and state governments should be able to conduct comprehensive emergency planning without being overburdened by reports. Information from facilities should not duplicate other reporting requirements and thus ease the burden on industry.

EVALUATION CRITERIA:
As part of the pilot, determine the extent to which reporting is reduced and whether state and local governments are more easily able to use the information received for emergency planning purposes. To the extent possible, measure resource savings for participating industries as well as state, tribal, and local governments.

CONTACT: Sherry Fielding (202) 260-6174; David Speights (202) 260-5338

REFERENCES: SARA - Title III, Clean Air Act Amendments, Oil Pollution Act

# PROMOTE A NETWORK OF "DATA HIGHWAYS"

WHAT:
Take advantage of the explosion of information highways and develop user friendly technologies to access and exchange environmental information among federal, state, tribal, local, and foreign governments, the public and regulated communities.

WHO:
OIRM (lead), OPPE, OCEPA, OIA, OCEM, Regional Operations and State/Local Relations Office

WHEN:
An intergovernmental task force would be convened in the next few months to address key issues: cost-effective ways to build upon existing networks (e.g., State/EPA Network for Data Sharing, Internet/National Research Education Network (NREN), EPA's Online Library System (OLS), Fedworld). Pilot projects would test usefulness and access before development of data highways and public access mechanisms.

BARRIERS:
Among the barriers are programmatic offices' reluctance to share information; lack of investment in environmental and policy-relevant data; lack of support to implement data integration work; and cultural barriers to using information technology.

COSTS:
Task force would cost approximately $100,000. Implementation costs depend upon the complexity of the pilot projects. [Several options have been developed by OIRM] Baseline for a national program is estimated at $4 million, would include public access to EPA data via INTERNET, electronic bulletin board access to the inventory of EPA services, products, holdings, and systems, and comply with Federal Locator requirements.

BENEFITS:
Qualitatively, the proposed "data highway" would result in better informed decision-makers and improved understanding of environmental quality and relative risk issues by the public as well as regulators. Would provide information for better risk-based priority-setting and pollution prevention measures.

EVALUATION CRITERIA:
Flow of data over "highways" and environmental results. Paradigm shift in managing resources, using environmental data to set multimedia priorities in geographic regions and empowering state, tribal and local governments.

REFERENCES:
The need for improved access to environmental data bases is well documented (i.e., by OTA, GAO, Office of Science and Technology).

CONTACTS: Jacques Kapuscinski (703-235-5626), Emma McNamara (202-260-1522)

# DEVELOP A LEARNING-BASED SYSTEM: WASTEWATER TREATMENT PILOT

WHAT:
EPA's current "training" model is a classroom-style training program focused on a single issue or media program. This initiative would develop a more holistic learning process for wastewater treatment operators to: (1) improve internal wastewater treatment plant processes and (2) to work with their industrial users to identify pollution prevention opportunities. The goal is an on-the-job learning and performance support system (Learning, Information, and Performance Support System or LIPPS) that is generally available on the "technology highway".

WHO:
EPA (lead OARM), state, tribal and local government agencies; the regulated industry; universities experimenting with learning technologies; and other interested parties.

WHEN:
This proposed project will begin in the fall (FY 1994), assuming resources are available. The project will inventory existing training tools, identify the gaps, and build an integrated system that is user friendly. The project will require approximately 2 years to complete.

BARRIERS:
Participants need to have access to computer systems and have adequate training to use the new system effectively. The information needs to be accurate and kept current or it will not be credible.

COSTS:
Up to $500,000. If developed under a partnership arrangement with a private sector cooperator, rents or royalties payable to EPA could recoup some of the expenditures.

BENEFITS:
The system should offer more competency-driven, appropriately targeted, and cost-effective training. EPA will be able to substantially reduce its traditional training efforts. It will also be able to centralize guidance, policy, and training while still providing a greater degree of autonomy for wastewater treatment operators and regulatory oversight personnel.

EVALUATION CRITERIA:
One measure would be the degree of customer satisfaction with the new system versus traditional training opportunities. Another would be the number of wastewater systems in compliance.

CONTACT: Renelle Rae (202-260-3297)

# BUILD MULTIMEDIA TRAINING CENTERS

WHAT:
EPA will assist states and local governments in planning and conducting multimedia inspections and enforcement by providing them with access to tools, training, and technical assistance. States will be able to learn from one another and from EPA's experience to avoid "reinventing the wheel." The training and technical assistance will be provided by multimedia centers that will be based in EPA's existing network of training resources.

WHO:
This project will be a partnership between EPA and current training centers sponsored by universities and other academic institutions, state agencies and consortia of state and/or local agencies, and private organizations. OAR will lead this.

WHEN:
The initial stage will identify topics and existing curricula for multimedia training (4 to 6 weeks). Next, EPA will design a multimedia training program for a region or target audience (one year). Finally, materials and technical assistance will be provided to interested EPA, state, and other organizations.

BARRIERS:
Designing the curricula and training programs will be difficult, especially given the diversity of inspection and enforcement approaches under different programs and as run by different states. Funding and time constraints might restrict EPA and the states' ability to invest in a coordinated approach.

COSTS:
Not available at this time.

BENEFITS:
This project will build upon work begun by EPA program offices, regional offices, and the NEIC. Multimedia inspections and enforcement could be far more effective in achieving pollution prevention and reduction of pollutant loadings that the current single program/media approach.

EVALUATION CRITERIA:
Criteria include the extent to which multimedia training can be developed and implemented, the quality of the training provided, and the effects of the training on participants and their organizations.

CONTACT:
Mark Siegler, SSCD/OAR (703-308-8673)

# PROVIDE ACCESS TO EXISTING TRAINING RESOURCES

WHAT:
This initiative will develop a means of accessing existing training resources through a single "pointer system" (e.g., a 900 telephone number). The project would not replace existing clearinghouses and training calendar systems but provide easy and efficient access to them.

WHO:
The project would operate in partnership with all of the current sponsors of training programs and training calendar databases. OAR and OIRM will lead this effort.

WHEN:
The first stage will be to incorporate existing training into the system. (2 to 3 months). Next, the system will be designed with easily accessed "doorways" that lead to training databases. (3 months). The third stage will emphasize outreach and updating the information as on-going responsibilities.

BARRIERS:
There are few barriers to a system such as this. It will require modest resources and time to work with the various sources of information. The major barrier is that the various training calendar databases now in operation may use slightly different software so that programming will be required to allow the doorways to operate smoothly.

COSTS; Not available at this time.

BENEFITS:
EPA, state, tribal, and local government staff as well as industry representatives will have much better access to training resources than currently. Greater use of existing training resources is also likely to (1) reduce the likelihood of duplication, and (2) increase the potential for self-sufficiency for some federally-funded training programs.

EVALUATION CRITERIA:
The project will be evaluated in terms of the use of training resources and satisfaction of both the users and the training providers with the system and its services.

CONTACT:
Mark Siegler, SSCD/OAR (703-308-8673)

# INCREASE OUTREACH WITH VOLUNTEERS AND STOREFRONT OFFICES

WHAT:
EPA needs to invest more in educating citizens, small businesses, and community leaders to understand environmental issues and win their support and participation. In order to provide greater outreach to these groups, this initiative would form an EPA/ACTION partnership that would provide volunteers from the VISTA program at little or no cost to open storefront offices in inner city and rural neighborhoods and provide retired volunteers from the RSVP program to help in state, tribal, and local offices.

WHO:
EPA regional offices would work with ACTION regional offices as well as state, tribal, and local governments. EPA should explore working with professional organizations and other networks to identify retirees with a wide array of skills. Region 5 will lead this in the initial phases working with OARM.

WHEN:
Region 5 is exploring setting up a storefront EPA office in southeast Chicago with ACTION/VISTA. This project will document the steps and barriers to establishing a storefront office. If successful, VISTA volunteers will work in the community to explain how to get environmental information, present workshops, and leave behind a community organization concerned and equipped to deal with community environmental problems.

BARRIERS:
It may be difficult to identify highly capable and qualified volunteers through the ACTION programs. Renting a storefront could be expensive a complicated process for regional offices. EPA may not have the resources to train the volunteers properly and provide on-going support.

EVALUATION CRITERIA:
EPA could survey the level of awareness of environmental issues at the beginning and end of the pilot to evaluate whether the storefront office has been successful in providing outreach. The general environmental conditions of the community could also be assessed before and after to determine whether this program has had an impact.

CONTACT:
Judy Beck, Region 5 (312-353-9391)

# PROMOTE JOBS AND SMALL ENVIRONMENTAL BUSINESSES

WHAT:
This initiative proposes to direct existing federal and state training programs to create new local, environmentally-related jobs and small businesses. Emphasis will be on inner city unemployed and underemployed. Pilot projects will select a specific media (i.e., lead abatement) to train women and minorities and develop small lead abatement businesses.

WHO:
A proposal has been submitted by the City of Los Angeles, Environmental Affairs Department, to EPA's Office of Cooperative Environmental Management, in conjunction with EPA's Office of Small and Disadvantaged Business Utilization. OCEM will have the initial lead.

WHEN:
This project would have three phases: (1) Evaluate federal and state agency programs for opportunities to meet local needs for job-training, job creation, and environmentally-related small business development. Develop a strategy (6-9 months). (2) Design one or more pilot programs to test the strategy (6 months). (3) If pilot programs are successful, begin implementation to foster environmentally-related jobs (24-36 months).

BARRIERS:
Lack of funding and interest at the federal level could result in failure to develop a sound strategy. Lack of local support could stymie pilot efforts and jeopardize buy-in from small businesses.

COSTS:
Phase 1: $125,000; phase 2: $50,000; phase 3: to be determined upon completion of phase 2.

BENEFITS:
This pilot would develop a process to assess local needs and direct federal and state resources to foster environmentally-related jobs and small businesses in local communities.

EVALUATION CRITERIA:
Project will evaluate the number of persons employed in the field after the training programs and the number and success of the environmentally-related businesses established.

REFERENCES: EPA Grant Proposal #822041-01-0 submitted by City of Los Angeles.

CONTACT: Joe Sierra, OCEM (202) 260-6839.

# BUILD TRIBAL CAPACITY

WHAT:
Most tribal environmental programs are just beginning to develop the staff expertise, laboratories, monitoring capabilities, and other infrastructure that are standard for their state counterparts. A Tribal Capacity Team will develop a strategy for building the technical abilities needed to manage their own environmental programs and become full partners on the Nation's environmental team. The strategy will build upon current efforts and coordinate efforts for implementing a comprehensive program. Some of the actions may include: 1) environmental curricula for Native American schools, 2) scholarships for Native Americans pursuing environmental careers, 3) internships and IPAs for Native Americans at EPA, 4) direct technical assistance to tribal environmental programs, 5) comparative risk analyses to assist in priority-setting, 6) more equitable formulae for program funding, 7) volunteers for hands-on training, 8) more effectively sharing research results, and 9) improved outreach. Other initiatives will be developed where needed. By coordinating capacity-building efforts and using priority-setting tools such as comparative risk, the effectiveness of all efforts are increased.

WHO:
EPA program and Regional offices, representatives of Indian tribes, Congressional staff, and other agencies as appropriate.

WHEN:
Establish the Tribal Capacity Team in fall, 1993, with a report and recommendations to Administrator by fall, 1994. Implementation of the recommendations will be ongoing.

BARRIERS:
Tribal needs are great due to years of neglect and vary from tribe to tribe. There is considerable competition for scarce resources. State programs may be viewed as more important.

COSTS: Perhaps 1 or 2 FTE will be needed to staff the Team. An estimated $35,000 will allow Tribal representatives to travel to meetings.

BENEFITS:
By better understanding the risks found in diverse tribal environments, coordinating across programs, and targeting efforts where they will do the most good, the investments made to meet tribal needs will have the highest possible payoff.

EVALUATION CRITERIA:
Has the strategy included an effective mix of initiatives that will enhance tribes' ability to manage environmental problems? Is EPA implementing the Team's recommendations?

CONTACT: Catherine Tunis, 202-260-2698

# INTERAGENCY COOPERATION TO "EMPOWER" TRIBES

WHAT:
By working together with each other and tribes, Federal agencies can cut red tape and eliminate duplication of efforts. Several federal agencies have responsibility for environmental issues on Indian reservations yet agency requirements are not coordinated and sometimes conflict. (To close a landfill, a tribe must have IHS build a transfer station, get funding from BIA to match a USGS grant to monitor groundwater, then go to IHS for engineering support, then to EPA for contract support to develop a closure plan for EPA approval. Then tribes must go to Congress for a special appropriation to actually move the dirt.) EPA will lead a Task Force that will review Federal responsibilities and identify areas for cooperation. An "Empowerment Pilot" will show how tribes can accomplish the work themselves using the same resources. This effort would also assist federal agencies achieve statutory environmental requirements on reservations, thereby reducing vulnerability to tribal lawsuits.

WHO:
EPA, Bureau of Indian Affairs, Indian Health Service, USGS, HUD, other Federal agencies, Indian tribes, Congressional staff.

WHEN:
Task Force established by fall, 1993, "Empowerment Pilot" begun by early 1994, Task Force report on applicability of interagency cooperation to full range of tribal efforts to Vice President and agency heads by 1/95, implementation of recommendations by 4/95, ongoing (but reduced) Task Force effort to continue cooperation.

BARRIERS: There may be legislative and/or regulatory barriers to some multi-agency efforts. Strong leadership is needed to focus on results and overcome bureaucratic inertia.

COSTS: Perhaps 1 or 2 FTE will be needed to staff the Task Force. An estimated $20,000 would enable tribal officials to travel to meetings. The cost of the pilot could be funded from existing program funds that would be spent on the project anyway.

BENEFITS: Tribes estimate that they could increase efficiency for some actions by two or three fold. With a $50 K grant--less than the cost of contract support for one landfill closure plan--the Menominee Tribe hired an engineer, drilled monitoring wells, collected data, and developed five closure plans. This initiative would encourage cost-effective programs, reduce federal liability for failure to meet environmental requirements, and build tribal capacity for solving environmental problems.

EVALUATION CRITERIA: How much additional environmental protection is achieved? To what extent can the Federal government adjust to achieve these benefits?

CONTACT: Catherine Tunis, 202-260-2698

# SPONSOR CHARRETTES TO ADVISE LOCAL GOVERNMENTS

WHAT:
Convening a charrette or panel of experts in a given field is an inexpensive but valuable technique for providing advice to local government officials. This proposal would significantly expand the use of charrettes to help local governments explore possible financial and technical alternatives for meeting their environmental infrastructure needs.

WHO:
The charrettes held thus far have been organized by the Environmental Finance Center (EFC) at the University of Maryland under an EPA grant. Experts may come from EPA, other federal, state, and local agencies; industrial, engineering, finance, environmental, health, or legal professions; and academia. The EPA lead is RMD/OARM.

WHEN:
This is a long-term project to make charrettes a permanent function of the Environmental Finance Centers.

BARRIERS:
There may be a reluctance on the part of municipal officials to openly air their problems, although our experience to date has proven this usually to be a short-lived concern. Experts must be carefully screened to be sure that their advice is impartial and reliable.

COSTS:
The charrettes are quite economical to hold. Using university facilities and relying on pro bono contributions of panelists' time helps keep costs down. The major expenses are for organization of the session and any travel expenditures required. Total costs per charrette may range from $2,500 to $5,000. The recommended EPA support is $300,000 divided among the several Environmental Finance Centers.

BENEFITS:
Two major benefits directly result from charrettes. The participating municipalities receive authoritative advice on important environmental issues and the lessons learned are useful guides for other communities and EPA.

EVALUATION CRITERIA:
Each charrette has an evaluation sheet filled out by all participants, covering organization, focus, usefulness and suggestions.

REFERENCES: Elizabeth Granata, U. of MD, 301-405-6376.

CONTACT: George Ames, RMD/OARM (202-260-1020)

# PROMOTE CONSENSUS BUILDING AND ALTERNATIVE DISPUTE RESOLUTION

WHAT:
Traditional command-and-control approaches to regulatory development and enforcement creates unnecessarily adversarial relationships among state, local, and tribal governments and EPA. Regulatory negotiation, alternative dispute resolution as a settlement tool, and similar techniques should become standard operating procedures. This initiative is to promote the use of these tools.

WHO:
EPA (OPPE/OE lead); state, tribal, and local officials; industrial, environmental, and citizen representatives; Congressional officials.

WHEN:
In the near term, convene a task force to address EPA's use of consensus-building, alternative dispute resolution as a settlement tool under the auspices of EPA's dispute resolution specialist (i.e., the AA/OE as designated by the Administrator under the Alternative Dispute Resolution Act of 1990), and other cooperative techniques. The task force will provide EPA insight into the effectiveness of these techniques, where EPA could incorporate them, and possible pilot projects.

BARRIERS:
The largest threat to regulatory negotiations and collaborative policy dialogues at present is OGC's latest interpretation of the Federal Advisory Committee Act which prevents EPA from using contract money to assist participants with travel expenses. Greater use of alternative dispute resolution techniques hinges upon addressing the funding shortages, administrative disincentives, and EPA managers' general inexperience with ADR techniques.

COSTS:
To be determined.

BENEFITS:
By using regulatory negotiations, alternative dispute resolution, and similar approaches, EPA can make more fully informed decisions that are likely to be more timely, cost-effective, and not subject to litigation.

EVALUATION CRITERIA:
Success of the project will be measured by the extent to which use of these tools improved the timeliness and cost-effectiveness of EPA's decisions, policies, and settlements.

CONTACTS: Chris Kirtz (202-260-7566) and David Batson (202-260-8173).

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# REPORT OF THE *INTERNAL COMMUNICATIONS* TEAM

NATIONAL
PERFORMANCE
REVIEW

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## I. EXECUTIVE SUMMARY

Blessed with a very motivated workforce, EPA is a young Federal agency. The cobbled-together personality of 1970 is outdated and obstructive of the mission of environmental protection. **The most fundamental internal communications problem EPA must address is a crisis of organizational culture which inhibits and defeats a spirit of unified mission.** This crisis is the result of many negative factors, such as poor management practices, turfism, lack of understanding of the big picture, apathy, and lack of commitment to a well-organized, comprehensive, and responsive Agencywide system for internal communications.

Our team defines "internal communications" as the way EPA employees communicate with each other to convey information on Agency business and personnel matters. Our business mandates serious attention to communication--mistakes can be costly, dangerous, and embarrassing, especially when they occur in policy and regulatory matters. With over 19,000 employees located among seven HQ locations, ten Regions, ten laboratories, and over 20 satellite program offices, as well as the Cincinnati and RTP complexes, we face a formidable task.

Internal communications have been the subject of several recent intensive analyses. During 1991-92, the Office of Administration and Resources Management (OARM) worked with the Office of Communications, Education, and Public Affairs (OCEPA) to qualitatively evaluate EPA's internal communications. Fourteen focus groups were conducted which involved 140 employees at HQ, three regions, and two laboratories. Several reports with recommendations were completed as noted in the reference list. These efforts yielded a general agreement that internal communications need significant improvement. The Internal Communications Publishing Interest Group (ICPIG) has already begun implementing some of the recommendations. During the same time period, one office (Office of Pollution Prevention and Toxics) initiated an ambitious evaluation and improvement plan for internal communications which is currently being implemented. (See References for all reports.)

Our NPR Team, consisting of 20 employees (including two regional representatives) convened for ten sessions to identify specific problems and recommended initiatives. We then commissioned an independent survey of 83 employees, and the majority concurred with the problems and initiatives outlined by our NPR Team. All of these reports repeat the same problems, barriers, and solutions in general categories.

As an immediate priority, our team decided to make the installation, availability, and mandated use of electronic communications the infrastructure on which to base improved practices of internal communications.

## II. VISION

**Internal communications is perceived as a worsening problem that is impeding EPA's mission performance.** A good example is the all-employee invitation to participate in the NPR process that was hindered by the lack of a mass communication system in use, such as integrated EMAIL. Employee morale is negatively impacted when information about EPA is not shared in a timely and efficient manner. Successful internal communications requires the dedicated efforts of individuals committed to the goals of the organization. The goals and objectives of all the National Performance Review teams rely very fundamentally upon the success of EPA's internal communications. **Therefore, the NPR team for Internal Communications recommends that the Senior Management Council adopt INTERNAL COMMUNICATIONS as a priority concern. This will assist the Administrator in making changes to the Agency's culture and management practices.**

**As the foundation for other communication activities, our NPR Team also recommends that the Agency stand behind current efforts to establish an integrated electronic messaging system throughout the Agency (see IV.A.3. and Attachment A: Target/Action Matrix for EMAIL).** Other barriers to internal communications are addressed in this report; however, we believe that the Administrator's use of the Agency's electronic communication system, which is currently under utilized, will provide an Agencywide incentive to begin using this pollution-preventing and almost instant method of mass communication.

## III. BARRIERS

Applying TQM principles in its discussions, our NPR Team cited the following as major communication concerns:

A. **Many EPA employees do not feel connected to the big picture** of what EPA is doing. While they are often viewed by colleagues and friends in the rest of the world as environmental experts, employees have reported that the most common way they learn of EPA policy is from external sources. Except for EPA Insight and the Policy Paper series (two of ICPIG's responses to the OARM Internal Communications Report), there is no frequent, regular system for informing the entire agency of policy developments. This could become an even more serious problem as EPA and other agencies begin to govern in more holistic ways (e.g., ecosystem protection, pollution prevention, credible and collaborative science, public-private partnerships, environmental justice).

B. **EPA employees want a better relationship between staff and management,** regions and Headquarters. Although the issue of not knowing Agency policy will be addressed through better top-down and bottom-up communications, there is a human resources value in developing trusting and thoughtful communication relationships. Rank and file employees are infrequently included in staff meetings. Clerical staff want to know more of substance. Program staffs want to know what other programs are doing. Regions feel isolated and do not contribute their field experience. This issue was frequently mentioned in terms of negative impact on general morale and the fostering of "turfism". Improving these lines of communication will require commitments to significant changes in EPA's culture and the installation and use of a user-friendly integrated electronic communication system within the Agency.

C. There is a **paper information overload** which causes delays in distribution and receiver processing. Some types of paper information are not necessary to everyone, but frequently staff does not receive paper communications in enough time to even prepare to respond. This persistent problem contributes to frustration and low morale. Although EPA is near a goal of 1:1 employee/ personal computer, the lack of access and support for an agencywide interactive electronic communications system keeps EPA at a disadvantage in the age of the super "information highway". There is a widely held opinion that our current E-mail system is difficult to use, so many employees refuse to use it. Other employees are more computer literate, are not intimidated, and use it often. Despite these differences in opinion, our team believes that the longer we postpone the adoption of a uniform electronic communications system, the worse internal communications will be within EPA, thereby furthering our inadequacies in comparison to our Federal counterparts.

D. Some **related problems** associated with internal communications:

1. Knowledge of work done in other offices may be helpful.

2. There is a need to know what each component in EPA is doing.

3. Orientation programs lack standardization, resulting in employees either having too much information "dumped" on them or not enough pertinent information that lends itself to a "welcoming" environment.

4. Human resources information on training and educational opportunities arrives too late to respond.

## IV. INITIATIVES

A. QUICK-STRIKE INITIATIVES: These items may not actually materialize "quickly," but the decision to make them happen can.

1. **Senior Leadership Council (SLC) adopts internal communications as a priority concern:** The Internal Communications and Publishing Interest Group (ICPIG) will serve as an advisory board for immediate and long range projects and evaluation.

2. **More Regular All-Hands Meetings:** Administrator Browner has stated that she intends her administration to be open to the opinions of all employees. The first all-hands meeting she held was popular not only because the Vice President attended, but because Ms. Browner spent so much time with employees that may never be able to talk personally with her about issues that concern them. The rest of senior management face the same circumstances. Face-to-face communication is always the best way to develop understanding and commitment among the rank and file--it may be the only way to change the culture. The Office of Communications, Education and Public Affairs is currently developing plans for the Administrator and individual Assistant Administrators to host Town Meetings with entire program staffs. Office Directors should follow. **The desirability of these type of meetings is increased as this Administration changes the mainstream direction of government.**

3. **Administrator's Mandate of Increased Use of Electronic Mail:** Office of Administration and Resource Management (OARM) has committed to the Administrator to **nationally integrate EPA electronic mail by installing an Extended LAN Facility (ELF) by January 1994.** This will allow all LANs and PCs to seamlessly connect through a variety of e-mail systems, including All-in-One which is universally available upon request to PC owners. (All-in-One does receive complaints over its complexity to operate which has led to the purchase of other systems by

some office organizations.) OARM and its Office of Information Resource Management (OIRM) are working with the 1995 budget planning and procurement cycle to request resources to complete EPA coverage by LAN and thus cost/benefit will be justified. Comprehensive LAN coverage will improve user ease and encourage individual access of networks like CompuServe and Internet which are already available in some organizational settings. All of this is already in the works and the Administrator is involved. Information to be communicated through integrated EMAIL bulletin boards:

a. All-hands memos, surveys, suggestions;

b. Announcement and text of Administrator's speeches (Administration's direction);

c. Policy orders and directives;

d. Press releases and advisories;

e. Administrator's "fireside chats";

f. Vacancy announcements;

g. EPA organization index and functional statements;

h. Expert database and scientific network);

i. Daily news; and

j. Human resources announcements and calendars.

4. SMC and all managers participate in some form of electronic communication training or confirm proficiency.

5. Charge OARM/OIRM/OHRM (Administration and Resource Management, Information Resource Management, and Human Resource Management) with developing an analysis of what are the barriers to using All-in-One, including lack of basic computer skills and incentives/disincentives. Investigate modification to the program to enhance usability by employees with rudimentary wordprocessing skills. Examine manual for ease of use and mistakes:

a. Design and provide basic function instruction card that speaks to on/off; read/send; access to bulletin boards; and trouble shooting guide.

b. Organize Personal Computer Coordinators (one to each major office) to form a taskforce to develop strategy to organize supplementary volunteer EMAIL tutors within smaller office settings to compensate for the limited availability of training classes. This will be vital to bringing a majority of non-users on board as quickly as possible.

6. Make better use of other non-paper communication methods, such as closed circuit television, video-conferences, public address announcements, bulletin boards.

B. INTERIM INITIATIVES

1. Develop an Agency-wide communication strategy for the recommendations of the National Performance Review. The NPR has a high profile and employee expectations for significant positive change are high.

2. Begin implementation of ICPIG recommendations in conjunction with the NPR process and initiatives.

3. Increase the amount of EMAIL information from the Administrator and other prestigious sources.

4. Develop definitive directories to be installed on EMAIL bulletin boards--this will require multiple organizations to conceive and execute.

5. Conduct an all-employee survey on the NPR recommendations as a follow-up to the stated intention of including everyone.

C. LONG-RANGE INITIATIVES:

1. <u>Bring accountability to EPA culture and management to prioritize internal communications</u>. Administrator require that management of internal communications be identified in Assistant Administrators' and managers workplans and performance agreements.

AAs market collegial value of improved internal communications.

2. Work on making EMAIL and other internal communications systems user-friendly. In addition to investigations into EMAIL programming modifications, employees need better access to contributing to traditional communication methods. Similar to the Federal Communications Commission's provision that local communities have access to television programming, EPA employees deserve a comprehensive vehicle for timely peer communication.

**V. ATTACHMENTS:**

A. Matrix: Analysis of Installation of National EMAIL

B. Visual Presentation Documents

1. Quotation from Government Executive July 1993

2. Team Approach to Driving Forces

3. "The Problems ... (As Characterized by Multiple Recent EPA Surveys)"

4. Pie Chart of OPPT Survey

## VI. REFERENCES:

A. Report: "A Qualitative Evaluation of the EPA Internal Communication System" (Office of Administration Resource Management) (March 1992)

B. Report: "Improving Internal Communications" (Internal Communications Workgroup, Communications Strategy Committee) (November 1992)

C. Report: "Improving Internal Communications and Staff Training and Development in OPPT" (Office of Pollution Prevention and Toxics) (March 1992)

D. Report: NPR-Internal Communications Team Survey of OPPTS Staff (July 1993)

E. Article: "Federal Communications Guide" Government Executive (June 1993)

**ATTACHMENT A**

## TARGET/ACTION MATRIX OF EMAIL SYSTEM

| | OBJ/INITIATIVES | CURRENT STATE | BARRIERS | IMPLEMENTATION | LEAD OFC | AFFECTED AUDIENCES | COST/ BENEFIT* | EVAL. CRITERIA |
|---|---|---|---|---|---|---|---|---|
| **HARDWARE** | To have a nat'l interface | Patch work | •Budget<br>•Human Will | CMB Mandate -- 6 months; OARM commitment target: January 1994 | OARM | ALL | Cost: $500K<br>Benefit: Incr. morale, communication, less paper used | Qtrly Usage rpt fr OIRM (identify prob. areas/ high flyers) |
| **CONTENT** | Useful info accessible in a timely, accurate, and consistent manner | Online: ECATS (trn'g), EPA Insight, EPA Journal, EnviroNews (summ. of major headlines); FUTURE: LEGISLATION | FTE's to maintain system for input/ compatibility | IMMEDIATE<br>•"Fireside" Weekly communications<br>•Wkly White House rpts | ALL (Content owners) | ALL | Cost: Time to install/input; FTE to maintain<br>Benefit: improved effectiveness | Online survey/ Auto del from dist. lists |
| **TRAINING** | Clusters/teams will bring co-workers up to speed | State of flux: calendar juggling | High vol. of users; Lack of FTE; short timeframe; Human will/resistance; succinct ref. doc | IMMEDIATE<br>Charge ICPIG or OCEPA w/dev. strategy for empl to be trained by Jan 1 | OARM | ALL | Cost: Time | •survey<br>•# of people using |
| **OARM/IC STAFF SUPPORT** | Strong priority: statement to clearly emphasize importance of int. communications | Existent -- 1 FTE in OCEPA | FTE's/Budget; Lack of holistic planning and prioritizing | CMB Mandate | OCEPA/ OARM | ALL | Benefit: Est. contact points | Qtrly usage reports |
| **MARKETING** | Make accessibi-lity known -- easy to learn; will make channels more effective/efficient | Negative attitude towards usage; ignorance of its value | •Prioritization<br>•Ignorance/ uninformed<br>•Attitude<br>•Perceived lack of need | IMMEDIATE<br>During the next 6 months as referenced in CMB mandate memo | OCEPA/ OARM | ALL | Cost: Intangible<br><br>Benefit: Backup of investments | Qtrly usage reports/ survey |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **COMMITMENT** "THE MANDATE" | Will establish conformity to standard operating procedures as decreed by CMB | Ad hoc usage | Resistance to change | IMMEDIATE | OA | ALL | Benefit: Std of communication Cost: Attitudes | Qtrly usage reports/ survey |
| **EXTERNAL APPLICATIONS** | Will promote effective, timely communication with external customers | ? | ? | ? | OCEPA/ OARM | Public/ Regulatory community | Cost: Potential impacts on budget; pro and con | Public response |

TEAM APPROACH
TO DRIVING FORCES FOR
INTERNAL COMMUNICATIONS

- THE NEED TO KNOW
- PROFESSIONALISM
- ACCOMPLISH MISSIONS OF THE AGENCY
- DESIRE TO COMMUNICATE BETTER
- INCREASE EFFICIENCY BETWEEN REGIONS, LABS, HQ
- DESIRE TO BE MORE EFFECTIVE
- AVOID DUPLICATION/INCONSISTENCY
- AVOID EMBARRASSMENT
- RAISE MORALE
- BROADEN PERSPECTIVES
- INCREASE OPPORTUNITIES BY BEING INFORMED OF THEM
- IMPROVE TIMELINESS

# REPORT OF THE *MANAGEMENT AND LEADERSHIP DEVELOPMENT* TEAM

NATIONAL
PERFORMANCE
REVIEW

# Management and Leadership Development

## Executive Summary

EPA should be more aggressive in selecting, developing and evaluating supervisors, managers and executives based on values and skills fundamental to fostering higher team performance throughout each organization. The challenge is to strategically build a management/leadership corps which fosters participation and empowerment while avoiding a crisis-oriented culture which encourages micro-management of issues and neglect of employees.

Overall, the Agency's investment in developing effective managers and leaders should be increased. It should be noted, however, that EPA is not starting from a zero base. Through the cooperation of the Office of Human Resources Management, the Agency's Human Resources Council and Program and Regional Offices, systematic efforts to impact the effectiveness of EPA's management/leadership corps began several years ago. But, much more needs to be done.

Current efforts should be expanded and new actions initiated to accomplish the following goals:

- **Change attitudes** to value effective management and leadership skills as vital to environmental success;
- **Align support systems** in selection, development and evaluation to reinforce the need for effective management and leadership; and
- **Deliver support services** to build the knowledge, skills and abilities needed by supervisors, managers and executives to be effective managers and leaders.

In order to advance management and leadership development within EPA, the following action areas are of utmost importance:

(1) Gaining commitment to an agencywide, competency-based definition of an effective EPA supervisor, manager and executive;

(2) Aligning the recruitment, selection, development and evaluation processes to support effective management;

(3) Achieving a diverse management corps;

(4) Incorporating subordinate assessment/feedback into the management/leadership performance appraisal process; and

(5) Investing and focusing resources commensurate with need.

The recommendations which follow in this report have been developed to address the above action areas.

**Vision:**

An Agencywide management and leadership development initiative which: is based on a consensus definition of effective management/ leadership, utilizing competency-based criteria at three levels of management; addresses the recruitment, selection, development and evaluation of supervisors, managers and executives in a systematic and clearly understood manner; and facilitates a quality-oriented, diverse and highly effective EPA management team.

**Action Category #1:**

To gain EPA consensus for an agencywide, competency-based definition of an effective supervisor, manager and executive and implement a communications strategy to transmit the definition to the Agency.

Surveys of hundreds of studies and professionals involved in quality and change initiatives provide a picture of the type of culture needed for success: management commitment, upward and downward communications, employee participation, pushing decision making down, focused development, investment in people and systematic planning. In order to do this throughout an organization, managers and leaders must be positive change agents and facilitate teamwork and individual empowerment. A clear understanding of expectations and a definition of effective management is essential to impacting change in EPA's management corps.

Initiatives --

- Utilize the current EPA definition for a "model manager" and the Office of Personnel Management (OPM) criteria outlined in the Management Excellence Framework (formally FAME criteria), to develop a draft guidance document outlining competency-based criteria for an effective supervisor, manager and executive.

- Provide the draft guidance document to all Agency organizations, special interest groups and supervisors, managers and executives for comment.

- Redraft the guidance document, incorporating comments, as appropriate, and present to the Senior Management Council for final review.

- Implement a communications/awareness strategy to transmit the definition to all EPA supervisors, managers and executives, and those individuals interested in a career in management.

Implementation --

Who: The Office of Human Resources Management.

When: 120 days after endorsement.

Barriers: Inability to reach Agencywide consensus.

Cost: Minimal; can be done within current resources.

Benefits: Increased awareness and understanding of what is expected of EPA's management corps and the competencies that are most important at each level of management. Provides a framework for management development planning, including application to recruitment, selection, training and evaluation processes.

Success: Official agreement to an Agencywide, competency-based definition of an effective supervisor, manager and executive.

**Action Category #2:**

To align the recruitment, selection, development and evaluation processes with an Agencywide, competency-based definition of an effective supervisor, manager and executive.

The quality of any management team depends on the people selected to be on it. To achieve the type of management corps needed for EPA to be successful, barriers to selecting the right individuals for management positions must be broken down, including the belief that technical expertise is the only important skill. Once selected, developmental systems must be directed at the knowledge, skills and abilities desired by the organization and must be available when needed. To reinforce these knowledge, skills and abilities, the management corps must be evaluated against a consistent set of expectations and values. Each administrative process in EPA which impacts the selection, development and evaluation of managers must be aligned with EPA's expectations and criteria of effective management and leadership.

Initiatives --

- Incorporate the Agencywide, consensus definition of an effective supervisor, manager and executive in all EPA administrative systems and processes affecting the recruitment, selection, development and evaluation of EPA's management corps.

- In the area of recruitment:

  - Utilize the definition of an effective manager to outline rating and ranking criteria for all management positions;

  - Assure that there is an effective and appropriate balance between the management skills and technical/ scientific/professional credibility requirements of managerial positions.

- In the area of selection:

  - Implement an SES Candidate Development Program (CDP) which meets EPA's need for future executives; redesign the application/selection process to emphasize the "potential" for meeting the primary competencies of an effective manager and to allow greater consideration of grade 14 employees;

  - Establish an AA/RA-based management succession planning initiative requiring organizations to identify and develop future leaders, beginning at the grade 11/12 level in a systemic manner, utilizing the effective manager definition;

  - Formalize the one-year probationary period, evaluation process for new supervisors, managers and executives including a requirement for a positive certification before probationary period clearance; link the definition of an effective manager to the probationary period decision; implement a process to provide guidance to the new supervisor regarding EPA's expectations and on what basis they will be evaluated; include employee evaluations, a review from outside the chain-of-command and/or completion of management skill training as positive certification points, as appropriate;

- In the area of development:

  - Continue to emphasize an Agencywide, structured approach to developing all managers, incorporating an Individual Development Plan/Career Planning process utilizing the "competency-based" manager definition;

  - Implement a mandatory core curriculum for management and leadership development, including transition, and Agency priority theme courses/learning experiences, which develops individuals to meet the definition of an effective manager and delivers the needed skills and learning at the appropriate time;

  - Develop and implement an automated system which routinely identifies new supervisors, managers and executives to allow for direct communication about required "transition" courses, career planning and EPA's expectations and definition for effective managers.

- In the area of evaluation:

  - Make management and leadership performance expectations the primary basis for all performance agreements for supervisors, managers and executives and assure that there is performance feedback occurring in all organizations on a periodic (hopefully continuous) basis;

  - Utilize the probationary period to remove supervisors, managers and executives who are not capable of performing within the definition of an effective manager;

  - Promote more formal and informal ways of recognizing managers who model the definition of the effective manager.

<u>Implementation</u> --

Who: The Office of Human Resources Management; EPA's Human Resources Officer community; Program and Regional Offices.

When: A number of these initiatives have already begun; additional support and endorsement will help to continue the efforts; all initiatives can be addressed over the next two years.

Barriers: Lack of Agencywide commitment to effecting change; lack of resources.

Cost: 5 FTE's and 300K to address core curriculum requirements and managerial assessment services; 1.7M over three years for an SES Candidate Development Program covering 100 candidates; the $ level of commitment defined by AA/RA's for succession planning for their organizations; 50K for ADP system support.

Benefits: A systematic and comprehensive, agencywide approach to developing an effective management corps; a well trained and motivated management corps.

Success: More systematic succession planning throughout Program and Regional organizations; greater TQM/empowerment implementation; greater productivity and utilization of employees.

**Action Category #3:**

To achieve a diverse management corps.

EPA should increase efforts to ensure the selection of an appropriate representation of minorities, women and people with disabilities in its management ranks, consistent with the changing composition of the general workforce in the United States. To this end more focus to this issue is needed amongst EPA's selecting officials and within the Agency's review and approval process.

Initiatives --

- o Reaffirm EPA's commitment to affirmative action goals for management positions by:
  - ☐ Issuing a clear and firm message from the Administrator to all selecting officials regarding affirmative action expectations for EPA's management corps and hold senior career management accountable for results;
  - ☐ Pushing goal planning to the Office level in Headquarters, the Division level in the Regions, and Labs and Installation Head level for Field components;

- Review the management performance review process for streamlining purposes; consider a "pass-fail" set of expectations with a well defined balance between programmatic requirements and management/leadership abilities, and focuses appropriate attention on managers' performance as "managers of people"; build an infrastructure that links evaluation, IDP's and career planning.

Implementation

Who: The Office of Human Resources Management, the human resources community, and Program and Regional Offices.

When: All initiatives can be addressed over the next year.

Barriers: Lack of organizational resolve to implement and value a subordinate feedback process; lack of resources to provide the computerized infrastructure.

Cost: FTE's or committed workyears from OHRM and OIRM; 100K in system development costs.

Benefits: A management corps which focuses attention on its management/leadership impact on the workforce will increase organizational productivity and better support implementation of new environmental themes.

Success: Higher levels of positive feedback to management from subordinate assessments.

**Action Category #5:**

To provide adequate resources and planning to advance management and leadership development initiatives.

An adequate, stable resource base, established through organizational planning, is essential if consistent, regular management and leadership development is to be a reality in EPA. The current "pay-as-you-go" approach has resulted in very uneven training and development in the Agency. Furthermore, individuals should not be penalized because of geographic location or because their supervisor does not personally consider management and leadership development important. A consistent Program and Regional Office planning process should be established and a funding mechanism should be established to set aside the travel and developmental dollars necessary for an effective, agencywide effort.

Initiatives:

- Establish a goal of 3% of the PRO (travel) and AC&C (training) accounts, as appropriate, for all managerial positions being set aside for succession planning and management/leadership development purposes, and consider formal inclusion as a line item in the budget process;

- Require Program and Regional Offices to establish a management/leadership development senior task force which establishes an organizational plan, updated annually, to address enhancement actions for management/leadership knowledge, skills and abilities, diversity concerns and succession planning issues.

Implementation:

Who: The Office of the Administrator, Program and Regional Offices, the Office of Human Resources Management, the Office of Civil Rights and the human resources community.

When: Process requirements can be outlined and Program and Regional Offices can begin implementation within 180 days.

Barriers: Lack of commitment to management/leadership development as an important issue; lack of planning skills; budget process concerns.

Cost: Planning and implementation time by Program and Regional Offices.

Success: More Agency focus and resources support for management/leadership development.

**Conclusion:**

EPA can increase its ability to be an effective environmental leader through a combination of consultative and participative management styles which promote productivity. Total Quality Management and Reinventing Government principles cannot be implemented unless an appropriate management culture is defined and action is taken to assure its implementation. Without this, the chance for the success of any changes EPA wants to make is minimal. Let's capitalize on this opportunity to make a difference which truly allows us to implement the changes necessary to foster high performance teams at EPA.

**List of Team Members and Input Sources**

Team:

| | |
|---|---|
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| Thomas Wyvill | PM-224 |

Input Sources:

45 National performance Review Suggestion Forms

17 respones from DAA's, DRA's and HRO's to the draft team report provided at the July 1st NPR Meeting

Senior Leadership Council critique

# REPORT OF THE *PERFORMANCE MANAGEMENT* TEAM

NATIONAL
PERFORMANCE
REVIEW

# THE PERFORMANCE MANAGEMENT QUALITY ACTION TEAM

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## Executive Summary

Over 100,000 staff hours go into conducting the performance management process each year at the Environmental Protection Agency. There is considerable evidence and sentiment that much of this time and effort is not well spent. The Performance Management Quality Action Team presents the following preliminary conclusions based on its research and findings.

The Agency needs to move away from a performance management system characterized by infrequent feedback and unproductive emphasis on labels and rewards. Instead, there should be more focus on meaningful dialogue, directed at personal development and organizational improvement and teamwork.

- The system should incorporate more feedback from customers and other important affected parties.
- The system should better link individual performance standards with Agency goals and priorities.
- The Agency needs to improve supervisors' and managers capabilities for coaching, counseling and mentoring.
- There should be experimentation with a variety of approaches to foster development of a better system.

These findings are based on three major data gathering efforts: a statistically valid survey with responses from over 700 EPA employees; a benchmarking study of performance evaluation practices in twenty other public and private organizations; and employee focus groups that included a broad representation of special interests, grade levels, and occupations across the Agency.

The survey results show that half the respondents are not satisfied with how performance is evaluated and communicated, that the system does not effectively guide and develop employees and that ratings are not fairly given. This confirms that there are some serious problems with the way performance is evaluated in this Agency. The good news is that most respondents believe they know how their performance is viewed and that high quality performance is recognized. The data shows that there is a clear consensus among employees for more frequent feedback, more focus on team efforts and contributions, and greater use of our customers' perspective in performance assessment (including subordinate input to the evaluation of management).

The benchmarking study uncovered a wide variety of practices, with no single, predominant approach. Some organizations are stressing team rather than individual accomplishments. Many are utilizing customer, peer and subordinate views during the evaluation process. Some are trying to delink awards/bonuses from rating categories, scores and adjectives and toward more frequent oral feedback or narrative assessments. In the focus group discussions, employees clarified and reiterated similar concerns, perspectives and preferences that were identified in both the survey and benchmarking process.

At this point, the PMQAT has identified five areas of focus for system improvements/reinvention. Additional time is needed to develop a specific action agenda.

## Vision

### Background

This is an interim report from EPA's Performance Management Quality Action Team (PMQAT). The team was established in January 1992 as part of the Office of Human Resources TQM Alignment Project. The purpose of the entire Alignment Project is to align EPA's human resources systems with TQM. This QAT's mission is to make EPA's performance management systems more effective by aligning them with the Agency's core values, including Total Quality Management (TQM).

There are twelve members of the team, representing the Offices of Solid Waste and Emergency Response, Inspector General, Human Resources, and Regions 3 and 8. The team has also been supported by the efforts of numerous others. The team met weekly from February - September 1992, and began with literature searches and fruitful policy discussions. Focus group sessions were held during the period November 1992 through June 1993.

When we first started meeting, we shared the view that, "everyone dislikes the performance appraisal system." Many members of the team also thought they understood what was wrong with performance management in EPA. Through a brainstorming exercise, the group developed a problem statement which reflected their views of problems with the current system. We thought we were familiar enough with what was possible with performance appraisal. Many team members wanted us to immediately write recommendations. However, there wasn't a complete consensus, so we turned to our TQM methodology. TQM taught us to:

- review the current process
- ask our customers what they need
- benchmark best practices
- consider doing focus groups to get more customer input

The quality action team began its review process by going through a brainstorming exercise and developing a problem statement. The problem statement represented the groups ideas on what problems exist with EPA's current performance management systems. The group than began a data gathering process that included a customer survey, benchmarking best practices and focus groups with customers to validate or disprove the hypothesis developed in the problem statement.

**Problem Statement**

The current performance management systems are considered ineffective because they:

- Don't provide meaningful, timely feedback
- Are impossible to administer in an equitable manner
- Are driven by the "numbers"
- Are focused too closely on awards

**Impact:**

- Low moral
- Discourages teamwork
- Avoidance
- Doesn't foster trust
- Adverse effect on productivity
- Discourages risk-taking
- Feeling judged v. appreciated
- Encourages quest for high-visibility

**General Description of Agency Systems**

Employees in EPA are covered by three performance management systems. A system that covers Senior Executive Service Members, another that covers Supervisors and Managers (GM employees), and a third system that covers General Schedule and prevailing rate employees (wage grade).

Each system falls under the authority of different laws and regulatory requirements, which is the primary cause for differences in many of the system features. Current regulatory requirements do allow each of the systems to have similar features such as:

- five rating levels
- higher level approval for performance agreements and ratings
- monetary or nonmonetary recognition for outstanding performance.

Within these similarities there still exist variations on how any one of these features might operate in a given system. For example, there are minimum and maximum budgetary limits on performance awards for GM employees, while there are no such limits for GS and prevailing rate employees. For SES employees, there is a budget limit and a minimum and maximum bonus amount.

Each system has a wide range of differences, while on the surface there appear to be a number of similarities. The following provides a brief overview of the major elements each of the systems have in common. Each system operates on an annual appraisal cycle and includes:

- **Written performance expectations that must be communicated to employees at the beginning of each appraisal cycle:**

  These expectations are communicated in the form of critical job elements (CJE's) that identify a major job responsibility or duty that is required of the employee. For each CJE, standards of performance may be written at three performance levels to identify how performance results will be measured to determine successful or unsuccessful accomplishments (Outstanding, Fully Successful, and Unsatisfactory).

  Performance expectations are documented in a performance agreement form which is often developed by both the employee and supervisor, but requires approval from a higher level official in the organization.

- **A written evaluation at the end of the appraisal period:**

  The evaluation results in one of five rating levels: Outstanding, Exceeds Expectations, Fully Successful, Minimally Satisfactory, and Unsatisfactory. The rating is recommended by the immediate supervisor and must be reviewed and approved by an official at a higher level in the organization.

- **Basic pay increases to employees who perform at the fully successful level or higher:**

  These come in the form of within-grade increases for GS and prevailing rate employees based on their years of tenure, and annual merit increases for GM employees. For SES, bonuses, special act awards and rank-level increases are available forms of pay for performance.

- **Performance awards granted to employees who demonstrate exceptional levels of performance.**

Some other similar system features include assistance to employees performing below the fully successful level, minimum appraisal periods, and annual progress reviews.

The Agency makes a substantial commitment of time and effort to implementing these systems. The PMQAT estimates that at least 100,000 hours, and perhaps more, are devoted to the performance management process. While for any one individual this is a very small amount of time, for the Agency it is a big investment. The estimate of effort is based on the following assumptions:

| | | |
|---|---|---|
| Preparation of Standards | 2 | hours |
| initial draft | 1 | hour |
| employee/supervisor discussion (15 minutes each) | .5 | hour |
| rewriting, signatures, copying | .5 | hour |
| Mid-Year Evaluation | 1.75 | hours |
| employee preparation | .25 | hour |
| supervisor preparation | .25 | hour |
| employee/supervisor discussion (30 minutes each) | 1 | hour |
| signatures, copying | .25 | hour |

| | | |
|---|---|---|
| End-of-Year Evaluation | 2.5 | hours |
| employee preparation | .5 | hour |
| supervisor preparation | .5 | hour |
| employee/supervisor discussion (30 minutes each) | 1 | hour |
| final write-up, signatures, copying | .5 | hour |

6.25 total hours per evaluation multiplied by 18,000 employees equals 112,500 hours.

**Status of Current System**

We conducted a survey of our customers and (72%) of the survey population responded. They told us we had read them wrong. More than half gave us narrative comments. Surprisingly, about half of EPA's workforce said they were satisfied with EPA performance management. Nearly three-fifths said they strongly agree or agree with the current 5-level system. Two-thirds said high-quality performance is recognized in their organizations. Three-fourths said they know how their performance is viewed.

But, we also learned more about problems. Three-fifths said ratings are not awarded fairly. Just as importantly, three-fifths also said the current system does not effectively guide and develop subordinates' work. There was considerably stronger agreement (ranging from 80-96%) on several survey items concerning options for system improvement. We also learned more about what motivates EPA workers and management.

The benchmarking work, meanwhile, showed us that there is a greater range of approaches to performance management than we had anticipated. After an extensive literature search, we contacted 41 private and Federal organizations. Twenty of them allowed us to interview them. Many of them told us how they had implemented concepts strongly supported by our customers in response to our survey.

In summary, through our survey and benchmarking efforts, we learned from our customers much about what they want. From EPA's workforce and TQM organizations outside EPA we learned about a new philosophy of performance management, and some alternatives for carrying it out. Also the information obtained through focus groups reiterated many of the concerns and ideas generated in the survey and benchmarking process.

## Customer Survey

In order to get input from the customers of the performance management process (EPA's managers, supervisors, and employees), we mailed a questionnaire to a random sample of EPA's workforce. Of 1,000 surveyed, 724 responded (72%), and 390 also gave us narrative comments.

Because of the size of the sample and its randomness, the odds are high that the responses reflect the views of EPA's entire workforce.

### Findings

The conventional wisdom is, "Everyone hates the performance appraisal system." The survey results, however, show that EPA performance appraisal has strengths as well as weaknesses. There is strong consensus on certain improvements needed. There are also possibilities for greater alignment with TQM.

### Signs of Strength

- 75% say, "I know how my performance is viewed."
- 67% say, "High-quality performance is recognized in my organization."
- Rules on the development and use of performance standards and required discussions are largely being followed.
- System design issues (number of rating levels, generic standard, rating cycle) do not appear to be major concerns.
- What motivates employees the most to perform well?
  - Self-satisfaction or self-esteem; Customer service

### Signs of Weakness

- "I am satisfied with how performance is evaluated and communicate in EPA." (53% say "No")
- "The current system provides an effective tool for guiding and developing subordinates' work." (60% say "No")
- "Ratings are fairly awarded in my organization." (57% so "No")

- Performance management is not as effective in headquarters as in the regions.

- Managers and supervisors were more critical of performance management in EPA than were employees.

**Consensus on Desired Improvements**

Four TQM-based options for improvements received extremely strong support from our customers (employees):

- "Performance management which acknowledges team contributions and group collaboration" (96 % agreed)

- "Employee feedback used to help identify supervisory development need" (95% agreed)

- "Performance discussed more often and less formally -- ongoing feedback and collaboration" (89% agreed)

- "Clear organizational goals, set at least annually: individuals' performance standards written to accomplish those goals" (84% agreed)

**Narratives**

Of the 724 people responding 394 (54%) sent us narrative comments, from a sentence to several pages. We appreciate the effort that went into that work, which affirmed many of our findings from the overall survey and confirmed many benchmarking observations. Following is a sample of responses received.

- The current system is corrupt. Everyone knows it is. It can't be salvaged. Performance should be evaluated continuously and by team or group. The current method is meaningless and dehumanizing.

- System is used to "beat down" individual or "award all" though falsely creeping grades-needs to be divorced from "bean" approach and quality factors need to be incorporated.

- "Subordinates" an insulting concept. I think entire rating system is insulting (by the way I have never received a "bad " rating). I think this subordinate bull implies class distinction -- do away with it!

- Formal; appraisals once a year on anniversary. Quarterly work review meetings with employees. Monetary awards for specific performance, no general/annual ratings. Cut the paper work. Focus on content and quality of review with employees. Focus on improvement.

- Keep it simple. Make it fair. Train supervisors in how to use it.

- Need more quality in communications between supervisors and subordinates. PMS is not the problem.

- Given what I've seen elsewhere and what the options are, I think it's a pretty good system. Some optional, "no cost" training in how to work within the current system could help tremendously though.

- EPA managers should be regularly evaluated by those whom they manage.

## Benchmarking Study

Based upon a literature review of the performance management systems of more than 200 federal and private sector employers, we selected 45 organizations for further study. These organizations had all received some recognition of their achievements in the area of Total Quality Management, such as the Malcolm Baldridge National Quality Award.

We surveyed these organizations with questionnaires, followed by personal interviews. Nineteen of these employers have responded to date with sufficient information to be included in this report.

**Federal Organizations:**

Information in this report is provided from the following federal agencies:

- Dept. of Navy, HQ
- Norfolk Naval Shipyard
- EPA, Las Vegas Lab.
- VA, Tide 38 alternate system
- General Services Administration
- IRS, HQ
- IRS, Ogden Service Center
- VA, Kansas City
- VA, Headquarters

**Private Sector:**

Information is also provided concerning the following private sector firms:

- Eastman Chemical
- AT & T
- Microsoft
- Corning
- Metropolitan Property and Casualty Insurance Company
- Solectron
- Xerox USA
- Xerox Canada
- Steelcase
- Esso Chemical

This reports is also based on descriptions in the literature of innovative practices in the following Federal/agencies:

- Defense Logistics Agency
- Dept. of Labor
- Transportation
- Army
- Federal Quality Institute
- OPM
- Dept. of Energy
- EEOC
- Naval Weapons Support Center (Crane, IN)
- Defense Finance and Accounting Service
- Navy proposals

**Findings**

We found widespread interest in change in the area of performance management, both in the federal and private sectors. Many Federal agencies have tried to modify their existing systems under current law and regulation to better meet the challenges they've identified. Others have suggested building new systems under demonstration project authority or proposals for revised legislation. The most far-reaching changes were found in the private sector. These employers, of course, have considerably more flexibility to design and implement non-traditional performance management systems.

Dr. W. Edward Deming suggests eliminating performance appraisals, claiming that they are not a good idea in any organization and particularly so in a total quality

organization. However, this is not a viable option for the Federal government under present law. The following innovations support the total quality philosophy and could be implemented in the federal sector without any modification to law or regulation.

**Innovations**

**Standards and Measures**

Some critics argue that individual performance appraisal does not sufficiently focus on the organization's goals and may result in individual goals that do not contribute to the mission of the organization as a whole. Employers are realizing the importance of **linkage of individual performance standards to the organization's business plan and strategic initiatives.** Xerox Canada describes this as "policy deployment." An individual's performance standards are specific work projects and activities, "cascading" from organizational goals based on the company's overall objectives. This concept has been implemented, at least partially, in both the federal sector (IRS, Navy) and the private sectors (Solectron, ATT, Microsoft, Metropolitan Property and Casualty).

**Generic performance standards** for core occupational groups are used in many organization as "work-saving" devices to facilitate the paper process. These are generally developed by large organizational task forces, sometimes with union input. Most organizations provide that these standards may be modified or supplemented as needed by individual managers. (IRS, VA, Navy, Solectron, Metropolitan Property and Casualty). Some use of generic performance standards currently exist within EPA--e.g., supervisors and managers required CJE's, contracts management standards and generic model language that describes three performance levels (Outstanding, Fully Successful and Unsatisfactory).

Some attempts have been made **to integrate development of position descriptions and performance standards** to assure performance expectations are formally linked to the duties of the position. (IRS, DOD proposal, Metropolitan Property and Casualty Company, Solectron). This is sometimes accomplished as an organizational initiative to develop standard position descriptions and performance standards together. This approach has been applied in EPA, Region 10.

**Statistical Process Control (SPC)** is an inherent part of Deming's quality model. SPC deals with process variation, the differences in performance processes that occur each time a

product is made or a service is carried out. The goal is to reduce variation associated with forces within the work system so that overall variation is reduced. SPC is based on statistical methods to provide a basis for reducing process variation.

Navy has incorporated SPC techniques in its proposal to easure process and team performance against baseline measures of the quality of the process, product or service, and customer satisfaction. The US Army Corps of Engineers has recommended linkage of each individual's pay to measurable, critical productivity outcomes.

**Teamwork**

Achieving the objectives total quality invariable relies upon **teamwork and cooperation.** Our review of the literature indicates that team efforts include improvement teams, work teams, multi-skilled teams, semi-autonomous work groups, and self-managed work teams.

Team performance is evaluated in several ways. Some work teams require employees to learn the job of every person on the team, and evaluate members on a broad **work-skill basis.** The Department of Navy has proposed an approach with a **combination of group and individual performance measurements.** An individual's overall performance appraisal would be a function of: a measurement of team performance combined with a measurement of an individual's contribution to overall team performance. Solectron bases their compensation on both individual and team performance.

Most agencies have provisions for **team-based awards** (DOE, Navy, IRS). The Naval Weapons Support Center (Crane, Indiana) has developed a process providing team involvement in awards money distribution. Non-monetary recognition is also being used, such as FAA's non-monetary recognition for managers in a TQM integrated system. EPA appears to be moving in the direction of recognizing and rewarding more team achievements.

**Multiple Sources/Input**

Some critics of the current system maintain that the appraisal process may be too complex for any single appraisal to conduct with any degree of accuracy. Several organizations have adopted appraisal **from both supervisor and peers** (DLA, FQI, Navy proposal; limited use in several pilots at Xerox

Canada). Though not a formal part of many plans, other agencies indicate that supervisors often informally consider peer input. This largely occurs by exception, such as lowering ratings due to peer complaints.

Several agencies consider **subordinate input into manager's appraisals** (DLA an OPM group, Navy proposal). We also found several cases of this in the private sector (Xerox, ATT). Several organizations within EPA currently use various assessment tools to obtain input from employees on supervisor's developmental needs.

As with peer input, subordinate input may be informally considered by the rater, even when not part of the official performance management system.

**Customer input** was considered essential to most private companies surveyed (Xerox, Corning, 3M, solectron, Eastman Chemical). The Navy has proposed formal customer surveys as input to individual performance appraisals. Other agencies reported the informal use of customer input, especially when problems exist.

**One System v. Multiple Systems**

Several companies have adopted one system for employees of all levels (Xerox Canada, Corning, Metropolitan). Current regulations have established three performance management systems in the federal sector: PMS, PMRS, and SES. GSA has a attempted to **integrate aspects of these various systems.** For example, awards are given for all "highly successful" and "outstanding individuals" at the GS/GM/WG levels.

Several agencies have recommended **elimination of within-grade increases** to allow higher salary increases to top-performing employee (Navy, former EPA proposal, Defense Finance and Accounting) This would require a waiver of law. The most recent information from the Office of Personnel Management (OPM) indicates that a combined GS/GM system may be implemented and within-grade increases would be retained for all employees (GS & GM). However, the merit increase payments that supervisors and managers presently receive would be eliminated.

The private sector has implemented other reforms, some of which have been proposed as demonstration projects or recommended for legislative reform in the federal sector.

**Rating Levels**

Numerous major companies have **eliminated rating levels.** Appraisals are a narrative description of the employee's work activities (Xerox, ATT, Eastman Chemical, ESSO Canada, Metropolitan Insurance). These corporations have **delinked performance evaluations and awards/bonuses.**

The Department of Labor has proposed a demonstration project based on these concepts. Their system would have **no summary rating,** just a narrative description. Awards would be separated from appraisals. Standards would be developed by the group, with individual performance to be appraised by the group.

**Focus Groups**

Focus groups were held to obtain the ideas of employees representative of various special interest groups, grade levels, and supervisory and non-supervisory occupations at headquarters, and in the regions and laboratories. A total of 10 focus groups were conducted which included five sessions in the regions and labs. All ten (10) focus groups agreed on the following **positive** aspects of the performance management system at EPA:

**Communication:**

♦ provides one-on-one interaction with supervisors
♦ serves as a planning tool

**Self Assessments:**

♦ serves as a memory booster for management
♦ allows the employee to reflect on performance

**Recognition/Awards:**

♦ provides incentive to productivity for some employees

**Mid-year performance reviews:**

♦ any shifts/changes can be discussed
♦ placing emphasis on areas of development
♦ early feedback on performance

All ten (10) focus groups also agreed on the following **negative** aspects of the performance management system at EPA.

**Lack of accountability/credibility on performance rating/process:**

- discussions are not enforced
- insufficient feedback
- planning with numbers
- finagling with numerical ratings
- perceived rating quotas
- forced distribution

**Systems unfair:**

- tied to too many other processes
- tied to position selection process; to much importance on actual ratings; not enough emphasis on meaningful feedback
- subjective
- focuses on what is not done rather what has been accomplished

**Favoritism:**

- certain employees receive high visibility projects
- same individuals receive "outstanding" ratings

**Rating levels:**

There were mixed feeling among the focus groups regarding the number of rating levels the system should include. Preferences deferred on ideas such as eliminating numerical ratings; pass/fail; three rating levels; and meets expectations/need to improve.

**De-linking performance from awards:**

There was a positive reaction to delinking awards from the performance rating process. However, some employees expressed a concern about awards being given to only those employees with "high visibility" jobs/projects. Concern focused on employees who would not have the opportunity to receive high visibility assignments or those who do not perform project type work.

**Timing of performance rating/reviews:**

There were mixed feelings on the timing of appraisals. The majority would like to stagger performance ratings/reviews (to EOD or anniversary date). A small minority would like them to remain the same.

**Peer/Subordinate Feedback:**

Participants of the managerial focus group believed that feedback should be obtained, but not tied into the rating process nor for the purpose of evaluation. On the other hand, employees and non-managerial focus groups believed that the feedback should go up the chain just as well as down and that their input should be a part of management evaluations and ratings. The majority of the focus groups agreed that being rated by peers may not be a widely accepted practice.

**Priorities for Change:**

There were various thoughts and ideas on what changes should be implemented first. The majority of the focus groups agreed on changes such as:

♦ trust between the employees and supervisors;
♦ accountability of the overall performance management system and enforcement of requirements
♦ a system that avoids forced distributions on money and outstanding ratings, etc.
♦ better communications/on-going communications;
♦ training focused on developing the coaching and counseling skills of managers and supervisors
♦ a system that addresses the concerns of employees

**Target/Action Category**

The QAT identified five general recommendations. We are in agreement that the Performance Management system needs to be improved and simplified. However, there are no quick fixes. We strongly recommend that identification of near-term, and long-term changes be developed in a thoughtful way, one that includes more customer improvement at both the managerial and non-supervisory levels.

While we believe that system enhancements are needed and can be developed, we believe that there is a greater need for a cultural change in the way we view performance appraisals in EPA. We want to ensure that necessary underlying conditions for success are present so that the cultural change can occur and flourish. There was agreement that this culture change is needed but that it will be a challenging journey.

With that premise in mind, here are the five recommendations. Additional time is needed to flesh out the detailed action plans to accomplish these general recommendations.

**Reinvention Idea #1 -- Refocus the Philosophy of Performance Management**

We need to move from a performance management system of infrequent feedback, labelling and reward focus toward a performance development/enhancement system that focuses on continuous meaningful dialogue with emphasis on personal/organizational growth that encourages teamwork.

The system should clearly define a purpose or philosophy of performance management, should focus on guiding and developing employees; should encourage teamwork and cooperation; should avoid labelling performance and should delink evaluations from the awards process. Almost 90% of survey respondents indicated that the current system is not effective as a tool for guiding and developing subordinates' work. Benchmarking identified a number of corporations that have delinked performance evaluations and awards/bonuses. This concept met with a neutral response in the EPA customer survey. Further exploration through focus groups provided a mixed response. Some employees view it as a good idea to de-link appraisals and awards while others expressed mixed feelings and a concern on issues i.e., employees with high visibility projects being recognized and rewarded, running out of funds before the end of the fiscal year, etc.

**Reinvention Idea #2 -- Expand System Flexibility**

The system needs to allow flexibility and experimentation throughout the Agency. The system needs to allow excellence to occur rather than trying to control and dictate excellence-thus a flexible system is needed. Through the Benchmarking exercise, the Group identified a number of innovative ideas and concepts that could be piloted under the current rules and regulations, e.g., emphasis on team performance; encourage employee empowerment and involvement; focus on coaching and counseling; include customer feedback, peer feedback, feedback up the chain, etc. Pilots could begin during FY 94.

**Reinvention Idea #3 -- Conduct training targeted to provide supervisors and managers with skills to be successful at coaching and counseling employees**

We need to improve supervisor's and managers capabilities for coaching, counseling and mentoring

to support personal/organization growth and teamwork. Supervisors are the key to an effective performance enhancement system. We cannot envision any system being effective, unless the current and future supervisory cadre become skilled in these areas. Coaching can be defined as communicating a vision and then getting people insist on being responsible. The importance of the role of the leader in this change process cannot be overemphasized. We encourage Senior Management to take advantage of every opportunity to emphasize and recognize the importance of the leader in this change process. As self-directed teams become more common, we need to ensure that our leadership team has the skills necessary to coach the teams toward excellence.

**Reinvention Idea #4 -- Include various input sources to identify developmental needs of all employees.**

The system needs to incorporate feedback to gauge success, i.e., from all sources, above, below, internal and external. The survey respondents most often cited "customer service" as the highest motivating factor; therefore, gathering input from a variety of customers should be an integral part of the system. In addition, it is a major tenet of the Agency's quality initiative. Benchmarking also supported this as an essential ingredient.

**Reinvention Idea #5 -- Improve communications and training on the system to help employees understand the** relationship and connection between organizational goals and individual responsibilities.

The system should incorporate the concept of "Cascading," which is providing a link between the organization's goal and objectives (strategic plan) and individual responsibilities. Almost 85% of the survey respondents indicated preference for a system linking clear organization goals to individual performance standards. Many of the private sector companies contacted through the Benchmarking exercise recognized the importance of linking individual performance standards to the organization's business plan and strategic initiatives.

A. Responsibility/Timeline/Barriers

The responsibility for implementing these changes which are broad in scope and representative of a change in organizational culture, as well as system processes and procedures, must begin at the top of the organization. Communications and specific actions that support this new direction must come from the Administrator and the Agency's senior leadership team. This will help promote a change in performance management philosophy, system procedures and past practices among EPA employees. This change effort should be supported by the Office of Human Resources Management and other administrative systems. The role of these resources would be to provide various forms of communications and training to inform employees and provide needed skills development.

Obvious barriers to these changes would be current Agency philosophy and past practices and procedures that are in current use. A significant barrier to making system changes are current regulations that have been established based on legal requirements. Obtaining demonstration authority from OPM to test alternative approaches to performance management would allow us to overcome this particular obstacle. It would be difficult to identify a time frame for completing such an initiative, but actions can begin immediately to develop communications, policy and needed guidance to implement changes.

1. Cost/Benefits/Success Measures

The benefit in doing this should result in greater organizational effectiveness. If the emphasis of the performance management process is focused away from labelling and award based performance appraisal decisions we would anticipate the following benefits:

♦ meaningful feedback being given to employees that provides an effective guide for continuous improvement in work products and professional development
♦ improvement in the skills and ability of supervisors to promote staff development and receive feedback about their own effectiveness and developmental needs

♦ the energy of supervisors and employees refocused on individual development, future expectations and challenges, and organization accomplishments
♦ improved customer service in response to feedback from internal and external sources

We can began to measure success when employees inform us that this process provides an effective tool for guiding and developing them to perform their jobs and managers share this same perspective. A fixed cost can not be identified but elements of implementing change would include costs associated with development and production of materials used to communicate new policies and procedures, as well as providing training for all Agency employees and resource documents. The possibility of contracting services to assist in this process should also be considered.

**References:**

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# REPORT OF THE *PERMIT STREAMLINING* TEAM

NATIONAL
PERFORMANCE
REVIEW

## VISION

Permits are issued only where necessary to apply tailored or site-specific requirements. Permits, market incentives, regulations, and voluntary programs are all used to control and prevent pollution and improve environmental quality. Systems are established that give real time, geographic information on the status of each permit, permissible releases to the environment, and incremental improvements in environmental quality. Through electronic means, such as bulletin boards or phone calls, permit applicants and interested citizens can get information on permit requirements, technical information, or geographic/ecosystem impacts of permits. The regulated community understands EPA's permit process (including appeals) and priorities; and acknowledges that permits are issued efficiently and predictably. Permit writers are recognized by their peers, management and the regulated community as achieving a standard of excellence through completion of a core curriculum that promotes technical expertise and public service. Permit decisions are made on a targeted basis, considering sensitive populations, environmental justice, and using tools such as comparative risk or geographic approaches. Permits create opportunities for pollution prevention, encourage innovation, address cross media impacts, and facilitate enforcement.

NATIONAL PERFORMANCE REVIEW

**PERMIT STREAMLINING TEAM**

## EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency (EPA) and its State partners have traditionally used permits to regulate facilities that discharge, treat, store and/or transport pollutants. These permits have brought about substantial reductions in pollutants released to the environment and their use should be continued. However, the present permit programs can be cumbersome and generally do not encourage cross-media considerations or the use of innovative alternatives, including new treatment technology and pollution prevention. Whereas the permitting programs have worked well in the past, the charge of the Permits Streamlining Team was to identify opportunities for improvement in the future.

Specifically, the characteristics of the current environmental permitting process that should be considered include:

- Permitting procedures, including a large universe of existing permit applications and renewal requests, contribute to delays in processing and uncertainty by the applicant and the surrounding community. Staff turnover and lack of comprehensive training also contribute to permit quality concerns.

- The existing statutes and regulations often restrict EPA and the States' ability to promote innovative treatment technologies, pollution prevention strategies, and market-based incentives.

- Permits are typically media specific with little information about the impact on other media (e.g., the movement of pollutants from air to water) or ecosystem protection (e.g., protection of airsheds or watersheds).

- EPA, the States and some municipalities have created a number of media-specific permits data bases which are frequently incompatible. While these data bases generate useful facility information, there is little information on local environmental conditions from which to make ecosystem or human health risk determinations.

The Permits Streamlining Team recommends the following major actions to address these concerns:

- Standardize permit processes (applications, reviews, appeals). Revise existing policies and regulations governing permit issuance, as well as the appeals process, to make them more efficient and effective without compromising due process.

- Revise the public participation procedures for permits to encourage early input from affected citizens.

- In collaboration with the States, design a core curriculum for each program for permit writer training to retain and strengthen permit staff. Also, seek input from industry on the design of the curriculum. Create rewards and other incentives for outstanding permit writing.

- Establish a National Permits Clearinghouse as a "one-stop" permits information and referral service so industry and the public can contact one place to obtain information about regulations and permitting requirements.

- Amend statutory and regulatory authorities to enable the Administrator to target permit issuance opportunities for technology-forcing innovations, cross media considerations, and pollution prevention strategies. Work within existing statutes to create opportunities and incentives for pilot projects. Engage in pilot projects to test targeting proposals as well as the feasibility and scope of permit fees.

- Issue permits only when necessary to apply site-specific controls, and "permit" other facilities by self-implementing regulations. Prioritize the applicant universe and permit decisions according to the human health risk, ecological risk, and environmental justice factors.

- Prioritize EPA programs (data collection, oversight, accountability, priorities) to emphasize improvements in environmental quality as well as permit programmatic goals.

- Develop and reorganize administrative systems in EPA and the States to encourage coordination of the various media permit programs. Integrate significant permit decisions to provide for more effective protection of the environment. In addition, the Agency should continue to investigate the feasibility of consolidated and industry or pollutant-specific clustered permits.

- Modify existing environmental media-specific data bases to make them compatible with the Geographic Information System (GIS) approach to identifying sensitive populations and geographic areas at risk and measuring environmental trends.

- Ask permits' stakeholders to identify other remaining barriers in the permitting process. Survey successful permitting programs outside of EPA for ideas.

EPA and the States face a growing number of small, diverse, decentralized sources of pollution. Each increment of pollution control poses greater cost, technology and enforcement challenges. Given this expanding universe of permits, EPA needs to invest in, and improve its existing permit programs if it is going to be successful in its efforts to further identify and reduce environmental risks, protect human health, foster pollution prevention, and encourage ecosystem protection.

**BACKGROUND**

Historically, EPA and its State partners have relied heavily on permits (often as mandated by Congress) as the primary vehicle to achieve environmental protection by prescribing the level of protection that must be achieved. The permit sets forth the limitations within the parameters established by the statutes for pollution discharges and handling of hazardous wastes. Permits may be general or specific. General permits specify exactly what a class of facilities is required to do (e.g., the dry cleaning industry or the pulp and paper industry). General permits are used when it is impractical and/or unnecessary to issue specific permits for each facility, e.g., numerous small facilities with similar operations. Individual permits specify exact operating conditions for a given facility and are often site specific. Permits also provide a strong basis for any subsequent enforcement action to ensure that limits are met and protection achieved.

While this strategy has succeeded in controlling sources of pollution from large, centralized facilities, the permitting universe has expanded to include many small, diverse, decentralized sources of pollution (e.g., storm water discharges). Thus, EPA must modify its permitting processes to address these new challenges.

Currently, EPA and the States are responsible for processing close to a million permits. EPA has annually budgeted over 1,000 positions (most of which are located in Regional and field offices) and several hundred million state grant and contract dollars to conduct permit activities. Despite this resource investment, it is not always possible to make permit decisions or reissue permits in a timely manner. As a consequence, permit issuance can appear slow and inefficient. Excessive paperwork requirements add to the administrative burden at both the State and Federal level and can create a real backlog in the permit process. Depending on the type of permit, the time it takes from application to issuance may range from one month to two years. If an applicant appeals a permit decision, lengthy public hearings may add to the time it takes for issuance of a permit.

Given the large volume and kinds of permits requiring processing, neither the Agency nor the States can effectively or expeditiously address the current universe of permit applications needing attention. Since a permit may

not always be the best method for achieving environmental protection and risk reduction, it is essential to prioritize, group, and target permitting activities according to types of facilities, geographic location, and the nature of the required permits.

**ESTIMATED UNIVERSE OF FACILITIES REQUIRING PERMITS**
(as of July 1993)

| STATUTE | CATEGORY WITHIN STATUTE | NUMBER |
|---|---|---|
| NPDES | Major and minor dischargers | 65,000 |
| | Facilities covered by general permits | 10,000 |
| | Industrial storm water | 100,000+ |
| | NPDES/sludge | 20,000 |
| AIR | Title V (projected) | 350,000 |
| | New Source & Modified | 40,500 per year |
| RCRA | Operating | 2,425 |
| | Post Closure | 1,834 |
| UIC | Class I | 514 |
| | Class II | 161,204 |
| | Class III | 34,026 |
| | Class V* | 208,600 |
| | Total for all Classes | 404,344 |
| TSCA | PCB Disposal | 53 |

*The Class V rule is currently under development and the permit number is likely to change significantly as a large number of wells will likely close instead of applying for permits.

As more States receive program delegation and the permitting processes become established, the EPA/State partnership is evolving. States have indicated that it would be more appropriate for EPA to focus on technology transfer, rather than state oversight. These States would prefer more flexibility, along with the delegated authority, to carry out their program responsibilities.

Furthermore, the lack of an integrated data base in the States or Regional Offices of EPA make it very difficult to conduct an integrated or multi-media permit program. Partnerships with the States need to be developed to cooperatively build the necessary data bases. This would greatly enhance monitoring and compliance as well as provide information for emergency responses to environmental accidents (e.g., floods).

Finally, the current permitting procedures and programs generally do not encourage innovative approaches to the process because of the requirements established through existing regulations and statutes. According to a report by the National Advisory Council For Environmental Policy and Technology (NACEPT), the current permitting and compliance systems, as they function today, discourage all stakeholder groups from taking the risks necessary to develop innovative technologies -- whether for pollution prevention or for pollution control -- and to bring them into routine use to solve environmental problems. Innovative approaches include any new treatment technologies or changes in emission controls that differ from the historic or traditional method. In addition, innovative approaches include pollution prevention, emission fees, marketable emission rights, and other less orthodox emission controls. It may also include flexible permits for testing and or research and development of innovative technologies for pollution prevention.

## ISSUE/DISCUSSION

With respect to the issues listed below, the Permit Streamlining Team identified recommendations, implementation steps, and where available, the resource and programmatic implications of implementation:

- Improving Administrative Processes
- Designing Training and Incentives for Permit Professionals
- Facilitating Meaningful Public Participation
- Increasing Access to Permitting Information
- Enabling Innovative Approaches to Permitting
- Targeting Permit Priorities
- Implementing a Cross Media Perspective
- Measuring the Environmental Success of Permitting

The permitting programs are not all alike and therefore, some of the discussion is not relevant to each program. The discussion is intended to be a broad overview of many of the concerns identified by EPA, the States, the

regulated community, and the interested public. The recommendations also reflect a mix of initiatives -- some of which may be started immediately and others which require regulatory/statutory or organizational changes.

Finally, note that some of the recommendations within this report overlap or depend on each other, and are also likely to be seen in other Agency National Performance Review Reports.

## ISSUE: IMPROVING ADMINISTRATIVE PROCESSES

The permitting processes are cumbersome and administratively burdensome. Final permit issuances or denials, and appeals often involve extensive delays, and use a tremendous amount of the Agency's and States' resources.

## RECOMMENDATIONS AND IMPLEMENTATION STEPS:

• Encourage States to take full delegation[1] and responsibility for permit programs and develop the capability of other states to assume more responsibility for permit programs. Modify oversight procedures to tailor guidance and review to help States implement environmentally effective permit programs.

IMPLEMENTATION STEPS: Office of Regional Operations and State/Local Relations (OROSLR) working with a group nominated by the State/EPA Committee and EPA management would address the delegation issue and develop oversight procedures in FY'94.

• Evaluate EPA's current requirements for State reports regarding program compliance and eliminate excessive or artificial commitments.

IMPLEMENTATION STEPS: National program managers should work with Regions, States and others to revamp accountability/measurement system for FY 1996 during FY 1994-1995.

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[1] In this document the term "delegation" includes all mechanisms that allow a non-EPA agency to review and issue permits to comply with Federal requirements. This includes delegation of authority to implement EPA regulations and State permit regulations that have been approved by EPA (e.g., New Source Review Permitting Regulations in State Implementation Plans for the Air Program).

• Consider the expansion of alternative permit mechanisms (e.g., general permits, permits-by-rule) for "minor" permittees or those in similar industries or geographic regions.

• Set up teams with States to further review and streamline the permit processes. Ask the stakeholders to identify barriers and obstacles in the permitting process. Survey successful permitting program organizations for more efficient approaches to permitting or similar processes.

IMPLEMENTATION STEPS: OROSLR should take the lead to identify team members and get them started within 90 days. The teams would have six months to develop their recommendations.

• Establish an expert system or other software to guide applicants through application preparation or States through application review. Such uniform systems should provide permit applicants with an up-front understanding of the permit requirements for their specific source and add certainty and consistency to the permit application and review process.

• Centralize permit application data, self audit information and compliance data in one information system to promote cross media, targeting opportunities. As part of the permit application process, require each applicant to provide environmental quality data associated with its release/discharge/emission. Such a data system would improve permit development as well as coordination between the media programs. For example, an applicant seeking the ability to trade pollutants in its wastewater permit would provide information on the discharge from the second facility receiving the "credit", to ensure that the additional pollutants do not degrade the second site's aquatic conditions.

• Standardize the appeals process for all federal permit programs eliminating unnecessary steps and consider setting reasonable time limits for permit applicants, permit reviewer and the Environmental Appeals Board. Encourage states to adopt these streamlined provisions.

• Review and standardize data quality requirements in Quality Assurance Project Plans on a national basis to accelerate approval.

• Establish model permit processing procedures and "Measures of Success" to set standards and provide incentives for EPA and States to process and issue permits in a timely manner.

IMPLEMENTATION STEPS: A national cross-program permit review team would need to be established to examine and amend permit application requirements, develop expert systems, establish permit time frames, and standardize the permit appeals process. Some of this review may be able to be done by individual programs. The team should complete its more detailed review in FY'94 with specific draft regulatory changes as an outcome.

**IMPLICATIONS:**

• Additional authorization of State permit programs will require a shift in EPA permit resources in the Regions, from permit issuance activities to work with States to get authorization done. This will result in a short term reduction in permit issuance, but long term should save the Agency a portion of permit issuance resources.

• Expanding use of alternative permit mechanisms like general permits and permits-by-rule for certain lower risk or lower priority permittees would allow a better focus of Federal and State resources on higher risk geographic areas, pollutants, and industry types. EPA and States might, through this approach, be able to reissue or issue lower risk permits which would otherwise receive no controls due to permitting backlogs. This Cross Program Review team would require the efforts of several people from each permit program full time, including regional (and maybe State) members. These resources would be shifted from other permit regulatory, oversight and outreach activities. Resources to follow through with regulatory changes would be needed in each program for the next 3-4 years. When completed, these changes should result in more efficient permit processing and improve the Regions/States ability to focus resources on environmental decisions rather than administrative processing.

• To design a data system to centralize permit application data would entail a significant investment in hardware, software and FTEs. It would provide to the public the ease of accessibility they have long requested. Estimates of the cost to design and maintain the system would be obtained through existing permit contract services already involved in other central permit contract systems.

**ISSUE: DESIGNING TRAINING AND INCENTIVES FOR PERMIT PROFESSIONALS:**

Staff turnover and lack of comprehensive training, particularly at the State level, are significant obstacles to producing quality permits on a timely basis. Obstacles to the permitting process often diminish Federal and State permit writers' sense of accomplishment.

**RECOMMENDATIONS AND IMPLEMENTATION STEPS:**

• Establish an EPA Permits Institute. Require all permit professionals, State and Federal, to complete a core curriculum of permit writing courses within a specified time frame. The curriculum could include both general and media specific courses focusing on:

general permit processes
state specific information
innovative strategies and approaches
targeting
cross media permits
regulatory and statutory updates

Schedule the courses often and investigate alternative approaches (e.g., satellite down links, video conferences, self-study) to making the courses accessible. Explore desirability and option to certify permit professionals upon completion of the core curriculum.

• Review the staffing of permit organizations to assure appropriate skills mix so that they have the staff with the necessary expertise to make scientific and technical permits decisions. Assign the general administrative and paralegal work to the appropriate staff.

• Provide financial and other incentives and awards to permit professionals. The Remedial Program Manager of the Year award in the Superfund program is a good model. Investigate a mechanism for including State employees in a Federal incentive programs.

IMPLEMENTATION STEPS: OHRM, the EPA Institute, and EPA program office permitting experts work with a team of State and EPA program professionals to design a core curriculum and an incentive program. An initial proposal should be distributed to stakeholders in FY 1994.

**IMPLICATIONS:**

Requiring all permit professionals to complete core curriculum of permit writing courses will produce higher quality permits on a timely basis. Providing incentives and awards will reduce Federal and State permit writer turnover. Consolidating existing training modules into a core curriculum will take some resource commitment in time, and awards will require some additional funds. This dedication of resources should, however, improve quality and the timeliness of the issuance of permits, and reduce costly staff turnover.

**ISSUE: FACILITATING MEANINGFUL PUBLIC PARTICIPATION**

Under the existing programs, the Agency does not address the public concerns early in the process which can result in general dissatisfaction and delays in permit decisions. Permittees often complain that public participation is used to delay permit decisions. The public feels the decisions have already been made before they have an opportunity to comment.

**RECOMMENDATIONS AND IMPLEMENTATION STEPS:**

• Revise the permitting procedures to encourage meaningful public involvement early in the process. Require permitting authorities and permittees to hold meetings with the public prior to submitting a permit application on controversial or significant permits.

• Identify more effective methods to notify the public of a permit application, other than through notices in the newspapers. Benchmark other organizations for successful approaches, such as the State of Maryland which issues a monthly publication that notifies the public of all the permits in Maryland that are open for public participation.

• In addition to the existing public comment process, develop communication strategies for each year's expected permit issuance workload, targeting more extensive public outreach for the more significant and/or controversial permit decisions. Allow for informal meetings with citizens groups prior to the development of a draft permit. Expand permit fact sheets to incorporate comments and issues raised by the public early in the process. This would make the post draft permit public participation more effective.

• Use the Superfund Community Relations Program as a model to develop programs to educate interested citizens regarding the purpose and scope of the permit process, including the use of public comments and the issues appropriate for consideration in the permit process.

IMPLEMENTATION STEPS: Public Affairs Specialists from OCEPA and State pollution control agencies should be appointed in FY 1994 to develop specific implementation steps for each of these public participation areas. These program improvements could be implemented immediately.

**IMPLICATIONS:**

The recommendations for this issue focus on early and expanded involvement of the permit applicant and the public in the permitting process. This process will provide more effective and expanded participation and education for the public. In general, these processes could be initiated immediately for all new permits without changes in regulatory requirements. Additional resources would be required by the permit applicant rather than by the EPA or State pollution control agencies.

**ISSUE: INCREASING ACCESS TO PERMITTING INFORMATION**

Direct and timely access by the public and permitting agencies to accurate, comprehensive and understandable information regarding permit programs, permit applicability and requirements is key to ensuring that applications are complete and processed in a timely and consistent manner. Permit information outreach can be accomplished through permits information resources.

Multiple information resources exist (e.g., information centers, guidance manuals, automated procedural programs and data bases and training instruments) for assisting State/local agencies, the regulated community and the public with regard to the procedural and technical requirements of the various permitting programs mandated by federal environmental statutes. These information resources are not always user friendly; they are media-specific; they do not cross-reference; they can be costly and difficult to access. The existing systems are not viewed as totally successful tools in streamlining the permit processes or for providing mechanisms for ensuring compliance.

**RECOMMENDATIONS AND IMPLEMENTATION STEPS:**

• Establish a National Permits Clearinghouse as part of EPA's Public Information Center so that industry and the general public have one place to obtain information about regulations and permitting requirements. This would include general, simple-to-understand information, as well as names and numbers of State and/or EPA contacts who are available to address permitting questions. Where the permit program is delegated to the State, the National Permits Clearinghouse will provide referrals to State experts.

• Create electronic bulletin boards to disseminate permit information. An electronic bulletin board can provide almost instant access to permitting resources including general and technical documents, data bases, checklists, policy and guidance, training materials, computer models, program contacts and events.

• Establish, and assign the responsibility to maintain, a compendium for each permit program of all relevant program policy and guidance. Also include external informational resources, such as trade and State agency organizations who can provide additional insights or knowledge about permit requirements.

> IMPLEMENTATION STEPS: Within six months, form a work group to be responsible for the coordination and collection of permit data and referral lists from each Program Office. Also this work group would be responsible for identifying existing centralized focal points/centers, starting with the EPA Public Information Center.

• Encourage national Regional and State permit programs to develop ways to be more responsive to the public. One example is the rotating "Duty Officer" used in Region VI and OPPE. The daily "Duty Officer" responds to inquiries from the public, refers callers, mails out information, aided by a notebook of references, hotline numbers, technical documents, state contacts, etc.

• Draft clear and understandable guidance manuals to explain the permit requirements. The manuals should include examples and should be available to the permit applicants, the States and the general public. A good model is the Virginia layman's guide to RCRA. For non-English speaking targeted audiences, documents and fact sheets should be available in the appropriate language.

IMPLEMENTATION STEPS: Each permit program office will either develop or review a checklist of the key elements of its permit application and provide a copy to the clearinghouse. The development or modification of the checklist should take 3-6 months. It should be used as a screening tool by both the applicant and permit reviewer to assure that all the permit requirements are addressed. The checklist should also list innovative technologies, pollution prevention and cross media issues to encourage both the applicant and the review to focus on these alternative areas. The list should also check for electronic data entry capabilities and ease of public access to information.

• Collaborate with state associations, trade associations and citizens' groups to regularly offer training workshops throughout the country. Courses could be targeted for specific groups such as small businesses or technicians who select and maintain appropriate control technologies or processes. The workshops could focus on issues such as resolving common problems found in permit applications, determining completeness, compliance with reporting and monitoring requirements and guidance on effectively working with the process to achieve a "hitch-free" application. Within three months each program office should review the practicality and benefits to be derived from implementing any of the above strategies not already in place. Appropriate additional measures should be implemented within six months thereafter.

**IMPLICATIONS:**

High printing costs currently limit the free distribution of larger publications. However, some larger publications can be accessed on line at no charge (i.e., Access EPA, etc.). Also, access to public data bases can be done from the Centers, again for no charge. Collecting, maintaining and dispersing the information may require additional contract resources, since the centers probably would be run by contractors. For example, the National Drinking Water Hotline handles an average of 4,000 calls a month at a cost of $450,000 a year.

The costs of implementing these recommendations varies from permit program to permit program. The Air Program has set up a Technology Transfer (Computer) Network for 1-3 FTEs and $200,000 of contract funds. The New Source Review Air

Permitting Program established a compendium of relevant materials with $50,000 of contract funds. This same office of New Source Review for Air drafted a comprehensive guidance document for 1-2 FTEs. Collaboration with non-EPA organizations to put on courses also requires EPA resources. The New Source Review Air Program estimates that each workshop uses 1/4 FTE and applicable travel funds.

**ISSUE: ENABLING INNOVATIVE APPROACHES TO PERMITTING**

Under most of the environmental statutes and regulations, requirements prescribe, often in very specific terms how pollution should be controlled. For instance, control technologies are often specified, and particular sources of pollution are typically identified. These conditions are not conducive to innovation, pollution prevention initiatives or ecosystem approaches. Even when regulations and statutes allow innovative approaches the EPA budgeting/planning process does not allow the evaluation up-front investments of **proactive** resources rather than expending **reactive** resources at a later time, resulting in a lack of resources for developing full and complete guidance for permittees on how to utilize innovative procedures in the permitting process. Since environmental improvement is the ultimate goal of any permit, permitting programs should encourage, or at least allow, sources to find cost-effective, efficient, flexible or innovative methods of achieving that goal. Innovative approaches include any emission control strategy that differs from the traditional method. Specifically, this includes pollution prevention, emission fees, marketable emission allocations, and other less orthodox emission control techniques.

**RECOMMENDATIONS AND IMPLEMENTATION STEPS:**

• Identify which statutes and regulations currently allow the use of innovative strategies, and prepare guidance for permit writers and permittees that explains how to implement those approaches.

• Identify which statutes and regulations currently do not allow full use of innovative strategies. Where the statute allows innovative strategies and the corresponding

regulation(s) do not, the Agency should revise the regulations. Where the statutes do not allow flexibility, the Agency should work with Congress to amend those statutes.

IMPLEMENTATION STEPS: OGC should be the lead in performing the statutory and regulatory analysis to determine what, if any, changes are necessary to allow the use of innovative technologies. The analysis should take approximately six months.

• For permitting programs which have authority for implementing innovative strategies, develop guidance up-front that explains how to utilize innovative procedures in the permitting process. Many permittees who wish to apply innovative strategies are discouraged by the lack of clear and concise guidelines on what is approvable by the permitting authority.

IMPLEMENTATION STEPS: Program office permitting experts coordinate work groups for the development of guidance over a six month period.

• Recommend that Congress provide the Agency with the statutory authority to establish a program for encouraging pilot projects to test the effectiveness of environmentally beneficial innovative controls that may not initially meet all existing programmatic or legislative requirements.

IMPLEMENTATION STEPS: OPPE should coordinate the use of pilot projects. Approximately 1% of the programs budget should be used on evaluation and implementation of pilot projects.

• Encourage the regulated community to demonstrate innovative strategies and then publish and widely disseminate success stories that can be used by other permittees.

IMPLEMENTATION STEPS: A team of representatives from permit organizations should solicit success stories from industrial groups and States and periodically publish in a guide.

• Encourage the establishment of tradeable emission allocations that allow the private sector to reduce emissions in the most cost effective manner. Trading may have limited geographic flexibility due to the site specific impacts of certain pollutants in some media.

IMPLEMENTATION STEPS: OPPE should coordinate the further study of this effort and prepare a proposal within six months.

• Establish permit fee programs that cover the cost of developing and issuing the permit. The fees in excess of the administrative costs should fund research into pollution prevention and other more cost effective control strategies such as marketable permits, or tradable allowances.

• Explore an emission fee program that sets the cost based on the risk of the specific pollutant that is discharged or use a graduated scale based on the toxicity of the active ingredient.

IMPLEMENTATION STEPS: OGC and OARM should research how the procedural barriers can be changed and develop a recommendation for the Administrator. A risk based fee system will be complex and costly to establish, but EPA should examine State fee systems that use this approach.

• Create incentives for pollution prevention and good performers, in general, by allowing participating facilities additional flexibility. For example, increasing permit duration, allowing self-reporting, reducing monitoring frequencies or deferring permit renewals.

IMPLEMENTATION STEPS: Where no legislature barriers exist, begin immediately; phase in other changes as legislative reauthorization opportunities arise.

• Use the permitting process as an opportunity to seek voluntary commitments to pollution prevention or other reductions in pollution. Provide tools and technical support for voluntary actions to address environmental problems. Go beyond mere permit writing to forge partnerships between public and private sector to improve environmental quality.

IMPLEMENTATION STEPS: Each of the permitting programs should establish an administrative framework to provide support for innovative projects within 30 days.

• Allow flexibility to meet release reduction targets in a single media. An example is the Amoco/EPA Pollution Prevention Project, where the participants determined that pollutant releases could be reduced much more cost-effectively than actually under the terms of the facility permits.

IMPLEMENTATION STEPS: OPPE should take the lead to identify other industries interested in pilot programs, and once identified, work with EPA program staff (Headquarters and the Regions) and States to develop a workplan. It will take approximately 9 months to develop the workplan.

**IMPLICATIONS:**

In the long term, increased use of innovative strategies will result in cost savings for industry and permitting authorities because by definition innovative strategies are optional programs that permit applicants choose to utilize or permitting authorities allow to be used in permits. This choice will only be made in cases where cost savings are realized. Specifically:

• Increased authority for pilot projects will speed the development of innovative strategies producing greater and more rigid cost saving for affected industries.

• Tradeable emissions encourages creativity in obtaining environmental results. Tradeable emission allocations will require greater government investment in the monitoring and modeling of pollutants on a geographic basis. Many of the monitoring and modeling techniques are currently available, however, they have only been applied on a limited basis. Economic studies show that in many cases the application of these technologies on a geographic basis can lead to substantial cost savings.

• In the long run this will result in cost savings for the permitting authority and the permitted community. The cost of the up-front guidance development could be considerable (5 FTEs per permitting program), but this will result in considerable cost savings as innovative permits are issued in a more timely, less-resource intensive manner and industry realizes the cost savings of using innovative approaches.

• Permit fees collected by the permitting authority will allow the authority to devote more resources to quickly and accurately process permits, which could result in real savings for permit applicants.

• Flexibility in the statutes would help to stimulate and enhance the development of innovative technologies for environmental improvement.

However, the up front resources of setting up programs can be considerable, such as explained below:

Setting up a marketable emission allocation program has taken over three years and more than 15 FTEs in the South Coast Air Quality Management District for three air pollutants (sulphur dioxide, nitrogen oxides and particulate matter). However, South Coast District management believes that this is less resource intensive than the traditional method of determining emission reductions and controls for each source.

For determining risk-based emission fees, the initial research and development efforts needed to determine relative risks and subsequent societal costs of emissions requires extensive resources and technical capabilities that have already been expended and must be forecasted to be spent in the future. However, several states, e.g., New Jersey and Pennsylvania have developed risk based permitting programs for toxic emissions. Additional data must be gathered to determine costs and benefits of implementing the innovative strategy approaches on an agency-wide basis.

**ISSUE: TARGETING PERMIT PRIORITIES**

Neither EPA nor the States can expeditiously or effectively address the current universe of almost a million permit applications, nor is a permit always the best method for achieving environmental protection/risk reduction. It is necessary to prioritize, group and/or target permitting activities.

While the need to target permit activity has been accepted for several years, to date our efforts have focused more on site-specific factors within individual media and less on environmental justice geographic factors, and ecosystems.

**RECOMMENDATIONS AND IMPLEMENTATION STEPS:**

• Issue permits only where it is necessary to apply tailored or site specific requirements; use alternatives where possible such as compliance with self-implementing regulations or class permits. For example, a recent study of the implementation of the RCRA program concluded that

non-commercial storage facility permits could be obviated by permit-by-rule or class permits. The study also concluded that post-closure permits for land disposal facilities could be replaced by enforcement orders or agreements.

- Write self-implementing regulations. In the interim, use general or class permits for sources that do not need site-specific requirements.

- Revise statutes as necessary to allow EPA and approved States the discretion to not require a permit for particular sources or classes of of sources as necessary.

IMPLEMENTATION STEPS: Beginning immediately and for the next 4-5 years, program offices should review existing regulations and those under development to identify opportunities. Over the next 3 years, amend statutes as opportunities arise, including the Clean Water Act, Safe Drinking Water Act, Resource Conservation and Recovery Act; in the same time frame, consider developing an Administration Bill to implement the changes recommended in this report.

• Prioritize permit issuance based on human health and ecological risk concerns, or on a geographic basis. The Agency should make more frequent use of geographic, environmental justice and other risk-based targeting considerations, particularly ecosystem approaches, to improve regional environmental quality and focus on the most critical environmental resources.

- As an interim step, within each media permitting program, set priorities for reissuance on a pollutant basis, industry basis and geographic bases. Pollutants, industries and geographic areas can be targeted based on risk. Targeting by industry also ensures that permit writers and the Agency gain expertise about the industry and that requirements are consistent from plant-to-plant and permit-to-permit. This approach requires substantial planning on the part of permit managers.

- Each Region has developed an individual, media-specific, permitting priority scheme. Headquarters should foster these efforts and encourage stronger commitments to targeting by folding it into the Regional strategic plans.

IMPLEMENTATION STEPS: Begin immediately to have the National Program Managers meet with the Regions. Beginning in FY'94, encourage Regions to implement ecosystem, environmental justice-oriented and geographic approaches. Negotiate specific transition to more targeted programs for FY'95 budget and Operating Plans. Immediately identify the barriers and opportunities for revision. In FY'94 make changes in the FY'95 Operating Plans and in grant negotiations for FY'95.

• Establish a system of State incentives and rewards, including revisions to the State oversight mechanisms to encourage States to adopt the risk-based targeted approach.

- Review existing allocation formulas used to award State grants and, where possible, reserve funds to reward or assist those States which embrace the risk-based, targeted approach to permit issuance.

- Establish other incentives for States to conduct targeted permit issuances (e.g., renegotiate Memoranda of Agreements, support changes to State permit processes such as longer permit durations and pilot arrangements, reorient EPA's State oversight approach to provide relief from the need to reissue 100% of permits).

IMPLEMENTATION STEPS: Establish a work group of program staff, Grant Administration Division, and State representatives to conduct a nine month study exploring existing incentives and opportunities in the future.

**IMPLICATIONS:**

• Reducing the number of permits that must be issued enables permit writers to better focus on the quality of each permit that is issued, thereby maximizing resources and environmental improvements. For example, by covering RCRA non-commercial storage facilities with permits-by-rule or class permits and by covering post-closure permits with enforcement orders, the universe of RCRA permits could be reduced by two-thirds. In the NPDES program, site specific requirements, and thus permits, may not be necessary for many storm water point sources, feedlots, oil and gas

discharges, minor POTWs (Privately-owned Treatment Works) and other point sources which are not impairing water quality. In the UIC program, the issuance of 80% of Class V UIC permits could be avoided, eliminating the need to issue at least 150,000 permits. In the Air Program, the issuance of certain permits may be reduced especially in attainment areas. This shift away from site specific permitting could reduce the issuance of tens of thousands of permits. The savings are roughly estimated to be 20% of the EPA permit FTE and permit grant or contract dollars. However, 6-7 FTE per national program per year over 3-5 years would be required to make the necessary regulatory changes.

• Resources will be needed to revise standards to make them self-implementing. These short term costs will be more than compensated by long-term savings. For example, the administrative resource savings for facilities no longer covered by permits may be between $10,000 and $100,000 per permittee (estimated cost for a facility to obtain a permit).

• Lapses or delays in permit issuance will be necessary to begin issuing permits on a risk and ecosystem basis due to data collection analysis needs. Some permits will not be reissued at all. Self-implementing regulations will need to be developed to ensure that these sources continue to be required to meet environmental standards.

• When setting priorities, the Agency should ensure that, while focusing on cleaning up the worst environmental problems, it does not neglect pristine areas that should also be protected.

• The Agency will need to revise its compliance strategy to address self-implementing regulations. Compliance and enforcement strategies must be cognizant of geographic and other targeting schemes and not hinder these efforts.

**ISSUE: IMPLEMENTING A CROSS MEDIA PROSPECTIVE**

Agency permit programs are media specific, and cross media impacts are not frequently addressed in assigning permit limits. Following traditional permitting approaches, pollutants can be transferred from one medium to another, or even escape regulation altogether. In one recent example, Philadelphia attempted to control emissions within its airshed by requiring installation of precipitators on urban

smokestacks. The solids and sludges that were removed found their way to the Delaware River, either directly through discharge or indirectly through runoff from land disposal. Once in the river, metals and other constituents that had been removed from smokestacks through air pollution controls were pushed upriver by natural tidal action until they entered the city's drinking water intake. Extra funds had to be allocated to remove these pollutants from drinking water supplies.

The immediate reaction to this example is to recommend a consolidated permit system. In fact, every time a permits reform study is undertaken, the consolidated permits question is revisited. The Agency promulgated regulations establishing such a system in 1980, but in response to broad based criticism these regulations were "de-consolidated" within three years. The Federal consolidation of permits did not produce the benefits expected. As part of the RCRA Implementation Study, people from industry, environmental groups and regulatory agencies were interviewed in Region VI. Both industry and environmental group representatives favored an integrated multi-media approach to permitting, while EPA and State regulators felt the approach could not work. Permit programs regulate inherently different activities, requirements are unique and the consolidated format is difficult to follow.

A recent study by the State of California on multi-media permitting concluded that while no states are currently permitting solely on a multi-media basis, several states are moving in this direction and endorsed the idea that further exploration is warranted.

**RECOMMENDATIONS AND IMPLEMENTATION STEPS:**

• Coordinate permit issuance/reissuance for environmentally significant sources to encourage the development of cross media pollution reduction strategies. One method of coordination might be the creation of permitting teams in the Regions to review permits and identify cross media transfer issues. Alternatively, EPA could phase in cross-media permitting with several pilots covering a wide range of alternatives, (e.g., combining UIC/RCRA; air/water; water/RCRA; or sludge/ground water). The pilots may involve volunteer permittees who are willing to invest in the process in exchange for the potential flexibility.

IMPLEMENTATION STEPS: Implement this initial strategy immediately and continue through FY'95.

• Consider reorganization of OW, OAR, OSWER and OPPTS (both HQ and Regions) along functional lines rather than media lines similar to OE, OARM, OGC, ORD, IG, OIA and OPPE. This structure will better promote cross media analysis and consistency from program to program. For example, one office may establish and update national, self-implementing pollutant or industrial standards, while another is responsible for site specific permitting of individual facilities.

IMPLEMENTATION STEPS: Within nine months, OARM will prepare a draft report for the Administrator, that also examines the implications of reorganization and evaluates other alternatives that effectively promote/facilitate cross media considerations with a final report within 12 months.

• Invest in compatible data systems to allow for cross media analysis of impacts when setting permit limits.

IMPLEMENTATION STEPS: Starting immediately, and continuing for an additional 2-4 years.

• Develop a coordinated approach across media programs in dealing with similar pollutants. There are significant differences with respect to pollutants considered important under RCRA, the Clean Air Act and the Clean Water Act. While the pollutant's effect in each media may account for some of this disparity, it does not justify it all.

IMPLEMENTATION STEPS: On-going.

• Amend statutes/regulations which mandate the use of specific control technologies (as opposed to merely setting a pollutant reduction target). These barriers must be removed for the Agency to be able to successfully implement cross media, pollution prevention and innovative "technology-forcing" approaches.

IMPLEMENTATION STEPS: Over the next 3 years, amend statutes as opportunities arise, including the Clean Water Act, Safe Drinking Water Act, Resource Conservation and Recovery Act; in the same time frame, consider developing an Administration Bill to implement the changes recommended in this report.

• Before implementing a consolidated permit program, establishing a pilot, or even empowering another task force to revisit the idea, OPPE should prepare an issue paper for the Administrator that consolidates the findings of past studies and task forces with the results and recommendations from the California study, the New Jersey pilot and other state efforts. These results can be combined with a survey of permit stakeholders focusing on the feasibility of a consolidated permits program.

IMPLEMENTATION STEPS: OPPE should conduct the historical review and the survey of stakeholders and present the Administrator with an issue paper within 4 months.

**IMPLICATIONS:**

• To effectively conduct cross media permitting will require an investment in environmental data collection by both EPA and the permittee. The up front data collection costs will be high, but generally will be offset by acceptance and use of the data system and by savings to the permittee in overall pollution control costs. Rough estimates of GIS implementation are almost $15 million over the next five years for initial set up to implementation in all ten regions. Savings in outyears go from design to maintenance to reduce overlap. System training will be needed.

• Cross media permits offer the opportunity for greater net environmental gain by promoting greater facility-wide risk reductions and discouraging those cross media pollution transfers that tend to increase risk. One result is more environmental protection for about the same cost. Data needs to be collected from various pilot studies to further document cost savings.

• Cost savings will be realized by examining pollution prevention alternatives as well as end-of-pipe controls. Cross media concerns may also spur technological innovation. The Amoco study showed that, given the flexibility, the Amoco Yorktown refinery could remove about 97% of tons of airborne hydrocarbons at about 25% of the cost of reducing them under current and anticipated permit requirements.

• Developing a permit to consider cross media impacts may delay permit issuance due to data constraints and the analysis of alternatives and several media specific permits may lapse. EPA oversight responsibilities will need to be modified to allow the use of alternative and/or innovative cross media considerations by Regions and states.

**ISSUE: MEASURING THE ENVIRONMENTAL SUCCESS OF PERMITS**

Currently, the Agency measures the success of some of its permit programs based on how many permits are issued/reissued. Moreover, these administrative measures do not necessarily provide the Agency with an indication of the effectiveness and degree of environmental improvement gained from the permit programs.

EPA has made several false starts creating a risk data base. The result is a proliferation of inconsistent, media-specific, data systems. These existing information systems are limited in their utility as tools for targeting or priority setting. Generally, these data systems track quantitative, administrative information rather than environmental impacts. Data on the most cost-effective means for pollutant reduction is lacking. Moreover, most Federal media specific systems are not compatible with each other or with State systems. Similarly, data linkages with other Federal agencies, such as the Fish and Wildlife Service and NOAA, are limited at best.

**RECOMMENDATIONS AND IMPLEMENTATION STEPS:**

• Designate the Geographic Information System (GIS) as the Agency's single approach to integrating environmental risk assessment. Improve the system to allow risk analysis by permit writers, strategic planners and managers. It should look across media and identify releases/emissions/discharges of concern. Ensure that GIS can interface with other Federal and State agencies concerned with pollution control and that State data can be uploaded into the Federal system.

IMPLEMENTATION STEPS: OARM will take the lead and coordinate with other Assistant Administrators, to conduct a one year study and present recommendations to the Administrator on the feasibility of GIS to be a single system and recommend any appropriate alternatives.

• In the interim, improve and use existing data systems (i.e., TRI, PCS, STORET, and FRDS) to independently determine appropriate geographic areas for targeting permit issuance. In addition, make greater use of external data sources such as the Nature Conservancy's Heritage Data (biodiversity); U.S. Fish and Wildlife Service (threatened and endangered species); National Institute for Environmental Studies (species inventory); U.S. Geological Survey and National Oceanic and Atmospheric Administration.

IMPLEMENTATION STEPS: Continue work on existing data systems to provide geographic data for permitting work with the PIC and the EPA library to assure increased access to external data systems.

• Revise application regulations and forms to solicit data on key environmental indicators. Use latitude and longitude data to coordinate facility information between permit programs. Make the submission of environmental data a pre-condition for obtaining administrative continuation of a permit.

IMPLEMENTATION STEPS: Develop criteria by FY'95 on both an agency-wide and program specific-basis; implementation will follow.

• In the interim, revise boilerplate conditions to require environmental data to be submitted as an enforceable condition of the permit. Incentives for voluntary submission can also be used until regulations are revised (e.g., less frequent monitoring, longer term permits).

IMPLEMENTATION STEPS: Within 12 months, each program office should issue a policy that every permit issued/ reissued must include specific environmental data.

• Revise existing program oversight criteria to account for the quality and environmental results gained by the various permits, in lieu of some of the Federal and State programmatic activities currently tracked (e.g., issuance, reissuance).

IMPLEMENTATION STEPS: Each office, beginning with FY'95 Budget, operating guidance and accountability systems will move beyond traditional oversight and bean counting approaches and include new measures geared to environmental results.

• EPA and States should develop a joint effort to randomly check and ensure permit compliance to ensure vigorous enforcement of permit schedules and limitations.

IMPLEMENTATION STEPS: The Office of Enforcement would work with Regions and States to develop goals and guidelines within six months.

**IMPLICATIONS:**

• Obtaining data on key environmental indicators is a prerequisite to establishing a risk-based, permitting priority scheme and allowing more innovation and flexibility with in Agency's various permitting programs. Current information systems can only crudely perform this function and must be improved.

• The cost of starting up and maintaining a single Federal/State system will be substantial (see cost estimates on page 25). Requiring each applicant to provide environmental quality data will be expensive as well, particularly for small business. However, the data entry efficiencies and environmental effectiveness gained are expected to offset the expense. Moreover, expenses can be mitigated by shifting them to the regulated community, (e.g., by providing for electronic data entry). Centralized data reporting will also result in additional savings by States.

• Centralization of permit application data will also facilitate public awareness and participation in the permit process.

• Creating a new single data system is likely to be controversial and require a substantial transition period. EPA itself may need to reorganize to allow the existing data bases to be consolidated, (e.g., create an Assistant Administrator for Environmental Data). Media programs and the States have invested in individual data systems. However, this may be offset by the flexibility of a targeted permit system and the ability to conduct more precise analysis of environmental concerns.

• The system will enable the Agency to better evaluate environmental risk, predict emerging problems and react quickly to changes in environmental quality. Such a system will also be able to relate the conditions (or success) of a permit in improving and maintaining local environmental conditions.

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## ADDITIONAL DATA COLLECTION EFFORTS

- NPR Suggestion Forms
- Survey of Regional Permit Branch Chiefs (attached)
- Review and Comment of Early Draft by Acting Assistant Administrators and Acting Regional Administrators
- Focus Groups and Interviews With EPA Employees and State Representatives

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## GLOSSARY

**Class Permit or Permit-by-Rule**
This option is a form of authorization to operate similar to a permit, but is applied on an industry-, size-, or class of facility-wide basis. Administrative and operating standards are established in regulation. A facility owner or operator then may be deemed to have a permit upon notification to the appropriate office of the facility's intent to operate pursuant to the regulations, certification of compliance with the regulations, and/or receipt of an approval from the program. This option provides yet more flexibility in establishing operating standards.

**Cross Media**
Anything that affects more than one end point for pollution (often referred to as "environmental medium" --i.e., air, water, groundwater).

**Ecological Risk**
The species that may suffer harm when their environment is altered in cleanup.

**Ecosystem**
Community of different species and their physical environment.

**Emission Fees**
Fees levied on permittees by a permitting authority based on the amount of pollution emitted into the environment. The fees could be structured to only cover the administrative costs of issuing the permit or could also cover additional expenses, such as pollution prevention, research projects or extra emission controls.

**Environmental Justice**
The concept of insuring that all individuals are protected equally from environmental risks, (i.e., that members of low-income and minority communities do not bear a disproportionate environmental risk). In the permitting context, this would mean that permits at sites in underprivileged areas are written and enforced to insure the same degree of protection as are permits in areas with higher visibility.

**General Permit**
This option operates the same as permit by rule, but provides more regulatory flexibility in that the permit conditions can be adopted administratively rather than being subject to a rulemaking process. The permit can also be reviewed periodically, and necessary changes made more easily.

**Geographic Information Systems (GIS)**
GIS are an advanced computer technology that combines map, model, and monitoring data into one comprehensive analytic framework, which assists engineers, scientists, and managers in identifying and assessing environmental problems and trends. A GIS provides sophisticated tools for data base creation, data base management, analysis of spatial and parametric information, and map production. A major GIS analytical function is to assign colors or patterns to multiple map themes and overlay them to reveal spatial relationships. Used properly, GIS has the potential to illustrate to EPA managers and decision-makers the impacts of environmental policies and programs.

**Innovative Strategies**
Any emission control strategy that differs from the historic method for meeting environmental goals. Specifically, this includes pollution prevention, emission fees, marketable emission allocations, and other less orthodox emission control techniques.

**Major Permit** or **Minor Permit**
A system for classifying permittees by their level of environmental risk or regulatory concerns. Each EPA permit program uses different criteria (and sometimes different terms to classify and characterize "major"/"minor" permittees.

**Market-Based Incentives**
Any scheme or policy designed to induce environmentally acceptable behavior through non-regulatory means. For example, a scheme whereby permittees may trade the rights to emit pollutants to an environmental medium for monetary compensation.

**Marketable Emission Rights**
A market-based incentive that allows for trading of authorization from the permitting authority to emit levels of pollutants.

**Media-specific**
Anything relating to activities, policies or controls within a single environmental medium. Also, since most EPA permit programs ate organized to control the addition of pollutants to a single environmental medium, the term also refers to activities of an EPA Permit program.

**Permit**
A required legally defensible document issued by EPA or the States and to a facility that tells them what they can and cannot do and reporting requirements. A means to achieve environmental quality.

**Permit-by-Rule** or **Class Permit**
See Class Permit

**Pollution Prevention**

Refers to the use of materials, processes, practices or products which reduce or eliminate the generation of pollution. It is a tool which can be applied to all sectors of economic activity to conserve natural resources, minimize risk to human health, and protect ecosystems.

**Post-Closure Permits**

A permit issued under the Hazardous Waste Program which specifies requirements for the continued monitoring and oversight of closed hazardous waste treatment, storage, or disposal facilities.

**Regulations**

A regulation is issued by EPA and has the full force of law. They are, in effect, "administrative statutes" providing clarification and refinement of statutes. Because they impose obligations and affect the rights of the public, EPA must follow certain policies and procedures when it develops rules. These policies and procedures are found in general statutes (e.g., The Administrative Procedures Act, Paperwork Reduction Act, Regulatory Flexibility Act, etc.), specific states (EPA's authorizing legislation, Executive Orders (i.e., E.O. 12044; E.O. 12291), judicial decision, and the Agency's own internal regulation management system.

**Site-specific**

Anything relating to activities, policies or controls within a single facility. For instance, controls on a waste water treatment plant that are based on information about the volume and types of pollutants, typically found at that particular location as opposed to controls based on the "typical waste water treatment plant."

**Statutes**

Statutes are laws enacted by Congress and can be quite specific. Some establish clear goals, criteria for determining what and how to regulate and timetables for doing so. All statutes require clarification or refinement before a regulatory program can be put in operation. EPA must frequently define key statutory terms and specify numerous details regarding how regulated parties will comply with the law. EPA is responsible for providing clarification and refinement through its regulations. Some of EPA's statutes are the Clean Air Act (CAA), Clean Water Act (CWA), Safe Drinking Water Act (SDWA), Toxic Substances Control Act (TSCA), Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Resource Conservation and Recovery Act (RCRA), Emergency Planning and Community Right-to-Know Act of 1986, Title III of Superfund Amendments and Reauthorization Act (SARA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

**Superfund**

The popular name for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which specifies requirements and makes available federal funds for the cleanup of old hazardous substance disposal sites.

**Targeting**

Any of several approaches for establishing risk-based priorities for issuance and enforcement of environmental permits (e.g., on a geographic basis, industry basis, or pollutant basis).

## STATUS OF STATE DELEGATION**

| STATES | NPDES | PSD | NSR | TITLE V | RCRA | UIC | PWSS |
|---|---|---|---|---|---|---|---|
| Alabama | X | X | X | | / | X | X |
| Alaska | | X | X | | | / | X |
| Arizona | | X | X | | ♦ | | X |
| Arkansas | X | X | X | | ♦ | X | X |
| California | X | X | X | | ♦ | / | X |
| Colorado | X | X | X | | ♦ | / | X |
| Connecticut | X | X | X | | / | X | X |
| Delaware | X | X | X | | / | X | X |
| District of Columbia | | / | X | | / | | |
| Florida | | X | X | | / | / | X |
| Georgia | X | X | X | | ♦ | X | X |
| Hawaii | X | X | X | | | | X |
| Idaho | | X | X | | ♦ | X | X |
| Illinois | X | X | X | | ♦ | X | X |
| Indiana | X | X | X | | / | / | |
| Iowa | X | X | X | | | X | X |
| Kansas | X | X | X | | / | X | X |
| Kentucky | X | X | X | | / | | X |
| Louisiana | | X | X | | / | X | X |
| Maine | | X | X | | / | X | X |
| Maryland | X | X | X | | / | X | X |
| Massachusetts | | X | X | | / | X | X |
| Michigan | X | X | X | | / | | X |
| Minnesota | X | X | X | | ♦ | | X |
| Mississippi | X | X | X | | / | X | X |
| Missouri | X | X | X | | / | X | X |
| Montana | X | X | X | | / | | X |
| Nebraska | X | X | X | | / | X | X |
| Nevada | X | X | X | | ♦ | X | X |
| New Hampshire | | / | X | | / | X | X |
| New Jersey | X | X | X | | / | X | X |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| New Mexico | | X | X | | / | X | X |
| New York | X | X | X | | ♦ | | X |
| North Carolina | X | X | X | | ♦ | X | X |
| North Dakota | X | X | X | | ♦ | X | X |
| Ohio | X | X | X | | / | X | X |
| Oklahoma | | X | X | | / | X | X |
| Oregon | X | X | X | | / | X | X |
| Pennsylvania | X | X | X | | / | | X |
| Rhode Island | X | X | X | | / | X | X |
| South Carolina | X | X | X | | / | X | X |
| South Dakota | | | X | | ♦ | / | X |
| Tennessee | X | X | X | | / | | X |
| Texas | X | X | X | | ♦ | X | X |
| Utah | X | X | X | | ♦ | X | X |
| Vermont | X | X | X | | / | X | X |
| Virginia | X | X | X | | / | | X |
| Washington | X | / | X | | / | X | X |
| West Virginia | X | X | X | | / | X | X |
| Wisconsin | X | X | X | | ♦ | X | X |
| Wyoming | X | X | X | | | X | |
| American Samoa | - | | | | | | X |
| Guam | - | - | - | | / | X | X |
| North Marianas | - | | | | | X | X |
| Puerto Rico | - | - | - | | | X | X |
| Trusted Territories | - | | | | | | X |
| Virgin Islands | X | | | | | | X |

Note regarding Title V: States are not required to submit operating permit programs until November 15, 1993

** EPA retains authority over designated Native American reservations.

**LEGEND:**

X States that are fully authorized under the given statute
/ States that are partially authorized under the given statute
+ States that will receive delegation in November 1993
♦ States that are authorized for most major requirements; joint Federal/State permits may be necessary
- Information currently unavailable

| | |
|---|---|
| **NPDES** | National Pollutant Discharge Elimination System |
| **PSD** | Prevention of Significant Deterioration (one section of NSR) |
| **NSR** | New Source Review (other than the PSD section) |
| | Includes major dischargers only in nonattainment areas and minor dischargers in all areas |
| **TITLE V** | Operating programs under Title V of the Clean Air Act |
| **RCRA** | Resource Conservation and Recovery Act |
| **UIC** | Underground Injection Control |
| **PWSS** | Public Water System Supervision program |

# REPORT OF THE *PLANNING AND BUDGETING* TEAM

NATIONAL
PERFORMANCE
REVIEW

# BUDGET AND PLANNING WORK GROUP

## SUMMARY

The Budget and Planning Work Group has been meeting since October 1992. The Work Group has focussed on improvements to the planning and budget processes rather than devising new processes. The Work Group has broad-based representation from the Headquarters' and Regional resource communities. The recommendations developed by the Work Group are based on a survey of the Agency's senior political and career executives and the expertise of the Work Group members.

The recommendations are not directly affected by changes in leadership at the Agency and the emergence of a new relationship with OMB. Major policy decisions are required to implement these recommendations. The deliberations of the Work Group have helped to frame these decisions and served as a forum to discuss the strengths and weaknesses of various strategies to improve the Agency's planning and budget processes.

## RECOMMENDATIONS

1. The functions of planning, budgeting, and financial (extramural) management need to be integrated into a single process.
2. The Agency's integrated planning, budgeting, and financial management process needs to be clearly articulated, step-by-step, delineating roles, timing, responsibilities, and outcomes.
3. The Regions should have an enhanced role in this process, especially regarding budget development.
4. The process should provide the opportunity for the states to participate in the Agency's planning and budgeting activities.
5. Basic planning and budget decisions should be made as early as possible.
6. The Agency needs to develop incentives for disinvestments and redirections at all levels in Headquarters and in the Regions.
7. The Agency should investigate the following improvements that are beyond the Agency's control.
    a. The necessity and utility of the OMB exhibits that accompany the Agency submission.
    b. Developing a two-year budget cycle.
    c. Consider multi-year appropriations.
    d. Provide incentives to Agencies that save money.
    e. Resolve the apparent inconsistency between empowerment and decentralization concepts of the NPR and the centralization and

micromanagement realities of FMFIA, the IG, the GAO, and the Congress.

f. Make the appropriations process more meaningful.

g. Review reporting requirements to OMB and the Congress and eliminate unnecessary reports.

## VISION

The Agency has a fully integrated, clearly articulated strategic planning, budget development, and financial accountability process that is used by senior managers to make resource decisions and to demonstrate commitment to and progress towards the Agency's strategic priorities.

## INTRODUCTION

The Planning and Budget Work Group was convened at the direction of the Deputy Administrator in October 1992. The primary goals for the group are to examine the process used during the development of the FY 1994 budget and to lay out a process for the development of the FY 1995 budget based on the Agency's strategic priorities. The composition of the Work Group is broad-based with representatives from the planning and budget functions at the Assistant Administrator level, as well as representatives from OPPE, the Office of the Comptroller, the 12th floor, and the Regions.

The Work Group views the National Performance Review as a source of legitimacy for the review of the Agency's planning and budget development functions and as an important forum to discuss ways to reinvigorate and refocus these processes. The Work Group has had an active exchange of information and experiences and has also relied on the information collected in the client survey to develop the recommendations that follow.

## PREVIOUS EFFORTS OF THE BUDGET REFORM TASK FORCE

The Planning and Budget Work Group is the successor to the Budget Reform Task Force that had been in existence for the preceding two years. The members of this Task Force were Assistant Administrators and Regional Administrators. In January 1992, the Task Force issued recommendations to guide the FY 1994 budget development process. The Task Force strongly recommended the integration of the Agency's planning and budget functions and proposed a general process for this purpose. The Task Force recommended that the Agency and the

media strategic plans should be multi-year documents; the annual budget request represents a one-year plan to move towards the goals and objectives outlined in the strategic plans.

The Task Force also recommended that the resource community participate in the formulation of a linking/integrating mechanism between strategic plans and the budget. The Task Force outlined a process for the internal development of the FY 1994 budget beginning with Agency-wide planning efforts.

PLANNING AND BUDGET WORK GROUP ACTIVITIES

At the first meeting, the members of the Work Group concluded that, for a variety of reasons, the process outlined by the previous Task Force in January 1992 had NOT been implemented successfully. The Work Group determined that "Guiding Principles" used by the Budget Reform Task Force were sound and they were used by the work group as recommendations were developed to integrate planning and budgeting. The principles are:

1. Seek broader, more informed participation in the budget process.

2. Provide opportunity for senior management input at critical stages of the process.

3. Identify all potential claimants early in the process.

4. Encourage meaningful Regional participation.

5. Enhance the Agency's decision-making process by establishing and communicating evaluation criteria up front, and by providing timely feedback.

6. Clearly articulate major roles and responsibilities of all parties.

7. Provide adequate time for developing an Agency strategy for packaging and effectively marketing the budget to OMB and the Congress.

8. Utilize personnel effectively by providing clear guidance, realistic deadlines, and recognizing the limited resources dedicated to planning and budget formulation. Rework should be eliminated, whenever possible, to allow time for value-added work.

9. Continuously improve the interaction and communication among the various parties that comprise the resource community.

The Work Group determined that it was important to have information from the "clients" of the budget process, the Agency's political and senior career managers, regarding the usefulness of the process in meeting their management needs and their ideas to improve this process.

In order to collect information from the "clients" of the budget process, the Work Group developed a survey instrument and distributed it to approximately 50 political and career executives. The Work Group was particularly interested in knowing if the Agency's senior management viewed the budget process as focussing on the right issues and if it was providing them with timely information to make decisions and develop recommendations for the Administrator's consideration.

Although the interviewers used the survey to guide the interviews, the responses did not always fall into precise categories. As a result, the responses did not lend themselves to statistical analysis; however, they did provide interesting views of the Agency's planning and budget activities and ideas for improvement.

SUMMARY OF THE RESULTS OF THE CLIENT SURVEY

The comments and responses regarding the use of themes and initiatives as an organizing framework for the budget indicated that there were too many initiatives and there was no sense of priority among them. For the most part, each office could define the themes and initiatives to suit their own purposes which had the effect of creating an unclear picture of activities and resources for the themes and initiatives from an Agency-wide perspective. The large number of initiatives and the lack of a single definition for each created confusion and lead to "gaming." There was no consensus among the clients regarding the effectiveness of theme/initiative structure as a marketing tool for the Agency's budget.

Headquarters clients indicated that the theme/initiative structure complicated media planning activities with little apparent benefit. Regional clients appeared to have more success in using the theme/initiative structure to link planning and budgeting. Several clients commented on the use of the theme/initiative structure to develop multi-media activities and suggested that the development of cross-media and multi-media activities should be handled outside the

budget process. However, it should be noted that two 12th floor clients commented that it was their specific intent to use the budget process to drive the Agency toward cross-media and multi-media activities.

The linking mechanism between planning and budgeting in the FY 1994 budget process was a one-page document referred to as an "action plan." In general, Regional clients believed the action plan worked better than Headquarters' clients. Most Headquarters' clients indicated that action plans were not useful and were not the proper mechanism to link planning and budgeting.

Almost half of the clients commented about the confusion over roles and responsibilities during the development of the FY 1994 budget. The roles of the 12th floor, OARM, and OPPE were not clear or understood. Therefore, clients did not know where to turn for informed answers to questions or authoritative clarification of guidance. Clients reported a lack of communication between OPPE and the Office of the Comptroller throughout the process. Others observed that there were simply too many people involved in the budget process.

Budget targets were viewed as a good concept. However, some clients reported that the targets were too high and, therefore, not realistic. Unrealistic targets raised expectations and generated unnecessary work.

Many clients supported the concept of early decision-making in order to allow time to prepare to sell the budget to OMB. However, early decisions are only good if they stick. Early decisions raised the issue of discipline in the budget process. The comment by one client concisely states the problem, "decisions weren't decisions." Procedures and targets were changed when a manager had a side conversation with a member of the Agency's senior leadership. Once an adjustment was made in one case, others petitioned for adjustments to meet their specific requirements and the process lost integrity. The lack of discipline and integrity fueled confusion about roles, responsibilities, and procedures.

One of the goals of the Budget Reform Task Force was to reduce the paperwork attendant to internal budget development. There was no consensus from the clients that efforts to reduce the paper associated with budget development were successful. Some clients indicated that the paperwork had expanded geometrically while others thought that excessive budget documentation workload had remained relatively constant.

The FY 1993 and FY 1994 budgets focussed almost entirely on the incremental increase; the base activities and resources were not part of the deliberations. There was substantial consensus among clients that the Agency must incorporate the base in all budget discussions. Several clients suggested that additional resources would be very difficult to obtain and the Agency must look to the base for resources to support new activities and programs. Although the budget request should discuss the base as well as the increment, the clients indicated that a base review is not needed every year. The clients indicated that the most significant barrier restricting candid discussion on the base is the lack of incentives for managers to identify disinvestment opportunities. The existing budget documents and hearing process with OMB and the Congress are not adequate vehicles to explain and demonstrate the benefits and accomplishments of the base programs.

The clients supported the concept of continuous improvement of the existing planning and budget processes rather than adopting new processes. The Agency should not start entirely new planning and budgeting processes each year. Based on the experiences of the previous budget cycles, many clients believed that an open and disciplined decision-making process was crucial.

TOWARDS CHANGE

The Work Group recognized that the development of the FY 1995 budget request would occur on a compressed schedule because of the change of Administration. Further development of recommendations was postponed. Subsequently, the Work Group became one of the teams for the National Performance Review and is using the NPR structure to present recommendations for review and approval.

In the early summer, the Director of the Office of Management and Budget indicated that OMB was going to refocus the budget process. OMB will be more interactive with the Agency and policy decisions will be made prior to the formal submission of the annual budget request on October 1.

Although OMB has proposed significant changes in the Agency's interactions on the budget, many of the issues considered by the Work Group still require attention in order to have a rational, meaningful process to prepare to discuss budget issues with OMB. The deliberations of the Work Group have served as an important forum to discuss ideas, to learn from our successes and failures, and to improve communications among the various constituents of the Agency's resource community.

Implementation of some of these recommendations will require policy decisions by the Administrator while others can be accomplished by individual program offices. For the most part, additional resources are not required to carry out these recommendations as the existing planning and budget staffs in the Agency can implement the Administrator's decisions. The one potential exception involves an enhanced role for the Regions in the planning and budget process. The Regions have resources for planning and financial management. However, they have not been staffed to participate actively in the budget development process. Therefore, depending on the final recommendation regarding the role of the Regions in the budget development process, additional resources may need to be devoted to this activity in the Regions.

RECOMMENDATIONS

The following recommendations have been developed to improve internal planning, budgeting, and financial management activities to enhance the Agency's messages to OMB, the Congress, and other constituencies contained in annual budget requests. Many of these recommendations require the endorsement of the Administrator. With this concurrence, the Work Group is ready to develop specific implementation plans including roles and responsibilities for various Agency offices and a detailed process and schedule for an integrated planning, budget, and management process. The implementation plans will be submitted to appropriate Agency officials for review and approval.

1. The functions of planning, budgeting, and financial (extramural) management need to be integrated into a single process.

CURRENT STATE

The Agency's planning, budgeting, and financial management activities too often are treated as independent processes and functions. Annual changes in the Agency's strategic directions and priorities waste resources and send confusing messages to managers, the Congress, and the public. Changes of this nature make it difficult to demonstrate that the Agency's strategies and investments are linked to improvements in the environment and reductions in risks to the environment and public health. Managers tend to focus on a single function in order to meet a due date or to respond to some other pressure. The planning, budget, and financial management implications of the multi-media and support offices (OE, ORD, OGC, OPPE, and OARM) are not factored into media office plans and budgets. The Agency is not adequately

prepared to substantiate the relationship between resource investments identified in the budget and outputs as required by the CFO Act and the Government Performance for Results Act.

DESIRED STATE

The Agency and each National Program Manager (NPM) should have a structured process that covers the complete spectrum of resource management activities from broad strategic goals and directions to outputs and results. The spectrum involves the following major components:

Goals-> Plans-> Budget-> Financial and Extramural Management-> Outputs/Results-> Feedback

The planning and budget decisions of the multi-media and support offices should be coordinated and integrated with the media offices in the planning and budget development components through a consultative process. Alternatively, the media offices should articulate requirements allowing time for the multi-media and support offices to prepare plans and budgets in response to these requirements. Changes in services and costs should be identified and coordinated with all affected offices in the Agency. Special interest items (i.e., FMFIA) should be identified early in the development of goals and plans rather than added on to the budget request. The Agency's planning and budget functions provide the information required by the CFO Act and the Government Performance and Results Act.

2. <u>The Agency's integrated planning, budgeting, and financial management process needs to be clearly articulated, step-by-step, delineating roles, timing, responsibilities, and outcomes.</u>

CURRENT STATE

Planning, budget development, and financial and extramural management have not been effectively linked at the Agency level or in some offices. The lack of a comprehensive resource management process and the uncertainty about roles and responsibilities creates confusion. Further, it is difficult to make informed strategic resource investments and document progress towards Agency and NPM goals.

DESIRED STATE

Resource management should be viewed as a spectrum of integrated activities. The Agency should have a clearly articulated step-by-step process to serve as a guide through the resource management spectrum. For each step in the process, the objectives, timing, roles, responsibilities, and

outcomes should be clearly spelled out. Managers at all levels should understand the relationship among the various steps and functions in the process. Agency and NPM strategic plans should be used to guide resource investment decisions and to identify program outputs.

3. The Regions should have an enhanced role in this process, especially regarding budget development.

CURRENT STATE

The role of the Regions in the development of the Agency's budget is unclear. There is no consensus among the Regions or the NPM's regarding the precise role the Regions should have in the budget development process. The Regions are involved in two important aspects of resource management: strategic planning and extramural management. National Program Managers use the "Lead Region" concept to collect information on Regional resource needs in the development of budgets; however, the NPM and Regional roles vary.

DESIRED STATE

As the resource management process is developed, the Regions should be provided with the opportunity to participate in each step of the process. Regional planning and extramural activities should be coordinated with the NPM's and a new, as yet unspecified, role for the Regions in budget development should be specified. The role for the Regions may simply be an enhanced role for the "Lead Region" or provisions could be made for the Regions to develop their own budgets or some other possibility.

4. The process should provide the opportunity for the states to participate in the Agency's planning and budgeting activities.

CURRENT STATE

The states are not provided with any direct roles in the Agency's planning, budgeting, and extramural activities. The report of the State Capacity Task Force needs to be evaluated.

DESIRED STATE

The Agency should enhance its partnership with the states by providing them with specific opportunities to offer ideas, identify needs, and report accomplishments. This subject has been tentatively scheduled for discussion at the "All States" meeting being convened by the Administrator this fall. The Agency should prepare a range of options to discuss with the states.

5. Basic planning and budget decisions should be made as early as possible.

CURRENT STATE

Too often decisions regarding Agency and media planning and budget activities are delayed to the last minute. The delays in making these important decisions often result in a rush to meet deadlines rather than a focus on quality proposals and documents. There has not been adequate time to develop strategies and plans to "market" our proposals to OMB and the Congress.

DESIRED STATE

Decisions affecting the strategic directions of the Agency and programs should not change every year. These types of decisions should be carefully considered and maintained for several years, with the recognition that some amendments will occur. NPM decisions regarding the budget should be made as early in the process as possible to allow time for the development of well thought out, quality proposals. Agency decisions regarding proposals to OMB and the Congress should be made as early as possible to allow for coordination within the Agency and to provide sufficient time to develop strategies to "sell" these proposals.

6. The Agency needs to develop incentives for savings, disinvestments, and redirections at all levels in Headquarters and in the Regions.

CURRENT STATE

There are no incentives for managers to identify activities and resources that can be reduced or may not be needed at all. In fact, the reverse is true. Budget and financial processes penalize managers who do not spend their allocations by basing the next budget on prior year spending levels. Managers who terminate activities or free up existing resources have those resources taken away.

DESIRED STATE

Managers at all levels of the Agency should focus on saving resources, redirecting resources to new and/or higher priority activities, and terminating programs that are no longer needed. Managers who are successful in these activities should be recognized and rewarded. They should not necessarily lose control over all of the resources they have saved or redirected. The Work Group will continue to work on developing more specific actions for implementing this recommendation.

7. <u>The Agency should investigate the following improvements that are beyond the Agency's control.</u>

   a. The necessity and utility of the OMB exhibits that accompany the Agency submission.

   b. Developing a two-year budget cycle.

   c. Consider wider use of multi-year appropriations.

   d. Provide incentives to agencies that save money.

   e. Resolve the apparent inconsistency between the empowerment and decentralization concepts of the NPR and the centralization and micromanagement realities of FMFIA, the IG, the GAO, and the Congress.

   f. Make the appropriations process more meaningful.

   g. Review reporting requirements to OMB and the Congress and eliminate unnecessary reports and paperwork.

The Planning and Budget Work Group is ready to develop specific implementation plans for each of these recommendations.

# NATIONAL PERFORMANCE REVIEW

## PLANNING and BUDGET WORK GROUP

## TEAM MEMBERS

| | |
|---|---|
| Richard White | Team Leader<br>OPPTS |
| Susan Absher | OSWER |
| Derry Allen | OPPE |
| Diane Bazzle | OA |
| Martha Berger | OPPE |
| Mike Binder | IG |
| Helga Butler | OA |
| Beth Cavalier | OPPTS |
| Beth Craig | OARM |
| Bob Currie | OPPE |
| Mary Free | OPPE |
| Rick Garman | OARM |
| Prudence Goforth | OARM |
| Kathy Gordon | OSWER |
| Sallyanne Harper | OARM |
| Nancy Hunt | OE |
| Lek Kadeli | OIA |
| Judy Kertcher | OROSLR |
| Jerry Kurtzweg | OAR |
| Terry Ouverson | OARM |
| Kathi Payne | OW |
| Sharon Payne | OPPE |
| Al Pesachowitz | OARM |
| Kathy Petrucelli | OARM |
| Barbara Pastalove | REGION II |
| Joann Rodman | ORD |
| Mike Schultz | REGION IX |
| Bill Stewart | OGC |
| Lisa Tychsen | OE |
| Cheryl Wasserman | OE |
| Jim Wieber | OROSLR |
| Alex Wolfe | OAR |

# REPORT OF THE *POLLUTION PREVENTION* TEAM

NATIONAL
PERFORMANCE
REVIEW

# EPA NPR POLLUTION PREVENTION TEAM MEMBERS

| | |
|---|---|
| Joe Abe | OPPE |
| Dave Bassett | OPPTS |
| Bob Benson | OPPE |
| Belentia Choyce-Epps | Region VI |
| Harlal Choudhurry | ORD/Cincinnati |
| Becky Cuthbertson | OSWER |
| David Duster | Region VIII |
| Mark Greenwood | OPPTS |
| *Ann Hardison | OA |
| David Hindin | OE |
| *Greene Jones | Region III |
| Steve Lingle | ORD |
| Karen Lumino | Region V |
| Amal Mahfouz | OW |
| Jim Nelson (Team Leader) | OGC |
| Diane Niedzialkowski | OAR |
| Susan Offerdal | OE |
| Louis Paley | OAR |
| Libby Parker | OPPTS |
| Neil Patel | OW |
| Mahesh Podar | OW |
| Yvette Price | OARM |
| Eric Schaeffer | OA |
| Anita Schmidt | OAR |
| Paul Shapiro | ORD |
| Betsy Shaver | ORD/RTP |
| Nathan Wilkes (Facilitator) | OPPE |

[*Denotes original members who were unable to participate.]

# I. EXECUTIVE SUMMARY

## A. Introduction

Environmental policy is undergoing important changes that reflect a fundamental shift in approach to environmental protection and management. The new approach to environmental policy-making is based on foresight, systematic thinking, and pollution prevention, and should be viewed in a context of sustainability. There is a growing concern that the current relationship between a consumption-based society and a healthy environment is not sustainable and may contribute to many social, economic and cultural problems around the world.

Pollution prevention is the preferred approach for environmental improvement and promoting a sustainable economy. EPA must build its programs, both regulatory and non-regulatory, on a foundation of pollution prevention. EPA must encourage state, local, and tribal governments and other federal agencies to do the same. EPA must work with its partners to develop clean technologies, to promote innovation, to ensure that the maximum amount of pollution is prevented, and to ensure that the minimum amount of our natural resources is consumed.

The President, the Administrator, and other leaders across the spectrum recognize that this is the "era of pollution prevention and sustainability". EPA, other federal agencies, state, local, and tribal governments, and industry have made substantial progress towards integrating pollution prevention into their environmental management programs. However, there is a great deal still to do. This Report is intended to promote significant progress in developing and promoting pollution prevention. The time is ripe to move from an ad hoc approach to a comprehensive strategy for pollution prevention and sustainability.

## B. General Background

In the very limited time available, the Pollution Prevention Team identified and reviewed several hundred ideas relating to P2, including both new ideas and initiatives that are already underway in EPA. At the same time, employees from throughout EPA responded to the Administrator's outreach efforts and submitted hundreds of additional ideas to the NPR (many of which concern pollution prevention). In performing its work, the Team recognized that important progress had already been made in many areas within EPA and beyond EPA. The Team utilized work already done and experience gained in EPA's ongoing efforts to expand use of pollution prevention and intends that this Report build on the pioneering work already done in this area.

C. Themes in the Initiatives in this Report

The 28 Initiatives featured in this Report (as well as the 32 summarized in the Appendix) have many themes in common. The Initiatives recognize that the status quo will not realize the promise of pollution prevention. Change (including in EPA's organizational structure) is important, inevitable, and necessary to accomplish pollution prevention and sustainability. EPA must establish momentum and credibility by acting immediately on many different pollution prevention fronts.

EPA can be a leader for pollution prevention and sustainability. This requires leading by example, sustained commitment from top EPA management, putting resources where our rhetoric is, integrating pollution prevention into all our programs, creating trust within EPA and between EPA and other parties, being accountable for Agency activities, and incorporating pollution prevention into the very culture of EPA.

The entire Federal Government must provide leadership in pollution prevention. Through its own actions, through its influence on the activities of others, and in how it uses its resources, the Federal Government can promote and encourage pollution prevention.

Information, technology development, and training are essential elements of establishing and encouraging pollution prevention. EPA staff needs to be trained in pollution prevention so they can carry the message to others. EPA has an important role in promoting education of the public, other government agencies, and business in pollution prevention.

Effective pollution prevention activities require effective partnerships because EPA alone cannot make pollution prevention a reality. This requires close work with and support of other Federal agencies, state, local, and tribal governments, the international community, business and financial institutions, labor groups, academia, public interest groups, and the public at large. Effective partnerships help EPA leverage its limited resources to promote pollution prevention and develop new, environmentally friendly technologies.

EPA can create incentives for changes in private sector behavior, stimulate voluntary adoption of pollution prevention, and promote enlightened self-interest in the business community. EPA can cooperate in research and pioneer pilot projects. Sector-based policies and programs should be considered as an innovative means of linking economic and environmental

priorities. EPA can provide flexibility in its regulatory programs to allow and encourage pollution prevention solutions to environmental problems.

EPA's success must be measured in environmental results, not bean counting. Pollution prevention must be a continuing process aimed at environmental improvements. Innovation and risk-taking must be rewarded not punished. EPA must seek a broad, private and public sector commitment to (and investment in) strategic, forward-looking approaches to environmental management--approaches that take the private and public sectors beyond baseline compliance.

D. Conclusions and Recommendations

Given the time constraints of this effort, the Pollution Prevention Team had virtually no time to review the ideas provided by EPA employees to the NPR in response to the Administrator's outreach efforts. The Team believes there is a wealth of good ideas embodied in that unreviewed material and strongly recommends that a followup group be given the task of reviewing, evaluating, and developing additional ideas beyond those presented in this Report so the value of all that good thinking is not lost.

From the many ideas it did review, the Team developed many Initiatives grouped in 10 Categories. This Report describes the Categories and presents Initiatives under each Category. The Initiatives include actions for which EPA has the primary responsibility, and actions for which EPA shares that responsibility with others. Twenty eight detailed Initiatives appear in the body of this Report, and another 32 Initiatives are presented in more abbreviated form in the Appendix.

The Team strongly recommends that the Administrator designate individuals, organizations, or groups to follow up on the 28 featured Initiatives and a group to further evaluate and develop the 32 Initiatives in the Appendix, perhaps the same group that follows up on the employee ideas submitted to the NPR.

The Team decided to present a broad array of Initiatives to show the many areas that present opportunities for action in pollution prevention across the wide spectrum of EPA and the Federal Government. Because of the limited analytical time available to the Team, more work will be required to refine the information on time frames, resources needed, barriers, benefits, and measures of success for some of the Initiatives. However, the Team believes that each of the Initiatives can be carried forward and fully developed by followup groups.

The time element is also important. The Initiatives contain actions that can be accomplished within the next six months, within the next year, and within the next two years, and others that represent an ongoing commitment for the long term. Short- and long-term items often appear in a single Initiative. Most Initiatives can begin immediately, even if the ultimate payoff is several years away. It is important to invest in both long- and short-term Initiatives. If we are to make pollution prevention our central ethic, we must undertake longer-term, substantive changes in the way we do business, and not just go for the "quick fix"" of isolated, ad-hoc projects.

The Team recognizes that the ultimate costs of the many Initiatives taken together appear to be high and may be hard to fund in the current fiscal climate. However, it is important to note that the payoff to business and society from the implementation of principles of sustainability and pollution prevention is likely to be many fold greater than the initial investment in this area. Effective use of pollution prevention will result in short- and long-term resource savings for Federal, state, local, and tribal governments and for business. It will also provide improvements in efficiency for both governments and business. Pollution prevention promotes U. S. competitiveness around the world and creates business opportunities. It is sound public policy to invest promptly in pollution prevention. Only by doing so, can we achieve the combination of economic savings, enhanced environmental protection, and technological competitiveness that are the ultimate promise of pollution prevention.

The Initiatives in this Report will require forward thinking and long-term planning to carry out. EPA can start the action on virtually all of them, but we must encourage others to join us throughout the Federal Government, state, local, and tribal governments, business, labor, and the public.

The goal set by the Administrator for incorporating pollution prevention throughout EPA is an ambitious one. The Initiatives presented in this Report are just a starting point. Other ideas will continue to be developed, and EPA and the rest of the Federal Government must have an ongoing process for encouraging, developing, evaluating, and implementing new pollution prevention ideas.

Many of the Initiatives featured in this Report are "ready to roll" and can meet the need for immediate progress with a relatively small expenditure of resources in the beginning. Other "big picture" initiatives may take longer to implement and show results, but it is still important to get started on them. For the most part, these are the Initiatives which will help us

make the change to a pollution prevention culture, and many can be begun with low resource levels. Each of the 28 Initiatives featured in this Report should start up quickly, and significant immediate progress can be made by establishing work groups to carry them out or to perform necessary analysis and planning in the near-term.

The Team recognizes that some will react to this Report by concluding that this is "more of the same old rhetoric about pollution prevention. However, the reader must judge the work of this Team by the specific Initiatives that we offer. The ten Categories and 28 specific Initiatives featured in the body of this Report are summarized immediately following this Executive Summary. Read them before you make a judgment.

# LIST OF CATEGORIES AND FEATURED INITIATIVES

Target/Action Category A: EPA SHOULD PROMOTE SUSTAINABILITY THROUGH ITS POLICIES AND PROGRAMS AS THE CENTRAL OPERATING PRINCIPLE FOR THE COUNTRY

A.1. Link Federal Policies and Programs to Sustainability and Pollution Prevention

A.2 Recognize and Address the Role of Key "Drivers" (Such As Population, Consumption Patterns, and Technology) Affecting Mankind's Ability to Create a Sustainable Future

Target/Action Category B: EPA SHOULD DEMONSTRATE THE BENEFITS OF P2 TO ENVIRONMENT, BUDGET & EFFICIENCY BY USING P2 STRATEGIES IN ALL ITS OWN OPERATIONS

B.1. Demonstrate a Commitment to Pollution Prevention in All EPA Internal Operations

Target/Action Category C: EPA SHOULD CHANGE ITS CULTURE AND ORGANIZATION TO MAKE POLLUTION PREVENTION THE CENTRAL OPERATING PRINCIPLE OF THE ORGANIZATION AND ITS EMPLOYEES

C.1. Identify Ways to Structure EPA to Promote Risk Taking, Exposure Reduction and Pollution Prevention

C.2. Require That Senior Level Managers be Accountable for Implementing Pollution Prevention Throughout EPA's Programs

Target/Action Category D: EPA SHOULD INTEGRATE POLLUTION PREVENTION INTO ALL PROGRAMS INCLUDING REGULATION DEVELOPMENT, PERMITTING OPERATIONS, COMPLIANCE ACTIVITIES, AND ENFORCEMENT

D.1. Develop and Implement Every Regulation, Guidance Document, and Policy to Integrate Pollution Prevention into the Menu of Options for the Regulated Community

D.2. Provide flexibility in Permit Compliance, Fee Schedules, and Processing Time for Permit Applications to Encourage Pollution Prevention

D.3. Develop Pilot Projects for Integrating Pollution Prevention into Development and Implementation of Regulations, Guidance Documents, or Policies for Two or More Media for the Same Industry

D.4. Harness Enforcement Activities to Help Promote and Implement Pollution Prevention

Target/Action Category E: EPA SHOULD ENHANCE PARTNERSHIPS WITH STATE, LOCAL, AND TRIBAL GOVERNMENTS TO IMPLEMENT POLLUTION PREVENTION

E.1. Work With the States on Pollution Prevention at as High a Management Level as in Other Programs

E.2. Improve Funding for Pollution Prevention Activities by States

E.3. Promote One-stop Shopping for Environmental Regulatory Assistance, Pollution Prevention Technical Assistance, and Other Assistance Programs

E.4. Adopt Standard Practice of Allowing Flexibility for States and Local Governments to Comply with Environmental Requirements Through Pollution Prevention

E.5. Facilitate Pollution Prevention by Native American Tribal Governments

E.6. Develop a "Demand-side Management" Strategy for Municipal Water Programs

E.7. Develop Municipalities' Capabilities to Use Pollution Prevention as a Centerpiece of Their Pre-treatment Programs

Target/Action Category F: EPA SHOULD TAKE AN ECONOMIC SECTOR-BASED APPROACH TO THE DEVELOPMENT OF ENVIRONMENTAL POLICIES AND PROGRAMS, WITH POLLUTION PREVENTION AS A KEY MEANS OF ACHIEVING COST-EFFECTIVE ENVIRONMENTAL PROTECTION.

F.1. Develop Sector or Sub-Sector Specific Policies, Projects, and Programs to Most Effectively Drive Private Sector Behavior and Promote Desired Private Sector Actions.

F.2. Establish Multi-Disciplinary Working Groups Within EPA and With Outside Entities to Develop Sector and Subsector Strategies.

F.3. Take a More Proactive Role to Develop Legislation That Would Provide Greater Flexibility for EPA to Promote Innovative Programs, Pursue Regulatory Trade-offs, and Prioritize Risks.

Target/Action Category G: EPA SHOULD CULTIVATE PUBLIC/PRIVATE PARTNERSHIPS TO FOSTER POLLUTION PREVENTION

G.1. Assist Industry Groups in Measuring Environmental Results of Their Codes of Conduct

G.2. Develop a Facility-based System for Organizing All of EPA's Data

Target/Action Category H: EPA SHOULD TAKE A LEADERSHIP ROLE IN PROVIDING EDUCATION AND INFORMATION ABOUT POLLUTION PREVENTION

H.1. Begin General Pollution Prevention Education Initiative

H.2. Facilitate the Sharing of Pollution Prevention Information with Industry

H.3. Develop a Chemical Use Inventory

Target/Action Category I: EXECUTIVE BRANCH SHOULD INTEGRATE POLLUTION PREVENTION INTO ITS PROCUREMENT AND DEVELOP FEDERAL AGENCY RELATIONSHIPS TO PROMOTE POLLUTION PREVENTION NATIONWIDE

I.1. Advance Principles of Pollution Prevention in Executive Branch Through Procurement of Goods and Services

I.2. Establish a Permanent, Inter-agency Team Reporting to the Vice President to Gather, Evaluate, Develop Ideas for Pollution Prevention Throughout the Federal Government and to Coordinate Pollution Prevention Activities Throughout the Federal Government

Target/Action Category J: GOVERNMENT SHOULD USE MARKET INCENTIVES, INTERNALIZING THE EXTERNALITIES AND FISCAL POLICIES TO PROMOTE POLLUTION PREVENTION

J.1. Develop "Take Back" Legislation and Regulations

J.2. Establish a Federal Environmental Sales Tax

## II. VISION

EPA believes that pollution prevention is the preferred approach for environmental improvement and promoting a sustainable economy. We seek to build our programs, both regulatory and non-regulatory, on a foundation of pollution prevention, and encourage state, local, and tribal governments and other Federal agencies to do the same. We work with our partners, including state, local, and tribal governments, businesses, the financial community, and others, to develop clean technologies, to promote innovation, to ensure that the maximum amount of pollution is prevented, and to ensure that the minimum amount of our natural resources are consumed.

# III. TARGET/ACTION CATEGORIES AND INITIATIVES

## Target/Action Category A:

## EPA SHOULD PROMOTE SUSTAINABILITY THROUGH ITS POLICIES AND PROGRAMS AS THE CENTRAL OPERATING PRINCIPLE FOR THE COUNTRY

Environmental policy is undergoing important changes within the private and public sectors that reflect a fundamental shift in society's approach to environment protection and management. The new approach to environmental policy-making, which is based on foresight, systemic thinking, and pollution prevention, is in response to a growing global awareness that the current relationship between a consumption-based society and the environment is not sustainable. Non-sustainable activities are, in fact, a major contributing factor to many social, economic, and cultural problems around the world.

The importance of sustainability issues is reflected in the recent establishment of the President's Council on Sustainable Development (PCSD) and the United Nations Commission on Sustainable Development. EPA and the other public and private sector organizations represented on the Council have been charged by the President to develop sustainability initiatives that will link economic and environmental priorities, at both the domestic and international levels. Pollution prevention will be a key tool in moving society toward a sustainable future. The initiatives in this category reflect specific actions that EPA and the rest of the Federal government can take to promote sustainability.

Category A Initiatives:

A.1. Link Federal Policies and Programs to Sustainability and Pollution Prevention

a. What. Environmental problems are created and aggravated by forces often beyond EPA's control, such as land use, transportation, agriculture, small business assistance programs, and federal facility operations. Federal agencies should be required to take all necessary actions to incorporate sustainability and pollution prevention into the development and implementation of their policies, programs, and activities (as well as the operation of their facilities). To begin, each federal agency should develop a pollution prevention strategy that is based on concepts of sustainable development.

For its part, EPA should (1) assist other agencies in evaluating and revising their policies and operations to minimize pollution, maximize pollution prevention opportunities, and stimulate progress toward sustainable development; (2) consider innovative approaches to link economic and environmental priorities (e.g., sector-based policies, public-private partnerships, incentive-based policies); (3) continue its leadership role on the PCSD.

b. Who. Other federal agencies would be required to evaluate their policies, programs, and operations, with EPA review of P2 strategies. EPA's sustainability initiatives should be coordinated by the Administrator's office and the Senior Leadership Council. The Administrator could create a multidisciplinary EPA team to support her work on the PCSD.

c. When. Immediate.

d. Barriers. Institutional inertia to change and lack of familiarity with sustainability and P2 concepts at EPA and other agencies. Agencies also may discover that their policies and programs are not consistent with principles of sustainable development.

e. Costs. Some FTE resources in each federal agency will be required to coordinate the efforts. While there may be short-term costs at federal agencies in adopting pollution prevention practices, in the long-term significant cost savings should result from the adoption of pollution prevention practices and policies.

f. Benefits. Potentially significant reductions in pollution; resource savings and environmentally sound growth.

g. Measuring Success. Short-term: reductions in TRI releases. Long-term: other measures of sustainability and pollution prevention (some of which are not yet fully developed).

A.2 Recognize and Address the Role of Key "Drivers" (Such As Population, Consumption Patterns, and Technology) Affecting Mankind's Ability to Create a Sustainable Future

a. What. There are a number of key forces affecting the earth's resources and ecosystems, including pressures from a growing population, disproportionate and non-sustainable consumption rates among different nations, and the rapid pace of technological change. To promote sustainable development, the federal government must identify the role that these and other driving factors play in environmental problems, particularly in this country, and how they relate to a sustainable future. Failure to do so will significantly weaken U.S. and international sustainable development policies. The White House should establish a multi-disciplinary panel, composed of representatives of key federal agencies (including EPA), academia, and various interest groups from all sectors of society, to support the PCSD by (1) reviewing the body of work done to date on sustainable development issues, (2) identifying the role that the various driving factors play in U.S. and world environmental problems, and (3) recommending possible solutions to address the problems.

b. Who. White House establishes panel in consultation with the PCSD, with EPA playing a significant role.

c. When. Panel should be given one year to study issue, review existing data and report to President. Start in Fall 1993.

d. Barriers. There are significant barriers for the Executive Branch entering this area. Some of the driving factors, such as population growth and consumption patterns, are politically sensitive subjects.

e. Costs. Several EPA FTEs to participate on panel.

f. Benefits. The benefits can be tremendous if we can identify the factors that drive socio-economic development patterns and then develop workable strategies to reduce and/or mitigate their impacts on the environment.

g. Measuring Success. In the short-term, success will be achieved by public and political recognition of the "win-win" nature of sustainable development (i.e., that properly developed economic and environmental policies are mutually supportive). In the long-term, success will be seen in many ways, including improvements in the quality of life in both developed and developing countries, reduction in societal expenditures for environmental control and remediation, preservation of natural ecosystems, and mitigation of global environmental and socioeconomic problems.

Target/Action Category B:

EPA SHOULD DEMONSTRATE THE BENEFITS OF POLLUTION PREVENTION TO ENVIRONMENT, BUDGET & EFFICIENCY BY USING POLLUTION PREVENTION STRATEGIES IN ALL ITS OWN OPERATIONS

There are four reasons why EPA must lead on pollution prevention: (1) opportunity to demonstrate both environmental and cost/ competitive advantages; (2) EPA staff's skepticism about P2; (3) severe resource constraints; and (4) the Pollution Prevention Act of 1990 directs EPA to do it.

There are numerous examples where a reevaluation of a process or product resulted in something that is both environmentally cleaner, and less expensive or more effective. Once demonstrated, such products and processes may be marketed throughout the country and exported to other countries. EPA should take the lead in using its own Agency-wide internal operations - communications, transportation, building services, and purchasing of products and services, to perform additional P2 demonstrations. Furthermore, we should establish the framework or incentives for others to demonstrate similar results.

The Administrator's call to make P2 EPA's "decision of first choice" requires that EPA vigorously expand P2 into every corner of EPA. EPA has completed numerous "pilot scale" P2 demonstrations, e.g., electronic mail, high efficiency lighting. These provide ample foundation for launching Agency-wide implementation of them now. Taken together, it is imperative that staff and management begin, and continue to see real environmental and resource-saving benefits from P2.

The government's budget deficit is large and growing; yet public demands an ever-increasing level of environmental protection. While not a panacea, fully developed and implemented P2 approaches offer EPA a real chance to reduce the cost of its operations while increasing its effectiveness.

The Pollution Prevention Act directs EPA to: "promote source reduction practices in other federal agencies;" and "identify opportunities to use federal procurement to encourage source reduction." EPA should become a "P2 demonstration laboratory". Furthermore, EPA has the opportunity to substantially affect the purchasing, consumption and manufacturing habits of the entire federal government and this country.

The specific Initiatives under this Category are primed for immediate and meaningful Agency-wide application. (See Appendix for more detailed Initiatives).

Category B Initiatives:

B.1. Demonstrate a Commitment to Pollution Prevention in All EPA Internal Operations

a. What. Agency-wide implementation of P2 actions to improve environment & efficiency & reduce cost: (1) Paper conservation - build upon OMS, NDPD, OSW, Regions V & IX, payroll, OAR "Communic. QAT", & OARM's "PaperWISE" projects--paper-less faxing; "low-paper office"; use of electronic "standard forms"; transmittal and storage of internal documents; electronic mail & bulletin boards, industry electronic reports; (2) Green purchasing - build upon Judiciary Sq. lighting, Denver airport--procure "green" (e.g., less toxic/more efficient materials, equipment, & services); reduce consumption and toxicity of existing items; P2 analysis for major purchases; get partners to develop innovative/green products and services; & establish a price differential for green products and services. (3) P2 transportation - conform to "Alternative Motor Fuels Act of 1988", & Sec. 11 of E.O. 12759; increase bicycling & walking to work; increase carpooling & vanpooling; (if available) increase employee use of mass transit systems using "Metro Passes" or other subsidies; award a transit benefit to a "P2 employee-of-the-Month"; encourage use of "flexiplace" work arrangements; use only green rental cars; purchase only green vehicles; partner with manufacturers to produce innovative, green vehicles; and use 2-way video-conferencing to reduce travel; (4) building services conservation - build on Judiciary Sq., Denver airport, P2 audit of White House and EOB. Reduce energy consumption by at least a 20% by the year 2000 (e.g., conduct agency-wide building services P2 assessment; use green lights and motion sensors; use "energy efficiency leader" in every facility; promote "job sharing" & "flexiplace" to use office space and services more effectively; use larger, but fewer buildings; use "gray water" systems; buy or lease new green facilities.

b. Who. teams of AA or facility, 1-2 years; then Agency-wide.

c. When. teams start by 10/93; EPA-wide starts 10/95.

d. Barriers. Few products, services, training, purchasing, and management procedures, and sufficient resources.

e. Costs. Significant near-term costs; significant savings in long-term.

f. Benefits. Improve environment & competitiveness; overcome EPA staff's skepticism and resource constraints; and comply with statute, regulations and policies.

g. Measuring Success. Quantify reductions in: products, services, natural resources, energy and in waste products.

Target/Action Category C:

EPA SHOULD CHANGE ITS CULTURE AND ORGANIZATION TO MAKE POLLUTION PREVENTION THE CENTRAL OPERATING PRINCIPLE OF THE ORGANIZATION AND ITS EMPLOYEES

For EPA to adopt pollution prevention fully as a way of doing its business, the "culture" and the organization of the Agency and its employees must change. EPA must break away from "business as usual". P2 must become the first option EPA thinks of in addressing any environmental issue. The organization and the people must see P2 as their primary way of doing business. To show that EPA is serious about changing how it does business, organizational change may be necessary. Ways must be found to motivate both the organization and the individuals within it to search for creative P2 opportunities. Money must flow toward P2 activities. This cannot be achieved without strong management commitment at all levels. Change of this nature will help EPA better focus P2 efforts in a coherent, comprehensive, integrated manner and facilitate interaction and cooperation among EPA, other Federal agencies, State, local, and tribal governments, industry, and the public.

Category C Initiatives:

C.1. Identify Ways to Structure EPA to Promote Risk Taking, Exposure Reduction and Pollution Prevention

a. What. Action Group, chaired by the Deputy Administrator, assesses alternative approaches to EPA's current structure. Group identifies at least 3 pilot projects (may utilize pilots already underway) to assess success, problems, & issues associated with different models for organization of EPA's work (include at least one sector-based & one multi-media). Pilots encompass different media, include both regulatory & non-regulatory components (to speed evaluation, pilots selected in part based on ability to complete analysis within a year). Group evaluates pilots & applies lessons learned to restructuring options & examines EPA experiences with partnerships, multi-media approaches, regulation negotiations, & other programs. Group formulates restructuring options/recommendations for Administrator after evaluation of the pilots & any other studies.

b. Who. Deputy Administrator. Action Group represents all Offices/Regions.

c. When. Group selected by 1/94. Select pilots by 6/94 with schedules for progress reports & completion of activities. After completion of evaluation, Group proposes timeframe for development & delivery of restructuring proposal/options to the Administrator.

d. Barriers. Inertia; existing regulations & statutory constraints; existing relationships between offices & ties among current co-workers & projects; reluctance to change status quo; Congressional constituencies & interests; disruption of on-going activities & of staff.

e. Costs. Significant short-term disruption; significant resources to ensure success, perhaps up to 10 to 15% of EPA's budget; moving costs.

f. Benefits. Opportunity to test premise for reorganization & identify issues/problems & potential solutions prior to undertaking development of a broader restructuring plan; could revitalize EPA & get management & staff (& the public and private sector) to rethink old ways of doing business; enhanced opportunities to identify and implement P2 as a core element in EPA's "thinking" process.

g. Measuring Success. Short-term, success of pilot projects by lessons learned & usefulness in formulating options for reorganization that enables EPA to meets its goals; long-term, success of restructuring by improvement in meeting goals, including establishment of P2 as central EPA ethic.

C.2. Require That Senior Level Managers be Accountable for Implementing Pollution Prevention Throughout EPA's Programs

a. What. One way EPA can change its "culture," and in particular the expectations of its employees, is to make P2 a priority with senior level managers by making them accountable for P2 performance and results. To do so, P2 should be an explicit element of agency tracking systems (e.g., MOARS and STARS commitments, workload models, and workload planning) & incorporate P2 into to performance standards of senior level managers. Such accountability ensures that their job performance is judged in part on how well they have promoted P2 in their areas of responsibility. Where appropriate, performance standards for mid-level managers, supervisors, and staff should also incorporate P2 into their CJEs.

b. Who. Administrator/Deputy ensure that P2 is addressed in MOARS/STARS, workload models, and work plans and in performance standards of senior managers. Mid-level managers ensure that P2 is incorporated into CJEs, where appropriate,

of subordinate staff. A working group drafts several possible versions of CJEs for use by managers/supervisors/staff at various levels & in various jobs.

c. When. Administrator/Deputy require incorporation of P2 into MOARS/STARS commitments, workload models, and work plans beginning in FY 1994. Working group prepares & distributes versions of P2 CJEs by 9/93. CJEs appear in all senior level managers' performance agreements signed beginning in 10/93.

d. Barriers. Competing commitments; competing mandatory CJE's; cynicism about performance review system & management accountability systems.

e. Costs. Time & resources for working group; time discussing/negotiation/incorporation into performance agreements by 10/93; time incorporating P2 into MOARS/STARS commitments, workload models, & work plans.

f. Benefits. Senior level managers, mid-level managers, supervisors and selected staff increasingly recognize that P2 is part of their job & are motivated to identify P2 opportunities; provides accountability up and down management chain.

g. Measuring success. None identified.

Target/Action Category D:

EPA SHOULD INTEGRATE POLLUTION PREVENTION INTO ALL PROGRAMS INCLUDING REGULATION DEVELOPMENT, PERMITTING OPERATIONS, COMPLIANCE ACTIVITIES, AND ENFORCEMENT

EPA should integrate pollution prevention into all aspects of implementation of its environmental laws. Many existing laws generally address a specific part of the environment--air, water, and land; other statutes deal with chemicals--pesticides or industrial chemicals. In implementing these laws, EPA offices frequently encounter situations where action under one environmental law causes an undesirable chemical to be shifted to a different environmental medium, without reducing the overall amount of that chemical being released to the environment.

To integrate P2 into regulations, permits, compliance promotion, enforcement, policies, and guidance, each action should have as many of the following attributes as possible:

1. performance-based standards (not based on end-of-pipe technology)

2. on-going program to assist the regulated community in compliance through P2

3. multi-media orientation

4. economic incentives such as trading, averaging, banking

5. flexibility/framework to accommodate/encourage risk-taking by all parties; promotes innovative technology development

6. promotes trust between EPA and other parties

7. promotes long-term cost savings as the basis for regulated parties making decisions--P2 generally cheaper over time

8. regulated parties are accountable through clearly stated measures; focus on environmental benefits

9. promotes use of full-cost accounting in EPA and industry decision-making

10. predictability/certainty in requirements and timing of changes in requirements

11. P2 as the starting point, not an add-on

Category D Initiatives:

D.1. Develop and Implement Every Regulation, Guidance Document, and Policy to Integrate Pollution Prevention into the Menu of Options for the Regulated Community

a. What. More comprehensive effort to encourage facilities to consider P2 before other options by explicitly providing P2 options, and give them preference, in regulations, policies, guidance documents, permits, & other regulatory activities. Identify statutory & regulatory barriers that preclude the use of P2 in regulations, policies, guidance, permits, or compliance. Change regulations, policies, and guidance documents that are barriers to the use of P2. Propose legislative changes to laws that are barriers to the use of P2. Much work has already started. By expanding this approach EPA will be further clarifying and strengthening the message in the near-term and institutionalizing it in the long-term.

b. Who. All Offices/Regions involved in regulatory/policy development, enforcement, & permitting.

c. When. Immediately begin to increase the activities already underway.

d. Barriers. Legislative requirements prescribe technologies in many cases; legislative/regulatory requirements allow limited time to comply with requirements when development & implementation of P2-oriented technologies need more time. Risk-based standards have been difficult to set.

e. Costs. Time & resources to identify and eliminate barriers under EPA's control; political capital to pursue legislative changes.

f. Benefits. By focusing on P2 & strengthening the message, EPA will be ensuring that in the long-run, quantities of wastes generated and released to the environment will continue to decline; facilities realize cost savings, including liability costs, as they will treat & dispose smaller quantities.

g. Measuring Success. Number of regulations, guidance documents, & policies developed & implemented with P2 as the central focus; reductions in the quantities of wastes generated as a result of P2 & cost savings to facilities.

D.2. Provide flexibility in Permit Compliance, Fee Schedules, and Processing Time for Permit Applications to Encourage Pollution Prevention

a. What. To encourage permittees to rely more on prevention than on treatment and disposal, EPA & states work together to develop means of promoting P2 in environmental permits such as--(1) allowing extra time to comply; (2) expediting permit applications utilizing P2; & (3) using differential (perhaps lower) fee for permits that rely primarily on P2 as a means to comply with the requirements. Create an EPA/State Permits Group to assess means for encouraging P2-oriented permits. Develop & implement options to remove barriers identified through the pilot projects; modify permit regulations & guidance as appropriate to foster P2.

b. Who. EPA & State permit & enforcement staff

c. When. Establish Permits Group or empower existing group by 10/1/93; identify opportunities to pilot test ideas by 12/93; start pilots in different Regions & States by 3/94.

d. Barriers. Existing regulations/legislation may limit ability to provide extra time needed to promote P2-oriented technologies; laws/regulations may limit fee flexibility; lost revenue to State programs that use fees for funding programs; difficult to define & agree on what is P2 & how much P2 is acceptable for differential treatment; how to define "good faith" noncompliance while trying to achieve P2 solutions.

e. Costs. Additional FTEs to process permit applications quickly, primarily at State level; perhaps lower State revenues from lower permit fees.

f. Benefits. Long-term reduction in quantities of wastes generated, treated, & disposed; more efficient utilization of resources for both permittees & permit issuing agencies; potential cost savings to permittees in the long-run; better long-term environmental results because less is released; lower permit fees and/or speedy processing of permit applications may elicit better cooperation from facilities thus potentially reducing permit backlogs.

g. Measuring Success. Number of permits with P2 focus; compare releases from prevention-focused & non-prevention-focused permits; cost savings & efficiency gains to both permittees and permit writing agencies.

D.3. Develop Pilot Projects for Integrating Pollution Prevention into Development and Implementation of Regulations, Guidance Documents, or Policies for Two or More Media for the Same Industry

a. What. Source Reduction Review Project (SRRP) provides information on the list of regulations in various programs that will attempt to include a P2 focus in their development. These regulations are being developed separately for each medium & mostly on different schedules. Work has also been done on clusters. Experience on the integrated rulemaking for the Pulp & Paper Industry to date has been positive & needs to be reaffirmed with other efforts. Combine the concept of P2 & multi-media by selecting two or more regulations affecting an industry to be developed together & on the same schedule. Pilot test concept on a couple of industries. Create an Action Group to make recommendations on potential pilot projects. Fund the projects rather than specific Offices/Regions doing them.

b. Who. Administrator creates an Action Group from across EPA. Offices/Regions participate.

c. When. Select Action Group by 9/1/93; identify candidate industries by 12/1/93; select pilots by 2/1/94; develop action plan including schedules, resources & FTEs & obtain Administrator's approval & begin pilots by 3/1/94.

d. Barriers. Existing regulations & statutory constraints; court-ordered deadlines; entrenched attitudes among regulation/policy development staff & implementation staff; lack of trust among other parties and EPA; different media offices have little incentive to cooperate on developing multi-media regulations, policies, or guidance documents.

e. Costs. FTEs and resources will have to be reallocated to ensure that the schedules are met.

f. Benefits. Coordinated & improved environmental & human health protection; more cost-effective environmental results; minimize opportunities for transferring pollution from one medium to another; industry/sector can realize improved resource efficiencies through better planning; EPA operates more efficiently.

g. Measuring Success. Indicators of environmental improvement or degradation in a geographic areas where specific target pollutant or industry is affected by the regulation or guidance/policy and its enforcement; quantify cost savings to the industry/sector in the pilot; quantify potential reductions in multi-media releases to the environment.

D.4. Harness Enforcement Activities to Help Promote and Implement Pollution Prevention

a. What. Expand the use of pollution prevention in enforcement activities. Encourage & fund multi-media inspections & compliance activities. Use settlements both as a means of achieving compliance & to reduce or prevent pollution. Expand use of Supplemental Environmental Projects (SEPs) & other compliance activities that can be used creatively to encourage P2. Ensure that enforcement policies do not act against P2 & work to encourage it. Develop integrated reporting systems to support compliance & P2. Expand training for enforcement personnel in available P2 technology, source reduction techniques, etc. that may be relevant to the specific kinds of violations found at facilities. Gather information on use of P2 in settlements. Build upon prior efforts to remove barriers to P2 in enforcement.

b. Who. Headquarters & Regional enforcement staff. NETI provides more comprehensive and increased quantity of training for both technical and legal staff.

c. When. Preliminary efforts already underway to develop training for Regional enforcement staff on P2. Other activities can begin immediately.

d. Barriers. Opportunities for promoting P2 through enforcement are limited to cases where violations have occurred; current regulatory and/or statutory requirements may preclude EPA from making the maximum use of P2; Congressional/GAO criticism of SEPs.

e. Costs. FTEs to educate staff & travel money for training

f. Benefits. Promoting P2 through enforcement settlements informs general public that EPA is very serious about prevention; encourages facilities to fully consider prevention in developing their compliance strategies; facilities may realize cost savings, including reductions in potential liabilities, when they rely on prevention as opposed to treatment and disposal approach.

g. Measuring Success. Number of enforcement actions resolved using SEPs that rely on P2 to achieve & maintain compliance; decreases in the quantities of pollution generated & released to the environment; cost savings to the facility vis a vis costs of treatment & disposal.

Target/Action Category E:

EPA SHOULD ENHANCE PARTNERSHIPS WITH STATE, LOCAL, AND TRIBAL GOVERNMENTS TO IMPLEMENT POLLUTION PREVENTION

The majority of EPA programs are implemented at the state, tribal, and/or local level. As the Administrator has stated, for EPA to make P2 its central ethic, it must solicit and engage in an active partnership with state, local and tribal governments. This requires a paradigm shift in the manner in which EPA has historically interacted with these entities. Changes have already been made in this direction. EPA needs to view its state/local/tribal partners as customers, providing them with the necessary tools and funding to implement P2. EPA must also bring them into the regulatory development and policy development process to verify that P2 initiatives can be carried out as designed.

Many state governments have been leaders in implementing P2 programs. The majority of states have established technical assistance programs, either within the state environmental regulatory agencies, or within non-regulatory entities, such as universities or non-profit organizations. In addition, several states have enacted facility planning or toxics use reduction legislation. EPA should use the experience gained from these existing state P2 programs in establishing specific federal P2 programs, regulations, and legislation. The states may also provide a useful "laboratory" to test other creative ideas to cost-effectively prevent pollution.

EPA has a crucial role as a catalyst and facilitator in promoting P2 within environmental programs at the state/local/tribal level. This role is best served through providing consistent and adequate funding to state/tribal and local P2 efforts, providing for more reasonable state and tribal matching requirements, and sharing appropriate P2 information and technologies with and between our state/tribal/local "customers".

Category E Initiatives:

E.1. Work With the States on Pollution Prevention at as High a Management Level as in Other Programs

a. What. EPA should communicate P2 to state governments through every program, to assure that they understand our commitment and support for state P2 activities, both regulatory and non-regulatory. The Regional Administrators must be held responsible for working with the state Directors (or even higher levels in state government) to encourage P2 activities within the state regulatory agencies. Program managers should also be held responsible for encouraging state P2 efforts within their programs. This can be done through

performance agreements, STARS credit, or changes in the workload models to base funding on the P2 activities to be undertaken. At the same time, states should not be pushed to do additional activities unless EPA provides new money. For the most part, this effort should focus on "integrative" work; i.e. putting P2 into permits, compliance orders, inspections, etc. Additional activities would require decisions on which current activities to disinvest.

b. Who. EPA's Senior Management Council.

c. When. Begin immediately; implement first round of accountability measures by end of FY 1994.

d. Barriers. Statutory requirements that keep staff busy and tie up available resources; institutional reluctance to change; uneasiness about the legality of some P2 projects (such as certain Supplemental Environmental Projects); the common view that P2 is something "extra."

e. Costs. Disinvestments in different areas.

f. Benefits. Provides an effective mechanism for institutionalizing P2 into state activities to implement federal environmental programs; states will be more willing to implement P2 within their regulatory programs, and will more readily generate & share success stories with EPA; net societal effect should be more cost-effective environmental protection.

g. Measuring Success. Using performance appraisals and STARS; reduction in chemical releases (perhaps through Toxics Release Inventory).

E.2. Improve Funding for Pollution Prevention Activities by States

a. What. Consistent funding is critical to imbed P2 in state programs. Money allocated for P2 activities in EPA state grants is far less than for control; this gives the message that pollution control is still the first priority. EPA must redirect resources to support state/local/tribal P2 activities. Increase funding for state/local/tribal P2 activities: 1) use program office P2 grant flexibility to integrate P2 in media-specific regulatory programs (include specific P2 activities within annual program grant guidance); 2) set aside percent of media grant funds for multi-media P2 activities; 3) request increased funding for grants under the Pollution Prevention Act to support technical assistance & other programs not necessarily housed in regulatory agencies; 4) develop guide to help state programs to become self-sustaining; (5) provide information on non-EPA sources of funds & work with other agencies to encourage use of their funds to support P2 programs; (6) decide which activities to drop to allow P2 projects; (7) address 50% matching problem: reprogram money into programs with lesser match or lower matching requirement.

b. Who. Each Office/Region. OPPT lead on matching problem.

c. When. Grant flexibility in FY 1995 program grants; request increased PPA grant funding for FY 1995 by 10/93; revise 1995 media program grant guidance in FY 1994.

d. Barriers. Pollution control "beans" currently determine grant activities, "extra" money for P2 activities; current grant guidance does not generally require P2 activities, & only occasionally encourages it; new money hard to come by, even for a top priority; requirement for 50% match to receive P2 grants (prohibits development of P2 programs in state & tribal governments where the need is the greatest; other media grants do not require this level of matching).

e. Costs. Increase in funding through PPA; staff time to change guidance and re-structure accomplishment "beans".

f. Benefits. States will believe EPA's commitment to P2, & will be able to do more to foster its adoption; discretionary P2 funds allow states & tribes to address environmental problems that are currently not addressed under an existing regulatory mechanism; better, more cost-effective compliance & environmental protection.

g. Measuring Success. Extent to which states use their grants to promote P2; document P2 activities undertaken by states (states to do it as a part of grant) and results.

E.3. Promote One-stop Shopping for Environmental Regulatory Assistance, Pollution Prevention Technical Assistance, and Other Assistance Programs

a. What. States have many disparate programs whose goal is to provide regulatory & technical assistance to businesses. Most states have P2 technical assistance programs. Many also have industrial & agricultural extension services, OSHA assistance programs, RCRA small quantity generator programs, NIST-sponsored manufacturing centers and/or SBA small business assistance programs. In addition, Clean Air Act (CAA) Amendments of 1990 require all 50 states to have a CAA small business assistance program in place by 11/93. Proliferation of small business assistance programs can make obtaining appropriate assistance difficult & confusing for a particular business. Coordinate (if not consolidate) all small business assistance programs sponsored or mandated by the Federal Government so they appear as "one-stop shopping" to the small businesses. Work with these federally-sponsored or mandated programs to help them incorporate P2 into their assistance to improve manufacturing & competitiveness. Work with state, university & other assistance programs, particularly P2 technical assistance programs, to encourage them to interact with the federally-sponsored or mandated programs, & to help them incorporate P2 assistance where they do not already.

b. Who. Working group with representatives of all affected programs to determine a mechanism for coordination. May be most effectively done with Regional Offices and clearinghouses.

c. When. Initiate FY 1994. Will require negotiating with a large number of programs so may take a while to complete.

d. Barriers. Because programs were set up by different parts of EPA, other federal agencies, and state and local entities under a number of different authorities, with a number of different, but related, purposes, authorities, turf, and purposes would have to be brought closer together.

e. Costs. EPA staff time; resources to establish information linkages.

f. Benefits. Various resources currently split among these programs could be used in a more coherent & efficient fashion, to help business improve production with cleaner, environmentally compliant technology.

g. Measuring Success. Degree to which small businesses turn to one source to locate the services they need.

**[FILL BACK IN HERE]**

E.4. Adopt Standard Practice of Allowing Flexibility for States and Local Governments to Comply with Environmental Requirements Through Pollution Prevention.

a. What. Set concrete goals based on acceptable environmental and human health protection criteria, then allow compliance by the most cost-effective means. With this flexibility, state and local governments are able to implement creative, cost-effective, protective, P2 approaches. EPA promotes use of P2 in meeting these criteria by publishing guidelines that promote the P2 options. Many past regulations have been promulgated with little or no input from the state and local governments responsible for implementation. EPA should involve these "customers" more in the regulatory development process to ensure the implementability of regulations.

b. Who. All EPA Offices that regulate state and municipal governments' environmental operations.

c. When. Begin immediately to notify appropriate authorities of impending change.

d. Barriers. Institutional approaches to reviewing and revising existing regulations; existing requirements may act as barriers.

e. Costs. EPA staff time.

f. Benefits. Decreased compliance costs for state/local governments and industry; increased P2.

g. Measuring success. Cost (to agencies & industry) of achieving compliance; rate of compliance.

E.5. Facilitate Pollution Prevention by Native American Tribal Governments

a. What. Tribal governments have special difficulties implementing P2, and require federal action to overcome them. Due to financial difficulties, Tribal governments have not been able to utilize EPA P2 funds (which require a 50% match), or develop their own programs. They are also at a disadvantage for obtaining currently available EPA support because they must compete with many much larger state governments and universities for the few available awards. Establish a working group with the affected Tribal governments to find a way to overcome these barriers and meet their needs for P2. May include making funds reasonably available to the Tribal governments, and providing necessary training and culturally appropriate informational materials.

b. Who. OPPT and EPA Institute

c. When. Begin immediately (this has already been under discussion). May take a while to accomplish if legislative changes are found to be necessary.

d. Barriers. Financial/legislative, since the legislation requires a match most tribes cannot afford; cultural differences.

e. Costs. EPA staff time; travel expenses for Tribal representatives; training expenses, including the costs of generating educational materials.

f. Benefits. Provides more environmental justice for Native Americans, and cleaner economic development of Native American lands.

g. Measuring Success. Number of grant awards made to tribal governments for P2; effectiveness of P2 actions taken.

E.6. Develop a "Demand-side Management" Strategy for Municipal Water Programs

a. What. Demand-side management programs are currently underway by various electric utilities to provide incentives & other means to reduce demand for power. Demand-side water programs can be a cost-effective way of reducing need to treat water. Several cities have implemented demand-side water conservation programs which cost less than the supply-side option (new treatment plants). Encourage this as an option in construction of new wastewater treatment plants & drinking water facilities through annual program guidance, state grants and/or state revolving fund. First step: determine whether revolving fund can be used to support demand-side management projects. Then alter program guidance to encourage this approach. Note: Region IX has been encouraging this approach in their Regional grant guidance.

b. Who. Office of Water.

c. When. Begin feasibility assessment and planning immediately.

d. Barriers. Cultural change in how we do business; appropriation issues about use of money in this way.

e. Costs. Staff time to make changes.

f. Benefits. Decreased need to expand POTW capacity and associated cost savings (in Boston, the cost was 1/3 to 1/2 that of building new capacity); reduction in cost to comply with POTW sludge regulations; reduction in depletion of water supplies; economic benefits of reduced water use; reduced need to expand or build new drinking water supply units and associated costs.

g. Measuring Success. Compare amount of water used to projected use without conservation; compute cost savings by comparing costs of conservation program with cost of building & operating new treatment plant capacity where it would otherwise have been needed.

E.7. Develop Municipalities' Capabilities to Use Pollution Prevention as a Centerpiece of Their Pre-treatment Programs

a. What. Several municipal wastewater programs currently provide P2 assistance to their business and industrial customers to help them meet or exceed pre-treatment standards. Through this assistance, companies are able to reduce their water use and the waste and release of other raw materials. Several POTWs in Region IX have been implementing P2 programs with their dischargers. Capture this existing experience and put it into a manual for use by other POTWs. Region V is currently working with the Metropolitan Sanitary District in Chicago to set up a P2 technical assistance program for its dischargers. Encourage this more widely. Request additional authority to require BMP's, not just encourage their adoption.

b. Who. Office of Water, state water programs.

c. When. Already being done in some municipalities. Program guidance to encourage others to undertake it, begins with FY 1994 funding. Training developed & provided to appropriate personnel beginning in FY 1994.

d. Barriers. Different way of doing business; local officials will need to acquire new expertise. Costs to local governments.

e. Costs. EPA staff time for re-writing program guidance; training and publication costs; costs to local governments to implement; local government training & travel costs.

f. Benefits. Local water treatment programs can greatly influence amount of pollutants generated by local businesses once they start educating them about P2; local officials are closest to the problem, and are more familiar with the particular businesses in their area than are EPA or state officials; higher rates of compliance; lower costs of compliance; lower sewer surcharges and water costs for businesses; reduced loss of raw materials; reduced demand for expansion of treatment facilities.

g. Measuring Success. Number of facilities a municipality has helped with P2; how many of a POTW's clients are in compliance; reduction in wastewater flows, BOD, COD or other water-borne contaminants from facilities involved in the pre-treatment program; reduction in total pollutants discharged to all media by these facilities (This will be especially easy if they report to TRI).

Target/Action Category F:

EPA SHOULD TAKE AN ECONOMIC SECTOR-BASED APPROACH TO THE DEVELOPMENT OF ENVIRONMENTAL POLICIES AND PROGRAMS, WITH POLLUTION PREVENTION AS A KEY MEANS OF ACHIEVING COST-EFFECTIVE ENVIRONMENTAL PROTECTION

As noted in the Vision Statement, the societal goals of sustainability and innovative technological development make it increasingly important for government policies and private sector actions to adopt a strategic approach to environmental management. For government, this means addressing environmental problems in the context of long-term socioeconomic goals. For businesses, a commitment to strategic environmental management requires an investment in long-term, cost-effective pollution prevention as part of an overall commitment to develop innovative new products, improve production quality, and achieve sustainable development.

In order to effectively promote a culture change of this magnitude, EPA needs to effectively link its own environmental programs with long-term socioeconomic goals. The Administrator already has noted her commitment to this goal, but at present the strategies and policies to establish that linkage have not been developed, and it is not clear that the Agency's traditional media-specific approach is adequate to achieve such a broad-based culture change across all economic sectors.

Many respected environmental commentators have recommended that EPA break away from the media-based programs of the past and think in terms of long-term, sustainability goals, starting by developing environmental policies and programs by economic sector. A sectoral focus would enable EPA and the federal government as a whole to more effectively integrate environmental concerns with long-term economic strategy. A sectoral approach also would help to break down the organizational barriers that prevent EPA from becoming more efficient in achieving desired environmental results.

Because of the innovative nature and long-term focus of this category, we believe that EPA should focus initially on assembling the right groups and initiating the right projects to start to determine how best to pursue a sector-based approach.

Category F Initiatives:

F.1. Develop Sector or Sub-Sector Specific Policies, Projects, and Programs to Most Effectively Drive Private Sector Behavior and Promote Desired Private Sector Actions

a. What. EPA should conduct sector-specific analysis, develop pilot projects, and implement programs to promote strategic environmental management in the private sector (i.e., linking innovation and product quality with P2 and sound environmental management; promoting investment in innovative technologies and processes that are environmentally sound). Build on sector-based work done to-date or ongoing (e.g., Amoco Project, OPPE's Industrial Sector Project, OPPT's DFE projects,). Demonstration projects should be public/private partnerships to test analyses and implement sector-specific policies. These policies should reflect a greater customer (assistance) orientation for EPA, but also should go beyond outreach and technology transfer to provide incentives for innovative private sector actions. Ensure that adequate attention is given to sub-sectors within broad economic sectors.

b. Who. EPA working groups and external network identified in Initiative F.2.

c. When. As task force work proceeds.

d. Barriers. Reluctance to break away from the status quo; restrictive statutory and regulatory requirements; cultural (i.e., trust) barriers.

e. Costs. To be determined as sector-specific initiatives are developed; implementation costs kept down because of networking and leveraging described in Initiative F.2.

f. Benefits. Long-term benefits are public and private sector culture change -- linking economic and environmental policies in government, establishing strategic environmental programs in the private sector that go beyond baseline compliance, greater "customer" focus for EPA programs and less emphasis on costly regulatory programs over time. Clearly multi-media in nature. Consistent with the concept of EPA as a leader, not merely a reactive Agency. Long-term societal pay-off is a more profitable, competitive, innovative, quality-oriented, and prevention-oriented private sector, plus a cleaner environment at lower cost.

g. Measuring success. Measure P2 accomplishments and cost-effectiveness of pilot projects (e.g., pay-offs in terms of profitability, competitiveness, innovation, product quality, investment in prevention, impacts on compliance costs, and

environmental benefits).

F.2. Establish Multi-Disciplinary Working Groups Within EPA and With Outside Entities to Develop Sector and Subsector Strategies

a. What. Establish and empower multi-disciplinary working groups in EPA to develop and implement sector-based activities described in Initiative F.1. (from analysis, through demonstration, to implementation). Establish partnerships with other Federal departments/agencies and the private sector to contribute to these activities with expertise, resources, complementary activities, etc.

b. Who. Establish internal working groups, communicating directly with the Administrator and coordinating through the Senior Leadership Council. EPA should seek innovative thinkers and employees who already have done work in this area, though not necessarily from media-specific and even P2-oriented programs. Also, establish public/private working groups, with participants drawn from the President's Council on Sustainable Development; the Departments of Commerce, Energy, Agriculture, and Transportation; the Office of Technology Assessment; the U.S. Trade Representative; and the White House Office of Environmental Policy. Private sector network partners also should include NGOs, regions and states, trade associations, academia, individual industry and business representatives. Contacts should occur at both EPA management and staff level. Connect with groups that are focused on sustainable development, not just single-issue groups.

c. When. Set up working groups by December 1993.

d. Barriers. Current organizational structure and reluctance to break away from the status quo; restrictive statutory and regulatory requirements; cultural (e.g., trust).

e. Costs. FTEs and money reallocated from existing activities (but low in relation to the possible benefits).

f. Benefits. Such task groups are a logical follow-up to the P2 NPR team. EPA working groups would clearly be multi-media in nature and would help break down organizational barriers. Ad hoc groups would generate maximum interest, draw upon a wide range of expertise and experience, and promote innovative thought. Networking outside EPA will ensure that sector initiatives are well coordinated; will leverage non-EPA interest, expertise, and resources; will identify and pursue more cost-effective strategies to achieve strategic

environmental goals; will foster public-private partnerships with more of an economic focus than such partnerships have had in the past.

g. Measuring success. See Initiative F.1.

F.3. Take a More Proactive Role to Develop Legislation That Would Provide Greater Flexibility for EPA to Promote Innovative Programs, Pursue Regulatory Trade-offs, and Prioritize Risks

a. What. Statutory requirements often pose significant barriers to innovation, R&D investment, P2, and strategic environmental management (beyond the baseline). EPA should show Congress that sustainable development policies require flexibility for government and the private sector to experiment with innovative approaches. EPA should develop and promote specific legislative proposals to increase flexibility and reduce current statutory barriers to innovation and the prioritization of risks.

b. Who. Sector-based task groups.

c. When. Begin ASAP and continue on an ongoing basis.

d. Barriers. Congressional and agency turf; reluctance to compromise stringent environmental standards even on a trial basis; slow legislative process.

e. Costs. Relatively low EPA FTE and extramural costs; requires expenditure of political capital to promote changes.

f. Benefits. A successful legislative program would provide EPA with greater flexibility to develop innovative programs, initiatives, etc.; would help to move Congress away from single-medium framework and make Congress part of the solution rather than part of the problem; would reduce private sector compliance costs over time (even as environmental performance improves); would provide better environmental results in a more cost-effective way.

g. Measuring success. None identified.

Target/Action Category G:

EPA SHOULD CULTIVATE PUBLIC/PRIVATE PARTNERSHIPS TO FOSTER POLLUTION PREVENTION

The Clinton Administration has highlighted the need to "reinvent" government in order to energize government and public entities to accomplish goals. The EPA Administrator has emphasized the importance of creating partnerships with state, local, and tribal governments, business, other agencies, and the public in carrying out EPA's mission. Public/private partnerships can be a way of reinventing the relationship between government, industry and the public to accomplish the objective of pollution prevention. In fact, pollution prevention can only be effectively implemented by changing the way people think about doing business. In particular development and selection of pollution prevention options involve value choices amongst trade-offs and can only be successfully implemented through the participation of all stakeholders. By successfully working with partners at all levels of government, in the various business sectors, and in the public, EPA can provide the leadership to catalyze change, inform change and ensure the priority of pollution prevention in the support of sustainable development. While forming effective partnerships is reflected in Initiatives throughout this Report, this category focuses on developing new partnerships with industry and the public to promote, implement and measure pollution prevention activities.

Category G Initiatives:

G.1. Assist Industry Groups in Measuring Environmental Results of Their Codes of Conduct

a. What. Several industries have developed environmental stewardship programs to guide the behavior of their members (e.g., chemical industry's Responsible Care program.) A key to making these codes credible with the public is to develop tangible measures of environmental improvement that result from implementation of the codes. Various offices within EPA have worked to develop environmental indicators. EPA would develop partners with one of the industry groups having a stewardship program to develop, implement, and promote a publicly accessible information system to track the industry's progress. Coordination of multi-media risk and policy issues would be accomplished with an agency-wide work group which would help direct the project. In addition to developing a measurement system, elements of a successful stewardship program will be identified with the objective of expanding both the measurement system and stewardship program to other groups.

b. Who. EPA program office, presumably one with greatest interest in the industry advancing the stewardship program.

c. When. Partner industry would be identified and development of the tracking system would be begun in FY 1994. The tracking could begin in 1995.

d. Barriers. Finding a willing, cooperative partner; difficult to develop the measures, verify the claims made, and find an effective way for delivering the information to the public.

e. Costs. Should mainly be FTEs; we would expect the industry to provide contractor support.

f. Benefits. Would enhance the credibility of these codes of conduct, which can be a positive influence on industry; would also help improve the methodology for measuring P2 progress. Would help expand the stewardship effort by providing systematic tracking and standards for success.

g. Measuring Success. Success will be measured by increased industry efforts to develop stewardship programs and by the reduced pollution tracked by the measurement/indicator systems.

G.2. Develop a Facility-based System for Organizing All of EPA's Data

a. What. TRI has been a very effective system for organizing and informing the public on what EPA knows about the environmental performance of facilities. EPA has collected a great amount of other data about these facilities as well. EPA has already developed IDEA and other facility data systems. Build upon TRI and other facility data systems to devise a facility-based information system that adds to the TRI data the information collected by the air, water and waste programs. Private groups have begun to build such integrated systems (i.e., RTK Net) and EPA may simply need to provide financial assistance and data access to such a group. Explore ways of describing releases per unit of production.

b. Who. All EPA programs with facility-specific data would need to participate; coordination could take place through a cross-Agency task force chaired by OPPT or OIRM.

c. When. System design - FY 1994. Implementation - FY 1995.

d. Barriers. There would be bureaucratic inertia that would need broad program office to overcome.

e. Costs. The information management costs could be significant.

f. Benefits. Having all of EPA's facility-specific data organized in a single system would give the fullest possible picture of what progress is being made toward pollution prevention. Through this system EPA could also begin to identify opportunities for data harmonization, elimination of duplication and reconciling incompatible reporting schedules.

g. Measuring Success. At one level this system is successful if it is used. It could also be viewed as a contributor toward more positive trends in facility performance.

Target/Action Category H:

EPA SHOULD TAKE A LEADERSHIP ROLE IN PROVIDING EDUCATION AND INFORMATION ABOUT POLLUTION PREVENTION

EPA needs to increase its investment in Environmental Education as a means of preparing existing staff at EPA, other federal and state agencies, industry and the public with respect to pollution prevention. In addition, such education is needed to reach consumer-age audiences, and to help raise new generations of environmentally conscious Americans. The first priority of EPA's education activities should be to assure that its own staff is sufficiently trained in pollution prevention to equip them to develop a P2 ethic, to be effective in their P2 outreach and technical assistance, and to train other personnel. Secondly, EPA should proactively educate the public and private sectors about pollution prevention opportunities. Educational programs should be formulated or enhanced for all levels of learning. Through P2 education, the public can learn how to help conserve energy, natural resources and money, and how to improve the competitiveness of the nation's products and services.

Four target groups are addressed by the education initiatives: EPA's own staff, other government agencies, private industry, and the general population (e.g., schools and universities). In addition, one initiative in this category addresses the development and dissemination of a chemical use inventory.

Two essential items which must be present to ensure integration of pollution prevention into EPA's and the nation's ethic are: pollution prevention education and training of existing and new generations of Americans; and identification and dissemination of potential emission reductions to the public and industry.

Category H Initiatives:

H.1. Begin General Pollution Prevention Education Initiative

a. What. Education and training of EPA staff is one of the essential building blocks in EPA's efforts to promote P2 throughout the nation. Convene an EPA P2 Training Work Group to develop minimum training standards and prepare a draft EPA Order on P2 training. Build on environmental education initiatives EPA has already undertaken. Develop increased societal interest in and support for P2 by investing in an Environmental curriculum of school age children K-12. Work with higher education to increase curricula development such as those developed by UCLA, NJIT and the EPA (OPPT) sponsored program at the University of Michigan. Aggressively educate populations and communities that experience the majority of environmental inequities to give them leverage in fighting against those inequities. The goal is to develop environmental awareness through curriculums, workshops, training programs and information resource centers. Leverage industry public education programs as well. Consider using techniques such as "town meetings", satellite/cable TV broadcasting; Public and educational TV broadcasts; P2 "infomercials", etc.

b. Who. A broadly representative group of EPA trained staff would work with state/local environmental agencies and school systems, various higher education systems, and industry.

c. When. Work group prepares guidelines for the programs by the close of FY 1994. Training sessions and other public outreach techniques are organized by mid FY 1995. Such programs are devised and arranged for the 1995 school year, and for the general public during calendar 1995.

d. Barriers. Resources; lack of sufficient networks of professional and educators; lack of trust among federal, state/local and industry personnel; lack of previous experience on similar topics.

e. Costs. Estimated $2,000,000 plus FTE commitment.

f. Benefits. Would help make the general public, including young people, aware of the environmental impacts of their actions and provide choices that will have positive consequences for their own health and the health of the environment. These programs would provide opportunities for young Americans to become future partners of the environment through science and technology. These programs could result in improved competitiveness of our products and services.

g. Measuring Success. None identified.

H.2. Facilitate the Sharing of Pollution Prevention Information with Industry

a. What. Currently, private industry receives information from EPA program offices about causes and effects of polluting, ways to control and prevent pollution, and benefits of using pollution prevention. State technical assistance programs and industrial extension services provide much of the P2 information to individual facilities. EPA should work to:
1) Develop more information about P2 opportunities, working with industries;
2) Support organization and activities of the National Roundtable of State Pollution Prevention Programs (the Roundtable).
3) Continue ongoing effort to delegate operation of the Pollution Prevention Information Clearinghouse (PPIC) to the Roundtable.
4) Encourage & fund support of Regional Pollution Prevention Resource Centers (similar to the one in Region IV, Great Lakes Technical Resource Library, NEWMOA, and the Pacific Northwest P2 Research Center) to help bring together P2 information & make it accessible to all state, local, & tribal governments and EPA.
5) As in Region IX, bring EPA Regional libraries & information centers into the national P2 information network, and empower existing library system to be an agent for disseminating P2 information.

b. Who. EPA Program Offices, OPPT, EPA libraries.

c. When. Much of this has begun on a small scale, or in limited geographical areas. These activities should be expanded now.

d. Barriers. Large number of assistance programs to coordinate.

e. Costs. About $150-200,000 per Region to support Regional Centers.

f. Benefits. P2 information more easily available to everyone who needs it, increasing the adoption of P2; state P2 programs will have a coordinated forum for interacting with EPA and others. Enhanced partnerships between public and private sectors.

g. Measuring Success. None identified.

H.3. Develop a Chemical Use Inventory

a. What. Current efforts to track progress in pollution prevention have been facility-based (i.e., Toxic Release Inventory). Another useful way to track progress in pollution prevention is to monitor changing patterns in the use of toxic chemicals (i.e., is the trend toward safer, less toxic materials). Under this initiative EPA would require chemical manufacturers and processors to report on how their products are used every ten years, along the same schedule as TRI. This data would be made available to the public along with the TRI results.

b. Who. EPA (OPPT).

c. When. System design - FY 1995. Implementation - FY 1996.

d. Barriers. It will be difficult to develop a system for describing use patterns that is informative to the public and will protect confidential business information. Also, some manufacturers claim they do not know how their customers use their products. OMB approval due to the Paperwork Reduction Act if this is deemed a survey.

e. Costs. None identified.

f. Benefits. EPA has rather limited data on how chemicals are used in this country. This data would help the entire Agency set priorities for what industries and processes deserve greatest attention. Also, the public reporting will help push industry toward development of safer products. It will also push manufacturers and processors to be more attentive to how their products are used.

g. Measuring Success. The project is successful if the data is used by government and industry to guide behavior.

Target/Action Category I:

EXECUTIVE BRANCH SHOULD INTEGRATE POLLUTION PREVENTION INTO ITS PROCUREMENT AND DEVELOP FEDERAL AGENCY RELATIONSHIPS TO PROMOTE POLLUTION PREVENTION NATIONWIDE

The federal government is one of the largest employers of personnel, generators of pollution, buyers of products and services, and performers of research and development in this country. According to the GSA, there are over 350,000 federal buildings on more than 700 million acres of public land. As one of the largest purchasers of goods and services in the nation, it

should establish a market for innovative and environmentally sound products and services. In this manner the government could significantly influence manufacturing, marketing, application and disposal habits of the entire nation, and perhaps the world. Furthermore, by demonstrating the cost and benefits of such innovative pollution prevention equipment and procedures, it can substantially improve the competitiveness of the nation's manufacturers and service organization. Therefore, it plays a crucial role in shaping the country's environmental agenda and in developing an environmental ethic.

The federal government is rapidly being required by statute, regulation, and policy to reduce its consumption of natural resources and to reduce the quantity and toxicity of its releases to the environment during a period of increasing budgetary constraints. As a result, pollution prevention is increasingly seen as a cost-effective approach to meeting these requirements.

In response to the mandate of the Pollution Prevention Act of 1990, EPA prepared the "EPA's National Pollution Prevention Strategy of 1991". The goal of the EPA Strategy is to: "Establish the federal government as the national leader in implementing pollution prevention policies and practices across all missions, activities, and functions in order to promote the sustainable use of natural resources and protect human health and the environment."

Recommended objectives and key targets for each opportunity are addressed in the initiatives in this Category. The President must lead in this effort. To the extent possible, EPA should be prepared to provide technical assistance to other federal agencies to accomplish these P2 goals.

Category I Initiatives:

I.1. Advance Principles of Pollution Prevention in Executive Branch Through Procurement of Goods and Services

a. What. Implement affirmative environmental procurement programs & life-cycle costing practices throughout federal government to influence and help create markets for environmentally acceptable products & innovative technologies, & to demonstrate cost benefit of such products. Over 100,000 federal government specifications and standards currently on the books. Build on the experience gained by DOD in pursuing environmental considerations and hazardous materials concerns. Under E.O. 12780, EPA is required to issue procurement guidelines for recovered materials; & other agencies must routinely report their progress in adopting affirmative procurement programs. Federal facilities should at least achieve the targets in

the Interim Federal Government P2 Strategy, including: (1) DOD reduction of use of TRI chemicals; (2) by 10/93, GSA revision of FPMR handbook to require environmental review of all specifications for civilian use; (3) by 6/93 revision of each agency's procurement guidelines to minimize purchase of ozone-depleting compounds; & (4) procurement of energy efficient products based upon life-cycle analysis.

b. Who. President directs through Executive Order. OFCCP develops procurement guidelines and regulations. Each agency responsible for compliance. Technical assistance from EPA.

c. When. President issues appropriate orders or directives by 1/1/94.

d. Barriers. Temporarily increased time and resource needs during the transition period; insufficient funding and personnel, particularly at EPA which has to provide so many of the support services to other departments; possible lack of suitable products and services; lack of suitable training, purchasing, and management procedures.

e. Costs. High during start-up; major savings in long-term.

f. Benefits. Demonstration of Government leadership; potentially significant reductions in the quantity of pollution generated and consumption of natural resources; reduced long-term costs of materials and services to the Government; acquisition of experience and data to influence purchasing and manufacturing habits of the entire country; and experiences which should result in industrial leadership in "quality", environmental and innovative technologies which can be exported.

g. Measuring Success. Quantify the reductions in the amount of pollution generated & released; quantify long-term cost savings using total cost accounting methods.

I.2. Establish a Permanent, Inter-agency Team Reporting to the Vice President to Gather, Evaluate, Develop Ideas for Pollution Prevention Throughout the Federal Government and to Coordinate P2 Activities Throughout the Federal Government

a. What. In a brief time, EPA's NPR Pollution Prevention Team identified several hundred ideas on P2 opportunities and initiatives. At the same time many EPA employees responded to the Administrator's request & submitted hundreds of other P2 ideas for consideration in the NPR. Well over 600 ideas were identified during the brief NPR effort. Many of these ideas involved activities that extend beyond EPA to other

Federal agencies. The Team did not have time to evaluate, let alone review, many of the these ideas. In addition it is anticipated that there will continue to be a stream of P2 ideas which affect more than a single federal agency, and which can most effectively be handled by an inter-agency team with a continuing mandate to review the ideas already collected and to develop, solicit, and review new P2 ideas from throughout the Executive Branch. Team is responsible for reviewing, evaluating, and developing P2 ideas to the point where they could be handed off to specific agencies for implementation. Due to the likely synergism developed, a great deal of benefit could result if the Team also coordinated the P2 activities of all federal agencies--looking broadly at ideas, facilitating cross-pollination of all agencies' P2 activities, and regularly reporting to the Vice President. Team, comprised of voluntary members from across the federal government, has a permanent staff and some contractor funding to assist its activities. Participation is considered a regular part of members' regular agency jobs.

b. Who. President appoints Team. Team members drawn from across Federal Government. Vice President monitors development and handoff of ideas.

c. When. Team is selected by 11/15/93.

d. Barriers. Lack of management support for employees to take on duties outside regular job description.

e. Costs. Limited to commitment of FTE to staff the Team; minor resources for information gathering and report production.

f. Benefits. Keeps the momentum begun in NPR going; Government does not lose P2 ideas that could not be evaluated or which applied to Executive Branch; facilitates synergism and shows a continuing commitment to P2 and quality process.

g. Measuring Success. How many ideas go from Team to agencies; how much pollution reduction and energy saved by government.

Target/Action Category J:

GOVERNMENT SHOULD USE MARKET INCENTIVES, INTERNALIZING THE EXTERNALITIES, AND FISCAL POLICIES TO PROMOTE POLLUTION PREVENTION

In our market economy, the price of goods and services generally does not include all the environmental costs associated with the production, distribution, use, or disposal of a particular good or activity. For example, the price an individual pays for

driving a car does not fully recover the cost to society of maintaining the roads or the air pollution generated. As another example, the price of cigarettes does not include the cost of picking up and disposing the discarded cigarette butt and the health and environmental impacts of the smoke. Unless such costs (especially long-term costs), called externalities, are factored into prices (internalized), the market will not properly allocate resources among competing demands in society. Initiatives in this category use financial adjustments to internalize the environmental externalities which will promote pollution prevention and lead us to a sustainable economy.

Category J Initiatives:

J.1. Develop "Take Back" Legislation and Regulations

a. What. With some exceptions, after a company sells a consumer product, the company has no responsibility for the environmental costs associated with the disposal of the product. In other words, the cost of disposal of the product is an invisible cost that is not factored into the company's decision-making or pricing of the product which contributes to a considerable waste management problem. Other countries have started to enact such "take back" requirements, while in this country the most common and virtually only "take back" program, "bottle bills", are fragmented across states, with many states having no such requirements. EPA should review "take back" legislation and its effectiveness in other countries and develop proposals for such programs for appropriate consumer goods in our economy, starting with those consumer goods whose disposal creates the most significant environmental problems. Take back programs could be based on a refundable deposit to encourage recycling of the product, or on other financial incentives, taxes or ways to encourage the reuse, recycling or proper disposal of the product.

b. Who. White House, Congress, EPA, and other stakeholders.

c. When. This initiative can begin immediately. Implementation can be phased-in with targeted industries and pilot programs within two years.

d. Barriers. There will be institutional resistance associated with developing and implementing a new program, changing existing standards and methods of operation in the public and private sectors, and educating the public and private sectors.

e. Costs. Unknown. Some companies are already beginning to make "take-back" products in order to sell them in the European market. Initially the implementation costs could be higher until products are modified.

f. Benefits. Reduced disposal costs, increased efficiency and recycling of product and resources.

g. Measuring Success. Success will be measured by quantifying the benefits from reduced environmental impacts from production and consumption of the product.

J.2. Establish a Federal Environmental Sales Tax

a. What. The cost of products and service often do not reflect the environmental costs (the externalities not already included in the market price) associated with the manufacturing, packaging, advertising, distributing, selling, using and disposing of the product or service. White House establishes study group to determine if a federal environmental sales tax could be developed to internalize externalities. Other existing federal taxes could be reduced or eliminated as appropriate.

b. Who. White House, interagency study group from Commerce, Treasury, EPA, academia, industry, public interest, Congressional staff, and other groups would be formed to study the idea and make recommendations.

c. When. Study group would commence work in 1994 with report by end of 1994.

d. Barriers. Considerable institutional barriers to change. Problems in developing values to measure environmental externalities. Public opposition to "another" tax unless was clearly communicated that this would replace or reduce existing taxes that did not promote pollution prevention and sustainable development. No infrastructure to collect tax; no experience.

e. Costs. FTE and political resources to develop and implement idea.

f. Benefits. Market would now efficiently allocate resources, with recognition for costs of pollution to society as a whole.

g. Measuring Success. Adoption of the new tax structure. Changes in consumption patterns to reflect environmental costs.

# APPENDIX
# POLLUTION PREVENTION TEAM REPORT

[Note: Initiative Numbers follow sequentially those featured in body of Team Report]

Target/Action Category A:

EPA SHOULD PROMOTE SUSTAINABILITY THROUGH ITS POLICIES AND PROGRAMS AS THE CENTRAL OPERATING PRINCIPLE FOR THE COUNTRY

A.3. Develop a Pollution Prevention/Sustainability Mission Statement for EPA

EPA should develop a revised mission statement, based on the principles of P2 and sustainable development. The mission statement would be incorporated into EPA's official Statement of Organization set forth in 40 CFR Part 1. As part of the development of the mission statement, EPA should evaluate whether measurable goals could be established to enable the public and EPA to determine whether progress was being made in meeting these goals. If measurable goals could be formulated, EPA would commit to formally evaluating its progress in meeting the goals every five years and revising the goals as appropriate. To eliminate any political influences in evaluating EPA's progress in meeting the goals, an independent organization (e.g., a university, GAO, the SAB) could be chosen to conduct the evaluation process. EPA itself would be responsible for formulating the mission statement and measurable goals. A team of senior staff and managers across the Agency would be tasked with developing a draft. Input and comments from other agencies and organizations should be sought.

A.4. Assert EPA's Leadership Role on Council on Sustainable Development

The formation of the White House Council on Sustainable Development represents a strategic opportunity for EPA to influence non-EPA policies and programs that are driving forces in creating and maintaining our environmental problems. The Administrator should assert a major, leadership role on the Council on Sustainable Development. The Administrator could create a multi-disciplinary EPA team to support her work on the Council.

Target/Action Category B:

EPA SHOULD DEMONSTRATE THE BENEFITS OF POLLUTION PREVENTION TO ENVIRONMENT, BUDGET & EFFICIENCY BY USING POLLUTION PREVENTION STRATEGIES IN ALL ITS OWN OPERATIONS

B.2. Reduce EPA's Internal Use of Paper & Paper Products

Two phase, Agency-wide implementation of a number of inter-related paper conservation actions, building upon many previous demonstrations (OMS, NDPD, OSW, Regions V & IX, payroll), in addition to harnessing the findings of OAR's "Communications QAT" on electronic mail and OARM's "PaperWISE" office project. This initiative is designed to accomplish three things: prevent pollution by reducing EPA's use of paper; reduce EPA's total cost of paper use; and improve EPA's efficiency in the acquisition, use, management, storage and transmission of data and information.

Phase One - a few (perhaps competing) "prototype teams" of AAships (or geographic locations) will immediately: (1) improve upon simple activities (e.g., use of centralized (paper) bulletin boards; recycling, double-sided copying; Agency-wide materials distributed via electronic media or via one copy per Section; use of electronic forms [EDI-electronic document interchange] in lieu of standard government paper forms; routine use of voice mail; methodical reduction in the quantity of paper copies made); and (2) begin working out the details for Agency-wide application of the more complicated or less developed paper reduction projects (e.g., electronic mail, electronic bulletin boards, electronic training, electronic proofing and processing of memoranda). Phase Two will build on the previous experiences to implement low-paper procedures throughout the entire Agency, including changing regulatory reporting to electronic forms.

B.3. Purchase "Green", P2-Friendly Products and Services

In two phases EPA develops, implements, & measures the effectiveness of P2 procurement activities within its facilities & operations by purchasing energy-efficient & P2-based products & services. In Phase 1: (1) revise EPA procurement (materials, services, & contracts) policies to ensure that they are "green"; (2) revise procurement guidelines & specifications to encourage the purchase of less toxic chemicals; (3) ensure that major procurement programs require a P2 analysis prior to implementation; and (4) reduce procurement needs by establishing improved system for recycling & reusing office equipment within facilities. In Phase 2: (1) use revised procurement specifications &

guidelines to purchase P2-friendly products & services; (2) form partnerships to support the development of innovative, P2-friendly equipment or services for government use; (3) promote use of innovative applications of existing and/or lower risk materials to avoid developing new or more toxic items; and (4) ensure that contractors providing services to EPA utilize P2 fully in their internal operations.

B.4. Reduce Environmental Impact of EPA's Transportation Activities and of Staff Commuting

Pursuant to the "Alternative Motor Fuels Act of 1988", and Executive Order #12759) work with other agencies to maximize the number of alternative-fueled vehicles that are acquired by the Federal government. Implement this initiative in two phases. Phase 1, establish a team to develop, perform & measure success for a model "P2 transportation initiative" to reduce air pollution & save resources: (1) find means to encourage more carpooling/vanpooling by EPA employees (even further subsidizing carpool parking or eliminating any subsidy to non-carpool vehicles); (2) promote use of mass transit systems (where available) by offsetting some of employees' costs; (3) use shuttle vehicles more efficiently; (4) analyze benefits of CAA Clean Fuels Fleet & Employee Commuting programs; (5) encourage bicycling & walking to work; & (6) award a "choice" transit benefit to a "P2 employee-of-the-Month" at each location to provide a highly visible reminder of the personal benefits of implementing P2. Phase 2, Agency-wide, broaden & merge with other P2 EPA initiatives to: (1) evaluate impact of its vehicle transportation; (2) purchase only "green vehicles"; (3) authorize EPA employee payment for travel on "green rental vehicles"; (4) use two-way video-conferencing (inside & outside EPA) to reduce employee travel; & (5) reduce staff commuting by making "flexiplace" (work at home) available to more employees.

B.5. Reduce EPA Use of Energy & Natural Resources in the Operation of its Facilities

Building on previous OAR & OFFE experiences, implement a prevention & conservation plan in two phases. In Phase 1, establish a team (specific Offices/Regions or across EPA) to develop, implement, & measure effectiveness of P2 building services conservation activities such as--(1) minimizing energy usage by turning off unused equipment & judiciously using outside air, drawing shades/blinds, etc.; (2) selecting an "energy efficiency leader" in every facility to develop a plan to reduce energy (& other services) & to motivate others to follow the plan; and (3) in accordance with Energy Policy Act of 1992, begin implementing an energy reduction strategy for at least a 20% reduction, compared to

1985, by year 2000. In Phase 2, broaden building service conservation activities Agency-wide: (1) use "green lights" & motion sensors to reduce lighting load when not needed; (2) reduce water consumption in all activities & install "gray water" systems where it makes sense; (3) promote "job sharing" & "flexiplace" to more effectively use office space & services; (4) use larger, but fewer buildings; (5) build or lease new facilities designed to reduce usage of energy, water, & other resources, minimize waste associated with services, maximize natural lighting, heating, & cooling, use optimum quantities of insulation, & use efficient motors, equipment & plumbing.

Target/Action Category C:

EPA SHOULD CHANGE ITS CULTURE AND ORGANIZATION TO MAKE POLLUTION PREVENTION THE CENTRAL OPERATING PRINCIPLE OF THE ORGANIZATION AND ITS EMPLOYEES

C.3. Establish a Permanent, Broad-based EPA Team to Gather, Evaluate, and Develop Ideas for Pollution Prevention for Action

In the brief time it had, the NPR Pollution Prevention Team identified several hundred ideas on P2 opportunities & initiatives. At the same time, dozens of EPA employees responded to the Administrator's request & submitted hundreds of other P2 ideas for consideration in the NPR. Well over 600 ideas were identified during the brief NPR effort. The Team did not have time to evaluate, let alone review, many of the ideas Team members identified & most of those received from fellow EPA employees. There is a wealth of ideas that should be examined & evaluated. To this end, establish a followup Team, drawn from across EPA, with a continuing mandate to review the ideas already collected & to develop, solicit, & review new P2 ideas. Team reviews, evaluates, & develops P2 ideas to the point where they can be handed off to someone inside or outside EPA to determine whether they can be implemented. Team looks broadly at ideas & regularly reports to the Senior Management Council on its activities. Team is centered in an existing unit (possible Pollution Prevention Staff) & has a small permanent staff to assist its activities. Participation is considered a regular part of members' jobs.

C.4. Devote a Significant Portion of EPA's Budget to Developing Innovative Activities that Promote Pollution Prevention

Allocation of office budgets over time should be judged in part by past P2 performance and results. In the near term, this initiative is to encourage innovative P2 activities by allocating a significant part of the operating budget to

jump start new P2 activities or to expand small-scale P2 activities that show promise on a larger scale. [This is not intended to affect existing P2 activities which already represent a significant portion of EPA's budget.] There are two approaches. During budget cycle, set P2 funding goal, e.g. % or otherwise (this is not related to the current 2% set-aside program). Aas & Ras identify, develop & fund innovative new P2 projects for next fiscal year. An alternative approach, in the first two years, take money off top of agency budget, not from individual programs. This money would be allocated to new, innovative P2 projects based on recommendations of EPA Pollution Prevention Board representing all EPA Offices/Regions. Offices/Regions cooperatively develop innovative P2 programs & submit proposals for spending money in next fiscal year on new P2 activities. Administrator allocates funds based on evaluation of proposals by the Board. Activities can be multi-media or single medium.

C.5. Reward EPA Employees for Their Efforts and Successes in Fostering Pollution Prevention Inside and Beyond EPA

Recognize employees who foster P2 inside and beyond EPA with: (i) monetary awards tied to yearly performance appraisals based on P2 performance during year; (ii) special act, time off, on-the-spot awards tied to performance in P2, (iii) medals or specially named honor awards for P2 performance & initiative inside EPA, & (iv) honor awards for employees who foster P2 outside of their EPA jobs. Honor awards given in public ceremonies. A Pollution Prevention Awards Board established (could be a subgroup of current Awards Board but with P2 expertise). Specific fund of award money for P2 awards. After 5 years, P2 achievement would be recognized as part of EPA's existing awards process, no longer separate.

C.6. Allow EPA Employees to Take Time to Work or Train in Pollution Prevention Outside of Their Normal Duties

Managers cannot conveniently "backfill" an employee seeking leave from regular duties. An employee may seek time off (or away from regular duties) to pursue professional development, train, or try new professional outlets. In the P2 area, employees may want time away to train in P2, to work on P2 task forces, to accept details to P2 jobs elsewhere in EPA, to do P2 work at other institutions under Intergovernmental Personnel Act assignments, & to do research or participate in technology development activities in the P2 area, among other things. This can only work when a manager is willing to let an employee go. Given the severe current & future limits on EPA resources & growing mandates, this is not often done. EPA should address this

issue by creating an FTE pool of 10-15 unfilled Administratively Determined (AD) positions. These FTEs would be available to allow managers to backfill an employee who is away from regular duties pursuing P2 opportunities. In future years, a FTE set-aside program would be initiated Agency-wide to supplement the AD pool, if need warrants. A high level manager would control the pool & would make decisions to allocate FTE for P2 backfill purposes.

Target/Action Category D:

EPA SHOULD INTEGRATE POLLUTION PREVENTION INTO ALL PROGRAMS INCLUDING REGULATION DEVELOPMENT, PERMITTING OPERATIONS, COMPLIANCE ACTIVITIES, AND ENFORCEMENT

D.5. Utilize Management Tools to Ensure That EPA Promotes Pollution Prevention in Every Regulation, Guidance Document, Policy Decision, and Permit Action

The Administrator has already issued a number of questions that must be addressed when regulations or policies are sent to her for approval. Build on the Administrator's list of questions at every level in EPA to ensure that every regulation, policy, guidance document, & permit action promotes consideration of P2 in every regulation, guidance document, & policy. Ask questions at every management level in EPA early in the development process to ensure that P2 is considered while there is still time to develop it in the action. Develop a list of generic P2 questions that need to be answered at every level of EPA before a decision is made that might include P2.

Target/Action Category E:

EPA SHOULD ENHANCE PARTNERSHIPS WITH STATE, LOCAL, AND TRIBAL GOVERNMENTS TO IMPLEMENT POLLUTION PREVENTION

E.8. Identify and Overcome Federal Barriers to Integrating Pollution Prevention into State Regulatory Activities

EPA establishes a Task Force with the responsibility to seek out instances where claims are made of federal regulatory or policy barriers to the adoption of P2 activities by state/local governments. Task Force includes representatives of EPA & state & local governments. EPA staff of the Task Force work to remove barriers by working with the EPA Program Offices & Office of General Counsel. All EPA personnel who deal directly with states can provide input to Task Force. Change EPA regulation/policy barriers. Take action to initiate legislative changes.

E.9. Help Coordinate State Programs and Facilitate the Sharing of Pollution Prevention Information

Make EPA's relationship with the states a full-fledged P2 partnership. Support organization and activities of the National Roundtable of State Pollution Prevention Programs (the Roundtable) in a manner similar to relationship with other state coordinating organizations such as ASIWPCA and ASTSWMO. Continue ongoing effort to delegate operation of the Pollution Prevention Information Clearinghouse (PPIC) to the Roundtable. Encourage & fund support of Regional Pollution Prevention Resource Centers (similar to the one in Region IV, Great Lakes Technical Resource Library, NEWMOA, and the Pacific Northwest P2 Research Center) to help bring together P2 information & make it accessible to all state, local, & tribal governments and EPA. As in Region IX, bring EPA Regional libraries & information centers into the national P2 information network, and empower existing library system to be an agent for disseminating P2 information. Ensure delivery mechanism for assistance is easily accessible. Provide adequate training of EPA, state, local, & tribal personnel.

Target/Action Category F:

EPA SHOULD TAKE AN ECONOMIC SECTOR-BASED APPROACH TO THE DEVELOPMENT OF ENVIRONMENTAL POLICIES AND PROGRAMS, WITH POLLUTION PREVENTION AS A KEY MEANS OF ACHIEVING COST-EFFECTIVE ENVIRONMENTAL PROTECTION

F.4. Work With (and Leverage the Resources and Expertise of) Public and Private Sector Entities in the Development and Implementation of Sector and Sub-sector Strategies.

Establish partnerships with other Federal departments and agencies (including departments focusing on economic recovery and innovation) and the private sector to pursue sector or sub-sector strategies. Link with EPA working groups (see Initiative F.2). Develop demonstration projects that test sector-based policies (see Initiative F.1. and the Public/Private Partnerships Category of this Report). Examples of Federal network partners include the President's Council on Sustainable Development; the Departments of Commerce, Energy, Agriculture, and Transportation; the Office of Technology Assessment; the U.S. Trade Representative; and the White House Office of Environmental Policy. Private sector network partners include NGOs, regions and states, trade associations, individual industry and business representatives. Contacts should occur at both EPA management and staff level. Connect with groups that are focused on economic growth, not just groups focused on environmental issues.

Target/Action Category G:

EPA SHOULD CULTIVATE PUBLIC/PRIVATE PARTNERSHIPS TO FOSTER POLLUTION PREVENTION

G.3. Assist Green Label Efforts

Several private groups, foreign countries and States are developing "green labeling" programs that recognize consumer products that are preferable from an environmental perspective. EPA has been asked by one such group (Green Seal) to help it identify the consumer product categories of greatest environmental impact. In carrying through the theme of developing new partnerships, EPA would choose a community having strong public interest activity. EPA would then convene a working group of local businesses, public interest groups and government to target products of greatest concern. Choice would be informed by a multi-media work group participating in the discussions. A continuing work group made up of EPA, government, industry and community groups would develop information and labeling for the products. In follow up to the labelling effort, the group would evaluate how consumers react to different forms of environmental labeling and advertising. This pilot effort would assist other labeling entities to set better priorities and deliver more effective messages.

G.4. Assist Small Business in Finding Incentives for Pollution Prevention

Effecting behavior change in pollution prevention depends upon providing incentives for companies to search out and apply strategies for improvement. The most powerful motivator is demonstrating that the improvement would be in the best interest of the company and would contribute to the profitability and marketability of the company. Three areas provide fruitful avenues to develop projects in conjunction with small businesses: cost accounting, financing and insurance. This pilot project would involve representatives from the three areas in a partnership with a selected industry to develop guidelines and information products tailored to that industry which would enable accountants to properly identify the cost savings from pollution prevention; financial institutions to provide loans for pollution prevention projects, and guidelines for insurance companies to take pollution prevention actions into account in liability insurance premiums. By forming new partnerships through work groups made up of small businesses, associations, financial institutions and EPA a

synergism will be created to develop incentives to promote pollution prevention activities in small business. The pilot projects can build upon existing projects that work through industry partnerships.

G.5. Develop Clean Technology for Small Business

Joint research conducted with the National labs, the private sector, universities and others that targets on the needs of small businesses on an industry-wide basis. Small businesses have fewer technical and financial resources available to them as individual businesses to address long-term, "breakthrough" research needs. EPA can perform a leadership role in helping to define what constitutes "clean technology" so as to ensure multi-media risk impacts and pollution prevention considerations remain in the forefront of targeted technology development. EPA can catalyze public/private research partnerships with specific industries that are characterized by lots of small businesses to fill the need for cleaner technologies and processes. Industrial partners, however, would also include suppliers, clients, and large companies in the same industry. In addition, EPA could play a role in ensuring the diffusion of clean technology to small business partners, as well as, ensuring incentives to employ it.

G.6. Undertake Voluntary Pilot Projects for Multi-media Facility-wide Assessments of Environmental Releases and Develop Options and Strategies to Reduce These Releases Through Pollution Prevention

EPA and Amoco Corp. conducted a two year voluntary project to assess releases to all media from a petroleum refinery and identified P2 options to reduce these releases. The project found that prevention-based options were generally more cost-effective than treatment and disposal options. This project generated information on releases that we did not know about and identified options in a much shorter time than it usually takes EPA for developing regulations. EPA should pilot test this approach in several different industrial facilities.

Target/Action Category H:

EPA SHOULD TAKE A LEADERSHIP ROLE IN PROVIDING EDUCATION AND INFORMATION ABOUT POLLUTION PREVENTION

H.4. Educate All Levels of Governments About Pollution Prevention

Training of EPA staff is one of the essential building blocks needed before EPA can change its work ethic. A minimum of one day training in Pollution Prevention for

every EPA employee and a minimum of one week for those employees who work directly and actively in P2 or in other activities that directly relate to emission reductions or controls. Convene an EPA P2 Training Work Group to develop minimum training standards and a draft EPA Executive Order on EPA training. In the interim, make the current EPA Institute's P2 orientation course available to the entire staff. Affected staff could opt out of such training by certifying that they previously received equivalent training or work experience.

Similarly, pollution prevention education in the federal government and the state/local levels is essential if one desires significant changes in their work ethic to occur. Partnerships will be forged between state and local governments, other federal agencies, and EPA to launch educational programs to advance P2 efforts. Efforts will be made by EPA to help educate other Federal agencies about P2. Programs would focus on educating state, local and federal employees (including legislative bodies) in P2 activities. With the help of EPA employees trained in P2, state/local governments and other federal agencies would be able to implement awareness programs in the government workplace.

Target/Action Category I:

EXECUTIVE BRANCH SHOULD INTEGRATE POLLUTION PREVENTION INTO ITS PROCUREMENT AND DEVELOP FEDERAL AGENCY RELATIONSHIPS TO PROMOTE POLLUTION PREVENTION NATIONWIDE

I.3. Direct the Federal Budget Toward Pollution Prevention

Direct expenditures in entire Federal Budget toward P2 purposes. In the interim, initiate a variety of Set-Aside Programs as an immediate bridge. Three examples: (1) Support innovation programs at Department of Energy to efficiently target, promote and encourage innovative P2 technologies using existing DOE infrastructure. Build on under-funded DOE capabilities and "steer" DOE in the direction of promoting environmental, P2 technologies, in addition to their current priority based on energy savings alone. Provides environmental sorting criteria to DOE to catch environmentally worthy technologies that would otherwise slip through the DOE sorting screens. (2) U.S. Information Agency (USIA) funds international demonstrations of P2 techniques and technologies. USIA empowered to use its informational infrastructure to advance P2 worldwide. (3) Promote Industrial Competitiveness through Efficiency to further demonstrate that P2 and saving energy can be highly profitable; expand NICE Grant Program through more DOE and Commerce funding.

I.4. Reduce Significantly Quantity and Toxicity of Wastes Executive Branch Produces

Significantly reduce quantity & toxicity of pollutants released & wastes generated by federal facilities & on public lands; make P2 approach of first choice in all environmental management decisions. Expand on & adapt experiences acquired during individual department initiatives, such as--DOD's announcement in August, 1992 that it had reduced its hazardous waste disposal by 54% (including a 85% reduction in the waste generated at its industrial-type facilities); & Tidewater Interagency P2 Program, started in 1991. Federal facilities achieve at least items specified in Interim Federal Facility P2 Strategy, including--(1) 50% reduction in releases of 17 priority chemicals at all government owned/contractor operated (GOCO) facilities by end of 1995; & by end of 1997, non-GOCO facilities reduce these chemicals by 33%; (2) report all releases consistent with TRI requirements, starting with beginning of calendar 1993; & (3) by end of 1992, adopt an energy efficiency implementation plan for each agency to achieve goals & requirements set forth in Executive Order #12759 & Energy Policy Act of 1992.

I.5. Use All Available Tools to Ensure That Executive Branch Programs, Policies, and Regulations Incorporate Pollution Prevention Concepts

Utilize all available tools, including the National Environmental Policy Act (NEPA), to ensure that programs, policies, and regulations of federal agencies incorporate pollution prevention concepts and approaches; and provide appropriate incentives for the private sector to undertake such practices. Achieve the specific targets enumerated in the Interim Federal Facility P2 Strategy. Each Agency looks for and implements P2 opportunities, either alone, or as part of federal government-wide initiatives, such as reducing small airborne particles (PM-10) by removing crop land from cultivation; working to develop environmental labeling and other activities to facilitate "green marketing"; early consideration of prevention in all major activities affected by the NEPA; and in reviewing curriculum items directed at students in grades K-12 and in college. Furthermore, EPA performs at least 50 multi-media enforcement inspections of federal facilities, and incorporates P2 into at least 25% of its enforcement case resolutions with the federal facility to sensitize the agencies to P2 opportunities.

I.6. Foster Development and Transfer of Pollution Prevention Technologies by Executive Branch to Private Sector

Develop technical solutions & foster technology transfer among Federal agencies & between the public & private sectors to address P2 needs & to enhance United States competitiveness. The primary theme contained in the Interim Federal Government P2 Strategy is for various agencies to work cooperatively to foster development & dissemination of P2 approaches to industry so that they may reduce costs of compliance, and/or to develop marketable innovative technology to the rest of the world. Government will achieve at least the targets contained in the Interim Strategy. Continued development of methods to assess the effectiveness of P2 approaches in reducing emissions and in demonstrating compliance with environmental regulations; in FY 1993 expansion of the breadth and effectiveness of EPA's Pollution Prevention Information Exchange System (PIES) database; in FY 1993 form an interagency committee to identify emerging P2 technologies that can be demonstrated at Federal facilities; development and scheduling new P2 technology transfer workshops, particularly "train-the-trainer" ones; and demonstrations of new P2 technology or new applications.

I.7. Develop National Pollution Prevention R&D Agenda

EPA should lead the development of a national R&D agenda for pollution prevention to--(1) promote a longer-term R&D perspective, (2) bring into play public and private sector resources, (3) coordinate Federal P2 R&D efforts, (4) lead to more effective use of national capabilities to do P2 R&D, (5) leverage EPA and Executive Branch R&D resources, and (6) lead to more cooperative public/private R&D efforts. Federal Coordinating Council on Science, Engineering, and Technology (FCCSET) sets up a separate working group, chaired by EPA, to develop a national R&D agenda for the public and private sectors on P2. If it is not possible to have a FCCSET working group, EPA could take the initiative to create an interagency P2 R&D council, chaired by EPA.

I.8. Develop an Executive Branch Technology Scanning Initiative to Promote the Identification of Pollution Prevention Technology Developments

Link files of Department of Commerce (relating to industrial and commercial data, including Patent and Trademark Office), Office of Environmental Statistics, EPA program offices, Department of Energy, other Federal agencies, and the White House Offices of Science and Technology Policy and

Environmental Policy, for the purpose of fostering integration of technology with pollution prevention opportunities.

I.9. Establish a Revolving Fund for Energy Efficiency and Community Heating and Cooling Systems

Community heating and cooling systems are an integrated approach to using energy and P2. Waste heat from fossil-electric power plants is captured for heating or cooling buildings in urban centers, rather than being released to the atmosphere or the aquasphere. For example, three power plants in Washington, D.C. make electricity for federal buildings and use the waste thermal energy to simultaneously heat or cool public buildings. Other cities in the U.S. are finding that Community Heating and Cooling Systems provide an economic stimulus to the center city (Newark, NJ). In Sweden and the Baltic Countries, waste heat is routinely used at sites up to 30 miles away from the generating facility. (1) Develop a Revolving Fund (with DOE, HUD, and Commerce, others) to temporarily provide loans for community heating and cooling systems -- to prevent pollution associated with making electricity; to recapture half of the waste thermal energy released by fossil-steam-electric power plants; to overcome high capital costs of initiating projects; revolving fund of $500 million to be repaid via shared savings. Modeled on EPA's revolving fund for construction grants, with improvements. (2) Expanded (or another) Revolving Fund (with DOE and Commerce, NIST) to finance capital-intensive investments in energy efficiency. This funds projects with pay-back times longer than the Green Programs, but with major prevention benefits.

I.10 Reduce Use of Paper & Paper Products by Federal Agencies

Builds on experiences gained at EPA other agencies and industry. In addition, it supports those agencies by providing electronic media "printing" of all official documents that have been printed in hard copy by GPO or NTIS (e.g., federal laws, regulations, and policies, as well as federal reports and manuals). This initiative is designed to accomplish three things: prevent pollution by reducing the Government's use of paper; reduce the Government's total cost of paper usage; and improve the Government's efficiency in the acquisition, use, management, storage and transmission of data and information. Since the Government is one of the largest buyers and users of paper and paper products, it has the potential to substantially affect the nation's paper using habits.

This initiative will include easy and/or inexpensive activities, such as: centralized paper bulletin boards; recycling, double-sided copying; agency-wide materials distribution via electronic media or via one hard copy per individual office or building floor; use of electronic forms [EDI-electronic document interchange] in lieu of standard government paper forms; routine use of voice mail; and methodical reduction in the quantity of paper copies made. It will also include complicated and/or expensive activities, such as: government-wide electronic printing and electronic mail, electronic bulletin boards, electronic training, electronic proofing and processing of memoranda, and changing regulatory reporting to electronic forms.

I.11 Develop Four-phase Metro Initiative for Washington D.C. Area

Promote transportation P2 measures for all federal agencies in Washington D.C. First component is full participation in Metro's MetroPass program that will help "level the field" by offsetting a current bias toward automobile commuting via parking subsidies. A second component is the Metro Green Station where EPA and other agencies work with Metro to suggest additional energy-efficiency measures that Metro might consider as a means of reducing operating costs, particularly utilizing PEPCO's demand-side management programs and the support of the D.C. Public Service Commission. Targets include lighting, motors for railcars, ventilating fans, escalators and elevators. The P2 benefits of the retrofits are quantified and become the basis for a third component, the "Metro as the Green Alternative" advertising campaign that publicly celebrates P2 and energy savings, introduces a broad public (including Hill policymakers) to P2 technologies and approaches, and induces additional ridership on Metro as a "green" commuting alternative. A fourth component, Innovative Technologies, might occur under a MOU with Metro. In this phase, EPA and other agencies can work with Metro as a testbed for new and emerging transportation technologies, particularly load-controllers and innovative proposals for propulsion systems for Metro buses.

Target/Action Category J:

GOVERNMENT SHOULD USE MARKET INCENTIVES, INTERNALIZING THE EXTERNALITIES, AND FISCAL POLICIES TO PROMOTE POLLUTION PREVENTION

J.3. Modify Existing Federal Financial Assistance Programs (Loans and Grants) to Promote Pollution Prevention Investments

The federal government can encourage and ultimately require public and private organizations to consider pollution

prevention in lending practices. Existing federal loan and grant fund programs (e.g., small business assistance) should be revised to fund pollution prevention investments (e.g., by designating specific funds for pollution prevention, offering a more favorable interest rate for pollution prevention, or requiring a pollution prevention analysis before approving certain loans/grants). Success is not required for funding.

J.4. Develop a Green GNP

Develop a green GNP that incorporates: the value of degrading the quality of the environment as a result of economic activity; the depletion of natural resources extracted for sale; and "defensive " expenditures to prevent or correct environmental damage. The first would introduce into the national accounts measurements associated with changes in the environment. The second and third items would involve exchange for money and are therefore already covered in the national accounts, but would be treated differently. The United Nations is currently developing a new standard for national accounts that can be used as a model for the development of a U.S. Green GNP.

J.5. Establish Minimum Global Environmental Standards for the Manufacturing of Goods.

Given the global nature of environmental problems, U.S. efforts alone to establish environmental standards for industry are not adequate if companies can simply move their operations to another country in order to avoid the costs often associated with complying with U.S. environmental standards. Companies that remain in the U.S. and manufacture their products in compliance with U.S. environmental standards can be at a competitive disadvantage if they must compete with imported products that were manufactured at a lower cost as a result of less stringent or no environmental standards in the other country. The White House should work to create minimum global environmental standards. Companies that manufacture goods in noncompliance with these global standards would be subject to an import tax that would increase the price of the goods. The level of the tax could be based on the average per product cost of environmental compliance costs experienced by industry. Could also give affirmative benefit to companies doing business in U.S. who maintain high environmental standards in operations abroad.

J.6. Promote Total Cost Accounting Principles

Most companies treat environmental costs as "overhead expenses" and thus do not fairly attribute environmental

expenditures to the process and material choices they have made. This tends to understate the value of pollution prevention. Total cost accounting, which tries to link environmental costs with the production decisions that cause these costs, is a means of correcting his problem. Under this initiative EPA would work with outside groups to standardize and disseminate total cost accounting principles. EPA work could include the development of guidelines for total cost accounting and techniques for allocating costs to particular processes or materials. EPA's Design for the Environment Program currently has an excellent project on Accounting and Capital Budgeting for Pollution Prevention that should be continued and broadened, to encourage the spread of the principles to the general accounting and business communities.

# REFERENCES

References relating to many of the Initiatives in the Report are available upon request from the Pollution Prevention Team.

# REPORT OF THE *POSITION CLASSIFICATION* TEAM

NATIONAL
PERFORMANCE
REVIEW

# POSITION CLASSIFICATION

## Executive Summary

Position Classification is at the heart of the employment process. The decisions made jointly by the selecting manager and the human resources (HR) specialist dictate the salary level of the job and the selection factors that will be used to judge the qualifications of the applicants. The current system, with its hundreds of occupational titles and arcane grade level differentiations, promotes a confrontational, rather than collaborative relationship between the HR specialist and program managers. This initiative seeks to streamline and simplify the process of writing a position description (p.d.) so that managers and HR specialists can focus on other areas such as EEO/Affirmative Action responsibilities, recruitment strategies, and staff/organizational development.

### Vision

We aim to implement a simplified, streamlined approach to position description development that fosters a collaborative relationship between HR specialists and their client managers.

### Target/Action Category

Reinvention Idea #1 - Simplify Position Descriptions

Simplify and streamline position descriptions for all agency positions.

A. Reduce position descriptions to their most simplified form while maintaining their legal sufficiency.

   1. Three basic position descriptions to cover all Agency positions -- one for professional/technical positions, one for para-professional positions, and one for supervisors and managers.

      a. generic descriptions pre-developed at each applicable grade level

      b. selecting managers can choose to tailor position descriptions with position specifics if desired (not necessary, however)

c. information will "flow" into what is needed to develop the vacancy announcement and qualifications criteria.

2. Implementation Time Line - Testing is already underway. Headquarters test sites will be chosen by August 31, 1993 with a decision on implementation due about January, 1994.

3. Barriers - The primary barrier is the willingness of the program offices to accept their share of the responsibility. Senior level support of this initiative is imperative.

4. Benefits - The primary benefit will be a more positive relationship with managers/supervisors. Another benefit is the time savings.

5. Success measurement - Success will be measured by the length of time needed to classify a position. Customer satisfaction with the overall HR program will be measured with customer focus groups.

References

Additional information can be obtained by contacting Michael Hamlin at (202) 260-3266.

## POSITION CLASSIFICATION TEAM MEMBERS

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# REPORT OF THE *QUALITY MANAGEMENT* TEAM

NATIONAL
PERFORMANCE
REVIEW

**EPA's Quality Management Team**

Team Leader: Mike Ward, Region 10

Team Members:

| | |
|---|---|
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| John Alter | OW |
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# EPA NATIONAL PERFORMANCE REVIEW
# QUALITY MANAGEMENT TEAM REPORT

## Executive Summary

### Vision

**EPA employees serve their internal and external customers and those the Agency affects with timely and responsible decisions and efficient, effective, and ethical operations.**

### Background

EPA was created in 1970 to take a holistic approach to the complex task of environmental protection. Although EPA's employees share a commitment to the goals of preserving natural systems and protecting public health and welfare, many external and internal influences have contributed to continuing divisions along media, functional, and geographic lines within the Agency.

EPA has achieved impressive environmental gains and is now the premier environmental organization in the world. However, we cannot afford to be content with the status quo. The context of environmental protection is changing. Governments, private-sector institutions, interest groups, and the general public all recognize that fundamental changes are needed in the way we work and relate to each other. We believe EPA can serve the American people better and accomplish more with its resources if we draw upon our employees, our customers and affected groups to:

- develop and articulate a clear vision of **what** EPA should be doing;
- commit to a strategy describing **how** EPA should carry out its mission, incorporating the Administrator's priorities of leadership on environmental issues; partnerships; sustainable development; pollution prevention; sound science; integrated environmental management; environmental justice; and management of human and financial resources; and
- adopt a unifying, disciplined management philosophy following these widely-accepted quality principles: inclusion of and **respect for people** as we exercise leadership; **a focus on the customer** in forming partnerships; and working smarter through fact-based **continuous improvement.**

The management approach known as "Quality Management" is based on organizations having a clear vision, a comprehensive strategy, and an integrated management philosophy well-understood throughout the organization. We believe that Quality Management is EPA's best hope for achieving its environmental mission. An open, inclusive, customer-focused Quality Management philosophy is EPA's key to sorting out its complex and conflicting priorities and making best use of scarce resources.

Much more remains to be done to achieve our vision of Quality Management. To continue implementing Quality, we recommend that the Agency focus on three major categories of action: **Leadership; Partnership** and **Working Smarter.**

Our report recommends Initiatives within each of these areas (with a brief "desired state" for each). We identify Barriers to change; a number of Suggested Actions; Measures of Success; and Costs and Benefits. Our suggestions include:

- Rotate executives within HQ and within each Region
- Conduct periodic, comprehensive Organizational Culture surveys of EPA Employees
- Promote a positive climate for risk-taking and innovation; celebrate "failures" that were learning opportunities
- Pilot self-directed Work Teams
- Build and improve on innovative outreach efforts to children, such as Partners in Education
- Create resource incentives for organizations to spend more wisely, reduce expenditures, or enhance revenues
- Experiment with "flattening" organizations, by converting some managerial and supervisory positions to non-supervisory technical experts
- Expand use of dual ladder career tracks through the SES-level to reduce the financial incentive for entering management
- AAs and RAs serve as Quality Consultants to each other
- Expand the "informal advisor" role of experts within the Office of the Inspector General and other EPA compliance monitoring organizations to help prevent problems

All of the teams' suggested actions build on the Agency's past efforts to implement Quality. They reflect the collective creativity of our team and incorporate many of the suggestions and comments which EPA employees provided to the NPR staff.

# EPA NATIONAL PERFORMANCE REVIEW
# QUALITY MANAGEMENT TEAM REPORT

## Vision

**EPA employees serve their internal and external customers and those the Agency affects with timely and responsible decisions and efficient, effective, and ethical operations.**

## Background

EPA was created in 1970 to take a holistic approach to the complex task of environmental protection. Although the great majority of people who work in EPA share a common commitment to the goals of preserving natural systems and protecting public health and welfare, many external and internal influences have contributed to continuing divisions along media, functional and geographic lines within the Agency.

EPA has achieved impressive environmental gains and is now the premier environmental organization in the world. However, we cannot afford to be content with the status quo. The context of environmental protection is changing. Governmental units, private-sector institutions, interest groups, and the general public all recognize that fundamental changes are needed in the way we work and relate to each other. We believe EPA can serve the American people better and accomplish more with its resources if we draw upon our employees, our customers and affected groups to:

- develop and articulate a clear vision of **what** EPA should be doing;

- commit to a strategy describing **how** EPA should carry out its mission, incorporating the Administrator's priorities of leadership on environmental issues; partnerships; sustainable development; pollution prevention; sound science; integrated environmental management; environmental justice; and management of human and financial resources; and

- adopt a unifying, disciplined management philosophy following these widely-accepted quality principles: inclusion of and **respect for people** as we exercise leadership; **a focus on the customer** in forming partnerships; and working smarter through fact-based **continuous improvement**.

The management approach known as "Quality Management" is based on organizations having a clear vision, a comprehensive strategy, and an integrated management philosophy well-understood throughout the organization. We believe that Quality Management is EPA's best hope for achieving its environmental mission. An open, inclusive, customer-focused Quality Management philosophy is EPA's key to sorting out its complex and conflicting priorities and making best use of scarce resources.

**Current State**

**EPA IS AT A CROSSROADS.** Now is the time for EPA's leaders to take an honest look at the values reflected in the Agency's systems, processes, and structures. Those that work as intended should be strengthened and promoted, while those that do not should be changed or eliminated. Quality Management can be used to facilitate these assessments. The Agency has already made a significant investment in Quality Management training, and many of the principles have taken root and produced genuine successes throughout EPA.

Yet much more remains to be done to achieve our vision of Quality Management. To continue to implement Quality, we recommend that the Agency focus on three major categories of action: **Leadership; Partnership** and **Working Smarter.**

Our report recommends Initiatives within each of the three major categories. We also identify Barriers to bringing about the changes desired; a number of Suggested Actions (with "whos" and "whens" indicated), Measures of Success, and our assessment of Costs and Benefits.

The Quality Management Team fully recognizes that these sets of Suggested Actions represent an extensive agenda. However, we want to provide the Administrator, the EPA Senior Leadership Council, and EPA's National Performance Review team with a broad range of potential improvements. Some of the ideas build on past and current efforts to implement Quality Management, while others are pilot-test actions. They reflect the collective creativity of our team, and they also incorporate many of the suggestions which EPA employees provided to EPA's National Performance Review (NPR) staff. We look forward to the recommendations of the other NPR teams for their perspectives on quality management.

## LEADERSHIP

World-class quality organizations don't just happen--they are created by effective leaders. These individuals communicate well, take planned risks willingly, and work with and through others to achieve the organization's mission. True leaders are visionaries. And they share their vision of what can be, model their values and create working environments that encourage and enable their followers to do their best.

Leaders recognize that when they empower others, they themselves become more effective. Because EPA is at a crossroads, we need effective leaders to keep the organization on course to achieve our important mission. Leadership is "steering not rowing."

### Initiative 1. Reinforce Quality

**EPA's leaders reinforce quality principles--inclusion of and respect for people and a focus on our customers--as the way we do business in our efforts to reinvent government.**

Barriers

- Senior managers fear loss of control
- Managers can "stone-wall"
- "Fad" mentality
- Payoff too far down the road

Suggested Actions

| What | Who | When |
|---|---|---|
| Rotate Executives Extensively within HQ and Within Each Region | A/SLC | 4/94 |
| Develop/use External Customer Surveys | OA/HQ/Reg | 11/93 |
| Conduct Periodic, Comprehensive Organizational Culture Surveys of all Employees (as done in NASA and other departments) | OA/OARM | FY 94 |
| Conduct Employee Evaluation of Supervisors | AAs/RAs Vols | FY 94 |

| | | |
|---|---|---|
| Require SLC Members to Teach Quality and Ensure Implementation of Quality | SLC | 10/93 |
| Promote EPA-Customer Executive Interchanges (Targeted IPAs, Swaps, Rotations) | HQ/Reg Vols | 10/93 |
| Use Federal Quality Institute Criteria to Assess EPA's Progress in Quality, Beginning with Leadership Criteria | SLC | 1/94 |
| Hold "Executive Brownbag" Lunches with Employees | SLC | 10/93 |
| Arrange Onsite/Offsite Visits with Quality Organizations | A/RAs | 4/94 |

Costs: External survey would cost approximately $150k; $100k for the Organizational Culture Survey. Employee Evaluation of Supervisors would cost roughly $7-10k for a pilot of 100 employees. Travel, related costs for IPAs; morale implications involved in rotating SESers.

Benefits: Continuation of quality management progress and solid top management commitment will put EPA on the track toward becoming a world-class quality Agency. Interchanges will expose executives to external customer perspectives. SES rotations will induce change by forcing "new kids on the block" to focus on customer needs in their new assignments. This will also encourage a broader perspective and thinking "outside the box."

Measures: Suggest established Government or private-sector quality measures (President's Quality Criteria or Malcolm Baldrige Award criteria). Internal/external surveys and employee evaluations of supervisors will establish baselines and measure progress over time.

## Initiative 2. Demonstrate Quality Management

**Management at all levels articulates a vision and direction and demonstrates, expects, and rewards Quality behaviors.**

Barriers

- Low trust level
- Lack of managerial skills
- Managers feel that they have to know all and do all
- Rewards are based on individual achievements, rather than team successes
- Not marketing genuine mission-related successes

Suggested Actions

| What | Who | When |
|---|---|---|
| Revitalize, Streamline, Monitor Employee Suggestion Process -- Address Backlog | OHRM/Reg HROs | 6/94 |
| Pilot-test the Use of a Customer Needs Checklist for Regulations or Policies to Record Input, Incorporation by EPA | OPPE/2AAs/2RAs | 6/94 |
| SES Award Winners ($10k, $20k) Showcase Quality Principles and How They Use Them | SES Awardees | FY 94 |
| Expand Use of Employee Shadow Assignments | Employee/Exec Volunteers | 10/93 |
| Monitor Managerial Individual Development Plans (IDPs), Fund/Enforce 40-hour Requirement for Management Skills Training | OARM/Mgrs. | 4/94 |

Costs: No additional training costs, since this should be part of existing requirement for 40 hours of training for Managers and Supervisors. The employee suggestion program and awards could be conducted within existing resource levels.

Benefits: Employees, customers, affected groups, potential partners will believe EPA is serious when managers at all levels practice quality techniques and model behaviors.

Measures: Regular, random spotchecks -- stop employees and ask about quality principles and Agency priorities. Observe meetings at any level for use of quality management approaches. Monitor IDPs, training records. Spot-check performance agreements for managers and supervisors to make sure quality is expected and evaluated.

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## PARTNERSHIP

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EPA alone cannot protect the environment. We need to share this complex mission with our Federal, State, and local counter-parts. As in any partnership, EPA and its partner(s) need to determine what is required to achieve our common goals and how each partner can contribute to the effort. Successful partnerships depend on open, honest communication, trust, and respect.

### Initiative 1. Make Decentralization Work

**EPA implements delegated authority in its daily operations so that, to the extent possible, responsibility for making improvements is exercised by those who actually do the work and/or deal directly with customers and affected groups. Externally, this means working with States, Tribes, other Federal Agencies, local governments, affected interest groups, and private industry. EPA Regional and Program Offices provide guidance, operate consistently with delegations of authority and responsibility, and "let go."**

Barriers

- EPA's interest in maintaining power and authority
- Congressional oversight and reporting requirements
- Concern about State and Local capacity/capabilities

Suggested Actions

| What | Who | When |
|---|---|---|
| Pilot a Direct EPA Region/State Relationship with Minimal HQ Involvement | EPA Reg/State | FY 94 |
| Pilot-test a Direct EPA HQ/State Relationship | EPA HQ/State | FY 94 |
| Expand Collaborative Planning with Customers -- Pattern after State/EPA Agreement Process | AAs/RAs | FY 94 |

Costs: Conduct these activities within existing resource levels.

Benefits: Reduces role/responsibility confusion, duplication of effort, waste, resentments. Timely decisions and actions benefit ultimate customers.

Measures: Survey of external customers demonstrates successes.

## Initiative 2. Empower Employees

**Managers invest in giving employees the skills and tools to do their best, encourage them to be innovative and take planned risks without fear, and let the employees do the work. Respect and trust levels rise. Employees have ownership and take pride in the Agency's work.**

Barriers

- Ineffective people skills
- Poor internal communications
- Hierarchical structure, systems
- Incomplete understanding of "empowerment"

Suggested Actions

| What | Who | When |
|---|---|---|
| Promote Positive Climate for Risk-Taking and Innovation -- Celebrate Learning | Agency Vols | 4/94 |
| Conduct Agency-wide Work Life Survey | OA/QAG/QCs | 1/94 |
| Create "AA/RA-For-A-Day" Opportunities for Staff (Swap Jobs) | 2AAs/2RAs | 10/93 |
| Pilot Self-Directed Work Team Concept at Section or Branch Level | 2Reg/2HQ Vols | FY 94 |
| Pilot "Match-Time" for Wellness Activities (Employee and EPA Match 2-3 Hours) | OW/Reg 4 | FY 94 |
| Provide Targeted Training in "Success Skills" (e.g., Customer Service; Facilitation; Conflict Resolution; Negotiation; Teamwork; Communications; Coaching and Counseling) | OARM/Regions | 1/94 |

Costs: See above for survey costs. Training from current resources. Administrative leave for wellness activities.

Benefits: Improved morale. Faster response to customer needs, higher quality products with less rework, cost-savings. Supports managers' focus on leadership, planning, etc. Supervisors able to do coaching, counseling, planning, career assistance. Job swaps can be "breakthrough" experiences for staff, executives.

Measures: Agency-wide employee survey provides baseline and progress measurement. Monitor Employee Counseling and Assistance Program, grievances/complaints, exit interviews, employee suggestions. Use of short-term sick leave declines.

## Initiative 3. Involve Others

**EPA seeks input early and often from those who use its products and services or are affected by its decisions. The Agency consistently meets or exceeds their needs. EPA includes a broad range of customers, partners, and affected groups in the processes of making decisions, in the development of policies that affect them, and in determining how the Agency does its work.**

Barriers

- EPA managers' resistance to involvement
- Perceived lack of time, resources
- Inability to use the feedback we get
- Perception that deadlines preclude involvement
- Restrictions (OMB) on surveying customers

Suggested Actions

| What | Who | When |
|---|---|---|
| Follow up on Daily Customer Interactions for Satisfaction | 3Reg/3HQ Vols | 1/94 |
| Conduct Face-to-Face Customer Contacts (Focus Groups; Interviews) | OA/AAs/RAs/QCs | FY 94 |
| ID Customer(s) for Major Internal and External Processes | OA/OARM/OPPE Regions | FY 94 |
| Build on Innovative/Successful Outreach to Children (e.g., Partners in Education; OW's National WETWAY Sessions; Videos and Posters | AAs/RAs | 9/93 |
| Pilot Use of Customer Input in Accountability/Performance Management Systems | AA/RA Vols | FY 95 |
| Minimize/Automate Reporting Requirements | EPA/States | FY 94 |

Costs: EPA management and staff time, travel for pilot tests. Costs of developing and producing outreach materials.

Benefits: Make sure we do the **right things.** Improves EPA credibility, customer support for decisions, program actions. Improves cooperation, responsiveness, and working relationships.

Measures: Interactions will yield on-the-spot feedback from customers. Monitoring response times of organizations will indicate changes and trends.

## WORKING SMARTER

The days of plentiful fiscal and human resources are gone. However, we find ourselves dealing with a greater number of more complex challenges. We want to respond more quickly to internal and external customer needs and involve others in productive partnerships. We must ask ourselves, "Is there a better way to do business?" "Can we improve our processes and systems?" "Is there a way to 'speed up' or eliminate the bureaucracy?"

The answers to these questions are found in working smarter, not harder. We need to enable our employees, our customers, and our partners to become more self-sustaining. We need to find innovative approaches to solving our problems and doing our work, we need to be more creative in the use of our resources. By applying quality principles and tools to our daily work practices, we can serve our customers better and regain the public trust.

Initiative 1. Set, and Work Toward, Environmental Goals

**EPA sets broad, realistic environmental goals with input from its customers, partners and the public. State/Local governments and the private sector determine <u>how</u> to achieve environmental goals.**

<u>Barriers</u>

- Technical staff unwilling to give up "doer" role for roles of leadership, oversight, advisory, outreach and assistance
- Existing congressional mandates
- Insufficient infrastructure in place to manage by data/facts

Suggested Actions

| What | Who | When |
|---|---|---|
| Expand Use throughout the Agency of Integrated Environmental Approaches like OW's Watershed/Attainment Approach, Region 10's Coeur d'Alene Initiative, Geographic Initiatives, and Targeted Enforcement | SLC | FY 94 |
| Complete Environmental Goals Project and Monitor Results | Task Force | FY 94 |
| Pilot-test Creation of Executive-level "Sustainability" Outreach Person to Work with Customers and Affected Groups | Reg 10/3 Reg Volunteers | 12/93 |
| Strengthen Outreach to Congress, State Legislatures to Get useful Input | SLC | FY 94 |
| Pilot "Environmental Results Report Card" Tracking of our Organizational Performance Using Customer Input and Environmental Indicators | OPPE/OARM | FY 95 |
| Negotiate State/EPA Agreement Applying Quality Principles | 3 Reg. Vols | FY 95 |
| Evaluate "No Net Gain" Approach to Reporting -- Every New Report Offset by the Elimination of an Existing one | OPPE/SLC | FY 95 |

Costs: EPA Management and staff time, travel costs.

Benefits: Clarifies roles and responsibilities. Reduces misunderstanding and resentment among levels of government, duplication and overlap of work, permits redirection of resources to more effective activities (subject to statutory limitations), enhances innovation.

Measures: Publication of goals by EPA, adoption of goals by States and local governments. Acceptance and use of goals by citizens, news media, etc., as legitimate and understandable. Quality, usefulness, frequency of recommendations from diverse groups on EPA performance.

Initiative 2. Integrate Management Systems

**Management and administrative systems and processes (planning, budgeting, human resources, accountability, grants and contracts management, etc.) link together to achieve EPA's strategic objectives using Quality Management.**

Barriers

- Crisis mode rather than effective long-range planning
- "Use-or-lose" budget practices
- Turfism
- Narrow-focus thinkers
- Accountability systems measure the wrong things
- Budget appropriation structure and process (statutory)

Suggested Actions

| What | Who | When |
|---|---|---|
| Create Resource Incentives for Organizations to Spend More Wisely, Reduce Expenditures, or Enhance Revenues | OARM/CFO | FY 95 |
| Work with Other Agencies to Identify Opportunities to Improve Ineffective Government-wide systems and to Find and Market Best Practices | SLC/OARM | 9/93 |
| Promote Rotational Assignments to and from Other Agencies, Especially in Administrative and Management Areas | OHRM/HQ, Reg Vols | 11/93 |

Costs: Dollar cost is minimal, involving primarily travel costs for rotational assignments.

Benefits: Clear, consistent set of priorities supported by fiscal and human resources to get the job done. Appropriate balance of intramural and extramural resources, with the right people with the right skills in the right jobs at the right time.

Measures: Compare budget with strategic plan(s) to determine degree of alignment. As a result of benchmarking activity, EPA systems are acknowledged to be among the best in government. Follow up on interagency rotations.

## Initiative 3. Design for Quality

**Quality-focused organizational structures, processes and systems promote and support the goals of leadership, partnership, and working smarter. EPA's decisions, responses and actions are timely and effective. We select, evaluate, promote and reward our managers based on managerial effectiveness, and provide alternative non-managerial career paths for high-performing scientific, technical and administrative staff.**

Barriers

- Human Resources Systems, policies, procedures (many statutory) are not customer-friendly
- Limited non-managerial career tracks
- Fear of losing job status, position

Suggested Actions

| What | Who | When |
|---|---|---|
| Experiment with "Flattening" Organizations by Converting Managerial and Supervisory Positions to Technical Experts | 2 Reg/2 HQ | FY 94 |
| Expand Use of Dual Ladder Career Tracks through the SES-level to Reduce the Financial Incentive for Employees to Want to Enter Management Ranks | ORD/Reg 10 | 1/94 |
| Revisit OPM, EPA Span-of-Control policies, guidance (3 staff = supervisory grade, 5 staff+ supervisor = Section Status) | OHRM/M&O | 11/93 |

Suggested Actions

| What | Who | When |
|---|---|---|
| Create Customer-Focused Organizational Structures (e.g., One-Stop Shopping Customer Service Centers) | OARM/OHRM/ Reg HROs | FY 94 |

Costs: Negligible -- can be done in-house.

Benefits: Fewer bottlenecks, sign-offs, delays; quicker response to customer needs. Greater creativity and innovation improves communication. Selection of managers and supervisors who want to manage and supervise and have people skills and other requisite capabilities. Enables technical or legal "superstars" to remain happy, motivated and productive in their chosen professions.

Measures: Detailed evaluations of pilot projects. Comparison of baseline Employee Evaluation of Supervisors data with results in subsequent years.

Initiative 4. Mainstream Quality Practices

**The Agency adopts Quality concepts, practices, and techniques in its daily operations.**

Barriers

- Lack of confidence in process
- Fear of Change
- Existing systems don't support Quality (Evaluation, Rewards)
- Lack of skills
- Fear of giving up managerial power

Suggested Actions

| What | Who | When |
|---|---|---|
| AAs/RAs Serve as Quality (or Customer Service) Consultants to Each Other | SLC Vols/QCs | 4/94 |
| Communicate Quality Success Stories and Market Applicability to Other Processes | QCs | 12/93 |

Suggested Actions

| What | Who | When |
|---|---|---|
| Pilot-test Jargon-free, EPA-Relevant, "Just-in-Time" Refresher Quality Training | OARM/QCs | 10/93 |
| Market Concept of "Desktop Quality"-- Each Employee Applies Principles to own Work | QCs | FY 94 |

Costs: Staff time; training costs would be minimized by using existing facilitators.

Benefits: Decision making, meetings and communications would yield desired results. See Benefits of "Leadership" initiatives.

Measures: Ask employees at random about quality principles. Observe meetings at any level for use of quality management approaches. Spot-check performance agreements for managers and supervisors to make sure quality is expected and evaluated. Internal/external surveys and evaluations of supervisors will establish baselines and measure progress over time.

Initiative 5: Redirect Key Functions

**EPA redirects functions to move toward error prevention and away from error detection work such as inspections and audits. Major EPA activities can be evaluated; we operate with disciplined goal-setting, automated monitoring and reporting, and timely feedback on goals achieved.**

Barriers

- Inspection and compliance ("Gotcha!") mentality
- No model demonstrating the desired state
- Inspector General legislation prescribes roles
- Congressional support for inspection activities

Suggested Actions

| What | Who | When |
|---|---|---|
| Create Cradle-to-Grave Measurement Team for EPA Programs and Processes, Incorporating Front-end Groups (OPPE, OARM), Monitoring Groups, and Audit/Inspection Groups (OIG, other OARM, Enforcement Units) | A/OARM/M&O | FY 95 |
| Expand the "Informal Advisor" Role of Experts within the Office of the Inspector General and Other EPA Compliance Monitoring Organizations (Focus on Prevention) | A/DA/OARM | FY 94 |
| Evaluate EPA and Contractor Resources Now Devoted to Audit and Inspection Functions -- Reality Check on Front-End Quality | OARM/CFO | 10/93 |
| Benchmark Major Accounting Firms to Assess Shift to Front-end Consulting, TQM. | CFO/QCs | 11/93 |
| Revisit FOIA, Congressional Correspondence Requirements | AX/AL | 1/94 |

Costs: Redirection of in-house resources. Benchmarking may involve travel costs, staff time, or contract dollars.

Benefits: Mobilizes highly skilled and educated staff to improve quality up front. Reduces rework, resource waste, repeated problems, and undetected errors. Improves morale of staff and those receiving services. Changes from product- to process focus, which has a higher quality improvement pay-off.

Measures: Morale measurements from internal survey would indicate baseline and future trends. Cost/benefit standards established. Proper customer service standards developed.

**Concluding Remarks**

Implementing Quality is about change--fundamental change. It requires a willingness to challenge the status quo and to question the conventional mindset. Change is about creating new forms, about implementing a new paradigm.

EPA **is** at the crossroads. As an Agency, we are experiencing the growing pains of maturation. This normal, if uncomfortable, process is made more difficult for us because Congress and the public are watching us so closely. The Quality Management Team chooses to view this situation as an opportunity--an opportunity in which we can make a difference. And, we will make a difference if we seek fundamental changes in the way in which our

- organization is structured and lead,
- employees and partners are considered and involved, and
- work is planned and designed around customers and processes.

We must seize the opportunity now! If we act with vigor and vision and apply Quality practices in making those fundamental changes, we can lead the Nation (and the world) in new approaches that will both protect and sustain the environment. If we act timidly and depend on old ways of doing business, we will look back and wonder "What if...?" Our challenge as public servants calls for us to venture forward using new, creative ways and to choose the path of vigor and vision. We must ask "Why not?"

By integrating Quality into the way we work, we can make a difference in achieving better environmental protection and improving our worklife. We believe that the recommendations offered in this report will help EPA create the fundamental changes necessary to achieve our environmental mission.

# REPORT OF THE *QUALITY SCIENCE* TEAM

NATIONAL
PERFORMANCE
REVIEW

# Quality Science Team Members

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# REPORT OF THE QUALITY-SCIENCE TEAM
## EXECUTIVE SUMMARY

Rule-making and other policy decisions at USEPA almost invariably rely on science, with the nature and extent of that reliance varying considerably from one instance to another. But one factor is invariant: quality must be a first-order concern in deciding what scientific information is relevant, how it is presented, and how it is used. Quality science is a condition precedent for quality decisions.

The quality-science team embraces a unifying vision:

**... that USEPA be recognized throughout the world as a science agency, as well as a regulatory agency, by virtue of**

**1) decisions consistently based on high-quality science;**

**2) leadership in all major areas of environmental science;**[1]

**and 3) effective communication and coordination of environmental-scientific issues and policies.**

The team recommends initiatives in the following four areas:

**A. ACHIEVEMENT OF QUALITY SCIENCE IN USEPA**

1. Quality-Science as a Continuing Policy Objective
2. Procedures that Promote Scientific Excellence
3. Science Advice within Program and Regional Offices
4. Science/Congressional-Liaison Team

**B. THE SCIENCE/POLICY INTERFACE**

1. Preparation of Policy-Makers for the Science/Policy Interface
2. Preparation of Scientists for the Science/Policy Interface
3. CASE BOOK on the Science/Policy Interface
4. Management of Differential Risks among Population Subgroups

**C. NURTURING QUALITY SCIENTISTS**

1. Job Enhancement and Resource Support for Scientists
2. Career Ladders and Promotion/Incentive/Reward Systems
3. Employee-Empowered Scientific Recognition Committee
4. Training For Scientists
5. Recruitment of Scientists

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[1] The words in this text are intended to be inclusive, not exclusive. "Environmental science" is used from a holistic perspective, encompassing both ecological science and human health science. "Science" (and "scientists") is used to represent not only the traditional natural sciences, but engineering (and engineers), the mathematical sciences, and the many other sciences (e.g., economics, social sciences) that may become more and more important over the next decade.

**D. COMMUNICATION AND COORDINATION**

1. Prioritization of Intra-Agency Communication and Coordination
2. Exchange of Scientists (internally & externally) For Purposes of Exchanging Science
3. Communication and Coordination with Other Federal Agencies, State and Local Agencies, and International Organizations
4. Communication and Coordination with Academia and Industry
5. Communication and Coordination with Congress, OMB, News Media, and the General Public

## I. VISION

**... that USEPA be recognized throughout the world as a science agency, as well as a regulatory agency, by virtue of**

**1) decisions consistently based on high-quality science;**

**2) leadership in all major areas of environmental science;[2] and**

**3) effective communication and coordination of environmental-scientific issues and policies.**

## II. BACKGROUND/CURRENT STATE

Rule-making and other policy decisions at USEPA almost invariably rely on science, with the nature and extent of that reliance varying considerably from one instance to another. But one factor is invariant: quality must be a first-order concern in deciding what scientific information is relevant, how it is presented, and how it is used. Quality science is a condition precedent for quality decisions.

USEPA's science activities range from fundamental, basic research to highly applied, problem-solving efforts. Basic research may be driven by critical, media-specific environmental problems; or it may create the foundation for unprecedented, multimedia approaches to the nation's most critical environmental challenges. While applied research may be used to fulfill immediate needs, it may also contribute to attaining long-term strategic goals.

Scientific activities at USEPA are performed both by its research laboratories and by its program and policy offices[3]. These activities directly impact the national and international environmental-science community. For example, USEPA's analytical methods, predictive models, and risk-assessment guidelines are used as standards by other agencies, both nationally and abroad.

USEPA is on the cutting edge of many areas of environmental science, and contributions of its scientists and other technical personnel are respected world-wide. However, the role of quality science in USEPA policies, decisions, and actions is often questioned. USEPA's major agenda is unquestionably that of a regulatory agency charged with promulgation and enforcement of air-, water- and land-quality

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[3] References to "program and policy offices" in this document are intended to address both Headquarters and Regional operations.

statutes. Science often is -- or seems to be -- a secondary priority. In fact, USEPA decisions all too frequently are perceived by OMB, Congress, other Federal agencies, industry, or the public as not grounded in sound science. To the extent that the Agency does not support and use quality science, this perception will be repeatedly reinforced.

USEPA's ability to conduct an effective and coherent quality-science program is impacted by numerous congressional mandates and highly compartmentalized appropriations. Program offices within USEPA are divided by media-specific statutes that sometimes erect seemingly insurmountable barriers to cross-media initiatives. Moreover, about 75% of the budget is directed toward problems of high visibility and relatively low risk rather than to environmental concerns considered by the scientific community to present significantly greater risks to human health and the environment (Problem Area Analysis of the FY94 Budget, OPPE, June, 1993).

Another manifestation of this balkanized governance is that the Agency's research and development is not driven by a holistic, long-term, strategic plan. Instead, program offices, dependent upon the Office of Research and Development (ORD) for support of regulatory actions, have seen critical research cut back substantially or eliminated outright, as ORD is forced to respond to new policy mandates without a commensurate increase in funds and staff. Neither ORD laboratories nor the program offices historically have had sufficient resources to address all high-priority short-term needs and a substantial long-term research agenda simultaneously.

Contributing to the perception that USEPA's decision-making is not always rooted in sound science is the Agency's severely limited ability to support and nurture its scientific staff. There are numerous inconsistencies throughout the Agency regarding job functions, training and development, opportunities for advancement, and recognition for scientists. In the face of attrition and loss of institutional memory in specific subject-matter areas, the Agency has fallen behind with respect to training and career development programs for its technical staff. Further, reductions in science and engineering career positions not only have bred undue dependence on contractors to meet scientific and technical needs but also have encumbered USEPA scientists increasingly with contracting duties -- thereby shifting their focus and their talents away from science toward administration.

Ineffective communication between USEPA policy-makers and scientific staff also tarnishes USEPA's reputation with respect to science. Evaluating and communicating the sources of uncertainty in predictive exposure and risk assessment are not deeply ingrained practices across the Agency. Scientists do not always fashion their recommendations and/or risk assessments so that all major assumptions and findings are made explicit. Likewise, many managers do not frame their questions to enable scientists to address the issues in the best way. Neither risk assessors nor risk managers

consistently convey their findings, decisions, and the associated uncertainties using the language and communication tools most appropriate for the target audience. USEPA cannot be said to be fulfilling its mission if it cannot adequately convey levels of risk to the public.

Communication and coordination among USEPA's science programs -- both internally and externally -- are beset by problems as well. Inadequate coordination among programs and the laboratories has led to science being practiced in isolation, and perhaps, redundantly. There is no comprehensive, cross-referenced data base that identifies in-house expertise and on-going activities for access by Agency scientists. Scientists working on similar or closely related issues or projects find difficulty in establishing peer review and support elsewhere within USEPA because there is no accessible Agency-wide listing of scientific personnel, training, and expertise. The same applies to USEPA publications, scientific findings, and decisions.

Communication and coordination of efforts with scientists in other Federal and State agencies and international organizations also are inconsistent. USEPA research efforts often have no apparent impact on the research agendas of other agencies, nor is there a well-established mechanism for USEPA staff to access the results of their counterparts at other agencies. While there are examples of successful collaborative efforts between USEPA and industry, (such as pollution prevention and product stewardship,) interactions with academia and industry should be considerably strengthened.

Inflexibilities in the contracting mechanism, relative to contract types, inhibit the Agency's ability to adequately address specific, research needs. Currently, the governing process for all contracts, whether scientific or non-scientific, is the same. Laboratory scientific and technical staff are required to purchase equipment utilizing the same procurement criteria as staff with completely differing needs. Due to the vastly differing nature of laboratory scientific needs from other types of procurement needs, utilizing universal procurement criteria for both of these areas greatly stifles the timely actions and operations of laboratory scientific and technical staff.

Against this sobering backdrop of needs, opportunities and problems, USEPA must take deliberate steps if it is to achieve its vision of being recognized as a science agency. The remainder of this document presents an overall strategy and some specific proposals toward that end.

**III. DESIRED STATE/GOALS**

Not only can science support the over-arching environmental-protection strategies of today; it also can define the strategies of tomorrow. Thus, changes in the way USEPA staff do science should include, but not be limited to, a greater emphasis on the following strategic themes: risk-based priority setting; pollution prevention, ecosystem approaches, and product stewardship; and

environmental education and equity for all population groups. Underlying it all should be a strong, sustained program of basic and applied research in all major domains of environmental science.

- Cross-media issues

Today, environmental issues are more complex than ever before; and environmental protection strategies must cut across all environmental media and all routes of exposure. Rarely is it sufficient to deal with environmental media individually. Rather, the quality of science across all program offices that exercise statutory authority over specific media should reflect a consistent, holistic approach to protecting and enhancing both ecosystems and human health and, at the same time, should ensure adequate environmental resources to meet future needs.

- Quality data and application

To ensure that science within USEPA is of the highest quality, USEPA must improve the quality of data and promote its appropriate application in decision-making processes. This can be accomplished by improving the methodologies used to acquire data; ensuring that models properly reflect the latest scientific information, data, and concepts -- including uncertainty analysis; applying models responsibly and consistently; and incorporating current scientific knowledge into risk-based decision-making.

- Communication and Coordination

Effective communication and coordination among USEPA scientists, between scientists and policy-makers, and between the Agency and the rest of society are essential to achieve high-quality science. USEPA must improve across the board in this area. Interactions between risk managers and risk assessors warrant special emphasis, as do USEPA interactions with other federal agencies, state and local agencies, OMB, Congress, academe, industry and international organizations. Above all, the Agency must improve its communication to the general public.

- Recognition and Resources

Public recognition, including that of the Congress, is essential for USEPA to achieve the above vision. USEPA requires not only effective environmental legislation but also resources sufficient to identify risk-based priorities and to implement appropriate environment protection and research strategies. USEPA's resources must also include a well-trained, well-equipped, and highly-motivated scientific and technical work force.

- Planning

Strategic planning and appropriate resource allocation are necessary to ensure: 1) the success of both short-term and long-term projects and 2) adequate environmental protection for the future. Ultimately, USEPA can do the right science and do the science right

only when the policies, methods, and infrastructure, as well as the public, actively support the undertaking.

**IV. TARGET/ACTION**

To achieve its vision that quality science undergird all environmental decisions and to strongly support its leadership role in all areas of environmental science, USEPA must identify those elements forming the basis of credible science and make a commitment to implement specifically targeted initiatives to achieve the vision. Broadly interpreted, a quality science agenda addresses the following:

- Clearly identifies and prioritizes the most important scientific questions to be addressed;
- Identifies and uses the most appropriate and powerful experimental and analytical designs;
- Employs state-of-the-art experimental techniques;
- Makes accurate measurements to generate reliable data;
- Evaluates and interprets the results appropriately to obtain accurate answers to the questions;
- Uses the results in mathematical models to apply science knowledge efficiently and coherently;
- Subjects the methods, results, interpretations, and models to field validation and independent review processes; and
- Provides an infrastructure that recruits, retains and rewards high quality scientific personnel and an on-going core capability.

V. TARGET/ACTION CATEGORIES

Development and implementation of an Agency-wide quality science agenda can be accomplished through the target/action areas and associated do-ables/initiatives that are summarized in this section. Details on each of the do-ables/initiatives are presented in the next section.

**A. ACHIEVEMENT OF QUALITY SCIENCE IN USEPA**

TARGET/ACTION STATEMENT: Over the last few years, several expert panels have conducted thorough reviews of science at USEPA (e.g., Safeguarding the Future: Credible Science, Credible Decisions, Reducing Risk: Setting Priorities and Strategies for Environmental Protection. and Future Risk: Research Strategies for the 1990s.) These panels have identified what needs to be done to improve both the quality and the relevance of science at USEPA. Now, USEPA's leadership needs to implement the recommendations.

Several recommendations have consistently emerged from the expert panel reviews: (1) To deal effectively with today's complex environmental problems, the Agency needs to develop a coherent science agenda that moves toward cross-media, anticipatory research; (2) the Agency should take steps to ensure that quality science enters the decision-making process early and consistently for effective environmental protection programs; and (3) Agency leadership must undertake a deliberate and continuing effort to create the climate, culture, and incentives necessary to encourage superior science.

SPECIFIC DO-ABLES:

1. Quality-Science as a Continuing Policy Objective

2. Procedures that Promote Scientific Excellence

3. Science Advice within Program and Regional Offices

4. Science/Congressional-Liaison Team

B. THE SCIENCE/POLICY INTERFACE

TARGET/ACTION STATEMENT: Efficacious use of science in support of policy decisions is the responsibility of both policy-makers and scientists. The credibility of USEPA decisions, the efficient use of USEPA resources, and the cost-effectiveness of USEPA regulations are all critically dependent on the maintenance of a clear distinction and a proper balance between science and policy. The place where scientific analysis ends and policy choices begin is not always easy to determine. In the context of a regulatory agency with many pressing responsibilities, the tendency to blur the line between science and policy is difficult to resist for scientists and policy makers alike.

The key to crafting and maintaining an appropriate relationship between scientific inquiry and policy making is the nature of the interaction between policy makers (or "risk managers") and scientists (or "risk assessors"). The timing, frequency, and nature of such communications are all important. Scientific analyses that are informative and policy decisions that are informed can best be achieved through implementation of specific practices and procedures governing communication across the science/policy interface.

SPECIFIC DO-ABLES

1. Preparation of Policy-Makers for the Science/Policy Interface

2. Preparation of Scientists for the Science/Policy Interface

3. CASE BOOK on the Science/Policy Interface

4. Management of Differential Risks among Population Subgroups

**C. NURTURING QUALITY SCIENTISTS**

TARGET/ACTION STATEMENT: As USEPA works to advance the high-quality performance of science and technology in its organization, it must develop, increase and support the skills and talents of its scientific workforce.

SPECIFIC DO-ABLES

1. Job Enhancement and Resource Support for Scientists
2. Career Ladders and Promotion/Incentive/Reward Systems
3. Employee-Empowered Scientific Recognition Committee
4. Training For Scientists
5. Recruitment of Scientists

**D. COMMUNICATION AND COORDINATION**

TARGET/ACTION STATEMENT: USEPA has the responsibility to communicate its environmental scientific findings to properly reflect the high-quality scientific basis for decisionmaking. Communication of findings and decisions must take into account the specific audience for whom the information is intended and include the appropriate language and tools to attain the most effective results. The Agency must coordinate its activities to avoid replication of tasks and attain coherent products (regulations, guidelines, regulatory decisions, research findings). Risk managers and scientists must establish good communication to ensure that regulatory decisions are based on high-quality science.

SPECIFIC DO-ABLES

1. Prioritization of Intra-Agency Communication and Coordination
2. Exchange of Scientists (internally & externally) For Purposes of Exchanging Science
3. Communication and Coordination with Other Federal Agencies, State and Local Agencies, and International Organizations
4. Communication and Coordination with Academia and Industry
5. Communication and Coordination with Congress, OMB, News Media, and the General Public

**VI. DO-ABLES/INITIATIVES**

A. Achievement of Quality Science in USEPA

**A.1 Quality-Science as a Continuing Policy Objective**

**WHAT:** Make a public commitment to use and support high-quality science in all of the Agency's deliberations and actions.

This would consist of several actions:

(1) The Administrator would publicly adopt the vision statement of the Quality Science Team and commit the Agency to accomplishing the vision statement.

(2) The Administrator would establish a process by which to implement the changes needed to ensure that USEPA is a science agency with high-quality science underpinning all of its actions.

**WHO:** The Administrator must publicly affirm the vision for quality science at USEPA. She must also establish and empower the Agency-wide Committee for Quality Science, and task it with overseeing the Agency's "deliberate and continuing effort to create the climate, culture, and incentives necessary to encourage superior science."

**TIME LINE:** One legacy of the National Performance Review should be the establishment and empowering of an Agency-wide team, a Committee for Quality Science, to develop and implement policies and procedures to enhance Quality Science at USEPA. This Committee for Quality Science should be part of USEPA's effort to "reinvent" the Agency. The Committee will be "continuing", providing suggestions for changes and assessing progress made in improving quality science. The Committee should incorporate and build upon efforts already underway, including the Council of Science Advisors, the Sci/Tech Committee, and the Quality Science Team itself.

**BARRIERS:** There is skepticism that USEPA, with its regulatory role, can also be a "science" Agency. Overcoming this skepticism within USEPA itself, in the Administration, and in Congress will be a major challenge. Adoption of the vision statement by the Administrator will not be adequate to bring about needed changes: the same vision must also be shared by the AAs and other upper- and mid-level managers. Demoralizing rumors of lab consolidation should be replaced by better administration of decentralized science. Finally, the vision must bring about changes in attitudes and actions.

**COSTS:** There are no additional costs to be incurred by having the Administrator affirm the vision statement and establish a Committee for Quality Science to advise her. Undoubtedly, some actions recommended by the Committee to improve the "climate, culture, and incentives" will have investment costs: quality science does cost, both in terms of funds and personnel. Nonetheless, there are a number of specific recommendations can be accomplished with no additional costs.

**BENEFITS:** The benefits to supporting the quality science vision are significant. Quality science used to support Agency decision-making will increase Agency credibility with the scientific community, the public, impacted industries, and Congress. Improved credibility of

USEPA as a science organization with Congress and OMB will likely lead to increased resources and greater flexibility. The recognition resulting from increased public confidence will improve work force morale, which will, in turn, provide further improvements in the Agency's rules and decisions. Only when high-quality science undergirds the Agency's deliberations can more effective and less costly solutions be identified. Better solutions to environmental problems will provide significant savings to the affected industries and will improve the national economy while still protecting our health and ecology.

**MEASURES OF SUCCESS:** This initiative will be successful only if the vision is put into action. The ultimate goal is to improve the quality of the Agency's science -- not quantity -- and quality is much more difficult to measure. Actions recommended by the Committee for Quality Science should each contain their own measures of success. The success of the overall effort to improve the quality of science can be estimated through periodic surveys of public (including scientific community, affected industries, and Congress) perceptions and confidence in the Agency's decisions.

### A.2 Procedures that Promote Scientific Excellence

**WHAT:** Reaffirm USEPA's commitment to basic scientific research, peer review, quality assurance, Good Laboratory Practices, and other policies that are designed to promote excellence in science.

Sustained excellence in science does not come about spontaneously. Quality science must be promoted regularly across the Agency through the application and continuing refinement of procedures created especially for this purpose.

**WHO:** Administrator, Assistant Administrators, Regional Administrators, Council of Science Advisors

**TIME LINE:** continuing; evaluate progress after 5 years

**BARRIERS:** Although the vast majority of USEPA managers and their staffs advocate quality science in principle, considerable disagreement remains as to how that goal can best be achieved. Many regulatory officials are concerned that, in some instances, expanded use of peer review and the other quality-promoting procedures will constrain operations unduly or require unnecessary expenditures of time and money. Further, even in instances when managers are eager to invoke these procedures, budgets and staffing constraints often preclude it. There is currently more emphasis on administrative procedures than on achieving flexibility.

**COSTS:** No adequate basis exists for estimating the absolute costs of this proposed initiative. Historical USEPA-wide records for budgets and staffing levels do not break out the costs associated with peer review and the other quality-promoting procedures. OARM, in cooperation with the program offices, ORD and the Regions, should begin a systematic review of the current dollars and FTEs that constitute the current operating level of these quality promoting

activities. An estimate of the FTEs and dollars needed to eliminate the operating shortfall and a short-term strategy for shifting resources would be developed and implemented over 18 months. After the shortfall is erased, a systematic, multi-year effort to increase the scope and intensity of the quality-science thrust could take place.

**BENEFITS:** Broader and more intense promotion of excellence in science will be manifest almost immediately in the quality and credibility of the technical work-products that support decision-making throughout the Agency. This should lead to regulations and policies that are cost effective and thus gain broad acceptance from the regulated communities. And, if decisions are easier to understand, less likely to invite legal challenge, and less likely to be reversed in court when challenged, then costs of litigation and enforcement should go down.

**MEASURES OF SUCCESS:** Success would be indicated by progressively more numerous decisions that win broad support for their cost/effectiveness in achieving environmental protection.

### A.3 Science Advice within Program and Regional Offices

**WHAT:** Continuing the development of a strong science advice program within the Agency.

One role of science in EPA is to reduce uncertainties in environmental decision-making. Because laboratory-animal testing is the model used most frequently to predict the potential for human health effects due to exposure to a chemical pollutant, there is uncertainty in extrapolating from effects seen in laboratory animals to predict effects in humans. Other areas of uncertainty in policy decision-making arise as a result of limited knowledge about exposure and the effect of numerous chemicals or chemical mixtures on environmental components.

While policy decisions require a strong science base to reduce uncertainty, USEPA policy or regulatory decisions are often perceived as not based on the relevant science. The science advice function, ensuring that policy decisions are based on a clear understanding of the relevant science, is currently not well-defined or systematically organized within USEPA. This would include a science advisor within ORD, each program office and region. The science advisor's function, analogous to that of an OGC legal advisor to a specific project or program, is to ensure that USEPA policy decisions and regulatory actions are based on superior science and a clear interpretation of relevant science and are **scientifically** defensible.

The science advisor within ORD, each program office and Region should be a senior scientist or recognized expert who works closely with the Science Advisor to the Administrator and serves as a program-office liaison to the Agency's Science Advisory Board.

**WHO:** Science Advisor within ORD and Each Program Office

**TIME LINE:** Develop and implement plan by fall 1994

**BARRIERS:** Decision makers may object to what is perceived as an additional layer of bureaucratic oversight. Programs which do not function in traditional line management approach may find the additional review inefficient in meeting statutory deadlines. Resource allocation for science advisor positions may compete for continuing education, training, and travel for program office career scientists.

**COSTS:** Variable, but a senior scientist or science expert may require GM/GS-15 and above salary range.

**BENEFITS:** The development of a strong science advice program within the Agency would result in consistency in Agency policy decision-making and the perception that USEPA is a "science" Agency. Decisions in one program office would not adversely impact those in other program offices. Another benefit would be more direct use of ORD science and less reliance on contractors to program offices. Career scientists would view their contribution to science at USEPA as valuable, if work products were reviewed by a well-trained peer. This would increase morale and incentives to do superior science. Then the public would be less likely to challenge USEPA policy decisions, avoiding costly delays (economic and environmental quality) in implementation. Additionally, enhanced career development and recognition would be provided for career scientists, both within and outside the Agency, for their contribution to excellence in science.

**MEASURES OF SUCCESS:** Policy decisions based on clear interpretation of science leading to more consistency in decision-making. Public support, news media perception enhanced, state and local environmental sectors support USEPA decisions. Congressional support, increased resource allocations.

### A.4 Science/Congressional-Liaison Team

**WHAT:** Establish a Congressional-liaison team representing Quality Science throughout the Agency.

The team would communicate actively with Congress and its staff about important issues of environmental science. Science issues should be communicated by scientifically-trained experts, not left solely to Public Relations personnel. USEPA should identify topic-area technical experts, train them to interact with Congress, and encourage them to communicate with Congress about their areas of technical expertise. Only when Congress and their staff understand the scientific and technical issues behind today's critical environmental problems can they deal effectively with these complex environmental problems. USEPA scientists should play a major role in educating Congressional staff about environmental science.

**WHO:** The Assistant Administrator for Research and Development, together with the Science Advisory Board, should champion this effort; however, the team should represent the interests of science throughout the Agency, including the Program Offices and Regions. Topic-area experts should be drawn from all sectors of the Agency.

**TIME LINE:** The liaison staff would be established as part of the National Performance Review effort to reinvent government and should remain a permanent part of USEPA.

**BARRIERS:** There are possible legal restrictions against "lobbying" Congress. Controls may need to be established to ensure that this initiative is clearly a component of public education, outreach and communications. Other science agencies seem to be able to use articulate, respected scientists to communicate effectively with Congress: USEPA should do no less. Potential barriers may be overcome by using NOAA or NASA as a model.

**COSTS:** Costs will be minimal. Current public relations or liaison staff could be re-assigned and augmented with a few additional FTEs. Topic-area experts would be recruited from current scientific staff, trained to communicate effectively with Congress and the public at reasonable costs and provided travel funds. The topic-area experts would not be permanently assigned to the Liaison Team, since they have to remain involved with their research programs in order to retain their expertise and credibility. Programs sponsored by the liaison staff (for example, periodic briefings for Congressional staff on critical environmental issues) should not be expensive. Travel costs for regular visits by topic-area experts to USEPA Headquarters and Congress could be absorbed within the Agency's current budget.

**BENEFITS:** Two major benefits will be: enhanced recognition by Congress of the high quality of scientific and technical expertise present in USEPA; and improved environmental legislation. USEPA has the foremost experts in many areas of environmental science, and this effort will help them be recognized for their expertise by Congress, other federal sectors, and the public. As USEPA becomes respected as a science agency by Congress, it will be treated more like a science agency. This effort will also help educate Congress (and Congressional staff and the public) about the scientific issues involved in today's environmental problems. Such increased understanding, together with the availability of identifiable topic-area experts to provide counsel and advice, should make for better, more-effective, and less-costly environmental legislation. Legislation that is well-founded in science will provide substantial savings for the U.S. through more effective programs with fewer ineffective, but costly, controls. Better legislation will also save considerable time and effort by reducing the political battles entailed in frequent revisions and re-authorizations of environmental legislation.

**MEASURES OF SUCCESS:** The goal of enhanced recognition of USEPA as the premier environmental science agency by Congress and Congressional staff can be assessed through periodic surveys.

Success should also be reflected in increased requests for Agency scientists to testify before Congress on technical environmental issues.

B. Science Policy Interface

**B.1 Preparation of Policy-Makers for the Science/Policy Interface**

**WHAT:** Establish a training program to help policy makers communicate more effectively with scientists.

EPA policy makers may fail to indicate the specific technical questions that need to be answered to achieve a particular risk-management objective; and scientists charged with preparing relevant analyses may fail to seek such clarification. Even when both parties are of one mind as to the key questions, the decision-making process often does not allow sufficient time for scientists to prepare a thorough assessment. Moreover, scientists rarely have the opportunity to help determine how their analyses actually are used to shape policy.

When any of these scenarios occurs, EPA science is not kept in the decision process. Over time, some scientists have come to feel that they are not an integral part of the decision-making process. The latter is a commonplace outcome whenever scientists focus on issues they personally believe are important and later learn that the risk managers consider those issues to be peripheral to the main question(s).

**WHO:** Agency-wide work group appointed by the Administrator; review by Council of Science Advisors

**TIME LINE:** Training program should be developed and instituted by the spring of 1994.

**BARRIERS:** The idea of yet another training program may meet resistance in principle, especially from those who feel that prior efforts in other subject-matter areas such as Total Quality Management have diverted staff from important work without commensurate positive effect on the quality of the decisions being made. Others may believe that the recommended training would merely restate at length ideas that really are only common sense. Still others may fear that, by adopting the recommended communication practices and procedures, they would be inviting unwarranted incursion into their programmatic discretion.

Policy makers will need to be assured that the objective is not to supplant their decision-making prerogatives but rather to ensure a proper relation and balance between science and policy. To promote cooperation by policy makers in the training, it must incorporate substantial flexibility and use the time of policy makers efficiently. The best time for an individual to take the proposed training would be when he or she is first appointed or promoted into a policy-making position.

**COSTS:** The cost of developing the training program would be approximately one person-year of effort. This could be accommodated within the normal duties of the staff involved.

**BENEFITS:** If policy makers were to make even modest modifications in their standard practices and procedures in response to the recommended training, the benefits could be very large. When scientific analyses are properly focused on the precise questions presented by the enabling statute or regulations, the resultant decision will be less vulnerable during judicial review. Scientists also will be more productive and not waste time and resources on peripheral issues. If outside scientists and the public believe that EPA scientific analyses have not been unduly influenced by policy/political requirements, the credibility of EPA decisions will be enhanced. Moreover, the benefits to the public of even a single regulation or action that is more cost-effective in achieving environmental goals than otherwise would have been the case in the absence of the proposed training program would far exceed the cost of developing and implementing the proposed program.

**MEASURES OF SUCCESS:** Because the recommended procedures for communication across the science/policy interface are largely objective, specific decisions can be examined to determine whether policy makers and scientists have followed them. For example, scientists can be asked whether they were advised early in the regulatory process concerning the specific questions their analyses should focus on. In addition to such objective measures, changes in attitudes will also be important. If the program succeeds, scientists will be less likely to complain that their work has been distorted by policy requirements and policy makers will express greater confidence in the objectivity of the analyses they receive. This would result in a more coherent and relevant research agenda.

### B.2 Preparation of Scientists for the Science/Policy Interface

**WHAT:** Establish a training program for scientists to assist them in communicating effectively and appropriately with policy makers.

USEPA needs the best scientific and technical information to make credible and scientifically defensible decisions. To ensure that, the scientist must present to the policy maker a comprehensive risk characterization (scientific analysis) and not just numbers.

The scientist must present both the qualitative and quantitative features of the assessment and also identify any uncertainties in the assessment based on confidence in the data and methods used to develop assessments. The scientist should present consistent assessments of risk ranges, principal assumptions and their underlying rationale. Also, where possible, he/she should quantify the uncertainties along with comment about their influence on the assessments.

The policy makers should specify whether the traditional scientific extrapolation models are appropriate in specific cases; strive for early peer review, both inter- and intra-agency; and identify when

additional information would be beneficial. Scientists should stress that the risk assessment process employs a varying number of judgmental positions to help bridge gaps in data and in understanding of underlying biological processes. Risk assessors should not attempt to overstate or understate risks, but rather give estimates and the range of uncertainty.

**WHO:** Agency-wide work group appointed by the Administrator; review by the Council of Science Advisors

**TIME LINE:** Develop the guidance by fall of 1993.

**BARRIERS:** Some policy makers seem reluctant to interface with program office or ORD scientists prior to communicating major risk-based regulatory decisions to the public. Also, they may choose not to reveal the degree of uncertainty or what influence uncertainty had on their final decisions. At times, scientists are not given adequate time to collect acceptable data to perform credible assessments. Research scientists are often brought into the process very late, as reviewers, rather than early on, as developers. At times, USEPA is pressured by external forces into making rush decisions that are not based on good science. Many times scientists are not advised what specific questions the decision makers need answered early on in the process. Some policy makers are resistant to involving scientists in the decision making process because of their perception that scientists should be excluded from risk management-based policy decisions.

**COST:** $100,000 for workshops, consultants and contractor assistance to develop the guidance document(s).

**BENEFITS:** Adherence to Agency wide guidance will improve the understanding of Agency risk assessments, lead to more informed decisions, and improve the credibility of Agency assessments and decisions and ultimately decrease costly challenges to regulations and enforcement actions. Recognition of USEPA risk assessments will improve scientists morale which in turn will lead to their enhanced productivity.

**MEASURES OF SUCCESS:** Decisions based on credible risk assessments will decrease the number of challenges from environmentalists, industries and the public.

### B.3 CASE BOOK on the Science/Policy Interface

**WHAT:** Create CASE BOOK, a collection of agency cases documented sufficiently to allow scientists and policy makers the opportunity to study the following:

Exemplary cases of science and policy interfacing.
Examples of problem solving approaches.
Orientation workbook for risk assessors and risk managers.
A guide to help new employees assess and manage risks.
A primary reference for science/policy approaches.

**WHO:** Council of Science Advisors. Contributions to CASE BOOK will be prepared by each program, that is, the offices serving under the various statues, (e.g., TSCA, FIFRA, etc.).

**TIME LINE:** Continuing; evaluate program after 2 years. The time for completion of the first edition of CASE BOOK will be one year after the agreement that this proposal is to be accepted and implemented. Approximately, September 1994.

**BARRIERS:** Some risk managers and risk assessors may be reluctant to relinquish their analysis for agency wide review. Additionally, a manual that is circumspect of decisions may cause paralysis of analysis, that is, CASE BOOK may cause risk assessors/managers to equivocate rather than make well-timed decisions. These are common barriers and should not prevent the idea of the CASE BOOK from being successful. Most scientific organizations compile reference information for use when making risk assessments and doing research/experiments.

**COSTS:** $25,000 for consultants and publication assistance.

**BENEFITS:** Circulation of a high quality manual containing instructive Science and Policy Case Studies will benefit the agency. CASE BOOK will provide substantive examples of what is expected of risk assessors and risk managers. Specifically, risks assessors and risks managers who know before hand what is expected of them have an advantage over those that do not. Communication is critical in order to facilitate problem solving. CASE BOOK will be a lexicon of Science and Policy and reveal the process of science and policy interfacing.

A well-prepared inventory of science and policy issues will require few resources compared to the benefits. Circulation of exemplary science and policy decisions will raise the morale of Scientists and Policy makers. The agency standards will be open to scrutiny and forced to stand the test of critique from agency scientists and policy makers. The peer review process, good laboratory practices and other practices designed to promote quality science would be enhanced by CASE BOOK. Promoting quality science and policy interfacing and publishing examples will gain support from the Congress and the public through better risks communication.

CASE BOOK will be an excellent tool for orientation of Risk managers and Risk assessors, both new and existing employees. In conclusion, the substance of CASE BOOK is already contained within the records of the agency and would not create a new or unreasonable burden on the risks managers and assessors.

**MEASURES OF SUCCESS:** The measures of success will be identified by evaluating how well CASE BOOK is received, that is, how often it is used and cited in the continual efforts to manage and assess risk. Feedback and input into CASE BOOK will identify the effectiveness of the document. Commentary sections on each case cited in CASE BOOK

could acknowledge the effectiveness of the document. Similarly, if CASE BOOK is cited as a guideline in future examples of Science and Policy Interface in the agency, we will know it is working.

**B.4 Management of Differential Risks among Population Subgroups**

**WHAT:** Enhance the capabilities of health-risk assessors to differentiate among population subgroups wherever practical by developing a long-term research plan and associated risk-assessment strategy.

Attempts to estimate the likelihood of adverse human-health effects from known or putative environmental hazards traditionally have focused on the risks faced by the population on the average; the principal exception has been selected reference concentrations or doses that are calculated using arbitrary uncertainty factors to protect potentially sensitive populations. Yet experience increasingly is making clear that, for any given hazard, some population subgroups may be at substantially greater risks than others as a consequence of stage of development, gender, or other manifestation of genetic make-up. Moreover, current research in cell biology, molecular genetics, and epidemiology is offering evermore powerful means to assess subgroup-specific risks; and an expanded effort would yield significant return. The time has come for USEPA risk assessors, as well as the other scientists whose work supports them, to obtain and use subgroup-specific data wherever practical as a matter of policy.

For example, in view of the possibility that infants and children may be a greater risk from certain pesticides than are adults, the National Academy of Sciences recently recommended revamping the pesticide-registration process so that it includes better tests and better data relevant to this subgroup. This line of reasoning can be extended to include the possible differential vulnerabilities of infants and children to hazards other than pesticides. And essentially the same logic can be applied to other population subgroups under various circumstances -- especially the elderly, women, and racial and ethnic minorities -- for a wide spectrum of environmental hazards.

**WHO:** The Administrator could appoint an agency-wide working group to develop a two-part product: (1) a research agenda to expand the knowledge base relevant to subgroup-specific risks and (2) a strategy for progressively incorporating this ever-growing knowledge base into the health-risk assessment process.

**TIME LINE:** Appointment of working group by January, 1994.

**BARRIERS:** As with pesticides, little data is available regarding the differential risks that most environmental hazards pose for various population subgroups; therefore, some commentators may assert that the proposed emphasis is premature. Others may acknowledge the reality of biological differences and endorse the

proposed initiative in principle but oppose it out of fear that the costs and time required for risk assessments could rise unduly.

**COSTS:** $100,000 for a workshop and consultant fees related to developing the research agenda and upgrading risk-assessment strategy. USEPA staff costs would be absorbed as part of normal duties.

**BENEFITS:** The initiative would introduce a new level of scientific rigor and sophistication into health-risk assessment. The initiative also would stimulate research toward better tests and better data pertinent to differential risks. Subgroup-specific risk assessments would lead to better tailoring of protective measures for the special needs of vulnerable subgroups, to improved public health, and thus to more cost/effective regulation.

**MEASURES OF SUCCESS:** Progressively more emphasis on subgroups in environmental regulations; accelerated emergence of new or improved subgroup-specific tests and data bases.

C. Nurturing Quality Science

### C.1 Job Enhancement and Resource Support for Scientists

**WHAT:** Tailor Jobs and the Work Environment to Make the Best Use of Scientific and Technical Talents

The first step in promoting quality science at USEPA is to ensure that the jobs we create are of high quality - stimulating, rewarding, and as free from administrative distractions as possible. This may require shifts in job assignments among other components of the work force. More scientific projects should be done in-house to enable our scientists to share scientific contributions and to link science to Agency policy, rather than merely reviewing the work of others, as with contract activities.

In addition, we must ensure that, as we nurture quality scientists within USEPA, we provide them with the necessary guidance, equipment, and general resources to perform and produce quality scientific outputs. The development of specific standards for laboratory practices and the placement of emphasis on quality assurance for all areas of scientific work, including the facility and staff, not merely procedures, are essential. Adequate resources should also be provided for implementing these standards and procedures.

**WHO:** Scientists and engineers throughout the Agency

**TIME LINE:** By fall of 1994, review all relevant job assignments; develop and implement plan to decrease reliance on contract support; develop and implement set of standards and QA plans for scientific work; increase resources and remove institutional barriers to scientific activities

**BARRIERS:** There are currently many inconsistencies throughout the Agency on the functions and grade levels of scientists. Although ORD has a career advancement system in place, it cannot be applied to other USEPA program scientists due to differing duties and functions. Limitations on federal positions and resulting reliance on contractors continues to be a serious problem. In-house expertise and public confidence in Agency decisions cannot be nurtured while much of the scientific work is delegated to contractors. While ethical standards exist, their emphasis is on legal and regulatory constraints rather than on opportunities. Similarly, QA is being developed for laboratory procedures, rather than as a framework for Agency scientists to produce quality products. Constraints on travel have a particularly devastating effect on scientists, since exchange of scientific information and the enhancement of the Agency's image are the two primary objectives of participation at environmental conferences and professional meetings.

**COSTS:** Converting much of the budget for the contract work to in-house resources should have no effect on the budget. Establish a travel budget of at least $15,000 per scientist.

**BENEFITS:** Decreased staff turnover and increased job satisfaction throughout the Agency

**MEASURES OF SUCCESS:** Increased public confidence in Agency decisions, policies, and regulations and increased representation of EPA scientists on national panels.

### C.2 Career Ladders and Promotion/Incentive/Reward Systems

**WHAT:** Create a system that links grade assignments to the contributions of the individual.

A traditional approach to position classification is no longer responsive to the Agency's need for flexibility in creating career ladders linked to organizational goals and individual achievement. If we agree that "science" forms the backbone of this Agency, scientists should be able to reach senior levels (through their "scientific" contributions and achievements) in the Agency, without having to assume "Management" positions. Promotion systems should provide the structure and criteria for advancement, but should not limit them with artificial ceilings (glass or otherwise).

Aspects of the Merit Promotion Program should be re-examined in order to support the concept that jobs are created by employees, based upon programmatic needs, rather than employees created by jobs. All employees should have a sense of the types of (multiple) "careers" they can have at USEPA.

An Agency-wide Policy Statement should be implemented in order to delineate the criteria for scientists to advance within the Agency. It should require that each program, office and laboratory adopt the policy, while further specifying these criteria, as related to the unique functions and operations of that program, office or

laboratory. High quality performance of scientists in these positions should be motivated and rewarded as an on-going process (not just through the annual appraisal cycle). Reward systems should be more competitive, innovative and prestigious, and less routine, "bean-oriented" and automated. New award categories, nomination (including external nominations) and peer review procedures may be incorporated. Incentives and rewards may be expressed through fellowships, advisor/instructor assignments, mini-sabbaticals, state-of-the art laboratory equipment, rotations or time and support to pursue other USEPA mission-oriented endeavors.

**WHO:** Task Force with cross section of USEPA scientists, Human Resources experts and 1st & 2nd line supervisors (particularly "Science" Managers - scientists managing scientists)

**TIME LINE:** Develop Agency-wide policy for career paths, promotions and incentive/reward systems to be implemented in FY95.

**BARRIERS:** Management may have reservations about implementing a policy due to potential budgetary impacts. If "benchmarking" all of the various scientific positions within the Agency is used in order to develop the criteria, this could be a very cumbersome process and it may end up falling under its own weight - well before a policy statement could be developed. There may also be some hurdles with OPM to get over. Supervisors may feel that this only presents more obstacles for them. They would need to receive extensive support (training, incentives, time, etc.) to do this. It would also require time and resource support to develop the policy and criteria for this type of personnel management system.

**COSTS:** Development: $100,000, plus 6 FTEs for a year; Implementation: $75,000 for training agency-wide

**BENEFITS:** Decreased staff turnover; it's getting increasingly difficult for the Agency to recruit and retain quality scientists. More emphasis on rewards rather than punishments would improve morale. Increased job satisfaction and sense of career direction. Decreased perceptions of "hidden" rules for advancement of scientists in the Agency. Increased importance placed upon our scientific workforce; increased pride. Improvement in the quality of science in USEPA.

**MEASURES OF SUCCESS:** An Agency-wide Policy and Criteria in place. Adoption by all USEPA programs (HQ's and Regions) and labs. Increased job satisfaction, pride and sense of career/direction -as gained through regular employee surveys.

### C.3 Employee-Empowered Scientific Recognition Committee

**WHAT:** Improve the way we reward scientists and technicians for innovation, creativity and continuing scientific excellence by establishing employee-empowered Scientific Recognition Committees at the Divisional level.

**WHO:** Create a "reinvention lab" to test this concept. This do-able is modeled on an existing committee in ORD/HERL/DTD (contact person, Dr. Robert Kavlock), but should be extended to other sectors (Regions, HQ's) of USEPA

**TIME LINE:** The model for this concept became operative within about 6 months of conception and is now in its second year. Briefly, the Division Director appoints a chairperson and, with the chair's help, drafts a committee consisting of 2 technical staff, 2 principal investigators (non-supervisory) and two supervisors (with two members replaced each year). Award nominations are solicited at least twice a year--anyone can submit a nomination at any time. The committee is convened as nominations come in. It makes recommendations to the Division Director who becomes the nominating official. The scope of activities that DTD currently deems worthy of recognition is broad, and has been developed with much discussion and debate. It is specific to the potential contributions of bench scientists and technicians, but is consistent with current USEPA award vehicles (on-the-spot, or special act awards). The concept of employee-empowered Recognition committees could be extended to other groups within USEPA but each group would have to decide their own criteria.

**BARRIERS:** Inflexible interpretation of current USEPA award criteria. Resistance of managers to empower staff at all levels of the organization.

**COSTS:** None: funds for these awards would come from the established award pool (for on-the-spot and special acts).

**BENEFITS:** Two years' experience with such a committee in DTD has already produced measurable benefits: 1) Staff like being recognized at the time of their contribution. It gives them positive feedback and this leads to increased motivation, loyalty and productivity. 2) The number of nominations has increased as staff gain familiarity with the process and confidence that it operates fairly. This helps assure that meritorious actions are recognized by both peers and supervisors. 3) Communication and trust is fostered between supervisors, principal investigators and technical staff. This promotes team efforts in the laboratory. 4) All staff are empowered--they make nominations and set criteria for recognition. They "own" this committee. This diminishes jealousy and fractious competition and eliminates the suspicion of "supervisor's favorites." 5) A potential long range goal would be to use this approach to recognize and reward good science, and remove cash awards associated with the official performance appraisal process. Then, the performance review -- unencumbered by the cloak of financial intrigue -- could be used productively to evaluate whether goals have been met and to set new goals and IDPs for the coming year.

**MEASURES OF SUCCESS:** Annual review at DTD staff meeting to obtain feedback on success of recognition program. Increased productivity measured by established methods.

## C.4 Training For Scientists

**WHAT:** Establish innovative career-development program to ensure that scientists remain challenged and stimulated while fostering a greater exchange and interaction between USEPA and the academic research communities.

The Agency needs to develop a system that maximizes the human potential of our scientists and thus the quality of science at USEPA. The system should establish, in advance, a cohesive training plan and budget for each position that is filled.

The program will require the establishment of a team of scientists (working with Human Resources) to develop a step-by-step mapping of advance career-development activities for each scientific position, which should include: (1) methods to ensure active participation in the rotation of USEPA scientists to outside science organizations to broaden the knowledge base of the individual, as well as the Agency; (2) financial support by the Agency for employee membership to scientific professional organizations; (3) establishment of an Agency-wide long-term training program for scientists who are interested in advanced training and remaining with the Agency; and (4) establishment of agreements with local colleges and universities to offer a wider variety of scientific courses at USEPA.

**WHO:** USEPA management

**TIME LINE:** Develop training plans for scientific positions by April 1994 and begin implementation by September 1994.

**BARRIERS:** Tight budget constraints exist, and USEPA lacks the support of Congress to provide the needed funding. Managers may resist spending funds on training scientists and opt for spending it on travel or oversight of extramural projects (especially non-scientific managers). Managers may discourage training when it involves allowing the employee to use government time and may make it difficult for scientists to participate in a rotational assignments. Aggressive means of exchanging technical information with international scientists, especially if it involves travel funds or other resources, may be viewed as only benefiting the scientist, and not the manager or the Agency.

**COSTS:** Development: $200,000, plus 4 FTEs; Implementation: $0 rotational assignments; $50 fee for each member of professional associations; $300-1000/training course.

**BENEFITS:** Recognition of USEPA as a high-quality science Agency; development of a strong base of top quality, stimulated scientists; retention of quality scientists with institutional knowledge; decrease the turnover rate of quality scientists; increase productivity of quality scientific outputs through advanced training; and, eliminate partial training of select scientists.

**MEASURES OF SUCCESS:** Gain public confidence; decrease turn-over rate of quality scientists; increased morale; produce defensible quality outputs; decrease in number of scientific challenges to the Agency.

### C.5 Recruitment of Scientists

**WHAT:** Develop a short-term and long-term strategy for the recruitment and retention of qualified in-house scientists, engineers and technicians.

Such a strategy is crucial if USEPA is to achieve status and credibility as a "Science Agency." Deficiencies in sustaining an adequate scientific staff are increasingly evident as the Agency is rapidly losing its institutional technical knowledge through attrition. The strategy must sanction the recruitment of junior scientists, engineers and technicians, who, under the mentorship of senior scientists, will conduct in-house research and develop into Agency experts.

Participation in the recruitment and hiring processes by peer-level scientists from inside and outside the Agency should be a key element of the recruitment policy. The strategy must also encourage cooperation and coordination with external researchers. USEPA must include in its long-term recruitment strategy a more sophisticated plan for improving cultural diversity, including fostering relationships with colleges and universities to attract top-notch recruits. Another important part of the recruitment strategy should include the placement (by recruitment or promotion from within) of several world-class scientists (including current EPA experts) into key policy and decision-making positions, as well as critical research areas that are essential to reducing uncertainties in USEPA decision-making.

**WHO:** Task force consisting of key Agency personnel and outside scientists appointed by the Administrator

**TIME LINE:** Develop an implementation plan by the 2nd quarter of 1994

**BARRIERS:** Barriers to the successful implementation of this recruitment strategy include the following: limited FTE ceiling, limited dollars for FTEs allocated by Congress, non-competitive salaries compared to industry, limited career tracks and inflexible Human Resource Management guidelines for scientists, procurement and ethics regulations that restrict communication between scientists, limited travel budgets, limited and un-focused training program for scientists across the Agency, recent policy to reduce 300+ GS 14/15/SES positions, recent policy to suspend cash performance awards for FY94 through FY98, very low morale of the current technical staff.

**COSTS:** The political will to approach Congress and OMB with a request for a significant increase in FTE ceiling. Part of the argument should address switching R&D dollars for PRO dollars to pay

for FTE ceiling increase. This approach would not increase the total dollars allocated to the Agency.

**BENEFITS:** The following benefits would be derived from the implementation of this recruitment strategy: increased respect for Agency decisions, increased respect for Agency scientists and engineers, increased confidence in Agency data, recognition and acceptance of USEPA as a science agency, increased morale and productivity within the Agency technical workforce.

**MEASURES OF SUCCESS:** The ultimate measures of success would result from environmental scientists around the world recognizing USEPA as the source of expertise in environmental science and technology, the primary training ground in environmental science and technology, a reliable source of quality environmental data, a leader in environmental methods and technology development, and a promulgator of regulations with sound technical basis.

D. Communication and Coordination

**D.1 Prioritization of Intra-Agency Communication and Coordination**

**WHAT:** Give special emphasis to communication and coordination of scientific activities within USEPA.

Effective intra-Agency communication and coordination is essential to achieve high-quality science products (research, regulations, guidelines, policies and decisions). The scientific resources throughout the Agency must be identified to facilitate direct and productive interaction of scientists working on related issues. In addition, readily available information on projects/activities currently on-going within the Agency (Headquarters, Regions, ORD-Laboratories) must also be identified and periodically updated. Identification of resources and projects/activities will serve to coordinate scientific efforts within the Agency.

Thus, it becomes essential that coordinators be designated in all programs to foster communication among scientists and avoid replicate efforts. Communication between risk managers and scientists involved in risk assessments requires that risk managers convey clearly what information they need from scientists, so that scientists can respond clearly and factually (including the uncertainties in the risk assessment). Training of scientific personnel in media communication should be made available (and in some cases, mandatory) to allow proper identification of the needs and level of communication required by the target audience. Non-scientific personnel should be encouraged (and in some cases, required) to receive scientific training as part of their career development.

**WHO:** USEPA-wide task initiated by the Administrator and implemented at each program, Region and ORD-Laboratory.

**TIME LINE:** This should be a continued effort supported by the Agency. The first phase of this task (identification and coordination of scientific resources and projects/programs) should be in operation by Fall 1994.

**BARRIERS:** Major barriers in communication and/or coordination of scientific efforts would be those imposed by statutory restrictions, which would limit the amount and nature of the information that can be shared. Although these are intrinsic and may not be easily removed, the need for improved communication and coordination of scientific efforts within the Agency should be recognized by the Administrator, Assistant Administrators and other upper- and middle-level managers as a vital key to achieve high-quality science.

**COSTS:**

a. Low Cost- Identify (through a survey) the scientific resources within the Agency. Identify the components of the different programs/projects in Headquarters, Regions and Laboratories. Create a document, database or other form of transmission media for disseminating the gathered information, with periodical update of the information. This could build on the Scientific Registry being piloted by the Sci/Tech Committee.

b. Medium to High Cost- Training of non-scientific personnel; Training in risk communication; Training in communication skills. Designation of intra-agency coordinators in FTE positions.

**BENEFITS:** The benefits of communication and coordination of scientific activities within the Agency are significant. Replicate efforts can be avoided, which would result in savings in time and costs. Improvement in communication and coordination within the Agency (among scientists and between scientists and managers) will improve the quality of science. This will have a direct effect in the quality of the decisions, regulations, research and risk assessments generated by the Agency. In turn, the Agency's credibility by the public, the scientific community in other agencies and academia, industry and Congress will improve. The increased credibility of the USEPA as a high quality science agency and a leader in all aspects of environmental science could result in increased funding to further expand the Agency's capabilities.

**MEASURES OF SUCCESS:** The success of an improved communication and coordination system within the Agency can be measured by the gains in the quality of science products generated by the Agency.

The ultimate measure of this success would by the recognition by others (the scientific community, industry, other agencies and organizations, Congress and the general public) that the USEPA is a high quality science agency and the leader in all aspects of environmental science.

**D.2 Exchange of Scientists (internally & externally) For Purposes of Exchanging Science**

**WHAT:** Increase scientific contact and openness within USEPA as well as with other government and private sector organizations.

The coordinated exchange of USEPA scientists within USEPA laboratories, Headquarters, and the Regions, as well as among other federal agencies, academia, and international organizations, will make its scientific and technical efforts more widely known. Such an exchange program would ensure that USEPA scientists are continually exposed to current knowledge and methodologies.

To accomplish this the Agency should promote and increase the number of details and rotational opportunities within USEPA. USEPA should require that every laboratory and program office, whether in Region or in Headquarters, mandate that rotational assignments/details outside of a scientists own immediate program take place at some optimal level of their career. These rotational assignments should last for a minimum of 30 days. Administrative and management procedures should be checked to ensure that no barriers exist to inhibit these rotational/detail activities.

In promoting the exchange and sharing of science between USEPA and other government and private sector organizations, the Agency should implement the recommendation contained in Safeguarding the Future: Credible Science, Credible Decisions,, The Quality of Scientists at USEPA, Recommendation 3 (pp.31-32). The details for the implementation of this recommendation would be left to the Agency to determine.

**WHO:** USEPA-wide, coordinated by personnel offices in the Regions, laboratories and Headquarters.

**TIME LINE:** Develop an implementation plan for the intra-Agency rotational/detail assignments by the end of FY94. Develop an implementation plan for the exchange of scientists between USEPA and the outside scientific community by early FY95.

**BARRIERS:** Coordination with other programs to allow the optimal exchanges will be complicated. Some may object to the disruption of their staff. The rotations involving relocation may require special attention, due to cost considerations. Some entrenched employees may object to the mandatory nature of the rotations. Concerns may exist over the opening of USEPA offices to non-USEPA employees, especially over Confidential Business Information (CBI).

**COSTS:** Costs will be minimal for internal rotations, with relocation and per diem costs being the largest out-of-pocket expense. Two (2) million dollars might be set aside for the external rotation program for the first year; that budget could be altered as the success and size of the program is determined.

**BENEFITS:** Cross-program understanding; a more multi-media, pragmatic workforce; greater future sharing of information as a result of networking. All of these would help improve the quality of science in the Agency.

**MEASURES OF SUCCESS:** Improved sharing of information across program; high number of rotations/details reflecting interest in program; better relationship with other governmental and private-sector organizations.

**D.3 Communication and Coordination with Other Federal Agencies, State and Local Agencies, and International Organizations**

**WHAT:** Create frequent opportunities for USEPA scientists to be exposed to current knowledge, data, and methodologies from other agencies and organizations, as well as to communicate findings and advice to them.

Among the federal agencies, USEPA is fifth in the dollars spent on environment research. The states have five times more scientists monitoring the status of the environment than does USEPA. Many international organizations (WHO, OECD, World Bank, Japan, United Nations, etc.) look to USEPA for scientific advice.

Within USEPA, scientists are separated by organization (four programs, ten regions, and the Office of Research and Development (ORD)) and location (35+ laboratories facilities). State agencies often cannot explain the science behind the regulations and regulatory actions to the public. The public is willing to comply if they could understand the rationale behind the Agency's decisions. Communication of USEPA scientists with their counterparts in international organizations, e.g., OECD, is crucial to the USEPA efforts on guideline harmonization. The communication to other agencies/organizations should be consistent, accurate, and frequent to build credibility as a strong scientific agency.

USEPA should plan and co-host meetings and workshops on scientific issues with other federal agencies which senior USEPA senior management would be expected to attend. Scientists from across USEPA would attend in numbers proportional to the other federal agencies. Regions would host similar meetings for states and field offices for federal agencies. USEPA should develop a focal point for scientific expertise to ensure that we provide accurate, current, consistent advice to international organizations.

**WHO:** USEPA-wide task force appointed by the Administrator. The task force would include scientists from ORD, programs, and Regions.

**TIME LINE:** First meeting planned for February 1994 with full implementation plan by October 1994.

**BARRIERS:** The greatest barrier would be the budget and managers' approval to travel. Travel dollars to attend these types of meetings do not exist in the present budget. The present culture will not invest the time and funds in this kind of long term investment. There also would be resistance to the formation of another task force.

**COSTS:** For four national meetings and ten regional meetings per year - $60,000. Travel funds for these meetings - $500,000.

**BENEFITS:** Improved communication between USEPA scientists and scientists in other federal, state, and international agencies/organizations would result in more credible environmental science, better compliance with our regulations, and reduction of wasted and duplicate efforts.

**MEASURES OF SUCCESS:** Survey developed by the task force for USEPA scientists, other federal agencies' scientists, and state scientists, to be completed by February 1994. The same survey instrument would be used again in February 1995 and February 1997.

### D.4 Communication and Coordination with Academia and Industry

**WHAT:** Develop **Environmental Technology Re-invention Laboratories** based on collaborative efforts of the Agency with universities and industry.

USEPA's environmental protection strategies are undergoing important paradigm shifts. The most important include: risk-based priority setting, pollution prevention as the preferred approach over pollution control, and increased attention to reducing ecological risk.

USEPA should encourage and legitimize the open collaboration of Agency scientists with academia and industry in the development of innovative approaches to pollution prevention and cleaner production technology. Such creative and non-traditional efforts will help ensure an American scientific, technological and industrial presence in the international marketplace. Open and unfettered communication and coordination with industry, in particular, will serve as the key to success.

**WHO:** The Administrator's Science Advisor, in collaboration with the Office of Prevention, Pesticides and Toxic Substances (OPPTS) with its links to industrial and agricultural chemistry and Design for Environment Program (DfE), and the ORD Office of Science, Planning, and Regulatory Evaluation (OSPRE) would serve as the Agency-broker on communication and coordination for a FY94 pilot program. The program would be conducted jointly with the National Science Foundation's (NSF) Environmentally Benign Chemical Synthesis and Processing Program and the NSF Industrial-University Cooperative Research Center at the University of Washington's Center for Process Analytical Chemistry. The industrial sector would be represented by the Dow Chemical - Perkin-Elmer Strategic Alliance Ventures Group recently established to extend the practical use of advanced analytical technology into applications of real-time industrial and environmental monitoring.

**TIME LINE:** Fifteen months to produce a report to Administrator Browner and Vice President Gore on the feasibility, limits and opportunities of USEPA/NSF coordinating innovative Design for Environment and Pollution Prevention programs with environmentally-based advanced technology ventures in the private sector.

**BARRIERS:** Three types of barriers to success exist:

Historical and cultural reluctance of USEPA to aggressively, openly, and effectively collaborate as equal partner with industrial sector subject to Agency regulations, and with technology-based firms who may benefit from close and privileged Agency ties.

Interagency turf battles where USEPA and other science agencies, each protective of their own perceived sphere of influence and control, will stifle coordination.

Intra-agency resistance between and among Program Offices and ORD. Current USEPA measurement and monitoring programs are predicated on pollution control with virtually no experience or expertise in pollutant transformation processes. Reluctance of Air, Water, Solid Waste and RCRA programs to adapt and adopt Performance-based measurements as opposed to USEPA Approved Methods-based measurements.

**COSTS:** Extramural investment modest -- primarily to support meetings and report development and production plus travel budget to Dow, Perkin-Elmer facilities and to CPAC. Intramural resources modest -- senior scientists from Administrator, Program and ORD Offices and Labs, plus travel budget to support staff.

**BENEFITS:** Effective and efficient communication and coordination of pollution prevention activities between the Agency and the industry-university communities will significantly leverage modest federal resources with private sector investments. Creating a mutually supportive culture between USEPA and industry supportive of national environmental and economic goals will reap long-term economic benefits.

**MEASURES OF SUCCESS:** The success of effective and efficient communication and coordination of this effort may be measured in a series of agreements between USEPA and industry to adopt specific advanced analytical technology to replace outdated and costly Agency methods and procedures. The October 1994 report would clearly identify quantifiable measures of savings, where appropriate, or the generation of better data for decisionmaking and compliance at comparable costs.

### D.5 Communication and Coordination with Congress, OMB, News Media, and the General Public

**WHAT:** Develop new and improved means to present its science-based activities to lay audiences.

USEPA's greater emphasis on cross-media planning and scientific efforts will result in a more coherent and efficient effort by the Agency to resolve complex environmental problems. This cross-media emphasis will require enhanced cross-media budgeting. This presents a serious communications challenge with respect to OMB and with the various Congressional oversight and appropriations committees and

subcommittees. The issue of how the communication of USEPA's research and science accomplishments affect the budget process is critical to the financial health and well-being of the Agency's science program and its scientists.

Specifically, USEPA need to take the following steps:

when presenting its programmatic and research projects to OMB, reflect the cross-media perspective rather than the perspective that fragments environmental protection into different media

adopt a communication strategy that aggressively supports the Agency budget -- i.e., obtain and disseminate to the public and affected industrial and agricultural sectors the best possible scientific information and ensure the nation's scientific expertise is enlisted in the service of USEPA's mission

increase the number and quality of Congressional briefings -- offering Congress an open invitation to utilize USEPA resources, as needed, to gain further information on topics of interest

increase the number of its personnel/scientists on loan to Congress/White House

interact more positively with the news media on releasing important environmental issues/decisions associated with the Agency, emphasizing press releases that reflect high-quality of science, convey it in a clear manner, and contain information that precludes conjecture and avoids negative publicity

hold public forums on science for selected target audiences in order to adequately present the information and address the audience's concerns as well as enable the audience to provide necessary feedback to USEPA scientists

serve as a leader in fostering environmental education for the general public, taking advantage of community-based organizations and placing special emphasis on educating and informing the public on issues of exposure and risk analysis, risk assessment and management, and risk communication

encourage public outreach by its scientists, emphasizing environmental education, in grades K-12, as well as in colleges and universities (especially schools with scarce resources) -- this outreach effort would also include a strong focus on stimulating students to follow science and engineering careers

The Agency should reexamine its present approach of using non-technical staff versed in communications and trying to bring them up to speed on the technical issues. A more effective approach would

be to employ individuals with strong technical backgrounds and train them to be skilled in the effective use of communication and public relations tools. There already are many scientists at USEPA who possess excellent communications skills. Their abilities should be tapped to explain scientific principles as a complement to the communications staff.

**WHO:** This should be a high-priority team effort on the part of the Program Offices, ORD, the Office of Congressional and Legislative Affairs (OCLA), and the Office of Communications and Public Affairs (OCPA). The communication materials should be prepared in terms non-USEPA scientists, Congress, and the public can understand.

**TIME LINE:** A Workgroup should be convened to develop a workplan and schedule to meet the near-term and long-term objectives of communicating with Congress, OMB, the news media, and the general public. The workplan should be submitted to the Administrator by February 1, 1994. The lead Offices would be OCLA and OCPA with scientific staff detailed from ORD, OPPTS and other Program Offices.

**BARRIERS:** Historical roles of professional communicators versus professional scientists, engineers, and technologists will make implementation of some objectives problematic. Top management support will be required if true change is to be accomplished.

**COSTS:** Significant intramural and extramural resources will be required over the long-term. In the short-term, current staff may be assigned to scope out the program and develop the workplan.

**BENEFITS:** The short- and long-term benefits to the Agency are significant. Improved understanding of the Agency's scientific basis for decisionmaking by Congress and OMB is desirable in its own right. The improvement of communication with the news media is obviously in the Agency's own self interest. Communication in an effective and meaningful manner with the general public is an Agency obligation.

**MEASURES OF SUCCESS:** Short-term measures of success may be measured in numbers of events, i.e., briefings, articles, public meetings, where USEPA science is presented and discussed. Longer-term measures will require some normative assessment of the perception, positive and negative, by Congress, OMB, the news media and the public on the "quality of science and decisionmaking" at USEPA.

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# REPORT OF THE *REGULATORY DEVELOPMENT* TEAM

NATIONAL
PERFORMANCE
REVIEW

**THE REGULATORY DEVELOPMENT TEAM**

The National Performance Review Team was the Regulatory Development Improvement Team -- a team composed of representatives from each of the Agency offices routinely involved in regulatory decisionmaking:

| | |
|---|---|
| Michael Alushin | Office of Enforcement |
| Dan Barolo | Office of Prevention, Pesticides and Toxic Substances |
| Dick Bauer | Office of the Administrator |
| Jay Benforado | Office of Research and Development |
| Wendy Cleland-Hamnett | Office of Policy, Planning and Evaluation (co-chair) |
| Tom Eagles | Office of Air and Radiation |
| Chuck Elkins | Office of General Counsel |
| Len Fleckenstein | Office of Policy, Planning and Evaluation |
| Maryann Froehlich | Office of Policy, Planning and Evaluation (co-chair) |
| Scott Furlong | Office of Policy, Planning and Evaluation |
| Kathleen Knox | Office of Prevention, Pesticides and Toxics Substances |
| Mark Luttner | Office of Water |
| Ken Munis | Office of Policy, Planning and Evaluation |
| Gail Robarge | Office of Research and Development |
| Margaret Schneider | Office of Solid Waste and Emergency Response |
| Bruce Smith | Region III |
| Pam Stirling | Office of Policy, Planning and Evaluation |
| Maggie Thielen | Office of Regional Operations and State and Local Relations |

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| Betty Walter | Office of Policy, Planning and Evaluation |
| John Wilson | Office of Policy, Planning and Evaluation |

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# I. EXECUTIVE SUMMARY

Making decisions about environmental policy is increasingly difficult. The complex nature of environmental problems being assessed and the societal consequences of our decisions have increased significantly. For this reason, it is critical that EPA have a well-tuned and efficient process to manage its decisions.

The Regulation Development Team has evaluated the Agency's current process, including consultations with over 200 Agency staff and external representatives. The team has identified several actions critical to ensuring the Agency's process facilitates development of quality regulations and policies. In addition to these actions, the Agency's current culture must change. The rulemaking and policy development environment must foster teamwork, accept different perspectives among participants, support cross-Agency and multi-disciplinary perspectives, actively seek and consider the views of affected parties outside the Agency, and promote timely issue elevation and resolution.

The Regulation Development Team recommends the following specific target actions:

- set and implement priorities by developing and using a tiering system that matches the scope of the development process to the significance of the action;
- improve the quality of data and analysis upon which EPA regulations depend;
- improve the effectiveness of workgroup operations and strengthen management of specific regulations;
- continuously evaluate and improve the process; and
- develop a process to similarly manage non-regulatory activities which establish important policies or which have significant effects on the environment.

The opportunity exists <u>now</u> for implementing these improvements. The Regulation Development Team proposes to immediately establish an implementation team, led by OPPE and comprised of representatives from all key program offices, whose sole job will be to carry out these recommendations. Implementation of the target actions would begin immediately with full implementation projected by January 1994.

# II. VISION

## A. Desired State

An open regulatory and policy development process that effectively develops quality rules, creates the opportunities for active involvement of key players inside and outside the Agency, ensures consideration of all relevant issues and alternatives, and ensures a level of analysis commensurate with the scope and potential impact of the action under development. The process must facilitate decisionmaking about environmental problems and policies that cut across the boundaries of single regulations and statutes. As a result, the process must be dynamic--it must accommodate and adapt to competing priorities and be fluid enough to change course as new information becomes available without getting stalled by shifting priorities and issues.

The Regulatory Development Team found a large degree of agreement on the elements that constitute a quality regulation. These key features are:

- protect human health and the environment;
- promulgated in a timely manner;
- address a clearly identified, high risk, environmental problem;
- analytically sound from an economic, scientific, legal, political and technical perspective;
- consider potential multimedia effects;
- reflect the views of groups outside EPA;
- cost-effectively achieve environmental objectives;
- clear and concise;
- enforceable and implementable; and
- include Agency-wide involvement, especially regional input, as appropriate.

In order to develop a successful regulation development process that produces a quality product, the NPR Team recommends some specific target actions and initiatives. Inherent in the actions and initiatives, however, is a fundamental change in the way EPA's decisionmaking system operates. Agency culture needs to change. An environment that rewards decisionmakers and staff who encourage and support cross-Agency, multi-disciplinary perspectives needs to be nourished. Senior managers, especially the Administrator, Deputy Administrator and 12th floor staff, will need to resist any actions which support or could be perceived to support parochial decisionmaking and reluctance to raise issues on a timely basis as they arise rather than at the end of the process.

A second major cultural change is warranted if a new system is to succeed. Along with teamwork, the Agency must become more accepting of the different perspectives Agency staff bring to rulemakings, and must enforce a disciplined process which raises and resolves issues throughout the process rather than becoming paralyzed while trying to reach consensus, or allowing "late hits" at the end of the process.

B. Current State

The current process requires that all regulations, regardless of their significance or precedent-setting nature follow the same formal process during development unless case-by-case exemptions are sought. Cross-agency workgroups are formed for rules even though this may not be a necessary to produce a quality regulation in every circumstance.

Rulemaking activities lack clear policy direction throughout the rule development process, especially at the beginning. Senior managers do not routinely make decisions early in the process to guide rulemaking or the selection of alternative regulatory options. This inhibits identification and resolution of major cross-cutting policy issues, and leaves major issues to be argued at the workgroup level. The process relies on "inspection" to assure quality at the end of the process when is more costly to correct problems, rather than building in steps to assure quality throughout the process.

Many delays and much rework result from differing opinions on the quality and adequacy of data collection and analysis in rulemaking. For example, the Office of Research and Development typically views scientific and technical defensibility as paramount whereas the lead office often puts more weight on other factors such as meeting court-ordered deadlines. These differences of opinions frequently are not resolved during rule development, leading to delay at the end of the process and criticism that EPA rules do not have a sound analytical basis.

The views of external constituencies often come to EPA late in the process, making it more difficult for EPA to incorporate legitimate concerns from affected parties into its activities. EPA often fails to benefit from the informal, and potentially greater exchange of information early in the process that would allow the Agency to better gauge the opinions of external groups on issues, identify key constituencies, garner support, gather information, determine implementability, or negotiate a rulemaking.

Workgroups are not formed or operated in a way which makes efficient use of resources and staff expertise. Members are reviewers of the work, not contributors to a team effort. Chairs and members often lack the necessary experience, skills, and training.

Few data are available on performance of the regulation development process or on customer satisfaction. Adequate data are not collected to allow the Agency to continuously measure and evaluate the regulation development process and the Agency does not routinely assess the efficiency of its process or the quality of its product. Under the new process, appropriate monitoring and evaluation data must be routinely collected and senior managers must view evaluation and improvement of the process as a priority.

Non-regulatory programs, legislation, and policy guidance play an important role in EPA's overall efforts yet these products are produced on an ad hoc basis with no formal process for contributions by EPA programs, regions, senior management, or external stakeholders. These activities do not benefit from the resources and collaborative efforts now focused solely on regulation development.

## III. TARGET/ACTION CATEGORIES

The Regulatory Development team has grouped its recommendations into five target/action categories. These categories are:

- strategically allocating Agency resources;
- improving the quality of data and analysis upon which EPA regulations depend;
- strengthening workgroup operations and management;
- continuously evaluating and improving the process; and
- developing a process to manage non-regulatory activities.

Inherent in all of these initiatives is change in Agency culture. As discussed earlier, regulation and policy development must be embedded in an environment that encourages and rewards cross-agency and multi-disciplinary approaches and teamwork.

**Recommendation 1**

**EPA must allocate its scarce resources strategically by:**

- **adopting a system that matches the scope of the internal process to the nature and scope of the action using a three-tier approach:**
  - **Administrator Priority Tier -- actions that require active senior manager involvement throughout the development process, expansive issue analysis, and input from diverse parties;**
  - **Cross-Agency Tier -- actions that require cross-Agency involvement to fully develop and evaluate options, and produce a quality rule;**
  - **Lead Office Tier -- actions where the nature and scope allow a quality rule to be produced by a single program office; and**
- **emphasizing early policy guidance by senior managers.**

The Agency is increasingly asked to do more with fewer resources. By creating and implementing a tiering system, we can better ensure that the most complex, controversial, or other critical actions receive the guidance, analytic development, and attention that is commensurate with their potential significance.

To write quality regulations, EPA need not apply the same process for each and every rulemaking. The idea of "one size fits all" is frustrating for program offices and leads to attempts to circumvent the formal development process whenever possible. In addition, cross-media offices cannot and should not devote the same level of time and attention to each and every rulemaking.

The recommended tiering system would have three levels -- each designed to meet the needs of a particular regulation or policy. The differences in the tier assignments would result from the degrees to which:

- the Administrator or Deputy Administrator needed to be involved in decisions throughout the various rule development stages (as opposed to other senior managers);
- cross-agency interaction is needed;
- comprehensiveness of analyses performed; and
- formal decision points need to be identified and documented.

Critical to the success of these recommendations is for senior officials to provide guidance, demand appropriate analyses, resolve issues, make timely decisions, and monitor progress throughout the regulatory process. Senior management involvement is especially critical early in the process. By better engaging senior officials throughout the process, major cross-cutting policy issues and alternatives can be addressed appropriately and promptly rather than leaving these issues to be argued at the workgroup level. If officials assigned to a rule do not have the time, they should delegate the responsibility to someone who does -- and they should not second-guess subsequent decisions.

**Recommendation 2**

**EPA must improve the quality of data and analysis upon which its regulations depend by:**

- **requiring an "analytic blueprint" to guide rule development; and**
- **expanding external involvement.**

Sound economic, scientific, legal, political and technical analysis was identified as one of the most important elements of a quality regulation. The Agency needs to consider the appropriate analytic support needed to produce quality for all of its actions although the actual scope of these activates will vary depending on the regulation. By openly and explicitly addressing the type and scope of analysis needed, especially early in the process, the Agency can avoid some of the delays and debates that currently take place late in the process over the adequacy of the data.

A specific initiative in this area is to require an "analytic blueprint" for all agency actions to map out the analysis required to achieve a quality regulation. Just as architects create blueprints of buildings before construction begins, so too EPA needs to create a blueprint before regulation development begins. The blueprint process does not end there however--it needs to be a living document so that all parties involved in the regulation development understands the analytical support that will be available to decisionmakers.

The scope of the blueprint should match the nature and scope of the regulation it guides. The more complex the regulation, the more detailed the analytic blueprint. The minimum amount of analysis should be conducted that ensures a quality regulation. For example, the analytic blueprint for a very complex and contentious regulation may need to be a detailed schedule of what analyses will be done, which office will manage the analysis, and when it will be complete. For routine regulations being developed by a single office, however, the blueprint should be a more concise document that briefly documents what analytical support will be completed.

A key way to improve the support for Agency activities is to enhance its outreach to external groups. Particular areas where this outreach could greatly benefit the Agency is by identifying key constituencies, gathering data, garnering political support and evaluating implementability. Therefore, the appropriate level of external involvement should be considered early on and included in the analytic blueprint.

EPA must also improve the quality of data and analysis upon which regulations are developed by ensuring that the process involves the identification, formulation and selection among, feasible options. Innovative approaches such as market-based incentives and other non-traditional (i.e., approaches other than command-and-control) should be promoted and evaluated whenever possible.

**Recommendation 3**

**EPA must strengthen workgroup operations and management of specific regulations by:**

- **clarifying the roles and responsibilities of workgroup chairs and members;**
- **providing a clear set of expectations for workgroup members with commensurate recognition and rewards;**
- **enhancing the skills of workgroup chairs and members;**
- **assigning facilitators, as appropriate; and**
- **creating and implementing a systematic dispute resolution process.**

Workgroup members are responsible for contributing to the development of a quality rule--not solely monitoring and critiquing the work of others. Chairs and members must be selected for their knowledge, skills, and experience related to the effort at hand and work as a team. Members of the team must have a clear understanding of their role and be accepting of the different perspectives other members bring to rulemakings. Workgroup chairs and members should also be rewarded for identifying and raising major policy issues to senior managers in a timely manner rather than trying to reach an artificial consensus or coming in with "late hits" at the end of the process.

The Agency must support its workgroups by providing the training and fulfilling the other needs to build workgroup skills and promote a healthy workgroup process. Appropriate recognition for workgroup participation must be provided to "elevate" the importance of activity. Management oversight must also be made a higher priority throughout the process.

For controversial or complex rules, the Agency should provide facilitators to improve the workgroup process. The role of the facilitator will be to ensure that there is an open process that creates the opportunity for active involvement of key players, consideration of all perspectives, and steady progress toward completion.

An effective workgroup process also needs a clearly understood dispute resolution process. Rather than having disagreements result in endless delays, the workgroup needs to have access to an efficient and effective process to resolve issues up through the chain of command.

**Recommendation 4**

**EPA must continuously evaluate and improve the process by:**

- **identifying and collecting data on the effectiveness of the process;**
- **improving the process as soon as problems arise.**

Because there is limited data available on the performance of the regulation development process or on customer satisfaction, this redesign of the regulation development process had to rely largely on its own data collection activities. The Agency must identify key performance measures (e.g., analytic plan was developed and implemented; feasible alternatives were identified and evaluated; timeliness of dispute resolution, rules steadily progress towards completion) of the new system and routinely collect this information. Without such data, EPA will not have the data readily at hand to diagnose and correct process problems when they first occur. Timely access to senior management to approve and implement improvements must also be afforded.

Data collection methods that should be considered are: routine, broad-based surveys of all workgroup participants and managers; targeted surveys and interviews covering a limited set of rules; field evaluation of selected stakeholders, both within and outside of EPA; and continuous data collection by a centralized office.

**Recommendation 5**

**EPA must develop a process to manage non-regulatory activities**

Non-regulatory programs, legislation, and policy guidance increasingly play an important role in EPA's overall efforts yet these products are produced in an ad hoc basis. The quality of these types of activities can be improved by implementing a process that makes efficient use of EPA resources, staff expertise across the Agency, and reflects stakeholder needs. This process need not be the same as the one used for regulations, but should reflect the same principles of tiering, appropriate cross-agency and senior management involvement, and early planning and scoping.

## IV. COSTS AND BENEFITS

The costs of not implementing the recommended changes in the regulation development process are great. There is widespread frustration with the current process and it is generally viewed as "broken." Lead program offices waste time by routinely acquiring case-by-case exceptions from the process, major cross-cutting policy decisions are imbedded in single-media regulations and debated time and time again in each regulation rather than addressed comprehensively, significant delays result over debates on the analytic support developed--or not developed--at the end of the process, disputes often remain unresolved until it is too late to incorporate decisions into the regulation, and staff and managers in the process are not rewarded for their participation.

In the short-term, the effort required to implement the new process will be substantial. Offices will be expected to dedicate FTE equivalent resources to develop detailed process requirements. Managers will need to find time to fix problems with rules too far along to benefit from the improvements recommended here while increasingly turning their attention to rules earlier in development to provide the guidance and direction needed to build in quality throughout the process.

As the new process is implemented, however, the frustration associated with the current process will dissipate. Tiering will reduce the administrative burden associated with having to get case-by-case exemptions, the scope of Agency's resources on a given regulation will be more commensurate with the scope of the problem EPA is addressing, fewer delays in regulations will occur as issues are raised and resolved in a timely manner, and the analytic support for the Agency's decisions will be stronger since it will have been planned and thoroughly considered early in the process. Managers will spend more time providing policy guidance direction up front rather than trying to fix crises at the end of the process. Finally, when problems in the process do occur--which they will--the Agency will have adequate data to quickly recognize, diagnose and correct the problem before it gets out of hand.

## V. NEXT STEPS

Fall 1993 provides a unique opportunity to implement needed changes to the regulatory development process; career staff are anxious for change, new management is coming on board and EPA is forging a new relationship with the Office of Management and Budget. With this in mind, the Regulation Development Team is moving forward to implement these recommendations.

### Establishment of an Implementation Team

An intra-agency implementation staff is being chartered by the Administrator to develop a detailed set of procedures that implement the recommendations outlined in this report. **Full implementation of the process is expected to be completed by January 1, 1994.** Deputy Administrator Sussman will oversee the implementation process and the Team will be led by Wendy Cleland-Hamnett and Maryann Froehlich of OPPE. Each of the key program offices will be asked to provide dedicated staff, with adequate experience in regulation development, to assist in implementation. In addition, program offices will be expected to make other staff available to participate on process design teams. These design teams will work over the next four months and focus on particular recommendations discussed in this report including: strengthening workgroup operations, specific process elements such as the analytic blueprint, and expanding external involvement. **Design teams will be expected to complete their work by December 1, 1993.**

A memorandum announcing formation of the Implementation Team and a call letter asking program offices to "tier" regulations will be sent out in August. The Regulatory Development Team will continue to provide guidance and direction for the Implementation Team.

## VII. SUPPORTING MATERIALS

To guide implementation of its recommendations, the Regulatory Development Team has developed the following materials. These materials provide the context and the recommended framework for an improved regulatory and policy development process and include:

**"Draft Findings, Problems in Regulation Development," December 7, 1992**
Summary of data gathered from focus group, interviews, and other communication with persons involved in regulation development--internal and external to EPA;

**"Flow-Charting the Regulation Development Process -- Initial Findings," September 29, 1992**
Provides general flow charts of how regulations are developed in media offices and presents findings drawn from these charts;

**"Establishing a Baseline for Evaluating Future Performance of a Reinvented Rulemaking," February 11, 1993**
Discusses why evaluation is important and discusses various evaluation options;

**Guiding Principles/Conclusions**
Provides overall themes for development of a new regulation development process;

**Workgroup Operations**
Discusses ways of improving the operation and management of workgroups;

**Suggestions on Dispute Resolution**
Presents ideas on a mechanism to resolving policy disputes between offices;

**Suggestions on Process for Cross-Agency Policy Decisions**
Presents a mechanism for managing major non-regulatory policy issues and programs;

**Alternatives Selection Process**
Discusses the goals and a mechanism for identifying, analyzing and considering reasonable policy alternatives;

**Early Guidance/Scoping**
Presents the notion of early policy guidance and scoping of issues;

**What Approaches do Federal Agencies use to Develop Regulations and Policy?**
Summarizes several regulation development "models" used by Federal Agencies based on information presented in Reinventing Rationality, The Role of Regulatory Analysis in the Federal Bureaucracy by Thomas O. McGarity.

## VII. REFERENCES

Because limited data existed on the current system, the Team's data collection strategy included reaching out to as many regulation development process "customers" as possible. Team members consulted with over 200 Agency staff to obtain information related to "program" experiences (i.e., air, water, research, etc) and "position" perspectives (senior management, workgroup chair, workgroup member, etc.) and with over 60 representatives from OMB, industry and environmental groups. In addition to talking to people, Team members drew upon information from previously conducted evaluations, relevant literature and Agency knowledge of other federal and state rulemaking processes. Data developed during this process include:

summaries of cross-Agency focus groups of workgroup members, workgroup chairs, and mid-managers;

summaries of DAA/DRA focus groups;

summaries of interviews with Assistant Administrators for OAR, ORD, OSWER, OPPE, OW, and OPPTS;

summaries of focus groups/interviews with staff within OAR, OW, OPPTS, OSWER, OPPE, OGC, OE, and regional offices; and

summaries of focus groups/interviews of external groups including OMB, local governments, environmental groups, and industry groups.

Additional major references used by the Regulatory Development Team included:

The Cadmus Group, A Study of Rulemaking Procedures in Regulatory Agencies, Draft Report Prepared for the EPA Regulatory Development Branch, September 29, 1989.

Thomas O. McGarity, "The Internal Structure of EPA Rulemaking", Law and Contemporary Problems, Vol 54:No. 4, 1991.

Clean Air Act Implementation Task Force, "Report to the Deputy Administrator," July 1990.

Cornelius M. Kerwin, "The Management of Rulemaking," draft manuscript, 1992.

# REPORT OF THE *WORKFORCE CAPACITY* TEAM

NATIONAL
PERFORMANCE
REVIEW

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## I. EXECUTIVE SUMMARY

**"Learning is not a task or a problem -- it is a way to be in the world."**-- Sidney Jourard

The capacity of the EPA work force to carry out our strategic priorities is the first implicit goal of the Agency before all other goals can be reached. Assessing and developing work force capacity must become an explicit goal. We want to change our culture to one in which learning is part of the way we do our environmental work every day.

Our vision is to recreate EPA's culture to that of a learning organization, which implies a work community in which individuals anticipate the results of their actions and look for creative, long-term solutions to environmental and operational problems; they are empowered to learn in pursuit of the Agency's mission. Building work force capacity through proactive learning goes far beyond a traditional view of training and career development. It requires our work force to develop a new perspective and new skills; it requires alignment between individual competency and organizational competency; it requires a management team which reflects and acts on a new set of organizational values.

The five target action areas we have explored, and the related recommendations, are the building blocks of cultural change. Each is dependent upon the existence and stability of the other, and cannot be disengaged, one from the next. If we choose to address some, and not all, we will risk reducing the changes to cosmetic rather than systemic and cultural.

**CREATE AN ORGANIZATIONAL CULTURE TO SUPPORT LEARNING AND GROWTH**

*Flatten management hierarchy
*Develop ongoing feedback systems
*Provide models of excellence

**BUILD MANAGEMENT CAPACITY TO DEVELOP STAFF**

*Change management selection criteria
*Improve and expand management training
*Build "360-degree" feedback systems
*Reassign managers with negative reviews

**ENGENDER INDIVIDUAL OWNERSHIP**

*Provide centers and systems for self-assessment
*Provide information on professional competencies
*Link individual competency development to budget process

**DEVELOP ORGANIZATIONAL SYSTEMS AND PARTNERSHIPS TO ENSURE ALIGNMENT OF WORK FORCE CAPACITY WITH AGENCY NEEDS**

*Strategically plan for human resources
*Restructure resource allocations
*Build career matrix

**DEVELOP "TECHNOLOGY TOOLS" TO SUPPORT LEARNING AND PERFORMANCE**

*Design a work force capacity network

*Create Learning Information and Performance Support System

Our vision of a learning organization demands powerful leadership, tremendous awareness and compassion for the fundamental changes these proposals bring to our existing work force.

## II. THE VISION

The capacity of the EPA work force to carry out our strategic priorities is the first implicit goal of the Agency before all other goals can be reached. Assessing and developing work force capacity must become an explicit goal. In order to address the challenges we face in the next century, which will be characterized by their complexity and interrelationship with other environmental and societal issues, we need to learn more and share more of what we learn in an integrated way. We want to change our culture to one in which learning is part of the way we do our environmental work every day.

Our goal is to recreate EPA's culture to that of a learning organization, which implies a work community in which individuals anticipate the results of their actions and look for creative, long-term solutions to environmental and operational problems; they are empowered to learn in pursuit of the Agency's mission. Employees in a learning organization share a common vision of the future; apply a systems approach to their work; develop themselves to attain mastery, both in subject and process; and are team players, committed to coordinated action and group learning. Building work force capacity through proactive learning goes far beyond a traditional view of training and career development. It requires our work force to develop a new perspective and new skills; it requires alignment between individual competency and organizational competency; it requires a management team which reflects and acts on a new set of organizational values.

This new, and broader, perspective looks beyond programs and media, jurisdictions and areas of technical expertise, to long-term systemic solutions. The ability to pool the collective expertise of the Agency is key to developing this perspective. As an organization, we need to explore emerging technologies to communicate and share information rapidly, and to help us learn from our mistakes. The technology itself is driving fundamental change. We need to direct it and guide it, or it will become an obstacle rather than a vehicle to becoming a learning organization.

The culture we envision is one in which our leaders and employees value growth and learning as the foundation of the Agency's environmental mission, not as separate from, or competing with the "real work." Our management team is selected, promoted, and valued for their willingness to develop staff as their highest priority. Our staff is selected and valued for their willingness to learn and initiate their own continuous growth. All organizational systems are aligned to ensure that EPA's mission and goals are inextricably linked to the capacity of the work force to carry them out. Work force capacity and strategic planning are interdependent and are coupled from the outset. The Agency's learning experts are consultants to the planning and budgeting processes. All employees have access to consistent learning, information, and performance support systems through state-of-the-art technology.

The five target action areas we have explored are the building blocks of cultural change. Each is dependent upon the existence and stability of the other, and cannot be disengaged, one from the next. To address some, and not all, risks reducing the changes to cosmetic rather than systemic and cultural.

Our vision of a learning organization demands powerful leadership, tremendous awareness, and compassion for the fundamental changes these proposals bring to our existing work force. Our employees are very adept at adjusting to programmatic or strategic redirections. However, they are rarely faced with having to redefine their work, their view of themselves, and their competencies in terms of the growth and direction of the organization. These proposals require a careful and thoughtful approach to managing comprehensive change in a tenured work force. All employees, in every type of job, will need the psychological protection provided through safe opportunities to relearn and practice, experiment and fail, grow and change.

## III. TARGET/ACTION CATEGORIES

1) Change the Agency culture to one which encourages people to learn and develop in ways which support EPA's goals and engenders desired organizational behaviors and values. We envision a culture where learning is on-going and supported systemically. Healthy organizational behaviors exist that foster growth and create an environment of respect for the individual, where honesty, trust, leadership, empowerment, encouragement, and fairness are inherent organizational values.

2) Select, promote, and reward managers based on their capacity and willingness to develop their staff. Their efforts enhance the professional development of their staff by providing, for example, coaching, mentoring, ongoing feedback and overall support for each individual.

3) Promote individual ownership of professional development through a personal competency plan which incorporates a self-assessment. The individual employee takes the initiative to find opportunities for growth.

4) Design Agency-wide systems to ensure alignment of: professional development with the EPA mission and goals; present work force skills with future organizational needs; management capacity to develop staff with employee initiative.

5) Provide all employees with consistent, "just in time" access to learning systems, information systems and performance support systems through state-of-the-art technology.

Our specific recommendations will affect the entire EPA work force in many ways and will also impact recommendations in several of the other National Performance Review reports. The reports with the most obvious overlaps or impacts are : Management/Leadership Development, Performance Management, Awards and Recognition, Quality Management, Quality Science and Intergovernmental Partnerships.

## IV. INITIATIVES (DO-ABLES)

### ACTION CATEGORY 1: CREATE AN ORGANIZATIONAL CULTURE TO SUPPORT LEARNING AND GROWTH

### RECOMMENDATION 1A: FLATTEN MANAGEMENT HIERARCHY

The Agency needs to eliminate levels of management to provide greater opportunities for growth, learning and efficiency at the staff level. Shifting responsibility for the productivity and quality of the work to the lowest possible organizational levels expands the opportunities for learning, creates flexibility and focuses energy at the levels where work products are best conceived and produced.

**SPECIFIC ACTIONS:** Immediate steps should be taken to freeze hiring into all management positions. A thorough review of existing or projected management vacancies should be undertaken to potentially eliminate the position or extend the span of control. The agency should begin by assessing the need for layers of management between the first-line of supervision and the senior management level. Reorganization may or may not be the obvious outcome of the delayering. The process will, however, result in new roles and responsibilities, greater spans of control, and different ratios at the existing management levels. The Agency should use all reasonable methods to flatten the management hierarchy and provide real growth opportunities for managers who wish to remain with EPA in non-managerial positions. All reasonable methods should be utilized such as early out programs, reassignment, reorganization, career counseling services and learning opportunities.

**WHO IS RESPONSIBLE:** The EPA Administrator and the Deputy Administrator are ultimately the only people who can be responsible for reorganizing the management hierarchy of EPA. Their personal values regarding diversity and supporting individuals throughout the change process will establish the tone and ultimate success of the redesign.

**TIMELINE:** Reorganizing of the management hierarchy at EPA can begin immediately, but real agency-wide change could take three years.

**BENEFITS:** A flattened organizational structure will improve and expand growth opportunities for all employees. There is tremendous potential and a real need for empowerment and flexibility at the staff level where the work is done.

Managers and employees will feel greater personal flexibility as movement into and out of management positions becomes routine and acceptable. The focus of our work can be directed towards the customer and the work product and less on servicing the management hierarchy.

**COSTS:** The time and expertise of human resource specialists throughout the agency to re-engineer and retrain the existing management hierarchy will initially be significant. There will be financial costs associated with lump sum payments and early out incentives. The retention of high quality performers who will move out of management positions will require the time of human resources specialists to assist in relocation and retraining as needed. All employees will need to become more skilled at working in self-directed teams where responsibility for work products is shared.

**EVALUATION MEASURES:** To truly measure progress in the re-engineering of the management hierarchy, an accurate base-line picture of the existing management structure is necessary. Review of the changes in the hierarchical structures should be monitored at the Administrator level every quarter for the first 18 months and annually as part of the on-going organizational review by the Administrator and Deputy Administrator. There needs to be assurance that senior managers at the local level are held accountable for restructuring their individual organizations through their performance standards. Using organizations such as Department of Defense or any number of private sector companies to benchmark our progress towards a more flattened organizational structure is also an important method of measurement.

**BARRIERS:** The existing civil service system with its linear professions and classification standards are critical barriers. The existing organizational hierarchy promotes followership rather than stewardship. The managers responsible for executing an organizational redesign have a vested interest in the employees whose work functions may be

in question. We presently reward the creation of larger organizations and growth; this equates to survival and longevity. Management resists investment in existing employees and prefers to hire new employees and work around people who need redirection and retraining.

**ACTION CATEGORY 1: CREATE AN ORGANIZATIONAL CULTURE TO SUPPORT LEARNING AND GROWTH**

**RECOMMENDATION 1B: DEVELOP ONGOING FEEDBACK SYSTEMS**

Develop organizational feedback systems to ensure that feedback is comprehensive, both up and down as well as lateral, with input from peers, partners and customers. The focus of the feedback process should be organizational behaviors which exhibit honesty, trust, ability to work on teams, leadership, integrity, fairness, respect for the individual, balancing work, and life issues.

**SPECIFIC ACTIONS:** Every EPA office, region, and laboratory must use an organizational assessment tool to get feedback from the employees, their partners (states, environmental groups, etc.) and their customers (public). The instrument should be consistent agency-wide and conducted once a year for the first two years and then every 18 months (ongoing). The survey must address the specific values and behaviors (described above) which support a healthy, learning culture.

All employees, both managers and employees, should receive specific feedback about their individual behaviors as they relate to supporting a learning culture. Managers would be reviewed by staff, peers and their supervisors. Staff would be reviewed by peers and their supervisors. The survey instrument should be used agency-wide and simple to complete with the same focus on behaviors such as honesty, respect for others, trust, leadership, fairness, integrity, team skills, etc. The behaviors affecting the work environment and the capacity of employees to grow and learn should be treated as seriously as the intellectual skills needed to produce quality work products.

**WHO IS RESPONSIBLE:** Changing the organizational culture through honest feedback around values and behaviors must be driven from the highest level (Administrator and Deputy). We have organizations where attempts at getting this type of organizational and individual feedback have been successful; but, in general, it is inconsistent and not <u>value</u>-oriented.

**TIMELINE:** The design and use of organizational and individual assessment instruments could be done within six months. Coaching managers and employees on how to give and receive feedback effectively may take six months to a year.

**BENEFITS:** The benefits would be constant feedback on how we need to redirect and realign our course to create an organizational learning ethic. The potential to assure

alignment between the organizational values and individual behavior will create a more productive and less stressful work environment.

**COSTS:** The primary costs will involve the time to design the organizational and individual survey tools. The implementation will involve a great deal of initial investment on the part of human resources development specialists to communicate the use of the assessment instruments, coach people on how to share feedback effectively, conduct the survey and analyze the data. Work also needs to be done at the local and national levels with the labor unions.

**EVALUATION MEASURES:** To assure that the assessment systems are in place and being used effectively, form random focus groups throughout the country after each assessment cycle. Focus groups should be led by a headquarters team. The initial surveys and their results will serve as baseline data to show improvement over time.

**BARRIERS:** Many of the existing organizational systems, i.e., position descriptions, performance appraisals, etc., have a "mythical" quality. They don't really reflect reality. It will be difficult to get buy-in to a new system because of the existing cynicism. People will be afraid of the exposure from this type of assessment. There may also be ethical and legal problems. People are not used to getting this type of feedback and most people have difficulty giving or receiving feedback. There is no real belief in amnesty.

**ACTION CATEGORY 1: CREATE AN ORGANIZATIONAL CULTURE TO SUPPORT LEARNING AND GROWTH**

**RECOMMENDATION 1C: PROVIDE MODELS OF EXCELLENCE**

**SPECIFIC ACTIONS:** All employees, particularly the organizational leaders, need to be exposed to models where people see a better way to behave around the ideal behaviors which foster a learning environment. Centers of excellence need to be created within the agency. We should look for managers and employees who truly behave in ways that promote growth and learning. Model organizations need to be supported and publicized. Employees should be encouraged to rotate into these model organizations. Excellent performers could be paired with those who need exposure to different ways of behaving. Training should be provided that is specifically geared to help people see themselves through the eyes of others. This will help people to get the feedback they need with the help of trained professionals. Examples of training that are geared to the behaviors that are critical to creating a learning ethic are: The Looking Glass course, Covey's 7 Habits, The National Training Lab's course, Myers-Briggs Workshops, American Managements' Executive Effectiveness course, etc.

**WHO IS RESPONSIBLE:** Learning through exposure to training or excellent models becomes the responsibility of each individual, their supervisor, and the human resources development specialists or learning specialists who essentially broker the opportunities. Managers, particularly, need to support and encourage their employees as they attempt to learn or improve their behaviors and work performance.

**TIMELINE:** This is an on-going process; however, immediate attention can be focused on the need for leaders to assess themselves in light of a new organizational value system. All employees should begin immediately to assess their abilities as learners as well as their capacity to encourage and support others as learners.

**BENEFITS:** Exposure to excellent models and training provide people with the tools and opportunities to change their behaviors. The possibility of changing the EPA culture to one which values growth and learning is only possible if employees are given what they need to make the change.

**COSTS:** The costs are very real with many of the suggested training courses costing $500.00 - $1200.00 per person. Rotational or coaching opportunities often involve time and travel expenditures. There will also be in-house overhead expenditures for some of the training to be offered in-house.

**EVALUATION MEASURES:** Conduct follow-up interviews with people four weeks and eight weeks after they have taken a training course or returned from a coaching experience.

Make sure that the supervisor and the employee have a conversation about their expectations before the employee takes the training or goes on the assignment. This preparatory discussion has proven to have the most significant impact on the learner's retention and behavior change when they return to the workplace.

**BARRIERS:** Employees rarely experience any interchange with their supervisors before a learning experience or after. The present organizational ethic rarely connects a learning experience to any actual results or expectations for change. Employees are often not acknowledged nor given more opportunities to use their new skills when they return to the workplace. The major complaint for most learners is the lack of resources, both travel and training dollars, which are limited particularly for those who want intermediate- and senior-level skills training or experiences.

**ACTION CATEGORY 2: MANAGEMENT (LEADERSHIP) CAPACITY TO DEVELOP STAFF**

**RECOMMENDATION 2A: SELECT AND RETAIN MANAGERS/LEADERS BASED ON THEIR CAPACITY TO DEVELOP STAFF**

The criteria for the selection of individuals into the leadership corps must include examples of their capacity for coaching, mentoring, motivating and developing people. Individuals selected into the corps would be required to take formal training in fields related to human development. As an integral part of the selection process, selected candidates would serve an 18-month probationary period. At the end of the first nine months, their performance would be evaluated by superiors as well as subordinates.

**SPECIFIC ACTIONS:** The agency should develop standard quality ranking factors for leadership positions with significant weight placed on the applicant's capacity for coaching, mentoring, motivating and developing.

Candidates for leadership positions would be required to submit as part of their application package at least four or five written recommendations from peers, addressing the candidates capacity for coaching, mentoring, motivating and developing. The recommendations would be submitted directly to the Human Resource Office to ensure confidentiality and heavily weighted in the selection process.

Leadership candidates would serve probationary periods with each new position and with every promotion to a new level of management.

**WHO IS RESPONSIBLE:** A team comprised of Human Resource Office professionals, line managers and staff members would develop a well defined selection process which would include quality ranking factors, application criteria and probationary assessment procedures.

**TIMELINE:** One week of devoted time to develop a pilot for a selected organization would be necessary. An additional week of devoted time would be needed for the teams to develop a model process.

Eighteen months would be needed to pilot the process in the selected organization and to evaluate its progress.

**BENEFITS:** The most significant benefits would be the creation of a more productive and energized work force where continuous growth and learning is valued. This may result in less turnover and a more motivated work force.

**COSTS:** The primary costs would involve the development of the selection criteria and the time involved in peer submissions and review. Additional coaching and feedback for those who were not selected would be critical.

**EVALUATION MEASURES:** Randomly audit all EPA offices, labs and locations to assure that their selection criteria and process includes the recommended actions above. Review peer assessments of selected candidates as well as the nine-month assessments of selected managers by their employees. These audits should be consistent and ongoing to assure that real change is in progress.

**BARRIERS:** The present selection process places heavy emphasis on whether you are liked by the selecting official and your technical expertise. Little or no emphasis is placed on your ability to grow and learn (role model) nor whether you can develop staff. There is a lack of internal role models for managers and supervisors to learn from. When managers don't succeed, we send them to training when, in fact, they may lack both the commitment and capacity.

**ACTION CATEGORY 2: MANAGEMENT (LEADERSHIP) CAPACITY TO DEVELOP STAFF**

**RECOMMENDATION 2B: PROVIDE ONGOING LOCAL MANAGEMENT TRAINING WHICH INCLUDES SKILLS TRAINING ON COACHING, MENTORING, ETC.**

**SPECIFIC ACTIONS:** Create a high quality core curriculum for the entire management/leadership corps with emphasis on coaching, mentoring and human development skills. The sessions should be practicums with feedback. These training modules should be a part of a larger ongoing curriculum for managers that would be available to them at their local offices, regions or labs. The program should extend over a period of time and involve skills that have direct practical applications to the working environment.

**WHO IS RESPONSIBLE:** An experienced team of learning specialists from the EPA Training Institute with members of the leadership corps and staff should develop the training modules for the agency. These modules should be targeted to specific skills to help managers improve their coaching and mentoring. The delivery of the training sessions would be the responsibility of the EPA Training Institutes throughout the country.

**TIMELINE:** One week of focused time would be necessary to develop the training modules. It would take one year to test and evaluate the pilot.

**BENEFITS:** Managers/leaders will potentially be able to facilitate the growth and capacity of their staff as a continuous process.

**COSTS:** Time and expertise will be required at each office and lab to maintain an ongoing training program available to all managers/leaders. In addition, for those Training

Institutes who already offer an ongoing curriculum, they will need to incorporate additional offerings related to facilitating staff growth and development.

**BARRIERS:** The agency has never valued ongoing skills training "just in time" for managers. The present offerings at the national levels are two- or three-day awareness courses which, in many cases, will be the only training a supervisor will receive. Many attempts have been made to change this approach but few organizations have made the commitment necessary. Management training is seen as an event and not an ongoing part of a leader's professional growth. The leaders are often not role models for their staff and do not take their own development seriously.

**EVALUATION MEASURES:** Randomly sit in on training offerings at local Training Institutes. Send experienced human resources development specialists to give feedback to local Institutes on their management/leadership curricula. If experienced specialists reviewed the course evaluations on a routine basis, this would indicate that the courses were being offered and indicate the quality of the offerings.

**ACTION CATEGORY 2: MANAGEMENT (LEADERSHIP) CAPACITY TO DEVELOP STAFF**

**RECOMMENDATION 2C: PROVIDE ANNUAL FEEDBACK ON THE MANAGERS/LEADERS CAPACITY TO DEVELOP STAFF**

Managers/leaders need to receive ongoing feedback from their staff on their coaching and mentoring skills. See our Specific Actions 1B for a complete description of this feedback process.

**ACTION CATEGORY 2: MANAGEMENT (LEADERSHIP) CAPACITY TO DEVELOP STAFF**

**RECOMMENDATION 2D: REASSIGN TO NON-MANAGEMENT POSITIONS AFTER CONSECUTIVE NEGATIVE STAFF REVIEWS**

**SPECIFIC ACTIONS:** Managers should receive feedback from their staff and their supervisors about their capacity to develop staff; however, consecutive reviews which indicate a mismatch with the necessary competencies should result in reassignment to a non-managerial position. It is important that opportunities to move into and out of management positions be handled constructively. Many outstanding technical experts find themselves in management positions and they are inappropriately matched to the competencies of the job. We would hope that thoughtful support for the individual would assure their continuation with EPA in a position that truly utilizes their skills and contributions.

**WHO IS RESPONSIBLE:** The group with primary responsibility would be the supervising manager in conjunction with the human resources development staff who would oversee the organizational and individual feedback systems described in 1B. Reassignment and counseling services could also be handled by the entire human resources staff. A manager could voluntarily opt out of the managerial profession; however, an external peer review board would be the most constructive way to determine if someone should be invited out after reviewing two years of unsatisfactory feedback results.

**TIMELINE:** We are recommending reassignment after consecutive negative reviews. This would occur after two years.

**BENEFITS:** Both managers and employees would understand that the agency has a plan for moving employees who are not in positions where they can be most effective. It is critical for the agency to have a strategy, particularly for our leadership positions which directly affect the productivity and work of our employees. The benefits of this would be greater productivity and the potential for greater job satisfaction.

**COSTS:** Initially, time will be required to complete the feedback surveys and counsel managers on the results. Subsequent time investments might involve coaching, counseling and training to help managers to improve their skills. For managers moving out of the managerial profession, counseling and retraining will also be required.

**EVALUATION MEASURES:** Offices, regions, and labs should be audited to assure that management review panels are in place. Follow-up interviews should be conducted with managers who leave their managerial positions to assure that counseling and support were provided. Reviews could be conducted as part of the other audits that are recommended throughout this report. The management review panels in each office, region, and lab should also prepare annual summary reports.

**BARRIERS:** The EPA culture perceives that anyone leaving a management position has failed so the move is viewed as punitive. Managers who truly take time to develop staff are rare and often not reinforced for their behavior. We are not successful at reassigning people to mutually satisfactory new positions, particularly at the senior management level.

**ACTION CATEGORY 3: INDIVIDUAL OWNERSHIP**

**RECOMMENDATION 3A: PROVIDE CENTERS AND SYSTEMS FOR SELF ASSESSMENT AND CAREER INFORMATION**

**SPECIFIC ACTIONS:** The agency needs to create self-development centers and systems to provide employees with the opportunities to conduct self-assessments and gain professional career information. The centers should be linked to the existing network of Training Institutes and self-learning centers. See Recommendation 5A for specific systems examples. Professional human resources development specialists trained in human development need to staff the centers at each EPA location and office.

**WHO IS RESPONSIBLE:** The decision to provide employees with both trained counselors and systems to support their career growth is a senior management investment decision. The existing human resources development offices would need to be staffed appropriately to offer these opportunities to all employees.

**TIMELINE:** With immediate commitment, this would take at least two budget cycles to implement.

**BENEFITS:** Employees could self-direct their own professional growth with the tools and professional assistance available to them.

**COSTS:** Some of the EPA regions are developing self-learning centers as part of their Training Institutes. These centers are still relatively rare. To create or expand existing centers, costs would include facilities/space, hardware, software systems, professional counselors and initial advertising.

**EVALUATION MEASURES:** Users of the development centers and systems should be surveyed as they use them. This would allow you to measure the level of usage and satisfaction. A voice-mail feedback system might also be user friendly and a good way of getting input on the quality of the services. It is always helpful to use other successful organizations with established career centers as a benchmark.

**BARRIERS:** Lack of resources and commitment have consistently been the primary barriers to offering these services. Most offices with professional counselors utilize their resources to produce and deliver training. Offices are understaffed in both the training and career counseling areas. Providing meaningful counseling services usually suffers as a result of the demand for training services.

**ACTION CATEGORY 3: INDIVIDUAL OWNERSHIP**

**RECOMMENDATION 3B: PROVIDE INFORMATION ON COMPETENCIES NEEDED FOR GROWTH IN A PROFESSION**

**SPECIFIC ACTIONS:** Provide all EPA employees with up-to-date information on the competencies required for growth in their profession. This information needs to be linked directly to the organizational strategic directions and our customers'

needs. The speed of change requires us to create an on-line system that would be designed around the competencies required within professional families. See Recommendation 5A for complete description.

**ACTION CATEGORY 3: INDIVIDUAL OWNERSHIP**

**RECOMMENDATION 3C: LINK INDIVIDUAL COMPETENCY DEVELOPMENT TO THE LOCAL BUDGET PROCESS. UPDATE ONCE A YEAR.**

**SPECIFIC ACTIONS:** Individual competency development planning and the local (region, lab, office) budget planning process need to be connected annually. Local budget planning is ad hoc and handled very differently at each EPA location which affects the local training and development allocations for each year. In addition, the individual competency plans should be updated at least once a year at the mid-year review and possibly again six months later.

**WHO IS RESPONSIBLE:** The importance of funding and supporting employees' competency needs must be a clear message from the Administrator to each of the RAs, AAs and lab directors. The timing of the competency development plans and the local budget planning should be strategic. Work needs to be coordinated between the local senior managers, the comptroller's office, and the human resources development staffs to assure linkage and appropriate funding.

**TIMELINE:** Local budget planning usually occurs in the fourth quarter for the following fiscal year. The next budget that could be affected would be FY'95 during the spring and summer of 1994.

**BENEFITS:** Employees would understand that the agency truly valued their planning process and supports their development needs. The training and development budgets would be more directly linked to real employee development needs.

**COSTS:** There are no consistent organizational systems to assess employee training and development needs. Few if any of the existing assessments are linked to the strategic goals; most are programmatically linked. Without a comprehensive integrated assessment process, cost estimates are not possible. Time will be required to update the competency plans. These will be on-line so the time involved should be minimal.

**EVALUATION MEASURES:** When budgets are formulated at the macro level (two years in advance) and at the local levels, learning specialists (human resources development specialists) need to be involved in the planning.

We will have succeeded if EPA integrates its learning specialists into preparing the work force with each new initiative, legislation, administration, and policy or technology. Senior managers should be routinely asked by the Administrator and Deputy Administrator how they will make the linkage between work force capacity and their organizational goals; what has changed in their assessment of work force development needs; and how this is reflected in their budgeting process.

**BARRIERS:** The present training and development budgets are an afterthought and dependent on what was budgeted the year before or what is left over. The individual competency planning presently known as IDPS are not done consistently and often never completed. For the most part, neither managers nor employers take them seriously.

**ACTION CATEGORY 4: DEVELOP ORGANIZATIONAL SYSTEMS AND PARTNERSHIPS TO ENSURE ALIGNMENT OF WORK FORCE CAPACITY WITH AGENCY NEEDS**

**RECOMMENDATION 4A: STRATEGIC PLAN FOR HUMAN RESOURCES**

Our strategic planning process must include the means by which the work is done: our work force capacity. In planning for future challenges, we must also plan for and create the capacity in our employees to understand, anticipate, and adapt to these future demands. Learning and strategic planning are not isolated activities; they are interdependent and should be linked at the outset of the process. The agency's learning experts need to be involved and active in the process of setting EPA's strategic direction to ensure that opportunities to learn are created in the workplace, wherever, whenever and however needed, and that human potential and motivation are considered in long-term planning. A review of the agency's competency database, as described in our Recommendation 5A, will be included in this process. A strategic plan which includes consideration of work force capacity will allow top agency officials to make more complete decisions regarding not just WHAT will be done, but also HOW it will be done -- what gaps need to be filled or overlaps minimized in terms of learning, competencies, succession, recruitment, management, etc.

**SPECIFIC ACTIONS:** As many progressive corporations have done, separate the function of developing work force capacity and learning from the traditional personnel operations function. In high-performance organizations, this function resides at the top-most level (see Reference section for specific citations). Write guidelines and begin with the next strategic planning and budget formulation cycles to identify competencies needed to do the work and achieve the proposed results. Start building a list of competencies by professional "families" and begin to identify critical gaps.

**TIMELINE:** This process could begin as early as the next strategic planning and budget formulation cycle.

**BENEFITS/COSTS:** Strategic planning for human resources makes development investments much more intentional and far less reactive. Costs to implement the strategic planning process are negligible, but the process results will require a significant shift in how and where we invest our resources.

**EVALUATION MEASURES:** Progress on this recommendation will be clearly marked by the inclusion of work force capacity as a critical item in formulating an office budget. Organizational placement of the work force capacity responsibility in the Administrator's Office will indicate a change in the way the agency addresses work force development.

**BARRIERS:** The most significant barrier to implementation of this recommendation is the culture in which we currently operate. Learning and development are not valued as the "real work" of the Agency, and yet no work can be done without it. A recent OPM study found that only a quarter of EPA's work force believes they need training, though 50 percent stated past training had improved their performance. The same study found that 43 percent of EPA's work force felt they were "too busy on the job" to attend training, and 42 percent cited a lack of funds as reason for not getting the training they need.

**ACTION CATEGORY 4: DEVELOP ORGANIZATIONAL SYSTEMS AND PARTNERSHIPS TO ENSURE ALIGNMENT OF WORK FORCE CAPACITY WITH AGENCY NEEDS**

**RECOMMENDATION 4B: RESTRUCTURE RESOURCE ALLOCATIONS**

We recommend a restructured approach to human and financial resource allocation, which funds projects and priorities rather than organizations and invests more in proven successes than potential failures. Our present resource allocation process results in individual organizational budgets and the initiation of similar projects which creates enormous redundancy and waste. For example, there are currently 43 separate Training Institutes and initiatives sponsored and funded by EPA, and we create more and more chaos with every identified "problem area." It will also provide the necessary support and impetus for employees to grow in the direction of the agency's goals by eliminating "tenured" positions and programs, broadening our cross-media perspective, and focusing on measurable results.

**SPECIFIC ACTIONS:** Refer to EPA's Planning and Budgeting NPR team and/or the government-wide Mission-Driven Budgeting NPR team. This is neither a new theme nor is it exactly within our subject area, but our team supports the concept and validates it from a work force capacity perspective.

**BENEFITS/COSTS:** Many key decisions made in the isolation of a program office have systemwide consequences that stretch over years and environmental consequences that extend for decades. EPA's compartmentalization creates redundancies of effort and product, sustains parochial concerns, creates a high risk for surprises and alienation, and misses too many opportunities for creative problem-solving.

**BARRIERS:** The Congressional appropriations structure and process is, perhaps, an insurmountable barrier.

**ACTION CATEGORY 4: DEVELOP ORGANIZATIONAL SYSTEMS AND PARTNERSHIPS TO ENSURE ALIGNMENT OF WORK FORCE CAPACITY WITH AGENCY NEEDS**

**RECOMMENDATION 4C: BUILD CAREER MATRIX**

Professional flexibility and ease of movement are paramount to this recommendation. The career matrix is an alternative to career ladders or dual career paths. We propose a system which has a matrix orientation to career competencies and development, such that, if depicted graphically, it resembles a grid rather than a series of stovepipes indicating growth as linear upward progression. There are many ways to develop professionally, including lateral movement, assuming different job types and categories, building expert skills, broadening competencies. For example, an individual should be able to move into management positions if they want to and have the requisite skills, but they also should be able to move out of management positions as a choice: with grace and non-punitively. Support staff positions without career options for growth would cease to exist. Rather, we would develop competency areas for administrative system managers, logistical experts, etc. Leadership competencies are developed for all employees, regardless of job type or grade. The career matrix allows the individual freedom of movement throughout the agency, based on competencies, and allows the organization to locate people through competencies rather than job classifications for short-term work groups or long-term assignments. The ease of movement may extend to other environmental partners -- states, other federal agencies, related congressional committees.

**SPECIFIC ACTIONS:** Develop clear families of competencies. Establish pay bands for flexibility. Create a career-brokering system, both automated and a physical place, where an individual can obtain information about different competency families, career counseling, and assistance.

**TIMELINE:** This is a long-term, iterative cultural change.

**BENEFITS/COSTS:** This eliminates focus on individual knowledge in isolation of the working environment and better utilizes the full range of competencies of each individual.

**EVALUATION MEASURES:** Compile statistics on movement through the agency. Survey the work force to determine areas of satisfaction and dissatisfaction.

**BARRIERS:** The current personnel classification system is the most significant barrier to this concept; it is the antithesis of what we envision. Other barriers fall out from the culture created by the Civil Service system: the only way to grow is up, management is the only path to "success," "I own my job" mentality, "I own my staff" mentality, security that comes with inflexibility.

**ACTION CATEGORY 5: DEVELOP "TECHNOLOGY TOOLS" TO SUPPORT LEARNING AND PERFORMANCE**

**RECOMMENDATION 5A: WORK CAPACITY NETWORK**

This is a multi-faceted, agency-wide system, accessible by all employees, which links (at least) eight applications related to work competencies. The "centerpiece" of the system is a list of competencies, grouped by major job families, needed to do the work required by the agency. This is a dynamic list which expands, contracts, and changes with agency priorities, customer needs, and expert assessment. It is updated annually, in conjunction with the strategic planning process. The next most critical element of this system is the individual checklist against which all employees self-assess their own competencies for their job twice a year. Individual competencies may be developed through work or life experience, individual study, or course work, but must be demonstrable. These self-assessments are validated by professional peers, customers, subordinates or other team members, and supervisors. Once individual competencies are validated, the information is stored in the system.

In aggregate, the system will be able to track and show work force competency gaps (creating opportunities for individual development) and surpluses (indicating areas in which individuals need to divest and so be able to update different skills). In this way, employees have control of, and can make choices about, their own development needs in the direction of identified agency needs. Read and/or write access is limited, based on the application or the private nature of the information. IBM has a similar prototype which the agency can learn from and use as a benchmark.

Some other applications/capabilities of this system include:

Competency Database -- allows searches and sorts based on type and level of competency to create teams of employees with desired skill mix for specific projects (e.g., select

expert in groundwater testing AND good facilitation skills, select all employees with base competency in Polish language)

Individual Competency Development Plans -- a "reinvented" version of the current IDP, more focused and in alignment with the agency's priorities

Organizational Competency Development Plans -- organizational versions of the above, used as part of the strategic planning process

Electronic Bulletin Board -- accessible by all employees; advertises permanent positions and temporary opportunities, based on types and levels of competencies required

Electronic Catalogue of Computer-Based Training (CBT) -- all on-line courses are linked to listed competencies and level of proficiency (e.g., basic familiarity, expert, etc.) upon successful completion

On-Line Registration for In-House Courses -- allows on-line tracking, tallying, etc.

**SPECIFIC ACTIONS:** Start immediately building lists of competency "families" by interviewing every program area and special agency group (e.g., Women in Science and Engineering, Secretarial Advisory Council, Human Resources Council, Science Advisory Board, etc.). Research prototypes, other than IBM, and establish partnerships with critical functions like OIRM.

**WHO IS RESPONSIBLE:** This system needs to be run centrally and at a high enough level to give credence and full organizational support to the process. The process should be managed by the agency's human resources development and learning experts, with support from Information Resources Management.

**TIMELINE:** This process could begin immediately; implementation of the system would take three to five years. Some organizations are already beginning to build local systems.

**BENEFITS/COSTS:** EPA needs to cultivate a learning organization in which individuals anticipate the results of actions and look for creative, long-term solutions to environmental and operational problems. This requires all individuals to view their jobs expansively, to focus on competency and performance, and be empowered to act. This change in perspective begins with an investment in our work force.

**EVALUATION MEASURES:** The best indicator of a viable state-of-the-art system would be if private industry and others use EPA's system as a benchmark model. On-line spot

checks and surveys of the system to determine frequency of use by employees could be used. Another measurable indicator would be that 100% of employees (over time) are updating their personal competencies on line twice per year and the agency has a process in place for identifying competencies based on mission and strategies.

**BARRIERS:** The current performance management system is a barrier to implementation of this network which virtually eliminates traditional performance reviews. Lack of resources, both human and financial, will be a barrier to set-up and maintenance.

**ACTION CATEGORY 5: DEVELOP "TECHNOLOGY TOOLS" TO SUPPORT LEARNING AND PERFORMANCE**

**RECOMMENDATION 5B: LIPSS (see Reinvention Lab Proposal) (Attachment C)**

A learning, information, and performance support system (LIPSS) is a means of producing consistent, "just-in-time" access to material needed to do a job. Every competency is developed through learning, which can be defined as a change in behavior. To do some tasks, real learning must take place; for others, one requires supporting information, such as reference books, data tables, or regulations. Many tasks, however, need "support" tools so they can be completed quickly and efficiently, like on-line form templates, checklists of procedures, or boilerplate language. These are the hallmarks of a LIPSS, and they can be created to support aspects of every job.

**SPECIFIC ACTIONS:** EPA has a number of pieces of different LIPS systems already, but they are disjointed, not widely used, and not networked for general access. Our Reinvention Lab proposal comes from this recommendation. It requires a hardware and communications network, reaching all 42 EPA facilities, to support applications designed for CD-ROM and interactive video, networked databases, and expert systems. Safety and health training is our recommendation for the first LIPSS; contracts and grants management and other competency areas will follow.

**TIMELINE:** The Safety and Health LIPSS (Attachment C) could be operational within one year.

**BENEFITS/COSTS:** Benefits are more competency-driven, appropriately targeted, cost-effective training which also allows a "refresher" boost when needed. Savings will accrue to the agency in travel costs and both direct and indirect training costs. Employees have greater ownership of their own development. Products will be a direct benefit to all programs that have field personnel and will be directly applicable to other federal, state, and local government agencies and private sector firms.

An estimated 1800 EPA employees are required to have health and safety training annually, at a cost in excess of $1 million per year. EPA just awarded a $45 million contract to provide health and safety training to federal and state personnel. Development costs may be up to $3 million. Capital costs are fixed and, once courseware is created, the operating costs are low. If developed under a partnership arrangement with a private sector cooperator, rents or royalties payable to EPA could recoup some of the expenditures. Two private firms have already inquired about establishing such a partnership with EPA.

**EVALUATION MEASURES:** Pre- and post-competency tests can be given and tracked on-line.

**BARRIERS:** There are regulatory barriers governing acquisition of products and services, the Federal Technology Transfer Act, OSHA and EPA series of health and safety rules and regulations, EPA's internal rules and procedures governing ADP equipment and software, and OSHA's hours-based (not results-based) training requirement.

There are also cultural barriers. EPA is an information-intensive agency which doesn't take the time to learn or use its own resources. EPA has invested heavily in information and data processing equipment, establishing Local Area Networks, and placing computers on employees desks. Yet there is no evidence that this investment has translated itself into learning and, therefore, productivity gains.

## ATTACHMENTS

A. EPA Reports and Reference Documents

B. General Bibliography and References

C. Reinvention Lab Proposal

D. Names and Addresses of the Work Force Capacity Work Group

## EPA Reports and Reference Documents

Environmental Law Institute. "Training for States: The EPA Institute and Federal-State Training. (Draft Report)" January 1988.

The Environmental Law Institute examined state training needs and the organization of state training programs for the EPA Institute in order to identify ways in which a federal-state training partnership might be developed. The study discusses the finding of the ELF based on looking at eleven state programs and talking with EPA and state officials.

National Academy of Public Administration. "Steps Toward a Stable Future: An Assessment of the Budget and Personnel Processes of the Environmental Protection Agency" May 1984.

This study is an assessment of EPA's personnel management and budgeting systems in the summer of 1983 done at the request of William Ruckelshaus. The panel conducted extensive interviews with EPA's top leadership, agency employees, and outside experts. It also administered a survey questionnaire to more than one-tenth of EPA's employees. The finding, conclusions, and recommendations of this study are presented and discussed.

National Academy of Public Administration. "Steps Toward a Stable Future II: A Progress Report on Human Resources Management at the Environmental Protection Agency." August 1985.

This document is a progress report on the implementation of the 1984 study "Steps to Stable Future." It discusses the results of a 1985 survey and compares it to the one done in 1984.

U.S. EPA. "The Impact of Technological Changes on the EPA Work Force." June 1989. A report prepared for William Reilly by the Human Resources Council.

This document looks at the changes technology has brought to the work place and recommends what steps should be taken to prepare for the future. The study explores the impact of technology on the following major areas: human resources management programs, communications and information, space and facilities planning, and the resource planning process.

U.S. EPA. "EPA Institute Advisory Committee Annual Report." November 1991.

This report takes a holistic view of the agency training activities and policy rather than a narrower view of the institute's operations and delivery functions. It also identifies responsibilities and initiatives of the EPA Institute and the development of an action plan called "Vision of Training at EPA."

U.S. EPA. "Administrative Support Careers Management System." November 1991. A report prepared by the National Human Resources Council.
This document reflects the changes in traditional secretarial and support roles. It provides alternative career paths for administrative support staff and specific examples of position descriptions and implementation procedures.

U.S. EPA. "EPA Training Professionals' Symposium, Final Report." September 1991. Prepared by Mary Fillmore.
This report begins by focusing on the accomplishment of training professionals throughout the agency, followed by a discussion of how training contributes to the EPA mission. It also examines the organizational climate and explores the supporting factors and obstructions to implementing the "Curriculum of the Nineties" program.

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U.S. EPA. Task Analysis of Job Series 1301 (Physical/Environmental Scientist) and 1320 (Chemist)(Contract No. 68-01-6925. JWK International Corporation) August 20, 1986.

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"Charting Your Career in EPA: A Brochure for Employees on Career Ladders and Paths." Draft, September 1990.

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U.S. EPA. "Mapping Career Paths at EPA." April 1992 (202-F-92-001). Tool kit for career counselors and employees for understanding careers within EPA. As a minimum the kit includes two publications entitled, "Step One: Career Planning Workbook- matching Your Skills, Abilities, and Interests with EPA Needs," and Step Two: Finding Your Career Direction."

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Joint publication explaining the various types of jobs included in the field of environmental protection.

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**MEMORANDUM**

**SUBJECT:** Reinvention Lab Proposal

**FROM:** Georgianna Bishop, NPR Team Leader
for Career Development

**TO:** The Administrator

The capacity of our work force to carry out your strategic priorities is the first implicit goal of the Agency before all other goals can be reached. Assessing and developing work force capacity must be an explicit goal. In order to address the challenges we face in the next century, which will be characterized by their complexity and interrelationship with other environmental and social issues, we need to learn more and share more of what we learn in an integrated way. We need to change our culture to one in which learning is part of the way we do our environmental work every day. Learning, which presently takes place one person at a time, one course at a time, will never get us to that goal.

Our "blue sky" ideal desired state is to recreate EPA as a learning organization, which implies a culture in which individuals anticipate the results of their actions and look for creative, long-term solutions to environmental and operational problems; they are empowered to learn in pursuit of the Agency's mission. Proactive learning goes far beyond a traditional view of technical training. It requires our work force to develop a new perspective and new skills; it requires alignment between individual competency and organizational competency.

Our team's reinvention lab proposal is the first part of the first step in realizing our vision of EPA as a technology-linked, competency-based, mission-directed learning organization. We chose it because it is broad-based, achieves a far better result than the current state, and costs less.

PROPOSAL: Build one learning application of a "Technology Highway" which reaches all 42 EPA facilities, and has a positive impact on other Federal agencies and state and local governments, by creating a learning, information, and performance support system [LIPSS] to achieve the intended result, rather than complying with the stated means of the Federal health and safety requirements.

AUDIENCE: Federal, state and local government agencies with on-site personnel at locations with hazardous substances.

AREAS FOR REGULATORY FLEXIBILITY: FAR and EPAAR regulations governing acquisition of products and services, the Federal Technology Transfer Act, OSHA and EPA series of health and safety rules and regulations, EPA's internal rules and procedures governing ADP equipment and software, and OSHA's hours-based (not results-based) training requirement.

BACKGROUND: EPA must comply with OSHA's health and safety training requirements, which demand up to 40 hours of initial training and eight hours of annual refresher training for employees going to locations where hazards are present.

EPA hires contractors in most cases to develop and deliver this training which is offered throughout the year at predetermined locations. Generally, a single training course is offered to all attendees, despite differences in the programs and types of hazards that they will encounter on-site. Because of the difficulty in scheduling courses and travel, EPA's own review has found that compliance rates are low.

PROJECT DESIGN: This proposed project combines technology-based training tools (CD-ROM and interactive video), on-line databases, and performance support aids (on-line checklists and expert systems) to create a comprehensive training and planning system which exceeds OSHA's health and safety and site safety planning requirements. The system uses proven technologies that can be inexpensively distributed or networked to make it widely available.

Pieces of the system already exist. The Office of Underground Storage Tanks has developed an interactive video to provide health and safety training to UST workers and a hypertext version of the UST regulations. Florida's Storage Tank Program was the first to use these learning tools to comply with the rules. The Office of Emergency and Remedial Response has developed an expert system for site safety planning; and the Office of Administration's Health and Safety Division is using commercial databases and developing CD-ROM based health and safety training. The project will integrate these tools and build a comprehensive system that cuts across all EPA programs and lab facilities.

Our federal, state and local partners are also subject to the same health and safety training requirements, as is the private sector. The project would look at ways of marketing or distributing the compliance system to these other groups.

CURRENT COSTS: The OSHA 1986 regulatory impact analysis estimated national expenditures at $148 million per year. An estimated 1800 EPA employees are required to have health and safety training annually, at a cost in excess of $1 million per year. EPA just awarded a $45 million contract to provide health and safety training to Federal and State personnel.

DEVELOPMENT COSTS: Up to $3 million. If developed under a partnership arrangement with a private sector cooperator, rents or royalties payable to EPA could recoup some of the expenditures. Two private firms have already inquired about establishing such partnership with EPA.

BENEFITS: More competency-driven, appropriately targeted, cost-effective training which also allows a "refresher" boost when needed. Savings will accrue to the Agency in travel costs, and both direct and indirect training costs. Employees have greater ownership of their own development. Products will be a direct benefit to all programs that have field personnel and will be directly applicable to other Federal, state, and local government agencies and private sector firms.

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# REPORT OF THE *WORKFORCE DIVERSITY* TEAM

NATIONAL
PERFORMANCE
REVIEW

**WORKFORCE DIVERSITY TEAM MEMBERS**

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# WORKFORCE DIVERSITY

**DEFINITIONS:** In this context, **workforce diversity** refers to increasing the representation of minorities and women, consistent with their representation in the civilian labor force, at all levels within EPA, and achieving federal goals for hiring persons with disabilities. Increasing workforce diversity is consistent with our affirmative action obligations.

The term **diversity** is used to describe the differing values and social forms, including unspoken rules of social interaction, held by ethnic, racial, and other groups. In a broader sense, the term refers to a range of differences held by people belonging to various groups, including differences related not only to race and ethnicity, but also gender, sexual orientation, disability, problem solving approaches, professional disciplines, management, styles, etc.

Affirmative action is the law. Diversity training can provide the awareness and guidance to make needed changes in organizational systems, structures, and management practices to remove barriers that could keep some members of EPA from reaching their full potential.

**SUMMARY:**

Equitable representation and quality of life are the primary issues of concern relative to workforce diversity in EPA. Since 1987, the overall number of minorities and white females has increased at EPA. According to data provided by the EPA Office of Civil Rights (OCR) for fiscal year 1992, minorities represented 16.4 percent of the EPA positions classified as Professional and Administrative, and white females represented 32 percent of those positions. Compared to their representation in the civilian labor force, both groups would appear to be well represented. Disaggregated data reveals, however, that serious underrepresentation continues to exist at various grade levels and for different organizational units, with some having achieved better success than others. This underrepresentation is most apparent when you look at the senior management ranks where certain groups have never been represented and the representation of others remains minimal.

The chart below, developed from OCR data, summarizes agency-wide underrepresentation at various grade levels. Each group noted there indicates a missed opportunity to achieve our goal of parity representation of minorities and white females within the EPA workforce. On balance, it is clear that much remains to be done.

**PROFESSIONAL POSITIONS**

| | |
|---|---|
| GS 5-8 | American Indian men (CA)* |
| GS 9-12 | American Indian men (MI)** |
| GS/GM 13-15 | White women (MI) |
| | African American women (MI) |
| | Hispanic women & men (MI) |
| | American Indian men & women (CA) |
| SES | White women (MI) |
| | African American women (CA) |
| | Hispanic women & men (CA) |
| | Asian/Pacific Islander women & men (CA) |
| | American Indian women (CA) |

**ADMINISTRATIVE POSITIONS**

| | |
|---|---|
| GS 5-8 | Hispanic men (MI) |
| GS 9-12 | American Indian women & men (CA) |
| | Asian/Pacific Islander men (MI) |
| | American Indian men (MI) |
| GS/GM 13-15 | Hispanic women & men (MI) |
| | Asian men (MI) |
| | American Indian men (MI). |
| SES | White women (MI) |
| | African American women (CA) |
| | Hispanic women & men (CA) |
| | Asian/Pacific Islander women & men (CA) |
| | American Indian women & men (CA) |

* Conspicuous Absence - nearly or totally absent
** Manifest Imbalance - substantially below their representation in the appropriate civilian labor force.

The Agency is much closer to achieving overall federal goals for hiring people with disabilities. In fiscal year 1992, people with disabilities constituted 3.8 percent of the EPA workforce. The federal goal was 4.16 percent. However, only .72 percent of the Agency's workforce were people with targeted disabilities while the federal goal for that year was 1.4 percent.

All employees should be treated fairly and feel that they are respected members of the EPA community. In 1992, a survey of over 5000 Headquarters employees revealed that many EPA minority employees, to a greater extent than other employees, feel that they are not respected or fairly treated at EPA, especially with regard to recruitment and promotion, particularly beyond the GS/GM 13 level. That same survey also revealed that 33 percent of the EPA employees completing the questionnaire said that they had experienced some form of discrimination at EPA. Those who said they had experienced discrimination indicated that the most frequent forms of discrimination were related to race, gender, and age. Twenty-two percent of the female respondents and six

percent of the male respondents also reported experiencing sexual harassment at EPA. The survey results clearly indicate that many EPA employees perceive that there are serious quality of life issues which the Agency needs to address more effectively.

In order to achieve greater progress in diversifying EPA and ensuring that all employees are appropriately valued and utilized, this administration will need to lead by example, provide sustained, meaningful top level scrutiny of progress, and be creative. The Administrator must also personally and periodically require accountability of all top EPA managers.

Short-term, managers must be held accountable for utilizing existing opportunities to address underrepresentation in their workforce, and to try to leverage new opportunities.

This administration must also be equally committed to looking beyond tomorrow to develop strategies designed to broaden EPA's recruitment networks to include more applicants from underrepresented groups, and ensure that there is an equitable process for selecting them.

**VISION:** We want an EPA that, at all levels, looks like America and provides a work environment free of discriminatory barriers which penalize people for their differences, particularly differences related to race, gender, ethnicity, and disability.

**I. ACTION CATEGORY:**

To make the representation of those groups currently underrepresented in EPA, particularly in the supervisory and managerial ranks, approximate their numbers in the civilian labor force by 1997, for the appropriate occupational category.

**A. INITIATIVES:**

1. **Establish Action Plans** - Each AAship, region, and lab will develop a plan of action, and incorporate it into their affirmative action plan, <u>by October 1993</u>, to address any underrepresentation in their organization. The plan should include both short and long-term strategies to identify potential internal and external candidates. The only required element of the plan will be that there be a standing internal peer panel, which includes minority and female representation, for each professional and administrative selection. The panel will be picked by the selecting official. It will review the recruitment plan utilized for the posting and the qualifications of the applicants. The panel will provide the selecting official with written comments on the recruitment plan and make a written recommendation to the selecting official concerning the

applicants. The selecting official may set the timeframe for the panel's deliberations. The panel's recommendations in no way impinge on the selecting official's right to make the final selection.

2. **Certify Action Plans** - The Office of Civil Rights will certify the adequacy of the action plans and the affirmative action goals to the Administrator by December 1993.

3. **Quarterly Reviews** - Every quarter, beginning May 1994, the Administrator will review progress against available opportunities and the affirmative action goals set by each organization, and will utilize an appropriate Assistant Administrator/Regional Administrator forum to discuss Agency progress. Results of the quarterly reviews will be published and widely distributed to EPA managers and supervisors. The Office of Civil Rights will be responsible for analyzing the data for these reviews.

4. **Early Out Study** - Achieving real improvements in the representation of minorities and women, particularly in the supervisory and managerial ranks, will be more difficult because of the reduced overall hiring opportunities in fiscal year 1994 and possibly beyond, due to budget constraints, and the prospective reduction of the number of GM-14 through SES level positions. For that reason, we recommend that the Office of Human Resources Management explore the feasibility of an early retirement proposal with the Office of Personnel Management, for GM-14s - SES, to create new hiring opportunities in the senior managerial ranks. A progress report on this will be provided to the Administrator by October 1993.

5. **SES Candidate Program** - The Office of Human Resources will develop a plan for an SES candidate program which can produce certified candidates by the beginning of fiscal year 1995. This plan will be completed by November 1993.

## II. ACTION CATEGORY:

To create a work environment where differences, particularly related to race, gender, ethnicity, age, and disability, are understood and this understanding leads to improved communication and interaction.

### A. INITIATIVES:

1. **Executive Training** - All top Agency executives, including Assistant Administrators, Regional Administrators, and members of the SES should receive diversity training, by a highly skilled outside contractor, by January 1994. The first

session for senior managers should be in November 1993, the second in January 1994. The Office of Human Resources Management should be responsible for arranging for the contractor.

2. **Diversity Assessment** - Each Assistant Administrator, Regional Administrator, and lab director should develop a process to review what, if any, issues exist within their organizations relative to diversity, which may be barriers to creating a workplace free of discrimination, and review organizational procedures and policies as they relate to these issues. The process should involve broad based employee input and should be designed to address the concerns of all employees. A report of the findings should be submitted annually to the Office of Human Resources Management, beginning November 1994.

**III. ACTION CATEGORY:**

To create improved guidance mechanisms to assist managers in addressing issues of diversity and the underrepresentation of women and minorities.

**A. INITIATIVES:**

1. **Data System** - The Office of Civil Rights and the Office of Human Resources Management should develop an effective agency-wide system to provide accurate and timely information on underrepresentation, in user friendly formats, to each AAship, Region, and laboratory. This information shuold be available at the beginning of each quarter and should provide the data by AAship, Region and laboratory, in addition to a breakout by division. This process should be in place and fully operational by January 1994.

2. **Guidance Materials** - The EPA Library, in conjunction with the Office of Civil Rights and the Office of Human Resources Management, should develop an appropriate set of materials, including books and videos, on equal employment opportunity, affirmative action, and cultural diversity. The EPA Library should provide an announcement to all supervisors and managers of its holdings in this area by January 1994. The Office of Human Resources Management should update the EPA Cultural Diversity Vendor Catalog annually. That update should be housed in the EPA library and

sent to each Agency training officer. The Office of Human Resources Management should complete this update by January 1994.

3. **Training** - The Office of Civil Rights, in conjunction with the EPA Institute, should develop a course on sexual harassment and age and race discrimination. This course should be offered at least once every quarter through the Institute and arrangements should be made to ensure its availability to the regions and labs. This course should be available by January 1994.

## IV. ACTION CATEGORY:

The following recommendations are directed to the government-wide National Performance Review team.

There are many government-wide policies and procedures that make it extremely difficult to attract talented entry level staff. These policies have resulted in EPA hiring few entry-level people in professional and administrative job series. This has also decreased Agency flexibility in attracting talented minority candidates.

### A. INITIATIVE:

We recommend that the Office of Personnel Management (OPM) do an analysis of the impact of the Administrative Careers With America exam on recruiting talented minorities and women at the entry level. That analysis should also consider how and where information about the exam is distributed and the accessibility of exam locations. Information about selection through the Administrative Careers With America process should be presented by race, ethnicity, gender, and job categories. That assessment should be completed by the beginning of fiscal year 1995.

We recommend further that the national OPM review the efficacy of current government promotion policies that, in some instances, create administrative hurdles to assuring the broadest possible range of career advancement opportunities, particularly for persons interested in advancement in non-managerial career tracks. Additionally, we recommend that the national OPM consider providing the broadest possible hiring authorities for every job category and making that authority consistent in all federal regions. These recommendations are related to increasing the numbers of underrepresented groups in the workforce to the extent in that improvements in these areas would

increase federal competitiveness in hiring the best and the brightest candidates.

## V. BARRIERS:

There are three principal barriers to achieving a completely diverse workforce at all levels:

**A.** Despite policy statements in support of diversity and equality, the Agency needs to demonstrate more effectively that these are important organizational values.

**B.** Agency leadership has not been held accountable for achieving affirmative action goals and top level attention to this as an issue has not been sustained.

**C.** Support mechanisms to provide information and guidance to offices is not currently adequate, e.g., timely data to assess progress, guidance in developing strategic plans for short and long-term efforts, inadequate guidance materials available at the Agency level, etc.

## VI. INVESTMENT COSTS AND BENEFITS:

Data does not currently exist to quantify whether or not cost savings would accrue from the proposed recommendations. Likewise, data does not exist to document significant additional costs associated with the recommendations. Significant latitude was provided as to how these recommendations could be met. The planning and periodic reports which are recommended do not, for the most part, constitute new requirements and therefore should not result in new expenditures and are basically nothing more than is already required for effective affirmative action planning. The cost for the training of EPA's senior executive's will not represent a significant financial burden.

Appropriately diversifying our workforce from the policy level on down and working to create a climate where that diversity is appreciated and utilized to improve the way EPA does business, presents us with the opportunity to create an even more effective organization. Valuing diversity and making it work for EPA is, in fact, a matter of business necessity. It means utilizing the creative energy arising from the wealth found in the diversity of our current workforce to enhance EPA's effectiveness and productivity.

## VI. EVALUATION CRITERIA:

Success should be measured against our ability to resolve identified problems. Our yardstick for workforce diversity is whether the profile of the organization becomes more diverse with regard to race, gender, and ethnicity in each grade level. The proposed quarterly reviews will reveal that.

Improving problem areas identified by the individual office diversity assessments should be used to gauge organizational improvement at the office level. Evaluations relative to improvements should be done six months after efforts have been put in place to resolve problems. The results of those assessments should be made available at the office level and should also be part of the quarterly review process.

## VII. REFERENCES:

Affirmative Employment Program Plan for Minorities, Women, and People with Disabilities, FY 1993 Affirmative Employment Program Plan Update and FY 1992 Accomplishment Report, April 15, 1993.

Affirmative Employment Program Plan for Minorities, Women and People with Disabilities, Fiscal Years 1988-1992, April 15, 1992.

Cultural Diversity Challenges for EPA, November 1992.

Cultural Diversity Training Strategy for EPA, July 12, 1991.

EPA Cultural Diversity Vendor Catalog, November 1991.

EPA Headquarters Cultural Diversity Survey Final Report, December 4, 1992.

Women, Minorities and People with Disabilities, Status Report, First Quarter of FY 1993.

# *LEADERSHIP TEAM*

# *SUPPLEMENTARY REPORT*

NATIONAL
PERFORMANCE
REVIEW

# SUPPLEMENTARY REPORT OF THE LEADERSHIP TEAM

## INTRODUCTION

The Leadership Team was formed as part of EPA,s National Performance Review, and its mission was to coordinate the efforts of the 19 Policy/Process Teams. One of the Leadership Teams roles was to identify and address issues which were not covered by the 19 Policy/Process Teams. This responsibility initiated the appointment of a subcommittee.

Issues which converged with those already under consideration by one of the 19 Policy/Process Teams were simply referred to the appropriate team leader for action. Issues which merited additional attention and were unclaimed by Policy/Process Teams were handled by the Leadership Teams subcommittee. The subcommittee issues addressed in this report are:

Section A: Leadership Philosophy

Section B: Environmental Literacy

Section C: Marketing EPA

Section D: Green Border Review

Section E: Recapturing Civil Penalties

## SECTION A:LEADERSHIP PHILOSOPHY

SUMMARY: Management research has shown that the most competitive businesses are those that have adopted principles generally encompassed under the heading, Total Quality Management (TQM.) These principles include a focus on high performance, continuous improvement, non-hierarchical management, and examination of barriers to success. TQM cannot be implemented successfully until the culture accepts and promotes its principles and ideals. EPA has talked TQM but has been.slow to make the necessary cultural changes to allow its most effective use. Quality cannot be legislated or dictated; it must be taught many times at all levels, accepted, and fostered by leadership.

EPA can become an effective environmental leader nationally and internationally by placing emphasis on high performance. The needed cultural changes must begin with removal of hierarchical barriers to success and a focus on team effort and empowerment. This is most effectively done through a combination of consultative and participative management styles as described.by Likert. Research has shown that these styles have been effectively implemented at a number of private businesses and government agencies with a concomitant increase in productivity. TQM is reliant on measuring all things against a common vision and set of values that have been identified by the leadership.

There is a perception within EPA that there is no clear VISION for the entire Agency. VISIONS have been developed for some program offices, some legislative mandates appear clear, and there are consistent demands from a variety of customers. Once the VISION is communicated throughout the Agency, then systems, structures and strategies can be examined for their support of the common VISION. Our current systems, structures and strategy may not be effective in promoting and developing high performance teams; in fact, they most likely are detrimental.

Until the leadership philosophy is altered, the chance for success of any changes suggested in this review is minimal. The leaders within EPA have, unfortunately, been constrained by the hierarchy of government, but changes in the systems alone will not allow for successful implementation of our suggestions. We must get at the heart of the organization and begin to break down hierarchical walls by implementing a new leadership philosophy. EPA,s NPR should capitalize on this unique opportunity to make a difference that will truly allow us to make the changes necessary to develop high performance teams at EPA and to strive for continual improvement.

VISION: To adopt a leadership philosophy and create a culture that results in the development of high performance teams at EPA.

ISSUE: How can we best bring the energy of our people to focus on constant improvement? We need to adopt a leadership philosophy that shares power and empowers people. We must move from the hierarchical style that has been imposed upon us to a participative management style that focuses the energy of EPA employees. This simply means that we must begin to share leadership responsibilities at all levels of our organization.

This concept is not being suggested simply because it is morally correct or currently fashionable, but because the data indicate that the implementation of such a philosophy results in a more efficient, effective and productive organization, capable of being measured and monitored for success. Studies further indicate that shared leadership is the ONLY way to improve performance over the long term. Organizations such as Xerox, Ford, Motorola, U.S. Geological Survey (USGS) have succeeded because they have challenged themselves to fully implement this style throughout their organizations and at all levels. Organizations that have not fully implemented this style (e.g., U.S. Forest Service in its first attempt) have not been as successful. Thus, we must challenge ourselves if we are to recognize change and success throughout our Agency.

INITIATIVE(S): Implement a comprehensive four-stage process:

Focus on our mission and articulate an Agency vision. Take time to evaluate and re-evaluate.

Make the mission and vision current and relevant. Top leadership must set the Agency's direction and vision, ensuring that it evolves as our environment changes by consulting with our customers and those who supply us with resources.

Share power and empower people. Embracing this concept is necessary for success in everything we choose to implement. Empowerment is defined as joining together to accomplisn a shared vision.

Unit-by-unit implementation across all of EPA. We are talking about a basic cultural and behavioral change which can only be done if we get into the "guts" of the Agency. With targeted training, this is a feasible goal. Costs could be kept to a minimum and, in fact, savings could be realized as we move away from unplanned, unfocused leadership training toward a targeted, consistent approach. Additional savings can be made by providing the ability to implement constructive change following existing Federal Executive Institute and Total Quality Management training.

It is important to note: "If organizations are to truly transform management philosophy and practice, people must critically explore the values, beliefs, behavior" (Larson).

REFERENCES:

1. Block, Peter. 1991. The Empowered Manager: Positive Political Skills at Work (San Francisco: Jossey-Bass).

2. Larson, Colleen L. 1991. "Transforming Management Philosophy: Beyond the Illusion of Change" New Directions for Program Evaluation, No. 49, pg 74:

3. Likert, Renis. 1961. New Patterns of Management (New York: McGraw Hill)

## SECTION B:ENVIRONMENTAL LITERACY

SUMMARY: EPA should enhance its role as an advocate of environmental literacy. Beyond the environmental protection field, people in business, economics, engineering, etc., usually react to the need for environmental protection because of various regulatory requirements, rather than because they understand and agree that it is both necessary and good business to conserve natural resources. This reaction may be due to the fact that they have not been exposed to this concept throughout their education. Consideration of environmental protection should be integrated into college textbooks in the study of economics, business, engineering, etc.

EPA has taken a leadership role in educating children and teachers in secondary schools. More attention may be needed to change curricula at the college level (beyond disciplines in environmental sciences) to help the private sector become more efficient in the use of natural resources and energy (such as in the design of products), and reduce the adverse impacts of their activities on the environment. Dialogue is needed to determine whether the efforts suggested below are contradictory to, redundant with, or complementary to existing efforts.

VISION: A society that believes that preservation of natural resources is essential and acts upon that belief.

INITIATIVES:

Expand EPA's emphasis on environmental education at the college level. Part of the effort should include a review of the existing strategy and a consideration of the resources currently devoted to college level environmental education and a comparison with the resources devoted to the kindergarten through secondary school level. The evaluation should include an examination of the legislative requirements, along with the potential benefits which can be achieved by targeting college level curricula. The study should document the relevant EPA activities currently being sponsored by program offices and laboratories. In addition, it should document related activities and plans outside of EPA (e.g. The United Nations or Tufts University.)

A patchwork of unrelated activities currently exists; the Agency should look for opportunities to leverage these scarce resources into a more comprehensive strategy (similar to NIOSH's program for Health and Safety.) More dialogue with the Environmental Education Division is needed to calculate the potential value of this recommendation. Potentially, one FTE and $150,000 could make a substantial first step. If grant funds become available, consideration should be given to targeting the college level.

If it is determined that more emphasis should be placed on targeting the college level, a strategy should be developed to facilitate that outcome. The barriers are likely to include organizational issues and the belief that various initiatives underway currently address the most important environmental education needs. In addition, the entire environmental education budget appears to be underfunded, and refocusing emphasis on the college level could result in disinvestments of equal or more important areas. The evaluation may take about six months, given the many organizations potentially involved. The benefits would be long-term and difficult to quantify at this time.

Provide rotational opportunities for EPA staff to work with non-profit organizations whose mission is environmental literacy and/or with universities to help identify pollution prevention opportunities and identify opportunities for changes in textbooks in various disciplines.

Barriers would include the need to identify and/or develop the process to enable this to happen, and the need to disinvest from other activities within the agency in order to invest in this new area. This initiative would.broaden the experience of EPA employees, as well as benefit the receiving organizations.

A possible investment option would be to assign two FTE,s from each program office and Regional Office to this effort, in six-month temporary details. A pilot program could be instituted with the equivalent of two FTE's for the first year, after which performance and results could be evaluated for further investment options. Measures of success could include the number of courses and students affected, organizations contacted, etc. The benefits would be short term and easier to quantify than in the first initiative. The concept would be for EPA to help "seed" ongoing efforts.

REFERENCES:

1. Cortese, Anthony, "Education for an Environmentally Sustainable Future", Environ. Sci. Technol., Vol. 26, No. 6, 1992, pp. 1108-1114.

2. Second Nature: Education for the Future, Mission Statement, May, 1993. Board of Directors, John F. Kerry, Honorary Chairman, Anthony Cortese, President, Bruce F. Droste, Douglas Costle, Ted Danson, Theresa Heinz.

# SECTION C:MARKETING EPA

SUMMARY: EPA is involved in a number of beneficial activities that go unnoticed, while lawsuits and negative publicity prevail. This tendency has been noticeable in the research, technical support, and compliance/enforcement areas; no doubt there are others. EPA's contributions to science and engineering are not publicized; our support of, and efforts to, assist State and local governments and the general public are seldom acknowledged; and the partnerships we have with universities, national organizations and international organizations are little known. Nor are creative enforcement remedies, such as Supplemental Environmental Projects, widely recognized. The proposal is that EPA begins to take credit for its positive impact and do a better job of marketing itself, both internally and externally.

VISION: To create a marketing system that allows for clear and continued communication between EPA and its customers (the public at large) regarding Agency activities and products and the rationale behind all Agency decisions, resulting in improved image, increased impact, and a larger resource base.

ISSUE: Despite the credible efforts of the Agency, lawsuits and negative publicity prevail. Perhaps this dilemma is a consequence of being a public agency ripe for scrutiny. We believe, however, that this situation can be turned around. The impacts of such negativism reverberate throughout the Agency; morale suffers, affecting productivity. Our desire is for our customers to have a clear understanding of our efforts and decisions and for our "value added" to be recognized by our peers and colleagues (some of whom may not even know we exist!).

INITIATIVE(S):

<u>Develop a marketing strategy.</u> While this task should be done internally by EPA staff, we need to seek help in learning how to develop a strategy. EPA must take credit for the positive effects it has on science, engineering, risk management, management, etc. Marketing efforts must be focused both internally and externally; EPA cannot be successful in communicating to the public when some of our internal colleagues don't recognize our value.

1. Internally: There are communication systems in place. We must analyze them for their effectiveness and redesign them, where necessary. (Note: EPA's NPR process presents a wonderful opportunity for cross-Agency marketing). Following this analysis, an internal marketing plan must be developed.

2. Externally: The Agency must learn the basic concepts of external marketing and determine what to include in its marketing strategy (and what not to include.) EPA has been gracious in promoting community-wide activities (e.g., Earth Day, recycling, "Pandy Pollution"), building tours, school outreach and hosting international guests. But we have not been as successful in marketing and communicating to the general public our process and progress in meeting our mission and specific goals. How to successfully transmit this type of message must be planned. A marketing strategy must be a part of every action taken by the Agency (effort, tasks, and accomplishments), and each individual strategy should be governed by an overall marketing plan.

COST: The costs associated with such an effort can be minimal. We have many activities currently in place which are an FTE drain and to which few benefits can be attributed (e.g., quarterly reports). If the Agency refocuses its activities, costs could be kept to a minimum.

Build upon existing partnerships and consortia with universities for idea and personnel exchanges. (See the report on "Quality Science" for additional benefits of such a program).

COST: 3-4 FTE,s; $250,000 per year

Arrange for rotational assignments within the Agency and between Agencies (also discussed in "Quality Science").

COST: Pilot 4-5 FTE's (as exchanges); $250,000 per year

Provide travel dollars specifically for the purpose of information sharing in Regions, at public meetings, and conferences etc. and place a priority on such travel.

COST: Could range from 20-50% of total travel dollars, depending on the organization.

CONCLUSION: This concept is not unique but the Agency needs an innovative marketing strategy. There is much good work done at EPA - let's take credit for it!

## SECTION D:GREEN BORDER REVIEW

SUMMARY: The Agency created the "Directives System" to establish a systematic process for identifying, writing, reviewing, approving, and disseminating internal Agency policy and operating procedures. By virtue of this system, Agency employees can utilize established directives to assist them in performing their responsibilities uniformly Agency-wide. Through this system, the Agency communicates internally and sets the administrative and legal basis for its internal operations.

The Assistant Administrator for Administration and Resources Management, through the Director, Office of Administration, has overall management responsibility for the EPA directives program. The Director, Management and Organization Division, has direct responsibility for the program. The process, from origination of a directive to approval, is commonly called the "Green Border" process because of the form used to obtain clearance for the issuance. A parallel system for regulation development is managed by the Office of Policy, Planning and Evaluation, and. called the "Red Border" system.

Unfortunately, it is difficult to change and improve an administrative system, despite obvious flaws or inefficiencies, or how outdated it is ("we,ve been doing it this way for years"). Yet this system needs reform. Not only has the system not "continually improved," it has actually deteriorated.

As the barriers to improvement (below) indicate, the process is viewed as flawed, but operational -- at least until an AA, RA, Office Director, or other official is "burned." It is time to reinvent the system, make it customer-oriented and functional.

Currently, the Agency,s "Green Border" process for internal "Issuances (Directives/Orders, Reorganizations, Delegations of Authority)" does not focus on stakeholders as customers, functions inconsistently, and is inefficient. Listed below are some of the problems:

Stakeholders are seen more as process inputs than partners.

There are few written procedures and policies, and those that exist are not well understood within the Agency some written procedures are inconsistent (e.g., who determines which.offices should comment during clearance/review).

Crucial stakeholder offices may not be involved in the development or clearance of issuances (e.g., State P2 grant delegations have not always included the Regional Offices, and OPPTS was not included in clearance of the Internal P2 Order).

The process is decentralized, with originators often having little knowledge of system and M&O having little control.

Proposals may be held hostage because of inconsistent application of rules (e.g., Region 8,s reorganization was held up for .issues not included in the reorganization).

Even though it is the Agency,s internal process for issuances, some Offices are covered by the process and some are not. (e.g., ORD has few delegated grant authorities, while other Offices are covered under the process).

Regional Offices, interests may be overlooked during the process (e.g. comments from RO's often are not considered seriously, unless nonconcurring -- which are treated negatively), and it may be inferred that there is no real provision for Regional Administrators to submit requests for delegation.

Delays occur during clearance/comment reconciliation caused by lack of knowledge of the process and result in inefficiencies; and there is no required closure time (pre-Green Border and Clearance period may go on interminably).

Impact statements and rationales for delegations of authority requests are not always submitted or available. They are not required to accompany the delegation (as reorganization impacts are) during clearance, making it hard for reviewers to understand the delegation or evaluate the impact.

Administrative actions which should be included in the formal system are outside it (e.g., delegations may be transferred as part of reorganization approval memos) and, thus, render tracking and accountability difficult.

Lack of uniform procedures and inconsistencies in implementation make the Agency vulnerable (example: in ORD grants -- official delegatees for enforcement or compliance authorities may not be correct.) These efficiency and effectiveness issues inhibit Agency operations and has made the Agency vulnerable to the IG and GAO.

Delegations should be routinely and substantively reviewed. This has not occurred, and there are "out of date" delegations (e.g., unnecessary concurrence requirements, as pointed out in Region 8's study of the value added by limitations).

VISION: There are customer oriented, written procedures and policies for the Green Border process that are well understood, accepted and applied consistently, with all stakeholder interests being represented. We are no longer vulnerable from legal and administrative perspectives.

INITIATIVE: The initiative proposed is to review the Green Border Process and to develop one that is well understood, accepted and applied consistently, so that:

All stakeholder interests are represented;

The Agency is no longer vulnerable from legal and administrative perspectives; and

Roles and responsibilities are clear. In addition, it is proposed that the recommendations of Region 8's analysis of "Limitations" in Delegations of Authority be used in the review (e.g., purging the Manual of limitations not adding value, evaluating the concept of limitations, and revising the Manual as necessary).

A work group led by M&O Division should conduct the review. Work group membership should consist of an equal number of field/Regional and HQ representatives.

The review should start ASAP, and it should be concluded within 60 Days. Revised procedures for Green Border reviews should be issued 30 days later.

Possible barriers to improvement:

1. Continued political pressures within the Agency to short cut and "use" the system;

2. Process viewed as flawed but operational;

3. Neither the extent of the problem is well known, nor the risks of not correcting it;

4. Process seen as barrier to getting things done quickly;

5. Consensus within the Agency for keeping things "loose" and avoiding processes and procedures; and

6. Lack of resources within M&O Division for running a more centralized, customer oriented, administratively efficient, and analytically sound process.

COST: The start-up costs for the work group and system changes would be more than offset by the savings realized through the improved efficiency.

BENEFITS: EPA will gain efficiency, predictability, and credibility. Delays and confusion would be avoided. It would also reduce wasted energy, time, and ill will.

MEASURES OF SUCCESS: Reduced process time and fewer IG and GAO reviews with fewer adverse findings.

REFERENCES:

1. EPA Directives Manual 1315 (1987 Edition)

2. Clearance Record, EPA Form 1315-16 (Rev 8-86)

3. Directives System - Agency Overview (M&O Division - unknown date)

4. EPA Delegations Manual 1200 (Introduction, 1220 TN 219, 1/2/90)

   Request for Change in Organization Structure, EPA Form 1110-1 (Rev 7-83)

# RECAPTURING CIVIL PENALTIES

SUMMARY: Because of the limits of federal law, EPA is not able to receive or put to good use the substantial civil penalties which the government collects as a result of the Agency,s civil enforcement program. Amendments to existing statues would enable EPA to recapture all or part of the civil penalties which are assessed and paid through its administrative and judicial enforcement actions. We propose that such penalties be paid directly to EPA for the specific purposes of funding EPA laboratories (regional labs and NEIC) and supporting enforcement-related training, particularly NETI. However, it may be preferable to use civil penalties collected by the Agency to fund non-enforcement activities, such as state grants or state training programs. There may be other discrete areas to which penalty dollars could be directed, such as the Compliance Audit Program (CAP) or the Agency's Internal Pollution Program.

EPA, through its civil judicial and administrative enforcement actions, collects millions of dollars annually in. penalties ($78.7 million in fiscal year 1992). Except where specific statutes provide otherwise, the penalties collected are paid directly into the United States Treasury and become part of the general revenues. EPA receives no resource benefit from, or credit for, the penalties realized from its enforcement efforts.

The exceptions to this general rule are the trust fund programs which are statutorily authorized to receive monies collected for the United States. Under CERCLA, for example, EPA can recover monies it expends at various stages of the Superfund program (removal, RI/FS, RD/RA, etc.), as well as penalties collected as a result of defendants, non-compliance with orders issued. Both the costs recovered and the penalties collected are paid into the trust fund for use in financing future Superfund actions. In addition, natural resource trustees (e.g., Department of Interior) can collect for restoration purposes, natural resource damages assessed under Superfund. Costs recovered and penalties assessed under the Oil Pollution Act are also payable to the Oil Pollution Act Trust Fund. See, Clean Water Act, Section 111(s).

Currently, EPA is prohibited from receiving non-trust fund penalty dollars for its own use. The Miscellaneous Receipts Act (MRA), 31 U.S.C. 3302(b), mandates that funds received for the United States be deposited directly into the Treasury, "without deduction for any charge or claim." The MRA has been strictly interpreted to prohibit receipt of government funds by entities other than the U.S. Treasury. Although there may be creative legal arguments around MRA restriction, Congressional action to amend the MRA provides an unassailable approach to permitting an agency such as EPA to receive, for its own use, penalties which would otherwise be payable only into the Treasury.

EPA currently has a policy of allowing defendants to perform Supplemental Environmental Projects as a means of mitigating civil penalties which would otherwise be assessed through civil enforcement actions. Such projects consist of environmentally beneficial activities which are negotiated as part of consent decrees or consent orders. The activities undertaken must bear a relationship (nexus) to the original violation(s) addressed by the enforcement action, but must be in addition to, or different from, whatever injunctive action is required to rectify the violations. Furthermore, the SEP policy requires that the government recover from the defendant, as a civil penalty, the full amount of any economic benefit of non-compliance realized by the defendant and some measure of the gravity component.

Recently, the Office of Prevention, Pesticides and Toxic Substances has considered a proposal whereby some portion of the penalties collected under the TSCA Section 8(e) Compliance Audit Program (CAP) would be directed to a trust fund in support of research into what constitutes a "substantial risk" for Section 8(e) reporting purposes.2 There is legal support for the proposition that this idea is consistent with the Agency,s SEP policy and does not violate the Miscellaneous Receipts Act. However, the trust fund proposal for the CAP program could be greatly strengthened through the legislation recommended here.

VISION: EPA recaptures, in whole or in part, the civil penalties collected through both administrative and judicial enforcement actions in a manner that permits those penalty dollars to be dedicated to specific Agency needs and programs.

Civil penalties could be directed to funding EPA laboratories around the country and to underwriting enforcement-related training. In addition, programs such as the TSCA Section 8(e) CAP program could be authorized to recapture penalties collected for a trust fund dedicated to scientific research. The fund could be used for research directed toward improved compliance with Section 8(e).

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1. There are six categories of projects which can be considered for credit - pollution prevention, pollution reduction, environmental restoration, environmental auditing, public awareness, and support for research on "substantial risk."

2. Section 8(e) of TSCA requires that a manufacturer, processor, or distributor of a chemical substance or mixture who acquires information which reasonably supports a conclusion that such substance or mixture presents a substantial risk of injury to health or the environment must inform the administrator. In February 1991, EPA initiated a voluntary Section 8(e) Compliance Audit Program (CAP) which set a penalty ceiling of $1 million per company. These "capped" penalties would go into the trust fund.

As noted above, the most certain means of achieving the desired state, i.e., enabling EPA to collect penalties for its own use is through Congressional amendment of the MRA. Such an amendment could extend to agencies and departments other than EPA that may be desirous of recapturing penalties they collect for their own uses. (This proposal could havc cross-agency utility as part of the government-wide NPR process.)

It may also be necessary for Congress to amend each of EPA,s statutory enforcement authorities in order to permit civil penalties to be paid directly to EPA. (Such language appears in CERCLA and in Section 311 of the Clean Water Act for enforcement of the Oil Pollution Act.) In addition, the appropriations bill for each statute EPA administers should probably include specific authorization for the Agency to receive civil penalties assessed through enforcement of that statute. Since Congress is unlikely to authorize EPA to commit the penalties it collects for general agency revenues, any legislation to implement this proposal should specify particular uses for the funds collected.

Because this proposal does not contemplate any forgiveness of penalties, it should not be subject to the SEP condition that only that portion of the penalty which exceeds the sum of the economic benefit, plus some gravity component, can be credited. Under this proposal, the defendant/respondent would pay the entire amount of the penalty, without benefit of tax deduction. However, rather than writing a check to the United States Treasury, the defendant/respondent would write a check to a specific account or trust fund administered by EPA. The account or trust fund would be expressly dedicated to avoid any risk of diversion of funds from their legally-designated objective.

Use of the Agency,s civil penalty collections to support enforcement-related training and laboratory needs has the potential for rendering those programs self-sufficient. If collections exceed Agency needs in some years, unused funds could be carried over to less prosperous years. Alternatively, funds unneeded in a particular year could revert to the U.S. Treasury.

INITIATIVE: At a minimum, this proposal would require legislation to amend the Miscellaneous Receipts Act, as well as the enforcement provisions .of each statute to which it is intended to apply. It is also recommended that the appropriation bills for each statute pursuant to which the Agency conducts a civil enforcement program include a reference to or specific authorization for civil penalties to be paid to EPA for discrete agency programs.

The Office of General Counsel, Office of Enforcement, and the legislative arms of the various program offices would need to collaborate to draft legislation. Timing of such legislation could be tied to statutory reauthorization or to annual budget cycles, although amendment of the Miscellaneous Receipts Act could occur at any time.

BARRIERS: Barriers to implementing this initiative are likely to be found principally within the regulated community, which may object to providing EPA with a financial incentive to enhance its civil penalty collections. This same objection may be heard from certain members of Congress. However, the argument for using penalties collected by the Agency, through its own enforcement efforts,to fund related Agency functions - e.g., laboratory support and training - should prove extremely compelling. As an alternative, the funds collected from civil penalties could be directed to non-enforcement related activities, such as state grants or training programs.

COST: Implementation of this proposal should generate more revenue than it consumes. There will be an initial resource investment for drafting necessary legislation and subsequent minimal costs of administering collection and distribution of penalty dollars received. However, this proposal should definitely be counted as an asset in the Agency's accounting system.

In addition to enhancement of agency resources, the benefits to the Agency are obvious. Rather than watching penalty dollars blend into the general revenues, Agency enforcement personnel will have the satisfaction of knowing that civil penalties are supporting environmental protection efforts. Furthermore, Agency programs which have been historically underfunded could be adequately financed, if not self-sustaining. In fact, the principal measure of success for this proposal would be that the EPA labs and enforcement training could be entirely funded by civil penalties.

REFERENCES:

1. February 12, 1991, memorandum from James M. Strock, "Policy on Use of Supplemental Enforcement Projects in EPA Settlements."

2. Miscellaneous Receipts Act, 31 U.S.C. #3302(b)