1st Annual

ORD Workshop

Managing Change

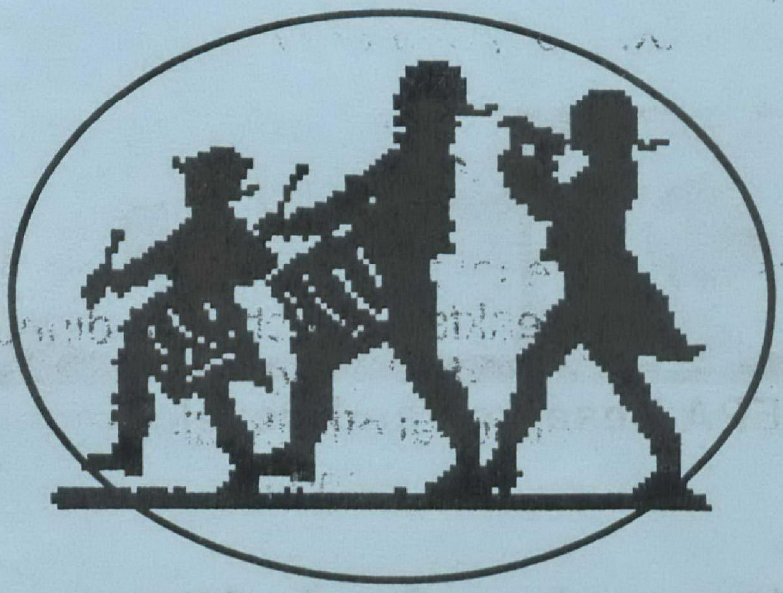
US EPA Research and Development

December 2 - 5, 1996
Williamsburg, Virginia

Goals

The goal of the workshop is to improve the delivery of high-quality science in ORD by:

- ✔ Understanding the new direction in ORD;
- ✔ Building the ORD team and improving communication;
- ✔ Sharing views and listening to all participants; and
- ✔ Developing action plans and change agents to achieve specific organizational improvements.



General Information

The workshop begins at 1:00 pm on Monday, December 2 and ends after lunch on Thursday, December 5.

Registration/Welcome Desk

Workshop registration is from 8:00 am - 5:00 pm on Monday, December 2nd in the Center Room, next to the hotel registration desk.

Conference Office

A conference office will be set up in the lower level of the Cascades Conference Center. A message board will be available there from Monday - Thursday.
Messages: Phone: (804) 565-8822
FAX: (804) 565-8827

Meals

Monday evening	lite fare
Tuesday	breakfast, lunch, and dinner
Wednesday	breakfast, lunch, and dinner; (optional off-site dinner)
Thursday	breakfast and lunch

Breakfast starts at 7:00 am everyday at the Cascades and the Woodlands Grill.

Day 1

Monday, December 2nd

Overall Change

The Center Room

8:00 - 5:00	Registration

Commonwealth Hall

1:00	**Workshop Begins**
1:00 - 1:30	Welcome/Purpose Bob Huggett
1:30 - 4:45	Guest Speaker on Organizational Change David Noer
4:45 - 5:00	Wrap-up and Overview of Upcoming Events

Cascades Meeting Center
(lower level)

5:30 - 7:00	Poster Session/Gallery Walk/ Lite Fare

Day 2

Tuesday, December 3rd

Improvement Opportunities

7:00	Breakfast - Cascades or Woodlands Grill

Commonwealth Hall

8:00 - 8:15	Introduction and Overview
8:15 - 10:00	Review of ORD Data
10:00 - 10:30	*Break*
10:30 - 11:30	Brainstorming the ORD Improvement Opportunities
11:30 - 12:00	Identifying Priority Issues
12:00 - 1:00	**Lunch**

The Cascades Meeting Center/Center Room Break-Out Rooms

1:00 - 2:30	Selecting Top Priorities
2:30 - 3:00	*Break*
3:00 - 4:30	Framing the Issues
7:00	**Dinner - Commonwealth Hall**

Day 3

Wednesday, December 4th

Framework for Action

7:00	Breakfast - Cascades or Woodlands Grill

Commonwealth Hall

8:00 - 8:10	Introduction and Overview
8:10 - 8:45	Presentation of the Improvement Opportunities

The Cascades Meeting Center/Commonwealth Hall Break-Out Rooms

8:45 - 11:30	Action Planning on the Improvement Opportunities
11:30 - 2:30	**Lunch**

Commonwealth Hall

2:30 - 5:00	Panel Presentations on the Improvement Opportunities
7:00	**Dinner - Garden Room or Shields Tavern**

Day 4

Thursday, December 5th

Commitment to Action

7:00	Breakfast - Cascades or Woodlands Grill

The Cascades Meeting Center
Break-Out Rooms

8:00 - 9:45	Lab/Center/Office Discussions

Commonwealth Hall

10:00 - 11:25	Actions and Commitments
11:25 - 11:45	Summary
11:45 - 12:00	Meeting Evaluation

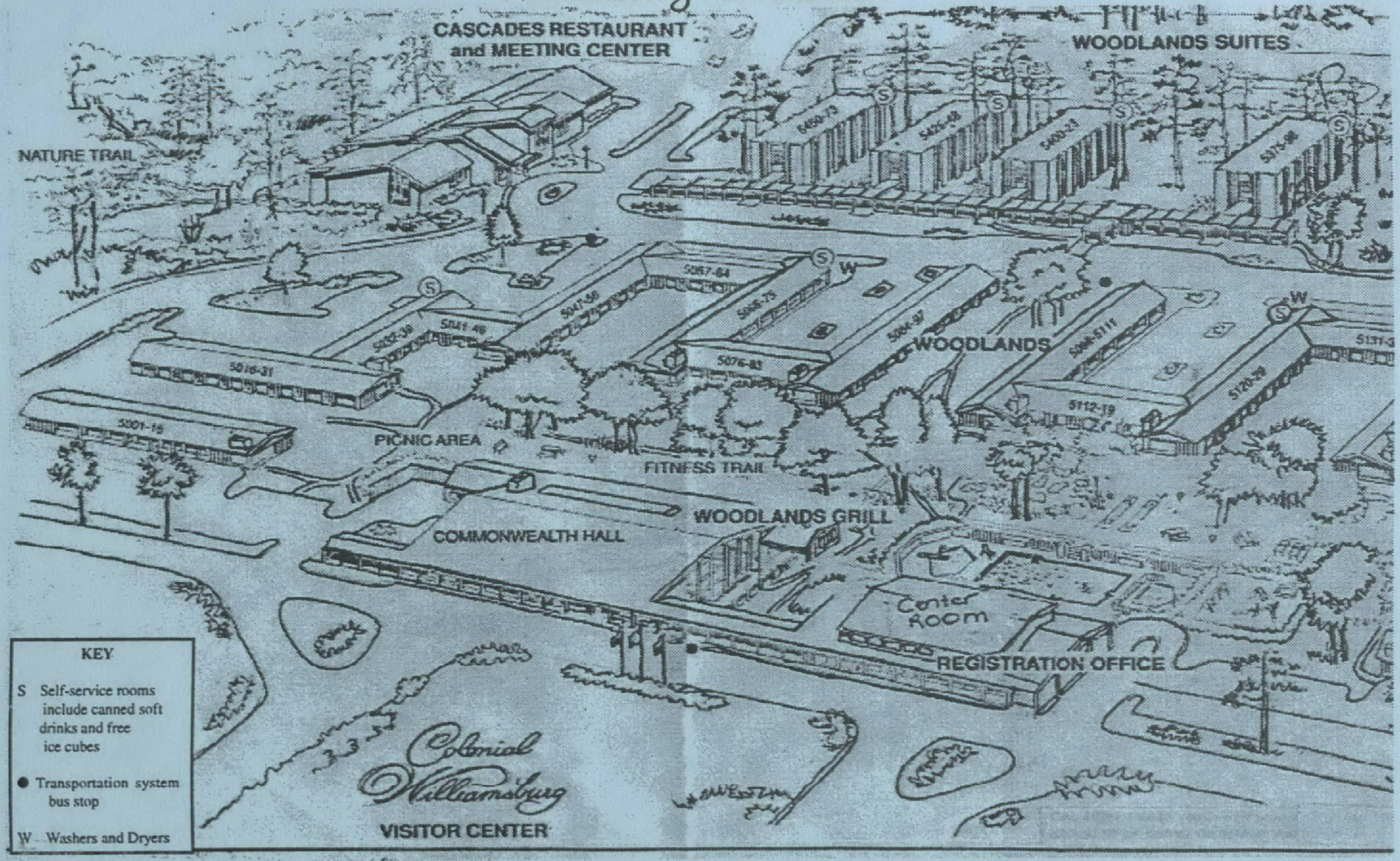
The Cascades

12:15 - 2:00	**"Launch" Lunch**

* Check-out time is at noon.
(Luggage can be stored in Commonwealth Hall)

Conference Rooms will be available for the remainder of the day if Labs/Centers/ Offices would like to continue to meet.

Williamsburg Woodlands



US EPA Research and Development

WORKSHOP

Success and Accomplishment Poster Session

◆◆◆◆

December 2, 1996

NRMRL

A1. **Biogenic Emissions**

Larry Jones and Chris Geron (919)541-4639
NRMRL RTP

A poster focused on the major national and regional contributions of biogenic emissions to total VOC emissions which produce ozone compliance problems will be presented. Ozone control strategies must produce N0x emission reductions in areas with high biogenic VOC emissions (biogenic emissions are over half of all annual VOC emissions and are an even higher proportion during ozone episodes). Without this knowledge, Agency control strategies could have focused on ineffective VOC only reductions resulting in the waste of millions of dollars of VOC emission control expenditures.

A2. **Navy Shipboard Chillers**

Bill Rhodes and Ted Brna (919)541-2683
NRMRL RTP

NRMRL/APPCD initiated a program to find replacements for Ozone Depleting Substances. In this search, one chemical in the family of hydrofluorocarbon (HFC)-236 was found which upon synthesis, evaluation of properties, computer modeling, application testing, and safety testing was found to be acceptable as a replacement for the refrigerant in all Navy shipboard chillers that used chlorofluorocarbon (CFC)-114. Utilizing HFC-236fa as retrofit is estimated to save the Navy between $300 million and $500 million (depending on the number of ships converted) compared to having to completely replace the chillers and HFC-236fa has no ozone depletion potential.

A3. **Landfill "Waste" Gas and Fuel Cells**

Bill Rhodes and Ron Spiegel: (919)541-7542
NRMRL RTP

In order to reduce methane emissions in waste gases from landfills, NRMRL/APPCD has developed a gas cleanup system and coupled it to a fuel cell to prevent emissions, produce electricity, and provide incentives for incorporating this technology into similar end uses. The coupled technology has been demonstrated at a landfill site in Broton, Connecticut in cooperation with Northeast Utilities. International Fuel Cells is a cooperator in this effort.

A4. **Fine Particulate Matter from Combustion Sources: Physical, Chemical, and Health Effects Characteristics**

Bob Hall and Andy Miller: (919)541-2920
NRMRL RTP

Work has begun to connect an understanding of combustion source
operations and health effects to help define origins and mechanisms of adverse health impacts due to increases in ambient particulate levels. Researchers at the National Risk Management Research Laboratory (NRMRL) and the National Health and Environmental Effects Research Laboratory (NHEERL) have developed a joint research project that enhances each organization's capabilities. By combining the expertise and facilities of NRMRL's Air Pollution Technology Branch (APTB) on combustion source operations and emissions with that of NHEERL's Pulmonary Toxicology Branch (PTB) on damage to lung function from exposure to particulate matter, it is hoped that a link between specific types of particulate sources and adverse health impacts can be determined.

This project is a clear case of how cooperative research involving diverse areas of expertise can improve the scientific understanding of complex issues.

A5. **Improving Indoor Air Quality Through Pollution Prevention**

Mike Osborne and Kelly Leovic (919) 541-7717
NRMRL RTP

This poster will provide an overview of three on-going projects that are using pollution prevention to improve indoor air quality. 1) Reducing Indoor Air Emissions from Office Equipment: APPCD is supporting research to develop a standard test method that will assist manufacturers in understanding emissions from office equipment and how these emissions might be reduced through pollution prevention. 2) Development of an Innovative Spray Nozzle: The new design will allow manufacturers to reformulate certain aerosol consumer products using air and water in place of volatile organic compounds (VOCs) and hydrocarbons while still maintaining acceptable product characteristics. 3) Evaluating Emissions from Engineered Wood Products: This project is targeted at identifying the primary sources of emissions from engineered wood products and evaluating lower-emitting alternatives.

A17. **Development of a Water Quality Contaminant Propagation Model for Drinking Water Distribution Systems (EPANET), WSWRD, NRMRL, ORD**

Robert M. Clark (513)569-7201
NRMRL CIN

The recent Cryptosporidium waterborne outbreak, that caused 400,000 people to become ill in

Milwaukee, and other drinking water related problems including USEPA's "takeover" of the Washington DC water system has heightened national concerns over drinking water issues. This concern is exemplified by the recent reauthorization of the Safe Drinking Water Act. It is anticipated that billions of dollars will be expended in order to meet tough new drinking water standards being considered by the USEPA. These requirements and standards are directed primarily toward water treatment, however there is a growing awareness that aging drinking water distribution systems and archaic design and operational philosophies may result in significant deterioration of water quality before it reaches the consumer. To provide a mechanism to study these infrastructure related effects, the Water Supply and Water Resources Division (WSWRD) of NRMRL has developed a computer program (EPANET) that performs extended period simulations of hydraulic and water quality behavior within drinking water distribution systems.

A18. Development of a Wet Weather Flow Research Plan, WSWRD, NRMRL, ORD

Frank Freestone (908)321-6832
NRMRL EDN

The Water Supply and Water Resources Division (WSWRD) of NRMRL was created as part of the ORD Laboratory Reorganization. As part of the reorganization, the Urban Watershed Management (UWMB) Branch was established in WSWRD, composed primarily of former Superfund staff who had been extramural project officers. In October 1995, UWMB, located in Edison New Jersey, was given the responsibility for preparation of a plan to address needed research regarding the impacts and

management of urban wet weather flows (WWFs). WWFs are the leading cause of water-quality impairment in the United States today. Improving WWF controls is one of the two highest priority water focus areas cited by EPA in its National Agenda for the Future. A draft Research Plan was issued for internal review in December 1995. The draft Plan has been circulated extensively throughout EPA Headquarters and ORD and addresses WWF characterization, watershed management, toxics, engineering control technologies, and infrastructure improvement. It also presents more than 75 projects to be done by WSWRD in collaboration with others. The Plan was revised and sent out for peer review on August 19, 1996. Comments were received from two peer review organizations (Water Environment Research Federation and American Society of Civil Engineers) as well as from about fifteen stakeholder groups.

A19. Drinking Water Quality Problems and Waterborne Disease Outbreak Studies, WSWRD, NRMRL, ORD

Don Reasoner (513)569-7234
NRMRL CIN

The risk of illness due to consumption of contaminated drinking water is a major concern for consumers, the water utilities that produce the water, and state and federal regulators. This concern ranges from questionable water quality problems (coliform occurrences) in distribution monitoring samples, to low level undetected illness(endemic disease), to overt disease outbreaks affecting some proportion of the consuming public. The Water Supply & Water Resources Division (WSWRD) of the National Risk Management Research Laboratory (NRMRL) provides technical

assistance to States and U.S.E.P.A. Regions to investigate problems related to coliform non-compliance issues such as the Washington, D.C. coliform problem that occurred this past summer. The WSWRD staff have also assisted the Centers for Disease Control and Prevention (CDCP, Atlanta, GA), and the pertinent state and E.P.A. Region in investigating identified waterborne disease outbreaks. During the past year, these activities included telephone conference calls to discuss CDCP investigational findings, analysis of water samples and characterization of microbial isolates obtained from suspect water samples. Assistance was provided to the CDCP related to an outbreak of chronic diarrhea (causative agent undetermined) in a small town in Texas, to the State of Idaho in a suspected *Campylobacter* outbreak in a summer camp, and to the Georgia Division of Public Health in a suspected swimming pool outbreak.

A20. Environmental Technology Verification Program -- ETV

Penelope Hansen (202) 260-2600
NRMRL DC

The Environmental Technology Verification Program (ETV), which began in October 1995, was created to accelerate the commercialization of new technologies into the domestic and international marketplace. Initiated through the President's environmental technology strategy, Bridge to a Sustainable Future, ETV uses the facilities and expertise of partner organizations to carry out technology evaluations and, through these evaluations, verifies the performance of commercial-ready innovative technologies. In 1996 five pilots were put in place covering drinking water systems, site characterization and monitoring

devices, indoor air products, pollution prevention and waste. treatment technologies, and an independent pilot that focuses on no prescribed technology area (see poster 21A for more information on the latter two pilots). Through the FY96 budget all of the above pilots were broadened in scope and five new pilots were added covering pollution prevention through innovative coatings, advanced monitoring systems, wet weather flow technologies, air pollution control technologies, and an international verification pilot. Congress continued its support of ETV in FY97, and the program has received approximately $27 million to date. ETV is managed through a cross-laboratory (NRMRL and NERL) team in which team members come from six ORD divisions and eleven branches.

A22. **Common Sense Initiative (CSI)**

Jane Franklin (513) 569-7601
NRMRL CIN

The Common Sense Initiative (CSI) represents a unique opportunity to move beyond the adversarial relationships that have historically dominated environmental debates. The CSI will emphasize the search for pollution prevention, innovative technologies, and cross-media approaches to environmental problems. The U.S. EPA is committed to CSI outcomes that are both cleaner and cheaper - cleaner because of improved environmental results; cheaper because of reduced industry compliance costs. Equal participation by stakeholders which are comprised by agency, industrial, trade associations, environmental groups and public involvement will make consensus recommendations to a workplan to define the issues and develop projects. The Metal Finishing Industry is a perfect case study to illustrate the recent success of the CSI.

A23. Environmental Technology Verification Program (ETV) Pilots

Sandra Taylor (513) 569-7228
NRMRL CIN

The Sustainable Technology Division in the National Risk Management Research Laboratory (NRMRL) is supporting two of the Environmental Technology Verification Program pilots (see poster 20A). The Pollution Prevention and Waste Treatment pilot partners with the State of California Environmental Protection Agency to verify systems in the metal finishing, electronics, petroleum and printing industries. Eleven technologies have been selected for evaluation to date. The Independent Pilot is carried out by the Civil Engineering Research Foundation and will operate independently of EPA in the selection and verification of technologies.

A24. Benefit/Cost and Cost Engineering Research Initiative Poster

Jane Franklin (513) 569-7601
NRMRL CIN

During ORD's reorganization, the Systems Analysis Branch (SAB) was created as a part of NRMRL's Sustainable Technology Division. The SAB's mission is to develop and demonstrate the use of decision making tools for use by the private and public sectors. These tools attempt to integrate knowledge of technological solutions to environmental problems with cost engineering issues such as life cycle assessment, value engineering, and benefit/cost analysis. The establishment of the SAB marks the first formal attempt within ORD to bring together the wide variety of cost engineering issues under one Branch. The FY97 Budget provides funding to NRMRL in support broad based cost engineering

research initiative. The overall goal of this initiative is to support the development of standard cost engineering methodologies and software tools that can be used by EPA's Regions, Program Offices, and Laboratories in support of standards setting, policy development, and in the establishment of research priorities. Toward this end, the SAB has begun the process of evaluating the status of current research activities, identifying needs, and structuring an integrated research agenda.

A26. SITE: Innovation On The Move

Annette Gatchett (513) 569-7697
NRMRL CIN

The Superfund Technology Evaluation Program (SITE) has supported the development of innovative remediation technologies for the past ten years. With the ORD reorganization and the new directions that have been developed in the ORD Strategic Plan, the SITE Program must be redesigned to be more market drive (i.e., away from technology push toward market pull). As a result, the SITE Program emphasis is being shifted to strategic partnering with other federal organizations, industry, and consulting firms to ensure that their remediation needs/ problems are addressed with the most cost effective technologies available. The key elements of this new SITE verification program will be : (1) developing highly credible data, (2) ensuring technical objectivity, and (3) getting the technology implemented in the user community quickly.

A32. NRMRL Technology Transfer and Support Division

Dan Murray (513) 569-7522
NRMRL CIN

This will be a general NRMRL display with an

emphasis on our Technology Transfer Program. We will display some of our more recent products and have a demonstration of our new Technology Transfer homepage.

A62. **Natural Attenuation of Organic Contaminants in Ground Water: A Risk Management Approach**
Clint Hall (405) 436-8510
NRMRL ADA

NCEA

B6. **Air Quality Criteria Document for Particulate Matter.**
Larry Folinsbee (919)541-2229
NCEA RTP
This poster will illustrate the process of production, quality control, and peer review of the scientific data base which is used to compile the AQCD for PM. Key conclusions and supplemental analyses will also be illustrated.

B7. **Air Quality Criteria Document for Ozone and Related Photochemical Oxidants.**
Larry Folinsbee (919)541-2229
NCEA RTP
This poster will illustrate the process of producing an integrated review from the vast scientific database for the atmospheric chemistry, exposure, and health and ecological effects of ozone. Production, peer review processes, and quality control will be illustrated.

B8. **Oxyfuels Information Needs.**

Mike Davis (919)541-4162
NCEA RTP

The "Oxyfuels Information Needs" document, issued in May 1996, identifies the types of information needed to support comparative assessments of the risks and benefits of oxygenated and reformulated gasolines (oxyfuels) in comparison to conventional fuels. Two oxyfuel programs required by the 1990 Clean Air Act Amendments (CAAA) have received considerable attention from the public and various scientific groups. This poster will describe a framework for the comparative risk assessment of fuels, summarize briefly the research that has been done or is currently being done on conventional and oxyfuels, and highlight areas of needed further work.

B9. **Quantitative Dose-Response Assessment of Inhalation Exposures to Toxic Air Pollutants.**

Mike Davis (919)541-4162
NCEA RTP

Provisions of the 1990 CAAA require accurate human health risk estimates of both acute and chronic inhalation exposures to hazardous air pollutants. This poster will describe three projects pertaining to improved quantitative approaches for dose-response assessment of air toxics: (1) an approach for derivation of risk estimates of acute exposures; (2) a probabilistic approach for dose-response estimates; and (3) refinement of uncertainty factor values for inhalation exposures. Projects (1) and (2) are scheduled for SAB review in FY97. The Society for Risk Analysis has invited presentations on all three projects at its upcoming annual meeting in December.

B51. **Superfund Health Risk Technical Support Center**

H. Choudhury (513)569-7536

NCEA CIN

The Superfund Health Risk Technical Support Center (STSC) provides technical assistance to Regions, state, Local and other Federal Agencies and other onsite coordinators. The STSC is the focal point for the assessment of toxicity information and the development of provisional toxicity values for chemicals commonly found at Superfund sites. Benefits of the STSC to the Agency include the credible evaluation of toxicity information and the consistent application across all regions. Through the STSC, ORD is able to identify which human health methods and exposure information is needed to advance EPA risk assessment.

B52. **SERDP: Improving Risk Assessment of Defense-Related Pollutants**

H. Choudhury (513)569-7536

NCEA CIN

During the past two years, work undertaken by the Material/Chemical Risk Assessment (MCRA) Working Group, a collaborative effort between DOD, DOE and EPA, includes evaluations of munition chemicals, warfare agents, and solvents including trinitrotolune (TNT) and trinitrobenzene (TNB), VX, GA, GB, GD, HD, CK, ethylene glycol, propylene glycol, stoddard solvents, trichloroethylene, depleted uranium, and various jet fuels. This collaborative effort resulted in new toxicity information that resulted in the development of a **600-fold higher RfD** for TNB, based on analogy to DNB, than the one previously developed by the EPA in 1988. TNT and TNB have undergone external peer review and the remaining

chemicals are in the final process of the MCRA Working Group review.

B53. **Fish Consumption: Methylmercury Exposure**
K. Mahaffey (513) 569-7957
NCEA CIN
Methylmercury exposure among human populations can be predicted from
the quantities and species of fish and shellfish consumed. The EPA has analyzed dietary survey data from longitudinal and cross-sectional surveys of the general U.S. population, as well as fish consumption data from groups known to have higher than typical fish consumption. This report will discuss mercury/methylmercury concentrations in different types fish and the subsequent health risk in both adults and children based on their body weight and types of contaminated fish consumed.

B54. **Local Scale Mass Balance of Emitted Anthropogenic Mercury**
H. Choudhury (513) 569-7536
NERL CIN
Atmospheric emissions of mercury are of widespread concern because they may be related, through subsequent deposition and bioaccumulation, to the elevated mercury concentrations in fish that have been measured across the U.S. and many other countries. Both natural and anthropogenic sources emit mercury to the atmosphere. This report, using a standard short-term Gaussian plume model , will discuss the pattern of deposition of mercury emitted from anthropogenic sources and industrial facilities.

B55. Detecting Departures from Additivity for Estimating Toxic Interactions

H. Choudhury (513) 569-7536

NERL CIN

The U.S. EPA has pursued the estimation of risk of adverse effects from exposure to chemical mixtures since the early 1980s. Initial methods to calculate risk estimates were often component based approaches that requires assumptions of dose-addition of response-addition and ignored possible changes in response due to interaction effects. In this research, a dose-response model is built for the mixture of concern, under the assumption of additivity, using single chemical dose-response information on the individual components of the mixture. This report will further discuss the application of this model to predict rrisk estimates using laboratory data.

IOAA

C10. Launching 5-year "Survey-Guided Development" Program

Lois Riley (292)260-7653

AAORD

- 96% participation in first survey
- Valid "snapshot" of employee attitudes and perceptions at all levels of EPA
- Accurate benchmark for the 5-year study of ORD organizational climate
- Foundation for identifying ways to improve and strengthen ORD
- Basis for ORD workshops at all organizational levels

C16. **Congressional Concerns: From Criticism to Support**

Bob Huggett
Mary Shaffran (202) 260-0881
AAORD

Congress (and especially the House and Senate Appropriations Committees) has been monitoring the Agency's research programs closely over the past few years. Since the Office of Research and Development has introduced its Strategic Plan, reorganization, and improved peer review process, Congressional comments have evolved from criticism to support. This poster features quotations from the House and Senate Appropriations Committees from Fiscal Year 1993 to Fiscal Year 1997 regarding Research & Development programs at EPA

NHEERL

D11. **Community Outreach and Long-Term Monitoring for the New Bedford Harbor Superfund Site**

William Nelson (401)782-3053
NHEERL NAR

The New Bedford Harbor Long-Term Monitoring Program (NBH-LTM) addresses three aspects of EPA's mission: regulation, scientific research, and community outreach. Research scientists at AED were requested by EPA Region I and the U.S. Army Corps of Engineers to design a monitoring program to assess the effectiveness of NBH. The NBH-LTM Program was developed using state-of-the-art science to quantify spatial and temporal changes in physical, chemical and biological parameters within various environmental compartments. By applying ORD's scientific expertise to this regulatory

situation, and at the same time making technical information understandable to the public, this long-term monitoring project was successfully implemented.

D12. **The National Health & Environmental Effects Laboratory - Atlantic Ecology Division : Responding to a Changing Mission**

Larry Rossner (401)782-3132
NHEERL NAR

The Atlantic Ecology Division (AED) is a premier marine/estuarine research facility located on the shores of Narragansett Bay, R.I. Since the inception of EPA, this facility has been focused primarily on national issues affecting water, sediment, and living resource quality in near-coastal environments. As a result of the significant changes that occurred from the ORD reorganization, AED now has the responsibility to develop and evaluate theory, methods and data needed to understand and quantify the environmental effects of anthropogenic stressors on the coastal waters and watersheds of the Atlantic seaboard. Responding to these changes, AED staff developed a Strategic Plan based in part on ORD's model, assembled a Science Council to help focus the research, and developed five new research themes that address many of the primary ecological problems confronting the Atlantic coast and its watersheds.

D36. **An Index of Benthic Condition to Determine the Magnitude of Environmental Stress**

Jim Harvey (904)934-9237
NHEERL GB

Using EMAP-Louisianian Province data, an index of benthic condition was developed and validated that can be used as an ecological indicator for

determining the magnitude stress caused by contaminants and other stressors.

D37. An Indigenous Gulf of Mexico Amphipod for Determining Sediment Toxicity.

Jim Harvey (904)934-9237
NHEERL GB

An amphipod, indigenous to the Gulf of Mexico, was identified that is easily cultured in a laboratory and is sensitive to contaminants in sediments. Current methods for determining toxicity for Gulf of Mexico sediments rely on exotic species; this finding provides the basis for a more realistic method to assess the biological hazard of Gulf of Mexico sediments.

D38. A Strategy to Join and Integrate Top-Down with Bottom-Up Research Planning

Jim Harvey (904) 934-9237
NHEERL GB

The approach used at GED to intersect top-down and bottom-up research planning is presented along with the strategic framework for GED's 5-year research plan.

D39. Gulf of Mexico Mortality Network (GMNET)

Jim Harvey (904)934-9237
NHEERL GB

A Gulf of Mexico-wide network has been established to document the occurrence of unusual mortalities and epizootics occurring in coastal waters and to determine their cause. The organization, procedures, and relationship to environmental monitoring will be presented.

D40. **Biologically Relevant Indices of Ozone Exposure for a Secondary Air Quality Standard**
Tom Murphy (541)754-4601
NHEERL COR

D41. **Ecoregions- A Powerful Tool for Classifying Ecological Systems**
Tom Murphy (541)754-4601.
NHEERL COR

D42. **Setting Regional Priorities for Protection of Biodiversity**
Tom Murphy (541)754-4601
NHEERL COR

D43. **Projecting Alternative Ecological Futures - A Tool for Community Based Environmental Protection**
Tom Murphy (541)754-4601
NHEERL COR

D44. **ECOTOX: A Database of Toxic Effects to Aquatic and Terrestrial Species**
Steve Hedtke (218)720-5550
NHEERL DUL
In response to a need by risk assessors and researchers for a
comprehensive database of ecological effects data, the Mid-Continent Ecology Division (Duluth) developed ECOTOX. The Unix-based on-line version of ECOTOX provides a single user interface for identifying and downloading toxicity data for aquatic life, terrestrial plants, and terrestrial wildlife.

D45. **Managing Change at MED: Evolution in workforce composition, research planning and team**

Steve Hedtke (218)720-5550.
NHEERL DUL

The poster covers two related areas: 1) changes in MED/NHEERL workforce composition and organizational structure as a consequence of the ORD reorganization; and 2) incorporation of Teams and their use in research planning, project design and implementation, during the same period. The poster concludes with a discussion of the remaining Team building challenges that need to be overcome for the efficient use of research Teams to advance the goal of high quality science.

D46. **Cryptosporidium serosurvey**

Hillel Koren (919)966-6200
NHEERL RTP

Success story is that we have compared two methods for measuring antibody and determined which one would be suitable for the study. The initial study on the NHANES data is available and well as preliminary data on the first set of paired cities. In addition this project is an example of leveraging funds with industry and cross collaboration with another EPA lab (NERL) and another federal agency (CDC).).

D47. **Reproductive Toxicology Division**

Robert Kavlock (919)541-2771
NHEERL RTP

The Reproductive Toxicology Division carries out research to improve our ability to detect, quantify, and interpret developmental toxicity induced by environmental pollutants. A variety of in vitro and in vivo techniques are used to improve our ability to

understand how environmental chemicals might interact with reproductive processes or the developing conceptus.

D48. **Divisional Reviews - Peer Review of NHEERL's Science Programs**
Robert Dyer (919)541-2760
NHEERL RTP
NHEERL has begun a cycle of regular peer reviews of its 9 research divisions. The poster will describe the purpose, process and period (time frame) for these reviews.

D49. **The NHEERL Synergy Workgroup: Organization, Goals and Progress**
Steve Bradbury (218)720-5610
NHEERL DUL
The poster describes the background, the goals and accomplishments of the synergy workgroup. Examples of synergy-related travel and collaborative projects are included.

D50. **US-Mexico Border Project**
Hal Zenick (919)541-2283
NHEERL RTP
The U.S.-Mexico Border Project represents a highly successful, binational partnership between Federal and State agencies and border communities to identify, prioritize and address the major environmental health risks in that region. The program blends surveillance/monitoring and research, intervention/mitigation, education/training and community outreach as a multi-pronged approach to problem resolution. ORD, along with CDC has co-chaired this interagency effort. The success of this venture was recognized recently by the formal establishment and inclusion of an

environmental health workgroup in the new, binational Border XXI program.

NERL

E14. Genetic Diversity Monitoring of Plants and Wildlife at Wurtsmith Air Force Base

Gregory Toth (513)569-7242
NERL CIN

Comprehensive exposure characterization ultimately includes assessment of the vulnerability of a resource and its receptors. Reductions in genetic diversity of a species indicate a vulnerability to exposure to stressors. This poster displays the results of research on genetic diversity indicator development. The Wurtsmith AFB was selected for the Department of Defense National Environmental Technology Demonstration Program (D/NETDP) to demonstrate bioremediation-based systems for *in situ* remediation of soils, sediments and ground water contaminated with fuels solvents and organic mixtures . Funded by the DoD Strategic Environmental Research and Development Program, we have collected tissue samples from several populations of bullhead catfish, amphibians and plants directly off base. These samples were used to test the hypothesis that stressors of anthropogenic origin can act as barriers to gene flow or create bottlenecks that lead to a loss of genetic diversity and further population declines.

E21. NERL Site Characterization

Jeff Van Ee (702)798-2367
NERL LV

The NERL Site Characterization CD-ROM is available through NTIS. It was finished this year. It

contains approximately 3000 pages of guidance on site characterization that can be electronically searched. It also contains a number of software packages that were produced at NERL-Las Vegas for use in hazardous waste site characterization.

E25. A Landscape Approach for Assessing Ecological Risk in a Southwestern Watershed. - San Pedro River Case Study

Bill Kepner (702)798-2193
NERL LV

The U.S. Environmental Protection Agency recently initiated a national approach to assess ecological risk relative to exposure to environmental stressors. A key component of this framework enlists landscape ecology as a theoretical basis from which to assess cumulative exposure to stress at multiple spatial and temporal scales. This project has focused its research into developing a system of landscape composition and pattern indicators which can be used to estimate current status, trend, and changes in ecological and hydrological condition. Specifically, it is designed to determine ecosystem vulnerability relative to large-scale natural or human-induced disturbances (e.g. climatic change and livestock grazing, respectively) using a system of landscape pattern metrics derived from remote sensing, spatial statistics, and geographic information system technology.

E28. Site Characterization Technology Demonstrations

Eric Koglin (702)798-2432 and
Steve Billets (702)798-2232
NERL LV

The acceptance of new field measurement technologies into general use is hindered by a lack

of reliable performance data. The Consortium for Site Characterization Technology (CSCT) was instituted to fill this gap. The CSCT is a partnership between the EPA, the Departments of Defense (DoD), Energy (DOE), Interior, the States and the private sector, all of whom share the goal of increasing the use of innovative characterization technologies in assessing contaminated sites. The CSCT is funded through the Environmental Technology Verification (ETV) program of the Environmental Technology Initiative (ETI) and the DoD Strategic Environmental Research and Development Program (SERDP). This presentation describes the process used by the CSCT to verify performance.

E29. A Field Demonstration of Portable Mass Spectrometers

Gary Robertson (702)798-2215
NERL LV

In FY96, three field portable mass spectrometers were demonstrated under the Consortium for Site Characterization Technology (CSCT). The CSCT conducts demonstrations, through third-party verification organizations, of new and innovative field-deployable measurement technologies. The purpose of this demonstration was to qualify the developers' performance claims and to create verified data sets that can be used to confirm the performance of the technology. The demonstration is intended to generate the information needed by potential users to determine the applicability of the technology to their environmental problem-solving needs. Environmental Technology process used to verify cost and performance.

E30. **Chirality in the Environment: The Ultimate in Speciation**

Arthur W. Garrison (706-355-8219)
NERL ATH

Many pesticides and other chemicals of environmental importance are chiral, i.e., composed of two or more enantiomers, mirror-image species each of which may be degraded by microbes at different rates. Knowledge of this chemical chirality is important to EPA, not only because of differences in degradation rates and persistence of enantiomers, but mostly because one enantiomer is likely to be more toxic than the other. Moreover, some pesticides and other chemicals are endocrine disruptors, the hormone-mimicking activity of which could be restricted to specific enantiomers. Knowledge of the persistence and toxicity of the respective enantiomers of chiral pesticides would improve ecosystem risk assessment and could lead to pollution prevention if manufacturers were to formulate only the enantiomer that was toxic to a target organism. The poster shows the application of capillary electrophoresis and gas chromatography using chiral columns to separate enantiomers in studies of the microbial degradation of dichlorprop, a phenoxy acid herbicide, and the plant-enzyme degradation of DDT.

E31. **Phytotransformation: Use of Plant Enzymes to Remediate Soil-Water Contamination**

Lee Wolfe (706)355-8207) and
Steven C. McCutcheon (706)355-8235
NERL ATH

The transformation of trinitrotoluene (TNT) to environmentally acceptable products is achieved through a new process that uses common aquatic plants containing a nitroreductase enzyme. This

research breakthrough provides an efficient, inexpensive, an aesthetically pleasing technology for the cleanup of water and soil contaminated with munitions waste at military installations and other sites. With the support from the interagency Strategic Research and Development Program (whose participants include the Departments of Defense and Energy along with EPA), the technology has moved on a fast track from bench study to pilot-scale field research. The 12-minute video provides an overview of the research on nitroreductase and other plant-enzyme systems.

E33. Models-3: A Unifying Framework for Environmental Modeling and Assessment

Joan Novak (919)541-4545
NERL RTP

Models-3 is a state-of-the-art environmental modeling system supporting multi-pollutant "one-atmosphere" issues (oxidants, nitrogen & acid deposition, and particulate matter) on urban to regional scales. Models-3 is designed to incorporate a variety of environmental models important to ecosystem and human risk assessment. Thus the Models-3 framework can provide an integrating mechanism for fate and transport research across the agency and scientific community. Interchangeable science components, and cross-platform data management and computing, facilitate the development of multi-media ecosystem exposure assessment capabilities. A graphical user interface enables local communities and regional planners to evaluate a range of local control options and risk reduction strategies to promote more informed judgments about ecosystem planning, preventative methods, and restoration. The poster is supplemented with a video highlighting multi-

media modeling in the Chesapeake Bay, the use of remote sensing data to improve model predictions, and the complexity of atmospheric chemistry associated with acidic deposition.

E34. Summer Study of Field Methods for Estimating Exposure of Children in Low-Income Families to Polycyclic Aromatic Hydrocarbons

Nancy Wilson (919)541-4723

Children in low-income families may have high exposures to polycyclic aromatic hydrocarbons (PAH). Such exposures could arise from home locations near industrial sites or heavy traffic, poor diet, environmental tobacco smoke, contaminated play areas, or other causes. The work reported here is one of several related studies that serve to evaluate methods for estimating exposure and to provide preliminary estimates of the exposure of children in low-income families to PAH. Nonsmoking participants with preschool children and incomes at or below the US poverty level were recruited. Concentrations of PAH were measured in indoor and outdoor air, house dust, yard soil, and diet for nine households. Urinary metabolites of PAH were measured for an adult and a preschool child in each home. Initial results of the recently completed summer study are presented here.

E35. Ambient Particle Concentrator for Conducting Laboratory InhalationExposure Studies

Robert M. Burton (919)541-3077

NERL RTP

The recent EPA invention of a unique 0.1 micron cutpoint virtual impactor makes possible the concentration of ambient particulate matter in size range of 0.1-2.5 microns. The system is a major breakthrough for use in experimental inhalation

exposure studies. It delivers particles concentrated by a factor of 30 to the test subjects, thus providing more of a chance to observe dose/response relationships.

E56. Multi-Resolution Land Characteristics (MRLC)

Denice Shaw (919)541-2698
NERL RTP

The MRLC program is a partnership of federal environmental monitoring programs and agencies. The goals of MRLC include the acquisition, management and distribution of multiscale land characterization informtion as well as the research for and production of Landsat TM based land cover data for the conterminous United States. As of this date, MRLC has completed land cover mapping for Standard Federal Regions 2 and 3, acquired complete Landsat TM coverage for the U.S. and developed a data management system to support the management, distribution and archive of MRLC products.

E57. Applications for Using Exhaled Human Breath as an Exposure Assessment Tool for Volatile Organic Compounds.

Jachim D. Pleil and Andrew B. Lindstrom
(919) 541-4680
NERL RTP

The presence of specific compounds in human blood can indicate a recent exposure (or biological response) to a drug or environmental pollutant, or indicate a disease state of the individual. The direct measurement of blood for various substances and biomarkers is one of the primary medical diagnostic tools in current use. Because the organic constituents of exhaled human breath are representative of their blood-borne concentrations

through gas exchange in the blood/breath interface in the lungs, a breath measurement could conceivably replace a direct blood measurement. A classic example of this is the "breathalyzer" test for inebriation from ethanol.

E59. Fish Biliary Metabolites as an Indicator of PAH Exposure at an Ecoregional Scale

Susan Cormier 513-569-7995
NERL CIN

This poster displays an application of biochemical indicators of exposure. The study demonstrated that bile metabolites of polycyclic aromatic hydrocarbons could be used to estimate the distribution and exposure levels that occur in aquatic systems at a large geographic scale. Bile metabolites were measured in fish collected from the Eastern Cornbelt Plains (ECBP) Ecoregion to determine the distribution and levels of exposure to combustion by-products and petroleum. Bile was collected from the gall bladder of 1 to 6 white suckers from 118 sites across Ohio (107), Indiana (8) and Michigan (3) using a randomized EMAP statistical sampling design.

E61. AEROSOL TEST FACILITY

Fu Lin Chen (919)541-3791
NERL RTP

I. Aerosol Physics Research Program
II. Methods Standardization and Equivalency
III. Aerosol Exposure/Activity Research Program

ORMA

F13. ORMA Customer Service

Peter Durant

ORMA staff recently developed a vision statement that sets customer service as a key goal of our organization. In FY 1996, we worked to improve customer service by advocating ORD facility improvement needs within and outside EPA, helping to fund scientific instrumentation, providing ORD-specific training on assistance instruments, and other activities. We look forward to soliciting suggestions from all our key customers -- ORD scientists, engineers, technicians, support staff and managers -- on how to improve service in FY 1997!

F15. ORD Awards Program

Shirley Thomas (202)260-9372

ORMA HQ

Poster focuses on ORD's 1995-1996 Awards Program reflecting ORD employee accomplishments in the different award categories.

F27. Improving ORD communications through use of new technologies

Pam Bassford (202)260-7466

ORMA HQ

- Videoconferencing (just being installed at ORD sites),
- OMIS (which provides us new ways of sharing info through ORD data base),
- Our government-wide, prize-winning use of internet for contract solicitations
- Local area and wide area networks

NCERQA

G58. NCERQA's First Years of Success.
NCERQA's ScienceTo Achieve Results (STAR): An ORD Success Story--meeting the specific science needs of the EPA, building on the scientific creativity of the country's foremost research scientists.

ORSI

H60. OSP + ORSI = the new Office of Science Policy
OSP 202-260-7669
OSP has two primary functions for relating ORD's research and expertise to the Agency's mission - today and for the future. One function is to guide the use of scientific analyses in current regulatory and science policy activities of EPA's laboratories, program and regional offices, and the Science Policy Council. The other is to assist in determining the kind and quality of information available for future environmental decisions by leading ORD and Agency research planning activities. These functions are accomplished by coordinating with ORD's most valuable resource — its people. OSP builds bridges between ORD and Agency programs for strategic planning, developing scientifically based regulations and policies, and for considering and resolving agency-wide science issues. Upon Agency approval of the offices' reorganization package, the Risk Assessment Forum, part of the old Office of Science Policy, will be under the National Center for Environmental Assessment.

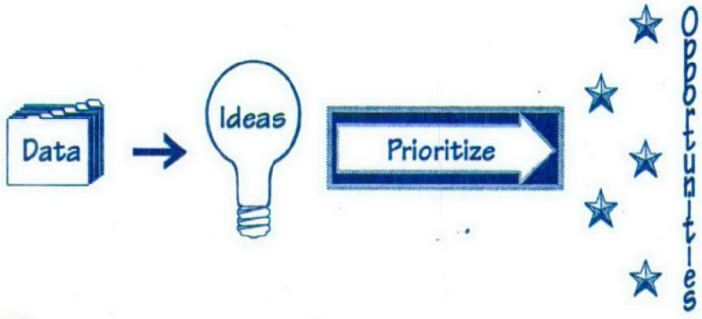
1st Annual ORD Workshop ~ Managing Change
December 2-5, 1996

Day 1 -- Overall Change

- Welcome/Introductions,etc. (Bob Huggett & Others)
- Grappling with Change
- Open Space/Gallery Walk/Celebrate Successes

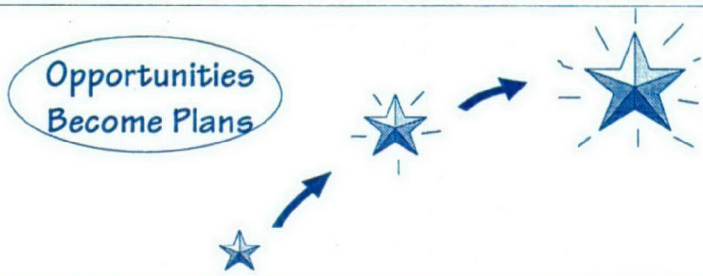
Day 2 -- Improvement Opportunities

- Review What We Know About ORD
- Data to be used:
  - Strategic Plan (over arching)
  - Survey, Councils, Participants
  - Workshop Steering Committee
- Identify Opportunities For Improvement
- Select Priority Opportunities



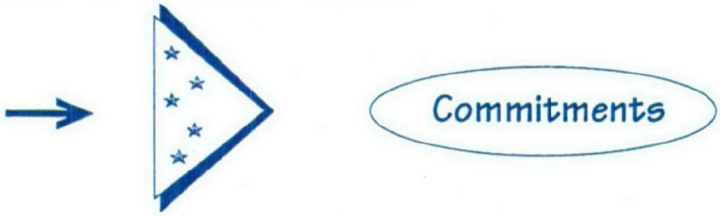
Day 3 -- Framework for Action

- Present Opportunities
- Develop Action Plan Ideas
- Reach Consensus on Action Plans
- Present & Discuss Plans



Day 4 -- Targeting Action

- Lab/Center/Office Discuss Plans
- Commitments/Celebration Lunch



Desired Outcome: Using Our Strategic Plan to Improve Delivery of the Best Science for EPA

1st Annual ORD Workshop ~ Managing Change

December 2-5, 1996

EPA ERL-Corvallis Library
00007403

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- Grappling with Change
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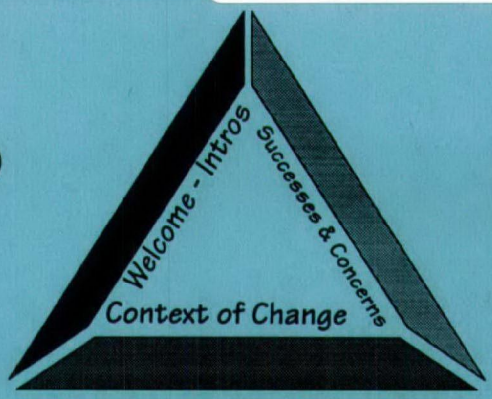

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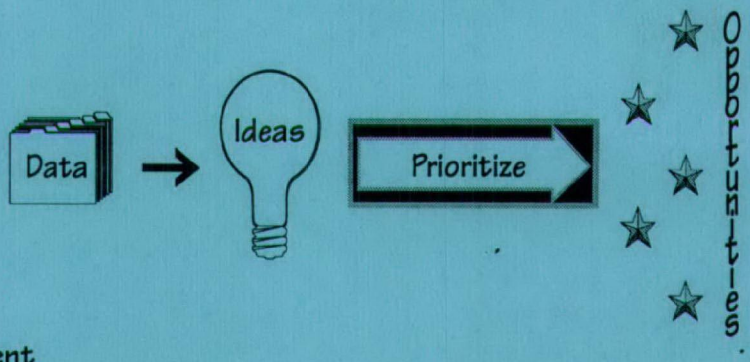

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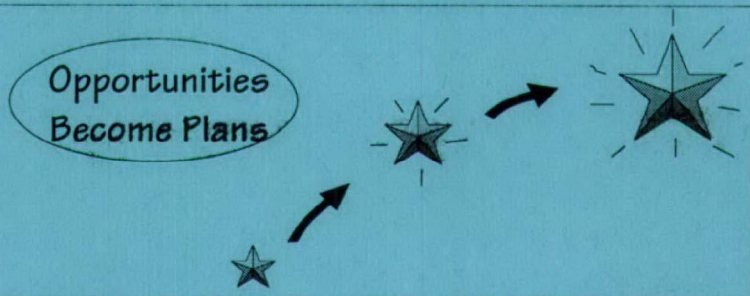

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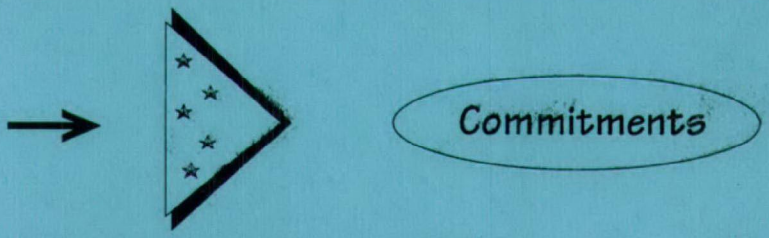

Desired Outcome: Using Our Strategic Plan to Improve Delivery of the Best Science for EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

DEC 2 1996

OFFICE OF
RESEARCH AND DEVELOPMENT

Dear ORD Colleague:

Welcome to the First Annual ORD Workshop - Managing Change. The materials in this notebook are to give you an orientation to the scope, purpose, and intended outcomes of this important meeting. We encourage you to review all of these materials to help establish a general understanding of what we hope to accomplish. Change and evolution in an organization are always difficult, and there are challenges at every level in the organization, from the support staff to the bench scientist to the senior manager. Each of us is impacted -- and each of us is part of the solution

We are committed to a fuller understanding of the issues arising from our change efforts. And we are committed to jointly working with you to find meaningful and lasting improvements in the way we do business in ORD. This meeting is intended to surface the most important issues in our organization in a setting of creative engagement and full amnesty. And while we want you to feel free to openly express your concerns, we are also providing an Amnesty Box to allow anonymous contributions There will also be flip charts strategically placed in the Workshop open space for people to make comments or suggestions throughout the meeting.

Let us emphasize again, that this is the beginning of a continuing process to improve ORD over the long term and position ourselves for the science needs of the coming millennium. We know we can count on you to help us do that

Bob Huggett Henry Longest Joe Alexander

Recycled/Recyclable
Printed with Soy/Canola Ink on paper that contains at least 75% recycled fiber

Workshop Principles and Goals

1st Annual ORD Workshop - Managing Change
December 2-5, 1996

Overarching Principles for the Workshop:

1 Workshop is a beginning not an ending - an on-going improvement effort.
2 Use the talents and creativity of all of ORD's staff and managers
3. Have a good time as we work on serious solutions
4 Suspend cynicism and personal gripes -- don't bring any axes to grind
5 Integrate action planning along the way in the meeting, don't leave it until the end when everyone is out of steam
6 Have an "amnesty" box at registration to drop in a card describing one burning issue or question that each attendee wants addressed by the meeting.
7 Set reasonable boundaries for the workshop. Don't try to cram in too much.

Goals of Meeting:

1 Identify critical needs in implementing the new ORD.
2 Identify actions to address those needs
3. Be ready to evolve, while sustaining excellence
4 Work as a team, valuing all contributions of talent Tap into creativity
5 Improve the organizational climate in ORD
6 Understand that these changes are real, and move forward
7 Initiate new beginning together.

Desired Outcomes:

1 Share and listen (and vent) - use data from survey, Science, Management and Human Resources Councils, and amnesty box
2 Understand the new directions in ORD, their meaning and benefits Attain mutual understanding of Bob's vision, and the perspective from the Labs. (Also value past accomplishments)
3 Build the ORD team and improve communications up, down, and across ORD
4 Come up with action items. Build a mechanism to assure that they actually happen, an accountability systems or something

Steering/Agenda Committee Meeting
July 18, 1996

Agenda

First Annual ORD Workshop - Managing Change
December 2-5, 1996
The Woodlands
Williamsburg, Virginia

AGENDA

Monday, December 2, 1996

Theme: Overall Change

1:00 PM	Welcome Goals of the Workshop	Henry Longest
	"Charge" for the Workshop	Bob Huggett
	Workshop Roles	Henry and Joe Alexander
1:30 PM	Breaking Free for Change Guest Speaker Author and noted Organizational Behavior practioner, Dr Noer will interact, lead discussions and lecture on the theme of change, personal and organizational realities associated with change, and the various responses associated with change.	David Noer, D.B.A.
5:00 PM	Wrap-Up	Henry Longest
5:30- 7:00 PM	Gallery Walk/Poster Session and Lite Fare Celebrating ORD's Successes with posters from ORD Labs, Centers and Offices while enjoying a lite buffet and meeting each other. Additionally, an "Open Space" array of flip charts are available to allow each participant to write concerns, issues or ideas about ORD. Everyone's comments are welcome. Begin an issue/idea flipchart yourself or add to others' comments.	

Tuesday, December 3, 1996

Theme: What we, ORD, know about ourselves and what needs improvement

8:00 AM	Introduction and Overview	Henry Longest
	Review of ORD Data	
	Presentations:	
	ORD Strategic Plan	Joe Alexander
	Survey Results	Henry Longest
	Human Resources	George Moore/
	Council	Betsy Howard
	Unions	
	Management Council	Debbie Dietrich
	Science Council	Hugh McKinnon

10:00- Break

10:30 AM Brainstorm Improvement Opportunities and Identify Priority Issues

Walt Galloway
Richard Brown

12:00 LUNCH

1:00 PM Select Top Priorities-Breakout Sessions

Group 1	Tables 1-7	Cascades Room
Group 2	Tables 8-13	Council Room
Group 3	Tables 14-19	Center Room
Group 4	Tables 20-25	North Room

2:30 PM Break

3:00 PM Framing the Issues-Breakouts continued

(4:30-5:30 PM - Historians and Facilitators develop one page descriptions of top improvement opportunities-room to be announced)

Vednesday, December 4, 1996

Theme: Defining priority improvement opportunities and finding a framework for action

8:00 AM Introduction and Overview Henry Longest

Presentation of the Priority Improvement Opportunities

8:45 AM Action Planning for Improvement Opportunities

Breakout Sessions*

Group 1	Commonwealth Room
Group 2	Center Room
Group 3	Garden Room
Group 4	Corner Room

11:30 AM LUNCH

2:30 PM Panel Presentations and Action Planning
Report out from Breakout Discussions
Commonwealth Hall

5:00 PM Adjourn

7:00 PM Shields Tavern or The Woodlands, Garden Room
(Use Hotel pass for free transportation to the Shields Tavern Dinner. Williamsburg buses leave about every 15 minutes from designated Woodlands bus stops-See Hotel map)

* See Table in Conference Book for breakout group assignment (Under Tab "Tables and Room Seating Plans")

Thursday, December 5, 1996

Theme: Taking the Action back home-getting started

8:00 Lab/Center/Office Teams Meeting
Breakout Sessions

Group 1	NRMRL	Commonwealth 1
Group 2	NERL	Cascades 2
Group 3	NHEERL	Commonwealth 2
Group 4	NCERQA	Cascades 1
Group 5	NCEA	Council 1
Group 6	ORSI	Seminar 2
Group 7	ORMA	Council 2
Group 8	IOAA	Corner Room

10:00 Final Plenary Session
Lab/Center/Office Teams Presentation

11:25 Summary of Key Highlights
Next Steps

11:45 Meeting Evaluation

12:15 PM The "Launch" Lunch
Informal Summary and Farewell

2:00 PM Workshop Adjourns

Table and Room Seating Plans

TABLE AND ROOM SEATING PLANS

NAME	DAY 1 AND 2 TABLES	DAY 3 BREAKOUT RMS	DAY 4 BREAKOUT RMS
AKLAND, ANN	3	1	3
ALEXANDER, JOE	4	1	8
ANDREASEN, JAMES	1	2	5
ARTHUR, JOHN	12	3	3
BARRON, JESSICA*	14	2	3
BASSETT, MARYANN	16	4	3
BASSFORD, PAM	6	4	7
BELILES, ROBERT	2	2	5
BETZ, ELIZABETH	17	4	2
BIRNBAUM, LINDA	5	1	3
BOBSEINE, KATHY	9	2	3
BOWEN, JULIE*	15	1	2
BOWMAN, SANDRA*	16	4	3
BOYDE, SHARON	3	4	5
BRADY, RANDY*	17	1	3
BROWN, RICHARD*	18	1	3
BRYAN, ELIZABETH	6	1	4
CAIRNS, MICHAEL	17	3	3
CALLAHAN, MICHAEL	7	1	5
CAMPBELL, JED	22	2	3
CARR, JIM*	9	1	1
CARSON-COX, LATASHA	5	4	1
CHOE, JASON	24	4	7
CHOUDHURY, HARLAL	9	3	5
CLARK, BOB	8	1	1
CLARK, TOM	8	1	2
CLAXTON, LARRY	10	1	3
COLON, MARIBEL	18	3	2
CONRATH, SUSAN*	10	4	3

TABLE AND ROOM SEATING PLANS

NAME	DAY 1 AND 2 TABLES	DAY 3 BREAKOUT RMS	DAY 4 BREAKOUT RMS
CONTRERAS, JANET	8	4	2
CONVERY, JOHN	11	1	1
CORBETT, JOSEPH	4	4	5
CORN, RUTH	21	4	1
CORTESI, ROGER	12	1	4
CROFT, JEAN	15	4	8
CUPITT, LARRY	13	1	2
DAVIS, J MICHAEL	8	3	5
DAVIS, ROBERT	16	4	2
DEAN, KAREN F.	10	4	3
DEMPSEY, CLYDE	7	2	1
DIETRICH, DEBBIE	14	1	7
DIXON, THOMAS	6	2	4
DRIVER, KATHY*	19	3	3
DRYER, JIM	17	4	1
DUFOUR, ALFRED	16	1	2
DURANT, PETER	13	1	7
DYER, BOB	18	1	3
EDER, BRIAN	19	2	2
EDWARDS, NICOLE	25	4	6
ERICKSON, PATRICIA	8	3	1
EXTON, MARGERY*	22	2	8
EXUM, LINDA	12	4	2
FARLAND, BILL	17	1	5
FEIGE, LOUIS	24	3	2
FEIGE, WALT	9	2	1
FINCH, CAROL	19	1	8
FOLEY, GARY	18	1	2
FREDERICK, ROBERT	5	2	5

TABLE AND ROOM SEATING PLANS

NAME	DAY 1 AND 2 TABLES	DAY 3 BREAKOUT RMS	DAY 4 BREAKOUT RMS
FREESTONE, FRANK	18	2	1
FRICK, WALTER	13	2	2
GAGE, MICHAEL	11	4	3
GALLOWAY, WALT*	21	3	2
GATCHETT, ANNETTE	10	3	1
GAY, BRUCE	20	3	2
GEORGE, SUSAN	17	2	3
GIBB, HERMAN	6	2	5
GLASER, JOHN	11	2	1
GRAHAM, JUDY	19	1	2
GRANT, LESTER	20	1	5
GRINDER, GREGORY	8	4	3
GROGARD, MEGAN	13	4	3
GUNDERSEN, JENNIFER	1	2	3
HALL, CLINT	21	1	1
HANLON, DEBORAH*	20	2	4
HANSEN, DAVID	2	2	3
HARDESTY, RICHARD	22	1	5
HARVEY, JAMES	23	3	3
HARVEY, TERRY	23	1	5
HAWK, PATRICIA A	18	4	3
HAWKINS, SHERRY	3	4	6
HEDTKE, STEVEN	24	1	3
HERRMANN, JONATHAN*	23	2	1
HOFFMAN, ALAN	21	2	2
HOLDSWORTH, THOMAS J	25	2	1
HOLM, HARVEY	14	3	2
HOWARD, BARRY	25	1	3
HOWARD, ELIZABETH	14	3	1

TABLE AND ROOM SEATING PLANS

NAME	DAY 1 AND 2 TABLES	DAY 3 BREAKOUT RMS.	DAY 4 BREAKOUT RMS
HUGGETT, ROBERT	1	1	8
HUTCHINGS, DEE L	19	4	1
JACKSON, PATRICIA	2	1	3
JACKSON, TOYA	1	4	2
JENSON, CORRENE	13	3	3
JOHNSON, MIMI	22	4	3
JONES, ESTHER	22	4	7
JONES, PAT	21	4	8
KADELI, LEK*	24	4	7
KAHL, MICHAEL	14	3	3
KANTOR, EDWARD	9	3	2
KAPLAN, NORMAN	22	3	1
KAVLOCK, ROBERT	3	1	3
KOREN, HILLEL	5	1	3
KULP, RUSSELL	23	2	1
LAMBERSON, JANET	6	2	3
LAPAN, RICK	3	2	3
LAURIE, VERNON	5	4	4
LAWRENCE, CAL	6	1	1
LESLIE, ANNE	24	4	7
LEW, ROSE	1	3	6
LEWIS, DENISE	23	3	3
LEWIS, NORMA	12	3	1
LINGLE, STEVE	10	1	4
LINTHURST, RICK	9	1	2
LONGEST, HENRY L	9	1	8
LYONS, TERRENCE	13	2	1
MABELLOS, JESSE	20	3	3
MAHAFFEY, KATE	10	3	5

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NAME	DAY 1 AND 2 TABLES	DAY 3 BREAKOUT RMS	DAY 4 BREAKOUT RMS
MARTIN, BARRY	11	1	2
MASON, SHARON	25	4	7
MAYER, FOSTER	12	1	3
MCCARTHY-O'REILLY, MARY	20	4	6
MCCLANAHAN, MELINDA	13	1	2
MCCRILLIS, ROBERT	24	3	1
MCKENNEY, CHARLES	2	4	3
MCKINNON, HUGH	14	1	1
MENZER, ROBERT	15	1	4
MESSER, JAY*	25	3	2
MILLER, CHARLES A	25	2	1
MILLER, DIANA	14	2	3
MOORE, GEORGE	1	2	1
MOORE, JOHN	10	1	2
MOORE, MIKE*	12	1	7
MORRIS, CURTIS M.	22	3	2
MULKEY, LEE	16	1	1
MULLIN, MICHAEL	7	3	3
MURPHY, CATHY	15	4	2
MURPHY, THOMAS	23	1	3
NACCI, DIANE	4	3	3
OLEXEY, ROBERT	17	1	1
OPPELT, TIM	18	1	1
OSBORNE, MICHAEL	1	3	1
OWENS, JAMES H	15	2	1
PAHL, DALE	23	2	2
PATTON, DOROTHY	19	1	6
PEACHER, CLAY	19	4	3
PEARSON, GARETH	7	2	2

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NAME	DAY 1 AND 2 TABLES	DAY 3 BREAKOUT RMS	DAY 4 BREAKOUT RMS
POTTER, BILL	2	2	2
PREUSS, PETER	22	1	4
PRINCIOTTA, FRANK	21	1	1
PRYOR, MARGHERITA	2	4	6
PUZAK, JACK	20	1	4
RADZIKOWSKI, MARYELLEN	24	1	6
REASONER, DONALD	14	3	1
REITER, LARRY	25	1	3
RENARD, ESPERANZA P	7	3	4
RILEY, LOIS	5	4	8
ROHRER, JUDY	4	4	8
ROSS, LINDA B *	11	1	7
RUBINSTEIN, NORMAN	1	1	3
RUSSO, ROSEMARIE	2	1	2
SAILSTAD, DENISE	15	2	3
SAKIEWICZ, CAROL A	5	4	3
SALMON, LEE*	1	1	6
SANTAVY, DEBORAH	24	2	3
SCHIERMEIER, FRANK	3	1	2
SCHMELLING, STEPHEN	20	3	1
SERGEANT, ANNE*	3	3	5
SHAFFRAN, MARY*	2	2	8
SHAW, DENICE	6	3	3
SHIMABUKU, RAY	20	3	3
SIKDAR, SUBHAS	4	1	1
SIMES, GUY	16	3	1
SLIMAK, MICHAEL	5	1	5
SMART, JAN	16	4	3
SMITH, BENNETT	3	3	2

TABLE AND ROOM SEATING PLANS

NAME	DAY 1 AND 2 TABLES	DAY 3 BREAKOUT RMS	DAY 4 BREAKOUT RMS
SMITH, KATE	6	1	2
SMITH, STEVE*	4	4	7
SOLOMON, ALLEN	21	2	3
SPARKS, ALLEN R	25	4	3
SPYRES, JULIE*	5	1	4
STANTON, MARK	17	3	3
STEEN, WILLIAM	16	2	2
STELMA, GERARD	4	2	2
SUTTON-BUSBY, VERLA	23	4	7
TEICHMAN, KEVIN*	6	1	6
TERRELL, DOCK	18	3	3
THOMAS, SHIRLEY	7	4	7
THORLAKSON, BOB*	7	3	1
TILSON, HUGH	7	1	3
TUCKER, DONNA	11	4	5
VAN EE, JEFF	11	3	2
VEITH, GIL	8	1	3
VORMWALD, RON	15	4	3
WASSON, SHIRLEY	2	2	1
WATERS, KAY	11	4	7
WATKINSON, WILLIAM	19	3	3
WATSON, PATRICIA L	12	4	1
WENTWORTH, NANCY	3	1	4
WHITFIELD, JAMIE	21	2	1
WIENER, RUSSELL	10	1	2
WIGGINTON, MARY	9	4	6
WILKINS, AMINA	7	2	5
WRAY, EVELYN	9	4	7
WRIGHT, KEN*	8	2	2

TABLE AND ROOM SEATING PLANS

NAME	DAY 1 AND 2 TABLES	DAY 3 BREAKOUT RMS	DAY 4 BREAKOUT RMS
ZARBA, CHRIS	10	1	8
ZENICK, HAL	11	1	3
*Facilitators			
DAY 3 BREAKOUT			
1=managers			
2=scientists			
3=scientists			
4=other			
DAY 4 BREAKOUT			
1=NRMRL			
2=NERL			
3=NHEERL			
4=NCERQA			
5=NCEA			
6=ORSI			
7=ORMA			
8=IOAA			

Day One Seating Arrangements

TABLE 1

James Andreasen
Jennifer Gundersen
Rose Lew
Toya Jackson
Michael Osborne
Robert Huggett
Norman Rubinstein
George Moore
Lee Salmon - facilitator

TABLE 2

Robert Beliles
David Hansen
Margherita Pryor
Bill Potter
Shirley Wasson
Patricia Jackson
Rosemarie Russo
Charles McKenney
Mary Shaffran - facilitator

TABLE 3

Sharon Boyde
Rick Lapan
Nancy Wentworth
Bennett Smith
Ann Akland
Robert Kavlock
Frank Schiermeier
Sherry Hawkins
Anne Sergeant - facilitator

TABLE 4

Joseph Corbett
Diane Nacci
Judy Rohrer
Gerard Stelma
Joe Alexander
Subhas Sikdar
Steve Smith - facilitator

TABLE 5

Robert Frederick
Carol Sakiewicz
Vernon Laurie
Latasha Carson-Cox
Linda Birnbaum
Hillel Koren
Michael Slimak
Lois Riley
Julie Spyres - facilitator

TABLE 6

Herman Gibb
Janet Lamberson
Tom Dixon
Pam Bassford
Elizabeth Bryan
Cal Lawrence
Kate Smith
Denice Shaw
Kevin Teichman - facilitator

TABLE 7

Amina Wilkins
Michael Mullin
Esperanza Renard
Clyde Dempsey
Michael Callahan
Gareth Pearson
Hugh Tilson
Shirley Thomas
Bob Thorlakson - facilitator

TABLE 8

Michael Davis
Gregory Grinder
Janet Contreras
Patricia Erickson
Bob Clark
Tom Clark
Gil Veith
Ken Wright - facilitator

TABLE 9

Harlal Choudhury
Kathy Bobseine
Edward Kantor
Walt Feige
Rick Linthurst
Henry Longest
Mary Wigginton
Evelyn Wray
Jim Carr - facilitator

TABLE 10

Kate Mahaffey
Karen Dean
Steve Lingle
Annette Gatchett
Larry Claxton
John Moore
Russell Weiner
Chris Zarba
Susan Conrath - facilitator

TABLE 11

Donna Tucker
Kay Waters
Michael Gage
Jeff Van Ee
John Glaser
John Convery
Barry Martin
Hal Zenick
Linda Ross - facilitator

TALBE 12

John Arthur
Pat Watson
Linda Exum
Norma Lewis
Roger Cortesi
Foster Mayer
Mike Moore - facilitator

TABLE 13

Correne Jenson
Megan Grogard
Walter Frick
Terrence Lyons
Larry Cupitt
Melinda McClanahan
Peter Durant
TBD - facilitator

TABLE 14

Michael Kahl
Diana Miller
Harvey Holm
Donald Reasoner
Debbie Dietrich
Hugh McKinnon
Elizabeth Howard
Jessica Barron - facilitator

TABLE 15

Ron Vormwald
Denise Sailstad
Cathy Murphy
James Owens
Robert Menzer
Jean Croft
Julie Bowen - facilitator

TABLE 16

Maryann Bassett
Jan Smart
William Steen
Guy Simes
Alfred Dufour
Lee Mulkey
Robert Davis
Sandra Bowman - facilitator

TABLE 17

Michael Cairns
Mark Stanton
Elizabeth Betz
Susan George
Bill Farland
Robert Olexy
Jim Dryer
Randy Brady - facilitator

TABLE 18

Patricia Hawk
Dock Terrell
Maribel Colon
Frank Freestone
Gary Foley
Tim Oppelt
Bob Dyer
Richard Brown - facilitator

TABLE 19

Clay Peacher
William Watkinson
Brian Eder
Dee Hutchings
Judy Graham
Dorothy Patton
Carol Finch
Kathy Driver - facilitator

TABLE 20

Ray Shimabuku
Jesse Mabellos
Bruce Gay
Stephen Schmelling
Lester Grant
Jack Puzak
Mary McCarthy-O'Reily
Deborah Hanlon - facilitator

TABLE 21

Allen Solomon
Ruth Corn
Alan Hoffman
Jami Whitfield
Clint Hall
Frank Princiotta
Pat Jones
Walt Galloway - facilitator

TABLE 22

Jed Campbell
Esther Jones
Curtis Morris
Norman Kaplan
Peter Preuss
Richard Hardesty
Mimi Johnson
Margery Exton - facilitator

TABLE 23

James Harvey
Verla Sutton-Busby
Dale Pahl
Russell Kulp
Terry Harvey
Tom Murphy
Denise Lewis
Jon Herrmann - facilitator

TABLE 24

Deborah Santavy
Jason Choe
Louis Feige
Robert McCrillis
Steve Hedtke
Mary Ellen Radzikowski
Anne Leslie
Lek Kadeli - facilitator

TABLE 25

Allen Sparks
Nicole Edwards
Thomas Holdsworth
Charles Miller
Barry Howard
Larry Reiter
Sharon Mason
Jay Messer - facilitator

Participant List

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
1	AKLAND, ANN	NHEERL	RTP	manager
2	ALEXANDER, JOE	IOAA	WASHINGTON	manager
3	ANDREASEN, JAMES	NCEA	WASHINGTON	self-nominated
4	ARTHUR, JOHN	NHEERL	DULUTH	self-nominated
5	BARRON, JESSICA	OARM	CINCINNATI	facilitator
6	BASSETT, MARYANN	NHEERL	CHAPEL HILL	self-nominated
7	BASSFORD, PAM	ORMA	WASHINGTON	self-nominated
8	BELILES, ROBERT	NCEA	WASHINGTON	self-nominated
9	BETZ, ELIZABETH	NERL	RTP	self-nominated
10	BIRNBAUM, LINDA	NHEERL	RTP	manager
11	BOBSEINE, KATHY	NHEERL	RTP	self-nominated
12	BOWEN, JULIE	REG 10	SEATTLE	facilitator
13	BOWMAN, SANDRA	OARM	CINCINNATI	HRO rep.
14	BOYDE, SHARON	NCEA	WASHINGTON	self-nominated
15	BRADY, RANDY	OARM	RTP	HRO rep
16	BROWN, RICHARD	OHROS	WASHINGTON	facilitator
17	BRYAN, ELIZABETH	NCERQA	WASHINGTON	manager
18	CAIRNS, MICHAEL	NHEERL	CORVALLIS	self-nominated
19	CALLAHAN, MICHAEL	NCEA	WASHINGTON	manager/steering cmte
20	CAMPBELL, JED	NHEERL	GULF BREEZE	self-nominated
21	CARR, JIM	OARM	WASHINGTON	facilitator
22	CARSON-COX, LATASHA	NRMRL	CINCINNATI	self-nominated
23	CHOE, JASON	ORMA	WASHINGTON	self-nominated
24	CHOUDHURY, HARLAL	NCEA	CINCINNATI	self-nominated
25	CLARK, BOB	NRMRL	CINCINNATI	manager
26	CLARK, TOM	NERL	RTP	manager/steering cmte
27	CLAXTON, LARRY	NHEERL	RTP	manager
28	COLON, MARIBEL	NERL	RTP	self-nominated
29	CONRATH, SUSAN	OAR	WASHINGTON	facilitator
30	CONTRERAS, JANET	NERL	LAS VEGAS	self-nominated
31	CONVERY, JOHN	NRMRL	CINCINNATI	manager

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
32	CORBETT, JOSEPH	NCEA	WASHINGTON	self-nominated
33	CORN, RUTH	NRMRL	CINCINNATI	self-nominated
34	CORTESI, ROGER	NCERQA	WASHINGTON	manager
35	CROFT, JEAN	IOAA	WASHINGTON	steering cmte
36	CUPITT, LARRY	NERL	RTP	manager
37	DAVIS, J MICHAEL	NCEA	RTP	self-nominated
38	DAVIS, ROBERT	AFGE	RTP	Union rep
39	DEAN, KAREN F	NHEERL	RTP	self-nominated
40	DEMPSEY, CLYDE	NRMRL	CINCINNATI	self-nominated
41	DIETRICH, DEBBIE	ORMA	WASHINGTON	manager/steering cmte
42	DIXON, THOMAS	NCERQA	WASHINGTON	self-nominated
43	DRIVER, KATHY	NHEERL	RTP	facilitator
44	DRYER, JIM	NFFE	CINCINNATI	Union rep
45	DUFOUR, ALFRED	NERL	CINCINNATI	manager
46	DURANT, PETER	ORMA	WASHINGTON	manager
47	DYER, BOB	NHEERL	RTP	steering cmte
48	EDER, BRIAN	NERL	RTP	self-nominated
49	EDWARDS, NICOLE	ORSI	WASHINGTON	self-nominated
50	ERICKSON, PATRICIA	NRMRL	CINCINNATI	self-nominated
51	EXTON, MARGERY	OPPTS	WASHINGTON	facilitator
52	EXUM, LINDA	NERL	ATHENS	self-nominated
53	FARLAND, BILL	NCEA	WASHINGTON	manager
54	FEIGE, LOUIS	NERL	CINCINNATI	self-nominated
55	FEIGE, WALT	NRMRL	CINCINNATI	self-nominated
56	FINCH, CAROL	IOAA	WASHINGTON	steering cmte
57	FOLEY, GARY	NERL	RTP	manager/steering cmte
58	FREDERICK, ROBERT	NCEA	WASHINGTON	self-nominated
59	FREESTONE, FRANK	NRMRL	EDISON	self-nominated
60	FRICK, WALTER	NERL	ATHENS	self-nominated
61	GAGE, MICHAEL	NHEERL	RTP	self-nominated
62	GALLOWAY, WALT	NERL	LAS VEGAS	facilitator

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
63	GATCHETT, ANNETTE	NRMRL	CINCINNATI	self-nominated
64	GAY, BRUCE	NERL	RTP	self-nominated
65	GEORGE, SUSAN	NHEERL	RTP	self-nominated
66	GIBB, HERMAN	NCEA	WASHINGTON	self-nominated
67	GLASER, JOHN	NRMRL	CINCINNATI	self-nominated
68	GRAHAM, JUDY	NERL	RTP	manager/steering cmte
69	GRANT, LESTER	NCEA	RTP	manager
70	GRINDER, GREGORY	NHEERL	WASHINGTON	self-nominated
71	GROGARD, MEGAN	NHEERL	RTP	self-nominated
72	GUNDERSEN, JENNIFER	NHEERL	NARRAGANSETT	self-nominated
73	HALL, CLINT	NRMRL	ADA	manager
74	HANLON, DEBORAH	NCERQA	WASHINGTON	facilitator
75	HANSEN, DAVID	NHEERL	NARRAGANSETT	self-nominated
76	HARDESTY, RICHARD	NCEA	WASHINGTON	manager
77	HARVEY, JAMES	NHEERL	GULF BREEZE	self-nominated
78	HARVEY, TERRY	NCEA	CINCINNATI	manager
79	HAWK, PATRICIA A	NHEERL	CORVALLIS	self-nominated
80	HAWKINS, SHERRY	ORSI	WASHINGTON	work group
81	HEDTKE, STEVEN	NHEERL	DULUTH	manager
82	HERRMANN, JONATHAN	NRMRL	CINCINNATI	facilitator
83	HOFFMAN, ALAN	NERL	RTP	self-nominated
84	HOLDSWORTH, THOMAS J	NRMRL	CINCINNATI	self-nominated
85	HOLM, HARVEY	NERL	ATHENS	self-nominated
86	HOWARD, BARRY	NHEERL	RTP	manager
87	HOWARD, ELIZABETH	NRMRL	RTP	HRC rep
88	HUGGETT, ROBERT	IOAA	WASHINGTON	manager
89	HUTCHINGS, DEE L.	NRMRL	ADA	self-nominated
90	JACKSON, PATRICIA	NHEERL	RTP	manager
91	JACKSON, TOYA	NERL	CINCINNATI	self-nominated
92	JENSON, CORRENE	NHEERL	DULUTH	self-nominated
93	JOHNSON, MIMI	NAGE	NARRAGANSETT	Union rep

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
94	JONES, ESTHER	ORMA	WASHINGTON	self-nominated
95	JONES, PAT	IOAA	WASHINGTON	work group
96	KADELI, LEK	ORMA	WASHINGTON	facilitator
97	KAHL, MICHAEL	NHEERL	DULUTH	self-nominated
98	KANTOR, EDWARD	NERL	LAS VEGAS	self-nominated
99	KAPLAN, NORMAN	NRMRL	RTP	self-nominated
100	KAVLOCK, ROBERT	NHEERL	RTP	manager
101	KOREN, HILLEL	NHEERL	RTP	manager
102	KULP, RUSSELL	NRMRL	RTP	self-nominated
103	LAMBERSON, JANET	NHEERL	NEWPORT	self-nominated
104	LAPAN, RICK	NHEERL	NARRAGANSETT	self-nominated
105	LAURIE, VERNON	NCERQA	WASHINGTON	self-nominated
106	LAWRENCE, CAL	NRMRL	CINCINNATI	manager
107	LESLIE, ANNE	NFFE	WASHINGTON	Union rep
108	LEW, ROSE	ORSI	WASHINGTON	self-nominated
109	LEWIS, DENISE	NHEERL	RTP	self-nominated
110	LEWIS, NORMA	NRMRL	CINCINNATI	self-nominated
111	LINGLE, STEVE	NCERQA	WASHINGTON	manager
112	LINTHURST, RICK	NERL	RTP	manager
113	LONGEST, HENRY L	IOAA	WASHINGTON	manager
114	LYONS, TERRENCE	NRMRL	CINCINNATI	self-nominated
115	MABELLOS, JESSE	NHEERL	RTP	self-nominated
116	MAHAFFEY, KATE	NCEA	CINCINNATI	self-nominated
117	MARTIN, BARRY	NERL	RTP	manager
118	MASON, SHARON	AFGE	WASHINGTON	Union rep
119	MAYER, FOSTER	NHEERL	GULF BREEZE	manager
120	MCCARTHY-O'REILLY, MARY	ORSI	WASHINGTON	steering cmte
121	MCCLANAHAN, MELINDA	NCERQA	WASHINGTON	manager/steering cmte
122	MCCRILLIS, ROBERT	NRMRL	RTP	self-nominated
123	MCKENNEY, CHARLES	NAGE	GULF BREEZE	Union rep
124	MCKINNON, HUGH	NRMRL	CINCINNATI	manager/steering cmte

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
125	MENZER, ROBERT	NCERQA	WASHINGTON	manager
126	MESSER, JAY	NERL	RTP	facilitator
127	MILLER, CHARLES A	NRMRL	RTP	self-nominated
128	MILLER, DIANA	NHEERL	RTP	self-nominated
129	MOORE, GEORGE	NRMRL	CINCINNATI	HRC rep
130	MOORE, JOHN	NERL	LAS VEGAS	manager
131	MOORE, MIKE	ORMA	WASHINGTON	steering cmte
132	MORRIS, CURTIS M	NERL	RTP	self-nominated
133	MULKEY, LEE	NRMRL	ATHENS	manager/steering cmte
134	MULLIN, MICHAEL	NHEERL	GROSE ILE	self-nominated
135	MURPHY, CATHY	NERL	ATHENS	self-nominated
136	MURPHY, THOMAS	NHEERL	CORVALLIS	manager
137	NACCI, DIANE	NHEERL	NARRAGANSETT	self-nominated
138	OLEXEY, ROBERT	NRMRL	CINCINNATI	manager
139	OPPELT, TIM	NRMRL	CINCINNATI	manager
140	OSBORNE, MICHAEL	NRMRL	RTP	self-nominated
141	OWENS, JAMES H	NRMRL	CINCINNATI	self-nominated
142	PAHL, DALE	NERL	RTP	self-nominated
143	PATTON, DOROTHY	ORSI	WASHINGTON	manager
144	PEACHER, CLAY	NHEERL	GULF BREEZE	self-nominated
145	PEARSON, GARETH	NERL	LAS VEGAS	self-nominated
146	POTTER, BILL	NERL	CINCINNATI	self-nominated
147	PREUSS, PETER	NCERQA	WASHINGTON	manager
148	PRINCIOTTA, FRANK	NRMRL	RTP	manager
149	PRYOR, MARGHERITA	ORSI	WASHINGTON	self-nominated
150	PUZAK, JACK	NCERQA	WASHINGTON	manager
151	RADZIKOWSKI, MARYELLEN	ORSI	WASHINGTON	manager/steering cmte
152	REASONER, DONALD	NRMRL	CINCINNATI	self-nominated
153	REITER, LARRY	NHEERL	RTP	manager
154	RENARD, ESPERANZA P	NCERQA	EDISON	self-nominated
155	RILEY, LOIS	IOAA	WASHINGTON	work group

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
156	ROHRER, JUDY	IOAA	WASHINGTON	self-nominated
157	ROSS, LINDA B	ORMA	WASHINGTON	self-nominated
158	RUBINSTEIN, NORMAN	NHEERL	NARRAGANSETT	manager
159	RUSSO, ROSEMARIE	NERL	ATHENS	manager
160	SAILSTAD, DENISE	NHEERL	RTP	self-nominated
161	SAKIEWICZ, CAROL A	NHEERL	NARRAGANSETT	self-nominated
162	SALMON, LEE	OAR	WASHINGTON	facilitator
163	SANTAVY, DEBORAH	NHEERL	GULF BREEZE	self-nominated
164	SCHIERMEIER, FRANK	NERL	RTP	manager
165	SCHMELLING, STEPHEN	NRMRL	ADA	self-nominated
166	SERGEANT, ANNE	NCEA	WASHINGTON	self-nominated
167	SHAFFRAN, MARY	IOAA	WASHINGTON	work group
168	SHAW, DENICE	NHEERL	RTP	work group
169	SHIMABUKU, RAY	NHEERL	CORVALLIS	self-nominated
170	SIKDAR, SUBHAS	NRMRL	CINCINNATI	manager
171	SIMES, GUY	NRMRL	CINCINNATI	self-nominated
172	SLIMAK, MICHAEL	NCEA	WASHINGTON	manager/steering cmte
173	SMART, JAN	NHEERL	RTP	self-nominated
174	SMITH, BENNETT	NERL	CINCINNATI	self-nominated
175	SMITH, KATE	NERL	CINCINNATI	manager
176	SMITH, STEVE	ORMA	WASHINGTON	facilitator
177	SOLOMON, ALLEN	NHEERL	CORVALLIS	self-nominated
178	SPARKS, ALLEN R	NHEERL	GULF BREEZE	self-nominated
179	SPYRES, JULIE	OPPE	WASHINGTON	facilitator
180	STANTON, MARK	NHEERL	RTP	self-nominated
181	STEEN, WILLIAM	NERL	ATHENS	self-nominated
182	STELMA, GERARD	NERL	CINCINNATI	self-nominated
183	SUTTON-BUSBY, VERLA	ORMA	WASHINGTON	self-nominated
184	TEICHMAN, KEVIN	ORSI	WASHINGTON	facilitator
185	TERRELL, DOCK	NHEERL	RTP	self-nominated
186	THOMAS, SHIRLEY	ORMA	WASHINGTON	work group

A	A	B	C	D
187	THORLAKSON, BOB	OHROS	WASHINGTON	HRO rep
188	TILSON, HUGH	NHEERL	RTP	manager
189	TUCKER, DONNA	NCEA	CINCINNATI	self-nominated
190	VAN EE, JEFF	NERL	LAS VEGAS	self-nominated
191	VEITH, GIL	NHEERL	RTP	manager
192	VORMWALD, RON	NHEERL	DULUTH	self-nominated
193	WASSON, SHIRLEY	NRMRL	RTP	self-nominated
194	WATERS, KAY	ORMA	WASHINGTON	work group
195	WATKINSON, WILLIAM	NHEERL	RTP	self-nominated
196	WATSON, PATRICIA L	NRMRL	CINCINNATI	self-nominated
197	WENTWORTH, NANCY	NCERQA	WASHINGTON	manager
198	WHITFIELD, JAMIE	NRMRL	KANSAS CITY	self-nominated
199	WIENER, RUSSELL	NERL	RTP	manager
200	WIGGINTON, MARY	ORSI	WASHINGTON	self-nominated
201	WILKINS, AMINA	NCEA	WASHINGTON	self-nominated
202	WRAY, EVELYN	ORMA	WASHINGTON	work group
203	WRIGHT, KEN	OHROS	WASHINGTON	facilitator
204	ZARBA, CHRIS	IOAA	WASHINGTON	steering cmte
205	ZENICK, HAL	NHEERL	RTP	manager/steering cmte

Steering Committee and Staff

1st Annual ORD Workshop - Managing Change

ORD Steering Committee:

Carol Finch, Chair	IOAA
Michael Callahan	NCEA
Tom Clark	NERL
Jean Croft	IOAA
Debbie Dietrich	ORMA
Bob Dyer	NHEERL
Gary Foley	NERL
Judy Graham	NERL
Shirley Hamilton	NCERQA
Mary McCarthy-O'Reilly	OSP/ORSI
Melinda McClanahan	NCERQA
Hugh McKinnon	NRMRL
Michael Moore	ORMA
Les Malkey	NRMRL
Mary Ellen Radzikowski	OSP/ORSI
Michael Slimak	NCEA
Chris Zarba	IOAA
Hal Zenick	NHEERL

Workshop Coordinating Workgroup

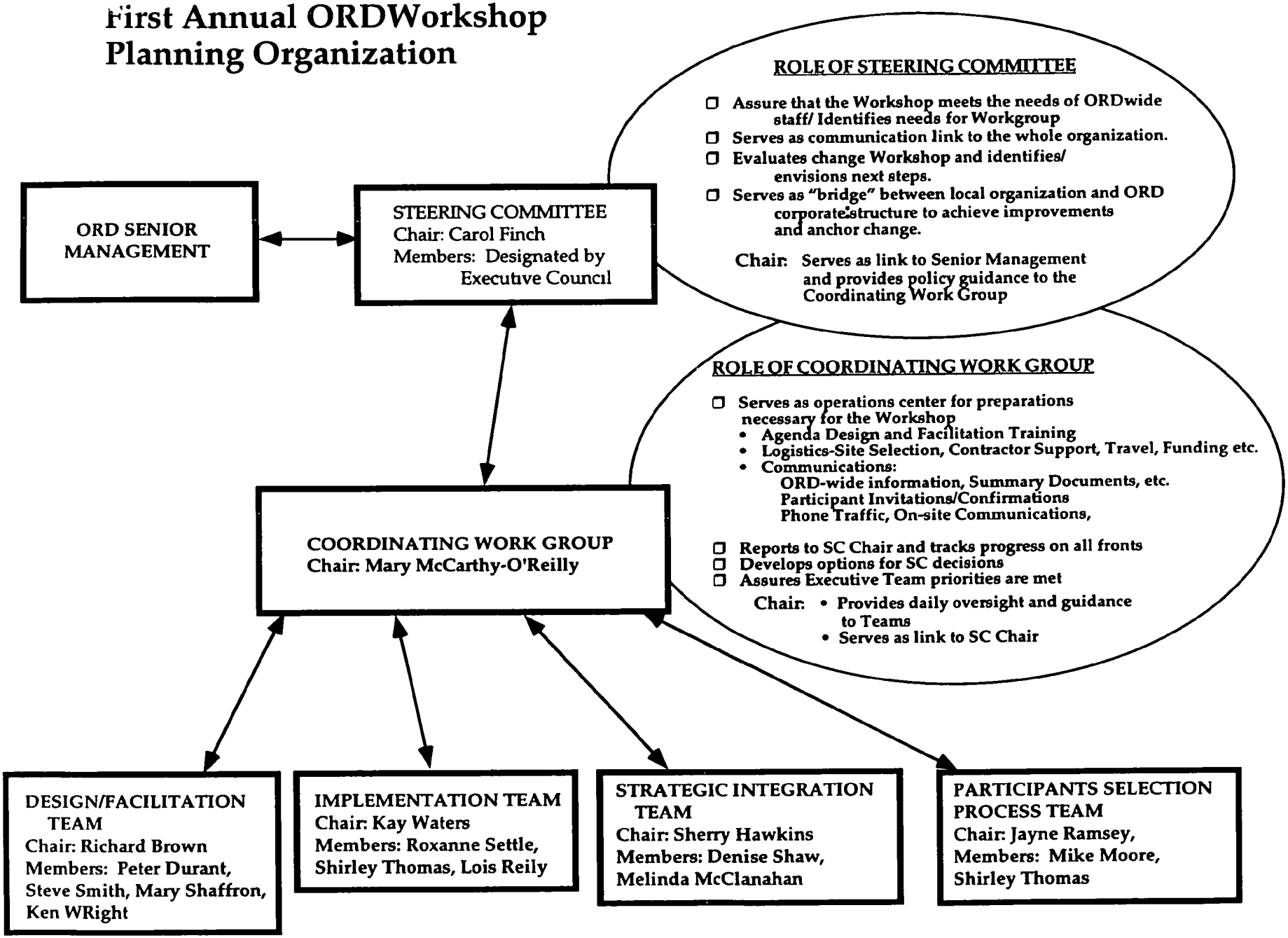
Mary McCarthy-O'Reilly	OSP/ORSI	Chair
Richard Brown Mary Shaffran	OARM IOAA	Facilitators-Lead
Sherry Hawkins	OSP/ORSI	Strategic Integration and Communications
Denice Shaw	NHEERL	Poster Session-Lead
Michael Moore	ORMA	Selection Process-Lead and Special Guests
Steven Smith	ORMA	HRC Liaison
Jayne Ramsey	ORMA	ORD Workshop Mailbox Coordinator and Participants Liaison
Kay Waters	ORMA	Implementation Team-Lead
Lois Riley Ken Wright	IOAA OARM	ORD Survey-Lead ORD Survey-Lead
Shirley Thomas	ORMA	Registration Manager Special Projects
Evelyn Wray	ORMA	Special Projects
Pat Jones	IOAA	On-Site Office Manager
Roxanne Settle	NCERQA	Reservations/Travel

On-Site Workgroup

Coordination Workgroup, Chair	Mary McCarthy O'Reilly
Staff	Evelyn Wray
Implementation Team, Lead	Kay Waters
Staff	Shirley Thomas
	Pat Jones
Strategic Integration, Lead	Sherry Hawkins
	Walt Galloway
	Denice Shaw
Facilitators Team, Lead	Richard Brown
Facilitators:	Mary Shaffran
	Jessica Barron
	Julie Bowen
	Jim Carr
	Sandy Bowman
	Kathy Driver
	Randy Brady
	Margery Exton
	Walt Galloway
	Deborah Hanlon
	Jonathan Herrmann
	Lek Kadeli
	Jay Messer
	Linda Ross
	Mike Moore
	Lee Salmon
	Ann Sergeant
	Steve Smith
	Julie Spyres
	Kevin Teichman
	Bob Thorlakson
	Ken Wright

Honorary Member Carol Finch

First Annual ORDWorkshop Planning Organization



ORD Advisory Councils

SUMMARY OF PRINCIPAL ROLES for ORD EXECUTIVE, SCIENCE & MANAGEMENT COUNCILS

Background

The Agency's mission is to protect environmental quality and human health through effective environmental policies and regulations. The Office of Research and Development (ORD) provides the scientific foundation for EPA's mission and is the Agency's lead office for the production, review and integration of scientific and technical knowledge into a credible science base on which effective policies and regulations can be developed. To achieve this credible scientific base, ORD senior management must be involved in defining, developing and implementing effective policies, procedures, practices and systems.

In 1995 ORD redesigned itself to be more efficient and effective in its efforts. Part of this redesign involved streamlining headquarters to focus on strategy, policy, budget and external government interfaces. Program management responsibility is delegated to the National Laboratories and Centers. This approach requires special attention to integrating management and science across the organization and providing opportunities for consensus building and decision making. Three senior management bodies (Executive, Management and Science Councils) have been established to fill this need. The specific roles and responsibilities of each of these councils are summarized as follows:

Executive Council

The Executive Council is the senior governing body for ORD and is responsible for providing the overall policy direction of the Office. Within the areas delegated by the Assistant Administrator this Council:

√ Serves as ORD's senior body for developing policy direction and resolving major policy issues.

√ Oversees, guides and directs ORD-wide activities.

√ Responds to issues forwarded to it from the Science and Management Councils

√ Forwards issues to the Science and Management Councils for their recommendations or resolution.

Members: * Assistant Administrator, Deputy Assistant Administrators, Laboratory, Office and Center Directors

Management Council

The mission of the Management Council is to facilitate a strong, well managed and effective national environmental science and technical organization. The Management Council:

√ Oversees ORD-wide management activities.

√ Advises the AA/ORD on ORD-wide management and administrative issues and on their impact on ORD/EPA science initiatives and programs.

√ Serves as an advisory and decision-making body for resolving ORD management policy issues, as delegated by the AA/ORD.

√ Coordinates development and implementation of management policies, procedures and systems.

√ Provides increased managerial awareness, cross-organizational participation, collective direction and effective feedback on those issues having significant impact on ORD's overall management operations.

Members: * DAA for Management, + DAA for Science, Director, Office of Resource Management and Administration, Deputy Laboratory and Center Directors for Management

Science Council

The mission of the Science Council is to facilitate a coherent research program which supports Agency decision making. The Science Council:

√ Oversees ORD science planning, including leading the development of the ORD Strategic Plan.

√ Advises the AA/ORD on science issues and on their impact on EPA/ORD initiatives and programs.

√ Provides increased managerial awareness, cross organizational participation, collective direction and effective feedback on those issues having significant impact on ORD's overall scientific and technical operations.

√ Provides a forum for guiding the development of research plans and for regularly reviewing the status, progress and future milestones in ORD research programs.

√ Serves as a decision-making body for resolving ORD science policy issues, as delegated by the AA/ORD.

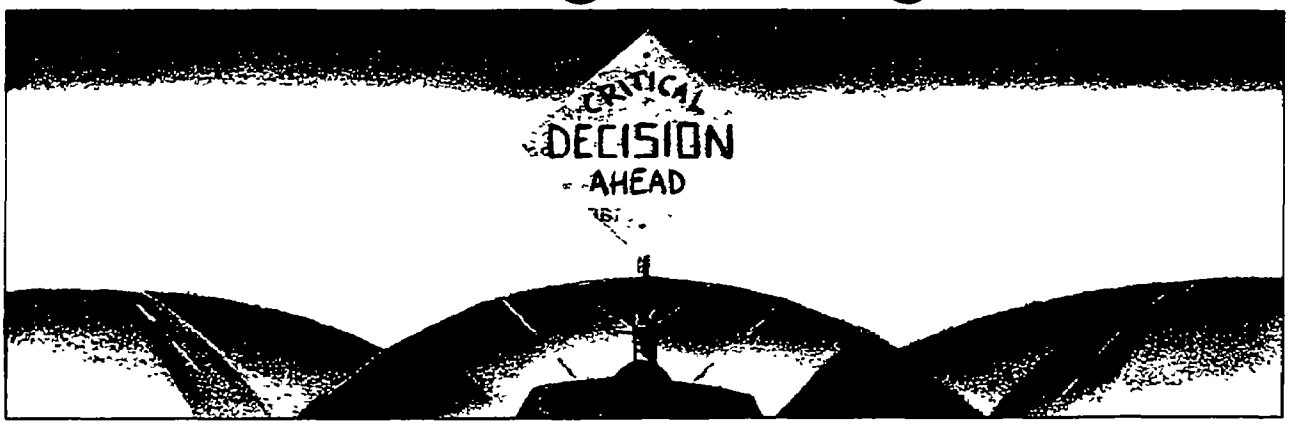
Members: * DAA for Science, + DAA for Management, Director, Office of Research and Science Integration, Director, Office of Science Policy, Associate Laboratory Directors for Ecology and Health, Associate Director for Science, National Center for Environmental Research and Quality Assurance

* = *Chair*
+ = *Ex Officio*

Change Information

HBR
MARCH-APRIL 1995

Leading Change:



Why Transformation Efforts Fail

by John P. Kotter

Over the past decade, I have watched more than 100 companies try to remake themselves into significantly better competitors. They have included large organizations (Ford) and small ones (Landmark Communications), companies based in the United States (General Motors) and elsewhere (British Airways), corporations that were on their knees (Eastern Airlines), and companies that were earning good money (Bristol-Myers Squibb). These efforts have gone under many banners: total quality management, reengineering, right sizing, restructuring, cultural change, and turnaround. But, in almost every case, the basic goal has been the same: to make fundamental changes in how business is conducted in order to help cope with a new, more challenging market environment.

A few of these corporate change efforts have been very successful. A few have been utter failures. Most fall somewhere in between, with a distinct tilt toward the lower end of the scale. The lessons that can be drawn are interesting and will probably be relevant to even more organizations in the increasingly competitive business environment of the coming decade.

The most general lesson to be learned from the more successful cases is that the change process goes through a series of phases that, in total, usually require a considerable length of time. Skipping steps creates only the illusion of speed and never produces a satisfying result. A second very general

John P Kotter is the Konosuke Matsushita Professor of Leadership at the Harvard Business School in Boston, Massachusetts He is the author of The New Rules. How to Succeed in Today s Post-Corporate World *(New York Free Press, 1995),* Corporate Culture and Performance, *coauthored with James L Heskett (New York Free Press, 1992), and* A Force for Change How Leadership Differs from Management *(New York Free Press, 1990)*

DRAWINGS BY KURT VARGO

lesson is that critical mistakes in any of the phases can have a devastating impact, slowing momentum and negating hard-won gains. Perhaps because we have relatively little experience in renewing organizations, even very capable people often make at least one big error.

Error #1: Not Establishing a Great Enough Sense of Urgency

Most successful change efforts begin when some individuals or some groups start to look hard at a company's competitive situation, market position, technological trends, and financial performance. They focus on the potential revenue drop when an important patent expires, the five-year trend in declining margins in a core business, or an emerging market that everyone seems to be ignoring They then find ways to communicate this information broadly and dramatically, especially with respect to crises, potential crises, or great opportunities that are very timely. This first step is essential because just getting a transformation program started requires the aggressive cooperation of many individuals. Without motivation, people won't help and the effort goes nowhere.

Compared with other steps in the change process, phase one can sound easy. It is not. Well over 50% of the companies I have watched fail in this first phase. What are the reasons for that failure? Sometimes executives underestimate how hard it can be to drive people out of their comfort zones Sometimes they grossly overestimate how successful they have already been in increasing urgency Sometimes they lack patience. "Enough with the preliminaries; let's get on with it." In many cases, executives become paralyzed by the downside possibilities They worry that employees with seniority will become defensive, that morale will drop, that events will spin out of control, that short-term business results will be jeopardized, that the stock will sink, and that they will be blamed for creating a crisis

A paralyzed senior management often comes from having too many managers and not enough leaders Management's mandate is to minimize risk and to keep the current system operating Change, by definition, requires creating a new system, which in turn always demands leadership Phase one in a renewal process typically goes nowhere until enough real leaders are promoted or hired into senior-level jobs

Transformations often begin, and begin well, when an organization has a new head who is a good leader and who sees the need for a major change If the renewal target is the entire company, the CEO is key. If change is needed in a division, the division general manager is key. When these individuals are not new leaders, great leaders, or change champions, phase one can be a huge challenge.

Bad business results are both a blessing and a curse in the first phase. On the positive side, losing money does catch people's attention. But it also gives less maneuvering room. With good business results, the opposite is true: convincing people of the need for change is much harder, but you have more resources to help make changes.

But whether the starting point is good performance or bad, in the more successful cases I have witnessed, an individual or a group always facilitates a frank discussion of potentially unpleasant facts: about new competition, shrinking margins, decreasing market share, flat earnings, a lack of revenue growth, or other relevant indices of a declining competitive position. Because there seems to be an almost universal human tendency to shoot the bearer of bad news, especially if the head of the organization is not a change champion, executives in these companies often rely on outsiders to bring unwanted information. Wall Street analysts, customers, and consultants can all be helpful in this regard The purpose of all this activity, in the words of one former CEO of a large European company, is "to make the status quo seem more dangerous than launching into the unknown."

> One chief executive officer deliberately engineered the largest accounting loss in the history of the company.

In a few of the most successful cases, a group has manufactured a crisis One CEO deliberately engineered the largest accounting loss in the company's history, creating huge pressures from Wall Street in the process One division president commissioned first-ever customer-satisfaction surveys, knowing full well that the results would be terrible. He then made these findings public. On the surface, such moves can look unduly risky. But there is also risk in playing it too safe. when the urgency rate is not pumped up enough, the transformation process

Eight Steps to Transforming Your Organization

1 Establishing a Sense of Urgency
Examining market and competitive realities
Identifying and discussing crises, potential crises, or major opportunities

2 Forming a Powerful Guiding Coalition
Assembling a group with enough power to lead the change effort
Encouraging the group to work together as a team

3 Creating a Vision
Creating a vision to help direct the change effort
Developing strategies for achieving that vision

4 Communicating the Vision
Using every vehicle possible to communicate the new vision and strategies
Teaching new behaviors by the example of the guiding coalition

5 Empowering Others to Act on the Vision
Getting rid of obstacles to change
Changing systems or structures that seriously undermine the vision
Encouraging risk taking and nontraditional ideas, activities, and actions

6 Planning for and Creating Short-Term Wins
Planning for visible performance improvements
Creating those improvements
Recognizing and rewarding employees involved in the improvements

7 Consolidating Improvements and Producing Still More Change
Using increased credibility to change systems, structures, and policies that don't fit the vision
Hiring, promoting, and developing employees who can implement the vision
Reinvigorating the process with new projects, themes, and change agents

8 Institutionalizing New Approaches
Articulating the connections between the new behaviors and corporate success
Developing the means to ensure leadership development and succession

cannot succeed and the long-term future of the organization is put in jeopardy.

When is the urgency rate high enough? From what I have seen, the answer is when about 75% of a company's management is honestly convinced that business-as-usual is totally unacceptable. Anything less can produce very serious problems later on in the process

Error #2: Not Creating a Powerful Enough Guiding Coalition

Major renewal programs often start with just one or two people. In cases of successful transformation efforts, the leadership coalition grows and grows over time. But whenever some minimum mass is not achieved early in the effort, nothing much worthwhile happens.

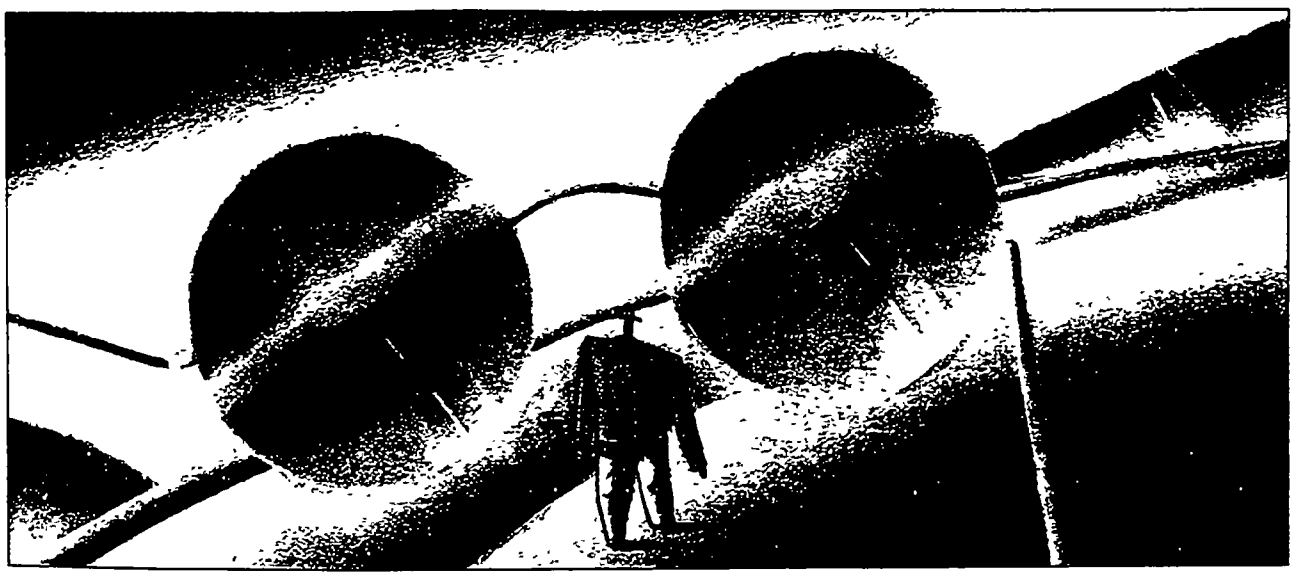
It is often said that major change is impossible unless the head of the organization is an active supporter. What I am talking about goes far beyond that. In successful transformations, the chairman or president or division general manager, plus another 5 or 15 or 50 people, come together and develop a shared commitment to excellent performance through renewal In my experience, this group never includes all of the company's most senior executives because some people just won't buy in, at least not at first But in the most successful cases, the coalition is always pretty powerful – in terms of titles, information and expertise, reputations and relationships.

In both small and large organizations, a successful guiding team may consist of only three to five people during the first year of a renewal effort. But in big companies, the coalition needs to grow to the 20 to 50 range before much progress can be made in phase three and beyond. Senior managers always form the core of the group. But sometimes you find board members, a representative from a key customer, or even a powerful union leader.

Because the guiding coalition includes members who are not part of senior management, it tends to operate outside of the normal hierarchy by definition. This can be awkward, but it is clearly necessary. If the existing hierarchy were working well, there would be no need for a major transformation. But since the current system is not working, reform generally demands activity outside of formal boundaries, expectations, and protocol.

A high sense of urgency within the managerial ranks helps enormously in putting a guiding coalition together. But more is usually required. Someone needs to get these people together, help them develop a shared assessment of their company's problems and opportunities, and create a minimum level of trust and communication. Off-site retreats, for two or three days, are one popular vehicle for accomplishing this task. I have seen many groups of 5 to 35 executives attend a series of these retreats over a period of months.

Companies that fail in phase two usually underestimate the difficulties of producing change and thus the importance of a powerful guiding coalition. Sometimes they have no history of teamwork at the top and therefore undervalue the importance of this type of coalition. Sometimes they expect the team to be led by a staff executive from human resources, quality, or strategic planning instead of a key line manager. No matter how capable or dedicated the staff head, groups without strong line leadership never achieve the power that is required.



In failed transformations, you often find plenty of plans and programs, but no vision.

Efforts that don't have a powerful enough guiding coalition can make apparent progress for a while. But, sooner or later, the opposition gathers itself together and stops the change.

Error #3: Lacking a Vision

In every successful transformation effort that I have seen, the guiding coalition develops a picture of the future that is relatively easy to communicate and appeals to customers, stockholders, and employees. A vision always goes beyond the numbers that are typically found in five-year plans. A vision says something that helps clarify the direction in which an organization needs to move. Sometimes the first draft comes mostly from a single individual It is usually a bit blurry, at least initially But after the coalition works at it for 3 or 5 or even 12 months, something much better emerges through their tough analytical thinking and a little dreaming Eventually, a strategy for achieving that vision is also developed.

In one midsize European company, the first pass at a vision contained two-thirds of the basic ideas that were in the final product. The concept of global reach was in the initial version from the beginning So was the idea of becoming preeminent in certain businesses. But one central idea in the final version – getting out of low value-added activities – came only after a series of discussions over a period of several months

Without a sensible vision, a transformation effort can easily dissolve into a list of confusing and incompatible projects that can take the organization in the wrong direction or nowhere at all Without a sound vision, the reengineering project in the accounting department, the new 360-degree performance appraisal from the human resources department, the plant's quality program, the cultural change project in the sales force will not add up in a meaningful way.

In failed transformations, you often find plenty of plans and directives and programs, but no vision. In one case, a company gave out four-inch-thick notebooks describing its change effort. In mind-numbing detail, the books spelled out procedures, goals, methods, and deadlines. But nowhere was there a clear and compelling statement of where all this was leading Not surprisingly, most of the employees with whom I talked were either confused or alienated The big, thick books did not rally them together or inspire change. In fact, they probably had just the opposite effect

In a few of the less successful cases that I have seen, management had a sense of direction, but it was too complicated or blurry to be useful. Recently, I asked an executive in a midsize company to describe his vision and received in return a barely comprehensible 30-minute lecture. Buried in his answer were the basic elements of a sound vision. But they were buried – deeply.

A useful rule of thumb: if you can't communicate the vision to someone in five minutes or less and get a reaction that signifies both understanding and interest, you are not yet done with this phase of the transformation process.

Error #4: Undercommunicating the Vision by a Factor of Ten

I've seen three patterns with respect to communication, all very common. In the first, a group actually does develop a pretty good transformation vision and then proceeds to communicate it by holding a single meeting or sending out a single communication. Having used about .0001% of the yearly intracompany communication, the group is startled that few people seem to understand the new approach In the second pattern, the head of the organization spends a considerable amount of time making speeches to employee groups, but most people still don't get it (not surprising, since vision captures only .0005% of the total yearly communication) In the third pattern, much more effort goes into newsletters and speeches, but some very visible senior executives still behave in ways that are antithetical to the vision. The net result is that cynicism among the troops goes up, while belief in the communication goes down.

> A vision says something that clarifies the direction in which an organization needs to move.

Transformation is impossible unless hundreds or thousands of people are willing to help, often to the point of making short-term sacrifices Employees will not make sacrifices, even if they are unhappy with the status quo, unless they believe that useful change is possible Without credible communication, and a lot of it, the hearts and minds of the troops are never captured.

This fourth phase is particularly challenging if the short-term sacrifices include job losses. Gain-

ing understanding and support is tough when downsizing is a part of the vision For this reason, successful visions usually include new growth possibilities and the commitment to treat fairly anyone who is laid off.

Executives who communicate well incorporate messages into their hour-by-hour activities In a routine discussion about a business problem, they talk about how proposed solutions fit (or don't fit) into the bigger picture. In a regular performance appraisal, they talk about how the employee's behavior helps or undermines the vision. In a review of a division's quarterly performance, they talk not only about the numbers but also about how the division's executives are contributing to the transformation In a routine Q&A with employees at a company facility, they tie their answers back to renewal goals

In more successful transformation efforts, executives use all existing communication channels to broadcast the vision. They turn boring and unread company newsletters into lively articles about the vision. They take ritualistic and tedious quarterly management meetings and turn them into exciting discussions of the transformation They throw out much of the company's generic management education and replace it with courses that focus on business problems and the new vision. The guiding principle is simple: use every possible channel, especially those that are being wasted on nonessential information

Perhaps even more important, most of the executives I have known in successful cases of major change learn to "walk the talk " They consciously attempt to become a living symbol of the new corporate culture This is often not easy. A 60-year-old plant manager who has spent precious little time over 40 years thinking about customers will not suddenly behave in a customer-oriented way But I have witnessed just such a person change, and change a great deal In that case, a high level of urgency helped The fact that the man was a part of the guiding coalition and the vision-creation team also helped So did all the communication, which kept reminding him of the desired behavior, and all the feedback from his peers and subordinates, which helped him see when he was not engaging in that behavior

Communication comes in both words and deeds, and the latter are often the most powerful form. Nothing undermines change more than behavior by important individuals that is inconsistent with their words

Error #5: Not Removing Obstacles to the New Vision

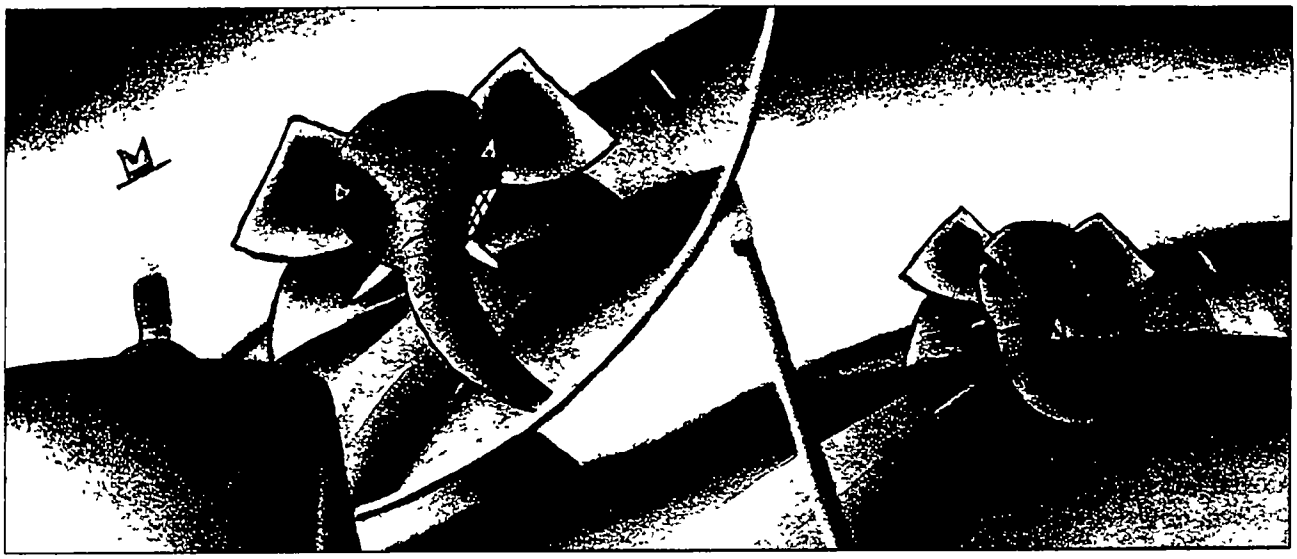
Successful transformations begin to involve large numbers of people as the process progresses. Employees are emboldened to try new approaches, to develop new ideas, and to provide leadership The only constraint is that the actions fit within the broad parameters of the overall vision The more people involved, the better the outcome.

To some degree, a guiding coalition empowers others to take action simply by successfully communicating the new direction But communication is never sufficient by itself. Renewal also requires the removal of obstacles Too often, an employee understands the new vision and wants to help make it happen. But an elephant appears to be blocking the path. In some cases, the elephant is in the person's head, and the challenge is to convince the individual that no external obstacle exists. But in most cases, the blockers are very real

Sometimes the obstacle is the organizational structure. narrow job categories can seriously undermine efforts to increase productivity or make it very difficult even to think about customers. Sometimes compensation or performance-appraisal systems make people choose between the new vision and their own self-interest. Perhaps worst of all are bosses who refuse to change and who make demands that are inconsistent with the overall effort

One company began its transformation process with much publicity and actually made good progress through the fourth phase Then the change effort ground to a halt because the officer in charge of the company's largest division was allowed to undermine most of the new initiatives. He paid lip service to the process but did not change his behavior or encourage his managers to change. He did not reward the unconventional ideas called for in the vision He allowed human resource systems to remain intact even when they were clearly inconsis-

Worst of all are bosses who refuse to change and who make demands that are inconsistent with the overall effort.



Too often, an employee understands the new vision and wants to help make it happen. But something appears to be blocking the path.

tent with the new ideals. I think the officer's motives were complex. To some degree, he did not believe the company needed major change. To some degree, he felt personally threatened by all the change. To some degree, he was afraid that he could not produce both change and the expected operating profit. But despite the fact that they backed the renewal effort, the other officers did virtually nothing to stop the one blocker Again, the reasons were complex. The company had no history of confronting problems like this. Some people were afraid of the officer. The CEO was concerned that he might lose a talented executive. The net result was disastrous. Lower level managers concluded that senior management had lied to them about their commitment to renewal, cynicism grew, and the whole effort collapsed.

In the first half of a transformation, no organization has the momentum, power, or time to get rid of all obstacles But the big ones must be confronted and removed If the blocker is a person, it is important that he or she be treated fairly and in a way that is consistent with the new vision But action is essential, both to empower others and to maintain the credibility of the change effort as a whole.

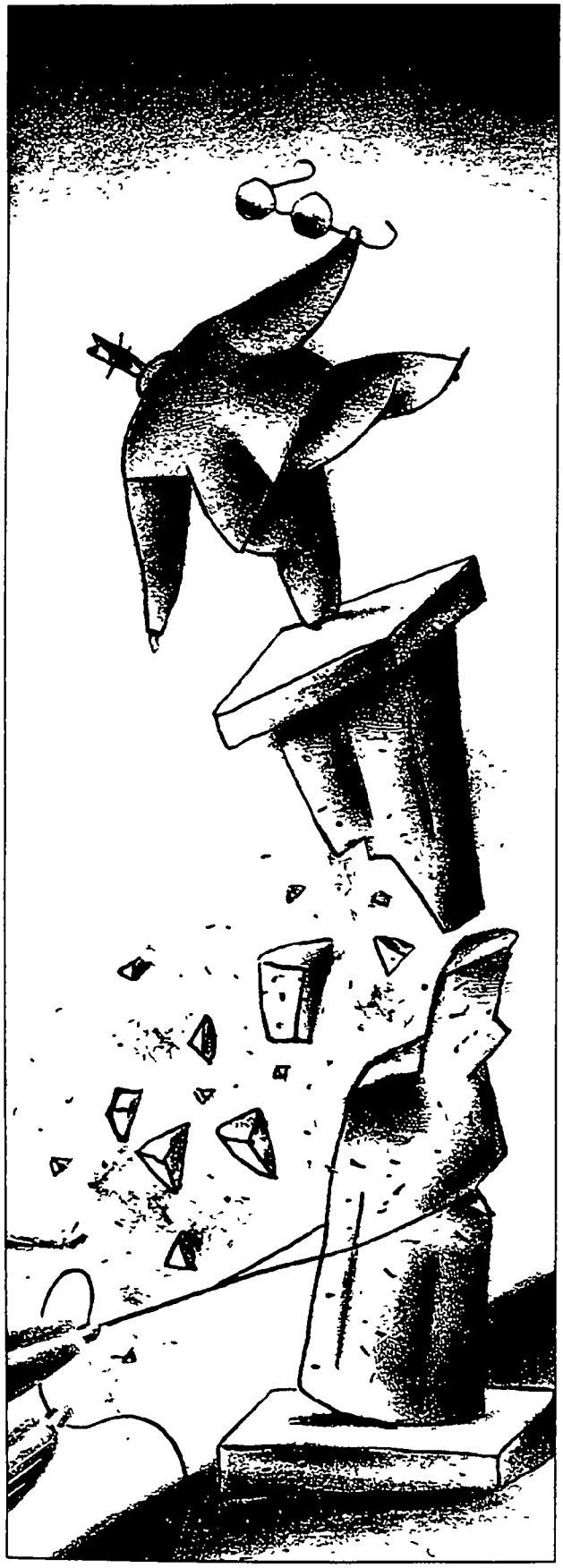
Error #6: Not Systematically Planning For and Creating Short-Term Wins

Real transformation takes time, and a renewal effort risks losing momentum if there are no short-term goals to meet and celebrate Most people won't go on the long march unless they see compelling evidence within 12 to 24 months that the journey is producing expected results Without short-term wins, too many people give up or actively join the ranks of those people who have been resisting change

One to two years into a successful transformation effort, you find quality beginning to go up on certain indices or the decline in net income stopping. You find some successful new product introductions or an upward shift in market share. You find an impressive productivity improvement or a statistically higher customer-satisfaction rating. But whatever the case, the win is unambiguous. The result is not just a judgment call that can be discounted by those opposing change.

Creating short-term wins is different from hoping for short-term wins. The latter is passive, the former active. In a successful transformation, managers actively look for ways to obtain clear performance improvements, establish goals in the yearly planning system, achieve the objectives, and reward the people involved with recognition, promotions, and even money. For example, the guiding coalition at a U S manufacturing company produced a highly visible and successful new product introduction about 20 months after the start of its renewal effort The new product was selected about six months into the effort because it met multiple criteria: it could be designed and launched in a relatively short period; it could be handled by a small team of people who were devoted to the new vision; it had upside potential, and the new product-development team could operate outside the established departmental structure without practical problems. Little was left to chance, and the win boosted the credibility of the renewal process.

Managers often complain about being forced to produce short-term wins, but I've found that pressure can be a useful element in a change effort.



While celebrating a win is fine, declaring the war won can be catastrophic.

When it becomes clear to people that major change will take a long time, urgency levels can drop. Commitments to produce short-term wins help keep the urgency level up and force detailed analytical thinking that can clarify or revise visions.

Error #7: Declaring Victory Too Soon

After a few years of hard work, managers may be tempted to declare victory with the first clear performance improvement. While celebrating a win is fine, declaring the war won can be catastrophic. Until changes sink deeply into a company's culture, a process that can take five to ten years, new approaches are fragile and subject to regression

In the recent past, I have watched a dozen change efforts operate under the reengineering theme. In all but two cases, victory was declared and the expensive consultants were paid and thanked when the first major project was completed after two to three years. Within two more years, the useful changes that had been introduced slowly disappeared. In two of the ten cases, it's hard to find any trace of the reengineering work today.

Over the past 20 years, I've seen the same sort of thing happen to huge quality projects, organizational development efforts, and more. Typically, the problems start early in the process: the urgency level is not intense enough, the guiding coalition is not powerful enough, and the vision is not clear enough. But it is the premature victory celebration that kills momentum. And then the powerful forces associated with tradition take over

Ironically, it is often a combination of change initiators and change resistors that creates the premature victory celebration. In their enthusiasm over a clear sign of progress, the initiators go overboard. They are then joined by resistors, who are quick to spot any opportunity to stop change. After the celebration is over, the resistors point to the victory as a sign that the war has been won and the troops should be sent home Weary troops allow themselves to be convinced that they won. Once home, the foot soldiers are reluctant to climb back on the ships. Soon thereafter, change comes to a halt, and tradition creeps back in

Instead of declaring victory, leaders of successful efforts use the credibility afforded by short-term wins to tackle even bigger problems. They go after systems and structures that are not consistent with the transformation vision and have not been confronted before. They pay great attention to who is promoted, who is hired, and how people are developed They include new reengineering projects that are even bigger in scope than the initial ones They

understand that renewal efforts take not months but years. In fact, in one of the most successful transformations that I have ever seen, we quantified the amount of change that occurred each year over a seven-year period. On a scale of one (low) to ten (high), year one received a two, year two a four, year three a three, year four a seven, year five an eight, year six a four, and year seven a two. The peak came in year five, fully 36 months after the first set of visible wins.

Error #8: Not Anchoring Changes in the Corporation's Culture

In the final analysis, change sticks when it becomes "the way we do things around here," when it seeps into the bloodstream of the corporate body. Until new behaviors are rooted in social norms and shared values, they are subject to degradation as soon as the pressure for change is removed.

Two factors are particularly important in institutionalizing change in corporate culture. The first is a conscious attempt to show people how the new approaches, behaviors, and attitudes have helped improve performance. When people are left on their own to make the connections, they sometimes create very inaccurate links. For example, because results improved while charismatic Harry was boss, the troops link his mostly idiosyncratic style with those results instead of seeing how their own improved customer service and productivity were instrumental. Helping people see the right connections requires communication. Indeed, one company was relentless, and it paid off enormously. Time was spent at every major management meeting to discuss why performance was increasing. The company newspaper ran article after article showing how changes had boosted earnings.

The second factor is taking sufficient time to make sure that the next generation of top management really does personify the new approach. If the requirements for promotion don't change, renewal rarely lasts. One bad succession decision at the top of an organization can undermine a decade of hard work. Poor succession decisions are possible when boards of directors are not an integral part of the renewal effort. In at least three instances I have seen, the champion for change was the retiring executive, and although his successor was not a resistor, he was not a change champion. Because the boards did not understand the transformations in any detail, they could not see that their choices were not good fits. The retiring executive in one case tried unsuccessfully to talk his board into a less seasoned candidate who better personified the transformation. In the other two cases, the CEOs did not resist the boards' choices, because they felt the transformation could not be undone by their successors. They were wrong. Within two years, signs of renewal began to disappear at both companies.

There are still more mistakes that people make, but these eight are the big ones. I realize that in a short article everything is made to sound a bit too simplistic. In reality, even successful change efforts are messy and full of surprises. But just as a relatively simple vision is needed to guide people through a major change, so a vision of the change process can reduce the error rate. And fewer errors can spell the difference between success and failure.

Reprint 95204

"A penny for your premeditations"

CARTOON BY GEORGE DOLE

Sample Action Plan

ORD IMPROVEMENT OPPORTUNITY
FOLLOW-UP ACTION PLAN FORMAT

Current State: State the problem succinctly.

Impact of Current State: How does this affect your organization?

Desired State: What is the goal of the improvement?

Barriers: What obstacles do you foresee in achieving desired state?

SPECIFIC ELEMENTS OF FOLLOW-UP PLAN:

1) **Responsible party** -- Party responsible for implementing the action.

2) **ORD contact** -- Knowledgeable ORD-level person, interested in real change.

3) **Lab/Center/Office Contact for your organization** -- person who will report to ORD on progress/obstacles.

4) **Timeline for Action Items** -- schedule, at organizational level (tentative to be confirmed with organization after Williamsburg), as well as at the ORD level.

5) **Milestones** -- indicators that progress is being made.

6) **Measures of Success** -- average time from initiation to completion.

6) **Reports** --quarterly, or as needed for milestones or other major accomplishments (ORD wide and/or organization specific).

7) **Model for dealing with opposition** at the organization level
   --Identify source of opposition - whose turf is being threatened
   --Are the concerns "real" or "perceived"
   --Does the issue stand alone or is it tied to other opportunities for improvement? Impacts?
   --Perspective of Others -Get buy-in early in the process.

Note: Use "Force Field Analysis" to anticipate other sources of opposition

If an improvement opportunity turns out to be a stone wall and simply cannot be changed, communicate the efforts made as well as legal or regulatory barriers that made change impossible.

note: FOLLOW UP PLAN SHOULD ALSO ACCOMMODATE INPUT BY STAFF WHO DID NOT ATTEND THE CONFERENCE:

Improvement Opportunities

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

NOV 22 1995

OFFICE OF
RESEARCH AND DEVELOPMENT

MEMORANDUM

SUBJECT: Additional Information on ORD First Annual Workshop - Managing Change

FROM: Robert J. Huggett, Ph.D.
Assistant Administrator
for Research and Development (8101)

TO: ALL ORD STAFF

The purpose of this memo is to touch base with you on the status of our First Annual ORD Workshop - Managing Change. As you know, this workshop is the first step in a long-term process to improve the delivery of high caliber science to the Agency, and enrich the quality of ORD's work environment. Workshop participants will develop specific action plans to address our most pressing organizational concerns. In addition, we will designate change agents responsible for implementing the improvements, and we will monitor progress in achieving measurable outcomes. We are committed to listening, understanding, and responding to the issues of concern to our workforce, with solutions developed by all Workshop participants.

Of the more than 400 employees who volunteered to attend the meeting, 100 were randomly selected to join ORD's senior management team in our improvement deliberations. We are attaching the list of attendees for your information. Details on the random selection process were sent to the Management Deputies in each Lab and Center, who will share this information with you, if you are interested. Successive annual meetings will involve a new selection of employees to assure a broad breadth of participation over time in change management activities.

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CORVALLIS OR 97333

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We are also including for your information, a draft agenda so you can see our intended process for framing, prioritizing, and solving the issues raised by the Organizational Survey, the ORD Advisory Councils, and Workshop attendees. We will also forward for your information the background materials for the meeting provided to the attendees. We want all ORD employees not attending this First Workshop to have a good understanding of what the meeting is about and what we hope to accomplish. In the meantime, I encourage you to quickly review the basic structure of and introduction to ORD's Strategic Plan, since the Plan will provide the framework for our considerations on future directions and opportunities for near term improvements.

By now, you have received information on the results of the ORD organizational survey. I regret that a number of administrative interruptions prevented us from sharing this information with you sooner. The results of the survey are one of the tools we will use in assessing where we need to strengthen our operations, and where we can begin to measure improvement in the years to come. The survey results are an important source of data for us, **but nothing can substitute for your active participation in contributing your suggestions on where we need to focus attention, and how we might implement specific improvement measures.** I hope you will share your ideas with your colleagues attending the Workshop, and assist in the deployment of the follow up measures brought back from the meeting. Your colleagues who designed the flow and content for the Workshop are highly motivated to prompt the continuing evolution of ORD. I hope we can count on your support as well.

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
1	AKLAND, ANN	NHEERL	RTP	manager
2	ALEXANDER, JOE	IOAA	WASHINGTON	manager
3	ANDREASEN, JAMES	NCEA	WASHINGTON	self-nominated
4	ARTHUR, JOHN	NHEERL	DULUTH	self-nominated
5	BARRON, JESSICA	OARM	CINCINNATI	facilitator
6	BASSETT, MARYANN	NHEERL	CHAPEL HILL	self-nominated
7	BASSFORD, PAM	ORMA	WASHINGTON	self-nominated
8	BELILES, ROBERT	NCEA	WASHINGTON	self-nominated
9	BETZ, ELIZABETH	NERL	RTP	self-nominated
10	BIRNBAUM, LINDA	NHEERL	RTP	manager
11	BOBSEINE, KATHY	NHEERL	RTP	self-nominated
12	BOWEN, JULIE	REG 10	SEATTLE	facilitator
13	BOWMAN, SANDRA	OARM	CINCINNATI	HRO rep.
14	BOYDE, SHARON	NCEA	WASHINGTON	self-nominated
15	BRADY, RANDY	OARM	RTP	HRO rep.
16	BROWN, RICHARD	OHROS	WASHINGTON	facilitator
17	BRYAN, ELIZABETH	NCERQA	WASHINGTON	manager
18	CAIRNS, MICHAEL	NHEERL	CORVALLIS	self-nominated
19	CALLAHAN, MICHAEL	NCEA	WASHINGTON	manager/steering cmte.
20	CAMPBELL, JED	NHEERL	GULF BREEZE	self-nominated
21	CARR, JIM	OARM	WASHINGTON	facilitator
22	CARSON-COX, LATASHA	NRMRL	CINCINNATI	self-nominated
23	CHOE, JASON	ORMA	WASHINGTON	self-nominated
24	CHOUDHURY, HARLAL	NCEA	CINCINNATI	self-nominated
25	CLARK, BOB	NRMRL	CINCINNATI	manager
26	CLARK, TOM	NERL	RTP	manager/steering cmte.
27	CLAXTON, LARRY	NHEERL	RTP	manager
28	COLON, MARIBEL	NERL	RTP	self-nominated
29	CONRATH, SUSAN	OAR	WASHINGTON	facilitator
30	CONTRERAS, JANET	NERL	LAS VEGAS	self-nominated
31	CONVERY, JOHN	NRMRL	CINCINNATI	manager

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
32	CORBETT, JOSEPH	NCEA	WASHINGTON	self-nominated
33	CORN, RUTH	NRMRL	CINCINNATI	self-nominated
34	CORTESI, ROGER	NCERQA	WASHINGTON	manager
35	CROFT, JEAN	IOAA	WASHINGTON	steering cmte.
36	CUPITT, LARRY	NERL	RTP	manager
37	DAVIS, J. MICHAEL	NCEA	RTP	self-nominated
38	DAVIS, ROBERT	AFGE	RTP	Union rep.
39	DEAN, KAREN F.	NHEERL	RTP	self-nominated
40	DEMPSEY, CLYDE	NRMRL	CINCINNATI	self-nominated
41	DIETRICH, DEBBIE	ORMA	WASHINGTON	manager/steering cmte.
42	DIXON, THOMAS	NCERQA	WASHINGTON	self-nominated
43	DRIVER, KATHY	NHEERL	RTP	facilitator
44	DRYER, JIM	NFFE	CINCINNATI	Union rep.
45	DUFOUR, ALFRED	NERL	CINCINNATI	manager
46	DURANT, PETER	ORMA	WASHINGTON	manager
47	DYER, BOB	NHEERL	RTP	steering cmte.
48	EDER, BRIAN	NERL	RTP	self-nominated
49	EDWARDS, NICOLE	ORSI	WASHINGTON	self-nominated
50	ERICKSON, PATRICIA	NRMRL	CINCINNATI	self-nominated
51	EXTON, MARGERY	OPPTS	WASHINGTON	facilitator
52	EXUM, LINDA	NERL	ATHENS	self-nominated
53	FARLAND, BILL	NCEA	WASHINGTON	manager
54	FEIGE, LOUIS	NERL	CINCINNATI	self-nominated
55	FEIGE, WALT	NRMRL	CINCINNATI	self-nominated
56	FINCH, CAROL	IOAA	WASHINGTON	steering cmte.
57	FOLEY, GARY	NERL	RTP	manager/steering cmte.
58	FREDERICK, ROBERT	NCEA	WASHINGTON	self-nominated
59	FREESTONE, FRANK	NRMRL	EDISON	self-nominated
60	FRICK, WALTER	NERL	ATHENS	self-nominated
61	GAGE, MICHAEL	NHEERL	RTP	self-nominated
62	GALLOWAY, WALT	NERL	LAS VEGAS	facilitator

ORD WORKSHO, PARTICIPANTS

A	A	B	C	D
63	GATCHETT, ANNETTE	NRMRL	CINCINNATI	self-nominated
64	GAY, BRUCE	NERL	RTP	self-nominated
65	GEORGE, SUSAN	NHEERL	RTP	self-nominated
66	GIBB, HERMAN	NCEA	WASHINGTON	self-nominated
67	GLASER, JOHN	NRMRL	CINCINNATI	self-nominated
68	GRAHAM, JUDY	NERL	RTP	manager/steering cmte.
69	GRANT, LESTER	NCEA	RTP	manager
70	GRINDER, GREGORY	NHEERL	WASHINGTON	self-nominated
71	GROGARD, MEGAN	NHEERL	RTP	self-nominated
72	GUNDERSEN, JENNIFER	NHEERL	NARRAGANSETT	self-nominated
73	HALL, CLINT	NRMRL	ADA	manager
74	HANLON, DEBORAH	NCERQA	WASHINGTON	facilitator
75	HANSEN, DAVID	NHEERL	NARRAGANSETT	self-nominated
76	HARDESTY, RICHARD	NCEA	WASHINGTON	manager
77	HARVEY, JAMES	NHEERL	GULF BREEZE	self-nominated
78	HARVEY, TERRY	NCEA	CINCINNATI	manager
79	HAWK, PATRICIA A.	NHEERL	CORVALLIS	self-nominated
80	HAWKINS, SHERRY	ORSI	WASHINGTON	work group
81	HEDTKE, STEVEN	NHEERL	DULUTH	manager
82	HERRMANN, JONATHAN	NRMRL	CINCINNATI	facilitator
83	HOFFMAN, ALAN	NERL	RTP	self-nominated
84	HOLDSWORTH, THOMAS J.	NRMRL	CINCINNATI	self-nominated
85	HOLM, HARVEY	NERL	ATHENS	self-nominated
86	HOWARD, BARRY	NHEERL	RTP	manager
87	HOWARD, ELIZABETH	NRMRL	RTP	HRC rep
88	HUGGETT, ROBERT	IOAA	WASHINGTON	manager
89	HUTCHINGS, DEE L	NRMRL	ADA	self-nominated
90	JACKSON, PATRICIA	NHEERL	RTP	manager
91	JACKSON, TOYA	NERL	CINCINNATI	self-nominated
92	JENSON, CORRENE	NHEERL	DULUTH	self-nominated
93	JOHNSON, MIMI	NAGE	NARRAGANSETT	Union rep.

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
94	JONES, ESTHER	ORMA	WASHINGTON	self-nominated
95	JONES, PAT	IOAA	WASHINGTON	work group
96	KADELI, LEK	ORMA	WASHINGTON	facilitator
97	KAHL, MICHAEL	NHEERL	DULUTH	self-nominated
98	KANTOR, EDWARD	NERL	LAS VEGAS	self-nominated
99	KAPLAN, NORMAN	NRMRL	RTP	self-nominated
100	KAVLOCK, ROBERT	NHEERL	RTP	manager
101	KOREN, HILLEL	NHEERL	RTP	manager
102	KULP, RUSSELL	NRMRL	RTP	self-nominated
103	LAMBERSON, JANET	NHEERL	NEWPORT	self-nominated
104	LAPAN, RICK	NHEERL	NARRAGANSETT	self-nominated
105	LAURIE, VERNON	NCERQA	WASHINGTON	self-nominated
106	LAWRENCE, CAL	NRMRL	CINCINNATI	manager
107	LESLIE, ANNE	NFFE	WASHINGTON	Union rep.
108	LEW, ROSE	ORSI	WASHINGTON	self-nominated
109	LEWIS, DENISE	NHEERL	RTP	self-nominated
110	LEWIS, NORMA	NRMRL	CINCINNATI	self-nominated
111	LINGLE, STEVE	NCERQA	WASHINGTON	manager
112	LINTHURST, RICK	NERL	RTP	manager
113	LONGEST, HENRY L	IOAA	WASHINGTON	manager
114	LYONS, TERRENCE	NRMRL	CINCINNATI	self-nominated
115	MABELLOS, JESSE	NHEERL	RTP	self-nominated
116	MAHAFFEY, KATE	NCEA	CINCINNATI	self-nominated
117	MARTIN, BARRY	NERL	RTP	manager
118	MASON, SHARON	AFGE	WASHINGTON	Union rep.
119	MAYER, FOSTER	NHEERL	GULF BREEZE	manager
120	MCCARTHY-O'REILLY, MARY	ORSI	WASHINGTON	steering cmte.
121	MCCLANAHAN, MELINDA	NCERQA	WASHINGTON	manager/steering cmte.
122	MCCRILLIS, ROBERT	NRMRL	RTP	self-nominated
123	MCKENNEY, CHARLES	NAGE	GULF BREEZE	Union rep.
124	MCKINNON, HUGH	NRMRL	CINCINNATI	manager/steering cmte.

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
125	MENZER, ROBERT	NCERQA	WASHINGTON	manager
126	MESSER, JAY	NERL	RTP	facilitator
127	MILLER, CHARLES A.	NRMRL	RTP	self-nominated
128	MILLER, DIANA	NHEERL	RTP	self-nominated
129	MOORE, GEORGE	NRMRL	CINCINNATI	HRC rep.
130	MOORE, JOHN	NERL	LAS VEGAS	manager
131	MOORE, MIKE	ORMA	WASHINGTON	steering cmte
132	MORRIS, CURTIS M	NERL	RTP	self-nominated
133	MULKEY, LEE	NRMRL	ATHENS	manager/steering cmte.
134	MULLIN, MICHAEL	NHEERL	GROSE ILE	self-nominated
135	MURPHY, CATHY	NERL	ATHENS	self-nominated
136	MURPHY, THOMAS	NHEERL	CORVALLIS	manager
137	NACCI, DIANE	NHEERL	NARRAGANSETT	self-nominated
138	OLEXEY, ROBERT	NRMRL	CINCINNATI	manager
139	OPPELT, TIM	NRMRL	CINCINNATI	manager
140	OSBORNE, MICHAEL	NRMRL	RTP	self-nominated
141	OWENS, JAMES H	NRMRL	CINCINNATI	self-nominated
142	PAHL, DALE	NERL	RTP	self-nominated
143	PATTON, DOROTHY	ORSI	WASHINGTON	manager
144	PEACHER, CLAY	NHEERL	GULF BREEZE	self-nominated
145	PEARSON, GARETH	NERL	LAS VEGAS	self-nominated
146	POTTER, BILL	NERL	CINCINNATI	self-nominated
147	PREUSS, PETER	NCERQA	WASHINGTON	manager
148	PRINCIOTTA, FRANK	NRMRL	RTP	manager
149	PRYOR, MARGHERITA	ORSI	WASHINGTON	self-nominated
150	PUZAK, JACK	NCERQA	WASHINGTON	manager
151	RADZIKOWSKI, MARYELLEN	ORSI	WASHINGTON	manager/steering cmte
152	REASONER, DONALD	NRMRL	CINCINNATI	self-nominated
153	REITER, LARRY	NHEERL	RTP	manager
154	RENARD, ESPERANZA P.	NCERQA	EDISON	self-nominated
155	RILEY, LOIS	IOAA	WASHINGTON	work group

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
156	ROHRER, JUDY	IOAA	WASHINGTON	self-nominated
157	ROSS, LINDA B	ORMA	WASHINGTON	self-nominated
158	RUBINSTEIN, NORMAN	NHEERL	NARRAGANSETT	manager
159	RUSSO, ROSEMARIE	NERL	ATHENS	manager
160	SAILSTAD, DENISE	NHEERL	RTP	self-nominated
161	SAKIEWICZ, CAROL A.	NHEERL	NARRAGANSETT	self-nominated
162	SALMON, LEE	OAR	WASHINGTON	facilitator
163	SANTAVY, DEBORAH	NHEERL	GULF BREEZE	self-nominated
164	SCHIERMEIER, FRANK	NERL	RTP	manager
165	SCHMELLING, STEPHEN	NRMRL	ADA	self-nominated
166	SERGEANT, ANNE	NCEA	WASHINGTON	self-nominated
167	SHAFFRAN, MARY	IOAA	WASHINGTON	work group
168	SHAW, DENICE	NHEERL	RTP	work group
169	SHIMABUKU, RAY	NHEERL	CORVALLIS	self-nominated
170	SIKDAR, SUBHAS	NRMRL	CINCINNATI	manager
171	SIMES, GUY	NRMRL	CINCINNATI	self-nominated
172	SLIMAK, MICHAEL	NCEA	WASHINGTON	manager/steering cmte
173	SMART, JAN	NHEERL	RTP	self-nominated
174	SMITH, BENNETT	NERL	CINCINNATI	self-nominated
175	SMITH, KATE	NERL	CINCINNATI	manager
176	SMITH, STEVE	ORMA	WASHINGTON	facilitator
177	SOLOMON, ALLEN	NHEERL	CORVALLIS	self-nominated
178	SPARKS, ALLEN R	NHEERL	GULF BREEZE	self-nominated
179	SPYRES, JULIE	OPPE	WASHINGTON	facilitator
180	STANTON, MARK	NHEERL	RTP	self-nominated
181	STEEN, WILLIAM	NERL	ATHENS	self-nominated
182	STELMA, GERARD	NERL	CINCINNATI	self-nominated
183	SUTTON-BUSBY, VERLA	ORMA	WASHINGTON	self-nominated
184	TEICHMAN, KEVIN	ORSI	WASHINGTON	facilitator
185	TERRELL, DOCK	NHEERL	RTP	self-nominated
186	THOMAS, SHIRLEY	ORMA	WASHINGTON	work group

A	A	B	C	D
187	THORLAKSON, BOB	OHROS	WASHINGTON	HRO rep.
188	TILSON, HUGH	NHEERL	RTP	manager
189	TUCKER, DONNA	NCEA	CINCINNATI	self-nominated
190	VAN EE, JEFF	NERL	LAS VEGAS	self-nominated
191	VEITH, GIL	NHEERL	RTP	manager
192	VORMWALD, RON	NHEERL	DULUTH	self-nominated
193	WASSON, SHIRLEY	NRMRL	RTP	self-nominated
194	WATERS, KAY	ORMA	WASHINGTON	work group
195	WATKINSON, WILLIAM	NHEERL	RTP	self-nominated
196	WATSON, PATRICIA L.	NRMRL	CINCINNATI	self-nominated
197	WENTWORTH, NANCY	NCERQA	WASHINGTON	manager
198	WHITFIELD, JAMIE	NRMRL	KANSAS CITY	self-nominated
199	WIENER, RUSSELL	NERL	RTP	manager
200	WIGGINTON, MARY	ORSI	WASHINGTON	self-nominated
201	WILKINS, AMINA	NCEA	WASHINGTON	self-nominated
202	WRAY, EVELYN	ORMA	WASHINGTON	work group
203	WRIGHT, KEN	OHROS	WASHINGTON	facilitator
204	ZARBA, CHRIS	IOAA	WASHINGTON	steering cmte.
205	ZENICK, HAL	NHEERL	RTP	manager/steering cmte.

1st Annual

DRAFT

ORD Workshop

Managing Change

US EPA Research and Development

December 2 - 5, 1996
Williamsburg, Virginia

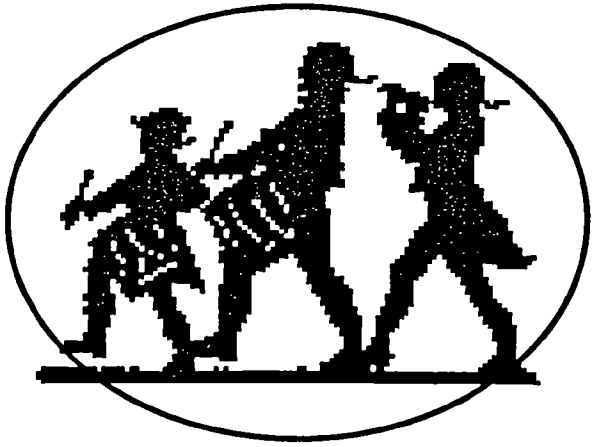
Attachment 2.

DRAFT

Goals

The goal of the workshop is to improve the delivery of high-quality science in ORD by:

- ☑ Understanding the new direction in ORD;
- ☑ Building the ORD team and improving communication;
- ☑ Sharing views and listening to all participants; and
- ☑ Developing action plans and change agents to achieve specific organizational improvements.



DRAFT

General Information

The workshop begins at 1:00 pm on Monday, December 2 and ends after lunch on Thursday, December 5.

Registration/Welcome Desk

Workshop registration is from 8:00 am - 5:00 pm on Monday, December 2nd in the Center Room, next to the hotel registration desk.

Conference Office

A conference office will be set up in the lower level of the Cascades Conference Center. A message board will be available there from Tuesday - Thursday. On Monday, the message board will be located in the registration area.

Meals

Monday evening	lite fare
Tuesday	breakfast, lunch, and dinner
Wednesday	breakfast, lunch, and dinner; (optional off-site dinner)
Thursday	breakfast and lunch

[Breakfast starts at 7:00 am every day at the Cascades and the Woodlands Hall]

DRAFT

Day 3

Wednesday, December 4th

Framework for Action

Commonwealth Hall

8:00 - 8:15	Introduction and Overview
8:15 - 9:00	Presentation of the Improvement Opportunities

The Cascades Meeting Center
Break-Out Rooms

9:00 - 11:00	Action Planning on the Improvement Opportunities
11:00 - 2:30	**Lunch**

Commonwealth Hall

2:30 - 4:30	Panel Presentations on the Improvement Opportunities
7:00	Dinner

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Day 4

Thursday, December 5th

Commitment to Action

The Cascades Meeting Center
Break-Out Rooms

8:00 - 9:45	Lab/Center/Office Discussions

Commonwealth Hall

10:00 - 11:45	Actions and Commitments
11:45 - 12:00	Meeting Evaluation

The Cascades

12:15	**"Launch" Lunch**

Conference Rooms will be available for the remainder of the day if Labs/Centers/ Offices would like to continue to meet.

DRAFT

Day 1

Monday, December 2nd

Overall Change

The Center Room

8:00 - 5:00	Registration
1:00	**Workshop Begins**

Commonwealth Hall

1:00 - 1:30	Welcome/Purpose Bob Huggett
1:30 - 4:45	Guest Speaker on Organizational Change David Noer
4:45 - 5:00	Wrap-up and Overview of Upcoming Events

Cascades Meeting Center (lower level)

5:30 - 7:00	Poster Session/Gallery Walk/ Lite Fare

DRAFT

Day 2

Tuesday, December 3rd

Improvement Opportunities

Commonwealth Hall

8:00 - 8:15	Introduction and Overview
8:15 - 10:00	Review of ORD Data
10:00 - 10:30	*Break*
10:30 - 11:30	Brainstorming the ORD Improvement Opportunities
11:30 - 12:00	Identifying Priority Issues
12:00 - 1:00	**Lunch**

The Cascades Meeting Center Break-Out Rooms

1:00 - 2:30	Selecting Top Priorities
2:30 - 3:00	*Break*
3:00 - 4:30	Framing the Issues
6:30	**Dinner**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

NOV 15 1996

OFFICE OF
RESEARCH AND DEVELOPMENT

NOTE TO: ***ALL ORD WORKSHOP PARTICIPANTS***

Enclosed are the materials we wanted you to have before the December Workshop We are in the final countdown in our preparations, and we believe ORD has assembled a cogent and interesting agenda that will give us a strong start in our long term improvement efforts. We are pleased with the enthusiasm of the attendees -- we think we have a great representation from ORD's best and brightest that includes all disciplines, locations, and levels of our organization

We hope you will take time to review these materials and come "loaded for bear" with thoughtful suggestions and solutions. See you in two weeks!

Joe Alexander

Henry Longest

Enclosures:

Workshop Agenda (draft)
Map of the Conference Facility (Woodlands)
Summary of Survey of Organizations 2000 Results
List of Workshop Participants
SAMPLE Write-up of an "Improvement Opportunity" to be Discussed at the Workshop
Biographical info on our "Grappling with Change" Speaker, David Noer
ORD's Strategic Plan
Maps
Materials on Colonial Williamsburg

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Nov 15, 1996

Example of Improvement Opportunity for Williamsburg

The following example is provided in the hope it is informative enough for participants to understand the scope of possible improvement opportunities. **It is neither real nor complete -- that's what the workshop is for!** This is simply to give you an idea of the range (basically wide open) of ideas, and that our goal is to have plans by the end of the workshop with implementation and follow up actions

Possible Issue There is too much bureaucracy -- red tape -- that gets in the way of doing good research

Possible Action Evaluate all levels of bureaucracy -- Federal, EPA, ORD, Lab/Center, Division, supervisor, team -- and use cross-functional teams to cut the red tape we have control over to the bone

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

NOV 8 1996

OFFICE OF
RESEARCH AND DEVELOPMENT

MEMORANDUM

SUBJECT: First Annual ORD Workshop - Congratulations to Workshop Selectees and Preparation for the Meeting

FROM: Robert J. Huggett, Ph.D.
Assistant Administrator
for Research and Development (8101)

TO: Williamsburg Workshop Selectees

This note is to convey my congratulations to each of you upon being selected to attend our First Annual ORD Workshop - Managing Change, in Williamsburg, Virginia, Dec. 2 - 5, 1996. I was pleased that a high number of our employees volunteered for the selection pool, and am satisfied that we have a good geographic and organizational cross section of ORD to explore opportunities for improving ORD.

In preparation for the Workshop, I urge each of you to talk to and "prod" your co-workers. Solicit their ideas and observations about life in ORD and bring this information to the Workshop. How are we doing in setting a vision for the organization? Have we communicated effectively to the employees of ORD our common goals and priorities and do individuals understand and agree with how they fit into them? Are we moving forward with a shared purpose and mission? Are we keeping all employees well-apprised of important scientific, management, budget, and human resource activities and events? Are we using to the maximum extent possible the diverse talents available in our workforce, from all categories and levels? Do you have the material resources and consistent direction necessary to accomplish your piece of ORD's mission? How do our EPA customers perceive our responsiveness to their needs for scientific expertise and support? How about our other customers in the academic and private sectors - are we engaged in mutually beneficial relationships and are we respectful of our clients? Is ORD on the right track for positioning ourselves for the science needs of tomorrow? What can I, or my office do to help with solutions?

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I want each of you to seriously consider the mission-effectiveness and culture of ORD, from your own unique viewpoint, and what might be done to help the organization's continuing evolution. We can make good use of this information in conjunction with the results of the ORD organizational survey which will be shared with all employees before the meeting. Site visits and briefings on the survey results are being arranged now. I am committed to this Workshop serving as the start of an ongoing process for improving ORD's operations and future.

We are preparing more specific information to send to you on the Workshop regarding the detailed agenda, logistics, and materials to read in preparation for the meeting. Please don't hesitate to ask questions, and engage your colleagues in candid constructive discussions. Also, feel free to call any of the members on the Workshop Steering Committee (attached) for any clarification on the Workshop you believe necessary.

I am looking forward to working with you next month.

Attachment

cc: Joe Alexander
Henry Longest
Executive Leads

ORD Workshop Steering Committee:

	Phone	Fax
Chair: Carol Finch	202-260-9463	202-260-4260
Hal Zenick	919-541-2283	919-541-4201
Bob Dyer	919-541-2760	919-541-4201
Gary Foley (ORD HRC Chair)	919-541-2106	919-541-7588
Tom Clark	919-541-2107	919-541-0445
Judy Graham	919-541-0349	919-541-3615
Hugh McKinnon	513-569-7689	513-569-7549
Lee Mulkey	513-569-7689	513-569-7549
Melinda McClanahan	202-260-5750	202-260-0929
Shirley Hamilton	202-260-0468	202-260-0929
Mike Callahan	202-260-8909	202-401-1722
Mike Slimak	202-260-5950	202-260-0393
Chris Zarba	202-260-1326	202-260-4260
Jean Croft	202-260-9837	202-260-4260
Mary McCarthy-O'Reilly	202-260-4461	202-260-0744
Mary Ellen Raddzikowski	202-260-3200	202-260-0744
Debbie Dietrich	202-260-7500	202-260-0552
Mike Moore	202-260-0277	202-260-2242

Workshop Coordinating Work Group;

Chair: Mary McCarthy O'Reilly	202-260-4461	202-260-0744
Richard Brown	202-260-9397	202-260-4997
Peter Durant	202-260-7461	202-260-2830
Sherry Hawkins	202-260-5593	202-260-0106
Mike Moore	202-260-0277	202-260-2242
Jayne Ramsey	202-260-7355	202-260-2242
Lois Reily	202-260-7653	202-260-4260
Roxanne Settle	202-260-5881	202-260-4235
Mary Shaffron	202-260-0881	202-260-4260
Denice Shaw	919-541-2698	919-541-3615
Steve Smith	202-260-5735	202-260-2242
Shirley Thomas	202-260-6743	202-260-2242
Kay Waters	202-260-8941	202-260-2242
Ken Wright	202-260-3271	202-260-
Evelyn Wray	202-260-6737	202-260-2344

NAME	DAY 1 AND 2 TABLES	DAY 3 BREAKOUT RMS.	DAY 4 BREAKOUT RMS.
)REASEN, JAMES	1	2	5
NDERSEN, JENNIFER	1	2	3
HUGGETT, ROBERT	1	1	8
JACKSON, TOYA	1	4	2
LEW, ROSE	1	3	6
MOORE, GEORGE	1	2	1
OSBORNE, MICHAEL	1	3	1
RUBINSTEIN, NORMAN	1	1	3
SALMON, LEE*	1	1	6
BELILES, ROBERT	2	2	5
HANSEN, DAVID	2	2	3
JACKSON, PATRICIA	2	1	3
MCKENNEY, CHARLES	2	4	3
POTTER, BILL	2	2	2
PRYOR, MARGHERITA	2	4	6
RUSSO, ROSEMARIE	2	1	2
SHAFFRAN, MARY*	2	2	8
WASSON, SHIRLEY	2	2	1
AKLAND, ANN	3	1	3
BOYDE, SHARON	3	4	5
HAWKINS, SHERRY	3	4	6
KAVLOCK, ROBERT	3	1	3
LAPAN, RICK	3	2	3
SCHIERMEIER, FRANK	3	1	2
SERGEANT, ANNE*	3	3	5
TH, BENNETT	3	3	2
NTWORTH, NANCY	3	1	4
ALEXANDER, JOE	4	1	8
CORBETT, JOSEPH	4	4	5
NACCI, DIANE	4	3	3
ROHRER, JUDY	4	4	8
SIKDAR, SUBHAS	4	1	1
SMITH, STEVE*	4	4	7
STELMA, GERARD	4	2	2
BIRNBAUM, LINDA	5	1	3
CARSON-COX, LATASHA	5	4	1
FREDERICK, ROBERT	5	2	5
KOREN, HILLEL	5	1	3
LAURIE, VERNON	5	4	4
RILEY, LOIS	5	4	8
SAKIEWICZ, CAROL A.	5	4	3
SLIMAK, MICHAEL	5	1	5
SPYRES, JULIE*	5	1	4
BASSFORD, PAM	6	4	7
BRYAN, ELIZABETH	6	1	4
DIXON, THOMAS	6	2	4
GIBB, HERMAN	6	2	5
LAMBERSON, JANET	6	2	3
LAWRENCE, CAL	6	1	1
SHAW, DENICE	6	3	3
TH, KATE	6	1	2
HMAN, KEVIN*	6	1	6
CALLAHAN, MICHAEL	7	1	5
DEMPSEY, CLYDE	7	2	1

MULLIN, MICHAEL	7	3	3
PEARSON, GARETH	7	2	2
RENARD, ESPERANZA P	7	3	4
THOMAS, SHIRLEY	7	4	7
THORLAKSON, BOB*	7	3	1
TILSON, HUGH	7	1	3
WILKINS, AMINA	7	2	5
CLARK, BOB	8	1	1
CLARK, TOM	8	1	2
CONTRERAS, JANET	8	4	2
DAVIS, J MICHAEL	8	3	5
ERICKSON, PATRICIA	8	3	1
GRINDER, GREGORY	8	4	3
VEITH, GIL	8	1	3
WRIGHT, KEN*	8	2	2
BOBSEINE, KATHY	9	2	3
CARR, JIM*	9	1	1
CHOUDHURY, HARLAL	9	3	5
FEIGE, WALT	9	2	1
KANTOR, EDWARD	9	3	2
LINTHURST, RICK	9	1	2
LONGEST, HENRY L	9	1	8
WIGGINTON, MARY	9	4	6
WRAY, EVELYN	9	4	7
CLAXTON, LARRY	10	1	3
CONRATH, SUSAN*	10	4	3
DEAN, KAREN F	10	4	3
GATCHETT, ANNETTE	10	3	1
LINGLE, STEVE	10	1	4
MAHAFFEY, KATE	10	3	5
MOORE, JOHN	10	1	2
WIENER, RUSSELL	10	1	2
ZARBA, CHRIS	10	1	8
CONVERY, JOHN	11	1	1
GAGE, MICHAEL	11	4	3
GLASER, JOHN	11	2	1
MARTIN, BARRY	11	1	2
ROSS, LINDA B *	11	1	7
TUCKER, DONNA	11	4	5
VAN EE, JEFF	11	3	2
WATERS, KAY	11	4	7
ZENICK, HAL	11	1	3
ARTHUR, JOHN	12	3	3
CORTESI, ROGER	12	1	4
EXUM, LINDA	12	4	2
LEWIS, NORMA	12	3	1
MAYER, FOSTER	12	1	3
MOORE, MIKE*	12	1	7
WATSON, PATRICIA L.	12	4	1
CUPITT, LARRY	13	1	2
DURANT, PETER	13	1	7
FRICK, WALTER	13	2	2
GROGARD, MEGAN	13	4	3
HAWK, PATRICIA A *	13	4	3
JENSON, CORRENE	13	3	3
LYONS, TERRENCE	13	2	1
MCCLANAHAN, MELINDA	13	1	2

BARRON, JESSICA*	14	2	3
DIETRICH, DEBBIE	14	1	7
HOLM, HARVEY	14	3	2
VARD, ELIZABETH	14	3	1
IL, MICHAEL	14	3	3
MCKINNON, HUGH	14	1	1
MILLER, DIANA	14	2	3
REASONER, DONALD	14	3	1
BOWEN, JULIE*	15	1	2
CROFT, JEAN	15	4	8
MENZER, ROBERT	15	1	4
MURPHY, CATHY	15	4	2
OWENS, JAMES H	15	2	1
SAILSTAD, DENISE	15	2	3
VORMWALD, RON	15	4	3
BASSETT, MARYANN	16	4	3
BOWMAN, SANDRA*	16	4	3
DAVIS, ROBERT	16	4	2
DUFOUR, ALFRED	16	1	2
MULKEY, LEE	16	1	1
SIMES, GUY	16	3	1
SMART, JAN	16	4	3
STEEN, WILLIAM	16	2	2
BETZ, ELIZABETH	17	4	2
BRADY, RANDY*	17	1	3
CAIRNS, MICHAEL	17	3	3
DRYER, JIM	17	4	1
LAND, BILL	17	1	5
RGE, SUSAN	17	2	3
XEY, ROBERT	17	1	1
STANTON, MARK	17	3	3
BROWN, RICHARD*	18	1	3
COLON, MARIBEL	18	3	2
DYER, BOB	18	1	3
FOLEY, GARY	18	1	2
FREESTONE, FRANK	18	2	1
OPPELT, TIM	18	1	1
TERRELL, DOCK	18	3	3
DRIVER, KATHY*	19	3	3
EDER, BRIAN	19	2	2
FINCH, CAROL	19	1	8
GRAHAM, JUDY	19	1	2
HUTCHINGS, DEE L	19	4	1
PATTON, DOROTHY	19	1	6
PEACHER, CLAY	19	4	3
WATKINSON, WILLIAM	19	3	3
GAY, BRUCE	20	3	2
GRANT, LESTER	20	1	5
HANLON, DEBORAH*	20	2	4
MABELLOS, JESSE	20	3	3
MCCARTHY-O'REILLY. MARY	20	4	6
PUZAK, JACK	20	1	4
MELLING, STEPHEN	20	3	1
ABUKU, RAY	20	3	3
N, RUTH	21	4	1
GALLOWAY, WALT*	21	3	2
HALL, CLINT	21	1	1

HOFFMAN, ALAN	21	2	2
JONES, PAT	21	4	8
PRINCIOTTA, FRANK	21	1	1
SOLOMON, ALLEN	21	2	3
WHITFIELD, JAMIE	21	2	1
CAMPBELL, JED	22	2	3
EXTON, MARGERY*	22	2	8
HARDESTY, RICHARD	22	1	5
JOHNSON, MIMI	22	4	3
JONES, ESTHER	22	4	7
KAPLAN, NORMAN	22	3	1
MORRIS, CURTIS M.	22	3	2
PREUSS, PETER	22	1	4
HARVEY, JAMES	23	3	3
HARVEY, TERRY	23	1	5
HERRMANN, JONATHAN*	23	2	1
KULP, RUSSELL	23	2	1
LEWIS, DENISE	23	3	3
MURPHY, THOMAS	23	1	3
PAHL, DALE	23	2	2
SUTTON-BUSBY, VERLA	23	4	7
CHOE, JASON	24	4	7
FEIGE, LOUIS	24	3	2
HEDTKE, STEVEN	24	1	3
KADELI, LEK*	24	4	7
LESLIE, ANNE	24	4	7
MCCRILLIS, ROBERT	24	3	1
RADZIKOWSKI, MARYELLEN	24	1	6
SANTAVY, DEBORAH	24	2	3
EDWARDS, NICOLE	25	4	6
HOLDSWORTH, THOMAS J.	25	2	1
HOWARD, BARRY	25	1	3
MASON, SHARON	25	4	7
MESSER, JAY*	25	3	2
MILLER, CHARLES A	25	2	1
REITER, LARRY	25	1	3
SPARKS, ALLEN R.	25	4	3

*Facilitators

DAY 3 BREAKOUT
1=managers
2=scientists
3=scientists
4=other

DAY 4 BREAKOUT
1=NRMRL
2=NERL
3=NHEERL
4=NCERQA
5=NCEA
6=ORSI
7=ORMA
8=IOAA

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
1	AKLAND, ANN	NHEERL	RTP	manager
2	ALEXANDER, JOE	IOAA	WASHINGTON	manager
3	ANDREASEN, JAMES	NCEA	WASHINGTON	self-nominated
4	ARTHUR, JOHN	NHEERL	DULUTH	self-nominated
5	BARRON, JESSICA	OARM	CINCINNATI	facilitator
6	BASSETT, MARYANN	NHEERL	CHAPEL HILL	self-nominated
7	BASSFORD, PAM	ORMA	WASHINGTON	self-nominated
8	BELILES, ROBERT	NCEA	WASHINGTON	self-nominated
9	BENFORADO, JAY	IOAA	WASHINGTON	manager
10	BETZ, ELIZABETH	NERL	RTP	self-nominated
11	BIRNBAUM, LINDA	NHEERL	RTP	manager
12	BOBSEINE, KATHY	NHEERL	RTP	self-nominated
13	BOWEN, JULIE	REG 10	SEATTLE	facilitator
14	BOWMAN, SANDRA	OARM	CINCINNATI	HRO rep
15	BOYDE, SHARON	NCEA	WASHINGTON	self-nominated
16	BRADY, RANDY	OARM	RTP	HRO rep
17	BROWN, RICHARD	OHROS	WASHINGTON	facil co-leader
18	BRYAN, ELIZABETH	NCERQA	WASHINGTON	manager
19	CAIRNS, MICHAEL	NHEERL	CORVALLIS	self-nominated
20	CALLAHAN, MICHAEL	NCEA	WASHINGTON	manager/steering cmte
21	CAMPBELL, JED	NHEERL	GULF BREEZE	self-nominated
22	CARSON-COX, LATASHA	NRMRL	CINCINNATI	self-nominated
23	CHOE, JASON	ORMA	WASHINGTON	self-nominated
24	CHOUDHURY, HARLAL	NCEA	CINCINNATI	self-nominated
25	CLARK, BOB	NRMRL	CINCINNATI	manager
26	CLARK, TOM	NERL	RTP	manager/steering cmte
27	CLAXTON, LARRY	NHEERL	RTP	manager
28	COLON, MARIBEL	NERL	RTP	self-nominated
29	CONTRERAS, JANET	NERL	LAS VEGAS	self-nominated
30	CONVERY, JOHN	NRMRL	CINCINNATI	manager
31	CORBETT, JOSEPH	NCEA	WASHINGTON	self-nominated

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
32	CORN, RUTH	NRMRL	CINCINNATI	self-nominated
33	CORTESI, ROGER	NCERQA	WASHINGTON	manager
34	CROFT, JEAN	IOAA	WASHINGTON	steering cmte
35	CUPITT, LARRY	NERL	RTP	manager
36	DAVIS, J. MICHAEL	NCEA	RTP	self-nominated
37	DAVIS, ROBERT	AFGE	RTP	Union rep
38	DEAN, KAREN F	NHEERL	RTP	self-nominated
39	DEMPSEY, CLYDE	NRMRL	CINCINNATI	self-nominated
40	DIETRICH, DEBBIE	ORMA	WASHINGTON	manager/steering cmte.
41	DRIVER, KATHY	NHEERL	RTP	facilitator
42	DRYER, JIM	NFFE	CINCINNATI	Union rep
43	DUFOUR, ALFRED	NERL	CINCINNATI	manager
44	DURANT, PETER	ORMA	WASHINGTON	manager
45	DYER, BOB	NHEERL	RTP	steering cmte
46	EDER, BRIAN	NERL	RTP	self-nominated
47	EDWARDS, NICOLE	ORSI	WASHINGTON	self-nominated
48	ERICKSON, PATRICIA	NRMRL	CINCINNATI	self-nominated
49	EXTON, MARGERY	OPPTS	WASHINGTON	facilitator
50	EXUM, LINDA	NERL	ATHENS	self-nominated
51	FARLAND, BILL	NCEA	WASHINGTON	manager
52	FEIGE, LOUIS	NERL	CINCINNATI	self-nominated
53	FEIGE, WALT	NRMRL	CINCINNATI	self-nominated
54	FINCH, CAROL	IOAA	WASHINGTON	steering cmte
55	FOLEY, GARY	NERL	RTP	manager
56	FREDERICK, ROBERT	NCEA	WASHINGTON	self-nominated
57	FREESTONE, FRANK	NRMRL	EDISON	self-nominated
58	FRICK, WALTER	NERL	ATHENS	self-nominated
59	GAGE, MICHAEL	NHEERL	RTP	self-nominated
60	GALLOWAY, WALT	NERL	LAS VEGAS	facilitator
61	GATCHETT, ANNETTE	NRMRL	CINCINNATI	self-nominated
62	GAY, BRUCE	NERL	RTP	self-nominated

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
63	GEORGE, SUSAN	NHEERL	RTP	self-nominated
64	GIBB, HERMAN	NCEA	WASHINGTON	self-nominated
65	GLASER, JOHN	NRMRL	CINCINNATI	self-nominated
66	GRAHAM, JUDY	NERL	RTP	manager/steering cmte
67	GRANT, LESTER	NCEA	RTP	manager
68	GRINDER, GREGORY	NHEERL	WASHINGTON	self-nominated
69	GROGARD, MEGAN	NHEERL	RTP	self-nominated
70	GUNDERSEN, JENNIFER	NHEERL	NARRAGANSETT	self-nominated
71	HALL, CLINT	NRMRL	ADA	manager
72	HANLON, DEBORAH	NCERQA	WASHINGTON	facilitator
73	HANSEN, DAVID	NHEERL	NARRAGANSETT	self-nominated
74	HARDESTY, RICHARD	NCEA	WASHINGTON	manager
75	HARVEY, JAMES	NHEERL	GULF BREEZE	self-nominated
76	HARVEY, TERRY	NCEA	CINCINNATI	manager
77	HAWK, PATRICIA A	NHEERL	CORVALLIS	self-nominated
78	HAWKINS, SHERRY	ORSI	WASHINGTON	work group
79	HEDTKE, STEVEN	NHEERL	DULUTH	manager
80	HERRMANN, JONATHAN	NRMRL	CINCINNATI	facilitator
81	HOFFMAN, ALAN	NERL	RTP	self-nominated
82	HOLDSWORTH, THOMAS J	NRMRL	CINCINNATI	self-nominated
83	HOLM, HARVEY	NERL	ATHENS	self-nominated
84	HOWARD, BARRY	NHEERL	RTP	manager
85	HOWARD, ELIZABETH	NRMRL	RTP	HRC rep
86	HUGGETT, ROBERT	IOAA	WASHINGTON	manager
87	HUTCHINGS, DEE L	NRMRL	ADA	self-nominated
88	JACKSON, PATRICIA	NHEERL	RTP	manager
89	JACKSON, TOYA	NERL	CINCINNATI	self-nominated
90	JENSON, CORRENE	NHEERL	DULUTH	self-nominated
91	JOHNSON, MIMI	NAGE	NARRAGANSETT	Union rep
92	JONES, ESTHER	ORMA	WASHINGTON	self-nominated
93	JONES, PAT	IOAA	WASHINGTON	work group

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
94	KADELI, LEK	ORMA	WASHINGTON	facilitator
95	KAHL, MICHAEL	NHEERL	DULUTH	self-nominated
96	KANTOR, EDWARD	NERL	LAS VEGAS	self-nominated
97	KAPLAN, NORMAN	NRMRL	RTP	self-nominated
98	KAVLOCK, ROBERT	NHEERL	RTP	manager
99	KLEFFMAN, DAVID	NCERQA	WASHINGTON	manager
100	KOREN, HILLEL	NHEERL	RTP	manager
101	KULP, RUSSELL	NRMRL	RTP	self-nominated
102	LAMBERSON, JANET	NHEERL	NEWPORT	self-nominated
103	LAPAN, RICK	NHEERL	NARRAGANSETT	self-nominated
104	LAURIE, VERNON	NCERQA	WASHINGTON	self-nominated
105	LAWRENCE, CAL	NRMRL	CINCINNATI	manager
106	LESLIE, ANNE	NFFE	WASHINGTON	Union rep
107	LEW, ROSE	ORSI	WASHINGTON	self-nominated
108	LEWIS, DENISE	NHEERL	RTP	self-nominated
109	LEWIS, NORMA	NRMRL	CINCINNATI	self-nominated
110	LINGLE, STEVE	NCERQA	WASHINGTON	manager
111	LINTHURST, RICK	NERL	RTP	manager
112	LONGEST, HENRY L	IOAA	WASHINGTON	manager
113	LYONS, TERRENCE	NRMRL	CINCINNATI	self-nominated
114	MAHAFFEY, KATE	NCEA	CINCINNATI	self-nominated
115	MANTY, DALE	NCERQA	WASHINGTON	self-nominated
116	MARTIN, BARRY	NERL	RTP	manager
117	MASON, SHARON	AFGE	WASHINGTON	Union rep
118	MAYER, FOSTER	NHEERL	GULF BREEZE	manager
119	MCCARTHY-O'REILLY, MARY	ORSI	WASHINGTON	steering cmte
120	MCCLANAHAN, MELINDA	NCERQA	WASHINGTON	manager/steering cmte
121	MCCRILLIS, ROBERT	NRMRL	RTP	self-nominated
122	MCKENNEY, CHARLES	NAGE	GULF BREEZE	Union rep
123	MCKINNON, HUGH	NRMRL	CINCINNATI	manager/steering cmte
124	MENZER, ROBERT	NCERQA	WASHINGTON	manager

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
125	MESSER, JAY	NERL	RTP	facilitator
126	MILLER, CHARLES A	NRMRL	RTP	self-nominated
127	MILLER, DIANA	NHEERL	RTP	self-nominated
128	MOORE, GEORGE	NRMRL	CINCINNATI	HRC rep
129	MOORE, JOHN	NERL	LAS VEGAS	manager
130	MOORE, MIKE	ORMA	WASHINGTON	steering cmte
131	MORRIS, CURTIS M	NERL	RTP	self-nominated
132	MULKEY, LEE	NRMRL	ATHENS	manager/steering cmte
133	MULLIN, MICHAEL	NHEERL	GROSE ILE	self-nominated
134	MURPHY, CATHY	NERL	ATHENS	self-nominated
135	MURPHY, THOMAS	NHEERL	CORVALLIS	manager
136	NACCI, DIANE	NHEERL	NARRAGANSETT	self-nominated
137	OLEXEY, ROBERT	NRMRL	CINCINNATI	manager
138	OPPELT, TIM	NRMRL	CINCINNATI	manager
139	OSBORNE, MICHAEL	NRMRL	RTP	self-nominated
140	OWENS, JAMES H	NRMRL	CINCINNATI	self-nominated
141	PAHL, DALE	NERL	RTP	self-nominated
142	PATTON, DOROTHY	ORSI	WASHINGTON	manager
143	PEACHER, CLAY	NHEERL	GULF BREEZE	self-nominated
144	PEARSON, GARETH	NERL	LAS VEGAS	self-nominated
145	POTTER, BILL	NERL	CINCINNATI	self-nominated
146	PREUSS, PETER	NCERQA	WASHINGTON	manager
147	PRINCIOTTA, FRANK	NRMRL	RTP	manager
148	PRYOR,.MARGHERITA	ORSI	WASHINGTON	self-nominated
149	PUZAK, JACK	NCERQA	WASHINGTON	manager
150	RADZIKOWSKI, MARYELLEN	ORSI	WASHINGTON	manager/steering cmte
151	REASONER, DONALD	NRMRL	CINCINNATI	self-nominated
152	REITER, LARRY	NHEERL	RTP	manager
153	RENARD, ESPERANZA P	NCERQA	EDISON	self-nominated
154	RILEY, LOIS	IOAA	WASHINGTON	work group
155	ROHRER, JUDY	IOAA	WASHINGTON	self-nominated

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
156	ROSS, LINDA B	ORMA	WASHINGTON	self-nominated
157	RUBINSTEIN, NORMAN	NHEERL	NARRAGANSETT	manager
158	RUSSO, ROSEMARIE	NERL	ATHENS	manager
159	SAILSTAD, DENISE	NHEERL	RTP	self-nominated
160	SAKIEWICZ, CAROL A	NHEERL	NARRAGANSETT	self-nominated
161	SALMON, LEE	OAR	WASHINGTON	facilitator
162	SANTAVY, DEBORAH	NHEERL	GULF BREEZE	self-nominated
163	SCHIERMEIER, FRANK	NERL	RTP	manager
164	SCHMELLING, STEPHEN	NRMRL	ADA	self-nominated
165	SERGEANT, ANNE	NCEA	WASHINGTON	self-nominated
166	SHAFFRAN, MARY	IOAA	WASHINGTON	work group
167	SHAW, DENICE	NHEERL	RTP	work group
168	SHIMABUKU, RAY	NHEERL	CORVALLIS	self-nominated
169	SIKDAR, SUBHAS	NRMRL	CINCINNATI	manager
170	SIMES, GUY	NRMRL	CINCINNATI	self-nominated
171	SLIMAK, MICHAEL	NCEA	WASHINGTON	manager/steering cmte
172	SMART, JAN	NHEERL	RTP	self-nominated
173	SMITH, BENNETT	NERL	CINCINNATI	self-nominated
174	SMITH, KATE	NERL	CINCINNATI	manager
175	SMITH, STEVE	ORMA	WASHINGTON	facilitator
176	SOLOMON, ALLEN	NHEERL	CORVALLIS	self-nominated
177	SPARKS, ALLEN R	NHEERL	GULF BREEZE	self-nominated
178	SPYRES, JULIE	OPPE	WASHINGTON	facilitator
179	STANTON, MARK	NHEERL	RTP	self-nominated
180	STEEN, WILLIAM	NERL	ATHENS	self-nominated
181	STELMA, GERARD	NERL	CINCINNATI	self-nominated
182	SUTTON-BUSBY, VERLA	ORMA	WASHINGTON	self-nominated
183	TEICHMAN, KEVIN	ORSI	WASHINGTON	facilitator
184	TERRELL, DOCK	NHEERL	RTP	self-nominated
185	THOMAS, SHIRLEY	ORMA	WASHINGTON	work group
186	THORLAKSON, BOB	OHROS	WASHINGTON	HRO rep

ORD WORKSHOP PARTICIPANTS

A	A	B	C	D
187	TILSON, HUGH	NHEERL	RTP	manager
188	TUCKER, DONNA	NCEA	CINCINNATI	self-nominated
189	VAN EE, JEFF	NERL	LAS VEGAS	self-nominated
190	VEITH, GIL	NHEERL	RTP	manager
191	VORMWALD, RON	NHEERL	DULUTH	self-nominated
192	WASSON, SHIRLEY	NRMRL	RTP	self-nominated
193	WATERS, KAY	ORMA	WASHINGTON	work group
194	WATKINSON, WILLIAM	NHEERL	RTP	self-nominated
195	WATSON, PATRICIA L	NRMRL	CINCINNATI	self-nominated
196	WENTWORTH, NANCY	NCERQA	WASHINGTON	manager
197	WHITFIELD, JAMIE	NRMRL	KANSAS CITY	self-nominated
198	WIENER, RUSSELL	NERL	RTP	manager
199	WIGGINTON, MARY	ORSI	WASHINGTON	self-nominated
200	WILKINS, AMINA	NCEA	WASHINGTON	self-nominated
201	WRAY, EVELYN	ORMA	WASHINGTON	work group
202	WRIGHT, KEN	OHROS	WASHINGTON	facilitator
203	ZARBA, CHRIS	IOAA	WASHINGTON	steering cmte
204	ZAVALETA, JENNIFER	NHEERL	RTP	self-nominated
205	ZENICK, HAL	NHEERL	RTP	manager/steering cmte

DAVID M. NOER, D.B.A.

Dr. Noer's current speaking and research interests deal with the effects of layoffs and downsizing on those who remain in organizations, the revitalization of people in the work force, and executive and team effectiveness.

Noer currently heads his own consulting and training organization in Greensboro, North Carolina. He has been designated an Honorary Senior Fellow of the Center for Creative Leadership, and was previously Senior Vice President for Training and Education with worldwide responsibility for the Center's training and educational activities.

Before joining the Center for Creative Leadership, he was president of his own consulting firm. His previous position was as Dean of the Control Data Academy of Management, and Vice President of Human Resource Development. He had worldwide responsibility for executive succession planning and top executive development. He also was responsible for human resource research, planning and organizational development strategies.

He served as President and CEO of Control Data Business Advisors. This involved P&L responsibility for a 60 million dollar subsidiary of Control Data specializing in technology based human resource oriented management consulting This organization included Control Data's corporate human resource development, strategic planning, and market research staff, and provided products and consulting services through offices in the United States, London and Melbourne. In addition to managing the firm, Dr. Noer provided personal organization diagnostic and development consulting to top executives in a number of client systems, particularly those considering the human implications of restructuring and downsizing

From 1975 to 1982, he was the Senior Vice President, Personnel and Administration, for Commercial Credit Company Commercial Credit was a holding company with operating units in the insurance, finance, consumer lending, banking, leasing and real estate fields. In addition to the traditional human resource activities, he managed strategic planning, purchasing, public relations and data processing Considerable effort was spent in divestiture and acquisition planning.

From 1965 to 1975, he held a number of increasingly responsible human resource positions in the United States, Europe and Asia. Dr Noer resided in Melbourne, Australia for three years during this period and was responsible for human resource management and consulting throughout Asia

He is the author of a wide range of popular articles and published research in consulting skills, individual and executive development, and international human resource management, and has written four books: *Multinational People Management A Guide to Organizations and Employees* (BNA, 1974), *The Employment Game* (Chilton, 1975), *Jobkeeping A Hireling's Survival Manual* (Chilton, 1976), and *Healing the Wounds. Overcoming the Trauma of Layoffs and Revitalizing Downsized Organizations* (Jossey Bass, 1993).

He received a B A from Gustavus Adolphus College, and a M.S in Organizational Development from Pepperdine University He earned a Doctorate in Business Administration with a concentration in Organizational Behavior, and a supporting field of Executive Mental Health from George Washington University He served as a member of the governing board of the Organizational Development Network, and was editor of the journal, *O D Practitioner*

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Professional Publications, Research Reports, and Selected Papers
July 1996

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DUE TO THE CURRENT FINANCIAL RESTRAINTS - THE LIGHT AT THE END OF THE TUNNEL WILL BE TURNED OFF UNTIL FURTHER NOTICE.

PARADIGM

SHIFTS

ASSUMPTIONS ABOUT PEOPLE

From →	To
People as Assets to be Developed	People as Costs to be Reduced
"Grow & Cultivate"	"Hire and Cut"

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Language Patterns

From → To

Nurturing	Violent
"Develop"	"Take Out"
"Help"	"Shoot"
"Grow"	"Terminate"

Time Orientation

From → To

Long Term	Short Term
"A Career"	"A Job"
"Make"	"Buy"

Size Orientation

From → To

Synergistic	Reductionist
"Build Up"	"Make Smaller"
"Develop"	"Cut"
"Enlarge"	"Reduce"

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Persistence of Symptoms

- Resignation, Fatigue and Depression
- Loss of Control
- Heightened Anger

Feeling Clusters

- Fear
  - Insecurity
  - Uncertainty
- Frustration
  - Resentment
  - Anger
- Unfairness
  - Betrayal
  - Distrust

Coping Mechanisms

- Less Risk Taking
- Low Productivity
- Information Thirst
- Survivor Blaming

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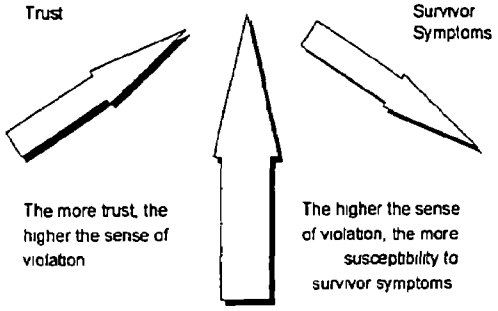
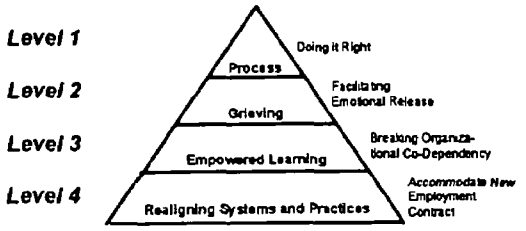
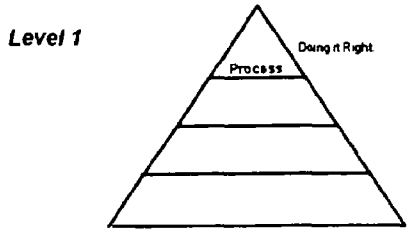
The Basic Bind



Pyramid Intervention Model



Pyramid Intervention Model



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Traditional Process Interventions

- –Fairness
- –Equity
- –Participation
- –Caretaking
- –Prior Notice

Denial Traps

- Spurious Self Actualization
- Myopic Mergers (They'll leave me alone/ I'll leave them alone)

Control Traps

- Managing Communications (controlling the way things are said)
- Managing Emotions (restraining authentic feelings
- Image Management (inappropriate coolness, detachment, analysis)

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Tips for Authentic Communication

- Be Real, Be Congruent
- Behave Appropnately, Think of a Funeral
- Lead with the Heart; Follow with the Head
- Never Say Never

Pyramid Intervention Model

Level 2

Interventions (What To Do)

- Install Processes that Facilitate Emotional Responses
  - Small Group Communications
  - Facilitated Group Discussions
  - Team Building Sessions

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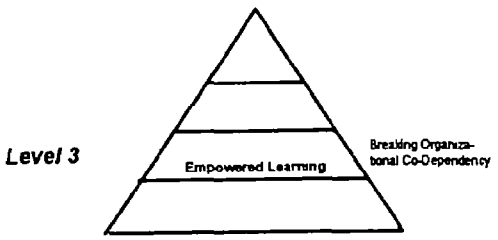
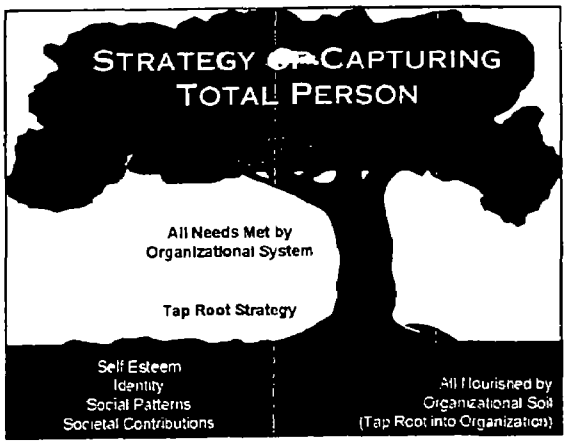
Interventions (What To Do)

- Train Managers in Intra- and Inter-personal Skills
  - –Listening
  - –Feedback
  - –Responding to Feelings

Pyramid Intervention Model



Strategy of Capturing Total Person



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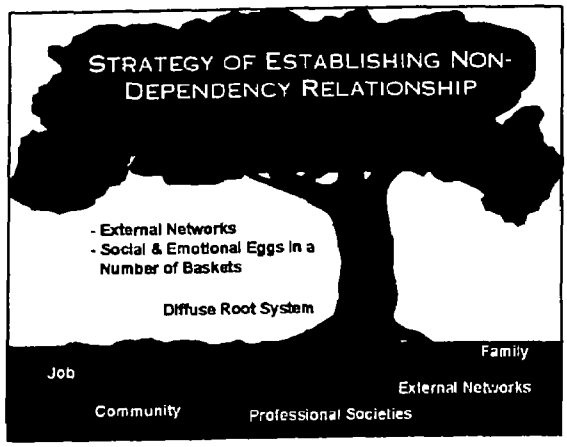
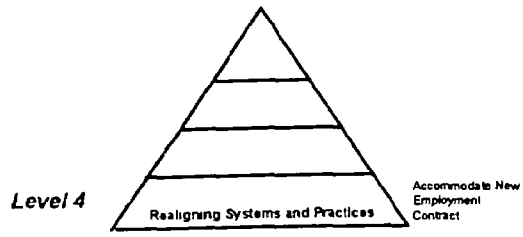


BREAKING ORGANIZATIONAL CO-DEPENDENCE

- Detachment
  - Bonding Around "Good Work"
  - Diffuse Root Strategy
- Letting Go
  - Not Controlling the Uncontrollable
  - Internal Focus and Valuing
- Connecting with Core Purpose
  - Life Planning
  - Value Clarification

PYRAMID INTERVENTION MODEL



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"Old" Employment Contract

Assumptions	Strategies	Outcomes
•Paternalistic management	•Excessive and duplicative support services •Long-term career planning systems	•Dependent workforce

"New" Employment Contract

Assumptions	Strategies	Outcomes
•Empowering management	•Promote autonomy •Stop "taking care" of employees •Don't do detailed long-term career planning	•Empowered workforce

"Old" Employment Contract

Assumptions	Strategies	Outcomes
•Reward for performance is promotion	•Linear compensation systems •Linear status symbols •Fixed job descriptions •Static performance standards	•Plateaued workforce •Demotivated (betrayed) workforce

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"New" Employment Contract

Assumptions	Strategies	Outcomes
•Reward for performance-sense of contribution and relevance	•Job enrichment and participation •The philosophy of quality •Self-directed work quality •Non-hierarchical performance and reward systems	•Motivated workforce •Task invested work force

"Old" Employment Contract

Assumptions	Strategies	Outcomes
•Long-term employment relationship	•Benefits and recognition systems reward tenure	•Older work force •Demographically narrow work force

"New" Employment Contract

Assumptions	Strategies	Outcomes
•Situational relationship	•Flexible and portable benefit plans •Tenure free recognition systems •Blurring distinction between full-time and temporary classifications	•Flexible workforce

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"Old" Employment Contract

Assumptions	Strategies	Outcomes
•Life time career	•Fitting in important •Relationships important	•Co-dependent work force

"New" Employment Contract

Assumptions	Strategies	Outcomes
•Explicit job contracting	•Short-term job planning •Employee does not sign up for life •Organization does not assume life-time caretaking	•Employee and organization bonded around good work

"Old" Employment Contract

Assumptions	Strategies	Outcomes
•Loyalty is equated to remaining with the organization	•Approved career paths only within the organizations •Penalize voluntary turnover •Internal promotion, discourage external hiring	•Narrow work force •Mediocre work force •Nondiverse work force

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"New" Employment Contract

Assumptions	Strategies	Outcomes
•Loyalty is equated with self responsibility and good work	•Non-traditional career paths •In/out process •Employee choice •Accelerate diversity recruiting	•Responsible work force

Leadership

Moving Toward The New Organizational Reality

Realigning the Leadership "Ings"

FROM		TO
Controlling	→	Helping
Evaluating	→	Empowering
Directing	→	Coaching
Planning	→	Listening

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New Paradigm Leadership Competencies (Self and Others)

- Transition Facilitation Skills
- Visioning Skills
- Empowerment Skills
- Process Wisdom
- Collective Learning

New Paradigm Leadership Competencies (Self)

- Value Congruence
- Self-understanding

Leadership As Easing Behavior From the Comfortable Old to the Relevant New

From →	To
Motivational strategies that promote dependence	Strategies that promote independence
The yearning for belonging	The necessity of autonomy
The organization as a primary social system	Employment primarily an economic relationship
The leader as savior	The leader as helper
The desire for permanence	The reality of transience
The leader as purveyor of objective reality	The leader as a maker of meaning

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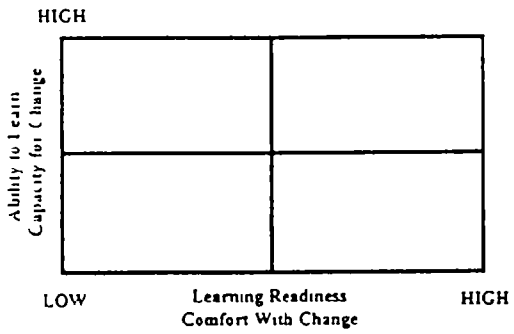
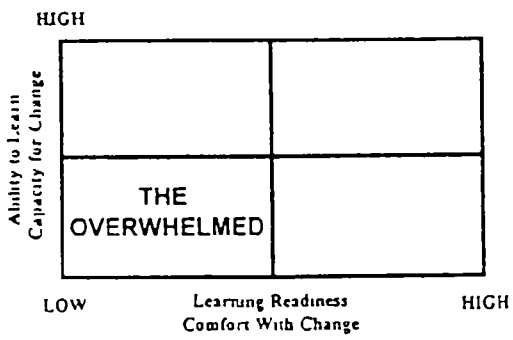
The "R" Factor

Patterns of Response to
Uncertainty, Change, and
Downsizing

The "R" Factor



The "R" Factor



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The Overwhelmed

Withdrawing
and
Avoiding

The Overwhelmed

How The Person Feels

- Somewhere Between Unhappy and Depressed
- Frustrated and Anxious
- Overwhelmed, Particularly By Work
- Bruised Self-Esteem
- Powerless
- In Need of Approval and Reassurance
- Reliant Upon Others
- Fearful of Mistakes and Failure
- In Need of Stability and Symptom Relief

The Overwhelmed

How The Person Typically Reacts to Transitions

- Blocks Out the Stressful Changes
- Avoids Confronting Issues Head-on
- Retreats Into "Safe" Activities
- Avoids Risk
- Waits for Things to "Return to Normal"
- Feels Angry - May Be Passive-Aggressive
- Looks for Symptom Relief - Not Solutions
- Avoids Thinking About What Might Happen
- Blames and Complains

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Leading Downsized Organizations
R Factor Model

Notes

The Overwhelmed

How The Person Operates as a Learner

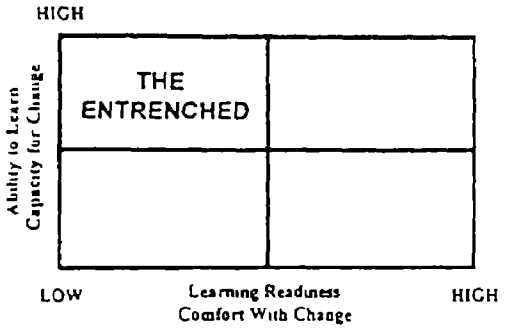
- Shuts Down - A Blocked Learner
- Seeks Answers that can Turn Back the Clock
- Expends Energy Trying to Look Busy
- Withdraws from the Significant Learning Challenges
- Doesn't Take Care of Self (Smoking, Drinking)
- Commiserates With Others Who Feel the Same
- Becomes a Barrier to the Learning of Others

The Overwhelmed

What the Person Needs to Become a Successful Survivor

- Understanding and Help In Dealing with Stress, Fear and Frustration
- Effective Superiors and Peers Who can Help Calm the Waters
- Phased-In Transition with Bridges to the "Old Ways"
- Development in Place , Rather than Job Change
- Protection from Quick Empowerment that Might be Viewed as a Set up for Failure
- A Series of Mini-Challenges and Crafted Success Experiences - Rebuild Confidence and Openness

The "R" Factor



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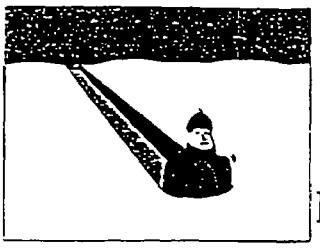
The Entrenched



Clinging to Narrow Learnings

The Entrenched

How The Person Feels

- Anxious, Frustrated and Angry
- Threatened By Sudden Change in Valued Behavior
- "We're Forgetting What Made Us Who We Are"
- Confident of Proven Skills and Past Performance
- Afraid of Being a Victim of the Numbers Game
- Often Guilty About Surviving While Others Left
- Reluctant to Take Risks that could Lead to Mistakes and Failure
- Unhappy but Unwilling to Start Over in the External Job Market

The Entrenched

How The Person Typically Reacts to Transitions

- Blames and Complains
- Acknowledges Need for Change , But Resists New Learning
- Works Harder than ever at Previously Successful Behavior
- Avoids Taking Risks
- Tries to "Ride It Out" Until Things Return to Normal

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Leading Downsized Organizations
R Factor Model

Notes

The Entrenched

How The Person Operates as a Learner

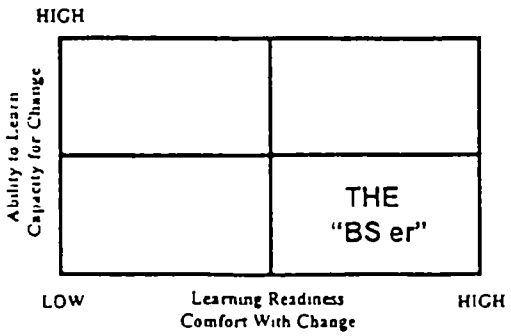
- Narrow Learner - Locks Onto Previously Successful Strategies and Practices
- Unconsciously Blocks Out Demands of Change
- Engages in "Action Frenzy" to Justify Existence
- Accepts Need to Be Different - Doesn't Know How
- Resists Risk of High Impact Developmental Assignments

The Entrenched

What the Person Needs to Become a Successful Survivor

- Understanding and Help in Coping with Stress, Fear and Frustration
- Carefully Paced Learning Activities - Be Careful Not to Overwhelm
- Don't Expect Too Much Too Soon
- Developmental Job Opportunities
- A Safe Place to Test New Learning and Experience Success - Simulations Work Well
- Effective Role Models
- Feedback, Encouragement and Support

The "R" Factor



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The "BS er"

Aggressive
Hipshooter
"Makes It Up"
High Drive But
Low Substance

The "BS er"

How the Person Feels

- Comfortable With the Need For Change
- Anxious to Move On With Transition
- Surprised at (and Unsympathetic to) the Stress Felt by Others
- Ready to Take Action Do Something - Anything
- Frustrated with the Confusion and "Whining"
- Confident in Own Ability to Function in Any Situation

The "BS er"

How the Person Typically Reacts to Transitions

- Jockeys for a Position of Influence and Recognition
- Expresses Frustration over Pain and Hesitancy of Others
- Presses for Quick Solutions and Decisive Action
- May Initially Come Across as a Beacon in the Darkness - But Ultimately Becomes Transparent
- Lack of Substance Doesn't Slow Him/Her Down
- Seems to Fool Superiors

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Leading Downsized Organizations
R Factor Model

Notes

The "BS er"

How the Person Operates as a Learner

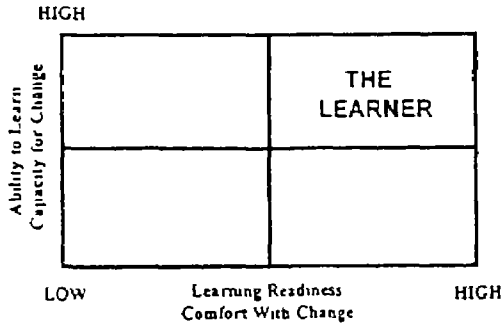
- Not Very Well!
- Oblivious to Core Challenges
- Overestimates Strengths, Doesn't See Weaknesses
- Pushes and Pulls Others Into Action
- Overdoes the Notion of "Ready, Fire, Aim"
- Dangerous as a Risktaker
- Often Leads the Overwhelmed Down the Garden Path

The "BS er"

What the Person Needs to Become a Successful Survivor

- Provide Regular, Objective and Accurate Assessment of Skills and Learning Needs
- Rein-in Power and Push Developmental Learning
- Can't be "Turned Loose" in an Empowered World
- Requires Check and Balance From Others
- Must be Held Accountable with Periodic Review and Monitoring

The "R" Factor



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The Learner

Growing
and
Processing

The Learner

How the Person Feels

- Challenged and Stretched
- Comfortable With the Need for Change
- Anxious About the Transition - But Open to the Possibilities
- Optimistic About the Long-Term Future
- Has the "Power of Positive Doing"
- In Control of Own Destiny
- Not Afraid of Short-Term Mistakes or Setbacks

The Learner

How the Person Typically Reacts to Transitions

- Seeks the Silver Linings Hidden Beneath the Dark Clouds
- Views Ambiguity and Change as Challenge and Opportunity
- Finds Humor in Difficult Situations and Uses it as a Tool
- Keen Awareness of Both Strengths and Weaknesses
- Treats Life as a Continuous Learning Experience
- Expands the Perimeter of Personal Comfort Zone

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Leading Downsized Organizations
R Factor Model

Notes

The Learner

How the Person Operates as a Learner

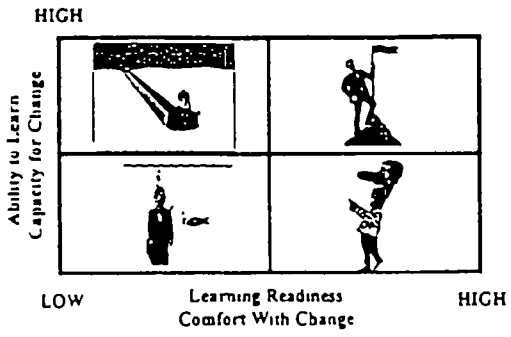
- Driven to Fill Gaps in Personal Development
- "Growth Through Developmental Surrender"
- Pays Attention to Learning Process - The "How" of Learning
- Strives to Solve Problems, Rather than to Place Blame
- Seeks Out Variety Both in Experience and Learning Tactics
- Will Risk Short-Term Performance Decrement If Learning is the Payoff

The Learner

What the Person Needs to Become a Successful Survivor

- Reward and Support for Being the Key Player in the Transition Process
- Flexible Growth Opportunities Coupled with Visible Rewards
- Latitude to Model Effective Learning Behavior for Others
- Relief from Being Caught in the Crossfire - i.e. Trying to be All Things to All People
- High Impact Developmental Assignments

The "R" Factor



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ORD Workshop
Daily News
December 3,1996•Williamsburg, Virginia

"WE ARE THE PARAMOUNT SCIENTIFIC RESEARCH FOUNDATION IN THE COUNTRY...IF NOT THE WORLD"--Dr. Robert Huggett

The first annual ORD workshop opened with a key note address from Bob Huggett He challenged all of us to have a new commitment toward ORD He said that the purpose of the meeting was "to identify what is or is not happening in ORD and then to make actual improvements and create a process to continue to implement these " His hope for the meeting was that "each of us could speak our mind, listen, come up with solutions.. and then pull them off!!"

Bob highlighted positive changes that ORD has already seen He applauded the quality and volume of peer reviews and the many accomplishments highlighted in the evening's poster session/gallery walk He noted also the change in how Congress views ORD---starting in 1995 with strict criticisms, to 1996 with words of encouragement, to 1997 with clear signs of support He noted that ORD was the only organization in EPA that did not get a budget cut, in fact, ORD received an increase. The ORD budget in 1997 is within 1% of the President's budget. Bob stated that this reflects the hard work of ORD staff It showed that we all have listened to our outside critics and our own Lab study, and we have taken action

Bob commented that he has looked closely at the ORD survey results and wants to hear issues and ideas at the workshop to address these He wants to continue to hear ideas of ways to reduce levels of bureaucracy and red tape He knows we need to better communicate our goals, objectives, and priorities to our entire organization He stated that the job of management is essential to the organization because managers facilitate our ability to deliver our ORD products--science and technology He emphasized that there is a change afoot Scientists are being asked to focus on their science and research, where just a few years ago they were told to focus as managers He recognized that this change will be hard but that it is essential to the mission of ORD.

He closed with thoughts on ORD's mission, serving the science of the Agency, and on the value of the messages in our strategic plan ORD, he noted, has a strategic plan that he envisions as a "living document." It is a road map to guide us "We are not out of the woods .we have to do well . all of you are here to help us stay on course "

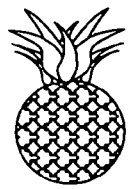
Henry Longest opens the First Annual ORD Workshop

Henry welcomed over 200 participants to the First Annual Workshop, a forum that has brought together ORD employees from all levels and locations. One hundred of the participants were selected at random from a list of 400 ORD volunteers The other participants are members of the senior executive service and senior management He reminded everyone that this workshop is the first step in what will be a multi-year process to improve ORD

Henry expressed his hope that all participants would have an opportunity to be heard and that everyone would do their best to listen to each other and respect each other's views

Henry emphasized the significance of ORD's role in providing the science foundation to support EPA's mission. To illustrate ORD's high profile in the scientific community and in the world, he displayed a recent front page headline from The New York Times describing EPA's new air standards. "This issue came from ORD We are the organization that provides the science for EPA's mission," he said

A Successful Registration



Registration was a success thanks to all participants and the set up team and staff running the table We had a few early birds that started the registration process at 7 30 a m Even during the busiest time between 10 30 and 12 30, registration moved quickly because the process was well organized and participants were cooperative Shirley Thomas, one of the registration volunteers, reflected that "the process went smoothly because everyone was friendly, cooperative, and had their money ready for their specific meal selections " Pam Bassford, also at the table, mentioned that "it was nice to finally have the opportunity to put faces to the voices she has interacted with in the past " Pat Jones also volunteered her day to help register the workshop participants At 5 00 p m closing time, 225 attendees had registered

DAVID NOER PROVIDES ADVICE FOR CHANGE AGENTS AT ORD

With an ORD Conference focused on change, David Noer of the Center for Creative Leadership offered several salient points for conference participants about managing change within ORD He addressed several aspects of his pyramid model for effective change (level one--the right process and level two--letting go) According to Noer, people typically react to change and uncertainty through exhibiting one of four specific personality types

TYPE	HOW THEY FEEL	HOW THEY REACT	HOW THEY LEARN	HOW TO HELP THEM ADJUST
Overwhelmed	powerless	avoids dealing with change issues	withdraws, sinks--doesn't learn	build confidence, show success is possible
Entrenched	angry, threatened	resists, tries to "ride it out", opponent	blocks out, narrow focus	gentle coaching
"BSer"	superior to all others--can't empathize	when in doubt--act, rush to act and decide	superficial, excessive risk-taking	strong oversight, objective feedback, a short lease
The Learner	stretched but controlling own destiny	life is a learning experience	focus on solving not blaming	support, guard carefully for burnout

A key lesson from David Noer is that effective change agents need to pay much more attention to emotions and feelings rather than structure and logic. To quote David Noer "lead with your heart, not with your head." More detail on his approach to change is in his book Breaking Free (which all participants received)

Poster Session/ Gallery Walk Showcases ORD's Successes

The goal of the evening was to demonstrate the pride and accomplishments of all the different facets in ORD This goal was clearly achieved as several participants commented favorably on the gallery walk Subhas Sikdar from Cincinnati felt 'the event helped bring all parts of ORD together" Dee Sailstad from RTP reflected that 'it was a good chance to see how EPA functions as a unit" Chris Zarba from Headquarters (IOAA) commented that "the event was extremely well organized and attentive to detail on the content and implementation" Denice Shaw who organized the poster display was thankful that "people who brought posters were cooperative and timely" Overall, the work that was showcased clearly demonstrated that ORD is having an impact in the Agency's science, research and technology

Noer Engages Participants in Activities About Change and Transition

David Noer did not let his audience snooze this afternoon. He engaged the participants in several activities at their tables in an effort to get people thinking and talking about change.

For the first exercise, Noer had each table come up with one word to describe how they feel about ORD. Although many of these words sounded like they came from overly-creative scrabble players, they seemed to capture the feelings within the organization. Feelings ranged from "hopeful" to "skeptical" to "skeptically hopeful." There were several "concerned," a few "optimistic," and several sort-of optimistic: "cautiously optimistic," "confusedly optimistic," and even "frumistic," translation. frustrated + optimistic.

In another exercise, Noer used the metaphor of a family to illustrate feelings associated with downsizing. He asked the participants to imagine a family: mother, father, and four children. The mother and father decide that they can no longer support the whole family, and therefore they have decided to let two of the children go - send them away. Noer asked the participants how they would feel if they were a) the children that were "separated", b) the children that were kept, and c) the parents. This exercise was designed to look at the issue of change and downsizing from an emotional perspective, rather than a practical perspective.

In a third group activity, Noer asked the participants to think about someone going through a transition, and then to identify characteristics and behavior patterns of two types of people. 1) the person who accepts and adapts well to change; and 2) the person who has trouble accepting and adapting to change. The participants agreed that the "ideal" person would be someone who is upbeat, motivated, helpful, open, communicative, and listens well - as one group put it, "the energizer bunny."

ORD Workshop
Daily News
December 4,1996•Williamsburg, Virginia

Workshop Participants Select 5 Priority Issues

Day 2 of the Workshop focused on identifying the issues and getting them out on the table After several hours of discussion on many issues and two rounds of voting, the participants selected the top 5 issues. These are the issues that the participants have collectively determined to be the most important issues to address, here at the conference and throughout the year. They are

- Red Tape
- Communications
- Resources and Infrastructure
- Integrating Science w/ EPA's mission
- Career Development

Brainstorming the "Improvement Opportunities"

Before the group got to the top 5 issues, the participants listened to and raised many issues. The first step in the process was to have the participants work in groups of 8 to identify 6-8 issues that ORD need to address. After this "brainstorming" session, the issues were posted and grouped around the room. Each participant then voted on the issues to narrow the extensive list down to 10 (All of the issues that were raised in this session - not just the top 10 issues - will be documented and disseminated.)

The top 10 vote getters were:

1 Resources & Infrastructure - 78
2 Red Tape- 72
3 Communications - 65
4 External Grants- 39
5 Lack of Technical Support for Research - 31
6 Career Advancement for Scientists - 28
7 Trust - 23
8 Integrate Science w/ Organizational Vision - 21
9 Career Development - 21
10 Planning Science - 18

(Note Each participant had 3 votes)

"ORD'S Strategic Plan is a Living Document That Helps Us Respond to and Anticipate Change"... Joseph K. Alexander

Joe Alexander presented the ORD Strategic Plan He emphasized that "it's not the document that is important, rather it is the concepts and the process of thinking through answers to fundamental questions, defining the core values of the organization, and what things are the most important to us." The strategic planning process challenges us to think about what we will be doing in the future. It challenges us to know who are customers and clients are and what service they request from us. It prompts us to envision the characteristics of environmental science in the future.

Joe identified four primary functions of the document:

1) a place where we describe our process to establish priorities;
2) a place that helps us make decisions about the allocation of resources,
3) a communications tool for our colleagues within ORD and the clients we serve, and
4) a communications tool for our stakeholders outside the Agency

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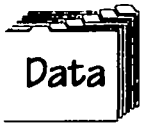
The plan discusses the process for setting priorities based on risk. It identifies the technical support ORD can provide to program offices. Joe also highlighted six near term priorities that the plan addresses:

1) research on drinking water
2) research on particulate matter
3) research on endocrine disrupters
4) research into new levels of capability in human health risk assessment
5) research into new levels of capability in ecological risk assessment
6) research into pollution prevention and new technologies

What ORD has is the first edition of the Strategic Plan; it is a living document that will need revisions. Joe hopes that the Strategic Plan can help us better articulate our vision and position ourselves to address the strategic needs of the Agency. The Strategic Plan needs to capture our thinking on where we want to be in 10 to 20 years. In revising the Strategic Plan, he hopes to "engage all colleagues across ORD so we have a set of ideas that makes ORD even better than it is today."



ORD Survey Results Shared

Henry Longest presented an overview of the ORD survey results. The survey, with a 96% response rate, highlights areas of strengths, concerns, and areas needing improvement. Among the strengths were job challenges, decision-making practices, influence and control, team building, and encouragement from supervisors for participation. Some of the concerns included communication flow, job reward, goal emphasis, and peer relationships The areas needing improvement included bureaucracy/red tape, group performance, and individual performance efficiency.

Given the high level of participation and the detailed responses, Henry stated that the survey provides ORD with "a good snapshot of peoples' perceptions and feelings and serves as a good basis from which to work."

Henry discussed his experience using survey instruments to monitor and improve organizations. He stressed that organizations have to make a long term commitment to this process for it to be effective. He is hopeful that ORD's commitment to a multi-year survey process will be effective in ensuring that the needed changes occur in the organization.

Henry expressed that the challenge for this Workshop is to "clearly define the problems so that we can come up with appropriate solutions to address them."

Councils and Union Representative Present Their Roles

Human Resource Council

Gary Foley (NERL/RTP) described the purpose and genesis of the Human Resources Council, which was formed in May 1996 as an advisory body to provide advice and assistance to the AA and Executive Council on human resource issues. The HRC, which includes representatives from every office, acts as an office-wide sounding board and communication network

Betsy Howard (NRMRL/RTP) described the four HRC workgroups: 1) the Team Workgroup, 2) Career Development/Promotion Potential Workgroup, 3) Awards/Performance Appraisal Workgroup, and 4) the Scientific Productivity Workgroup.

George Moore (NRMRL/Cincinnati) presented several communication issues, highlighting specific areas that need improvement

Management Council

Debbie Dietrich, Director of ORMA, provided an overview of the Management Council, describing its mission and function within ORD The Management Council reviews and establishes policies and procedures across ORD. Last year's shut down and furloughs put the Management Council in a reactive mode; this year, they hope to set a proactive agenda. Tom

continued on next p

Clark, from NERL of RTP, NC, provided a field perspective on the role of the Management Council Woven in with his humor was a description of some of the Management Council's priority issues, including improving delegation and empowerment, wider use of OMIS, and improving infrastructure in the labs.

Science Council

Hugh McKinnon (NRMRL/Cincinnati) presented the role of the Science Council. The Science Council played a role in the reorganization, especially in coordinating scientific issues across all the ORD Labs. Now that the reorganization is in place, the Science Council is focusing on other issues, including implementing and coordinating various pieces of the strategic plan. The Science Council is working with scientists in the labs to develop research plans and is also working to encourage interaction between ORD and other scientific organizations.

Unions

Mimi Johnson, the Union representative from the NAGE, described the role of the Unions within ORD. Mimi emphasized the Union's desire to successfully implement the partnership councils, and stated that, "the Union will continue to push for issues that make it easier for ORD to conduct science "

Kudos for the Facilitators

The workshop facilitators had their work cut out for them today. There was a lot to accomplish and not a lot of time to do it The reaction from several facilitators indicates that the willingness and motivation of the participants made their job a lot easier

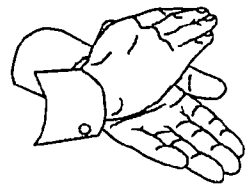
Karen Dean (ORD/NHEERL)· "It's been fun People are really primed. They want input These are issues they've thought a lot about for a long time "

Julie Spyres (OPPE) "Everyone is really cooperating well, trying to listen to what everyone is saying - and following directions!"

Steve Smith (ORD/ORMA). "We've all spent a lot of time both in planning and practice. I'm impressed by the motivation and capabilities of all of the facilitators and planners - great spirit and dedication "

Lek Kadeli (ORD/ORMA): "I'm impressed with the openness, commitment, and involvement from everyone... They are a motivated group."

Mary Shaffran (ORD/IOAA): "Today was intense It's hard to organize an activity for 200 people It was a challenge but it worked - everyone got their issues out on the table."



Thanks to all the ORD (and non-ORD) facilitators who made the day a success!

Lee Salmon (OAR)
Mary Shaffran
Walt Galloway
Dick Garnis
Steve Smith
Julie Spyres (OPPE)
Ken Wright (OARM)
Bob Thorlakson (OARM)
Kevin Teichman
Jim Carr (OARM)
Karen Dean
Linda Ross
Jessica Barron (OARM)
Pat Hawk
Mike Moore
Julie Bowen (Region 10)
Sandra Bowman (OARM)
Randy Brady (OARM)
Deborah Hanlon
Kathy Driver
Richard Brown (OARM)
Margery Exton (OPPT)
Jonathan Herrmann
Lek Kadeli
Jay Messer
Anne Sergeant

A special thanks to Walt Galloway, Richard Brown, Mike Moore, Kevin Teichman, and Mary Shaffran for coordinating a very intense and productive day!

ORD Workshop
Daily News
December 5, 1996 • Williamsburg, Virginia

Bob Huggett Sees Progress at the ORD Workshop

Bob Huggett shared some of his thoughts and perceptions about the ORD Workshop He expressed his enthusiasm and optimism for the outcome of the Workshop, and emphasized his commitment to "doing whatever needs to be done" to carry out the action plans that we develop here in Williamsburg He stated that he, Henry, and Joe would sit down after the workshop, study the recommendations for each of the 5 priority areas, and then work with the Executive Council to implement the plans "There are a number of innovative things we can do .. we can do a lot and we must give it our best shot," he said He specifically mentioned the possibility of establishing committees with representatives from each lab and center to work on each of the issues. He also suggested that in order to understand the different perspectives coming from Headquarters and the field, we might have Headquarters people go to the field and, in turn, have field representatives come to Headquarters. "There's an old Indian saying. never judge a person until you've walked in their shoes."

Bob was encouraged by the progress of the Workshop He was impressed with the dynamic of engaging 200 people from every part and level of the organization He was also encouraged to hear the participants espouse realistic approaches to these difficult issues "People seem to understand that there are bounds."

He said that he hopes the participants come away from this workshop with more optimism than when they arrived "Remember the words that we used on the first day to describe the way we feel about ORD?. I hope that after this workshop, there are more people who would use the word "optimistic" to describe how they feel." He encouraged the participants to talk to their colleagues when they return home and to share with them their experiences from the workshop. He also challenged people to think about ORD as a whole and not in individual parts. He used the analogy of 5-part madrigal music. each part can stand alone and sound good, but together the parts blend and sound more beautiful than any individual part. In ORD, each part can stand alone, but together we are better.

When asked about the Second Annual Workshop, he said, "it will definitely happen " His hope is that next year, we will be well on our way to solving the priority issues from this Workshop, and we can work on the next five issues.

"We are confronted with insurmountable opportunity"
-Pogo

Henry Longest Expresses Enthusiasm About Sessions

Henry Longest started Day 3 by expressing how impressed he was with the sessions on Day 2 that identified the top five issues. He felt "everyone was energized" and that the sessions were very "stimulating". He explained the activities for Day 3, which involved taking the five priority issues that the groups have now defined and developing action plans to address the specific problems.

Panelists Present the Five Priority Issues

Volunteer panelists gave concise and quick presentations based on the outcome of the "issue framing" sessions, designed to define clearly the five issues. Each issue was defined using the following criteria:

Current State - the situation now;
Impact - how does it affect ORD,
Desired State - the "ideal" situation,
Bounds - barriers and limitations to achieve the desired state; and
Measures - ways to evaluate success

These presentations and the handouts that summarized them served as the foundation from which to develop the specific action plans.

Thank you to all the participants who volunteered to record and present the issues

From Defining the Problems to Finding Solutions

After a long day a talking about and defining the problems on Tuesday, the participants were ready to solve them! Following the Wednesday morning panel presentations that summarized the "issue framing" activity from the previous day, the participants met in groups to work on action plans Rather than having people grouped randomly, as they were in previous sessions, the participants were divided into managers, scientists, and "others" The objective for each group was to come up with some action planning ideas for each of the five priority issues

Volunteers from each group then got together to discuss, debate, and consolidate their conclusions, so that they could present them at the plenary session Clear and comprehensive solutions and plans were presented for all five priority issues

The following actions were recommended for each issue

1 Integrate Science with EPA Mission
Recommended Action
- create bulletin board/chat room
- develop case studies of good/bad examples of integrated science
- reevaluate and redefine roles of PIs, ALDs, and clients in research planning and implementation process
- hold regular cross-lab/client state-of-science workshops
- submit a proposal to the Administrator for an Agency-wide program for scientific strategic plans

2 Resource Infrastructure
Recommended Action
- develop strategic resource allocation/create staffing plan for balanced workforce
- clarify definition of infrastructure
- provide research team support
- analyze travel needs to support science

3. Red Tape
Recommended Action
- redelegate to lowest possible level
- review, evaluate, and revise ORD policies and procedures for value added and accountability.
- ensure that service-oriented organizations in ORD act as facilitators not barriers
- simplify Lab Implementation Plan and reduce information requests

4 Effective ORD Communication
Recommended Action
- provide effective, reliable, and compatible electronic communication
- establish/strengthen two-way communication mechanisms
- develop and organizational communications strategy

5 Career Development
Recommended Action
- set up career mentoring programs for all paths and levels
- set clear, consistent guidelines and train for implementation
- create and implement high-quality Individual Development Plan
- obtain and protect travel budget for development.
- create long-term investment in study of career path
- communicate career development information - disseminate high quality user-friendly information on career development, training, and promotion opportunities

Thanks!

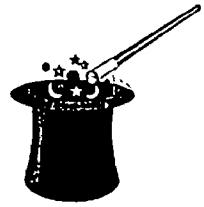
Special thanks to the office team led by Evelyn Wray for taking care of faxes, phone messages, typing, and everything else!

Also, many thanks to the Workshop coordinating committee and steering committee for making this Workshop happen

Most of all, thank you to all the participants who shared their valuable time and ideas with everyone this week

Have a Safe Trip Home!

The Recipe



FILL Glue Pot with the fresh, pure, clear water of undiluted human spirit

✓ Take special care not to contaminate with preconceived ideas, or to pollute with excess control
✓ Fill slowly, notice that the pot only fills from the bottom up It's impossible to fill it from the top down!

STIR in equal parts...

- Customer focus
- Pride in good work

BRING to a boil and blend in

- A liberal portion of diversity
- One part self-esteem
- One part tolerance

FOLD in ..

- Accountability
- Openness to learning

SIMMER until smooth and thick, stirring with..

- Shared leadership and clear goals

SEASON with..

- A dash of humor and a pinch of adventure

LET cool and garnish with...

- A topping of core values

SERVE by coating all boxes in the organization chart, with particular attention to the white spaces. With proper application, the boxes disappear and all that can be seen is productivity, creativity, and customer service.

- David Noer

Labs/Centers/Offices Make Commitments to Improve ORD

The last day of the Workshop focused on what each lab, center, and office could do to implement actions to address the five priority issues

During the last morning session, each lab, center, and office met separately to talk about how to implement these actions at the local lab/center/office and ORD-level, and how to engage their colleagues back home in doing so

There were a total of eight groups that met together

The Labs
NHEERL - National Health and Environmental Effects Laboratory
NERL - National Exposure Research Laboratory
NRMRL - National Risk Management Research Laboratory
The Centers
NCERQA - National Center for Environmental Research and Quality Assurance
NCEA - National Center for Environmental Assessment
The Offices
ORMA - Office of Resources Management and Administration
ORSI - Office of Research and Science Integration
IOAA - Immediate Office of the Assistant Administrator

Following are brief summaries of the specific commitments made by each group

NRMRL will:
Red Tape

- Hold a management meeting in January
- Endorse the two-signature approach
- Establish a "red tape raiders" task force

Career Development

- Assign a "resource person" to handle career development issues
- Reinvigorate the IDP process
- Set aside travel $ for PIs

Communication

- Take lead on setting up ORD Internet and Intranet communication strategy
- Conduct survey on information needs
- Standardize communication systems
- Hold all hands, division, and branch meetings to make workshop information available

Resources and Infrastructure

- Conduct 5 year hiring review in line with current direction
- Communicate infrastructure analysis
- Conduct travel analysis

Integrating Science with EPA's Mission

- Take lead on setting up bulletin board/chat room (pilot by June)
- Take lead with ORSI in setting up state-of-the science reviews

NHEERL will:

- Hold an all hands meeting to convey messages from the AA and lab directors, and involve staff locally
- Appoint staff who will spend time dealing with each issue
- Form workgroups/opportunity teams with a mix of people from the lab
- Establish performance standards across management levels
- Share experiences with other labs/centers

NCERQA will:
Red Tape

- Identify "choke points" by January
- Begin implementing corrective action by mid-February

- Complete corrections by mid-June

Integrating Grants Program into ORD/Agency Process

- Work on redefining roles of principle investigators (PIs)

Internal and External Communication

- Work on home page to incorporate information on abstracts and grants
- Hold workshops for home and program offices

NERL will:
Protect infrastructure

- Create process for evaluating equitable distribution
- Create model of infrastructure needs to use when making rapid first-cut decisions

Improve Communication

- Expand NERL Home Page
- Focus on ORD-wide communication
- Work with ORMA to implement the two-signature model for reducing red tape
- Conduct a review of ORD policy and procedures
- Finalize and stabilize NERL strategy to include PI interaction and bottom-up interaction
- Promote the use of electronic signatures
- Implement a new career development plan
- Devise a clear definition of long and short-term research

NCEA will:

- Identify an 'issue champion' for each issue

Red Tape

- Establish small teams to identify problem areas

Resources and Infrastructure

- Create a small team of people to define/characterize infrastructure to get a better understanding
- Address the issue of travel

resources

Integrate Science with EPA Mission

- Develop more high visibility case studies
- Reactivate review of PI and ACD roles

Career Development

- Develop a handbook for new employees
- Identify common training needs and provide group training
- Establish a mentoring program

Communication

- Complete NCEA Home Page
- Survey and identify communication needs

ORSI will:

Career Development

- Strengthen the IDP, emphasizing learning opportunities, new projects, and training

Red Tape

- Redelegate to lowest level consistent with 9th floor

Resources/Infrastructure

- Create draft of strategic plan

Communication

- Take steps to better communicate within the organization
- Take steps to communicate what ORSI's role is in the organization

Integrating Science with Agency's Mission

- Reevaluate the role of ALDs
- Seek input from PIs
- Develop draft approaches to integrated State-of-the- Science workshops
- Report to the Science Council by March

ORMA will:

- Act as an agent for change by listening, learning, and acting
- Focus on support to the organization, not oversight and control

Communication

- Establish a feedback mechanism for customers
- Support development of a communication strategy with ORSI and IOAA

Integrating Science with EPA's Mission

- Focus GPRA on results, not red tape

Red Tape

- De-layer the acquisition process - fewer signatures
- Identify 3 procedures and reduce their processing time by 50%

Career Development

- Survey best practices and include these in management reviews
- Create navigation aids

Resources and Infrastructure

- Define infrastructure by 3/97
- Report on how travel dollars are spent

IOAA will:

- Devote next Executive Council Meeting to Workshop follow-up
- Regularly monitor progress on carrying out these commitments
- Integrate these commitments into the Strategic Plan

Communication

- Initiate a communication strategy
- Implement a system for feedback

Red Tape

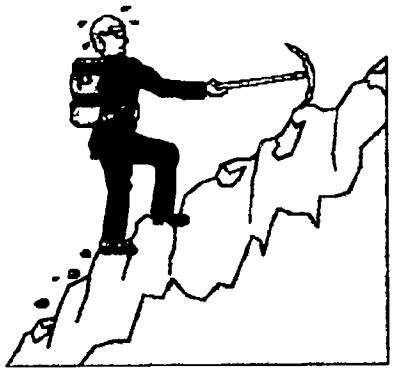
- Assess the chain of approval
- Conduct a review of all ORD policies
- Support service-oriented attitude

Career Development

- Human Resources Council to work on a career development strategy
- Conduct supervisor training with lab/center input

Resources and Infrastructure

- Clarify definition of infrastructure and communicate this definition
- Reallocate resources based on new definition
- Establish process to link budget to strategic plan and research plans



Personal Commitments to Change

After each lab/center/office presented their commitments, Henry asked the participants to voice individual commitments to the ORD improvement process Several participants, both managers and non-managers stood up to offer a personal commitment

Henry Longest committed to following through on the "two-signature" initiative to minimize red tape He also committed to finalizing the leave policy associated with international travel

Joe Alexander stated that he would integrate the ideas and action plans from the Workshop into the 1997 Strategic Plan revision

Debbie Dietrich said she would commit to making the ORD Management and Information System (OMIS) work

Tim Oppelt said he would commit 25% of his time to implementing improvement actions He also offered to host the Second Annual Workshop in Cincinnati

Dorothy Patton stated that she would listen to her staff and help them meet their commitments She also said she would work to encourage the Science and Management Councils to meet soon

Mike Slimak said he would make sure that the Workshop issues are in the forefront of NCEA's activities

Peter Preuss stated that he would strive to make the NCERQA grants program an integral part of EPA's grants program

Gary Foley committed to encouraging creativity through empowerment

Evaluations Convey Positive Feedback

The final task for the participants after four long days of hard work was to evaluate the First Annual Workshop There was an overwhelming 85% response rate Overall, the responses were full of positive comments that seemed to capture the energy and momentum of the four days Following are some excerpts

What aspects of the Workshop did you find interesting, useful and beneficial...

- the ability of 200 people to focus on areas of common interest and concern and then identify action for follow-up was unbelievable "
- "The open and trusting atmosphere to discuss all issues made me a more trusting employee "
- "Bob, Joe, and Henry's strong endorsement for positive change and real follow-up "
- "All of it!"
- "It was an excellent opportunity especially for non-management staff to meet and interact with other ORD colleagues across all labs, centers, etc "
- "Wide ORD representation, enthusiasm, posters, amnesty box Three cheers to the organizers and facilitators!"

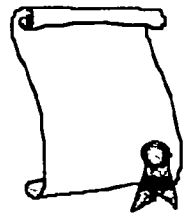
What aspects of the Workshop need improvement?

- "More time for action planning "
- "More time for developing issues "
- "Allow more time for discussion/characterization of next actions/steps in terms of both overarching ORD follow-up and individual lab/center efforts "
- "Workshop was too long "
- "Workshop was too short "

Do you feel that the actions crafted at the Workshop will be implemented back home?

- "Yes, but only if each participant puts personal energy into continuing the process "
- "Day 5 will be the real test "
- "The key is follow through "

"Launch Lunch" Provides Appropriate Send-off for Workshop Participants



The First Annual ORD Workshop ended on Thursday afternoon with a lunch to recognize and thank all of the participants Each participant was presented a Tribute of Appreciation "in recognition of your efforts as an

agent for change in ORD "

Coming Soon....

A full summary of the Workshop activities and outcome is being prepared It will highlight the issues that were raised on Day 2, the action plans that were developed and presented on Day 3, and Day 4's commitments from each lab, center, and office

ISSUES FROM THE AMNESTY BOX (Monday, December 2)

1. Scientists gain expertise vicariously by supervising students and technicians and by collaborating with larger teams. The significant reduction in contractor support and cooperative agreements will reduce the breadth of expertise of ORD scientists overtime. This, together with the "random" removal of expertise through early outs and retirement, can be expected to leave critical gaps in ORD's ability to provide a full (or wide) range of advice to EPA's regulatory and policy programs. This factor must be addressed in strategic planning, particularly via hiring and staffing plans

2. The need for EPA to solve "puzzles" (complex, with interacting issues) vs problems (direct questions which science or engineering can address). What should be the role of ORD---research on problems, or puzzles?

3. ORD scientists are viewed by top management as inferior to academicians, stripped of funding and kept out of the loop in extramural grants/coops. ORD scientists are not inferior and should be involved with extramural recipients at all stages.

4 Why is not the in house expert used more often? Why are people with peer reviewed publications not assigned to team etc.?

5. What is being done about the under representation of minorities and SES minorities in ORD?

6 This is a top-down change...the hitch is that we 're asking managers to change a system (a dysfunctional one, to be sure) under which they have been successful. Why should they change? There would not appear to be anything in it for them, and certainly few (if any) operate with the greater good in mind.

7. I was shocked to read in ES&T that the idea is to get scientists away from contract management and back to science.* That is exactly the opposite of what's happening in NCEA-DC.
   * I would love it if that happened!

8. What level of funding---all accounts---goes directly to Research? What is the % of ORD's total budget?

9. Change the culture. Move the SESers.

10 Co-workers feel with all of the downsizing that they will be shutting down Divisions. Why is NERL considered the mother Lab? What makes RTP so special besides Cincinnati or Las Vegas, etc...? The Divisions are being reorganized so much that science research is not being done and scientist are frustrated. Comment: Why bother saying

anything, nothing is or will be done.

11. Greater access to information. Less restrictive Information Security. Our division's Homepage is not accessible to the public to serve This is not only unproductive by illegal (FOIA) The Information Security is overly restrictive to our internal researchers (can't attach instruments or OS's of choice, WIN 95, etc) Can't use dynamic IP's yet there is absolutely no individual user accountability only machine level (vp addresses).

12. Lack of clerical and "non-professional" admin. staff (in the field). Researchers, scientists and managers are, of course, the backbone, but there have to be staff in the "trenches" to push the paper, handle the Agency "exercises". Where are they--most locations are surviving with the SEE Prog and this appears somewhat shaky!! There must be some relief here.

13. Too much time is spent by Project Officers in managing EPA contracts. Why not streamline and shorten some of the Management Processes, particularly the Financial Management

14. In spite of statements of a 50% cut in HQ, there has been no corresponding cut in authority from HQ. How do we implement change if no one is willing to give up some power?

15. ORD has had numerous exercises with employee participation for change. They have had many names, reinvention, etc. However, no actions ever arose. Sometimes, recommended actions of the committees were not even entered into a record accurately. Will this REALLY be different, or just more broken promises.

16. Publications are important! Let scientist publish without management review. Just the standard disclaimer.

11. ***Which of 3 Williamsburg Action Scenarios to Choose?***

(1) Low profile scenario all keep quiet and enjoy Williamsburg
No one gets hurt

(2) Democracy scenario (attempt to) implement constituents' suggestions
Builds on the existing framework
A range of possible outcomes beneficial change to even more bureaucracy

(3) Philosophical scenario "let us work," "out of the way, please" science
Commitment to unleashed thought and political shielding

The Philosophical Scenario

Given that,

(z) A malignant EPA *system* has evolved outside of EPA's leadership intentions or control
(a) EPA ORD bureaucracy is excessive and turned inward
© Ill-conceived political interference has been destructive
(d) Corrosive effects of power are not well understood or appreciated
(e) EPA has lost its philosophical perspective
(b) EPA career tracks lack balancé
(f) The ORD survey is proof of these assertions *and* a mandate for change

Conclusions. The Williamsburg Convention might find·

① No single segment of EPA is solely responsible for EPA's malaise, solutions can be found without wasteful and destructive indictments
② EPA's bureaucracy can be streamlined by turning significant parts outward
③ An outward directed "corps" manned by former high level bureaucrats can cultivate political allies and educate adversaries
④ Leadership must seek enlightenment necessary to recognize adverse effects of power; i e., (or corollary?) scientists tend to be under represented in power circles because they tend to shun non-scientific assignments
⑤ Only a deeply rooted, commonly shared, and commonly understood scientific philosophy can bring balance to EPA's power circle, strength to its protective "corps," and a sense of right to its search for a political umbrella
⑥ A primary cause of loss of prestige of ORD is its undervaluing its indigenous science, ORD must sustain a phalanx of *practicing* experts as well as principal investigators primarily managing public resources

Candidate Elements of a Working EPA Scientific Philosophy

Preamble Perhaps the most important tenet of science is the concept of *fun* EPA would do well not to deny or apologize for this fact "It is remarkable", wrote Laplace, "that a science [like physics] which began with considerations of **play** has risen to the most important objects of human knowledge " Thus, a **playful** technique provides unexpected clues to problems in different fields — one of the leitmotifs in the history of science

It is important to note that fun in science connotes a certain looseness and fluidity of thought and action, not perks In the Manhattan Project, General Bradley indulged scientists even as he kept them focussed

While it is not hard to imagine that EPA has enemies who will try to make EPA science pay for having fun, EPA stands to lose more support among its allies by denying it If Laplace can say it, EPA can say it!

A corollary is that scientists who have fun are not eager to be promoted This concept has profound implications that should not be taken lightly What type of individuals seek and attain management and power positions? Why? Enlightened leaders will contemplate the implications

Aspects of the IG's recent campaign through ORD illustrate the dangers of denying our soul If the IG's cleansing exercise helped EPA science, then why are we at an acknowledged low point just two or three years later?

A premiere reason for the fact that EPA suffers from its profound malaise is that so little was done (or could be done) to resist the excesses of both the IG and EPA's detractors in Congress EPA did not or was unable to cause its adversaries to reflect on the differences between legitimate corrections to EPA science, such as funding levels or programmatic emphases, and basic and unacceptable tampering with the need for scientists to work without intimidation and manipulation The cause of this failure was the disconnect between management and bench level scientists, conversely, with the firm support of its scientists management could have spoken more boldly

The point is, whether or not EPA ORD is allowed by prevailing forces at any given time to exercise its philosophy or not, EPA should at least have a philosophy to promote. Elements of ORD's philosophy that it might expound to the world include, in addition to fun.

Postulate systems filter unfavorable information, i e , they lie. The ORD survey proves this contention It needs to be understood and counteracted

Toleration (cultivation?) of error. there is too much emphasis on certainty in work plans, science that does not make mistakes is not taking very big steps

Shielding scientists must be protected from unreasonable interference growing out of dissatisfaction with the pace of performance, the bureaucracy should dedicate itself to removing as much administrative burden from scientists as possible. Undue legal influence over ORD or legal tampering is not in the best interest of science

Stability scientists should be allowed to maintain their disciplines as much as possible, "forced" transitions should allow for ample learning curve time, new ventures should be manned by volunteers and recruits as much as possible

Travel whether or not it prevails, ORD management should periodically persuade those opposed to lighten up on travel restrictions, science is a social enterprise, educate potential allies to that reality

Diversity science is incredibly complex, some areas are harder to publish in than others, EPA should augment its "bean counting" with deeper philosophical notions, including the fact that indigenous science done by EPA scientists has value comparable to principal investigator work using EPA monetary resources. The dual track needs to be really implemented fairly

Simplicity ORD should recognize the fundamental difference between engineering and science. Engineering in science often represents an interim solution to a complex problem, dependent on substantial empirical experience, while science works more slowly to define governing physical and other principals that may provide more accurate future solutions. ORD should strive to revisit models to upgrade them, particularly in the sense of simplifying them as governing principles become more firmly established

Dangers of committees: ORD's perspective on peer review regurgitates what its critics want to hear Peer review can be the manipulation of power as well as other instruments controlled by individuals and institutions Everyone knows that peer review has resulted in gross abuses of power and has impeded important work from time to time It is not in ORD's interest to put peer review on pedestal There are times when the only good peer review comes from the scientific community as a whole, support that notion In some cases administrators are simply hiding behind committees

Conviction of our beliefs· the strategic document does not give the sense that ORD believes in itself, partly because it accepted all outside criticism so uncritically (was the reorganization really necessary?) And, there is a lack of philosophical underpinning

ISSUE FOR AMNESTY BOX

ISSUE

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Name _____(Optional)

OPEN SPACE ISSUES----Monday December 2nd

1 Better define ORD's role and clients. (Less than 20, greater or equal to 3).

1a. How do ORD parts contribute to ORD's mission?

2. How can ORD's program better meet client needs? e g. regions, CBEP initiatives

3. Promote climate of freedom where job is well defined and then staff is free to perform.

4. How should ORD provide support to regulatory process? Is there a better way ?

5. Look at how the ORD culture values information How can we improve the way we share information·
   --within ORD (up and down ; labs to HQ; down and up)
   --with clients (regions and programs)
   --with the public

6 How can ORD better coordinate and integrate with other agencies, academia, NGOs?

7. Futures/emerging issues research--- needs more emphasis.

8. Ways to improve performance appraisal process?

9 How can ORD make/use "flexiplace" and "telecommuting" for example, to meet workforce changes, e.g. role of support staffs ?

10 Cooperative agreements grants and research planning--- how well are they working?

11 ORD needs a new or restructured process to get client feedback to measure ORD's success.

IMPORTANT!

Tomorrow morning you'll be hearing a discussion of data for a couple of hours. Then, at 10:00 am, you will be asked to brainstorm some issues. These instructions describe what will be happening from 10 - 11:30. Please familiarize yourself with these steps - - If it's not clear, discuss the steps with any facilitator. Thanks!

Instructions to Participants - Brainstorming

In this session you will. Limited financial personnel resources

(1) write an ORD issue (preferably one which cuts across ORD, could produce a near-term success, and is measurable in some way) on each of two post-it notes

(2) walk around and talk to at least two people you don't know about your issues and theirs

(3) come back to this table in 30 minutes and discuss everyone's two issues until the table narrows the focus down to 6-8 issues which you agree on

(4) record those issues on post-it strips 27" x 10"

(5) post them around the outside of the room in groups of related issues

(6) multivote on the groups of issues on your way to lunch

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12/3 AM

~~12/3 PM~~

Instructions to Participants - Inner/Outer Circle

In the next session you will North Room Cascades #4 @1:00

(1) go to your breakout room with about 50 other participants

(2) walk over to a flip chart page with one of the approximately 10 issues the conference just selected by multivote, joining several other participants

(3) select a spokesperson for the issue

(4) discuss the issue and why it is important, with the spokesperson taking notes

[The spokesperson will sit in one of about 10 chairs in the center of the room. The group will discuss each of the issues, beginning with 2-3 minutes from the spokesperson for an issue, followed by discussion.]

(5) multivote on the issues, then take a break

12/3 PM

Instructions to Participants - Framing

After this break you will.

(1) ***frame*** each of the improvement opportunities the conference has selected

(2) come back to this breakout room and sit with your tablemates from yesterday

(3) begin the work of defining and determining the scope of one issue at your table, recording your conclusions on a form

(4) meanwhile, select an Historian to stay with this issue during the session

(5) after 20 minutes, rotate clockwise, leaving your Historian, Facilitator, and issue at your table

(6) discuss the next issue for 15 minutes, building on the work of the previous group

(7) continue to rotate around the circle until you all come back to your original tables

(8) when you come full circle, clarify any remaining questions

(9) send your Historian and Facilitator to the Panel Room for the issue

(10) leave for the day

Instructions for Action Planning

During this 165-minute period you will ***address & plan*** each of the improvement opportunities the conference has selected At this table you will spend 25 minutes brainstorming approaches, considering them, and recording your recommendations on **Improvement Action Planning Forms** Your facilitator has completed items 1 & 2 You should complete one form in its entirety as a group for each step you think ORD should take to accomplish the improvement in this 25 minutes After you have worked on this opportunity, you will paper clip and place your completed forms in the envelope on the table Your facilitator will take the envelope to the next table and the facilitator on your left will bring a second envelope to you By the time each envelope travels all the way around the circle of tables, there will be 5 sets of action plan forms for each opportunity in each envelope

Before you finish your first round, you will have five extra minutes to select a Historian Your Historian will travel with the opportunity, envelope, and facilitator, while everyone else stays at this table. They will participate actively in the discussion you have on the issue, but will observe only while the other tables discuss the issue

When the envelope rotates the fifth time, your Historian will rotate back to this table You will take a good look at the five sets of forms in the envelope You will select from the five 1-3 which you think merit further consideration You may recommend one in particular, or develop a consolidated approach combining the best features from different proposals You will then be released for a long lunch, except for your Historian They will take your Action Planning Forms to the Panel Room for the opportunity (panel rooms will be listed on a chart by the door of the room you are in They will then become one of four panelists who will synthesize their views into up to five Action Planning Forms and make a presentation to all participants later in the day

INSTRUCTIONS TO PARTICIPANTS - DAY 4

PERSONAL COMMITMENTS SESSION:

- You will be asked to make 3 personal commitments that will help Ensure your organization's action plan involves colleagues back home and secures their commitments.

- You will share your commitments with others at your table and in the plenary session. Your written commitments will be used to help ensure Follow-up.

NEXT STEPS FOR FOLLOW - THROUGH SESSION:

- Think about how we can ensure the action plans for improvement are implemented and successful. Share these ideas during the next steps session.

- Think about what went well during the workshop and where there are areas for improvement. Share these ideas in the Evaluation session.

THESE ARE MOST OF THE STRIPS THAT WERE DEVELOPED AT YESTERDAY'S 10:30 PLENARY SESSION

COMMUNICATIONS (176 VOTES)

- Need to improve communication both within ORD and to outside
- Inadequate and ineffective communications
- Lack of coordination
- Identification of client needs
- Ineffective - "du loop"
- Improve communication
- Lack of communication: Listening and understanding all directions
- Too much centralized management versus oversight
- Inconsistent management
    - Lack of delegation authority, responsibility and accountability
    - Contract management too bureaucratic (scientist spends too much time managing)
    - Too much micromanagement
- Micromanagement
    - Lack of empowerment
    - Lack of true streamlining
    - Administrative burden on science
- Too much paperwork and procedures
- Improve communication/ORD self-portrait
- Lack of adequate communication
- Improve communication linking top down and bottom up and with clients
- Insufficient communication/concern between scientists and managers
- No consistent message on scientific issues and ORD policies
- Improper utilization of work force
- Rotten communication
- Lack of communication
- Dysfunctional communication
- Not enough horizontal and vertical communication (internal)
- Lack of communication to, from, within ORD
- Lack of real 2-way communication
- Lack of means

RESOURCES & INFRASTRUCTURE STRIPS (150 votes)

- Protect infrastructure
- No standardized financial database for EPA Project Officers
- Predictability of resources -- Monetary & Staff
- Resource/info sharing
    - No incentives to collaborate
    - Hoarding of resources
- Focus resources on doing research
- Resources--what you need, when you need it
- Need for internal resources to support doing work -- Current problems with:
  Lack of administrative/clerical help
- Scientific career development
    - Career path
    - Travel & meeting support
- Not enough support staff (secretarial, administrative, technical)
- Resources to support program offices
- Lack of travel resources
- Stability in research directions & funding
- Stability in in-house research program
- Strong intramural research program:
    - Poor qualification research
    - Limited infrastructure ($, people)
- Enhancing intramural research including infrastructure
- Inadequate Resources
    - Infrastructure
    - Travel/Training
    - Technicians for P.I.

INTEGRATING SCIENCE WITH EPA MISSION (119 VOTES)

-Chronic instability in ORD research priorities/programs
-Crisis management (too many firedrills)
-In-house research without competition
-More opportunity to plan science (research stability)
-Improved integration of science with planning and client needs
-Programs are budget driven not science driven
-Lack of bottom-up input into science planning
-Need for mechanisms for bottom up input in research planning
-Disconnects in science planning
    EPA-wide
    Across program offices
    ORD
-Succession planning for scientists/meet priorities of strategic plan
-Involve scientists in planning
-Lack of integrated research
    Reconnect: Eco/Human/Risk assessment/Risk management
    Planning to bench-level scientist
-Scientists have no say in direction of ORD--it's all managers
-Lack of true integration and buy-in for R/D agendas, programs and goals across ORD labs/centers
-ORD temporally out of synch with regional clients
-Lack of connection between ORD scientists and overall EPA mission
-Problems with research and planning: emphasis on turf; long/cumbersome; wrong players

RED TAPE (200 VOTES)

- Comp time/ O.T. policies
- Obstacles to participation in conferences, especially foreign
- Excessive paperwork for coops
- Planning & budgeting process takes too many months & person-years
- Streamline procurement process
- Process of Awards of contracts & coops is bureaucratic & wasteful
- Grants program separates ORD from peers, needs of EPA program offices
- Integrate extramural and intramural grant programs
- Scientists need involvement in extramural funding
- Ensure implementation of QA/QC by grantees
- Fewer grants, more coops- make sure division needs OK first
- Delegation of authority to P.I. level (e.g., budget decisions)
- Stop micromanagement, especially travel
- Insufficient delegation/ too slow to process actions
- Too much review above labs for contract actions
- Too many administrative burdens on scientists
- Simplify lab implementation plan
- No empowerment at lab/div level; only exists in IOAA & ORMA
- Excessive bureaucracy and procedures

CAREER ADVANCEMENT AND DEVELOPMENT FOR ALL (129 VOTES)

-Lack of opportunity for career development and enhancement

Improvement Oppo ity: Communication

Action	Specific Steps to be Taken	Contributions Needed by ORD's Principal Organizations	Measures of Success	Follow-up Planned
Establishing/ Strengthening 2-way Communication Mechanisms	• Establish chat rooms • Customize information flow • Institutionalize bottom's up communication opportunities - SOO Survey - Amnesty E-mail • Skip level interaction (lunches) open door policy • Clarify roles and responsibilities of ALD/ACD's • 360 evaluations • Intensive communication and feedback on Strategic Plan	• ORD/HRC	• Communication standard in management performance agreement • Reflected in SOO Survey • Completion of 360° evaluations • Report from HRC on employee satisfaction on 6 months communication • Reduced time spent on employed	• Manage by walking around ... • Report on • Assess feasibility of information customizing • Quarterly conference call with 9th floor and Division Directors • Newsletter (different level) produced bi-weekly
Develop a Communication Strategy	• Address internal/external • Develop SOP's for difference and substantive issues/types of communication, e.g., budget information and raising ethic policies, review, and comment (what, when, how)	• HRC • ORSI - lead in lab/center workgroup	• SOO Survey results	• Periodic meetings with ORD staff • Reflected in Strategic Plan • Random surveys • Communication Strategy Timeframe· 3 months

Improvement Opportunity: Communication

Action	Specific Steps to be Taken	Contributions Needed by ORD's Principal Organizations	Measures of Success	Follow-up Planned
Electronic Communications - more effective	Improve (yesterday) electronic communications by. • Make it available to people/ train • Hardware/software; standardize, compatible, reliable and user friendly (E-mail/LANs) • Painless tele/video/phone • Adequate expertise • Effective use of Internet/ Intranet • Integrate as part of planning and budgeting process	• OIRM/NCC • ORMA • ADP Coordinators • Management Council * • User Community	• The mail goes through/ throughout • People get equipment • Reduced down time comparable to private sector • ADP plan with short and long-term perspective - Annual response • Quicker response/support	• Survey of Users "Customer Survey" "Comparability Survey" "Detail Survey" Timeframe. SOO Survey • Develop Action Plan (ORMA) - Compatibility Feasibility Timeframe: 3 months • Equipment and training Timeframe. yesterday • Homepages for all organizations Timeframe: yesterday • Beta Testing Timeframe: 6 months

Improvement Opportunity: I rate Science with EPA Mission

Action	Specific Steps to be Taken	Contributions Needed by ORD's Principal Organizations	Measures of Success	Follow-up Planned
1. Bulletin Board/Chat Room	Define research needs, priorities, and direction with active involvement by ORD PIs, Program Offices, Regions	• Advertise existence and availability of systems • Science Council establish pilot area (e.g., ecosystem sustainabililty) • Solicit other topic areas to be established (possibly, media based)	• Access hits (time per hit) • Establish 5 top topics of interest • Track activity and progress over time	Establish small groups of PIs to take ownership of specific topic areas. Periodic summaries prepared and presented to chat room/bulletin board, as well as through formal planning process
2. Case studies of good/bad examples of integrated science	• Led by ORSI • Has Lab and Center members • Within 6 months	• ORSI lead coordination • Labs & Center contribute	• ORD, Programs, and Regions feel both planning process • Science review of regs is working • Science inputs occur early in reg development process and not as afterthought	Case studies used to work with ORD, Programs, and Regions to revise/improve Research Planning and requests for ORD sign off on Program Office Regulatory actions
3. Reevaluate and refine roles of PIs, ALOs, clients in research planning and implementation process	• View increasing research scientist involvement in planning • improving ORD/Client communication and understanding of mission • Improving use of ORD expertise • Defining budget decision authority • Improved understanding of processes at all levels	• Each center laboratory reevaluate current/desired involvement (defined appropriate balance) • ORSI/ORMA revisit roles of ALDs, ARDs, etc • ORMA lead evaluation of issues in process	• Revised strategic plan which all stakeholders feel have had input to (via survey?) • Repeat survey on how ALDs spend their time demonstrates improvements/better understanding	Scheduled progress review to look for interactive/incremental improvements
4 Regular cross-lab/client state-of-science workshops	• Cross the entire paradigm of issues • Carefully selected topics (no more than 2 or 3 a year) • All labs and related	• All laboratories participating on expert basis • Engage program scientists • Envalue the grants program	• Leads to a formal report • Utility in planning for later years • Reinforce mission/reputation for cross-discipline environmental research	
5. ORD preparation of a proposal to the Administrator for an Agency-wide program for scientific strategic plans	• Selected topics • Structural exchange of information between ORD's & programs on mission • Strategies developed jointly with ORD programs	• Open to peer review • Flexibility to accommodate changes • Living documents	• Source of information for GPRA purposes • Returns-of-scale if we truly join program and ORD mission areas to design strategy for development and use of science	

Improvement Oı tunity: Red Tape

Action	Specific Steps to be Taken	Contributions Needed by ORD's Principal Organizations	Measures of Success	Follow-up Planned
1 Redelegate to lowest possible level	• Personnel action • Acquisition • Travel $ • Planning	• Representation from Mgmt Council, Science Council, HRC to ensure implementation	• ORD delegatation no more restrictive than Agency delegations • No more than 2 signatures required • Improved survey results	• Subsequent survey • Mgmt review of site delegations and implementation progress • Quarterly report on progress to ORD personnel
2. Review, evaluate and revise ORD policies and procedures for value added and accountability	Review policies re· • acquisitions • awards • $ in	• Representation from Mgmt Council, Science Council, HRC to ensure implementation • EMS network	• ORD policy consistent with Agency-wide policy • Only 2 signatures • Labs/science not halted due to lack of $ or ability to spend. • Reduction in average time of receipt or spending of $.	Management reviews
3. Service-oriented organizations in ORD act as facilitators, not barriers	• Timeliness • Feedback • Service standards • Electronic tracking (OMIS) • Internal travel trackings	All internal service organizations	Customer feedback	
4. Communicate ORD rules	• Easy electronic access by all ORD staff to current guidance • Engage the ORD community (bite-size steps) through current information (i e , policy of the month)	• ADP expertise • Writing skills • Volunteers	Same access to same rules	• Issuance of final rules • Mgmt council follow-up
5 Simplify Lab Implementation Plan and reduce information requests	• Use OMIS	• National labs • Mgmt Council • Science Council • ORMA	• Clear LIP guidance • OMIS replaces former systems • Reduced requests for same info - analyze requests	• Periodic evaluation of requests - looking for decrease • Feedback on evaluation • Feedback on plan (all levels)

Improvement Opportr y: Career Development

Action	Specific Steps to be Taken	Contributions Needed By ORD's Principal Organizations	Measures of Success	Follow-up Planned
Plan for development	• Get serious--have a positive attitude about career development • Set up career--mentoring programs for all paths and all levels • Set clear/consistent Guidelines and Train for Implemention • Create and implement high quality Individual Development Plan (IDP) • Obtain and protect travel budget for development--not to be confused with mandated credential maintenance • Long-term investment in study of career path--including KSAs, personal and organizational goals	• Dramatic change in ORD attitudes and leadership by employees and management • Charge a group with setting up a mentoring program (e g., MC, HRC) • Make group accountable for accomplishing guidelines/training, etc. • Each organization commit to implementation • ORMA establish baseline budget/needs • Training is a job duty, tailored to the individual • Do long-term job analysis studies	• Each PI goes to at least 1 professional meeting a year • Each additional key person has at least 1 professional meeting every 2 years • Increase the number of positions advertised as rotational • Budget stats made available • Audit of IDPs for quality, existence, and closure by XS of organization being audited	
Communication of career development and +advancement information	• Disseminate high quality, user-friendly information on career development, training, and promotion opportunities	• HRMD and HRC create documentation • Train supervisors and disseminate information at all hands meetings at all sites	• Every supervisor and employee has easy access to all documentation • Build in specific question to measure success in SOO 2000 or alternative surveys) • Multiple qualified applicants for most training opportunities	• HRC or local HR groups evaluate progress

Improvement Opportu. Resource Infrastructure

Action	Specific Steps to be Taken	Contributions Needed by ORD's Principal Organizations	Measures of Success	Follow-up Planned
Strategic Resource Allocation	• From Strategic Plan and Research Plan, allocated FTEs & RD & E to lab/centers. • Lab/centers develop staffing plan for balanced work force to support PIs (i.e., how many technicians, administrative, post doc., fellowships, secretaries, etc. • Lab/centers develop S&T needs (i.e., supplies, travel, salaries, etc.) • ORD policy for indefinite time all new hires occur in lab/centers.	• ORMA lead allocation drill • Lab/centers do own subsequent local allocation (FTEs and money), i.e., staffing plans • ORMA helps with post doc., fellowship programs • AA/ORD issues policy on low vacancies will be filled, over FTEs used, etc. • Strategic Plan ORSI et al • Research plans	• An acceptable allocation of resources, i.e , transparent, justifiable • New post docs , junior researchers • Flow of personnel to labs/centers • Low correlation between actual staffing and plan , i e, balanced work force for efficient support to PIs. • Tracking of FTEs	• DAA/ORD start allocation process with schedule • Work with OARM where necessary for post docs , etc. • AA/ORD issues policy on how vacancies will be filled and where new hires go.. • Schedules for Strategic Plan, Research Plans, Staffing Plans
Travel to Support Science	• Review past budgets (megalab and division levels) • Analyze needs to support science (divisions) • Reallocate dollars to support PIs directly	• Divisions • Megalabs • NCEA	• PIs attend 2 meetings per year • Greater recognition of our PIs outside ORD • Training needs met • Field studies completed on schedule	• Annual reviews of travel allocations and feedback (megalab)

Improvement Opportunity: Resource Infrastructure

Action	Specific Steps to be Taken	Contributions Needed by ORD's Principal Organizations	Measures of Success	Follow-up Planned
Infrastructure Definition	• Clarify definition of infrastructure in time to influence FY99 budget process - March 97 - Issues that could be clarified in definition could include. core, i e., untouchable, allocations; ways to accommodate or reduce impact of taps; dollars vs FTEs; decision making levels; and flexibility to meet site-specific staffing needs • Disclose infrastructure universe fully and openly, so that it's transparent to all users, including PIs, OMB, auditors • Agree on process to reach closure on clarified definition, as well as to adjust infrastructure definition in future based on factors such as inflation, legislative redirections, etc. • Proceed, with AA concurrence, on re-allocations that may occur as result of using clarified definition	• Executive Council, working with science and management councils, will publish clarified definition (next meeting, 1/97) • Science and management councils, with bottomup input from scientists, will review existing allocations in light of clarified definition • Reality check· describe what happens to resources; identify where allocations should be adjusted to reflect infrastructure categories • ORMA participates to ensure consistency of final definition with existing resource tracking systems	• Clarified infrastructure definition is published by March 97 (in time for FY99 budget planning) • Clarified infrastructure definition is reflected in FY99 resource allocations • ORMA receives fewer calls asking about infrastructure accounting • Consistent accounting across ORD • Greater infrastructure stability but also more responsiveness to specific science needs	• Add question to ORD survey "Do you understand what is included in infrastructure?" • PIs guide (user's guide) to infrastructure • Periodic audits of budget process by independent organization

Improvement Opportu Resource Infrastructure

Action	Specific Steps to be Taken	Contributions Needed by ORD's Principal Organizations	Measures of Success	Follow-up Planned
Travel to Support ScienceResearch Team Support	• Make EPA an attractive place to work for by offering an adjusted salary scale • Increase availability of post doc , graduate and permanent technician • Determine Agency's training needs and allocation of training needs • Offer opportunity for faster upgrade (determine what other Agencies are doing and parallel this) • Offer bonus incentives • Bring back "stay-in-school" program, national research council program, and others • Determine what works in technical support from other organization (NASA, DOD) and adapt what fits in the organization • Analysis of how teams look like 10 years ago and at present • PI contact or investigate scientist from other agencies and determine PI/technical ratio • Increase training resources and improve training • Provide incentive, i.e , reward for training participants for participation, e g., advancement recognition of benefits and value added to training,	• Strong recommendation from management council/HRC • HRC with Divisional representation should provide historical ratio of PI/technical ratio that includes all tech supprot from (contract, P.O , and others) • Division Director allocation • Assessment of training needs by Brach Chief • Survey of other Agency and HRC	• Emplouees age stabilized • Satisfied PI • Increased publication • Increased productivity • High retention of new hire	• Learn from negative and exit survey should be conducted from employees leaving • 2 years evaluation to determine any change • Continue to survey trained employees needs and to determine effect of training • Continue to survey employees training needs.

INTEGRATE SCIENCE WITH EPA MISSION

CURRENT STATE

- Lack of commitment to integrate science planning across agency (planning=initial identification of research needs through use of products)
- Research/regulatory agenda driven by political pressures
- Regulatory process does not factor in scientific concerns
- No agency-wide science strategy

IMPACT:

AGENCY	ORD	PERSONAL
• Regs not supported by science • Damage to EPA effectiveness	• Value of ORD questioned • Difficult to maintain stable research environment • Inability to fulfill promises • Poor client relationships • Clients turn to others	• Low morale • Career damage • Inefficient use of resources

DESIRED STATE:

AGENCY	ORD	PERSONAL
• All EPA regs/policies based on strong science • Acknowledgment of ORD's unique expertise • Integrated science planning	• Research advances science and anticipates future research needs • Research sought by clients	• Recognition of individual research accomplishments

BOUNDS

Ability of clients to prioritize/articulate needs
Statutory deadlines/legislative mandates
Political pressures/public opinion
Resources
Skill mix/abilities

MEASURES:

AGENCY	ORD	PERSONAL
• Decisions driven by ORD research results • Quality of science not a limiting factor in EPA decision making • Congressional support • Improved environmental conditions	• Customer satisfaction as reflected in support for budget and investment in ORD process • Peer reviews support ORD	• Recognition of unique contributions of ORD to environmental science and protection

RED TAPE

CURRENT STATE:
- CYA culture
- Poor ratio of process to product
- Lack of trust, empowerment, appropriate delegation
- Micromanagement
- Redundancy and excess review

IMPACT:
- Frustration and low morale
- Lack of trust
- Increased and inappropriate human and dollar cost of doing business
- Lack of timeliness
- Productivity problems
- Loss of research momentum
- Difficulty in attracting and keeping excellent scientists

DESIRED STATE
- Administrative/management staff to have service mentality rather than watchdog attitude
- High and timely research productivity
- Administrative/management support for strong research infrastructure
- Delegate decisions to lowest (legal) level
- No controls beyond those required by Agency without cost justification
- Elimination of excessive/unnecessary reporting
- Reasonable standards and time for review
- Mutual accountability ↕ ↔
- Information management systems to simplify processes

BOUNDS
- Legal/federal/regulations (e.g., FMFIA)/EPA policies
- Perception of Agency by public and Congress
- Common sense/cost effectiveness
- Trust/legacy of IG review
- Comfort level with vulnerability

MEASURES
- Improved morale and productivity
- Shortened processing time
- Fewer signatures/less paper
- OMIS replaces other systems
- Adoption of work flow procedures
- Increased ratio of practicing scientists to all others
- Improved results on SOO2000
- Identify and reduce red tape by quantifiable % by X time
- Adoption of Agency policies instead of ORD policy (e.g., international travel policy matches rest of Agency)
- Increased delegation authority - delegate to lowest legal level

RESOURCES/INFRASTRUCTURE

CURRENT STATE

- Confusion on definitions of resource categories - especially infrastructure.
- Poor skill mixes to accomplish "new" mission(s).
- Perception that ORD did not protect its infrastructure resources as promised.
- Mismatch between available resources and research expectations (is amount of resources adequate for work to be done?)
- Inconsistency in allocation of infrastructure (across laboratories/centers)
- Long-term planning is difficult.
- Misaligned resources (Ratio of administrative to scientific personnel skewed)

IMPACT

- Mission of ORD stifled
- Inhibits scientific productivity
- Loss of trust
- Instability
- Low morale
- Discourages enthusiasm for long-term planning
- Creates unhealthy competition between labs/centers
- Hard to maintain state of the art science
- More strongly affects groups who have traditionally done more extramural research

DESIRED STATE

- We have more junior level scientists and technicians
- Everyone understands what "infrastructure" means.
- Better allocation of FTEs to do quality science
- We have the right kind of resources at the right time in the right place to successfully complete the mission (science).
- There is more input from scientists into definition and allocation of infrastructure.
- Upper management supports stable and protected levels of infrastructure, periodically reviewed and revised based on science.
- First priority is placed on resources to do science.
- The number and type of programs is consistent with the infrastructure $$ we have.

BOUNDS

- Size of appropriation
- FTE ceiling
- Budget process
- Set categories of funding
- ORD priorities (Program Offices/Congressional Priorities)
- Political reality
- Inflexible federal personnel system (can't get rid of dead wood, can't move people)

MEASURES

- Survey results show improvement
- Clear, consistent definitions
- Benchmark against other federal scientific agencies
- Improved morale
- Ratio of technicians: scientists: administrators is appropriate
- More people promoted through science track
- Meet milestones

COMMUNICATION

CURRENT STATE·
ORD's ability to communicate both within and outside the Agency is ineffective, irregular, inefficient and selective. This inadequate, unprioritized communication, is frequently top-down, untimely and of poor quality; it is hampered by technological barriers and lack of trust. The quantity of information ranges from overload to absent.

IMPACT:

Resentment	Missed Opportunities
Hostility	Wasted time and effort
Distrust	Overwhelmed
Insecurity	Vulnerable to political intervention
Distortion/rumor	Undervalued
Frustration harms environment	Hinders career development
Creates confusion	Less effective
Information Overload	Negative impact on productivity
Stressed	Hinders our ability to do our job

Lack of communication is disrespectful

DESIRED STATE:

ORD communication should be based on a humanistic approach and an understanding of the ORD culture. Communication should encompass common terminology and technology, user-friendly processes, coordination, and the free flow of information all directions. We should optimize use of existing mechanisms. Good communication include: accurate, consistent, sufficient, clear, sufficient, timely, relevant, accessible, open, honest, transparent and personal when appropriate.

BOUNDS:

ORD communication is restricted by inconsistent technology, legal considerations, lack of resources and training, and geographic and organization isolation. Individual desire for power and control lead to information hoarding. These conditions do not provide motivation to communicate well, and there is no process to improve the system.

MEASURES:

Feedback from Improved future survey response skip level meetings, clients
Predictable response rates and frequency of appropriate responses, i.e., hits on intra-net
Pulse different levels of the organization for consistent message
100% compatible E-mail for all staff
Cadre of accessible IRM professionals in ORD

CAREER ADVANCEMENT AND DEVELOPMENT

CURRENT STATE

- Most attention paid to training related to management and oversight. Less systematic plan for professional development.
- Lack of attention to promotion (outside manager track) of scientists and especially technical and administrative support personnel.
- Out-dated OPM standards for administrative support personnel.
- Lack of resources ($) to support training and associated travel
- Promotion only vehicle to increase salary
- Fear for individuals to go off for long-term training
- University training is available
- Inequity in promotions between labs; standards are vague and ambiguous
- Stuff already on books - not used; inequity over ORD (Athens satisfied w/current status career track model)
- Management plays major role in promotion and development
- Training/retraining - selection criteria; no reevaluation of policy since reorganization
- Selection criteria for training opportunity unclear; long-term training unclear for GS11 and up; OPM decision?
- Management unaware or not priority; lack of orientation
- Reorganization leads to skill mismatch; some specific (more) or some broader
- Not necessary mentoring; money is available for programs; communication of what is available is not there, no clear policy
- Career development is responsibility of employee and supervisor
- Managerial culture is not supportive of advancing staff
- Support career tracks are not being used - are blocked
- Career development to 14/15 is limited due to ceiling limits - science/admin should not be combined
- Lack of flexibility to back fill due to attrition
- Branch chiefs are not 15, should be (throughout ORD)
- No track for experts (QA, computer, etc.) environmental specialist
- No procedure to promote to 16 as a bench scientist (have to go into management)
- Inconsistent promotion process and standards between labs and Headquarters
- Inconsistent definitions of roles (team leader, PI, technicians)
- Career development at all levels is limited
- Different criteria for managers (increased responsibility, vulnerability)
- Jobs are perceived as tailor-made for a specific individual and therefore do not apply
- Promotions limited due to increased responsibility to do non-science work.
- Team leaders don't get extra credit for their leadership, team members don't get credit for their work if they are not the P.I. or senior author
- Limited training opportunity for new skills development
- Development should be a life-long process not stop at any level
- Insufficient information about training
- Lip service on IDP's
- 10% of industry budget on training - ORD much less
- Inconsistent application of the research grade evaluation
- Too few travel $, stifles collaboration
- Insufficient information on career pathways and criteria
- Need management endorsement to be peer reviewed
- No competitive career ladders for scientists and administrative
- EPA ceiling abrogates the panel process for research careers
- No mentoring or guidance on careers
- Managers and scientists burn out and return to bench - do they retain grade and get retrained?

- No career planning office/officer/program
- The way money is applied to training and development
- ORD deficient in communicating advancement opportunities and an imbalance of applying resources at various sites

Imbalance of resources devoted to career development and advancement in ORD

IMPACT
- Inequity of promotions
- Negative impact on recruitment of quality scientists
- Low morale
- People dissatisfied - tune out or leave - seek other opportunities
- Inefficient work and decreased productivity
- Internal jealousy
- Technical skills stay static - loss of quality science and ORD's stature

The current state leads to lowered morale, productivity, satisfaction, and connectivity.

DESIRED STATE
- A revised performance appraisal system
- Mentoring program available
- Adequate travel $
- Management commitment to staff career development
- Well defined airing strategy and management plan
- Improve overall ORD science
- "Truth" in position descriptions
- Staff has a complete picture of opportunities for training and advancement
- Better alignment of personnel skills with organizational needs
- Flexibility of hiring at all levels with a stated long-term hiring strategy

A well communicated and fair approach to career development based upon individual needs as they relate to the overall improvement of ORD science.

BOUNDS
- Money for career development not geographically consistent
- Travel dollar limitations
- Lack of attention ORD pays to the issue
- Training must be related to mission
- Peer panel review for GS 14 and 15
- OPM standards for specific grades
- Competing demands limit long-term training ("Never a good time")

MEASURES
- ORD survey: increased morale over time (fairness)
- Closure on IDP's
- Increased peer recognition and credentialing
- Better science with greater
- Increased solicitation of advice and technical assistance from outside ORD
- Promotion process expedited
- Increase in % workforce receiving training toward professional development

ORD IMPROVEMENT OPPORTUNITY FOLLOW UP PLAN

CURRENT STATE: *State the problem succinctly.* Conduct of research is hampered by the amount of red tape required to carry out day to day operations.

IMPACT: *How does this affect your organization?* Scientists spend increasing amounts of time on paperwork, reducing productivity, effectiveness and morale.

DESIRED STATE: *What is the goal?* Paperwork is cut to the bone. Scientists are free to do science. Adequate secretarial and administrative staff take care of the paperwork

BARRIERS TO DESIRED STATE: *What obstacles do you foresee in reaching the desired state?* 1) FTE ceiling is inadequate for science and administrative positions; 2) Federal regulations on contracts and assistance management; 3) Restrictions on Delegations of Authority to appropriate levels

ORD Contact for reporting progress/obstacles: *Person at ORD level knowledgeable of the area and interested in real change*

Lab Contact for reporting progress/obstacles: *Person at lab level knowledgeable of the area and interested in real change--consider those who could not attend the workshop*

Timeline for Action Items: ■ ORD level responsibility ● Lab level responsibility

Times given for example only -- come up with your own-- Be realistic - assign responsibility

1 week out	Each Division Director nominates 2 people for Lab-wide workgroup, possibly one who did and one who did not go to Williamsburg to work with Lab contact. Management Deputy designates representative.
2 weeks out	Red Tape Workgroup meets with Management Deputy, selects chairperson, sets schedule for periodic meetings
■ 3 weeks out	*What do you need from ORD? How do you want to structure ORD-Lab interactions?*
3 weeks out	Workgroup solicits comments from interested persons
■ 4 weeks out	Workgroup reports on progess to Management Deputy, ORD contact
■ 5 weeks out	ORD contact reports on ORD commitments
6 weeks out	Workgroup sends activity report to all employees
7 weeks out	Workgroup presents findings and recommendations to Management Deputy
7 weeks out	Management Deputy presents findings and recommendations to Lab Director, gains concurrence
■ 8 weeks out	Workgroup and Management Deputy presents findings and recommendations with ORD implications to ORD contact
9 weeks out	Recommendations are implemented by Management Deputy
12 weeks out	Poll staff for effects of change at their level

MILESTONES FOR GAUGING PROGRESS: *Indicators that progess is being made*
Workgroups established
Real Paperwork requirements vs. Institutional Practices identified
Delegations of Authority amended
Standard Operating Procedures revised to reflect new authorities

REPORTING: *How do you communicated effectively and in a timely fashion?*
In addition to quarterly reports, updates provided to all parties as decisions are reached.

DEALING WITH OPPOSITION:

Source of Opposition:	*Whose turf is threatened?*
Legitimacy of Concerns:	*Are concerns real? Or perceived?*
Related Issues:	*How do your needs and proposed changes impact other areas?*
Perspective of Others:	*Get buy in all around early in the process*

Use Force-field Analysis to anticipate other sources opposition

ACCOUNTABILITY: *Who is accountable for this issue?*

From: asolomon@oimb-nt.uoregon.edu
Comments: Authenticated sender is <asolomon@oimb-nt.uoregon.edu>
To: all@mail
Date: Fri, 6 Dec 1996 15:17:05 +0000
Mime-Version: 1.0
Subject: ORD meeting review
Reply To: asolomon@oimb.uoregon.edu
Priority: normal

3

MEETING REVIEW: IMPRESSIONS FROM THE WILLIAMSBURG ORD IMPROVEMENT WORKSHOP

THE BOTTOM LINE(S):

Having just finished the First ORD Workshop, I wanted to put down my subjective impressions and understandings of what we did there and what implications I perceive for WED and our individual p
rofessional activities. These are not meant to be comprehensive, but rather, to select those components and activities which were most stimulating to me. You may want to compare items you find of int
erest in this letter to impressions by other WED attendees (Michael Cairns, Ray Shimabuku, Pat Hawk, Janet Lamberson and Tom Murphy), or to ask them about things that are obviously missing from this report.

You also can expect to soon receive from that meeting the objective outputs in the form of memos, meeting descriptions, institutional goals, and so on. You will be seeing much more than perhaps you care to, including long lists of word-ideas, one-line concepts, several "overarching issues" defined at length if not depth. My overall impression of the meeting results is much more positive tha
n my expectation had been, a view repeated by most (but not all) people I talked to there on the last day. In fact, I am squarely optimistic that people from Huggett through Reider will implement as much of the meeting proposals as they can, which will be significantly more than they thought they could when the meeting began.

OVERVIEW

The meeting was defined as being aimed at changing ORD practices and procedures in order to produce better Science (capital S intended). More specifically, it appeared to turn out to function as a means to apply the concerns reflected in the Survey to improve ORD, so that the organization could attain more of the high ideals described in the Strategic Plan. The meeting opened with an aftern
oon orchestrated by a motivational speaker, which was devoted to opening people to thinking constructively about change in ORD. The second day was aimed at defining ORD problems based in part on the Survey, and at using the group's specific worries to focus the plethora of problems down to a few overarching issues. The third day was used to focus the energy of the group on the potential solution
s, and the fourth, to documenting on paper how solutions to each issue could be implemented in the individual labs.

Throughout, I found the meeting was amazingly well planned and carefully executed, based on my 27 annual ESA meetings, and on countless others I have attended or myself organized. There were alw
ays working microphones and overhead projectors, enough flip charts, rooms correctly sized for the groups meeting there, facilitators well prepared and uniformly focussed on the product they needed t
o extract from us, and so on (for details on how different it may have looked to facilitators, check with Pat Hawk, who was one). The people who were needed to summarize results of each activity sta
ge were there in adequate numbers, and produced accurate summaries from tens of scrawled sheets. Much of headquarters staff was there, typing the day's results until

late at night, while other organi
zers were working on the day's results or the next day's activities.
Great thought and preparation had been applied to "capturing" the intermediate and final products of the meeting, through regular
note taking and retyping, selection of "historians" at each stage,
and so on. In short, the meeting was prepared and implemented as though the explicit goals were also the true goals! If it was desig
ned to be just the rubber stamp to the Strategic Plan that many
people expected, it could have been done much more easily (and cheaply) and still been masked as the ORD improvement meeting it was bil
led to be.

ORGANIZATION

I think we must understand meeting organization to understand
the nature of what did (and did not nor will not) come out of the meeting. The meeting appeared to have been professionally organize
d to specifically reduce to a working few, the diverse and numerous
agendas and ideas of ALL the assembled multitude. By professionally, I mean that consultants were probably hired (for big bucks) wh
o were known to be experts at creating approaches for specific goals.
The obvious goal here was making sure that everyone had a finger (and, I suppose, ownership) in the activities taking place at ev
ery stage in the evolution of the final set of action plans.

At each stage, the 205 attendees were divided into groups of 7
or 8. Each group spent half an hour or more with the help of a facilitator to get the ideas out on the table, and some additional
time to reduce those ideas to a few which each table could agree
upon. In turn, the ideas of each table were melded with similar ideas from other tables, to form a few ideas for the group to evaluate
in plenary. Then, those few phrases, or keywords were further
distilled to form a very few statements. The advantage of this approach was obvious: everyone could see that their ideas were not only h
eard, but were woven into the fabric of the outcomes (rather than
being heard and ignored as most had expected). The disadvantage also became obvious when we viewed the first product of our analysis
of ORD deficiencies. The rich variety and logic that underlay the
many statements, few phrases and fewer keywords had been lost by the time they were woven into the final statements. The result is th
e submerging into "overarching issues" of many of the specific
concerns and deficiencies that we each have noted singly, in groups or universally. The people who were at the meeting know where many o
f those items are subsumed, but it may be difficult if not impossible
to drag them out of the meeting products.

THE PLAY

The meeting had four essential parts: initial exercises to
loosen us up to interacting with each other; defining the problems (framing the issues); defining the required responses (framing the a
nswers); and, implementing the solutions (documenting the
commitments).

In addition, there was an "amnesty box" which was to bring up
issues that people thought were too hot to handle in public, but which were extracted to be entered into the mix. I put in the anon
ymous questions and comments of those at Corvallis who talked to, or
emailed me, regarding their concerns. However, inputs to this box had no apparent role in the proceedings although they were duly
typed up and distributed on the second and fourth day of the meeting.

Also, to keep us from focussing too long on negative aspects of
ORD, the organizers ended the first day with a cash bar and horse-duvers, surrounded by posters of ORD accomplishments. On the fa

ce of it, much of this appeared to be propaganda, and it certainly
was not as carefully prepared as the rest of the meeting: WED had three posters, including one on
somewhat-dated ozone research resu
lts, one on our application of Forest Service's Ecoregions
classification, and one on our coop with the Harvard birders. Yet, the situation also served as a
means to induce people to talk about what
they DID think about that was good in their professional lives, and
to consider the worthwhile accomplishments of ORD. This, I think, put many in an optimistic mood for
the analyses the next day, per
haps not coincidentally.

THE MIND-BENDING

This was not perfectly aimed, but it appeared to hit the mark all
the same. The speaker was an expert on responses of corporations to rapid change. Unfortunately, his
message was aimed at respons
es to corporate downsizing (something we have stopped worrying as
much about since the Congress backed off of their threats to downsize EPA) and to how managers can
classify, then manipulate, the peo
ple who were leaving and those who remained after the downsizing.

However, between parts of the lecture, there were exercises in
which individuals at the tables of 7-8 (carefully mixed) strangers tried various activities, all aimed
at breaking the ice among th
em, at which the activities were successful. The initial exercise was
the most effective, I think: each table had to come up with one word that best described their
attitude toward ORD. With all 8 pe
ople working at finding the most appropriate word, the politics were
out on the table in about 30 seconds. Luckily, the politics at our table were fairly similar, and we
agreed that the most optimist
ic word was "disenfranchised." Some were similarly negative toward
ORD ("abandoned," "undervalued," "disconnected") and others, more guarded or positive ("challenged,"
"anticipating," "hopeful"). Not
surprisingly, the latter were primarily found at tables where lab
directors and similar officials sat.

FRAMING THE ISSUES

To present the flavor of the meeting, I wrote the following with
more detail than you may want to review; if so, skip liberally.

Framing the issues began with a morning session in which
individuals at each of the 25 tables dredged up their favorite complaints (requested to be those which
cut across ORD, which produce near
-term success, and which are measurable in some way). Each person
wrote those two items on post-its, talked to others in the room about the items, then came back to the
table to discuss the issues. O
f the 16 or so issues at each table, 6-8 were chosen as those agreed
upon. After the 6-8 X 25 tables-worth of issues were posted around the room on big sheets (with some
being combined as being very
similar), people then were given 3 colored sticky tags to use to vote
for the most important. From among these issues were "voted" the most important, overarching issues.
Hence, by noon, 400 issues
(probably actually closer to 300, considering real duplications) were
whittled down to 10 or 15, with most people still feeling a sense of ownership.

The afternoon was spent further winnowing and then framing these
issues. While the group was off lunching, the facilitators and staff counted the votes and printed
the lists of issues and one-l
iners encompassed within each of the ten issues selected. On our
return, we were divided into four rooms of about 50 people each, told to gather under a specific issue
banner displayed on the walls i
n which we were most interested, and to and discuss the issue. Next,
one person was selected to try to convince the group why their issue was the most important, and the
group then voted again on the
five most important of these 10 issues. The 5 issues, as you will

learn in more detail, were (1) overwhelming red tape, (2) need for sponsorship of ORD personnel advancement, (3) poor communications up, down and across the organization, (4) lack of integration of science in ORD planning, and (5) inadequate infrastructure and resources to do the science required.

The rest of the afternoon was spent rotating from one "issue table" to another, framing the issue. Framing was defined as (1) characterizing the current problem, (2) the effects of the problem, (3) the nature of the desired state and (4) the barriers to complete solution of the problem.

By the end of the day, the issues had been analyzed by five groups in each of four different rooms, with the results subsequently combined and reduced further after the groups completed their wor k. The evening was spent by the attendees, listening to cute observations, songs and poems about Bob, Joe and Henry, with an early adjournment by many when there was a fake bomb-threat.

FRAMING THE ANSWERS

The next day of framing answers was much like the previous one involving framing the questions. This time, however, the four rooms consisted not of carefully-assembled mixes, but of managers (1) , scientists (2) and other staff (1). The goal was determine how to solve the five overarching issues resulting from issue framing activities. Again, the ideas of many were winnowed down to a few, an d these combined with the winnowed-down ideas from the other rooms. In this case, the solutions were defined by describing the what/when/how of the step to be taken, defining measures of success, and the follow-up actions to be taken.

DOCUMENTING THE COMMITMENTS

The final morning was spent in groups consisting of personnel from the three laboratories and two centers. The tables of about 8 people were again formed to discuss how the answers could be appl ied in, in our case, NHEERL. This exercise again winnowed the many down to a few. The presentation to the plenary of these individual solutions and commitments to help the labs was followed by a few minutes in which individuals described how they were going to implement the results themselves. Bob Huggett gave a fine speech on how Henry and Joe would be held accountable in their CJE's, Henry and Joe allowed as how this was what they had been seeking for ages and they would leave no tern unstoned in implementing the proposals, the directors of the Labs and Centers each discussed how they wou ld implement the results (I cannot seem to find my notes on what Larry Reiter said, but it was all reasonable stuff and should be available soon), and individuals "at random" gave testimonials. In so me ways, it ended just in time, as people's expressed commitments began taking on a vague similarity to those in an old-fashioned gospel tent meetings where the participants become continuously more enthusiastic about witnessing for their deity (I told you this was my subjective opinion; please don't be offended).

THE CONCLUSION

This was a great meeting whose worth should not be minimized. For valuation sake, one can subdivide it into two components: the meeting itself, and subsequent application of the results of the m eeting. It seemed to me that the meeting itself justified most if not all its cost. First, it was a great opportunity by participants to smooze with people in the organization with whom they rarely g et the opportunity for informal communication. The famous gargoyles of our lives turn out to be human, many of whom are attempting to do THEIR jobs as well as possible, too. Second, it was an opportu nity (which many took) to present and detail their difficulties in

doing the job they are paid to do, to the headquarters and RTP powerpeople, in a context that demanded not only listening by hdqtrs
and rtp, but HEARING the problems. Third, in working closely with
many different ORD people to assemble and formulate the issues and solutions, the participants got to know many others up and down th
e management chain, and most began to perceive the almost universal
desire by those individuals to do a decent job for a day's pay. If we ran the meeting every year, and eventually all ORD personnel
attended, it would be worth the effort that went into it.

Yet, the second component, the subsequent application, may yet
prove to be even more valuable than the first. After the religious fervor has worn off the participants, there is still the written
commitments of individuals throughout the organization to work
TOGETHER to better the operation; not alone, but in concert with others who are waiting for the products now. It remains to be seen how
much of the completed agenda will be implemented, but make no
mistake, this was not an empty or hollow exercise. Despite my famous naivet, about this organization, I firmly believe the implementatio
n of the meeting results will be a significant increase in the
effectiveness of our professional efforts, and hence, of our satisfaction with our jobs at WED. But, you don't have to believe me - watc
h for the documentation of the promises and the subsequent results
during this next year.

Thanks for reading this far. Your comments and discussion are
MOST welcome.

Cheers,

AL