



CIAQ

Interagency Committee on Indoor Air Quality

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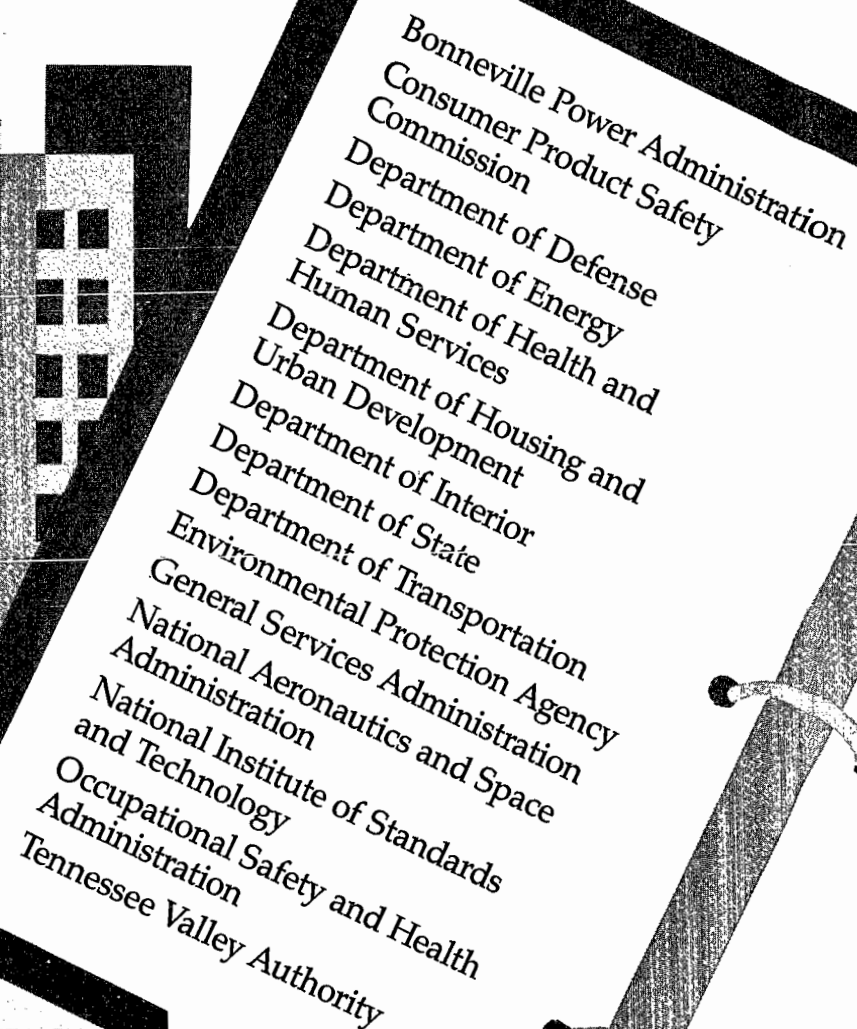

June 1995

Current Federal Indoor Air Quality Activities

Prepared by the:

Indoor Air Division

United States Environmental Protection Agency



Bonneville Power Administration
Consumer Product Safety
Commission
Department of Defense
Department of Energy
Department of Health and
Human Services
Department of Housing and
Urban Development
Department of Interior
Department of State
Department of Transportation
Environmental Protection Agency
General Services Administration
National Aeronautics and Space
Administration
National Institute of Standards
and Technology
Occupational Safety and Health
Administration
Tennessee Valley Authority

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ABOUT THIS PUBLICATION

In 1988, EPA started to periodically compile and publish a list of the indoor air quality activities currently being undertaken by Federal agencies. This publication is the 1995 update of that list.

Title IV of the Superfund Amendments and Reauthorization Act (SARA) of 1986 requires EPA to establish a committee comprised of the Federal agencies concerned with various aspects of indoor air quality (IAQ) and to coordinate Federal IAQ activities. The Interagency Committee on Indoor Air Quality (CIAQ) functions as the primary Federal coordination mechanism for indoor air.

Through the CIAQ, each Federal agency is asked to supply an update of its present and ongoing research, policy, and program development activities in the field of indoor air quality. The responses to that request make up the content of this publication. The primary purpose of compiling this information is to provide individuals in the Federal community with a useful tool for coordinating their activities at the project level. This publication has proven to be useful to many individuals and organizations outside the Federal government as well.

For each agency, the major indoor air activities are identified, along with a brief description of the activity, its current status and/or projected completion date, the agency/office responsible, and a contact name and phone number. In addition, this update of the list also includes a section listing the indoor air related publications for the public that are available from Federal agencies.

The information for this chart was compiled by the Indoor Air Division, Office of Air and Radiation (6607-J), U.S. Environmental Protection Agency, 401 M Street S.W., Washington, D.C. 20460.

PLEASE NOTE:

THE INFORMATION CONTAINED IN THIS PUBLICATION WAS CURRENT AS OF JUNE 1995. HOWEVER, ALL INFORMATION SHOULD BE CONSIDERED SUBJECT TO CHANGE WITHOUT NOTICE. FOR THE MOST CURRENT INFORMATION, INDIVIDUALS LISTED FOR EACH PROJECT SHOULD BE CONTACTED DIRECTLY.

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GLOSSARY OF NAMES AND ACRONYMS OF FEDERAL GOVERNMENT AGENCIES/OFFICES (CIAQ MEMBERS)

CIAQ	Interagency Committee on Indoor Air Quality	OW	Office of Water
		OGWDW	Office of Ground Water and Drinking Water
CIAQ Co-Chair Agencies:		OPPE	Office of Policy and Program Evaluation
EPA	U.S. ENVIRONMENTAL PROTECTION AGENCY	OPA	Office of Policy Analysis
OA	Office of Administrator	ORME	Office of Regulatory Management Evaluation
		RID	Regulatory Integration Division
OARM	Office of Administration and Resource Management	PIC	Public Information Center
SHEMD	Safety, Health, and Environmental Management Division	CPSC	U.S. CONSUMER PRODUCT SAFETY COMMISSION
		DOE	U.S. DEPARTMENT OF ENERGY
OAR	Office of Air and Radiation		
IAD	Indoor Air Division	PE	Policy, Planning, and Analysis
ORIA	Office of Radiation and Indoor Air	QEA	Office of Environmental Analysis
		EE	Energy Efficiency Conservation and Renewable Energy
ORD	Office of Research and Development	IAQIV	Indoor Air Quality Infiltration and Ventilation
NCEA	National Center for Environmental Assessment	OBt	Office of Building Technologies
NERL	National Exposure Research Laboratory		
NHEERL	National Health and Environmental Effects Research Laboratory	ER	Energy Research
NRMRL	National Risk Management Research Laboratory	CHER	Office of Health and Environmental Research
ORSI	Office of Research and Science Integration	ORAW	Office of Remedial Action and Waste
		LBL	Lawrence Berkeley Laboratory
OPPTS	Office of Prevention, Pesticides and Toxic Substances	NREL	National Renewable Energy Lab
OPPT	Office of Pollution Prevention and Toxics	NE	Nuclear Energy
OPP	Office of Pesticide Programs	DHHS	U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

GLOSSARY OF NAMES AND ACRONYMS OF FEDERAL GOVERNMENT AGENCIES/OFFICES (continued)
(CIAQ MEMBERS)

CDC	Centers for Disease Control and Prevention	NIST	National Institute of Standards and Technology (formerly the National Bureau of Standards)
NCEH	National Center for Environmental Health		
NCCDPHP	National Center for Chronic Disease Prevention and Health Promotion	DOD	U.S. DEPARTMENT OF DEFENSE
NIOSH	National Institute for Occupational Safety and Health	DOA	Department of the Army
OSH	Office on Smoking and Health	DON	Department of the Navy
NCHS	National Center for Health Statistics	USAF	U.S. Air Force
		OEHL	Occupational and Environmental Health Laboratory
NIH	National Institutes of Health		
NIEHS	National Institute of Environmental Health Sciences	DOI	U.S. DEPARTMENT OF INTERIOR
NIAID	National Institute of Allergy and Infectious Diseases	NPS	National Park Service
NCI	National Cancer Institute	USGS	U.S. Geological Survey
NHLBI	National Heart, Lung and Blood Institute	DOS	U.S. DEPARTMENT OF STATE
NIDR	National Institute of Dental Research	DOT	U.S. DEPARTMENT OF TRANSPORTATION
HRSA	Health Resources Services Administration	FAA	Federal Aviation Administration
DFOH	Division of Federal Occupational Health	OST	Office of the Secretary of Transportation
ATSDR	Agency for Toxic Substances and Disease Registry	GSA	GENERAL SERVICES ADMINISTRATION
		NCR	National Capital Region
DOL	U.S. DEPARTMENT OF LABOR	HUD	U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
OSHA	Occupational Safety and Health Administration		
Other Federal Agencies:		NASA	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
BPA	BONNEVILLE POWER ADMINISTRATION	TVA	TENNESSEE VALLEY AUTHORITY
DOC	U.S. DEPARTMENT OF COMMERCE		

OTHER ACRONYMS/ABBREVIATIONS

AIA	American Institute of Architects
ALA	American Lung Association
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASTM	American Society for Testing and Materials
BAQ	Building Air Quality
CO	Carbon Monoxide
CEC	Commission of European Communities
CIRRPC	Committee for Interagency Radiation Research and Policy Coordination
ETS	Environmental Tobacco Smoke (Secondhand Smoke)
FDA	Food and Drug Administration
FHA	Federal Housing Administration
FRRP	Florida Radon Research Program
HSIA	Halogenated Solvents Industry Association
HVAC	Heating, Ventilating, and Air Conditioning
IAP	Indoor Air Pollution
IAQ	Indoor Air Quality
IAQIV	Indoor Air Quality and Infiltration/Ventilation
IRAA	Indoor Radon Abatement Act
MCLs	Maximum Contaminant Levels
MOU	Memorandum of Understanding
NEA	National Education Association
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NHANES III	Third National Health and Nutrition Examination Survey
NO₂	Nitrogen Dioxide
NPTN	National Pesticide Telecommunications Network
NTIS	National Technical Information Service
PAHs	Polycyclic Aromatic Hydrocarbons
pCi/l	Picocuries per liter

OTHER ACRONYMS/ABBREVIATIONS (continued)

PTA	Parents and Teachers Association
RH	Relative Humidity
SARA	Superfund Amendments and Reauthorization Act of 1986
SBS	Sick Building Syndrome
SVOCs	Semivolatile Organic Chemicals
TEAM	Total Exposure Assessment Methodology
UL	Underwriters' Laboratory
VOCs	Volatile Organic Chemicals

MEMBER AGENCIES

Bonneville Power Administration

Office of Energy Resources
PO Box 3621-RAE
Portland, OR 97208-3621

Consumer Product Safety Commission

4330 East West Hwy
Bethesda, MD 20814

Department of Defense

The Pentagon
Washington, DC 20301

General Services Administration

18th & F Sts, NW
PMSE, Room 4312
Washington, DC 20405

National Aeronautics and Space Administration

600 Independence Ave, SW
Washington, DC 20546

National Institute of Standards & Technology

Building Environment Division
Building 226, Room B306
Gaithersburg, MD 20899

Tennessee Valley Authority

Environmental Quality Staff
400 Summit Hill Drive
Knoxville, TN 37902

U.S. Department of Energy

1000 Independence Ave., SW
Washington, DC 20585

U.S. Department of Health and Human Services

National Institute for Occupational Safety and Health
4676 Columbia Pkwy (R-12)
Cincinnati, OH 45226-1988

U.S. Department of Housing and Urban Development

451 7th St., SW
Washington, DC 20410-6000

U.S. Department of Interior

Loss Control Management
National Park Service
Box 37127
Washington, DC 20013-7127

U.S. Department of Labor

Occupational Safety and Health Administration
200 Constitution Ave., NW
Washington, DC 20210

U.S. Department of State

Office of Medical Sciences
2201 C St., NW, Room 3245
Washington, DC 20520-2256

U.S. Department of Transportation

Office of the Secretary
400 7th St., SW
Washington, DC 20590

U.S. Environmental Protection Agency

401 M St., SW
Washington, DC 20460

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INDOOR AIR ACTIVITIES WITHIN THE U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CONSOLIDATED INDOOR AIR ACTIVITIES				
Overview and Coordination				
CIAQ Co-chair	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	EPA/OAR/ORIA/IAD	Bob Axelrad (202) 233-9030
Policy Development				
Health Effects of Indoor Allergens	Provide funding to the National Academy of Sciences (NAS) to prepare a committee report on the health effects of allergens in indoor air.	Available from Institute of Medicine, 1-800-624-6242, (202-334-3313)	EPA/OAR/ORIA/IAD	Richard Leukroth (202) 233-9047
Buildings Program				
Building Assessment Survey and Evaluation (BASE) Program for Public and Commercial Office Buildings	Cross-sectional study to develop standardized protocol and collect data on HVAC and building characteristics, environmental measurements and occupant perceptions in public and commercial office buildings. Data will form baseline to assist in determining and prioritizing indoor air research needs and actions.	Protocol and pilot testing completed 11/93. Thirteen building studies completed during 1994. Sixteen buildings being studied in 1995. Program description and overview of data findings to be made available on EPA's World Wide Web internet server Earth1, 8/95.	EPA/OAR/ORIA/IAD	Susan Womble (202) 233-9057
Introduction to IAQ and New Home Construction	Provide guidance on techniques to prevent IAQ problems in the construction of new homes.	Draft guide anticipated Summer 1995.	EPA/OAR/ORIA/IAD	Susan Dolgin (202) 233-9048
IAQ Tools for Schools Action Kit	Develop model IAQ management plan for schools covering prevention and problem solving.	Release scheduled for: September 1995.	EPA/OAR/ORIA/IAD	Bob Thompson (202) 233-9056
Private Sector Survey	Identify and characterize private sector firms providing IAQ diagnostic and mitigation services.	Completed.	EPA/OAR/ORIA/IAD	David Mudarri (202) 233-9053

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Cost of IAQ Controls in Commercial Buildings	Assess energy and non-energy costs of controlling indoor air quality.	Series of reports and papers planned Fall 1995.	EPA/OAR/ORIA/IAD	David Mudarri (202) 233-9053
Ventilation and CO ₂	Assess use of CO ₂ to measure ventilation.	Fall 1995.	EPA/OAR/ORIA/IAD	David Mudarri (202) 233-9053
Guidance -- Air Duct Cleaning	Provide technical and policy guidance on air duct cleaning and its impacts on IAQ.	Ongoing.	EPA/OAR/ORIA/IAD	Sandra Eberle (202) 233-9722
Pollutant/Source Program				
Environmental Tobacco Smoke: Respiratory Health Effects of Passive Smoke: Lung Cancer and Other Disorders (w/ORD)	Issue EPA assessment of risk of lung cancer in adults and respiratory symptoms in children from exposure to environmental tobacco smoke.	Completed. Available from IAQ INFO.	EPA/ORD/NCEA	Steve Bayard (202) 260-3984
			EPA/OAR/ORIA/IAD	Bob Axelrad (202) 233-9030
Secondhand Smoke	Outreach for general public on hazards of ETS.	Ongoing.	EPA/OAR/ORIA/IAD	Bill Long (202) 233-9733
Indoor Air Source Characterization Project (w/OPPT)	Characterize and prioritize emissions from materials used indoors and determine their impact on indoor air quality. Take actions, as necessary, to reduce exposures/risks.	Ongoing.	EPA/OAR/ORIA/IAD (joint lead w/OPPT)	Richard Leukroth (202) 233-9047 Christina Cinalli (202) 260-3913
Intergovernmental Program				
Quarterly CIAQ Meetings (w/CPSC, DOE, NIOSH, OSHA)	Share information on public and private sector actions that affect indoor air. Promote coordination of relevant Federal policies and activities.	Quarterly meetings held in January, April, July, and October.	EPA/OAR/ORIA/IAD	Sandra Eberle (202) 233-9722
Federal Indoor Air Quality Activities	Issue publication that describes current Federal IAQ activities for use by government officials and private sector.	Published periodically since 1988. (See publications section for information on availability.)	EPA/OAR/ORIA/IAD	Sandra Eberle (202) 233-9722
NATO-CCMS Pilot Study	Explore and inventory research and risk management strategies of affiliated member countries.	Final report available.	EPA/OAR/ORIA/IAD	Elissa Feldman (202) 233-9316

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Public Information and Outreach Program				
IAQ Information Clearinghouse	Distribute IAQ publications produced by EPA. Provide information on technical and non-technical aspects of IAQ to the general public, all levels of government, and scientific and business communities. Also offers referrals and literature searches.	Ongoing.	EPA/OAR/ORIA/IAD	Susan Dolgin (202) 233-9048 IAQ INFO (800) 438-4318
USDA (Cooperative Extension System)	Increase knowledge and understanding of indoor air quality issues by the general public through the Cooperative Extension System (CES).	Project initiated 4/95.	EPA/OAR/ORIA/IAD	John Guevin (202) 233-9055
Schools Guidance/Ventilation Video	Produce 30 minute video that provides basics on ventilation, and step-by-step details on how to properly operate and maintain ventilation systems.	Start: Spring 1995. Anticipated completion: Fall 1995.	EPA/OAR/ORIA/IAD	John Guevin (202) 233-9055
<i>Building Air Quality Training</i>	Deliver the 8 hour training course designed specifically to address the needs of building owners and facility/building managers to target audience and to others working with indoor air quality in commercial buildings. Course introduces prevention and management of indoor air quality problems and is a companion to <i>Building Air Quality: A Guide for Building Owners and Facility Managers</i> .	Course deliveries continue through EPA Regional Training Centers. The "off-the-shelf" BAQ Trainer's Manual can be purchased from the National Audiovisual Center for in-house delivery.	EPA/OAR/ORIA/IAD	John Guevin (202) 233-9055
Stationary Engineer Indoor Air Quality Training	Implement an IAQ training curriculum (training manual and student workbook) for stationary engineers. The comprehensive curriculum serves as a practical guide for instructors and workers on IAQ issues and, in addition to its reference function, will be designed to provide hands-on experience.	Course developed by International Union of Operating Engineers and included in its national curriculum. Completed: Summer 1994. Course deliveries: Ongoing.	EPA/OAR/ORIA/IAD	John Guevin (202) 233-9055

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Basic Hands-On IAQ Measurement/Diagnostics Workshop	8-hour "hands-on" measurement and diagnostic techniques training course.	Development underway. Expected completion: Fall 1995.	EPA/OAR/ORIA/IAD	Sandra Eberle (202) 233-9722
IAQ Orientation Training	Deliver 2½-day introductory IAQ course targeted to Federal, State, and local government employees as well as facility managers in public and private sector. Includes health effects, building dynamics, and principles of diagnosis and mitigation.	Being delivered nationwide at EPA Regional Training Centers and offices. Schedule available through IAQ INFO.	EPA/OAR/ORIA/IAD	Sandra Eberle (202) 233-9722
Building Air Quality Implementation Guidance	Ensure good indoor air quality through consensus-based efforts with owners, managers, and occupants of public and commercial buildings. Efforts include voluntary, incentive-based initiatives derived from EPA's <i>Building Air Quality: A Guide for Building Owners and Facility Owners</i> .	Program development discussions with stakeholders ongoing.	EPA/OAR/ORIA/IAD	Julie Rosenberg (202) 233-9154
Health Professional Guide to Indoor Air Pollution (w/CPSC, ALA, AMA)	Provide guidance to health care professionals about major indoor air pollutants, their sources and health effects. Also provide guidance on how to diagnose suspected IAQ-related complaints.	Completed. See publication.	EPA/OAR/ORIA/IAD	Marion Herz (202) 233-9733
Headquarters Coordination with Regional IAQ Contacts	Provide coordination and liaison between Regional Indoor Air contacts and the Indoor Air Division.	Ongoing.	EPA/OAR/ORIA/IAD	Tracy Washington Enger (202) 233-9484
EPA Representative to National Asthma Education and Prevention Program (NAEPP) Coordinating Committee	Represent EPA in NAEPP Federal liaison group; coordinate EPA's asthma activities with NAEPP and other Federal programs.	Ongoing.	EPA/OAR/IAD	Sandra Eberle (202) 233-9722
Workgroups Grant to American Lung Association for Community-based Asthma Control in Cooperation with NHLBI, Zeta Phi Beta Sorority, and Fisons Pharmaceuticals	Train volunteers to deliver Open Airways for Schools curriculum in at-risk communities, and encourage comprehensive approach to asthma management, including control of indoor pollutant "triggers."	Workshops have been delivered in Washington, DC, Houston, TX, St. Louis, MO, and Los Angeles, CA. 10 additional workshops to be scheduled.	EPA/OAR/IAD	Sandra Eberle (202) 233-9722

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Workshop on Effects of Ambient and Indoor Air Pollution on Asthma	Discuss current research on health effects and control strategies for pollutants that affect asthmatics	Two workshops for school nurses scheduled for Fall 1995.	EPA Region 1	Mary Beth Smuts (617) 565-3232
Secondhand Smoke Outreach-Risks to Children	With the Pennsylvania chapter of the American Academy of Pediatrics, develop, disseminate, and promote use of educational materials on risks of secondhand smoke exposure to infants, toddlers, and preschoolers. Focus on childhood education and day care programs.	Work to begin: Fall 1995.	EPA/OAR/ORIA/IAD	Bill Long (202) 233-9733
Secondhand Smoke Outreach-African-American Communities	The American Lung Association's African-American church-based smoking cessation project will add a secondhand smoke component to their education efforts with 32 African-American churches.	Work to begin: Fall 1995.	EPA/OAR/ORIA/IAD	Bill Long (202) 233-9733
Secondhand Smoke- Hispanic-American Radio Campaign	The Hispanic Radio Network will broadcast Spanish language programming on the risks of secondhand smoke.	Work to begin: Fall 1995.	EPA/OAR/ORIA/IAD	Bill Long (202) 233-9733

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Region 1 Program	Provide outreach and education on indoor air topics.	Coordination and support of State Indoor air programs through the New England IAQ Workgroup; formation of the IAQ Training and Resource Center at the Harvard School of Public Health to deliver EPA-developed courses and Harvard-developed advanced courses in IAQ; public outreach, which includes workshops, displays and articles in an IAQ update; program assistance to: ALA of RI to support BAQ training for public and private building managers; ALA of Maine to fund development of model school maintenance plans; ConnCOSH to support workshop on BAQ for employers and employees; Tufts University to disseminate ETS information and IAQ Tools for Schools. Additional program assistance promoting IAQ and pollution prevention to: MA Office of Technical Assistance for school audits and VT Department of Health and University of VT to support a joint spring conference on Healthy Air in VT schools.	EPA Region 1 (CT, MA, ME, NH, RI, VT)	Mary Beth Smuts (617) 565-3232 Eugene Benoit (617) 565-9078 Benoit.Eugene@ EPAMAIL.EPA.GOV Pat Hamlin (617) 565-3729
Region 2 Program	Provide outreach and education on radon and indoor air topics.	Coordination and support of State/Cooperative Partner activities. Target key players for IAQ Tools for Schools and Building Air Quality guidance implementation participation. Offer training targeted to these audiences including one day hands-on training, and workshops for State-wide school conferences.	EPA Region 2 (NJ, NY, PR, Virgin Islands)	Lorraine Koehler (212) 637-4005 Jean Feola (212) 637-4025 Rachel Chaput (212) 637-4007

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Region 3 Program	Provide outreach and education on indoor air topics.	Formation of Indoor Air Quality Training Consortium consisting of Eastern Regional Radon Training Center, U.S. Public Health Service, Mid-Atlantic Environmental Hygiene Resource Center, and U.S. EPA Regions 2 and 3.	EPA Region 3 (DE, MD, PA, VA, WV, DC)	Fran Dougherty (215) 597-8322
Region 4 Program	Provide education and outreach on indoor air topics.	Distributes <i>The Inside Story</i> (22 minute video with residential focus). Holds quarterly conference call for state and local government agencies. Schedules training for public officials and others. Promote networking within states, especially Florida, Georgia, North Carolina, and Tennessee. Promote Halloween outreach ("Indoor Air House of Horrors") for media appeal.	EPA Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)	Henry Slack (404) 347-3907 or 3555
Region 5 Program	Provide outreach and education on indoor air topics.	Continue Regional Network Building with State and local government agencies. Outreach, public information, and education on ETS with emphasis on addressing minority groups. Participation in a Regional buildings outreach program and develop IAQ resource base. Initiate Regional workshop on IAQ for public/private organizations. Develop and implement schools outreach and education program in IAQ issues.	EPA Region 5 (IL, IN, MI, MN, OH, WI)	Julie Beckman (312) 886-6063
Region 6 Program	Provide outreach and education on IAQ-related issues, including radon, to Federal, State, and local governments, Indian Nations, the industrial and service communities, scientific organizations, and the general public.	Region-wide network of professionals in IAQ-related issues established; State resource guide for AR to be completed in 1995; translation of brochure "How Healthy is the Air in Your Home" to Spanish language in process; workshops for IAQ Tools for Schools to be announced; call for additional course listings and IAQ activities.	EPA Region 6 (AR, LA, NM, OK, TX)	Carrie Paige (214) 665-7546 Mike Miller (214) 665-7550 Evelyn Daniels (214) 665-7543

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Region 7 Program	Provide outreach and education on indoor air topics.	Coordination and support of State/Tribal/Cooperative Partner activities including IAQ Orientation courses and BAQ workshops. Target key players for IAQ Tools for Schools and Building Air Quality guidance Implementation. Offer training and workshops aimed at these audiences.	EPA Region 7 (IA, KS, MO, NE)	Michael Marshall (913) 551-7604
Region 8 Program	Provide outreach and education on indoor air topics.	Continued support for State and local IAQ programs. Coordination of training and outreach activities on the Building Air Quality guidance and the Tools for Schools program. Other activities include cable TV programming, ALA partnership for IAQ training for various vocational education programs such as cosmetology.	EPA Region 8 (CO, MT, ND, SD, UT, WY)	Patty Walmskirch (303) 293-0976
Region 9 Program	Provide outreach and education on indoor air topics, in conjunction with information on radon and emf.	"IAQ Tools for Schools" outreach and implementation workshops. "Hands-On Measurement and Diagnostics" course, BAQ course. Continuing state IAQ network development, participation and support. Support to ALA of San Francisco/San Mateo for training and workshops, including ETS in English-as-a-second language training. Target key players for Building Air Quality guidance. Respond to public inquiries. Collect and disseminate information on <u>stachybotrys atra</u> and other biocontaminant issues.	EPA Region 9 (AZ, CA, HI, NV, American Samoa, Guam, Trust Territories of the Pacific)	Barbara Spark (415) 744-1132

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Region 10 Program	Provide outreach and education on indoor air topics.	Continuing support for State and local government IAQ Networks. IAQ Orientation scheduled for 10/95 in Boise. BAQ in Seattle, also fall '95. IAQ Orientation and BAQ to be delivered in '96 -- sites as yet undetermined. Continue to work with local and State health departments and environmental agencies to provide Indoor Air Pollution education and outreach. Currently initiating an Indoor Air Pollution/ETS outreach and education program with Tribal Nations FY'95. Work with health departments and school districts to provide distribution and instructional workshops for "Tools for Schools." Continue implementation planning of "Building Air Quality" guidance. Incorporate Environmental Justice/Pollution Prevention/Whole House measures in all outreach and educational encounters. Work with non-profits to encourage the formation of coalitions with community groups for people of color and low-income groups. Support education and outreach efforts to housing projects.	EPA Region 10 (AK, ID, OR, WA)	Brook Madrone (206) 553-2589
IAQ RESEARCH ACTIVITIES Program Management				
Matrix Manager: ORD IAQ Research Program	Identify and coordinate research needed to fill existing information gaps.	Ongoing.	EPA/ORD/ORSI	Kevin Teichman (202) 260-7669
Laboratory Coordinator, EPA IAQ Research Program	Laboratory coordination of EPA Indoor Air Research Program.	Ongoing.	EPA/ORD/NRMRL	Gene Tucker (919) 541-2746 Fax: (919) 541-5485

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Research Coordinator for the Committee on Indoor Air Quality (CIAQ)	Coordinate Federal government research efforts related to IAQ.	Ongoing.	EPA/ORD/ORSI	Kevin Teichman (202) 260-7669
Program Manager: National Health and Environment Effects Research Laboratory's IAQ Research Program	Coordinate the health effects research studies of the indoor air program.	Ongoing.	EPA/ORD/NHEERL	Ila Cote (919) 541-3644
Program Manager: National Risk Management Research Laboratory's IAQ Research Program	Coordinate the emissions testing, modeling, chamber studies, and test-home studies of the indoor air program.	Ongoing.	EPA/ORD/NRMRL	Mike Osborne (919) 541-4113 MOSBORNE@ENGINEER.AEERL.EPA.GOV
Program Manager: National Exposure Research Laboratory's IAQ Research Program	Coordinate EPA IAQ methods development and large building studies research.	Ongoing.	EPA/ORD/NERL	Ross Highsmith (919) 541-7828
Indoor Air Reference Bibliography	Maintain an extensive bibliography of reference materials on indoor air pollution.	Ongoing.	EPA/ORD/NCEA	Beverly Comfort (919) 541-4165
Monitoring				
Low Cost Personal Monitoring Devices for Indoor Air	Develop and evaluate low cost, comfortable personal monitoring and sampling devices that can be worn during normal activities.	Ongoing, with continuous research updates. Passive NO ₂ , O ₃ , and VOCs badges have been developed and field validated. Real-time personal NO ₂ and O ₃ monitors being evaluated. Personal samplers for particles developed and validated. Various technical reports available.	EPA/ORD/NERL	Jim Mulik (919) 541-3067
Monitoring Methods and Devices for Retrieving Airborne Microorganisms	Design and construct an exposure room to develop a variety of monitoring methods and samplers to retrieve airborne microorganisms.	Completed.	EPA/ORD/NERL	Steve Hern (702) 798-2100
Monitoring Support for Epidemiology Study of Asthmatics and Persons with Allergies	Provide monitoring support for a joint University of Arizona/EPA 300-home epidemiology study; assemble data on viable bacteria and fungi to which study participants are exposed.	Completed.	EPA/ORD/NERL	Steve Hern (702) 798-2100

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Portable Humidifiers Study	Evaluate the relationship between water quality used in humidifiers and the impact on indoor particle levels.	Three journal articles published.	EPA/ORD/NERL	Ross Highsmith (919) 541-7828
Sampling Methods for Semivolatile Organic Compounds (SVOCs) in Indoor Air	Evaluate air samples for SVOCs that are suitable in microenvironments. FY 94-97 research includes studies to evaluate field methods for the estimation of indoor and personal exposures to key environmental pollutants for low income and minority populations.	Exposure estimates via conventional sampling methods are being compared to real-time microenvironmental monitor methods.	EPA/ORD/NERL	Nancy Wilson (919) 541-4723
Chemical Characterization of SVOCs in Indoor Air	Characterize polar and non-polar SVOCs in indoor air.	Ongoing. Research studies include estimates of indoor and personal exposures to key environmental pollutants.	EPA/ORD/NERL	Nancy Wilson (919) 541-4723
VOCs in Indoor Exposures from Personal Activities (Field Study)	Identify personal activities which increase exposure to VOCs and other pollutants.	Ongoing. Field studies in a variety of indoor microenvironments have been conducted to characterize the spatial and temporal variability of important VOCs and estimate indoor exposures to VOCs. Numerous publications available.	EPA/ORD/NERL	Andrew Lindstrom (919) 541-4866
Indoor Dispersion/Ventilation Model	Investigate the use of the NIST general indoor air quality model in diagnosing sick buildings.	Ongoing.	EPA/ORD/NERL	Alan Huber (919) 541-1338
Compendium of Indoor Air Quality Measurement Methods	Compile most commonly used IAQ measurement methods for technical guidance documents.	Published: 9/90. Compendium review/update planned in FY 96 with revised compendium scheduled for FY 97.	EPA/ORD/NERL	Ross Highsmith (919) 541-7828

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Methods for Sampling VOCs in Breath	Develop and improve methods for sampling VOCs in breath; investigate VOC uptake and elimination pharmacokinetic parameters.	Ongoing. Innovative whole-air sampling techniques have been developed for measuring VOCs in alveolar breath and relating these levels to indoor air exposures. Various technical reports published. Current research investigating indoor and personal exposures resulting from VOCs in municipal water supplies.	EPA/ORD/NERL	Andrew Lindstrom (919) 541-4866 Joachim Pleil (915) 541-4680
TEAM Study: Particle Study	Characterize indoor and personal particle exposures by size fraction, examine the particle composition and estimate their source.	Monitoring instrument developed and tested. Data collection from 178 homes completed. Data analysis completed. Reports and articles on earlier TEAM studies available. Volume I available from NTIS. Volume II (PAHs) available from California Air Resources Board. Volume III (Data Analysis) to be published, 1995.	EPA/ORD/NERL	Lance Wallace (703) 341-7509 Fax: (703) 341-7575
Indoor Air Study of 10 New Public Buildings	Measure indoor air concentrations of selected VOC's in 10 new non-complaint buildings. Assess emissions from selected common building materials.	Completed. Report available.	EPA/ORD/NERL	Lance Wallace (703) 341-7509
ORD Large Buildings Studies	Longitudinal studies in randomly selected GSA-owned office buildings to be studied one or more times over a 3-5 year period following a standardized protocol. Complements the EPA BASE cross-sectional studies. Additional opportunities for research (new sampler evaluation, building diagnostics, etc.) being explored.	Pilot studies conducted in 1993. Building studies for Fall 1994, Winter 1994-1995, and Spring 1995 seasons completed and under validation. Studies scheduled for Summer 1995 and Winter 1995-1996. Validated data to be available Summer 1995. Various reports available.	EPA/ORD/NERL	Ross Highsmith (919) 541-3121
Analytical Methods for Airborne Microorganisms	Develop and improve analytical methods for characterizing indoor air microbiological aerosols.	Initiated: FY 91.	EPA/ORD/NERL	Al Dufour (513) 684-7218

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Characterization of VOCs Associated with Bioaerosol Contamination	Develop and validate methods for characterizing contribution of VOCs resulting from microbiological contamination.	Initiated: FY 91.	EPA/ORD/NERL	Joachim Pleil (919) 541-4680
Innovative Techniques for Characterizing and Modelling Bioaerosols	Develop real-time measurement techniques to characterize bioaerosol contamination and model growth and dispersion.	Ongoing.	EPA/ORD/NERL	Steve Hern (702) 798-2594
Modelling and Analysis of Exposure to Consumer Products	Evaluate indoor air quality models through sensitivity analysis and comparison with experimental chamber data. Refine and apply models to evaluate the effects of reversible sinks on build-up and removal of indoor air pollutants.	Ongoing. Draft reports on model sensitivity and analysis of sink effects available. Report anticipated: Summer 1993.	EPA/ORD/NERL (co-sponsored by OPTS/OTS)	James Quackenboss (702) 798-2442
Nyland Homes Low Emission Residence Study	Examine IAQ benefits related to the use of low emission building materials and other design and operational features purported to enhance IAQ. Pollutant levels in conventionally built and specifically designed "good IAQ, low energy use" housing units will be compared both before and during occupation.	Initiated: 1992. Pre-occupation phase complete; occupation phase: Summer 1993. Final reports published	EPA/ORD/NERL/Region 8	Andrew Lindstrom (919) 541-4866
Indoor Air Study of Contaminants in New Office Building Containing Low-emitting Furniture and Furnishings	Collect environmental monitoring and related data bearing on IAQ in Washington State's new Natural Resources building.	Initiated: FY 1992. Draft final in review.	EPA/ORD/NRMRL (co-sponsored by OPPT)	Mark Mason (919) 541-4835 Mason.Mark@ EPAMAIL.EPA.GOV Sidney Abel (202) 260-3920

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Washington State SHARPE Building Studies	Characterize selected physical and chemical IAQ parameters in four Washington State Department of Labor SHARPE buildings and relate these data to occupants' perceptions of IAQ. Conduct one small-scale study at the newest of the four buildings to evaluate the impact of building flushouts on particle and volatile organic compound levels.	Completed and technical report published by Washington State Department of Labor.	EPA/ORD/NERL/ Washington State Department of Labor	Ross Highsmith (919) 541-3121 Jim Burt (206) 956-5660
Residential Indoor Air Formaldehyde Testing Program - Pilot Study	Test the study design for collecting formaldehyde monitoring data in a small number of newly constructed single-family test houses to be used in evaluating IAQ model performance.	Monitoring in conventional house initiated; manufactured builder identified; emission testing of composite wood products underway.	EPA/OPPTS/OPPT	Sidney Abel, III (202) 260-3920
Benzene Exposure Assessment Model (BEAM)	Utilize human activity pattern data combined with microenvironmental and ambient (indoor/outdoor) concentrations to estimate population distributions of exposure to benzene and related VOCs.	Ongoing. Interim reports available. PC-version being developed.	EPA/ORD/NERL	Joseph Behar (702) 798-2216
Total Human Exposure Relational Database (THERDbase)	Provide database structures and programs to store and/or estimate and retrieve data on human activity patterns, infiltration rates, and microenvironmental concentrations for various pollutants and media. Use data in total human exposure modelling.	Ongoing.	EPA/ORD/NERL	Joseph Behar (702) 798-2216
Characterizing Indoor Exposures to Pesticides	Characterize spatial and temporal variability of selected pesticides in the indoor environment.	Ongoing. Various papers describing the results of the earlier Non-Occupational Pesticides Exposure Study (NOPES), the Agricultural Health Study (AHS), and other programs characterizing indoor pesticides concentrations and estimating exposures to pesticides are available.	EPA/ORD/NERL	Andy Bond (919) 541-4329

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Lower Rio Grande Valley Environmental Study	Estimate indoor and personal exposures to a variety of inorganic and organic species to include VOCs, SVOCs, and pesticides.	A nine home pilot study was conducted over two seasons to test methodologies and characterize exposures to VOCs, metals, PAHs, and pesticides. Indoor and outdoor measurements were used to estimate inhalation exposures. Pilot field study completed in 1993 with published reports anticipated by 8/95.	EPA/ORD/NERL	Gerry Akland (919) 541-4885
National Human Exposure Assessment Study (NHEXAS)	A multimedia, population-based human exposure study to estimate exposures to metals, VOCs, and pesticides. Estimates based on ambient, indoor, and personal air measurements. Inhalation exposures will be related to other routes of exposure to determine the total body burden.	Three large-scale feasibility studies have been peer-reviewed and are preparing for field implementation. Study design reports are in press. Pilot study results scheduled to be published in 1/97.	EPA/ORD/NERL	Timothy Buckley (919) 541-2715
Characterizing Exposures to Dust Mite Antigens	Develop improved methods to characterize indoor air and personal exposures to dust mite antigen and other important microbiologicals and relate these results to asthma in children.	Pilot field studies conducted in concert with HERL/RTP in 1993-94. An improved dust mite antigen microassay has been developed, facilitating the collection and characterization of indoor and personal samples and replacing conventional source sampling techniques. Various technical reports are available.	EPA/ORD/NERL	Andrew Lindstrom (919) 541-4866
Improved Collection and Growth Media for Fungi and Bacteria	Develop improved media for optimal recovery and enumeration of bacteria and fungi from indoor air.	Ongoing. New and improved media have been developed and tested under laboratory conditions. Validations under field conditions are in progress.	EPA/ORD/NERL	Gerry Stelma (513) 684-7384
Microbiological Screening Methods	Develop methods to use for rapid screening of indoor bacterial and fungal concentrations.	Ongoing. Methods will be developed based on bacterial and fungal colony putative virulence factors and for aero-allergens. Gene probes for selected species have been developed and tested under laboratory conditions. Field validation studies are scheduled.	EPA/ORD/NERL	Gerry Stelma (513) 684-7384

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Develop Improved Indoor Air Microbiological Samplers	New and improved standard samplers are needed that maximize the collection efficiency for the selected microbiological organisms, reduce the stress due to collection, and promote the storage and resuscitation of the species without growth during or immediately after collection.	Ongoing. Existing samplers have been characterized and new improved samplers have been designed and are undergoing laboratory and field validation. Research is ongoing.	EPA/ORD/NERL	Gerry Stelma (513) 684-7384 Andrew Lindstrom (919) 541-4866
New Office Building Bake-Out Study	Characterize physical and environmental parameters prior to and after building bake-out to determine the effectiveness of an innovative bake-out process for reducing indoor exposures once the building is occupied.	Study completed and technical report published.	EPA/ORD/NERL EPA/Region 9	Andrew Lindstrom (919) 541-4866 Richard Taft (415) 484-1606
Characterizing Indoor Acid Aerosol and Particulate Matter Exposures	Characterize the spatial and temporal variability of acid aerosols and particles indoors and outdoors, assess exposures, and determine the emission sources. Studies designed to respond to EPA Clean Air Science Advisory Committee (CASAC) scientific issues.	Large-scale studies conducted in Philadelphia (1992-93) and Washington (1994). Study on-going in Nashville, TN (1995). Various reports on Philadelphia and Washington published.	EPA/ORD/NERL	Robert Burton (919) 541-3077
Health Effects Research				
Indoor Biocontaminants-Asthma and Allergy (Human)	Dose/response analysis of dust mites and other allergens in children and adults.	Initiated: 10/91.	EPA/ORD/NHEERL	Hillel Koren (919) 966-6220
Indoor Biocontaminants-Asthma and Allergy (Experimental Animal)	Develop animal model for studies of allergic responses to indoor biocontaminants.	Ongoing. Initiated: 1990.	EPA/ORD/NHEERL	MaryJane Selgrade (919) 541-2657
Multiple Chemical Sensitivity	Perform clinical characterization of selected individuals to determine best objective measures.	Initiated: 1992.	EPA/ORD/NHEERL	Howard Kehrl (919) 966-6208
Sick Building Syndrome-Test Method Development	Develop and/or validate objective indicators of sensory irritant, neurologic and immunologic effects applicable to SBS.	Ongoing. Initiated: 1989.	EPA/ORD/NHEERL	Hillel Koren (919) 966-6200

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Respiratory Irritant Properties of Indoor Products	Evaluate selected products for respiratory irritant properties.	Initiated: 1992.	EPA/ORD/NHEERL	Dan Costa (919) 541-2531
Exposure and Risk Assessment				
IAQ Study in EPA Headquarters Building	Use occupant surveys and indoor air monitoring to identify indoor air quality problems in selected buildings. Make appropriate recommendations for improving indoor air quality.	Completed. Occupant survey report (Volume I): 11/89. Air quality monitoring report (Volume II): 5/90. Report relating air quality monitoring and occupant survey (Volume III): 1/91. Additional analysis of occupant surveys (Volume IV): 9/91.	EPA/OARM/SHEMD EPA/ORD/NRMRL	Jeff Davidson (202) 260-1640 Hugh McKinnon (202) 260-5898
Source Characterization and IAQ Control				
Chamber Studies of Organic Emissions from Material Sources	Develop methods for determining emissions from indoor materials/products; evaluate the effects of environmental variables on emission rates; evaluate source modifications as IAQ control techniques.	Ongoing. ASTM Standard Guide on small chamber testing: 5/90; series of technical papers published. Currently developing models to predict emission rates of VOCs.	EPA/ORD/NRMRL	Bruce Tichenor (919) 541-2991 BTichenor@ ENGINEER.AEERL.EPA. GOV
Test House Studies of Indoor Sources and Sinks	Develop emissions testing procedures and models for organic compounds; investigate sources and sinks; compare these to chamber measurements.	Ongoing. Interaction of organic compounds with indoor sinks completed: 3/91; effects of building features on indoor air movements completed: 11/91.	EPA/ORD/NRMRL	Bruce Tichenor (919) 541-2991 BTichenor@ ENGINEER.AEERL.EPA. GOV
Bioresponse Methods for Source Characterization	Develop biological response-based tests (using humans, animals, or in vitro techniques) to evaluate potential health impacts of indoor sources.	Work with Pierce Lab and Aarhus will be completed in FY 95.	EPA/ORD/NRMRL	Mark Mason (919) 541-2746 Mason.Mark@ EPAMAIL.EPA.GOV.
Data Base of Indoor Air Pollutant Sources (DIAPS)	Data base of indoor air source emissions.	Available via Indoor Air Branch's IAQ Bulletin Board.	EPA/ORD/NRMRL	James White (919) 541-1189
Large Building IAQ and Energy Impacts	Evaluate the energy impacts of increasing outdoor air quantities to meet ASHRAE 62-1989 in a large building located in a hot and humid climate.	Field research was performed in a large building in Florida. A report is being finalized and will be available by 6/95.	EPA/ORD/NRMRL	Russell N. Kulp (919) 541-7980 rKulp@ ENGINEER.AEERL.EPA. GOV.

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Ventilation and IAQ Research Needs	Research opportunities related to ventilation and IAQ are identified in seven major categories: (1) pollutant transport to and into the building envelope, (2) air cleaning systems, (3) flow and pollutant dispersion, (4) room and building flow/dispersion, (5) HVAC/building design, operation, and control, (6) applied microbiological research, and (7) building performance.	A report detailing these findings is available.	EPA/ORD/NRMRL	Russell N. Kulp (919) 541-7980 rkulp@ ENGINEER.AEERL.EPA. GOV.
IAQ and the HVAC Industry	Purpose is to: (1) detail basic topics describing the interactions between ventilation systems and IAQ, (2) outline methods and descriptions of how and why HVAC system configurations are designed, (3) describe current technology and components available, (4) present industry perspectives, and (5) provide future research topics and directions.	A report outlining the Ventilation Technology Systems Analysis is complete and available.	EPA/ORD/NRMRL	Russell N. Kulp (919) 541-7980 rkulp@ ENGINEER.AEERL.EPA. GOV.
Residential Air Duct Cleaning	Determine IAQ and energy impacts of air duct cleaning in residential dwellings.	The overall research project will last 2 years. Current first year (FY 95) research involves pilot-scale testing. Second year (FY 96) will be devoted to performing a field study.	EPA/ORD/NRMRL	Russell N. Kulp (919) 541-7980 rkulp@ ENGINEER.AEERL.EPA. GOV.
Gas Phase Filtration Equipment	Develop field test methods that will measure gaseous contaminant removal effectiveness of gas phase filtration equipment commonly used for IAQ.	Research is being performed cooperatively with ASHRAE and will be completed in two phases: (I) Develop test schemes, and (II) Perform field demonstration of test schemes. Research began 3/95 and will be completed 10/96.	EPA/ORD/NRMRL	Russell N. Kulp (919) 541-7980 rkulp@ ENGINEER.AEERL.EPA. GOV.

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Large Building IAQ and Microbiological Contamination	Generate a baseline measurement to evaluate the impact of ventilation system design and operation on the microbiological aspects of IAQ in large buildings located in hot and humid climates.	Field research was performed in a large building in Florida. A report is being prepared and will be available 6/95.	EPA/ORD/NRMRL	Russell N. Kulp (919) 542-7980 rkulp@ENGINEER.AEERL.EPA.GOV.
HVAC Systems as Emission Sources	Determine indoor air contamination sources associated with large building HVAC systems and identify research needs.	Field studies in 2 large buildings and literature research were completed 10/94. A report outlining the findings is available.	EPA/ORD/NRMRL	Russell N. Kulp (919) 541-7980 rkulp@ENGINEER.AEERL.EPA.GOV.
Evaluation of IAQ Control Alternatives	Evaluate relative merits (cost and effectiveness) of methods for improving IAQ. Methods to be evaluated include low-emitting products, ventilation, and air cleaners.	Ongoing.	EPA/ORD/NRMRL	Leslie Sparks (919) 541-2458
Source Catalog	Provide a listing of sources of indoor air pollutant chemical constituents, and possible source strengths.	Complete nomenclature for materials found in homes and offices. Indicate which materials may be sources of indoor air emissions. Available through NTIS.	EPA/ORD/NRMRL	James White (919) 541-1189
Biocontaminant Control	Develop methods for determining the effect of RH, temperature, surface moisture, and biocides on biological contaminants in the indoor air.	Ongoing.	EPA/ORD/NRMRL	John Chang (919) 541-3747
IAQ Model	Develop an easy-to-use tool for assessing IAQ problems, conducting risk analysis, and evaluating control options.	Model complete. Upgrades ongoing.	EPA/ORD/NRMRL	Leslie Sparks (919) 541-2458
Determination of Air Flows in Buildings	Develop low cost, easy-to-use methods for measuring air flows between rooms and HVAC, between rooms and outdoors, and other important indoor air flows (e.g., to exhaust fans).	Ongoing.	EPA/ORD/NRMRL	Leslie Sparks (919) 541-2458

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Technical Support to Program Offices	Provide short-term responses to requests from EPA program offices regarding emissions from indoor materials and products.	Ongoing. Report available on emissions of perchloroethylene from dry cleaned fabrics: 10/88; assessment of mercury from interior latex paint: 5/91. FY 95 study of latex paint emissions is underway.	EPA/ORD/NRMRL	Bruce Tichenor (919) 541-2991
Cost-Effectiveness of IAQ Control Alternatives	Evaluate cost-effectiveness of alternative IAQ control approaches in the full range of building types, as a function of building, HVAC, and IAQ control system variables.	Ongoing.	EPA/ORD/NRMRL	Bruce Henschel (919) 541-4112
Application of Pollution Prevention to Aerosol Consumer Products	Develop methods and models to characterize emissions from aerosol products so that lower emitting products can be developed.	Representative aerosol products are being characterized and a prototype spray nozzle is being developed.	EPA/ORD/NRMRL	Kelly Leovic (919) 541-7717 Fax: (919) 541-2157 KLeovic@ ENGINEER.AEERL.EPA. GOV
Application of Pollution Prevention to Office Equipment	Pollution prevention techniques, such as product design modifications, will be applied to reduce or prevent emissions from office equipment.	Literature review on office equipment emissions has been published and test guidance has been developed for measuring indoor emissions from office equipment. Emission tests and pollution prevention research began in 4/95.	EPA/ORD/NRMRL	Kelly Leovic (919) 541-7717 Fax: (919) 541-2157 KLeovic@ ENGINEER.AEERL.EPA. GOV
Indoor Air Research Technology Transfer	Communicate research results to the IAQ Research Community, Program and Regional Offices, and other interested parties through newsletters, workshops, and symposia.	Biannual newsletters on ORD's IAQ research are distributed. A symposium, "Engineering Solutions to IAQ Problems," will take place in 7/95.	EPA/ORD/NRMRL	Kelly Leovic (919) 541-7717 Fax: (919) 541-2157 KLeovic@ ENGINEER.AEERL.EPA. GOV
Development of the Environmental Resource Guide (ERG)	Provide architects and design professionals information which will enable them to factor environmental issues (e.g., IAQ) into the materials selection process.	ERG is available through AIA subscription services. ERG developed by AIA from an EPA grant. Material reports will be released through NTIS. FY 93.	EPA/ORD/NRMRL	James White (919) 541-1189

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Application of Pollution Prevention Techniques to Reduce Indoor Air Emissions from Textiles Used in Furnishings	Evaluate and apply pollution prevention strategies to textiles to develop low-emitting products.	Cooperative agreement with North Carolina State University College of Textiles is on-going.	EPA/ORD/NRMRL	James White (919) 541-1189
Application of Pollution Prevention Technique to Reduce Indoor Air Emissions from Composite Wood Products	Evaluate and apply pollution prevention strategies to reduce emissions from wood furniture.	Cooperative agreement with Research Triangle Institute. Background information collection complete. Sampling began 4/95.	EPA/ORD/NRMRL	Betsy Howard (919) 541-7915 BHoward@ ENGINEER.AEERL.EPA. GOV
Testing and Development of Pollution Prevention Alternatives to Reduce Indoor Air Emissions from Perchloroethylene Dry Cleaning and Dry Cleaned Fabrics	To evaluate the efficacy, cost and environmental impacts of available and emerging alternatives to perchloroethylene dry cleaning, and to promote the development and commercialization of more environmentally benign techniques.	Cooperative Agreement award in process.	EPA/ORD/NRMRL	Betsy Howard (919) 541-7915 BHoward@ ENGINEER.AEERL.EPA. GOV
The Effect of Air Cleaners on Lung Dose from Radon Progeny	Determine whether air cleaners are effective in reducing the radiation dose to the lungs from indoor radon progeny.	Ongoing.	EPA/ORD/NRMRL	Ron Mosley (919) 541-7865
Other Projects				
IAQ Questions for NHANES III	Add questions to NHANES study that will permit analysis of contribution of indoor air pollution sources to health problems identified in survey.	Ongoing.	EPA/ORD/NCEA	Sherry Selevan (202) 260-2604
RADON ACTIVITIES Program Management				
Committee on Indoor Air Quality and Radon Workgroup -- Co-Chair (w/DOE)	Provide updates to the CIAQ on pending federal radon legislation, ongoing programs, and other issues.	Ongoing.	EPA/OAR/ORIA	Anita Schmidt (202) 233-9452
Problem Assessment				
Comparison of Geology and Indoor Radon	Develop methodology to identify high radon potential areas.	Ongoing.	EPA/OAR/ORIA	Marcia Carpentier (202) 233-9711

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Large Building Measurement Protocols	To develop radon measurement protocols for large buildings.	Ongoing.	EPA/OAR/ORIA	Marcia Carpentier (202) 233-9711
Workplace Pilot Study	Pilot effort to examine factors necessary to develop a nation-wide survey of workplaces.	Ongoing.	EPA/OAR/ORIA	Marcia Carpentier (202) 233-9711
Environmental Indicators	Measure progress toward increasing radon awareness, testing and mitigation at national, state, and local levels.	Ongoing.	EPA/OAR/ORIA	Jeff Phillips (202) 233-9446
National Residential Radon Survey	Estimate the frequency distribution of annual average radon exposures in U.S. homes using year-long measurements, and assess correlations between residential radon concentrations and various factors.	Completed. Summary report available.	EPA/OAR/ORIA	Frank Marcinowski (202) 233-9437
Radon Measurement in Schools	Update and revise existing interim guidance to schools on measuring radon.	Completed.	EPA/OAR/ORIA	Anita Schmidt (202) 233-9452
Radon Measurement in Schools - Self-Paced Training Workbook	Provide self guided trainings for radon measurement in schools (companion to guidance document).	Completed.	EPA/OAR/ORIA	Chris Bayham (202) 233-9335
Revised EPA Radon Measurement Device Protocols	Revised EPA Radon Measurement Device Protocols to include new methods for measuring indoor radon and radon decay products.	Completed.	EPA/OAR/ORIA	Anita Schmidt (202) 233-9452
State/EPA Indoor Radon Residential Surveys	Help States identify areas where elevated radon levels (hot spots) may occur, and estimate the Statewide and regional frequency distribution of screening measurement results.	Completed forty-two States. Data available through the National Radon Database at NTIS.	EPA/OAR/ORIA	Jeff Phillips (202) 233-9446
Protocols for Radon Measurements in Homes	Provide radon measurement protocols/guidance in homes (companion document to "A Citizen's Guide to Radon" and "Home Buyers and Sellers Guide to Radon").	Completed.	EPA/OAR/ORIA	Anita Schmidt (202) 233-9452

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Protocol Evaluation Study	Evaluate the utility of various short-term testing protocols for mitigation decision-making in a nationwide sample of residential structures.	Ongoing.	EPA/ORA/ORIA	Frank Marcinowski (202) 233-9437
NAS Study	Examine the relationship of uranium miner data to homeowner exposure with respect to lung dosimetry.	Completed.	EPA/OAR/ORP	Susan Conrath (202) 260-9615
Ambient Air Study	Investigate and document radon ambient air concentrations throughout the U.S.	Completed.	EPA/OAR/ORP	Anita Schmidt (202) 260-9615
National School Radon Survey	To develop and conduct national school survey pursuant to Section 307 of IRRA.	Ongoing.	EPA/OAR/ORP	Lisa Ratcliff (202) 260-9615
Mitigation and Prevention				
Model Standards and Techniques for Control of Radon in New Residential Buildings	Model standards for use by builders in constructing radon resistant homes.	Completed: Standards available for use.	EPA/OAR/ORIA	Jennifer Keller (202) 233-9338
Large Building Evaluation Program	Evaluate several large buildings to collect information to support development of mitigation guidance and guidance for constructing radon-resistant new buildings.	Ongoing.	EPA/OAR/ORIA	Bryan Ligman (202) 233-9432
Capability Development				
New House Evaluation Program	Transfer technology for constructing radon resistant buildings to private sector, and provide data for the development of model building codes.	Ongoing. Final report due: Summer 1995.	EPA/OAR/ORIA	David Price (202) 233-9447
Radon Measurement Proficiency (RMP) Program	Test capabilities of companies measuring indoor radon, and provide the public with a mechanism for identifying qualified testing companies.	Ongoing.	EPA/OAR/ORIA	Sam Poppell (205) 270-3414

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
	Evaluate individual contractors for proficiency in on-site measurement through written examination and provide the public with a list of proficient individuals.	Ongoing.	EPA/OAR/ORIA	Phil Jalbert (202) 233-9431
Radon Contractor Proficiency (RCP) Program	Operate a voluntary proficiency program to evaluate the effectiveness of mitigation contractors.	Ongoing.	EPA/OAR/ORIA	Gene Fisher (202) 233-9418
State Indoor Radon Grants (SIRG)	Provide grant funds to establish and expand radon programs.	Ongoing.	EPA/OAR/ORIA	Sheila Brown (202) 233-9438
Regional Radon Training Centers	Develop information and provide training to Federal and State officials, private firms, and the public regarding health risks posed by radon. Demonstrate and teach methods of radon measurement and mitigation, and provide training and administer examinations as part of the RCP and RMP Programs.	Ongoing.	EPA/OAR/ORIA	Phil Jalbert (202) 233-9431
			Eastern	Debora Fisher (908) 932-2582
			Southern	Rod Jenkins (205) 844-6271
			Midwest	William Angell (612) 624-5343
			Western	James Reidhead (970) 491-7742
Policy and Public Information				
Radon Education and Awareness for Health Professionals	Inform health professionals about the risks associated with indoor radon.	Ongoing.	EPA/OAR/ORIA	Anita Schmidt (202) 233-9452
National Database of Indoor Radon Measurements	Prepare a database that will contain radon measurements from several EPA surveys.	Completed. Available through NTIS.	EPA/OAR/ORIA	Sharon White (202) 233-9457
Update Citizen's Guide to Radon	Revise and update policy and guidance to homeowners on indoor radon.	Guide completed.	EPA/OAR/ORIA	Dennis Wagner (202) 233-9400
Radon Public Service Announcements	Prepare and distribute Public Service Advertising on indoor radon including TV, radio and print.	TV, radio, and print PSAs nationwide.	EPA/OAR/ORIA	Kristy Miller (202) 233-9441

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Radon Action Week	Develop activities in support of National Radon Action Week.	Conducted in October of 1990, 1991, 1992, 1993, and 1994. Plans ongoing for 1995.	EPA/OAR/ORIA	Kristy Miller (202) 233-9441
Public Outreach (Local)	Work with national governmental and non-profit organizations to develop public information and outreach activities on indoor radon.	Ongoing.	EPA/OAR/ORIA	Dennis Wagner (202) 233-9400
<i>Home Buyer's and Seller's Guide to Radon</i>	Develop guidance for testing home radon levels in the context of a real estate transaction.	Guide completed: 4/93.	EPA/OAR/ORIA	Sarita Hoyt (202) 233-9428
Drinking Water				
Regulatory Proposal for Radionuclides in Drinking Water	Regulate radon levels in public drinking water supply.	Rules proposed: 7/18/91. Final rules anticipated.	EPA/OW/OGWDW	Tim Gill (202) 260-8049
Research on Radon Removal from Drinking Water	Assess effectiveness of radon removal techniques at point-of-entry into home and for community water supplies for both high and low concentrations of radon.	Research on removal of high levels of radon completed. Reports available. Research evaluating long-term removal in community supplies begun: 6/91.	EPA/ORD/NRMRL	Kim Fox (513) 569-7820
Radon Research Activities				
National Risk Management Research Laboratory Coordinator: ORD Radon Mitigation Research Program	Manage ORD Radon Mitigation Research Program.	Ongoing.	EPA/ORD/NRMRL	Tim Dyess (919) 541-2802 TDyess@ ENGINEER.AEERL.EPA. GOV
Permeability and Diffusion Characteristics of Florida Concrete -- Phase II Field Samples and Analyses	Establish the range of radon transport resistances of concrete and identify concrete construction and treatment for enhanced radon resistance.	Final report in preparation.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERL.EPA. GOV
Radon Gas Movement Through Soils and Building Shell Components	Study soil gas movement through soil and foundation substructures in a chamber filled with radium laden soil.	Ongoing.	EPA/ORD/NRMRL	Ron Mosley (919) 541-7865

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
New House Evaluation Studies of Radon Resistant Construction	Demonstrate the effectiveness of passive and active radon mitigation in new construction in Florida.	Final report in preparation.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ENGINEER.AEERLEPA.GOV
Evaluation of HVAC System Control for Radon Reduction in Large Buildings	Determine the feasibility of using HVAC systems for both radon reduction and improved indoor air quality.	Ongoing.	EPA/ORD/NRMRL	Marc Menetrez (919) 541-7981
Air Cleaning Technology	To determine the role of air cleaners in improving IAQ. Particulate and gas cleaners are studied.	Ongoing.	EPA/ORD/NRMRL	Leslie Sparks (919) 541-2458
Demonstration of Radon Reduction Methods for Multi-family Housing	Demonstrate mitigation techniques unique to multi-family housing.	Completed.	EPA/ORD/NRMRL	Marc Menetrez (919) 541-7981
Evaluation of Active Soil Depressurization Exhaust Configurations to Cost-Effectively Reduce Exhaust Re-entrainment	Determine conditions under which exhaust might be discharged at grade level, considering exhaust re-entrainment, exposure of persons outdoors, and deposition of radon progeny.	Completed.	EPA/ORD/NRMRL	Bruce Henschel (919) 541-4112
Localized Pressurization Using a Residential Fan-coil Unit to Control Radon	Determine the feasibility of utilizing a typical residential furnace to reduce indoor radon levels in a new basement house.	Completed.	EPA/ORD/NRMRL	Tim Dyess (919) 541-2802 TDyess@ENGINEER.AEERLEPA.GOV
Development of Radon Diagnostic Measurement Guidance and Mitigation Strategies for Large Buildings in Florida	Examine how radon concentrations and indoor air quality are effected by ventilation dynamics, building system conditions, mixing and leakage rates and HVAC components.	Ongoing.	EPA/ORD/NRMRL	Marc Menetrez (919) 541-7981
Radon Mitigation in Existing Houses - New Mexico	Assess the design and performance of mitigation systems for slab-on-grade and crawl space houses, with conditions representative of the Southwest.	Completed.	EPA/ORD/NRMRL	Bruce Henschel (919) 541-4112

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Radon Prevention in the Design and Construction of Schools and Other Large Buildings	Demonstrate cost-effective new construction techniques to prevent radon entry.	Ongoing.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERLEPA. GOV
Applied R&D Effort to Refine EPA's Design Criteria for Submembrane Depressurization Systems in Crawl Space Houses	Determine conditions under which complete sealing of membrane and steps to improve suction distribution are required.	Completed.	EPA/ORD/NRMRL	Bruce Henschel (919) 541-4112
Develop and Demonstrate Low-Cost Mitigation Techniques for Difficult-to-Mitigate Schools	Study cost-effective means for mitigating schools not amenable to SSD or HVAC models.	Ongoing.	EPA/ORD/NRMRL	Marc Menetrez (919) 541-7981
Evaluation of Indoor Air Pollution Sources in Large Building HVAC Systems	Determine the relative magnitude of pollution sources in large buildings HVAC systems and develop methods for mitigation.	Currently performing cooperative research with ASHRAE. Phase I of the research began 9/92. Additional research phases could follow.	EPA/ORD/NRMRL	Russell Kulp (919) 541-7980 RKulp@ ENGINEER.AEERLEPA. GOV
Soil Radon Potential Mapping of 12 Counties in North-Central Florida	Demonstration of a mapping algorithm which factors geological, lithological, hydrological, and indoor monitoring data into prediction of soil gas and indoor radon potentials.	Completed.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERLEPA. GOV
Experimental Investigation of Radon Entry into Crawlspace Structures Using Large Scale Instrumental Test Modules	Define crawlspace construction guidance for new houses.	Final report in preparation.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERLEPA. GOV
Model Validation and Assessment of the Performance of Radon Resistant Construction Features in a Crawlspace House	Establish a fully integrated and validated source, transport, and entry mathematical model for simulating and evaluating the radon resistance of crawlspace house designs.	Final report in preparation.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERLEPA. GOV

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Polk County Research House Project: Test Cell Studies of Radon Entry	To study and evaluate the effects of barrier (slab) cracks and utility penetrations on radon entry into Florida slab or grade houses.	Final report in preparation.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERL.EPA. GOV
Radon Generation and Transport Through Concrete Foundations	Provide an evaluation of generation and transport potential use of radon containing cements in concrete.	Completed.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERL.EPA. GOV
RAETRAD -- Version 3.1 Users Manual -- The RAETRAD Model of Radon Gas Generation, Transport and Indoor Entry	Provide a user friendly computer simulation model and documentation for evaluating the indoor radon concentrations potential at selected sites for slab or grade houses.	Completed.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERL.EPA. GOV
Development of a Lumped Parameter Model of Indoor Radon Concentrations	Provide an integrated macro model for partitioning the radon resistance of new construction among foundation fill, passive barriers and ventilation and house dynamic features.	Completed.	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERL.EPA. GOV
Policy and Program Evaluation				
Time-of-Sale Incentives for Radon Mitigation	Identify mitigation incentives for homeowners.	Ongoing.	EPA/OPPE/ERAB	Alan Carlin (202) 260-5944
Environmental Contaminants in Schools	Evaluate EPA's guidance to schools about asbestos, radon, and lead in drinking water.	Draft final report: 7/90.	EPA/OPPE/ORME	Bill O'Neil (202) 260-5487
Evaluation of EPA's Risk Communication Efforts	Produce and distribute materials regarding the effectiveness of EPA risk communication initiatives.	Ongoing. Selected titles: <i>Radon Risks: Attitudes, Perceptions and Actions</i> , EPA/230-04-89-049 August 89; <i>Alerting the Apathetic and Reassuring the Alarmed - Communicating About Radon Risk in Three Communities</i> EPA/230-08-88-036, Winter 1990.	EPA/OPPE/ORME	Ernestine Thomas (202) 260-5606

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
TOXIC CHEMICALS/HOUSEHOLD PRODUCTS ACTIVITIES				
Asbestos Activities				
NESHAPs Regulations (section 112 of the Clean Air Act)	Protect public health from exposure to asbestos in ambient air.	Enforcement of several regulations including ones prohibiting manufacture of spray-on asbestos insulation and molded pipe insulation and requiring appropriate procedures for demolitions and renovations involving asbestos ongoing. Revisions to regulations under development.	EPA/OAR/OAQPS	Simms Roy (919) 541-5263
Asbestos School Hazard Abatement Act (ASHAA) Loan and Grant Program	Conduct \$70 million program to assist schools with greatest hazard and largest need to abate damaged or deteriorating asbestos.	Funded 2,933 school abatement projects involving more than \$346 million in awards since 1985. Congress has reauthorized until 1995.	EPA/OPPTS/OPPT	Lynn Burger (202) 260-3790
Worker Protection Rule	Protect health of government workers not covered by OSHA regulations.	First rule issued: 1987. Proposal to revise: 11/94.	EPA/OPPTS/OPPT	Doreen Cantor (202) 260-1777
Ban and Phase Out Rule	Intended to ban most asbestos-containing products and new uses.	Final rule published: 7/89. Most of rule vacated by court order: 10/91.	EPA/OPPTS/OPPT	Doreen Cantor (202) 260-1777
Extension of Accreditation Requirements to Cover Individuals Working in Public and Commercial Buildings	To comply with the requirements of the Asbestos School Hazard Abatement Reauthorization Act.	Final rule expected: Summer 1995.	EPA/OPPT	Phil King (312) 353-9062
Asbestos-Containing Materials in Schools Rule	Protect public health in schools.	Enforcement of rule promulgated in 1987.	EPA/OPPTS/OPPT	Bob Jordan (202) 260-2328
Lead-Based Paint Hazards (Section 403 of Title X)	To identify dangerous levels of lead in residential soil and dust, and locations and conditions of residential lead-based paint that pose hazards.	Guidance issued in July 1994; rulemaking proposal under development.	EPA/OPPTS/OPPT	Dave Topping (202) 260-7737 Karen Maher (202) 260-3814
Lead Activities				
Comprehensive Abatement Performance Study	Evaluate the long-term efficacy of abatements techniques used by HUD in their Federal Housing/Administration Demonstration Project.	Sample collection for a pilot study conducted: 5/91. Data collection efforts scheduled to begin: Spring 1992.	EPA/OPPTS/OPPT	John Schwemberger (202) 260-7195

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Repair and Maintenance Study	Evaluate efficacy of Maryland abatement practices and alternative low-cost repair and maintenance approaches to reducing household exposure to paint and dust.	Recently finished the 6 month campaign.	EPA/OPPTS/OPPT	Samuel Brown (202) 260-2282
Encapsulation Efficacy	Evaluate feasibility of draft protocols for assessing lead-based paint encapsulant performing products in reducing lead exposure in residential structures.	Interim ASTM standards scheduled for completion.	EPA/OPPTS/OPPT	Jill Hacker (202) 260-3952
Laboratory Accreditation (w/NIOSH)	Develop components for the establishment of a laboratory accreditation program.	Proficiency testing program for lead determinations in paint dust and soil is scheduled for completion: 3/93. 125 labs participating.	EPA/OPPTS/OPPT	John Scalera (202) 260-6709
Role-Specific Training Course Development	Develop model training course curricula for lead-based paint inspectors, abatement supervisors, and workers.	Inspector, supervisor, and worker courses completed. Risk assessor course scheduled for completion: spring 1995.	EPA/OPPTS/OPPT	Bob Jordan (202) 260-2328
Significant New Use Rule	Provide EPA with the opportunity to evaluate risks associated with a new use of lead before the use is introduced commercially.	Analyzing and summarizing comments on Advanced Notice of Proposed Rulemaking.	EPA/OPPTS/OPPT	Jonathan Jacobson (202) 260-3779
Regional Lead Training Centers	Establish network of five university-based training centers to train abatement professionals.	Five consortial groups selected to develop centers. Each center has lead institution with various consortial members from labor, non-profits, and community groups.	EPA/OPPTS/OPPT	Lyn Burger (202) 260-3790
Forum on State and Tribal Toxics Action (FOSTTA) Lead Workgroup	Serve as a mechanism for state agencies and tribal organizations to exchange information on lead issues and programs with each other as well as with EPA.	Workgroup has been established. Topics for discussion include: lead accreditation issues; state and federal lead legislation; technical issues surrounding lead-based paint abatement; and role of the states in the implementation of federal lead strategies.	EPA/OPPTS/OPPT	Megan Carroll (202) 260-7269

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
National Lead Information Center	Project includes a hotline and clearinghouse to provide both information to the public as well as technical information to State/local officials and the professional community.	Hotline and clearinghouse in operation.	EPA/CDC/HUD/DoD	Karen Hoffman (202) 260-3790
Accreditation for Training and Implementation of Title X	Develop regulations to ensure that individuals engaged in lead-based paint activities are properly trained, that training providers are accredited and contractors are certified. Performance standards for abatement will also be included.	Proposed rule: September 1994; final rule expected: Fall 1995.	EPA/OPPTS/OPPT	Denise Kearns (202) 260-7798
Pre-Renovation Education Requirements (TSCA §406(b))	Provide housing occupants with lead hazard information before renovations.	Proposed rule issued 3/9/94. Final rule expected: 8/30/95.	EPA/OPPTS/OPPT	Charles Franklin (202) 260-1781
Lead Hazard Information Pamphlet (TSCA §406(a))	Create public outreach tool containing lead poisoning prevention information. Distributed under several EPA and HUD regulations.	Draft released 3/9/94. Public hearing 8/29/94. Focus tests: Summer 94. Final expected: April 95.	EPA/OPPTS/OPPT Co-sponsor CPSC	Charles Franklin (202) 260-1781 Lori Saltzman (301) 504-0477
Lead-Based Paint Disclosure Rule (§1018 of Title X)	Provide housing buyers and renters with information on potential lead hazards before sale or lease.	Proposed 11/2/94. Final rule expected: 8/31/95.	EPA/OPPTS/OPPT and HUD's lead office.	Charles Franklin (202) 260-1781 Conrad Arnolts (202) 755-1805
Renovation and Remodelling Exposure Study	To fulfill Title X requirements; and determine the extent to which persons engaged in renovation and remodeling activities create lead-based paint hazards.	Draft summary report completed: 9/30/94; complete study draft final report scheduled for 4/28/95.		Darlene Watford (202) 260-3989
XRF/Test Kit Field Evaluation Study	Evaluate the performance of XRF instruments and lead-paint test kits.	Report is being revised to address peer review comments.		John Schwemberger (202) 260-7195

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Other Chemicals/Sources				
CO Detector Task Forces (six total)	To coordinate the efforts of CPSC, EPA, the Gas Research Institute (GRI), the American Gas Association (AGA), the Carbon Monoxide Safety and Health Association (COSHA), and the National Association of State Fire Marshals (NASFM) to improve CO detector performance and information provided to consumers.	The six task forces met for the first time in October, 1995 and developed a scope and issues for each task force. These task forces are composed of CO detector manufacturers, government representatives, fire services personnel, gas industry representatives, the public, and other interested parties. The task forces are gathering data and examining action levels, standards, field and laboratory testing of detector performance, and consumer and professional education to improve the performance of CO detectors. Meetings will be scheduled periodically with a goal of issuing reports to the steering committee by the Fall of 1995.	CPSC/EPA/GRI/AGA/COSHA	Elizabeth Leland (301) 504-0962 X1321 John Girman (202) 233-9317
Formaldehyde and Pressed Wood Products	Assess risk. Identify and implement mitigation measures, if appropriate.	EPA's Science Advisory Board review of updated risk assessment completed: 1992. Initiated action in 1992 to collect formaldehyde exposure data through testing in newly-constructed single-family homes, to improve public/consumer information on formaldehyde emissions from pressed wood products, and to support the evaluation of an IAQ initiative undertaken by the State of Washington for the construction of new office buildings.	EPA/OPPTS/OPPT	George Semeniuk (202) 260-2134 Sid Abel (202) 260-3920
Cleaning Study	To determine the relative effectiveness of different cleaning agents for cleaning lead-contaminated dirt from floors, walls, and surfaces.	Statistical design for evaluation of products is undergoing TPB internal review and comment.		Ben Lim (202) 260-4222

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Indoor Air Source Characterization Project	Characterize emissions from materials used indoors and determine their impact on indoor air quality.	In progress. A source ranking database is being developed and is on the agenda for review by the Science Advisory Board. Analytical test methods have been evaluated for latex and alkyd wall paint. Report available. A screening-level risk assessment is being done on wall paint to determine if a quantitative exposure assessment and the development of risk management options are necessary.	EPA/OPPTS/OPPT Joint lead with EPA/ORIA/IAD	Christina Cinalli (202) 260-3913 Richard Leukroth (202) 233-9047
Indoor Air Cluster Project	Collect existing data on chemicals in consumer/commercial products to identify sources of indoor air pollutants for near term examination under the Existing Chemicals Program.	Ongoing. Aerosol spray paint cluster case is undergoing risk management options development. Draft risk assessment is being reviewed by industry and other interested parties. Report available.	EPA/OPPTS/OPPT	Christina Cinalli (202) 260-3913
Carpet Policy Dialogue (w/IAD and ORD)	Develop standardized test method to measure TVOC emissions from carpet floor covering materials; obtain voluntary commitments from industry to characterize TVOC emissions from carpet products; review carpet manufacturing process and installation practices to identify feasible ways to reduce VOC emissions; inform public about carpet emissions and floor covering materials.	Concluded activities: 9/91. Products: standardized TVOC test method; three consensus agreements for industry testing programs; four memoranda of understanding between EPA and the affected industries to formalize testing programs, compilation of process engineering information and recommendations to reduce VOC emissions; a compendium report summarizing Dialogue activities; and a public information brochure about indoor air quality and new carpet. Data from the voluntary industry testing programs to be submitted to EPA's TSCA Carpet Emissions Administrative Record as it becomes available. EPA will conduct technical evaluation of the industry test results and report findings to the TSCA carpet emission administrative record.	EPA/OPPTS/OPPT	Charles Auer (202) 260-3749

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Integrated Chlorinated Solvents Workgroup (w/CPSC, OSHA, and FDA)	Coordinate interagency assessment of key policy issues regarding uses of 4 major solvents. Identify regulatory and non-regulatory options to reduce exposure. Risk management options selection of dry cleaning (perchloroethylene) completed: 1987. Follow-up work on identifying potential opportunities for reducing risks to consumers from dry cleaning in process. Metal cleaning work (not an IAQ problem) completed: 1988.	CPSC required labelling of methylene chloride products and is currently evaluating the efficiency of such labelling. EPA published a <i>Federal Register</i> notice summarizing federal government activities in this area: Spring 1991.	EPA/OPPTS/OPPT	Paul Campanella (202) 260-3946
Environmentally-Preferable Cleaning Products - A Pilot Project under Executive Order 12873	Develop guidance for Federal agencies to purchase environmentally-preferable cleaning products and implement in GSA supply system.	Draft guidance under review by vendors on GSA's cleaners/degreasers schedule*	EPA/OPPTS/OPPT GSA/FSS	Conrad Flessner, Jr. (202) 260-3918 Patricia Pierson (206) 931-7120
Exposure Assessment Activities				
Multi-Chamber Concentration and Exposure Model (MCCEM)	Computer software tool for assessing inhalation exposure to airborne concentrations of chemicals released from sources of indoor air pollution using air infiltration and interzonal airflow rates for user-selected or user-designed residences.	Report available.	EPA/OPPTS/OPPT	Mary Ryan (202) 260-3916 James Quackenboss (702) 798-2442
PFT (perfluorocarbon tracer) Data Base	Improve methods for modeling exposure to contaminants in indoor air in homes.	Data used to develop estimate of national distribution of air exchange rates in residences. Report being prepared.	EPA/OPPTS/OPPT	Pat Kennedy (202) 260-3916
Toxic Substances/Household Products Public Information Activities				
Toxic Substances Publications	Provide public with information about the uses and hazards of asbestos and other toxic substances.	See publications section for list of publications.	EPA/OPPTS/OPPT	David Kling (202) 260-3949
TSCA Assistance Information Service	Provide hotline service to answer questions from the public.	Ongoing. (Phone number: (202) 554-1404)	EPA/OPPTS/OPPT	Wanda Woodburn (202) 260-3795

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Toxic Substances/Household Products Research Activities				
Asbestos in Residences	Determine the amount of asbestos in residences.	Small screening study completed.	EPA/ORD/AREEL	Leslie Sparks (919) 541-2458
PESTICIDE ACTIVITIES				
Termiticides				
Chlordane	Protect public from exposure to termiticides containing cyclodienes.	Completed. Halted sale of chlordane and heptachlor to pest control operations under 1987 MOU with Velsicol (sole manufacturer) unless certain conditions are met. Manufacturers have withdrawn aldrin and dieldrin from market.	EPA/OPPTS/OPP	Jim Roelofs (703) 305-7102
New Termiticides	Evaluate effectiveness and toxicity of new termiticide products.	Ongoing.	EPA/OPPTS/OPP	Dave Jaquith (703) 305-5942
Other Pesticide Activities				
National Home and Garden Pesticide Use Survey	Determine use patterns and practices for homeowner applied pesticides.	Report published 3/92.	EPA/OPPTS/OPP	Ed Brandt (703) 308-8050
Certified and Commercial Pesticide Applicator Survey	Estimate pesticide use for restricted products use products in response to 1990 Farm bill. Survey contains all non-agricultural uses; and estimates of total pesticide use for commercial applicators on lawns, general pest control, termiticide uses, rights of way, public health and aquatic. Includes estimates of indoor and outdoor use by chemical, site, and pest.	Draft report published September 30, 1994.	EPA/OPPTS/OPP	Alan Goozner (703) 308-8147
Antimicrobials	Determine exposure to antimicrobials from products used in buildings accessible to general public.	Currently reviewing exposure data submitted to Agency in response to 1987 data collection request. Collection and evaluation of toxicology and exposure data ongoing.	EPA/OPPTS/OPP	Antimicrobial Branch (703) 305-6661

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Pesticide Data Requirements	Add new data requirements for pesticide application exposure and post application exposure.	Data requirements issued in proposed form: Fall 1990.	EPA/OPPTS/OPP	Kathleen Martin (703) 308-2857
Inert Ingredients in Pesticides	Identify toxic inert ingredients used in pesticides and require actions by manufacturer to reduce risks to public health, as appropriate.	Implementation of 1987 policy requiring actions on both existing and new inerts is ongoing. Most products have been reformulated to remove toxic inerts. Program of collecting data on new inerts in progress.	EPA/OPPTS/OPP	Kerry Leifer (703) 305-8323
Postapplication Exposure Monitoring Test Guidelines	Provide guidance to registrants who are required to submit pesticide exposure data for agricultural and residential scenarios.	Draft guidance to be available in interim final early 1996.	EPA/OPPTS/OPP	Kathleen Martin (703) 308-2857
Pesticide Public Information Activities				
Public Information	Answer public inquiries on pesticide issues.	Maintain National Pesticide Telecommunications Network (NPTN) hotline (phone number: 800-858-7378 (general public); 800-858-7377 (medical and government personnel). Brochure about NPTN available.	EPA/OPPTS/OPP	Frank Davido (703) 305-7576
DRINKING WATER ACTIVITIES				
Issue Maximum Contaminant Levels (MCLs)	Regulate amount of VOCs in public drinking water supply.	Final MCLs for 8 VOCs issued: 1987. Final MCLs for additional 10 VOCs promulgated: 1/31/91. MCLs for additional 3 VOCs anticipated to be proposed: 5/92.	EPA/OW/OGWDW	Al Havinga (202) 260-5555 Greg Helms (202) 260-6721
Exposure Assessments for VOCs in Drinking Water	Develop model to estimate human exposure from volatilization of drinking water contaminants from showering and other sources (e.g., dishwashers, washing machines).	Report anticipated: 1993.	EPA/OW/OGWDW/OST	Ken Bailey (202) 260-5535 Greg Helms (202) 260-6721

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INDOOR AIR ACTIVITIES WITHIN THE U.S. CONSUMER PRODUCT SAFETY COMMISSION

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Co-Chair	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	CPSC	Lori Saltzman (301) 504-0477
Indoor Air "Guidance Document" for Public	Provide guidance to consumer on how to assess and decrease indoor air pollution exposure in homes from biological pollutants, asbestos, and combustion products.	Brochures available on biologicals, asbestos, combustion products, formaldehyde, and CO detectors.	CPSC/EPA/ALA	Ken Giles (301) 504-0580
IAQ RESEARCH ACTIVITIES				
Monitoring of Biological Pollutants	Obtain monitoring data and analysis of the concentrations of biological pollutants in homes in Portage, WI, Steubenville, OH, and Topeka, KS (coordinated with Harvard 6-City Study).	Report available.	CPSC	Lori Saltzman (301) 504-0477
Home Humidifiers, Vaporizers, and Similar Appliances	Identify bioaerosols and selected particulate emissions from portable home humidifiers.	Study completed. Report available.	CPSC	Lori Saltzman (301) 504-0477
Carbon Monoxide (CO) Detectors	Evaluate and promote effective, low cost, reliable CO detectors to protect against acute poisonings from leaking appliances and venting systems.	Evaluation underway.	CPSC	Elizabeth Leland (301) 504-0962
Health Effects of Biological Pollutants	Attempt to correlate data on housing conditions and respiratory systems of children with biological pollutant monitoring data from their homes (coordinated with Harvard 6-City Study).	Report available.	CPSC	Lori Saltzman (301) 504-0477
Wood Stove Emissions	Measurements of indoor pollutant emissions from EPA Phase II woodstoves. Report from NIST.	Report available.	CPSC	Mike Babich (301) 504-0994
Wood Stove Emissions	Exposure and risk assessment of emissions from Phase II woodstoves.	Evaluation underway.	CPSC	Mike Babich (301) 504-0994

U.S. CONSUMER PRODUCT SAFETY COMMISSION

U.S. CONSUMER PRODUCT SAFETY COMMISSION

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Carpet Systems	Evaluate consumer complaints. Evaluate emissions from carpet systems (carpet and cushions).	Report on consumer complaints available. Report on laboratory evaluation of emissions completed. Status report on carpet systems project will be available in Spring 1995.	CPSC	Valentine Schaeffer (301) 504-0994
Carpet Systems	Sensory and pulmonary irritancy testing.	Testing underway at Air Quality Sciences.	CPSC	Valentine Schaeffer (301) 504-0994
KEY TOXIC CHEMICAL/HOUSEHOLD PRODUCTS ACTIVITIES				
Methylene Chloride	Evaluate the effectiveness of CPSC labeling and enforcement policy in reducing risk of cancer from methylene chloride.	Report to be completed: Spring 1995.	CPSC	Laureen Burton (301) 504-0994
Kerosene Heaters/Unvented Gas Space Heaters	Voluntary standard to limit emissions of NO ₂ .	Report available.	CPSC	Laureen Burton (301) 504-0994
Glycol Ethers	Assess use of glycol ethers in consumer products and review toxicity data.	Evaluation ongoing.	CPSC	Laureen Burton (301) 504-0994
Heating, Ventilation, and Air Conditioning System	Assess impact of selected residential HVAC systems on IAQ.	Study conducted in phases. Phase I and IIA reports available. Phase IIB report available Summer 1995.	CPSC	Roy Deppa (301) 504-0784
Lead	Reduce consumer exposure to lead, especially in paint. Evaluate consumer test kits.	Ongoing.	CPSC	Lori Saltzman (301) 504-0477

INDOOR AIR ACTIVITIES WITHIN THE U.S. DEPARTMENT OF ENERGY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Co-chair	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	DOE/EE/OBT	John Talbott (202) 586-9455
IAQ RESEARCH ACTIVITIES				
Indoor Air Quality Control Techniques	Develop, test, and evaluate energy-efficient and cost-effective techniques to maintain IAQ. Conduct comprehensive and critical review of current technologies.	Research ongoing.	DOE/EE/OBT	John Talbott (202) 586-9455
Organic Pollutants	Determine relationships between organic pollutants in large buildings and energy-conservation measures; develop methods and protocols for measuring emissions from key building materials and products.	Research ongoing.	DOE/EE/OBT	Joan Daisey (510) 486-7491
Air Infiltration Research	Develop methods to model and measure infiltration and interzonal airflows.	An international collaborative research program on air flow modeling is proceeding, ongoing effort to develop improved estimate of ventilation energy liabilities.	DOE/EE/OBT	John Talbott (202) 586-9455
(IAQ/V Measurements) Healthy Buildings Research	Determined energy-efficient methods to reduce IAQ-related health effects.	Ongoing. Will participate in inter-agency efforts with EPA and NIOSH.	DOE/EE/OBT	John Talbott (202) 586-9455
IAQ and Productivity	Assess potential to improve productivity of office workers by providing better indoor environments.	Ongoing literature review and analysis of potential and design of experiments.	DOE/EE/OBT	John Talbott (202) 586-9455
Malfunctioning Residential Space-Heating Appliances and Carbon Monoxide Exposures	Develop and validate methods to estimate indoor exposures to energy-related indoor air pollutants.	A passive carbon monoxide sampler is being developed and validated as an inexpensive diagnostic for homes with malfunctioning appliances in collaboration with industry.	DOE/EE/OBT	John Talbott (202) 586-9455

U.S. DEPARTMENT OF ENERGY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Ventilation Research	Determine combinations causing ventilation loads and dilution of indoor pollutants, and develop models and measurement methods to quantify ventilation parameters.	Ongoing. Providing technical support for ASHRAE Std. 62; ongoing efforts to characterize residential ventilation and develop techniques to measure ventilation rates and pollutant removal efficiency usable by industry.	DOE/EE/OBT	John Talbott (202) 586-9455
Ventilation Experimentation	Address industry needs in ventilation performance through cost shared use of DOE laboratory facilities.	Ongoing.	DOE/EE/OBT/NREL	Ren Anderson (303) 275-6032
RADON RESEARCH ACTIVITIES				
Energy Conservation Impacts of Indoor Radon	Minimize or eliminate adverse energy impacts of mitigation technologies.	Ongoing.	DOE/EE/OBT	John Talbott (202) 586-9455
Basic Environmental Radon Health Effects Research	To understand any cellular and molecular effects of radon, and identify elevated radon areas nationally.	Ongoing.	DOE/ER/OHER	Susan Rose (301) 903-5037

INDOOR AIR ACTIVITIES WITHIN THE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Co-chair	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	DHHS/CDC/NIOSH	Lawrence J. Fine (513) 841-4428 Fax: (513) 841-4483
General Indoor Air Quality/Indoor Office Environmental Information	Answer inquiries on indoor air quality and indoor/office environmental information, or any occupational safety and health issue.	Ongoing.	DHHS/CDC/NIOSH	(800) 356-4674
Indoor Air Quality/Indoor Office Environmental Investigations	Provide site investigations or technical advice to solve indoor air quality and other indoor/office environmental problems.	Ongoing.	DHHS/CDC/NIOSH	David Sundin (513) 841-4382
Epidemiologic Studies of Indoor Air Quality/Indoor Office Environments	Address relationships between indoor air quality and worker symptoms by comparing risks between controlled and uncontrolled environments.	Ongoing.	DHHS/CDC/NIOSH	Mark J. Mendell (513) 841-4481
Indoor Environmental Air Quality Health Effects Studies	To identify indoor environmental risk factors for work-related symptoms through cross-sectional epidemiologic studies in office buildings selected without regard to work complaints.	Ongoing.	DHHS/CDC/NIOSH	Mark J. Mendell (513) 841-4481
Indoor Environmental Air Quality Studies and Methods Development	To identify indoor environmental interventions in rigorously designed studies which reduce occupant symptom reporting in non-industrial workplaces; also to develop improved measurement methods of both exposures and health outcomes for such studies.	Ongoing.	DHHS/CDC/NIOSH	Mark J. Mendell (513) 841-4481
Characterization of Indoor Environmental Quality in Commercial Aircraft Cabins	Objective is to characterize certain parameters of environmental quality according to aircraft type and flight patterns and lengths for a variety of aircraft during commercial flights.	Ongoing.	DHHS/CDC/NIOSH	Martha A. Waters (513) 841-4458

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Epidemiology and Industrial Hygiene Investigation of a New GSA Building	To establish baseline data on chemical microbiological, and psychosocial stresses in a new office building and determine the effects of seasonality on these factors.	Ongoing.	DHHS/CDC/NIOSH	Kenneth M. Wallingford (513) 841-4314
Analytical Techniques for Indoor Air Contaminants (Chemical and Biological)	Research and information on existing analytical methods.	Ongoing.	DHHS/CDC/NIOSH	Eugene Kennedy (513) 841-4392 Miriam Lonon (513) 841-4318
Method for Sampling and Analysis of Indoor Air for Organic Compounds	The improved method resulting from this research will provide a means to measure these low-level exposures to selected VOCs. The method will be used by industrial hygienists, epidemiologists, and engineers to measure worker exposure and evaluate control effectiveness.	Ongoing.	DHHS/CDC/NIOSH	Eugene Kennedy (513) 841-4392
Sampling and Analysis of Microbiota in Indoor and Workplace Environments	Better understanding of the nature of the microbial hazards will make risk assessment easier and will have a substantial impact on the areas of hazard surveillance, control technology, and intervention.	Ongoing.	DHHS/CDC/NIOSH	Miriam Lonon (513) 841-4318
Methods for Characterizing Emissions from Office Equipment	Develop a method for the characterization of emissions from common office equipment such as photocopiers and laser printers, by placing the equipment in an environmental chamber and operating the equipment as it is normally used. Emission rates will be determined from the results of samples collected from the chamber.	Ongoing.	DHHS/CDC/NIOSH	Michael Gressel (513) 841-4378

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Portable Mass Spectrometer or FTIR Evaluation	Develop a miniature CG/MS capable of addressing field industrial hygiene monitoring needs for indoor air pollution, exposure characterization, and control research.	Ongoing.	DHHS/CDC/NIOSH	Harley Piltingsrud (513) 841-4280
Method for Sampling and Analysis of Indoor Air for Organic Compounds	Detect and identify volatile organic compounds at part per billion levels in a single sample.	Ongoing.	DHHS/CDC/NIOSH	Gene Kennedy (513) 841-4392
Methods for Evaluating Indoor Air Ventilation Systems and Determining Ventilation Effectiveness	Develop effective ventilation system measurement tools for indoor air quality investigations.	Ongoing.	DHHS/CDC/NIOSH	Robert Hughes (513) 841-4221
Development of Survey Assessment Instrument for Job-Related Psychosocial Stressors	Develop reliable and valid psychometric measures for use across a wide variety of occupations including workers in non-industrial workplaces.	Ongoing.	DHHS/CDC/NIOSH	Joe Hurrell (513) 841-4403
Measurement of Biochemical Indicators of Tobacco Exposure	Develop reliable tests for cotinine and other analytes which reflect use of tobacco to examine effects of tobacco smoke exposure.	Ongoing.	DHHS/CDC/NCEH	Tom Bernert (404) 488-7911
State Services and Public Information Services on Indoor Air Pollution	Provide information resource for State health departments and members of the public requesting information on the health effects of air pollutants.	Ongoing.	DHHS/CDC/NCEH	Ruth Etzel (404) 488-7320
Environmental Tobacco Smoke	Provide technical and public information on environmental tobacco smoke.	Ongoing.	DHHS/CDC/NCCDPHP/ OSH	Technical Information Center, OSH (404) 488-5705
Health Statistics	Collect, analyze, and disseminate health data from national surveys.	Ongoing.	DHHS/CDC/NCHS	Diane Wagener (301) 436-7032
Lung Cancer Risk from Passive Exposure to Cigarette Smoke	Evaluate the lung cancer risk from passive exposure to smoke at home and at work among never and ex-smokers and determine the effect of household smoke exposure on the relationship between indoor radon and lung cancer risk.	Ongoing.	DHHS/NIH/NIEHS	Dale Sandler (919) 541-4668

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Dust Mite, Cockroach and Cat Allergens In Asthma	Examine the role of indoor allergens (dust mite, cat, cockroach), of homes, in the development of, and persistence of symptoms of, asthma.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Environmental Determinants of Childhood Asthma	Studies relating exposure to tobacco smoke, allergens (notably indoor allergens), IgE levels in cord blood, and the development of asthma in childhood.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Trichophyton and Aspergillus Immunology and Lung Disease	Extend observations that some patients with "non-allergic" asthma do, in fact, have immune responses to agents that have not previously been associated with asthma -- Aspergillus fumigatus and Trichophyton.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Cockroach Allergens - Immunochemistry and Allergic Disease	Purify and clone cockroach allergens, to develop assays for measuring cockroach allergen levels (for example, levels in house dust samples), and to design methods to reduce exposure to cockroach allergens.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Peptide Immunotherapy in Asthma	Determine whether immunotherapy with peptides derived from the major cat allergen (an allergen important in asthma) will be useful in treating cat-induced asthma.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Controlled Trial of Dust Mite Avoidance for Asthma	A multisite project to determine whether protocols can routinely reduce dust mite levels to which asthmatic children are exposed, and whether such reduction can improve asthma in these children.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Molecular Studies of Antigens that Cause Lung Disease	Evaluate the structure of one of the major allergens of dust mite, called Der p II. The study intends to define the parts of the allergen molecule that bind to B lymphocytes, in order to design modified proteins that may lead to new treatment of dust mite allergy.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Cellular Basis of Allergic Diseases to House Dust Mite	Analyze the interaction of Der p II with T cells, in order to develop new treatment of dust mite allergy.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Relationship of Atopic Status to Asthma in Children	With particular emphasis on low income and minority housing, this project examines the role of housing conditions (especially the concentration of major indoor allergens) and the development of sensitization to allergens and asthma in children and designs techniques to reduce exposure to these allergens.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Epidemiology of Home Allergens and Asthma	Examines, from birth, the natural history of asthma and relates it to levels of exposure to allergens in the home.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Molecular Genetic Analysis of Asthma	Identify genes associated with asthma. Among the genes being studied are those that control immune responses to indoor allergens.	Ongoing.	DHHS/NIH/NIAID (cofunded with National Heart, Lung, & Blood Institute)	Patricia Gallahan (301) 496-6752
National Cooperative Inner City Asthma Study	Identify risk factors for severe asthma in children in inner cities, design an intervention program to reduce the risk factors and monitor improvement, if any. Factors being studied in the indoor environment are indoor allergens (dust mite, cat, cockroach), tobacco smoke, and indoor pollutants.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Immune Response to an Intracellular Pulmonary Pathogen	Effects of iron availability on the extracellular and intracellular growth of <i>Legionella pneumophila</i> .	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Genetics of Monocyte Killing by Bacteria	Studies on the genetics of <i>Legionella pneumophila</i> and its interactions with host macrophages.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Generic Determinant of Pathogenicity in <i>Legionella</i>	Studies on the intracellular growth of <i>Legionella pneumophila</i> in amoeba and macrophage cells and the effects of environmental and genetic factors on intracellular growth.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Genetics of Iron Acquisition by <i>Legionella Pneumophila</i>	Studies on the genetics of iron acquisition by <i>Legionella pneumophila</i> .	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Genetic Analysis of the <i>Legionella</i> MIP Virulence Factor	Examination of the regulation, distribution, and structure/function of the MIP and MIP-like genes of <i>Legionella pneumophila</i> .	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Iron and Monocyte Activation Against A Lung Pathogen	Identification of factors important in cell-mediated and humoral immune responses to <i>Legionella pneumophila</i> infections.	Ongoing.	DHHS/NIH/NIAID	Patricia Gallahan (301) 496-6752
Chronic Disease of the Airways: Prospective Evaluation of Airways Reactivity	Evaluate airways reactivity in regard to chronic disease outcomes.	Ongoing.	DHHS/NIH/NHLBI	Leslie Cooper (301) 594-7443
Respiratory Disorders of Neonates and Children	Evaluate respiratory disorders in neonates and children.	Ongoing.	DHHS/NIH/NHLBI	Mary Anne Berberich (301) 594-7428
NO ₂ Induced Peroxidation Products and Airway Reactivity	Study of the effect of NO ₂ from Tobacco and Home Gas Stoves-Basic Research.	Ongoing.	DHHS/NIH/NHLBI	James Kiley (301) 594-7443
Cohort Study of Respiratory Illness in Early Childhood	Study of wood smoke and other indoor air pollution on respiratory illnesses.	Ongoing.	DHHS/NIH/NHLBI	James Kiley (301) 594-7443
Determinants of Respiratory Health in Young Adults	Effect of smoking on respiratory health.	Ongoing.	DHHS/NIH/NHLBI	James Kiley (301) 594-7743

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Human Health Effects on Repeated Exposures to Ozone	Effects of ozone on pulmonary health.	Ongoing.	DHHS/NIH/NHLBI	James Kiley (301) 594-7743
Reproductive Disorders Associated with Occupational Exposure to Nitrous Oxide	Evaluate occupational exposures to nitrous oxide.	Ongoing.	DHHS/NIH/NIDR	Kenneth Lynn (301) 496-7220
Contamination Related to Hazardous Wastes	Provide assistance and advice on indoor air contaminants exposures related to hazardous waste sites.	Ongoing.	DHHS/ASTDR	Frank Mithcell (404) 488-4853
RADON ACTIVITIES				
Indoor Radon and Cigarette Smoking in the Etiology of Lung Cancer	Investigate the interaction between lifetime radon exposure and smoking in the etiology of lung cancer in a collaborative epidemiologic study in Utah and Connecticut.	Ongoing.	DHHS/NIH/NIEHS	Dale Sandler (919) 541-4668
Indoor Radon and Lung Cancer Risk	Investigate the lung cancer risk associated with residential radon exposure in New Jersey.	Ongoing.	DHHS/NIH/NIEHS	George Malindzak (919) 541-3289
Indoor Radon and Lung Cancer Risk in Women	Investigate the lung cancer risk associated with indoor radon in residentially stable women in Iowa. Characterize radon exposure using multiple technologies.	Ongoing.	DHHS/NIH/NIEHS	George Malindzak (919) 541-3289
Residential Radon Levels and Risk for Acute Myeloid Leukemia in Childhood	Assess radon levels in the homes of case-children and controls in a national study of risk factors for childhood acute myeloid leukemia.	Ongoing.	DHHS/NIH/NIEHS	Dale Sandler (919) 541-4668
Study of Thyroid Cancer in High Radiation Areas in China	Study the incidence of thyroid cancer in high radiation areas in China.	Ongoing.	DHHS/NIH/NCI	John Boice (301) 496-6600

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Epidemiologic Study of Lung Cancer and High Levels of Indoor Radon in China	Investigate the effect of residential radon concentration and other indoor air pollution on lung cancer risk in an area of China where 50% of the population live in underground dwellings and where indoor radon concentrations are 3-4 times U.S. levels.	Ongoing.	DHHS/NIH/NCI	Jay Lubin (301) 496-3356
Evaluation of Radon/Radon Progeny Exposures in Radon Mitigators	Determine the factors involved in exposure to radon during mitigation activities.	Data collection ongoing.	DHHS/CDC/NIOSH	Tom Bloom (513) 841-4314
Consultations with States and Other Organizations	Respond to inquiries on health aspects of radon exposure.	Ongoing.	DHHS/CDC/NCEH	Christie Ehemann (404) 488-7040
National Park Service Indoor Radon Program (w/DOI)	Assist in the design and implementation of the National Park Service indoor radon sampling program.	Ongoing.	DHHS/CDC/NCEH	Christie Ehemann (404) 488-7040
Lung Cancer Among Non-smoking Women with Residential Exposure to Radon Study	Compare estimates of lung cancer risk (per pCi/l) in non-smoking Missouri women to corresponding estimates on miners.	Ongoing.	DHHS/NIH/NCI	Michael Alavanja (301) 496-1611
Household Radon Exposure Among Women Admitted to Hospitals Study	Obtain measurements of radon exposure for each subject, estimate lung cancer risk per pCi/l of concentration, and compare with corresponding estimates on miners.	Ongoing.	DHHS/NIH/NCI	Zdenek Hrubec (301) 496-6600
Lung Cancer Among Women in China Exposed to Indoor Radon and Other Pollutants Study	Obtain measurements of radon exposure for each subject, and estimate lung cancer risk per pCi/l of concentration.	Ongoing.	DHHS/NIH/NCI	John Boice (301) 496-6600
Lung Cancer Among Women in New Jersey Study	Evaluate radon as a potential risk factor by monitoring radon levels in the homes of persons who developed lung cancer and in the homes of others who do not have the disease.	Ongoing.	DHHS/NIH/NCI	Zdenek Hrubec (301) 496-6600

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Trace Progress Towards Healthy People 2000 National Health Objectives	Track increase in home testing for radon. National objective for year 2000 is 40 percent of homes tested.	Ongoing.	DHHS/CDC/NCHS	Mary Anne Freedman (301) 436-7032

INDOOR AIR ACTIVITIES WITHIN THE U.S. DEPARTMENT OF LABOR (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION)

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Co-Chair	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	DOL/OSHA	Frank Frodyma (202) 219-8021
Occupational Standards for Indoor Air Pollutants	Regulate levels of air pollutants in the industrial workplace.	Publish final rules on cadmium, asbestos, formaldehyde, and 4,4-methylenedianiline. Final rule stage for 1,3-butadiene and methylene chloride. Proposed rule stage for glycol ethers. Kentucky, Michigan, and Washington are presently considering workplace IAQ standards under their OSHA-approved State plans.	DOL/OSHA	John Martonik (202) 219-7075
Regulatory Review of Indoor Air Quality and Smoking	Consider whether OSHA should regulate smoking and indoor air quality.	Public proposal issued on 4/5/94. Public comment period until 8/13/94. Received over 100,000 written comments. Public hearings began on September 20, 1994 and will continue into March 1995. Request for information on IAQ issues was published in the <i>Federal Register</i> on September 20, 1991. Comment period closed March 20, 1992. Reviewing over 1,200 comments.	DOL/OSHA	John Martonik (202) 219-7075
Field Health Compliance Inspections	Protect health of American workers by inspecting exposure to hundreds of air contaminants.	Ongoing.	DOL/OSHA	Regional Administrators, Area Directors, and State Plan Administrators
IAQ Training Course	Assist Federal and State Compliance Officials in evaluating indoor air quality in non-industrial workplaces.	Ongoing.	DOL/OSHA	Zigmas Saduskas (312) 353-2500 ext. 129
Health Response Team Onsite Evaluation	Assist Federal and State Compliance Officials in conducting indoor air quality investigations in non-industrial workplaces.	Ongoing.	DOL/OSHA	Robert Curtis (801) 487-0521

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Legionnaires' Disease Chapter of OSHA Technical Manual	Assist Federal and State Compliance Officials in evaluating complaints of Legionnaires' Disease and provide technical guidance for conducting a legionella outbreak investigation.	Final draft.	DOL/OSHA	Robert Curtis (801) 487-0521
IAQ Chapter of OSHA Technical Manual	Provide technical guidance to Federal and State Compliance Officials who investigate IAQ cases.	Published: 11/90. Under revision.	DOL/OSHA	Charles Adkins (202) 219-7031
Tuberculosis Chapter of OSHA Technical Manual	Assist Federal and State Compliance Officials in evaluating TB and provide technical guidance for conducting a TB investigation.	Draft in preparation.	DOL/OSHA	Melissa McDiarmid (202) 219-5003

INDOOR AIR ACTIVITIES WITHIN THE BONNEVILLE POWER ADMINISTRATION

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	BPA	Kathy Fisher (503) 230-4375
Ventilation Research Project	Investigate effects of mechanical ventilation systems on air flows inside residential buildings and between the structure and the outside environment.	Phase I single family ventilation studies completed. Phase II multifamily ventilation study completed. Phase III options being explored. Completion date to be determined.	BPA	Mark Jackson (503) 230-5475
Moisture, Ventilation, and Thermal Performance Investigation of Manufactured Housing Weatherization	To assess the effects of weatherization on moisture levels, ventilation levels, and thermal performance in 10 manufactured homes in the Pacific Northwest.	Ongoing. Expected completion date: 8/96.	BPA	Eileen Jensen (503) 230-3462
RADON ACTIVITIES				
Evaluation of the Washington State Building Code Radon Passive Stack Requirements	To conduct a study of the effectiveness of passive stacks in new homes.	Ongoing. Expected completion date: 6/95.	BPA & EPA	Chuck Eastwood (360) 418-2692

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	GSA	Vivian Mills (202) 501-1115
Indoor Air Quality Policy and Guidelines for GSA-Owned and Controlled Buildings	Maintaining acceptable IAQ throughout GSA space.	Ongoing.	GSA	Vivian Mills (202) 501-1115
Interagency Agreement with NIOSH	Fund IAQ research in GSA's Overland, Missouri and Long Beach, California buildings.	Data analysis; draft preparation.	GSA	Vivian Mills (202) 501-1115
Development of a GSA Policy on Filters	Require a minimum filtration efficiency for HVAC system filters in GSA buildings.	Completed.	GSA	Vivian Mills (202) 501-1115
Development of IAQ Assessments Guidelines	Standardize the proactive IAQ studies conducted by contractors throughout GSA's regions.	Completed.	GSA	Vivian Mills (202) 501-1115
Adoption of the ASHRAE 62 Ventilation Standard	To improve customer satisfaction.	Completed.	GSA	Vivian Mills (202) 501-1115
Development of Furniture Off-Gassing Document	Provide information to customers who purchase office furniture from the FSS schedule.	Draft due in early 1995.	GSA	Jim Price (FSS) (703) 305-6338 Fred Sisson (PBS) (202) 708-5236
Radon Program Management	Coordination of radon testing and mitigation in GSA-controlled buildings.	Essentially complete.	GSA	Cathy Thomas (202) 501-1293

INDOOR AIR ACTIVITIES WITHIN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	NASA	Ray Gilbert (703) 557-8163
Study on House Plants and Air Quality	Determine mechanisms by which plants remove chemicals from air. Evaluate capacity and efficiency of removal.	Concluded.	NASA/John C. Stennis Space Center	Ray Gilbert (703) 557-8163
Offgassing of Materials for Spacecraft Applications	Determine acceptability of materials for spacecraft use.	Maintain data in computer file called MAPTIS. Publish handbook, <i>Materials Selection List for Space Hardware Systems</i> annually. Research ongoing.	NASA/Marshall Space Craft Flight Center, White Sands, NM	C.F. Key (205) 544-2483

INDOOR AIR ACTIVITIES WITHIN THE TENNESSEE VALLEY AUTHORITY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	TVA	William A. Pitman (615) 632-6699
Chattanooga Indoor VOC and NO ₂ Study	Examine short-term concentrations of VOCs and NO ₂ in 7 residences and 3 public buildings.	Completed: report available.	TVA	William J. Parkhurst (205) 386-2793
NO ₂ Concentrations in 5 Chattanooga, TN Public Housing Developments	Examine relationships between NO ₂ and various appliance types and weatherization measure in 200 homes.	Completed: report available.	TVA	William J. Parkhurst (205) 386-2793
NO ₂ Intervention Study in Public Housing Developments	Examine influence of gas appliance inspection and maintenance program on NO ₂ concentrations in 30 public housing residences.	Completed: report available.	TVA	William J. Parkhurst (205) 386-2793
Industrial Hygiene Studies	Monitor and assess IAQ in buildings and structures occupied by TVA.	TVA Occupational Hygiene Department leads project. Work in progress.	TVA	John McFeters (202) 386-2314
Consumer Outreach	Develop guidelines and standards for use in distributor programs and initiatives primarily involving residential and small commercial buildings.	Ongoing.	TVA	Dale Depew (615) 751-3260
RADON ACTIVITIES				
Implementation of Indoor Radon Abatement Act	Conduct radon measurements within TVA buildings.	Report submitted to EPA.	TVA	Jesse Coleman (205) 386-2993

INDOOR AIR ACTIVITIES WITHIN THE U.S. DEPARTMENT OF COMMERCE (NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY)

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	DOC/NIST	Andy Persily (301) 975-6418 Fax: (301) 990-4192 APersily@NIST.GOV
Indoor Air Pollution and Building Airflow Models	Develop generalized simulation programs that account for air movement and contaminant dispersal within buildings due to generation, dilution, reaction, adsorption and other mechanisms.	CONTAM93 available for multizone airflow and contaminant dispersal modelling. CONTAM95 under development with enhanced simulation capabilities in the area of chemical reaction and adsorption/desorption mechanisms.	DOC/NIST	Andy Persily (301) 975-6418
IAQ Modeling in Large Buildings	Use multizone indoor air quality modeling to investigate impact of building features, ventilation system design and performance, ambient conditions, and indoor pollutant source characteristics on building airflows and contaminant concentrations.	Ongoing effort to identify important pollutant transport mechanisms, model input requirements, modeling capabilities requiring further development, and the potential performance of indoor air quality control options. Case study being conducted for the case of radon entry and transport in four large buildings.	DOC/NIST	Andy Persily (301) 975-6418
Ventilation and Air Quality in Large Buildings	Develop test methods and procedures for studying air exchange characteristics, pollutant levels and their relationship in large buildings.	Ongoing long-term monitoring of ventilation and contaminant levels in new and existing office buildings. Ventilation effectiveness measurement techniques for mechanically ventilated office buildings under development.	DOC/NIST	Andy Persily (301) 975-6418
Guide to Ventilation Assessment in Commercial Buildings	Develop a practical guide to procedures for assessing ventilation rates in commercial buildings for use in IAQ investigations and other applications.	"Manual for Ventilation Assessment in Commercial Buildings," Report No. NISTIR 5329 available.	DOC/NIST	Andy Persily (301) 975-6418

U.S. DEPARTMENT OF COMMERCE

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
IAQ Commissioning in a New Office Building	Perform a pilot indoor air quality commissioning effort in a new office building to identify issues in the implementation of such a program and to obtain indoor air quality performance data prior to and immediately after construction.	Effort completed and final report available, "Indoor Air Quality Commissioning in a New Office Building," Report No. NIST 5586.	DOC/NIST	Andy Persily (301) 975-6418
NIST Radium and Radon Measurement Standards	Maintain national standards; develop new transfer standards and applications; disseminate standards and provide mechanisms for insuring the quality of radon measurements (calibrations, intercomparisons, proficiency testing, etc.).	Ongoing.	DOC/NIST	R. Collé (301) 975-5527

INDOOR AIR ACTIVITIES WITHIN THE U.S. DEPARTMENT OF DEFENSE

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	DOD/DON	Daniel Reinhard (703) 614-1287
SBS Complaint Investigations	Provide guidance to field support teams on conducting indoor air quality investigations at Air Force facilities.	Guidance document completed: 4/87.	DOD/USAF/AL/OEMI	Lt. Col Craig Hollenbeck (210) 536-6049
Data Repository of IAQ Investigations	To assess magnitude of IAQ problems at Air Force facilities.	Reports to be issued.	DOD/USAF/AL/OEMI	Lt. Col Craig Hollenbeck (210) 536-6049
RADON ACTIVITIES				
Army Radon Reduction Program	Identify occupied Army buildings worldwide with elevated radon levels and reduce radon to below 4 pCi/l.	Over 70,000 buildings tested; about 28,000 yet to be tested. Assessment phase to be completed: 9/93. Mitigation scheduled through FY 97.	DOD/DOA	Nelson Labbe (703) 806-5202
Navy Radon Assessment and Mitigation Program	Screen Navy and Marine Corps installations for structures with elevated radon levels and reduce elevated levels, where found, to below 4 pCi/l.	Initial screening phase completed with the exception of some precautionary rescreening based on statistical guidelines. Assessment and mitigation phases being scheduled through FY 97 based on established priority guidelines.	DOD/DON	LCDR Garry Higgins (703) 602-2582
Air Force Radon Assessment and Mitigation Program	Identify, evaluate and mitigate potential sources of radon which could pose unacceptable risks to the Air Force populace worldwide.	Initial Screen Phase of all active Air Force installations completed 3/88. Detailed Assessment Phase of residential/high interest (schools, dormitories, etc.) structures at medium/high probability installations essentially complete. Completion of Detailed Assessment Phase for administrative buildings pending funding availability and implementation of legislative mandate. Mitigation of residential/high interest structures identified as having elevated radon levels above 4 pCi/l during the Detailed Assessment Phase is ongoing.	DOD/USAF	Mark Shannon (202) 767-0157 (Mitigation) Lt. Col Don Jordan (202) 767-0621 (Assessment)

U.S. DEPARTMENT OF DEFENSE

INDOOR AIR ACTIVITIES WITHIN THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	HUD	Margery A. Turner (202) 708-4230
RADON ACTIVITIES				
Development of Radon Policy for HUD Program	Determine HUD/FHA and Public and Indian Housing policies to handle radon issues.	Policy called for in McKinney Amendments Act. Submitted 1991.	HUD	Edwin Stromberg (202) 708-4370
Develop Site Classification Test for Radon Source Potential	Develop and demonstrate the effectiveness of a site test for radon risk of building sites.	Completed.	HUD and NIST	William Freeborne (202) 708-4370
Mitigate HUD-owned Multi-family Buildings	Test and mitigate HUD-owned multi-family buildings in high radon areas.	Project completed.	HUD	Edwin Stromberg (202) 708-4370
LEAD-BASED PAINT ACTIVITIES				
Lead-Based Paint Abatement Grant Program	Provide grants to States and local governments for lead-based paint abatement in private housing.	Grants announced October 1994. Future rounds cancelled. Proposed to become part of HUD Affordable Housing Fund.	HUD	Ellis Goldman (202) 755-1822
Lead-Based Paint Abatement Demonstration in Public Housing	Demonstrate abatement strategies in public housing with special attention to transfer of dust between units.	Field work complete. One case study sent to Congress; one in clearance; one in preparation.	HUD	Conrad Arnolts (202) 755-1805
National Hazard Estimate and Comprehensive and Workable Plan for Private Housing	Develop an estimate of the national hazard from lead-based paint; prepare a comprehensive and workable plan for the prompt and cost-effective identification and abatement of lead-based paint in all privately owned housing in the United States.	Report submitted to Congress: 12/90.	HUD	Steve Weitz (202) 755-1805
Comprehensive and Workable Plan for Public Housing	Develop a comprehensive and workable plan for lead-based paint abatement in public housing.	Field survey work completed. Cost data to be obtained from the abatement demonstration in public housing. Report to Congress scheduled for completion: 10/95.	HUD	Steve Weitz (202) 755-1805

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
In-Place Management (Interim Containment) Strategy for Public Housing	Develop a strategy for managing potential lead-based paint hazards for properties which are not scheduled for comprehensive modernization in the near-term.	Comment period completed: 11/91. Strategy issued to housing authorities as component of Risk Assessment Notice, dated June 25, 1992.	HUD	William Wisner (202) 755-1805
Disclosure Impact Study	Survey on public awareness of lead-based paint hazards, providing baseline data as a part of a program to determine the impact of hazard disclosure at the time of real estate transactions. Data will also provide background information for designing public information campaigns. HUD will seek to identify improved ways of informing population groups that are least informed yet at high risk of lead poisoning.	Preliminary results will be available in the Fall, 1995.	HUD	Barbara Haley (202) 755-1805
National Registry of Proficient X-Ray Fluorescence (XRF) Operators	Establishment of a registry of competent XRF inspectors by the National Lead Abatement Council.	Implementation expected in September 1995. Completion of project in September 1996.	HUD	William Wisner (202) 755-1805
XRF Evaluation Standard	HUD and EPA are evaluating the performance characteristics of specific makes and models of portable XRF analyzers, as requested by manufacturers, and will publish the findings in a consistent format that will assist users in the operation and/or purchase of the instruments. NIST is developing an evaluation standard for the XRF that can be used by private laboratories.	The evaluation effort will be completed by June 1996.	HUD	William Wisner (202) 755-1805
Grant Program Evaluation	An intensive evaluation of the effectiveness and cost of the methods being used by HUD grantees to reduce lead-based paint hazards in privately owned housing occupied by low-income households.	Preliminary results will be available in October 1995 and annually thereafter. Final report due in 1999.	HUD	Ellis Goldman (202) 755-1822

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
In-Home Education and Specialized Cleaning	University of Rochester study of the effectiveness of educating families on special dust-lead cleaning practices in reducing children's blood lead levels.	Report available later in year.	HUD	Steve Weitz (202) 755-1805
Model Housing Code Provisions	The National Institute of Building Sciences will be developing model provisions for State and local housing codes that incorporate best lead-based paint hazard control practices based on Task Force recommendations.	A two year project to begin in July 1995.	HUD	Conrad Arnolts (202) 755-1805
Operations and Maintenance Manual	The National Institute of Building Sciences is preparing a manual of best practices for controlling lead-based paint hazards when performing routine maintenance work on buildings.	The manual will be available in Summer 1995.	HUD	Conrad Arnolts (202) 755-1805
Study of Dust-Blood Relationship	University of Rochester study of the relationship between lead in house dust and lead in children's blood.	Complete report available from the National Center for Lead-Safe Housing.	HUD	Steve Weitz (202) 755-1805
MANUFACTURED HOUSING				
Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing	Comprehensive technical guidance on how to conduct lead hazard testing and reduction activities. Required by Title X of 1992 Housing and Community Development Act.	Publication planned: 6/95.	HUD	William Wisner (202) 755-1805
Improving Air Distribution Systems in Manufactured Housing	Develop solutions to increase delivery of heating and cooling air.	Testing of systems is taking place. Projection completion in December 1995.	HUD and NC AEC	William Frabone (202) 708-4370

INDOOR AIR ACTIVITIES WITHIN THE U.S. DEPARTMENT OF THE INTERIOR

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	DOI	Claudia Finney (202) 343-7014 Fax: (202) 523-3609 Claudia.Finney@NPS.GOV
RADON ACTIVITIES				
Mobility, Transport and Fate of Naturally Occurring Radionuclides in Ground Water	Determine factors controlling radionuclide transport and fate along groundwater flow paths, and define mechanisms that release radionuclides to ground water and characterize spatial variation of radionuclide concentrations.	Project completed in 1992. Report on "Relation of Lithology to Variability of Radionuclide Activity in Groundwater in Newark Basin, NJ" is in the review process. Report will be a USGS Water-Supply Paper.	DOI/USGS	Otto Zepceca (609) 771-3900
Natural Radioactivity in Ground Water of the Kirkwood-Cohansey Aquifer System, South New Jersey, 1983-1989	Delineate occurrence and distribution of radionuclides in ground water, identify relation between radionuclide activities and other chemical constituents, delineate source of radioactivity in ground water chemistry, and radionuclide content along flow paths.	Project completed; report approved and in review process. "Geochemical and Hydrogeological Controls on Radium in Ground Water in the Kirkwood-Cohansey Aquifer System, South Coastal Plain, NJ" will be published in USGS Water Resources Investigation Reports. (Report 92-4144 at the printer).	DOI/USGS	Otto Zepceca (609) 771-3900
Leaching of Radium from Sediments of the Cohansey Sand	Expose sediment from different depths of the aquifer to water of different chemical quality to determine effects of various chemistries on leaching of radium.	Experimental procedures being designed.	DOI/USGS	Otto Zepceca (609) 771-3900

U.S. DEPARTMENT OF THE INTERIOR

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Investigation of the Geology and Geochemistry of Radon in Shear Zones (w/DOE)	Investigate radon in major shear zones along the east coast of the U.S.	Project completed. Sampling and chemical analysis of rock and soil samples of the Great Valley, WV completed. Chemical analysis of rock and soil samples from High Shoals and Kings Mountain Granites, NC and Lake Agassiz, ND in progress. See end of year report for 1991 and renewal proposal for 1992 for additional information (DOE Project DE-AI05-88ER60665).	DOI/USGS	Linda Gundersen (303) 236-5528

INDOOR AIR ACTIVITIES WITHIN THE U.S. DEPARTMENT OF STATE

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	DOS/Office of Safety/ Health and Environmental Management	Stephen Uman (202) 663-3230
RADON ACTIVITIES				
Radon Assessment Advisory Group	Select a course of action for radon control program for overseas buildings and dwellings.	Ongoing.	DOS	Richard Cheslock (703) 875-7015

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
CIAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	DOT/OST/Office of Environment, Energy and Safety	Arnold Konheim (202) 366-4849
Smoking Aboard Aircraft	Restrict smoking on board commercial airline flights in order to reduce health risks and enhance aviation safety.	Smoking is now prohibited on almost all domestic flights. On November 1, 1994, the United States, Australia and Canada signed an agreement banning smoking on non-stop flights between their countries. Other nations are expected to join with the U.S. in prohibiting smoking.	DOT/OST/Office of Environment, Energy and Safety	Arnold Konheim (202) 366-4849
Aircraft Disinsection	Working to eliminate the disinsection of aircraft while passengers and crew are on-board by working with foreign countries, the World Health Organization and the International Civil Aviation Organization and through a rulemaking to require airlines and travel agents to notify customers of disinsection prior to purchasing tickets.	Ongoing.	DOT/OST/Office of Environment, Energy and Safety	Arnold Konheim (202) 366-4849
Cabin Air Quality	Determine what aircraft cabin air conditions, if any, including pressure altitude systems, could be harmful to the health of airline passengers and crew as well as the risk of airline passengers and crew contracting infectious diseases during flight.	New project: Public law was passed on August 23, 1994 directing a research program be established. An existing interagency agreement with the National Institute for Occupational Safety and Health (NIOSH) was amended to determine the feasibility of designing and conducting the study of chemical, physical, and microbiological aspects of cabin air quality. The completion of approximately 24 survey flights will be accomplished during remainder FY 95 and FY 96. A 5-year epidemiological study to address disease transmission in the cabin environment is proposed for FY 97 thru 2002.	DOT/FAA/Office of Aviation Medicine	Jerry Horolinsky, M.D. (404) 954-6820 Jean Watson (202) 366-6985

INDOOR AIR QUALITY PUBLICATIONS AVAILABLE FROM FEDERAL AGENCIES

Publications listed below were issued as a general public information or technical assistance activity. They are intended to provide guidance to either the general public or some specific segment of the public. Activities that result in the publication of technical reports are listed and described under the sponsoring Federal agency earlier in this document.

TITLE	DATE	LEAD AGENCY/OFFICE	CONTACT
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U.S. ENVIRONMENTAL PROTECTION AGENCY

Those publications with "PIC" or "IAQ INFO" listed as the contact should be ordered from the following sources:

Indoor Air Quality Information Clearinghouse (IAQ INFO)
P.O. Box 37133
Washington, D.C. 20013-7133
(800) 438-4318
(202) 484-1307
FAX: (202) 484-1510

EPA Public Information Center (PIC)
401 M Street S.W. (PM-3404)
Washington, D.C. 20460
(202) 260-2080

Building Air Quality: A Guide for Building Owners and Facility Managers
(GPO Number: S/N 055-000-00390-4. Cost: \$24; discount for 100 or more)

1991

EPA/OAR/ORIA/IAD
(w/NIOSH)

Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA
15250-7954
or Call:
(202) 512-1800

IAQ Tools for Schools Action Kit

1995

EPA/OAR/ORIA/IAD

IAQ Problem Solving Wheel

1995

EPA/OAR/ORIA/IAD

PUBLICATIONS AVAILABLE FROM FEDERAL AGENCIES

TITLE	DATE	LEAD AGENCY/OFFICE	CONTACT
BAQ Training Kit	1993	EPA/OAR/ORIA/IAD (w/NIOSH)	National Archives National Audiovisual Center 8700 Edgeworth Drive Capitol Heights, MD 20743-3701 1-800-788-6282 FAX (301) 763-6025 TDD (301) 763-4385
<i>Introduction to Indoor Air Quality:</i> <i>A Self-Paced Learning Module</i> <i>A Reference Manual</i> (Cost: \$47; \$40 for NEHA members)	1991	EPA/PHS	The National Environmental Health Association 720 South Colorado Blvd, South Tower, Suite 970 Denver, CO 80222 Telephone: (303) 756-9090
<i>Indoor Air Pollution: An Introduction for Health Professionals</i>	1994	EPA, ALA	IAQ INFO
<i>Targeting Indoor Air Pollution: EPA's Approach and Progress</i>	1993 (rev.)	EPA/OAR/ORIA	IAQ INFO, PIC
<i>What You Should Know About Combustion Appliances and Indoor Air Pollution</i>	1991	EPA, CPSC, and ALA	IAQ INFO, PIC
<i>The Inside Story: A Guide to Indoor Air Quality (EPA 402-K 93-007)</i>	1993 (rev.)	EPA/OAR/ORIA (w/CPSC)	IAQ INFO, PIC
Fact Sheets: <i>EPA and Indoor Air Quality</i> <i>Ventilation and Air Quality in Offices</i> <i>Sick Building Syndrome</i> <i>Residential Air Cleaners</i> <i>Use and Care of Home Humidifiers</i> <i>Carpet and Indoor Air Quality</i>	1991 (rev.) 1990 (rev.) 1991 (rev.) 1990 1991 1995 (rev.)	EPA/OAR/ORIA	IAQ INFO, PIC
<i>Setting the Record Straight: Secondhand Smoke is a Preventable Health Risk</i>	1994		IAQ INFO
<i>Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders</i>	1993		IAQ INFO, PIC
<i>Secondhand Smoke: What You Can Do (EPA 402-F 93-003)</i>	1993	EPA	IAQ INFO, PIC
<i>Flood Cleanup: Avoiding Indoor Air Quality Programs</i>	1993		IAQ INFO

PUBLICATIONS AVAILABLE FROM FEDERAL AGENCIES

PUBLICATIONS AVAILABLE FROM FEDERAL AGENCIES

TITLE	DATE	LEAD AGENCY/OFFICE	CONTACT
<i>Residential Air-Cleaning Devices: A Summary of Available Information</i>	1990	EPA/OAR/ORIA	IAQ INFO
<i>Consumers Guide to Radon Reduction</i> (EPA 402-K 92-003)	1992	EPA	PIC
<i>Home Buyer's and Seller's Guide to Radon</i> (EPA 402-R 93-003) (2/93)	1993	EPA/OAR/ORIA	PIC
<i>Radon Measurements in Schools - Revised Edition</i> EPA 402-R-92-014 (7/93)	1993	EPA/OAR/ORIA/Radon	PIC
<i>Radon Measurements in Schools - Self-Paced Training Workbook</i> EPA 402-B-94-001	1994	EPA/OAR/ORIA/Radon	PIC
<i>Reducing Radon in Schools: A Team Approach</i> (EPA 402-R 94-008)	1994	EPA/OAR/ORIA/Radon	Bryan Ligman (202) 233-9432
<i>Indoor Radon and Radon Decay Product Measurement Device Protocols</i> EPA 402-R-92-004	1992		PIC
<i>Protocols for Radon and Radon Decay Product Measurements in Homes</i> EPA 402-R-93-003 (6/93)	1993		PIC
<i>Asbestos in the Home: A Homeowner's Guide</i>	1988	EPA Region 10	Mary Frances Briggs (202) 553-1255
<i>Health Effects of Wood Burning</i>	1988	EPA Region 8	Chuck Stevens (303) 294-1111
<i>Managing Asbestos in Place</i>	1990	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>Asbestos in Your Home</i>	1990	EPA, CPSC, and ALA	
<i>ABCs of Asbestos in Schools</i>	1989	EPA/OPPTS/OPPT	
<i>Guidelines for Conducting the AHERA TEM Clearance Test to Determine the Completion of an Asbestos Abatement Project</i>	1989	EPA/OPPTS/OPPT	
<i>Assessing Asbestos Exposure in Public Buildings</i>	1988	EPA/OPPTS/OPPT	
<i>A Guide to Performing Reinspections Under the Asbestos Hazard Emergency Response Act (AHERA)</i>	1992	EPA/OPPTS/OPPT	
<i>Indoor Air Pollutants from Household Product Sources</i> (EPA 600/4-91/025)	1991	EPA/OPPTS/OPPT	Janet Remmers (202) 260-1583

PUBLICATIONS AVAILABLE FROM FEDERAL AGENCIES

LEAD FROM FEDERAL AGENCIES

TITLE	DATE	LEAD AGENCY/OFFICE	CONTACT
<i>EPA Study of Asbestos-Containing Materials in Public Buildings</i>	1988	EPA/OPPTS/OPPT	
<i>Environmental Hazards in Your Schools: A Resource Handbook</i>	1990	EPA/OPPTS/OPPT	
<i>Asbestos in Schools: A Guide to New Federal Requirements for Local Education Agencies</i>	1988	EPA/OPPTS/OPPT	
<i>A Guide to Respiratory Protection for the Asbestos Abatement Industry</i>	1986	EPA and NIOSH	
<i>Airborne Asbestos Health Assessment Update</i>	1986	EPA/OPPTS/OPPT	
<i>Guidance for Preventing Asbestos Disease Among Mechanics</i>	1986	EPA/OPPTS/OPPT	
<i>Guidance for Controlling Asbestos-Containing Materials in Buildings</i>	1985	EPA/OPPTS/OPPT	
<i>Measuring Airborne Asbestos Following An Abatement Action</i>	1985	EPA/OPPTS/OPPT	
<i>Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials</i>	1984	EPA/OPPTS/OPPT	
Lead Brochures and Fact Sheets:	1992	EPA/HUD/CDC/DoD	National Lead Information Center 1-800-LEAD-FYI
- <i>Lead Poisoning and Your Children</i>			
- <i>Envenenamiento de Plomo y Sus Niños</i> (Spanish version of above)			
- <i>Home Repairs and Renovations: What You Should Know About Lead-Based Paint</i>			
- <i>Reparaciones y Renovaciones de Casas: Lo Que Usted Debe Saber sobre el Plomo Basado en La Pintura</i> (Spanish version of above)			
- <i>Questions Parents Ask About Lead Poisoning</i>			
- <i>Preguntas que Los Padres Hacen sobre el Envenenamiento de Plomo</i> (Spanish version of above)			
- <i>Testing Your Home for Lead</i>			
- <i>Inspeccionar su Casa por el Plomo</i> (Spanish version of above)			
<i>Radon Prevention in the Design and Construction of Schools and Other Large Buildings</i> (3rd Edition)	1994	EPA/ORD/AEERL	A.B. Craig (919) 541-2824
<i>Radon in Schools - Every School Should Take This Simple Test</i>	1989	EPA. OAR, ORIA	PIC
<i>A Citizen's Guide to Radon</i> , 2nd Edition (EPA 402-K 92-001) (5/92)	1992	EPA and HHS	PIC
<i>Technical Support Document for the 1992 Citizen's Guide to Radon</i> (EPA 400-R 92-1.1)	1992	EPA/OAR/ORIA	Frank Marcinowski (202) 233-9437
<i>National Residential Radon Survey Summary Report</i>	1992	EPA/OAR/ORIA	

PUBLICATIONS AVAILABLE FROM FEDERAL AGENCIES

PUBLICATIONS AVAILABLE FROM FEDERAL AGENCIES

TITLE	DATE	LEAD AGENCY/OFFICE	CONTACT
<i>Tracer Gas Measurement of Indoor-Outdoor Air Exchange Rates</i>	1994	EPA/ORD/NRMRL	Bruce A. Tichenor (919) 541-2991 BTichenor@ ENGINEER.AEERLEPA .GOV
<i>Managing Residential Sources of Indoor Air Pollution</i>	1994	EPA/ORD/NRMRL	
<i>Comparing the Field and Laboratory Emission Cell (FLEC) with Traditional Emissions Testing Chambers</i>	1994	EPA/ORD/NRMRL	
<i>Considerations of Revisions of Emissions Testing Protocols</i>	1994	EPA/ORD/NRMRL	
<i>Evaluation of Emissions from Latex</i>	1995		
<i>Overview of Source/Sink Characterization Methods</i>	1994	EPA/ORD/NRMRL	
<i>AEERL's Pollution Prevention Research Programs</i>	1994	EPA/ORD/NRMRL	Kelly Leovic (919) 541-7717 KLeovic@ ENGINEER.AEERLEPA .GOV
<i>The Application of Pollution Prevention to Reduce Indoor Air Emissions from Office Equipment and from Composite Wood Materials</i>	1994	EPA/ORD/NRMRL	
<i>EPA Radon Mitigation Research Update</i>	1994	EPA/ORD/NRMRL	
<i>Indoor Air Research: Characterizing Air Emissions from Indoor Sources</i>	1995	EPA/ORD/NRMRL	
<i>Office Equipment: Design, Indoor Air Emissions, and Pollution Prevention Opportunities</i>	1995	EPA/ORD/NRMRL	
<i>Radon Mitigation Research: Improved Technology for Environmental Protection (EPA 600-F 94-035)</i>		EPA/ORD/NRMRL	
<i>Comparison of Soil Permeability Measurements Using Probes of Different Sizes and Geometrics</i>	1994	EPA/ORD/NRMRL	Ronald B. Mosley (919) 541-7865
<i>Measurement of the Effects of Moisture Distribution on the Transport Properties of Radon and Other Soil Contaminants in EPA's Soil Chamber</i>	1994	EPA/ORD/NRMRL	
<i>Large Building Characterization</i>	1994	EPA/ORD/NRMRL	Marc Y. Menetrez (919) 541-7981

PUBLICATIONS AVAILABLE FROM FEDERAL AGENCIES

TITLE	DATE	LEAD AGENCY/OFFICE	CONTACT
<i>Radon Reduction Techniques for Existing Detached Houses: Technical Guidance (Third Edition) for Active Soil Depressurization Systems (EPA 625-R 93-011)</i>	1993	EPA/ORD/NRMRL	Bruce Henschel (919) 541-4112
<i>Analysis of Radon Mitigation Techniques Used in Existing U.S. Houses</i>	1994	EPA/ORD/NRMRL	
<i>Physical and Numerical Modeling of ASD Exhaust Dispersion Around Houses (EPA 600-R 94-115)</i>	1994	EPA/ORD/NRMRL	
<i>Physical and Numerical Modeling of Active Soil Depressurization Exhaust Dispersion Around Houses</i>	1994	EPA/ORD/NRMRL	
<i>Soil and Fill Laboratory Support-1991, Florida Radon Research Program (EPA 600-R 94-064)</i>	1994	EPA/ORD/NRMRL	David Sanchez (919) 541-2979 DSanchez@ ENGINEER.AEERL.EPA .GOV
<i>Supplement to: Standard Measurement Protocols, Florida Radon Research Program (EPA 600-R 94-001)</i>	1994	EPA/ORD/NRMRL	
<i>Passive Radon Control Feature Effectiveness in New House Construction in South Central Florida</i>	1994	EPA/ORD/NRMRL	
<i>Laboratory Assessment of the Permeability and Diffusion Characteristics of Florida Concretes: Phase I. Methods Development and Testing (EPA 600-R 94-053)</i>	1994	EPA/ORD/NRMRL	
<i>Recommended Standards and Practices for Radon Resistant Passive Construction in Slab-on-Grade Houses</i>	1994	EPA/ORD/NRMRL	
<i>Air Infiltration Measurements Using Tracer Gases: A Literature Review</i>	1995	EPA/ORD/NRMRL	
<i>Development of a Lumped-Parameter Model of Indoor Radon Concentrations</i>	1995	EPA/ORD/NRMRL	
<i>Feasibility of Characterizing Concealed Openings in the House-Soil Interface for Modeling Radon Gas Entry</i>		EPA/ORD/NRMRL	
<i>Radon Generation and Transport in Aged Concrete</i>		EPA/ORD/NRMRL	
<i>The RAETRAD Model of Radon Gas Generation, Transport, and Indoor Entry (EPA 600-SR 94-198)</i>	1995	EPA/ORD/NRMRL	
<i>RAETRAD Version 3.1 User Manual (EPA 600-SR 94-105)</i>	1995	EPA/ORD/NRMRL	

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<i>Soil Radon Potential Mapping of Twelve Counties in North-Central Florida</i> (EPA 600-SR 94-218)	1995	EPA/ORD/NRMRL	
<i>Soil and Fill Laboratory Support -- 1991 (Florida Radon Research Program)</i>	1994	EPA/ORD/NRMRL	
<i>Characteristics of Florida Fill Materials and Soils -- 1990 (Florida Radon Research Program)</i>	1994	EPA/ORD/NRMRL	
<i>Supplement to: Standard Measurement Protocols - Florida Radon Research Program</i>	1994	EPA/ORD/NRMRL	
<i>Characterization of Environmental Chambers for Evaluating Microbial Growth on Building Materials</i>	1994	EPA/ORD/NRMRL	John C. S. Chang (919) 541-3747
<i>Design and Operation of a Dynamic Test Chamber for Measurement of Biocontaminant Pollutant Emission and Control</i>	1994		
<i>Evaluation of Fungal Growth (Penicillium Glabrum) on a Ceiling Tile</i>	1994		
<i>Small Chamber and Test Protocol Design for Chemical and Toxicological Emissions Characterization of Indoor Sources</i>	1994		Mark A. Mason (919) 541-4835
<i>Source Testing and Data Analysis for Exposure and Risk Assessment of Indoor Pollutant Sources-Ideally</i>	1994		Leslie E. Sparks (919) 541-2458
<i>Ventilation Technology Systems Analysis</i>	1994	EPA/ORD/NRMRL	Russell N. Kulp (919) 541-7980 RKulp@ ENGINEER.AEERL.EPA .GOV
<i>HVAC Systems as Emission Sources: A Critical Literature Review</i>	1994	EPA/ORD/NRMRL	
<i>Microbiological Screening of the Indoor Air Quality in the Polk County Administrative Building</i>	1995	EPA/ORD/NRMRL	
<i>Energy Analysis of Applying ASHRAE 62 in the Polk County Administrative Building</i>	1995	EPA/ORD/NRMRL	
<i>Indoor Air Quality Research Programs: A Literature Review</i>	1994	EPA/ORD/NRMRL	
<i>HVAC Systems as Emission Sources Affecting Indoor Air Quality: A Critical Review</i>	1995		

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<i>Non-Occupational Pesticide Exposure Survey</i>	1990	EPA/ORD/EMS	Andrew Bond (919) 541-4329
<i>Environmental Tobacco Smoke: A Guide to Smoking Policies</i>	1993	EPA/OAR/ORIA/IAD	Bob Axelrad (202) 233-9030
U.S. CONSUMER PRODUCT SAFETY COMMISSION			
<i>Asbestos in Your Home</i>	1990	CPSC, EPA, and ALA	CPSC Hotline (800) 638-CPSC or write to: CPSC Washington, DC 20207
<i>Safety Alert on Humidifiers</i>	1988	CPSC	
<i>Biological Pollutants in Your Home</i>	1990	CPSC and ALA	
<i>Safety Alert on Lead in Paint</i>	1990	CPSC	
<i>An Update on Formaldehyde</i>	1990	CPSC	
<i>Safety Alert on Mercury Vapors</i>	1991	CPSC	
<i>What You Should Know About Combustion Appliances and Indoor Air Pollution</i>	1991	CPSC, EPA, and ALA	
<i>Indoor Air Pollution: An Introduction for Health Professionals</i>	1994	CPSC/EPA, ALA, and AMA	
<i>Protect Your Family from Lead in Your Home</i>	1995 (summer)	CPSC, EPA	
<i>Safety Alert on Art Materials</i>	1992	CPSC	
<i>Methylene Chloride Safety Alert</i>	1987	CPSC	
<i>Stripping Paint from Wood</i>	1989	CPSC and HSIA	

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TITLE	DATE	LEAD AGENCY/OFFICE	-CONTACT
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES			
<i>Guidance for Indoor Air Quality Investigations</i>	1987	DHHS/CDC/NIOSH	David Sundin (513) 841-4382
<i>Indoor Air Quality -- Selected References</i>	1989	DHHS/CDC/NIOSH	Technical Information Branch, NIOSH Information Number (800) 356-4674
<i>Building Air Quality: A Guide for Building Owners and Facility Managers</i> DHHS (NIOSH) Publication No. 91-114	1991	DHHS/CDC/NIOSH and EPA	GPO (see EPA listing)
<i>Current Intelligence Bulletin 54: Environmental Tobacco Smoke in the Workplace -- Lung Cancer and Other Health Effects</i> DHHS (NIOSH) Publication No. 91-108	1991	DHHS/CDC/NIOSH	Technical Information Branch, NIOSH Information Number (800) 356-4674
<i>Testimony of NIOSH on the Occupational Safety and Health Administration's Proposed Rule on Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite</i>	1984, 1990, 1991	DHHS/CDC/NIOSH	
<i>Current Intelligence Bulletin 45: Polychlorinated Biphenyls -- Potential Health Hazards from Electrical Equipment Fires or Failures</i> DHHS (NIOSH) Publication No. 86-111	1986	DHHS/CDC/NIOSH	
<i>A Recommended Standard for Occupational Exposure to Polychlorinated Biphenyls</i> DHHS (NIOSH) Publication No. 77-225	1977	DHHS/CDC/NIOSH	
<i>Children's Exposure to Environmental Cigarette Smoke Before and After Birth: Health of Our Nation's Children, United States, 1988</i>	1991	DHHS/CDC/NCHS	Scientific and Technical Information Branch, NCHS (301) 436-8500
<i>Inventory of Exposure-Related Data Systems Sponsored by Federal Agencies (Joint Project -- EPA, NCHS, and ATSDR). EPA/600/R-92/078</i>	1992	DHHS/CDC/NCHS EPA/OHR DHHS/ATSDR	Center for Environmental Research Information, EPA (513) 569-7562
<i>Environmental Health Data from the National Health Interview Survey, 1991 (data tape)</i>	1993	DHHS/CDC/NCHS	Systems and Programming Branch, NCHS (301) 436-7087

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<i>The Surgeon General's Report on the Health Consequences of Involuntary Smoking</i>	1986	DHHS/CDC/NCCDPHP/OSH	Technical Information Center, Office on Smoking and Health (404) 488-5705
<i>Reducing the Health Consequences of Smoking: 25 Years of Progress</i>	1989	DHHS/CDC/NCCDPHP/OSH	
<i>Secondhand Smoke: We're All At Risk</i>	1993	DHHS/CDC/NCCDPHP/OSH	
<i>It's Time to Stop Being a Passive Victim-Action Guide/ETS Campaign Brochure (3990)</i>		DHHS/CDC/OSH	Jeanne Robinson (404) 488-5627
<i>Reducing the Health Risks of Second Hand Smoke-ALA (3963)</i>			
<i>Respiratory Health Effects of Passive Smoking-EPA Fact Sheet (3987)</i>			
<i>What You Can Do About Secondhand Smoke (4219)</i>			
<i>Bibliography on Environmental Tobacco Smoke in the Workplace (4423)</i>			
<i>Breath: Bar and Restaurant Employees Against Tobacco Hazards Pamphlet (4309)</i>			
<i>Testimony of NIOSH on the OSHA Notice of Proposed Rulemaking on Indoor Air Quality</i>	1994	DHHS/CDC/NIOSH	NIOSH Publications Office (800) 356-4674
<i>Something in the Air: Airborne Allergens (No. 93-493)</i>	1993	DHHS/NIH/NIAID	Pat Gallahan (301) 496-6752
<i>How to Create a Dust-Free Bedroom</i>	1994	DHHS/NIH/NIAID	Pat Gallahan (301) 496-6752
<i>African Americans and Smoking: At a Glance</i>	1991	DHHS/OSH/NCCDPHP	Pat McCarty (404) 488-5705
<i>Pathways to Freedom</i>	1992		Fax: (800) CDC-1311
<i>Smokeless Tobacco or Health: An International Perspective</i>	1994		
<i>Smoking, Tobacco, and Health: A Fact Book</i>	1989		
<i>Tobacco Control Information Sources</i>	1993		
<i>Clearing the Air</i>	1989		
<i>Good News for Smokers 50 and Older</i>	1990		

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<i>Health Benefits of Smoking Cessation: At a Glance</i>	1990		
<i>Out of the Ashes</i>	1992		
<i>It's Time to Stop Being a Passive Victim</i>	1993		
<i>Reducing the Health Risks of Secondhand Smoke</i>	1993		
<i>Respiratory Health Effects of Passive Smoking: Fact Sheet</i>	1993		
<i>Environmental Tobacco Smoke in the Workplace: A Selected Bibliography</i>	1993		
<i>Health Consequences of Involuntary Smoking: A Report of the Surgeon General</i>	1986		
<i>The Health Consequences of Smoking: Cancer and Chronic Lung Disease in the Workplace</i>	1985		

U.S. DEPARTMENT OF LABOR (Occupational Safety and Health Administration)

The address of the OSHA Publications Office is listed below. A single free copy of any of the publications listed is available by writing to this address.

OSHA Publications Office
200 Constitution Avenue, N.W., Room N3647
Washington, D.C. 20210

<i>Asbestos Standard for Construction Industry</i> (OSHA Publication No. 3096)	1989 (Rev.)	OSHA	OSHA Publications Office (202) 219-4667 or (202) 219-9266
<i>Asbestos Standard for General Industry</i> (OSHA Publication No. 3095)	1989 (Rev.)	OSHA	
<i>Chemical Hazard Communication</i> (OSHA Publication No. 3084)	1992 (Rev.)	OSHA	
<i>Exposure to Hazardous Chemicals in Laboratories</i> (OSHA Publication No. 3119)	1989	OSHA	
<i>4,4' Methylenedianiline (MDA) for General Industry</i> (OSHA Publication No. 3135)	1992	OSHA	
<i>4,4' Methylenedianiline (MDA) in the Construction Industry</i> (OSHA Publication No. 3137)	1992	OSHA	
<i>Grain Handling</i> (OSHA Publication No. 3103)	1991 reprint	OSHA	
<i>Hazardous Waste and Emergency Response</i> (OSHA Publication No. 3114)	1992 reprint	OSHA	

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<i>Informacion Sobre los Riesgos de los Productos Quimicos</i> (Spanish translation of OSHA Publication No. 3084; OSHA Publication No. 3117)	1989	OSHA	
<i>Occupational Exposure to Cadmium</i> (OSHA Publication No. 3136)	1992	OSHA	
<i>Occupational Exposure to Cadmium in the Construction Industry</i> (OSHA Publication No. 3139)	1992	OSHA	
<i>Safety and Health Guide for the Chemical Industry</i> (OSHA Publication No. 3091)	1986	OSHA	
<i>Safety and Health Guide for the Microelectronics Industry</i> (OSHA Publication No. 3107)	1988	OSHA	
<i>Working with Lead in the Construction Industry</i> (OSHA Publication No. 3126)	1991	OSHA	
The following "Program Highlights" are one-page fact sheets and are available free of charge from the OSHA Publications Office.			
<i>Asbestos</i> (Program Highlights #6)		OSHA	OSHA Publications Office (202) 219-4667 or (202) 219-9266
<i>Carbon Monoxide Poisoning</i> (Program Highlights #11)		OSHA	
<i>Cotton Dust</i> (Program Highlights #23)		OSHA	
<i>Formaldehyde</i> (Program Highlights #27)		OSHA	
<i>Grain Handling Facility</i> (Program Highlights #28)		OSHA	
<i>Occupational Exposure to Hazardous Chemicals in Labs</i> (Program Highlights #33)		OSHA	
<i>Waste Anesthetic Gas</i> (Program Highlights #38)		OSHA	

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U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT			
<i>Comprehensive and Workable Plan for the Abatement of Lead-Based Paint in Privately Owned Housing: A Report to Congress</i>	1990	HUD	HUD USER P.O. Box 6091 Rockville, MD 20850 Credit Card Orders: 1-800-245-2691 or (301) 251-5154 in Maryland and the Washington, D.C., metropolitan area
<i>The HUD Lead-Based Paint Abatement Demonstration (FHA)</i>	1991	HUD	
<i>The HUD Lead-Based Paint Abatement Demonstration (FHA), Vol. I, Appendices A-H</i>	1991	HUD	
<i>The HUD Lead-Based Paint Abatement Demonstration (FHA), Vol. I, Appendices I-P</i>	1991	HUD	
<i>Lead-Based Paint Bibliographies: Problem Identification Strategies</i>	1990	HUD	
<i>Lead-Based Paint Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing</i>	1991	HUD	
<i>Training Course -- Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing</i>	1991	HUD	
<i>EPA Model Training Course for Lead Abatement -- Contractors/Supervisors</i>	1992	EPA/HUD	
BONNEVILLE POWER ADMINISTRATION (U.S. Department of Energy)			
<i>Northwest Residential Radon Standards -- Volume I Project Report (DOE/BP-1273)</i>	1989	BPA	Sue Ludeman (503) 230-7334
<i>Northwest Residential Radon Standards -- Volume II Comment Letters (DOE/BP-1274)</i>	1989	BPA	
<i>Air Leakage Control Manual (DOE/BP-1687)</i>	1992	BPA	

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TITLE	DATE	LEAD AGENCY/OFFICE	CONTACT
<i>Indoor Air Quality in Commercial Buildings -- Volume I: Measurement Results and Interpretation</i> (DOE/BP-12921-4)	1989	BPA	Sue Ludeman (503) 230-7334
<i>Indoor Air Quality in Commercial Buildings -- Volume II: Appendices</i> (DOE/BP-12921-5)	1989	BPA	
<i>Influence of Subslab Aggregate Permeability on Subslab Ventilation Performance</i> (DOE/BP-1757)	1992	BPA	
<i>Analysis of Innovative Ventilation Systems in Multi-family Buildings: RCDP Cycle III</i> (DOE/BP-2092)	1993	BPA	
<i>Measured Infiltration and Ventilation in Manufactured Homes</i> (DOE/BP-13330-1)	1992	BPA	
<i>Spillage of Combustion By-products from Woodstoves Operated in Negative Pressure Environments</i>	1993	BPA	
<i>Radon Mitigation Expert System</i> (Handbook and Computer Diskette)	1993	BPA	Eileen Jensen (503) 230-3462
GENERAL SERVICES ADMINISTRATION			
<i>Asbestos Management and Control</i> (video) QLA 19126	1992	GSA	National Audiovisual Center 8700 Edgeworth Dr. Capitol Heights, MD 20743-3701 (301) 763-1891 1-800-788-6282
<i>Asbestos Management and Control</i> (brochure) QLA 19126	1992	GSA	
<i>Breathing Easy: What You Should Know About Indoor Air Quality</i>	1992	GSA	
<i>Breathing Easy</i> (video) QLA 19194	1992	GSA	
TENNESSEE VALLEY AUTHORITY			
<i>How Clean is Our Air? A Decade of Change</i>	1990	TVA	William Parkhurst (205) 386-2793 (No FTS)
<i>Indoor Air Quality: How It Affects You</i>	1988	TVA	

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