

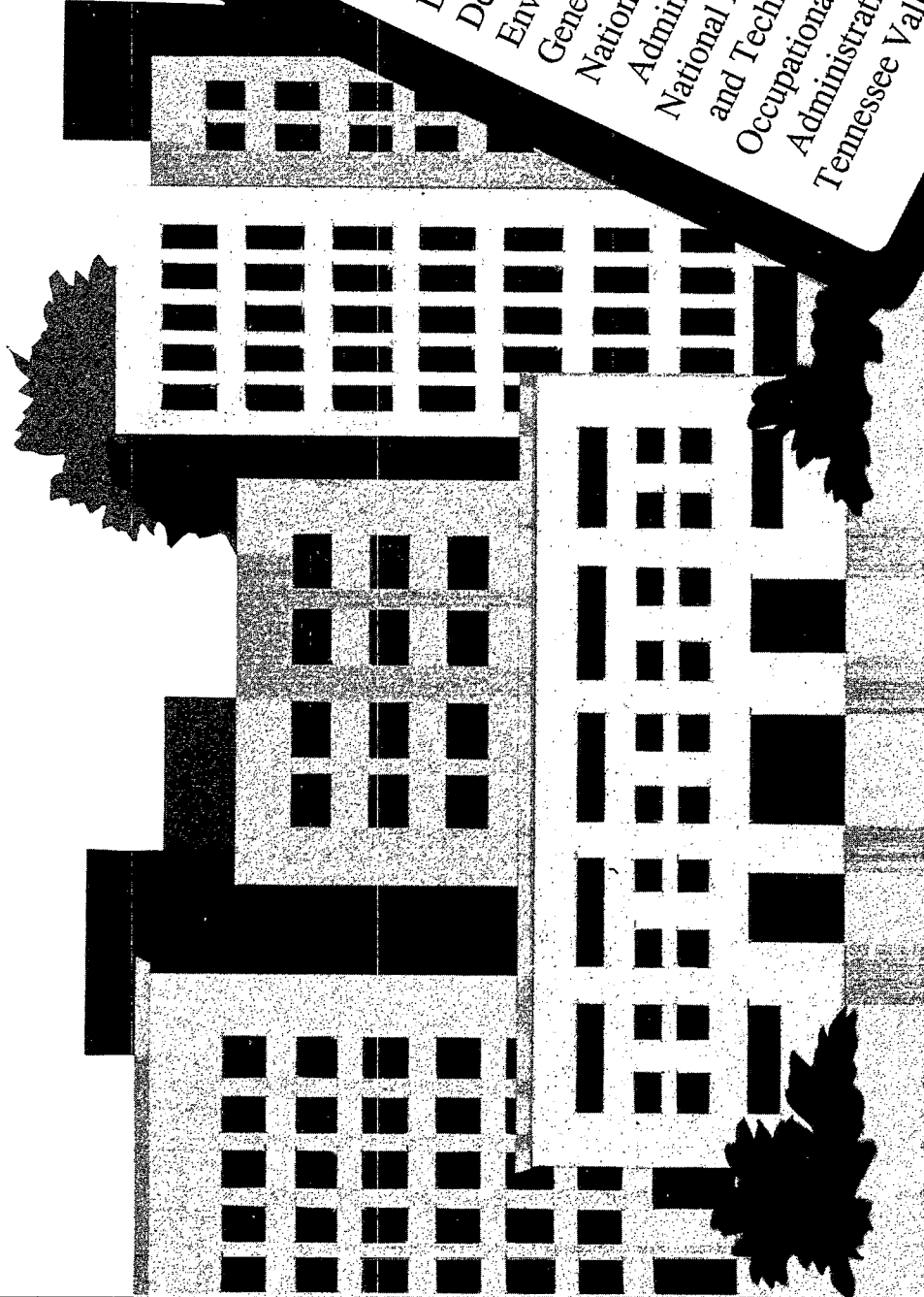


CIAQ

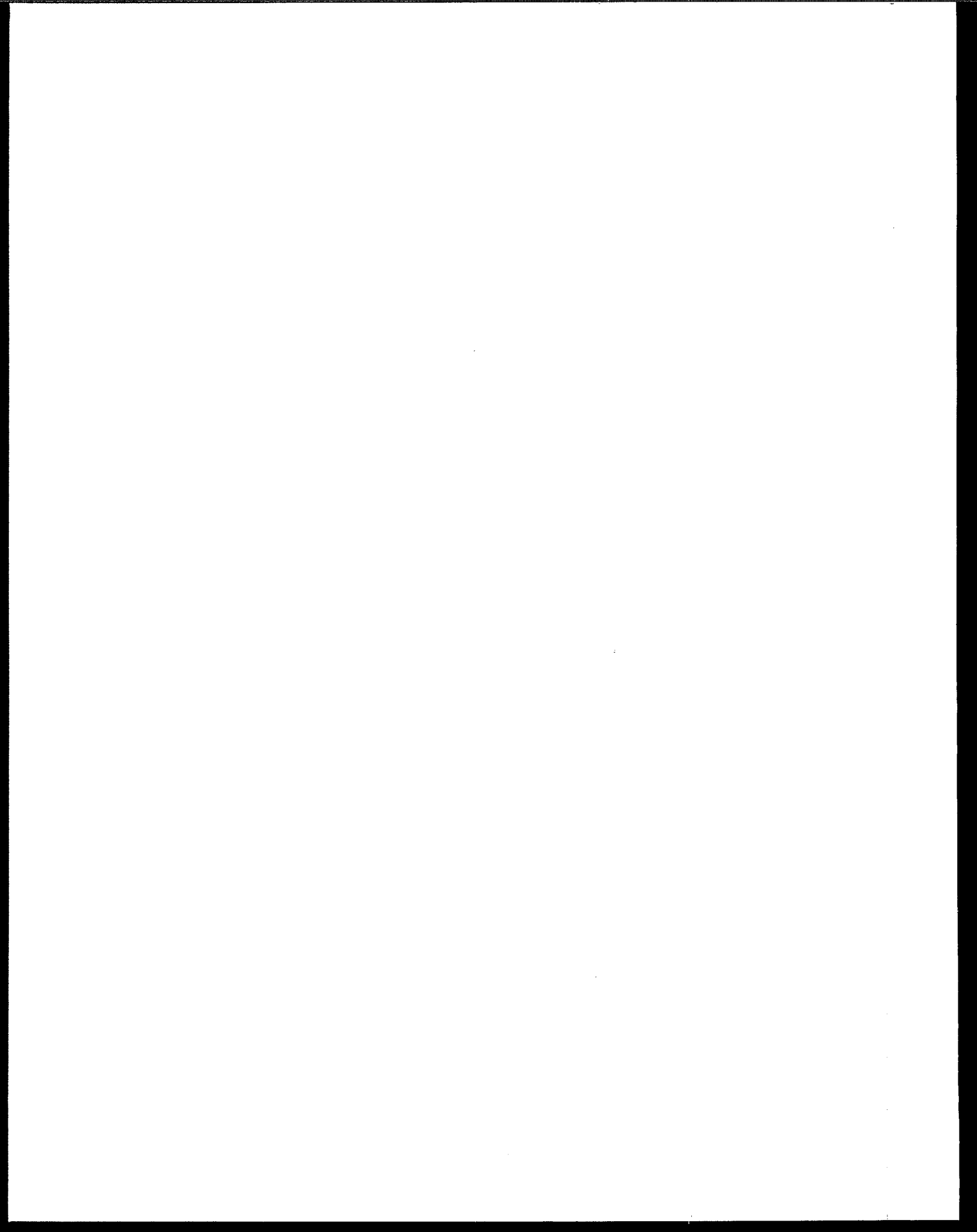
Interagency Committee on Indoor Air Quality

EPA-402-K-99-001
March 1999

EPA Current Federal Indoor Air Quality Activities



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
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



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 1999 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. Some entries may also include an e-mail address for the contact. 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 Environments Division, Office of Air and Radiation (6604-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 JANUARY, 1999. 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 OGWDW	Office of Water Office of Ground Water and Drinking Water
CIAQ Co-Chair Agencies:			
EPA	U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Administrator	OPPE OPA ORME RID	Office of Policy and Program Evaluation Office of Policy Analysis Office of Regulatory Management Evaluation Regulatory Integration Division
OA			
OARM	Office of Administration and Resource Management	NSCEP	National Service Center for Environmental Publications
SHEMD	Safety, Health, and Environmental Management Division	CPSC	U.S. CONSUMER PRODUCT SAFETY COMMISSION
OAR	Office of Air and Radiation	DOE	U.S. DEPARTMENT OF ENERGY
ORIA	Office of Radiation and Indoor Air	PO	Policy
IED	Indoor Environments Division	OEA EE	Office of Environmental Analysis Energy Efficiency and Renewable Energy
ORD	Office of Research and Development	IAQIV OBTS	Indoor Air Quality Infiltration and Ventilation Office of Building Technologies, State and Community Programs
NCEA	National Center for Environmental Assessment	ER	Energy Research
NERL	National Exposure Research Laboratory	OTHER	Office of Health and Environmental Research
NHEERL	National Health and Environmental Effects Research Laboratory	ORAW	Office of Remedial Action and Waste
NRMRL	National Risk Management Research Laboratory	LBL	Lawrence Berkeley National Laboratory
OSP	Office of Science Policy	NREL	National Renewable Energy Lab
OPPTS	Office of Prevention, Pesticides and Toxic Substances	NE	Nuclear Energy
OPPT	Office of Pollution Prevention and Toxics		
OPP	Office of Pesticide Programs		

DHHS	U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES	NIST	National Institute of Standards and Technology (formerly the National Bureau of Standards)
CDC	Centers for Disease Control and Prevention	DOD	U.S. DEPARTMENT OF DEFENSE
NCEH	National Center for Environmental Health	DOA	Department of the Army
NCCDPHP	National Center for Chronic Disease Prevention and Health Promotion	DON	Department of the Navy
NIOSH	National Institute for Occupational Safety and Health	USAF	U.S. Air Force
OSH	Office on Smoking and Health	OEHL	Occupational and Environmental Health Laboratory
NCHS	National Center for Health Statistics		
NIH	National Institutes of Health	DOI	U.S. DEPARTMENT OF INTERIOR
NIEHS	National Institute of Environmental Health Sciences	NPS	National Park Service
NIAID	National Institute of Allergy and Infectious Diseases	USGS	U.S. Geological Survey
NCI	National Cancer Institute	DOS	U.S. DEPARTMENT OF STATE
NHLBI	National Heart, Lung and Blood Institute		
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
		CIC	Consumer Information Center
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
IEQ	Indoor Environmental Quality
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
NO ₂	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

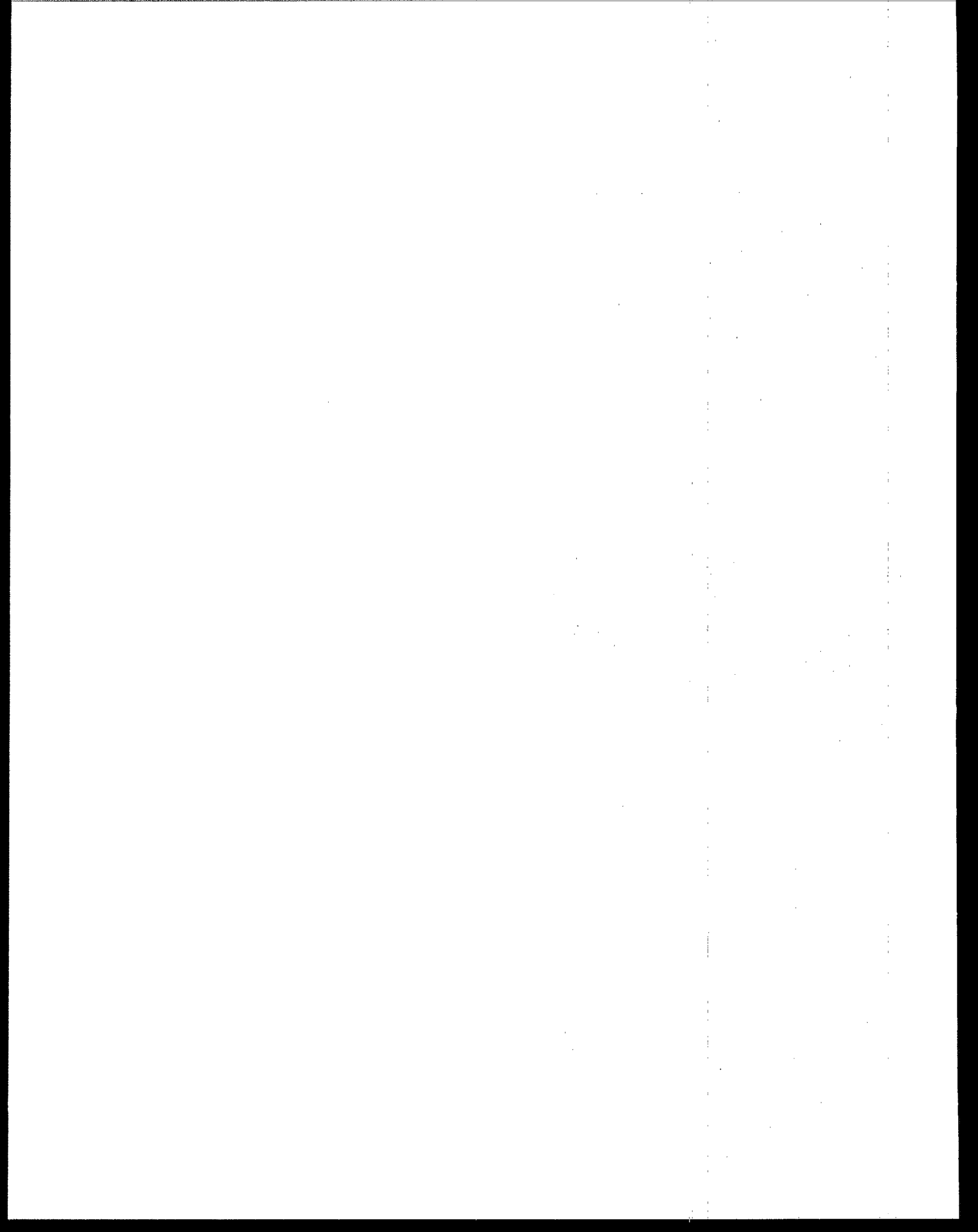
U.S. Department of Interior
Loss Control Management
National Park Service
Box 37127
Washington, DC 20013-7127

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



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

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD	
			AGENCY/OFFICE	CONTACT

Note: Most EPA e-mail addresses have the format *LastName.FirstName@epa.gov* (e.g., *thomas.connie@epa.gov*). Use this format when contacting EPA personnel by e-mail, unless otherwise noted in this document.

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/IED	Mary T. Smith (202) 564-9370 smith.maryt@epa.gov
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Policy Development

Health Effects of Indoor Allergens	The National Academy of Sciences (NAS) completed a report on the health effects of allergens in indoor air.	Available from Institute of Medicine, 1-800-624-6242, (202-334-3313) or at www.nap.edu/bookstore	EPA/OAR/ORIA/IED	Pauline Johnston (202) 564-9425 johnston.pauline@epa.gov
Asthma and Indoor Air Quality	The National Academy of Sciences (NAS) is preparing a report on the relationships between indoor air pollutants and asthma.	Ongoing. To be completed in 9/99.	EPA/OAR/ORIA/IED	Pauline Johnston (202) 564-9425 johnston.pauline@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Direct and Indirect Costs of Asthma and the Potential Benefit of Education and Intervention.	Study the cost-effectiveness of asthma education programs.	Ongoing.	EPA/IED	Mark Heil (202) 564-9724 heil.mark@epa.gov
			EPA/OP	Lanelle Wiggins (202)260-2692
			EPA/OCHP	Ed Chu (202) 260-7778

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.	One hundred buildings have been studied as of September 1998. Data for first 56 buildings are available upon request from EPA. Data for all 100 buildings is anticipated by the end of 1999. Papers containing descriptive information were presented at Healthy Buildings '95, IAQ '96, ASHRAE IAQ '96, and Healthy Buildings '97. Additional presentations are planned for Indoor Air '99. Program description and overview of summary data are available on EPA's home page. (http://www.epa.gov/iaq/BASE)	EPA/OAR/ORIA/IED	Laureen Burton (202) 564-9032 burton.laureen@epa.gov Susan Womble (202) 564-9057 womble.susan@epa.gov
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U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
School Intervention Study	Provide a measure of the effectiveness of EPA's <i>IAQ Tools for Schools</i> guidance in improving the management of school buildings for better IAQ. The parameters to be quantified include: the benefits of IAQ problem prevention activities, changes in occupant activities, symptoms and perceptions of the quality of the indoor air, reductions in pollutant levels, improvements in ventilation system performance, and the costs of implementing the guidance.	Before and after testing over a one-year period beginning Fall 1997. Monitored throughout the year for activities and costs.	EPA/OAR/ORIA/IED	Bryan K. Ligman (202) 564-9432 ligman.bryan@epa.gov
Introduction to IAQ and New Home Construction	Provide guidance on techniques to prevent IAQ problems in the construction of new homes.	Development ongoing.	EPA/OAR/ORIA/IED	David Price (202) 564-9447 price.david@epa.gov
IAQ Assessment Survey of Large Office Buildings	To provide a baseline assessment of the adoption of IAQ practices in the operation and maintenance of large office buildings (both government and commercial office buildings over 50,000 square feet) across the United States.	Draft survey developed and being reviewed by focus groups prior to submission to OMB for clearance to conduct survey.	EPA/OAR/ORIA/IED	G. Lee Salmon (202) 564-9451 salmon.lee@epa.gov
IAQ Tools for Schools Action Kit	Model IAQ management plan for schools covering prevention and problem solving.	Kit completed. See publications section for ordering information.	EPA/OAR/ORIA/IED	Bob Thompson (202) 564-9056 thompson.bob@epa.gov

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
IAQ Tools for New Schools Guidance	School design and construction guidance for architects, engineers, and school officials that will help ensure good IAQ.	Winter 1999	EPA/OAR/ORIA/IED	Bob Thompson (202) 564-9056 thompson.bob@epa.gov
IAQ Building Economic Analysis Model	To assist building owner/manager to assess the financial costs and benefits of an IAQ management plan in a specific building.	Draft revenue-cost analysis module complete. Field tested in 12/97.	EPA/OAR/ORIA/IED	David Mudarri (202) 564-9053 mudarri.david@epa.gov
Cost of IAQ Controls in Commercial Buildings	Assess energy and non-energy costs of controlling indoor air quality.	Selected papers completed. Full draft reports completed 12/98.	EPA/OAR/ORIA/IED	David Mudarri (202) 564-9053 mudarri.david@epa.gov
Ventilation and CO ₂	Assess use of CO ₂ to measure ventilation.	Completed and published.	EPA/OAR/ORIA/IED	David Mudarri (202) 564-9053 mudarri.david@epa.gov
Document—Should You Have the Air Ducts in Your Home Cleaned	Provide technical and policy guidance on air duct cleaning and its impacts on IAQ.	Published October 1997. Available from IAQ INFO. No. EPA-402-K-002	EPA/OAR/ORIA/IED	Bob Axelrad (202) 564-9315 axelrad.bob@epa.gov
				John Guevin (202) 233-9055 guevin.john@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY

PURPOSE

STATUS

LEAD AGENCY/ OFFICE

CONTACT

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. Publication No. EPA/600/6-90/006-F	EPA/ORD/NCEA	Steve Bayard (202) 260-5722 bayard.steve@epa.gov
			EPA/OAR/ORIA/IED	Bob Axelrad (202) 564-9030 axelrad.bob@epa.gov

Secondhand Smoke

Outreach for general public on
hazards of ETS.

Ongoing.

EPA/OAR/ORIA/IED

Bill Long
(202) 564-9733
long.bill@epa.gov

Intergovernmental Program

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/IED

Connie Thomas
(202) 564-9016
thomas.connie@
epa.gov

Quarterly C/IAQ 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/IED

Connie Thomas
(202) 564-9016
thomas.connie@
epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
NATO-CCMS Pilot Study	Explore and inventory research and risk management strategies of affiliated member countries.	Final report available.	EPA/OAR/ORIA/IED	Bob Axelrad (202) 564-9315 axelrad.bob@epa.gov

Public Information and Outreach Program

IAQ Information Clearinghouse	Receives calls, faxes, and mail for requests for IED publications. Processes orders for IED publications to EPA' distribution center (NSCEP). Provides some information on technical and non-technical aspects of IAQ to the general public, all levels of government, scientific and business communities.	Ongoing.	EPA/OAR/ORIA/IED	Maria Theesen (202) 564-9783 IAQ INFO (800) 438-4318 theesen.maria@epa.gov
USDA (Cooperative Extension System) Interagency Agreement	Expand knowledge and understanding of home indoor air quality issues by the general public in partnership with the USDA Cooperative Extension System and Montana State University through county extension educators funded by State grants.	Launched in November 1996. More than 2,000 county educators trained and over 10,000 Americans adopting good IAQ practices in the home.	EPA/OAR/ORIA/IED	John Guevin (202) 564-9055 guevin.john@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
<i>Indoor Air Quality Tools for Schools</i>	Reduce exposure to school children and staff by implementing practical, cost-beneficial practices for improved indoor air quality in existing public schools and in the construction of new schools.	<i>Indoor Air Quality Tools for Schools</i> Action Kit available.	EPA/OAR/ORIA/IED	Jennifer Keller (202) 564-9338 keller.jennifer@epa.gov John Guevin (202) 564-9055 guevin.john@epa.gov Bob Thompson (202) 564-9056 thompson.bob@epa.gov
International Union of Operating Engineers— <i>Stationary Engineers: The Indoor Air Quality Solution</i> Cooperative Agreement.	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, is designed to provide hands-on experience. Expand training delivery to non-union members, and expand by making course available on CD-ROM.	Course developed by International Union of Operating Engineers and included in its national curriculum. Completed.. Course deliveries: Ongoing. Over 1,600 stationary engineers trained to date. Improved IAQ practices being implemented in nearly 6,500 buildings, totaling over 1 billion square feet of facility space nationwide.	EPA/OAR/ORIA/IED	John Guevin (202) 564-9055 guevin.john@epa.gov
<i>Indoor Air Pollution: An Introduction for Health Professionals</i> (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. Available through NSCEP.	EPA/OAR/ORIA/IED	Elissa Feldman (202) 564-9316 feldman.elissa@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Headquarters Coordination with Regional IAQ Contacts	Provide coordination and liaison between Regional Indoor Air contacts and the Indoor Environments Division.	Ongoing.	EPA/OAR/ORIA/IED	Susie Shimek (202) 564-9054 shimek.susie@epa.gov
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/IED	Susan Womble (202) 564-9057 womble.susan@epa.gov
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/IED	Tracey Mitchell (202) 564-9446 mitchell.tracey@epa.gov
Secondhand Smoke Outreach-Risks to Children	With the National Resource Center for Health and Safety in Childcare, disseminate a learning module targeted to daycare centers on secondhand smoke and risks to children	Ongoing	EPA/OAR/ORIA/IED	Alison Freeman (202) 564-9455 freeman.alison@epa.gov
Secondhand Smoke- Hispanic-American Radio Campaign	The Self Reliance Foundation will broadcast Spanish language programming on the risks of secondhand smoke, and other indoor air quality issues.	Ongoing	EPA/OAR/ORIA/IED	Jennifer Keller (202) 564-9338 keller.jennifer@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

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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 Maine to fund development of model Lung Healthy Schools; Tufts University to evaluate HMO's Asthma Environmental care policies. Additional program assistance to ConnCOSH, RICOSH, NHCOSH, and MACOSH to work with pilot schools in implementing <i>IAQ Tools for Schools</i> and develop Health school coalitions. Fund NEAsthma and Allergy; to continue outreach to daycare providers; Fund Physicians for Social Responsibility; to develop an Environmental Asthma curriculum for physicians; provide technical assistance to Urban Environmental Asthma coalitions with a research project focusing on environment interventions in public housing.	EPA Region 1 (CT, MA, ME, NH, RI, VT)	Mary Beth Smuts, coordinator (617) 918-1528 smuts.marybeth@epa.gov Eugene Benoit (617) 918-1639 benoit.eugene@epa.gov fax: (617) 918-1505
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U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Region 2 Program	Provide outreach and education on radon and indoor air topics; administer state indoor radon grants and indoor air grants.	Coordination and support of State/Cooperative Partner activities for radon and IAQ. Target key players for IAQ Tools for Schools participation. Mentor schools agreeing to pilot IAQ Tools for Schools. Perform enhanced pilots which include integrated pest management walkthroughs in selected urban schools in Region. Developing a "Next Generation" School Program to guide a larger number of schools through documented implementations. Provide targeted training or workshops where appropriate. Support Safe Lung Associations in Open Airways/IAQ Tools for Schools outreach to school nurses. Recently supported the translation of Open Airways into Spanish and is working with Region 7 to produce a video on reducing indoor asthma triggers. Participate in Community based asthma outreach projects including the regional Children's Health Champion Program in Newark, N.J. Support asthma research on roaches and asthma and other indoor environmental interventions. Project Officers for Eastern Regional Radon Training Center at Rutgers University which provides radon and IAQ training ,services including Spanish language IAQ courses.	EPA Region 2 (NJ, NY, PR, Virgin Islands)	Laraine Koehler (212) 637-4005 koehler.laraine@epa.gov
				Jean Feola (212) 637-4025 feola.jean@epa.gov
				Rachel Chaput (212) 637-4001 chaput.rachel@epa.gov
				FAX (212) 637-4942

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Region 3 Program	Provide outreach and education on indoor air topics.	With the Mid-Atlantic Environmental Hygiene Center, Region 3 is providing area-wide <i>IAQ Tools for Schools</i> seminars and in-house workshops for specific schools. Network building is being stressed through the ALA and Region 3 states in supporting <i>IAQ Tools for Schools</i> and carbon monoxide projects. Cooperative Partners serving urban minority areas are being solicited for testing, training, and mitigation of residential carbon monoxide hazards. With DOE's PA weatherization staff, conducting effectiveness testing on low-cost radon mitigation systems installed in eight homes.	EPA Region 3 (DE, MD, PA, VA, WV, DC)	Fran Dougherty (215) 814-2083 dougherty.fran@epa.gov James Burke (215) 814-2055 burke.james@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Region 4 Program	Provide education and outreach on indoor air topics including radon. Oversee State Indoor Radon Grants program and Southern Regional Radon Training Center.	Distributes literature, videos, <i>IAQ Tools for Schools</i> kits. Holds quarterly <i>IAQ</i> conference calls and annual radon meeting with states and local agencies. Schedules training for public officials, oversees course development, develops project proposals, and provides technical support to states and the public. Promotes networking within states, especially Florida, Georgia, North Carolina, and Tennessee, and between states for idea sharing and joint efforts. Promotes Radon Action Week and Media Action Month. Promotes use of <i>IAQ Tools for Schools</i>, real estate testing for radon, use of radon-resistant techniques in new construction, and school testing and mitigation for radon. Promotes/develops programs for Indian Nations. Manages State Indoor Radon Grants programs for Region 4's eight states and the Southern Regional Radon Training Center which covers the thirteen states of Regions 4 and 6.	EPA Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)	Henry Slack (IAQ) (404) 562-9143 slack.henry@epa.gov Doug Neeley (Radon) (404) 562-9105 neeley.doug@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Region 5 Program	Provide outreach and education on indoor air topics.	Develop and implement schools outreach and education program in IAQ issues, which includes promoting EPA's IAQ Tools for Schools Action Kit. Continue Regional Network Building with State and Local government agencies, as well as local partners. Participants in a Regional buildings outreach program which would integrate Energy Star/Green Lights and Radon issues with good indoor air quality. Support local research efforts for IAQ activities.	EPA Region 5 (IL, IN, MI, MN, OH, WI)	Sheila Batka (312) 886-6053 Fax: (312) 353-8289 batka.sheila@epa.gov Region 5 Home Page: http://www.epa.gov/ARD-R5/home.htm

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.	Provide training and distribution of IAQ Tools for Schools kits. Increase public awareness regarding IAQ issues by hosting informational booths at trade and environmental shows. Provide IAQ training. Providing technical assistance to schools in Region 6 that agree to fully implement the IAQ Tools for Schools action plan. Coordinating with local officials in the states of Texas and New Mexico to form self-sustaining IAQ/Radon coalitions to address radon and other indoor air related issues. Developing methodology to eliminate environmental risk to children in the home, school, and child care settings.	EPA Region 6 (AR, LA, NM, OK, TX)	Mike Miller (214) 665-7550 miller.michael@epa.gov Traci Frambrough (214) 665-2246 frambrough.traci@epa.gov
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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 <i>IAQ Tools for Schools</i> and <i>Building Air Quality</i> guidance implementation. Offer training and workshops aimed at these audiences.	EPA Region 7 (IA, KS, MO, NE)	Michael Marshall (913) 551-7604 marshall.michael@epa.gov
Region 8 Program	Provide outreach and education on indoor air topics.	Continued support for State and local IAQ programs. Coordination of IAQ training courses including: Orientation, Hands-On Diagnostics, and IAQ Tools for Schools. Support for IAQ Tools for Schools implementation and outreach. Partner with ALA on ETS and asthma outreach projects. Support of state network for indoor environment programs. Response to public IAQ inquiries.	EPA Region 8 (CO, MT, ND, SD, UT, WY)	Megan Williams (303) 312-6431 williams.megan@epa.gov

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Region 9 Program	Provide outreach and education on indoor air topics, in conjunction with information on radon and EMF.	IAQ <i>Tools for Schools</i> 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 <i>Building Air Quality</i> guidance. Respond to public inquiries. Collect and disseminate information on stachybotrys atra and other biocontaminant issues.	EPA Region 9 (AZ, CA, HI, NV, American Samoa, Guam, Trust Territories of the Pacific)	Barbara Spark (415) 744-1132 spark.barbara@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Region 10 Program	Provide outreach and education on indoor air topics.	Continuing support of IAQ networks made up of State and local government agencies and non-profit organizations. Tribal IAQ Orientation course scheduled in Seattle in March. IAQ Orientation courses planned for Region 10 States. Planning Air Quality Orientation courses in Alaska, Washington, Idaho, and Oregon. Working with cooperative partners to provide <i>IAQ Tools for Schools</i> indoor air training seminars throughout Region 10. In Washington state, six training seminars are planned. In Oregon, training seminars are scheduled in Portland, Medford, and Eugene. In Alaska, training seminars are planned in Anchorage, Juneau, and Bethel. In Idaho, cooperative partnerships for training seminars are being established. Continue grant and other support to non-profit community organizations that perform indoor air pollution outreach and education. Support education and outreach efforts to housing projects. Continue special emphasis on asthma prevention, intervention outreach, and education in these communities. Continue IAQ outreach and education incorporating ETS information to Tribal Nations throughout the Region.	EPA Region 10 (AK, ID, OR, WA)	Brook Madrone (206) 553-2589 madrone.brook@epa.gov

SELECTED IAQ RELATED RESEARCH ACTIVITIES

Program Management

Research Coordinator for the Committee on Indoor Air Quality (CIAQ)	Coordinate EPA research efforts related to IAQ.	Ongoing.	EPA/ORD/OSP	William Russo (202) 564-6767 Fax: (202) 565-2515 russo.william@epa.gov
Associate Laboratory Director for Air Research: National Risk Management Research Laboratory	Laboratory coordination of EPA Indoor Air Research Program	Ongoing	EPA/ORD/NRMRL	Doug McKinney (919) 541-3006 Fax: (919) 541-5227 dmckinney@engineer.aaerl.epa.gov
Associate Laboratory Director for Air Research: National Health and Environmental Effects Research Laboratory	Coordinate the health effects research studies of the indoor air program	Ongoing	EPA/ORD/NHEERL	John Vandenberg (919) 541-4527 vandenberg.john@epa.gov
Associate Laboratory Director for Multimedia Research: National Exposure Research Laboratory	Coordinate EPA indoor-air-related methods development and human exposure research	Ongoing	EPA/ORD/NERL	Dale Pahl (919) 541-1851 Pahl.Dale@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Risk Management and Source Characterization Research				
Water-Based Cleaners Source Characterization	Characterize the major volatile organic compounds and help improve OPPT's Source Ranking Database (SRD) model for emissions from hard surface cleaners.	Chamber testing underway.	EPA/ORD/NRMRL	Betsy Howard (919) 541-7915 bhoward@engineer.aeerl.epa.gov
Methods/Emission Models for Internal Diffusion Controlled Sources	Develop test methods and models to support the establishment of source-to-dose models for human health risk assessment purposes	Developing conceptual design of prototype models	EPA/ORD/NRMRL	John Chang (919) 541-3747 jchang@engineer.aeerl.epa.gov
Determine Impact of Ozone Generator Air Cleaners on Indoor Air Quality	Develop a fundamental understanding of the role that ozone can play in controlling indoor air pollutants	Large Chamber Testing Underway	EPA/ORD/NRMRL	Mark Mason (919) 541-4835 mmason@engineer.aeerl.epa.gov
Boston Public Housing Asthma Study	Identify housing characteristics that may lead to or aggravate asthma in tenants, measure asthma concentration and evaluate control strategies	Developing Test Plan	EPA/ORD/NRMRL	Betsy Howard (919) 541-7915 bhoward@engineer.aeerl.epa.gov
Identification of Pollution Prevention Solutions to Reduce Emissions from Photocopiers	Identify pollution prevention alternatives that will result in reduced emissions of VOCs, ozone, and/or particulates from dry process photocopiers and related supplies	Test Plan Under Development	EPA/ORD/NRMRL	Bruce Henschel (919) 541-4112 bhenschel@engineer.aeerl.epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Literature Reviews of High Risk Sources of Indoor Air Pollution	Develop understanding of emission characteristics and pollution prevention opportunities		EPA/ORD/NRMRL	Kelly Leovic (919) 541-7717 kleovic@engineer.aeerl.epa.gov
Relationship Between Indoor and Outdoor Fine Particulates	Study the mechanisms by which outdoor particles enter the indoor environment since highest risk of health effects occur in confined indoor spaces		EPA/ORD/NRMRL	Ron Mosley (919) 541-7865 rmosley@engineer.aeerl.epa.gov
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/SHMMD	Jeff Davidson (202) 260-1650 davidson.jeff@epa.gov Hugh McKinnon (202) 260-5898 mckinnon.hugh@epa.gov
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	John Chang (919) 541-3747 jchang@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;; effects of building features on indoor air movements completed.	EPA/ORD/NRMRL	John Chang (919) 541-3747 jchang@engineer.aeerl.epa.gov

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ISSUE/MAJOR ACTIVITY		PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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 completed.	EPA/ORD/NRMRL	Mark Mason (919) 541-2746
Data Base of Indoor Air Pollutant Sources		Data base of indoor air source emissions.	Ongoing.	EPA/ORD/NRMRL	Gene Tucker (919) 541-2746 gtucker@engineer.heerl.epa.gov
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	Marc Menetrez (919) 541-7981 mmenetrez@engineer.aeerl.epa.gov
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 sparks.les@epa.gov
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 sparks.les@epa.gov
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 bhenschel@engineer.aeerl.epa.gov

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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	Bruce Henschel (919) 541-4112 bhenschel@engineer.h eerl.epa.gov
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.	Photocopies of report available 9/98.	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," took place on 7/97.	EPA/ORD/NRMRL	Kelly Leovic (919) 541-7717 Fax: (919) 541-2157 kleovic@engineer .aeerl.epa.gov
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.	Final report available.	EPA/ORD/NRMRL	Kelly Leovic (919) 541-7717 Fax: (919) 541-2157 kleovic@engineer .aeerl.epa.gov

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Exposure and Monitoring Research				
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. Uses for both indoor and outdoor air. Current emphasis on outdoor air.	EPA/ORD/NERL	Jim Mulik (919) 541-3067 mulik.james@epa.gov
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.	Various reports available.	EPA/ORD/NERL	Steve Hern (702) 798-2594 hern.stephen@epa.gov
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.	Various reports available.	EPA/ORD/NERL	Steve Hern (702) 798-2594 hern.stephen@epa.gov
Portable Humidifiers Study	Evaluate the relationship between water quality used in humidifiers and the impact on indoor particle levels.	Various reports available.	EPA/ORD/NERL	Ross Highsmith (919) 541-7828 highsmith.ross@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY

PURPOSE

STATUS

LEAD AGENCY/ OFFICE

CONTACT

Sampling Methods for Semivolatile Organic Compounds (SVOCs) in Indoor Air

Evaluate air samples for SVOCs that are suitable in micro environments. 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.

Ongoing. Exposure estimates via conventional sampling methods are being compared to real-time micro environmental monitor methods.

EPA/ORD/NERL

Nancy Wilson
(919) 541-4723
wilson.nancy@epa.gov

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
wilson.nancy@epa.gov

VOCs in Indoor Exposures from Personal Activities (Field Study)

Identify personal activities which increase exposure to VOCs and other pollutants.

Completed. Various reports 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.

Completed. Reports available.

EPA/ORD/NERL

Alan Huber
(919) 541-1338
huber.alan@epa.gov

Compendium of Indoor Air Quality Measurement Methods

Compile most commonly used IAQ measurement methods for technical guidance documents.

Completed.

EPA/ORD/NERL

Frank McElroy
(919) 541-2622
mcelroy.frank@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

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. Work extended to auto and aircraft fuel and exhaust emissions.	Joachim Pleil (915) 541-4680 pleil.joachim@epa.gov
TEAM Study: Particle Study	Characterize indoor and personal particle exposures by size fraction, examine the particle composition and estimate their source.	Completed.	EPA/ORD/NERL	Lance Wallace (703) 648-4287 wallace.lance@epa.gov
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.	EPA/ORD/NERL	Lance Wallace (703) 648-4287 wallace.lance@epa.gov
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 beginning in 1994 following a standardized protocol. Complements the EPA BASE cross-sectional studies. Additional opportunities for research (new sampler evaluation, building diagnostics, etc.) being explored.	Studies completed. Validated data set and final report available. Data being analyzed -- some reports available.	EPA/ORD/NERL	Ross Highsmith (919) 541-7828 highsmith.ross@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

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.	Completed.	EPA/ORD/NERL	Joachim Pleil (919) 541-4680 pleil.joachim@epa.gov
Innovative Techniques for Characterizing and Modeling Bioaerosols	Develop real-time measurement techniques to characterize bioaerosol contamination and model growth and dispersion.	Completed.	EPA/ORD/NERL	Steve Hern (702) 798-2594 hern.stephen@epa.gov
Modeling 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.	Completed.	EPA/ORD/NERL (co-sponsored by OPPTS/OTS)	James Quackenboss (702) 798-2442 quackenboss.james@epa.gov
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.	Completed.	EPA/ORD/NERL/ Region 8	Andrew Lindstrom (919) 541-4866

U.S. ENVIRONMENTAL PROTECTION AGENCY

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.	EPA/ORD/NERL	Ross Highsmith (919) 541-7828 highsmith.ross@epa.gov
			Washington State Department of Labor	Jim Burt (206) 956-5660
Benzene Exposure Assessment Model (BEAM)	Utilize human activity pattern data combined with micro environmental and ambient (indoor/outdoor) concentrations to estimate population distributions of exposure to benzene and related VOCs.	Completed and technical report published.	EPA/ORD/NERL	Steve Hern (702) 798-2594 hern.stephen@epa.gov
Total Human Exposure Risk Database and Advanced Simulation Environment (THERDBASE)	Provide database structures and programs to store and/or estimate and retrieve data on human activity patterns, infiltration rates, and micro environmental concentrations for various pollutants and media. Use data in total human exposure modeling.	Currently available at www.therd.com	EPA/ORD/NERL	Ed Furtaw (702) 798-2285

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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 Agricultural Health Study (AHS), and other programs characterizing indoor pesticides concentrations and estimating exposures to pesticides are available.	EPA/ORD/NERL	Linda Sheldon (919) 541-2205
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 with published reports available.	EPA/ORD/NERL	Shaibal Mukergee (919) 541-1865 mukergee.shaibal@epa.gov
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 published in 1997. Ongoing. Reports available.	EPA/ORD/NERL	Steve Hern (702) 798-2594 hern.stephen@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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. Completed.	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.	Completed. Various reports available.	EPA/ORD/NERL	Gerry Stelma (513) 569-7384 stelma.gerald@epa.gov
Microbiological Screening Methods	Develop methods to use for rapid screening of indoor bacterial and fungal concentrations.	Ongoing. Methods will be developed based on bacterial 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. Completed. Various reports available.	EPA/ORD/NERL	Gerry Stelma (513) 569-7384 stelma.gerald@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY PURPOSE STATUS LEAD AGENCY/OFFICE CONTACT

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.	Completed. Various reports available.	EPA/ORD/NERL	Gerry Stelma (513) 569-7384 stelma.gerald@epa.gov Andrew Lindstrom (919) 541-4866
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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.	Completed.	EPA/ORD/NERL	Andrew Lindstrom (919) 541-4866 Richard Taft (415) 744-1491 taft.richard@epa.gov
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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. Completed.	EPA/ORD/NERL	Russ Weiner (919) 541-1910
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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 koren.hillel@epa.gov

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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 selgrade.maryjane@epa.gov
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 koren.hillel@epa.gov
Respiratory Irritant Properties of Indoor Products	Evaluate selected products for respiratory irritant properties.	Initiated: 1992.	EPA/ORD/NHEERL	Dan Costa (919) 541-2531
Assessment Research				
Indoor Air Reference Bibliography	Maintain an extensive bibliography of reference materials on indoor air pollution.	Ongoing.	EPA/ORD/NCEA	Beverly Comfort (919) 541-4165 comfort.beverly@epa.gov
Assessment of Carbon Monoxide	Evaluation of the sources, concentrations, and potential health-related effects from exposure to carbon monoxide in indoor environments.	Ongoing.	EPA/ORD/NCEA	William Ewald (919) 541-4164 ewald.william@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
IAQ Questions for NHANES II	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) 564-3312 selevan.sherry@epa.gov

RADON ACTIVITIES

Problem Assessment

Large Building Measurement Protocols	To develop radon measurement protocols for large buildings.	Ongoing.	EPA/OAR/ORIA	Gene Fisher (202) 564-9418 fisher.gene@epa.gov
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	Brian Gregory (202) 564-9024 gregory.brian@epa.gov
Radon Measurement in Schools	Update and revise existing interim guidance to schools on measuring radon.	Completed.	EPA/OAR/ORIA	Jennifer Keller (202) 564-9338 keller.jennifer@epa.gov
Radon Measurement in Schools - Self-Paced Training Workbook	Provide self guided training for radon measurement in schools (companion to guidance document).	Completed.	EPA/OAR/ORIA	Jennifer Keller (202) 564-9338 keller.jennifer@epa.gov

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ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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	Lee Salmon (202) 564-9451 salmon.lee@epa.gov
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. Data available through www.ntis.gov and search by keyword "radon".	EPA/OAR/ORIA	Brian Gregory (202) 564-9024 gregory.brian@epa.gov
NAS Study (BEIR VI Report)	'Health Effects of Exposure to Radon'; an update of the 1988 BEIR IV Report; examined approaches to assessing the lung cancer risk associated with radon in indoor air.	Completed 1998.	EPA/OAR/ORIA	Anita Schmidt (202) 564-9452 schmidt.anita@epa.gov
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) 564-9338 keller.jennifer@epa.gov
Radon Proficiency Program	Operate a voluntary proficiency program to evaluate the effectiveness of mitigation contractors.	Program closed as of 9/30/98	EPA/OAR/ORIA	Gene Fisher (202) 564-9418 fisher.gene@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
State Indoor Radon Grants (SIRG)	Provide grant funds to establish and expand radon programs.	Ongoing.	EPA/OAR/ORIA	Sheila Brown (202) 564-9439 brown.sheila@epa.gov
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 Radon Proficiency Program.	Ongoing.	EPA/OAR/ORIA	Phil Jalbert (202) 564-9431 jalbert.phil@epa.gov
			Eastern/Region 2	Laraine Koehler (212) 637-4005 koehler.laraine@epa.gov
			Southern/Region 4	Patsy Brooks (404) 562-9145 brooks.patsy@epa.gov
			Midwest/Region 5	Mike Murphy (312) 353-6686 murphy.michael@epa.gov
			Western/Region 8	Kathleen Craig (303) 312-6031 craig.kathleen@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY		PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Policy and Public Information					
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	National Technical Information Service (NTIS) (703) 605-6000 www.ntis.gov/sitemap
Radon Public Service Announcements		Prepare and distribute Public Service Announcements (PSAs) on indoor radon including TV, radio and print.	TV, radio, and print PSAs nationwide.	EPA/OAR/ORIA	Kristy Miller (202) 564-9441 miller.kristy@epa.gov
Radon Action Week		Develop activities in support of National Radon Action Week.	Conducted each October.	EPA/OAR/ORIA	Chris Griffin (202) 564-9421 griffin.chris@epa.gov
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) 564-9400 wagner.dennis@epa.gov
"Home Buyer's and Seller's Guide to Radon"		Develop guidance for testing home radon levels in the context of a real estate transaction.	Guide completed: 4/93. Update Planned for 1999.	EPA/OAR/ORIA	Phil Jalbert (202) 564-9431 jalbert.phil@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY		PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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Drinking Water

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..		EPA/ORD/NRMRL	Kim Fox (513) 569-7820 fox.kimr@epa.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.	Completed.		EPA/ORD/NRMRL	Marc Menetrez (919) 541-7981 menetrez.marcyves@epa.gov
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 sparks.les@epa.gov
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 menetrez.marcyves@epa.gov
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 bhenschel@engineer.h eerl.epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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.	Completed.	EPA/ORD/NRMRL	Marc Menetrez (919) 541-7981 menetrez.marcyves@epa.gov
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 bhenschel@engineer.h eerl.epa.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 bhenschel@engineer.h eerl.epa.gov
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.	Completed.	EPA/ORD/NRMRL	Marc Menetrez (919) 541-7981 menetrez.marcyves@epa.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 600/R-94-218).	EPA/ORD/NRMRL	NSCEP

U.S. ENVIRONMENTAL PROTECTION AGENCY

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.	Completed (EPA 600/R-96-010).	EPA/ORD/NRMRL	NSCEP
Radon Generation and Transport Through Concrete Foundations	Provide an evaluation of generation and transport potential use of radon containing cements in concrete.	Completed (EPA 600/R-96-175).	EPA/ORD/NRMRL	NSCEP
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 600/R-96-195).	EPA/ORD/NRMRL	NSCEP
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 600/R-96-201).	EPA/ORD/NRMRL	NSCEP

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 carlin.alan@epa.gov
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U.S. ENVIRONMENTAL PROTECTION AGENCY

U.S. ENVIRONMENTAL PROTECTION AGENCY

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	Sims Roy (919) 541-5263 roy.sims@epa.gov
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 completed; manufactured home testing not conducted at this time; emission testing of composite wood products completed; peer review of final report underway.	EPA/OPPTS/OPPT	Patrick Kennedy (202) 260-3916 kennedy.patrick@epa.gov
Worker Protection Rule	Protect health of government workers not covered by OSHA regulations.	Amended proposal under development.	EPA/OPPTS/OPPT	Cindy Fraleigh (202) 260-1537 fournier.cindy@epa.gov
Ban and Phase Out Rule	Intended to ban most asbestos-containing products and new uses.	Final rule published.	EPA/OPPTS/OPPT	Cindy Fraleigh (202) 260-1537 fournier.cindy@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Model Accreditation Plan	Training and accreditation requirements for asbestos professionals in schools, public and commercial buildings.	Amendments under development.	EPA/OPPT	Cindy Fraleigh (202) 260-1537 fournier.cindy@epa.gov
Asbestos-Containing Materials in Schools Rule	Protect public health in schools.	Amendments under development.	EPA/OPPTS/OPPT	Cindy Fraleigh (202) 260-1537 fournier.cindy@epa.gov
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	Jonathon Jacobson (202) 260-3779 jacobson.jonathon@epa.gov
Lead Activities				
Comprehensive Abatement Performance Study	Evaluate the long-term efficacy of abatement techniques used by HUD in their Federal Housing/Administration Demonstration Project.	EPA reports published in April 1996: a summary report (EPA 230-R-94-013a) and a detailed report (EPA 230-R-94-013b).	EPA/OPPTS/OPPT	John Schwemberger (202) 260-7195 schwemberger.john@epa.gov
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.	EPA report on pre-intervention levels (EPA 747-R-95-012) published August 1996; EPA report on 12-month post-intervention levels undergoing peer review.	EPA/OPPTS/OPPT	Ben Lim (202) 260-1509 jim.ben@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

U.S. ENVIRONMENTAL PROTECTION AGENCY		LEAD AGENCY/ OFFICE		STATUS	PURPOSE	CONTACT
ISSUE/MAJOR ACTIVITY						
Encapsulation Testing Program	Evaluate feasibility of draft protocols for assessing lead-based paint encapsulation products.	EPA report published September 1995 (EPA 747-R-95-011).	EPA/OPPTS/OPPT			Jill Hacker (202) 260-3952 hacker.jill@epa.gov
Laboratory Accreditation (w/NIOSH)	Develop components for the establishment of a laboratory accreditation program.	Accreditation Program in place; proposed revisions to program published in the Federal Register.	EPA/OPPTS/OPPT			John Scalera (202) 260-6709 scalera.john@epa.gov
Role-Specific Training Course Development	Develop model training course curricula for lead-based paint inspectors, abatement supervisors, workers, and risk assessors.	Inspector, supervisor, worker, risk assessor courses completed. Lead contractor and inspector courses completed.	EPA/OPPTS/OPPT			Beth Weiner, Lead Worker Course (202) 260-2924 weiner.beth@epa.gov Bob Jordan, Risk Assessor Course (202) 260-2328 jordan.bob@epa.gov All courses can be ordered from HUDUSER at 800-245-2691 or 301-251-5154

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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 jacobson.johathan@epa.gov
Regional Lead Training Centers	Establish network of six university-based training centers to train abatement professionals. Training centers offer EPA-approved courses. Each center has members from labor, non-profits, and community groups that also offer courses.	Centers offer EPA-approved courses.	EPA/OPPTS/OPPT	Robert Wright (202) 260-7800 wright.robert@epa.gov
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 carroll.megan@epa.gov
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. Has video lending library and speakers bureau.	Hotline and clearinghouse in operation.	EPA/CDC/HUD	Robert Wright (202) 260-7800 wright.robert@epa.gov Hotline: 1-800-424-LEAD

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Accreditation for Training and Implementation of Title X	Developed 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 are also included.	Final rule published.	EPA/OPPTS/OPPT	Mark Henshall (202) 260-5089 henshall.mark@epa.gov
Pre-Renovation Education Requirements (TSCA §406(b))	Provide housing occupants with lead hazard information before renovations.	Final rule published. Complete.	EPA/OPPTS/OPPT	James Boles (202) 260-5956 boles.james@epa.gov
Lead Hazard Information Pamphlet (TSCA §406(a))	Published public outreach tool containing lead poisoning prevention information. Distributed under several EPA and HUD regulations.	Final rule published.	EPA/OPPTS/OPPT Co-sponsor CPSC	Paul Cestone (202) 260-1923 cestone.paul@epa.gov 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.	Final rule published.	EPA/OPPTS/OPPT and HUD's lead office.	Ellie Clark (202) 260-3402 Conrad Arnolts (202) 755-1805

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Renovation and Remodeling 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.	EPA reports on environmental levels with selected renovation and remodeling activities and renovation and remodeling worker blood levels nearing publication; study of incidence of renovation and remodeling activities compared to children's blood lead levels underway.	EPA/OPPTS/OPPT	Darlene Watford (202) 260-3989 watford.darlene@epa.gov
XRF/Test Kit Field Evaluation Study	Evaluate the performance of XRF instruments and chemical test kits for testing lead in paint.	EPA reports published in May 1995: a Summary report (EPA 747-R-95-002a) and a Technical report (EPA 747-R-95-002b).	EPA/OPPTS/OPPT	John Schwemberger (202) 260-7195
Renovation and Remodeling Guidelines	Public outreach tool to help homeowners and professionals reduce lead exposure when conducting home renovations and remodeling activities.	Published April 1994.	EPA/OPPTS/OPPT	Darlene Watford (202) 260-3989 watford.darlene@epa.gov
Other Chemicals/Sources				
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. 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 semeniuk.george@epa.gov Sid Abel (703) 305-7346 abel.sid@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Cleaning Study	To determine the relative effectiveness of different cleaning agents for cleaning lead-contaminated dirt from floors, walls, and surfaces.	EPA report on study results released in Spring 1997.	EPA/OPPTS/OPPT	Khoan Dinh (202) 260-3891
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 cinalli.christina@epa.gov
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.	Matrix of environmental attributes of cleaners published in GSA catalog.	EPA/OPPTS/OPPT	Conrad Flessner, Jr. (202) 260-3918 flessner.conrad@epa.gov
Formaldehyde	Develop model to estimate indoor air concentrations of formaldehyde from home cabinetry, furniture, and building materials.	Programming of final scenarios (mobile home scenarios) is underway. Model completed.	EPA/OPPTS/OPPT	Conrad Flessner, Jr. (202) 260-3918 flessner.conrad@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY

PURPOSE

STATUS

LEAD AGENCY/ OFFICE

CONTACT

Exposure Assessment Activities

Multi-Chamber Concentration and Exposure Model (MCCM)	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	Patrick Kennedy (202) 260-3916 kennedy.patrick@epa.gov
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PFT (per fluorocarbon 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 completed.	EPA/OPPTS/OPPT	Patrick Kennedy (202) 260-3916 kennedy.patrick@epa.gov
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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.	EPA/OPPTS/OPPT	Susan Hazen (202) 260-1024 hazen.susan@epa.gov
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TSCA Assistance Information Service	Provide hotline service to answer questions from the public.	Ongoing. (Phone number: (202) 554-1404)	EPA/OPPTS/OPPT	Susan Hazen (202) 260-1024 hazen.susan@epa.gov
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U.S. ENVIRONMENTAL PROTECTION AGENCY

U.S. ENVIRONMENTAL PROTECTION AGENCY

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 sparks.les@epa.gov	
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) 308-2964 roelofs.jim@epa.gov	
New Termiticides	Evaluate effectiveness and toxicity of new termiticides products.	Ongoing.	EPA/OPPTS/OPP	Dave Jaquith (703) 305-5942 jaquith.dave@epa.gov	

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
Source Ranking Database	The Source Ranking Database (SRD) provides a mechanism for a systematic screening-level review of a large number of indoor sources to identify high-priority product and material categories for further evaluation. The SRD produces risk-based rankings by multiplying an indoor-air concentration by a hazard score for each chemical in a given product or material, for each environment in which the product/material is used.	The SRD was reviewed by the EPA Science Advisory Board (SAB) in July, 1997 and the SAB issued its report in January, 1998. EPA responded to the SAB's recommendations in June, 1998 and has begun work to address certain of the key recommendations.	EPA/OPPTS/OPPT	Christina Cinalli 202-260-3913 cinalli.christina@epa.gov Jim Darr 202-260-3441 darr.james@epa.gov
National Home and Garden Pesticide Use Survey	Determine use patterns and practices for homeowner applied pesticides.	Report published.	EPA/OPPTS/OPP	Ed Brandt (703) 308-8050 brandt.edward@epa.gov
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, termiticides uses, rights of way, public health and aquatic. Includes estimates of indoor and outdoor use by chemical, site, and pest.	Draft report published.	EPA/OPPTS/OPP	Alan Goozner (703) 308-8147

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/ OFFICE	CONTACT
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
Pesticide Data Requirements	Add new data requirements for pesticide application exposure and post application exposure.	Data requirements issued in proposed form.	EPA/OPPTS/OPP	Amy Rispin (703) 305-5989 rispin.amy@epa.gov
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 leifer.kerry@epa.gov
Postapplication Exposure Monitoring Test Guidelines	Provide guidance to registrants who are required to submit pesticide exposure data for agricultural and residential scenarios.	OECD Workshop, 10/97; SAB, March 1998; to be finalized, March, 1999.	EPA/OPPTS/OPP	Al Nielsen (703) 305-5242 nielsen.alan@epa.
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 davido.frank@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

ISSUE/MAJOR ACTIVITY

PURPOSE

STATUS

LEAD AGENCY/ OFFICE

CONTACT

DRINKING WATER ACTIVITIES

Issue Maximum Contaminant Levels (MCLs)

Regulate amount of VOCs in public drinking water supply.

Final MCLs for 8 VOCs issued. Final MCLs for additional 10 VOCs promulgated. MCLs for additional 3 VOCs.

EPA/OW/OGWDW/

Al Havinga
(202) 260-5555
havinga.al@epa.gov

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 available

EPA/OW/OGWDW/
OST

Ken Bailey
(202) 260-5535

Greg Helms
(202) 260-6721
helms.greg@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY

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 lsaltzman@cpsc.gov
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, combustion products, and formaldehyde.	Brochures available on biologicals, asbestos, combustion products, formaldehyde, and CO detectors.	CPSC/EPA/ALA	Ken Giles (301) 504-0580 kgiles@cpsc.gov
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 lsaltzman@cpsc.gov
Home Humidifiers, Vaporizers, and Similar Appliances	Identify Bioaerosols and selected particulate emissions from portable home humidifiers.	Report available.	CPSC	Lori Saltzman (301) 504-0477 lsaltzman@cpsc.gov

U.S. CONSUMER PRODUCT SAFETY COMMISSION

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Carbon Monoxide (CO) Alarms	Promote the use of effective, affordable, reliable CO alarms to protect against CO poisoning associated with the use of fuel-burning appliances.	Brochures and reports available.	CPSC	Elizabeth Leland (301) 504-0962 eleland@cpsc.gov
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 lsaltzman@cpsc.gov
Wood Stove Emissions	Measurements of indoor pollutant emissions from EPA Phase II woodstoves. Report from NIST.	Report available (1995).	CPSC	Mike Babich (301) 504-0994 mbatich@cpsc.gov
Wood Stove Emissions	Exposure and risk assessment of emissions from Phase II woodstoves.	Report available (1995).	CPSC	Mike Babich (301) 504-0994 mbabich@cpsc.gov
Carpet Systems	Evaluate consumer complaints. Evaluate emissions from carpet systems (carpet and cushions).	1990 Report on consumer complaints available. Reports on Phase I and II investigation of emissions completed and available.	CPSC	Marilyn Wind (301) 504-0477 mwind@cpsc.gov

U.S. CONSUMER PRODUCT SAFETY COMMISSION

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Carpet Systems	Sensory and pulmonary irritancy testing.	Sensory and pulmonary irritancy testing on BHT completed by IITRI. Report available.	CPSC	Marilyn Wind (301) 504-0477 mwind@cpsc.gov
KEY TOXIC CHEMICAL/HOUSEHOLD PRODUCTS ACTIVITIES				
Kerosene Heaters/Unvented Gas Space Heaters	Voluntary standard to limit emissions of NO ₂ .	Report available.	CPSC	Ron Jordan (301) 504-0508 rjordan@cpsc.gov
Heating, Ventilation, and Air Conditioning System	Assess impact of selected residential HVAC systems on IAQ.	Study conducted in phases. Reports available.	CPSC	Roy Deppa (301) 504-0784 rdeppa@cpsc.gov
Lead	Reduce consumer exposure to lead, lead and vinyl miniblinds, lead and public playground equipment.	Reports available.	CPSC	Brian Lee (301) 504-0994 blee@cpsc.gov
Camping Heaters	Voluntary standard to limit emissions of CO.	Staff recommendations forwarded to Standards Committee. Evaluation underway.	CPSC	Sandra Inkster (301) 504-0994 sinkster@cpsc.gov

U.S. CONSUMER PRODUCT SAFETY COMMISSION

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Man-made Vitreous Fibers (Fiberglass and Mineral Wool)	Preliminary hazard assessment of possible cancer risk from vitreous fibers released from thermal insulation and other products.	Evaluation underway.	CPSC	Michael Babich (301) 504-0994 mbabich@cpsc.gov

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/OBTS	John Talbott (202) 586-9455 john.talbott@ee.doe.gov
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/OBTS	John Talbott (202) 586-9455 john.talbott@ee.doe.gov
Organic Pollutants	Determine relationships between organic pollutants in residential and large buildings and energy-conservation measures. Develop methods and protocols for measuring emissions from key building materials and products.	Research ongoing.	DOE/EE/OBTS	Joan Daisey (510) 486-7491
Air Infiltration Research	Develop methods to model and measure infiltration and interzonal airflows, and assess ventilation of U.S. housing and associated energy use.	Research ongoing.	DOE/EE/OBTS	John Talbott (202) 586-9455 john.talbott@ee.doe.gov
(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/OBTS	John Talbott (202) 586-9455 john.talbott@ee.doe.gov

ISSUE/MAJOR ACTIVITY		PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
IAQ and Productivity		Assess potential to improve productivity of office workers by providing better indoor environments. Projects are in cooperation with NIOSH.	Research ongoing.	DOE/EE/OBTS	John Talbott (202) 586-9455 john.talbott@ee.doe.gov
Ventilation Research		Support ASHRAE in developing effective ventilation and indoor air quality standards. Develop practical measurement techniques for ventilation rates and efficiencies.	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/OBTS	John Talbott (202) 586-9455 john.talbott@ee.doe.gov
Ventilation Experimentation		Address industry needs in ventilation performance through cost shared use of DOE laboratory facilities.	Ongoing.	DOE/EE/OBTS/NREL	Ren Anderson (303) 275-6032
RADON RESEARCH ACTIVITIES					
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	LEAD		
	PURPOSE	STATUS	AGENCY/OFFICE CONTACT
CIAQ Co-chair	Coordinate Federal research and policy on indoor environmental quality and related issues.	Ongoing.	DHHS/CDC/NIOSH Michael Hodgson (202) 401-2414 muh7@cdc.gov
General Indoor Environmental Quality/Indoor Office Environmental Information	Answer inquiries on indoor environmental quality and indoor/office environmental information, or any occupational safety and health issue.	Ongoing.	DHHS/CDC/NIOSH 1-(800) 356-4674
Indoor Environmental Quality/Indoor Office Environmental Investigations	Provide site investigations or technical advice to solve indoor environmental quality and other indoor/office environmental problems.	Ongoing.	DHHS/CDC/NIOSH David Sundin (513) 841-4382
Indoor Environmental Quality Health Effects Studies	To identify indoor environmental risk factors for work-related symptoms through cross-sectional or case control epidemiologic studies in office buildings	Ongoing.	DHHS/CDC/NIOSH Mark J. Mendell (513) 841-4445
Indoor Environmental Quality Intervention Studies and Methods Development	To use rigorously designed experimental studies to identify indoor environmental interventions that reduce reported occupant symptoms 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) 841-4445

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Characterization of Indoor Environmental Quality in Commercial Aircraft Cabins	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
Epidemiology and Industrial Hygiene Investigation of a New GSA Building	To establish baseline data on chemical and microbiological exposures, and psychosocial stresses in a new office building and determine the effects of seasons on these factors and on worker symptoms.	Ongoing.	DHHS/CDC/NIOSH	Avima Ruder (513) 841-4440
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

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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
Portable Mass Spectrometer Evaluation	Develop a miniature GC/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
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 (770) 488-7320

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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	David Ashley (770)488-7962
Environmental Tobacco Smoke	Provide technical and public information on environmental tobacco smoke.	Ongoing.	DHHS/CDC/ NCCDPHP/OSH	Technical Information Center, OSH (770) 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
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/NIAD	Sahi Rafiullah (301) 496-6752

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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	Sahi Rafiullah (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	Sahi Rafiullah (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	Sahi Rafiullah (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	Sahi Rafiullah (301) 496-6752

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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	Sahi Rafiullah (301) 496-6752
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	Sahi Rafiullah (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	Sahi Rafiullah (301) 496-6752

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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/NIAMD	Sahi Rafiullah (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/NIAMD	Sahi Rafiullah (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/NIAMD (cofunded with National Heart, Lung, & Blood Institute)	Sahi Rafiullah (301) 496-6752

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD	
			AGENCY/OFFICE	CONTACT

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	Sahi Rafiullah (301) 496-6752
Immune Response to an Intracellular Pulmonary Pathogen	Effects of iron availability on the extracellular and intracellular growth of Legionella pneumophila.	Ongoing.	DHHS/NIH/NIAID	Sahi Rafiullah (301) 496-6752
Genetics of Monocyte Killing by Bacteria	Studies on the genetics of Legionella pneumophila and its interactions with host macrophages.	Ongoing.	DHHS/NIH/NIAID	Sahi Rafiullah (301) 496-6752
Generic Determinant of Pathogenicity in Legionella	Studies on the intracellular growth of Legionella pneumophila in amoeba and macrophage cells and the effects of environmental and genetic factors on intracellular growth.	Ongoing.	DHHS/NIH/NIAID	Sahi Rafiullah (301) 496-6752

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Genetics of Iron Acquisition by Legionella Pneumophila	Studies on the genetics of iron acquisition by Legionella pneumophila.	Ongoing.	DHHS/NIH/NI/AID	Sahi Rafiullah (301) 496-6752
Genetic Analysis of the Legionella MIP Virulence Factor	Examination of the regulation, distribution, and structure/function of the MIP and MIP-like genes of Legionella pneumophila.	Ongoing.	DHHS/NIH/NI/AID	Sahi Rafiullah (301) 496-6752
Iron and Monocyte Activation Against A Lung Pathogen	Identification of factors important in cell-mediated and humoral immune responses to Legionella pneumophila infections.	Ongoing.	DHHS/NIH/NI/AID	Sahi Rafiullah (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	Gail Weinmann (301) 435-0202
Respiratory Disorders of Neonates and Children	Evaluate respiratory disorders in neonates and children.	Ongoing.	DHHS/NIH/NHLBI	Mary Anne Berberich (301) 435-0222

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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) 435-0202
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) 435-0202
Determinants of Respiratory Health in Young Adults	Effect of smoking on respiratory health.	Ongoing.	DHHS/NIH/NHLBI	James Kiley (301) 435-0202
Human Health Effects on Repeated Exposures to Ozone	Effects of ozone on pulmonary health.	Ongoing.	DHHS/NIH/NHLBI	James Kiley (301) 435-0202
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 Mitchell (404) 488-4853

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY		PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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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

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.	Study completed. Manuscript in preparation.	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 (770) 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 (770) 488-7040

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
Lung Cancer Among Non-smoking Women with Residential Exposure to Radon Study	Compare estimates of lung cancer risk (per pCi/l) in smoking and non-smoking Missouri women to corresponding estimates on miners.	Part I complete. Part II is in analysis phase. Papers issued for peer review in 1997.	DHHS/NIH/NCI	Michael Alavanja (301) 496-1611
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	Jana Patterson (202) 219-8021 patterson.jana@osha-no.oshsa.gov
Occupational Standards for Indoor Air Pollutants	Regulate levels of air pollutants in the industrial workplace.	Published final rules on cadmium, asbestos, formaldehyde, and 4,4-methylenedianiline, butadiene, methylene chloride, and respiratory protection. Final rule stage for glycol ethers. Proposed rule stage for chromium, prevention of work-related musculoskeletal disorders, PELs for air contaminants, and tuberculosis.	DOL/OSHA	Adam Finkel (202) 219-7075
Regulatory Review of Indoor Air Quality and Smoking	Consider whether OSHA should regulate smoking and indoor air quality.	Request for information on IAQ issues was published in the Federal Register on 9/20/91. Comment period closed 3/20/92. Reviewed over 1,200 comments. Public proposal issued on 4/5/94. Public comment period until 8/13/94. Received over 115,000 written comments. Public hearings began on 9/20/94 and ended on 3/13/95. The post-hearing comment period closed 2/9/96.	DOL/OSHA	Adam Finkel (202) 219-7075

U.S. DEPARTMENT OF LABOR

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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
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: 9/95.	DOL/OSHA	Charles Adkins (202) 219-7031

U.S. DEPARTMENT OF LABOR

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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
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CIAQ Member

Coordinate Federal research and policy on indoor air quality and related issues.

Ongoing.

BPA

Mark Jackson
(503) 230-5475

See "Publications
Available from Federal
Agencies, pp 107-108.

INDOOR AIR ACTIVITIES WITHIN THE GENERAL SERVICES 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.	GSA	Karone Blondin (202) 501-3518 karone.blondin@gsa.gov
Indoor Air Quality Policy and Guidelines for GSA-Owned and Controlled Buildings	Maintaining acceptable IAQ throughout GSA space.	Ongoing.	GSA	Karone Blondin (202) 501-3518 karone.blondin@gsa.gov
Interagency Agreement with NIOSH	Fund IAQ research in GSA's Overland, Missouri and Long Beach, California buildings.	Data analysis; draft preparation.	GSA	Karone Blondin (202) 501-3518 karone.blondin@gsa.gov
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 price.james@gsa.gov Fred Sisson (PBS) (202) 708-5236 sisson.fred@gsa.gov
Radon Program Management	Coordination of radon testing and mitigation in GSA-controlled buildings.	Ongoing.	GSA	Karone Blondin (202) 501-3518 karone.blondin@gsa.gov

GENERAL SERVICES ADMINISTRATION

GENERAL SERVICES ADMINISTRATION

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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CONSUMER INFORMATION CENTER

Consumer Information Catalog	A catalog of free and low-cost federal publications of consumer interest. Several publications contain information on indoor air. Coordinate the development, printing, and distribution of indoor air publications for federal agencies.	Ongoing. Published four times per year.	GSA/CIC	Donna Rathbone (202) 501-1794 Fax: (202) 501-1794 donna.rathbone@gsa.gov Home Page: http://www.pueblo.gsa.gov
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INDOOR AIR ACTIVITIES WITHIN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD	
			AGENCY/OFFICE	CONTACT
CIAQ Member	Develop policy, provide training, and coordinate overall activities relating to indoor air quality.	Ongoing.	NASA	Diana Giammarco (202) 358-1894 dgiammar@mail.hq. nasa.gov

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	C.F. Key (205) 544-2483
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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 (423) 632-6699 wapitman@tva.gov
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) 882-2728 dadepew@tva.gov

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
C/IAQ Member	Coordinate Federal research and policy on indoor air quality and related issues.	Ongoing.	DOC/NIST	Andy Persily (301) 975-6418 Fax: (301) 990-5433 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 modeling. CONTAM96 under development with duct model and ability to estimate exposure.	DOC/NIST	Andy Persily (301) 975-6418 Fax: (301) 990-5433 apersily@nist.gov
Carbon Monoxide Dispersion in Residential Buildings	To understand factors affecting mixing of carbon monoxide in residential buildings as it relates to the location of CO detectors.	Literature review complete (Report No. NISTIR 5906).	DOC/NIST	Andy Persily (301) 975-6418 Fax: (301) 990-5433 apersily@nist.gov
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.	DOC/NIST	Andy Persily (301) 975-6418 Fax: (301) 990-5433 apersily@nist.gov

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
IAQ Performance of Residential Ventilation Systems	Computer simulation, using CONTAM, of the performance of various approaches to the ventilation of residential buildings as indicated by air change rates and pollutant concentrations due to a number of sources.	Limited analyses complete (Report No. NISTIR 5801). Additional simulations ongoing.	DOC/NIST	Andy Persily (301) 975-6418 Fax: (301) 990-5433 apersily@nist.gov
Ventilation and Air Quality in Large Buildings	Develop test methods and procedures for studying air change 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 Fax: (301) 990-5433 apersily@nist.gov
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 Fax: (301) 990-5433 apersily@nist.gov
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. NISTIR 5586.	DOC/NIST	Andy Persily (301) 975-6418 Fax: (301) 990-5433 apersily@nist.gov

U.S. DEPARTMENT OF COMMERCE

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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 Reinhard.Daniel@hq.navy.mil
SBS Complaint Investigations	Provide guidance to field support teams on conducting indoor air quality investigations at Air Force facilities.	Guidance document completed..	DOD/USAF/AL/OEMI	Lt. Col. Gary Carlton (210) 536-6049 gary.carlton@guardian.brooke.af.mil
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. Gary Carlton (210) 536-6049 gary.carlton@guardian.brooke.af.mil
RADON ACTIVITIES				
Army Radon Reduction Program	Identify occupied Army buildings worldwide with elevated radon levels and reduce radon to below 4 pCi/l.	Completed. Over 80,000 buildings tested.	DOD/DOA	Nelson Labbe (703) 806-5202

U.S. DEPARTMENT OF DEFENSE

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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 were scheduled based on established priority guidelines.	DOD/DON	LCDR John Pomerville (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. Detailed Assessment Phase of residential/high interest (schools, dormitories, etc.) structures at medium/high probability installations 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)

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	Xavier de Souza Briggs (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.	See pages 101-103 for a list of complete reports available from HUD USER.	HUD	Edwin Stromberg (202) 708-4370
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LEAD-BASED PAINT ACTIVITIES

Lead-Based Paint Abatement Program	Provide grants to States and local governments for lead-based paint abatement in private housing.	Grants announced October 1994. Future rounds canceled. 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

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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:	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 completed.	HUD	Steve Weitz (202) 755-1805
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: Strategy issued to housing authorities as component of Risk Assessment Notice, dated June 25, 1992.	HUD	William Wisner (202) 755-1805

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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 available.	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.	Project completed.	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 is completed.	HUD	William Wisner (202) 755-1805

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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 available annually. Final report due in 1999.	HUD	Ellis Goldman (202) 755-1822
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.	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.	Project ongoing	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.	Publication is available from HUD USER.	HUD	Steve Weitz (202) 755-1805

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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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
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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 is available from HUD USER.	HUD	Steve Weitz (202) 755-1805
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Improving Air Distribution Systems in Manufactured Housing	Develop solutions to increase delivery of heating and cooling air.	Publication is available from HUD USER.	HUD and NC AEC	William Freeborne (202) 708-4370 x5725
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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. Report on "Relation of Lithology to Variability of Radionuclide Activity in Groundwater in Newark Basin, NJ" is in press. Report will be a USGS Water Resources Investigation Report.	DOI/USGS	Otto Zepezca (609) 771-3900
Natural Radioactivity in Ground Water of the Kirkwood-Cohansey Aquifer System, South New Jersey, 1983-1989	Decline occurrence and distribution of radionuclides in ground water, identify relation between radionuclide activities and other chemical constituents, decline source of radioactivity in ground water chemistry, and radionuclide content along flow paths.	Project completed; report published: "Geochemical and Hydrogeological Controls on Radium in Ground Water in the Kirkwood-Cohansey Aquifer System, South Coastal Plain, NJ," USGS Water Resources Investigation Report 92-4144.	DOI/USGS	Otto Zepezca (609) 771-3900

INDOOR AIR ACTIVITIES WITHIN THE 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 Urman (703) 875-4137 urmansc@state.gov

RADON ACTIVITIES

Radon Assessment Advisory Group	Select a course of action for radon control program for overseas buildings and dwellings.	Ongoing.	DOS	Stephen Urman (703) 875-4137 urmansc@state.gov
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INDOOR AIR ACTIVITIES WITHIN THE U.S. DEPARTMENT OF TRANSPORTATION

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 arnold.konheim@ost.dot.gov
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 all domestic flights and all international flights operated by U.S. carriers except for those international flights operated by one carrier. DOT is continuing to work toward the elimination of all smoking.	DOT/OST/Office of Environment, Energy and Safety	Arnold Konheim (202) 366-4849 arnold.konheim@ost.dot.gov
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.	Ten countries now require disinsection of all inbound flights, only four of which require that passengers be on board while the aircraft is sprayed with insecticide.	DOT/OST/Office of Environment, Energy and Safety	Arnold Konheim (202) 366-4849 arnold.konheim@ost.dot.gov

ISSUE/MAJOR ACTIVITY	PURPOSE	STATUS	LEAD AGENCY/OFFICE	CONTACT
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.	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 exposure monitoring on 33 survey flights was accomplished. Data analyses from these flights will be completed in FY99. A 5-year epidemiological study to address disease transmission in the cabin environment was developed for the FY 1997-2002 time frame. Relationships with university researchers, aircraft manufacturers, airlines, and appropriate aviation committees have been formed. Initial sampling will be undertaken to ensure that future data collection efforts for disease transmission will result in useful data.	DOT/FAA/Office of Aviation Medicine	Jeff Marcus (405) 954-5555 jeff.marcus@foa.dot.gov
				Jean Watson (202) 267-8393

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
U.S. ENVIRONMENTAL PROTECTION AGENCY			
Those publications with "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 (703) 356-4020 FAX: (703) 356-3586		U.S. EPA/NSCEP (National Service Center for Environmental Publications, formerly NCEPI) P.O. Box 42419 Cincinnati, OH 45242 FAX ONLY: (513) 489-8695 800-490-9198	
IED publications can also be found on IED web site - http://www.epa.gov/iaq			
<i>Building Air Quality: A Guide for Building Owners and Facility Managers</i> (GPO Number: S/N 055-000-00602-4. Cost: \$28; discount for 100 or more)	1991	EPA/OAR/ORIA/IED (w/NIOSH)	Mail in order to: U.S. GPO Superintendent of Documents P.O. Box 371954 Pittsburgh, PA 15250-7954 or Call: Phone: (202) 512-1800 Fax: (202) 512-2250
<i>Building Air Quality Action Plan</i> (GPA Number: S/N 055-000-00603-2; cost: \$2.50)	1998	EPA/OAR/ORIA/IED (w/ NIOSH)	
<i>An Office Building Occupants Guide to IAQ</i> (EPA-402-K-97-003)	1997	EPA	IAQ INFO, NSCEP

IAQ Tools for Schools Action Kit (GPO #055-000-00563-0)
(Cost: \$22, single quantity, includes S&H; discount for 100 or more)
Note: A limited number of "Kits" are available to schools by faxing the request on official school letterhead to the IAQ Clearinghouse at (703) 356-5386 or by writing to:

EPA Kit

P.O. Box 37133

Washington, D.C. 20013-7133

IAQ Tools for Schools Problem Solving Wheel

IAQ Tools for Schools— Ventilation Basics Video

IAQ Tools for Schools— Taking Action & Ventilation Basics Video

Healthy Indoor Air for America's Homes

BAQ Training Kit (#AVA 191885500)

(Cost: \$150 each + shipping & handling)

Introduction to Indoor Air Quality:

A Self-Paced Learning Module

A Reference Manual

(Cost: \$47; \$40 for NEHA members)

Should You Have the Air Ducts in Your Home Cleaned?

Indoor Air Pollution: An Introduction for Health Professionals (EPA-402-R-94-007)

1995

EPA/OAR/ORIA/IED

Schools Kit: Same ordering information as above; or call IAQ INFO 1-800-438-4318

1995

EPA/OAR/ORIA/IED

IAQ INFO

1995

EPA/OAR/ORIA/IED

IAQ INFO

1997

EPA/OAR/ORIA/IED

IAQ INFO

1996

EPA/OAR/ORIA/IED
(with USDA Cooperative Extension System and Montana State University)
Nathaniel Vogel
(406) 994-3451

John Guevin
(202) 564-9055

1993

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

National Technical Information Service
1-800-553-NTIS
or 703-487-4650
or TDD 703-487-4639

1991

EPA/PHS

The National Environmental Health Association
720 South Colorado Blvd,
South Tower,
Suite 970
Denver, CO 80222
Telephone:
(303) 756-9090

1997

EPA

IAQ INFO, NSCEP

1994

EPA, ALA

IAQ INFO, NSCEP

PUBLICATIONS AVAILABLE FROM FEDERAL AGENCIES

<i>What You Should Know About Combustion Appliances and Indoor Air Pollution</i>	1991	EPA, CPSC, and ALA	IAQ INFO, NSCEP
<i>The Inside Story: A Guide to Indoor Air Quality (402-K 93-007)</i>	1993 (rev.)	EPA/OAR/ORIA (w/CPSC)	IAQ INFO, NSCEP
<i>Fact Sheets:</i>	1990 (rev.)	EPA/OAR/ORIA	IAQ INFO, NSCEP
<i>Ventilation and Air Quality in Offices</i>	1991 (rev.)		
<i>Sick Building Syndrome</i>	1990		
<i>Residential Air Cleaners</i>	1991		
<i>Use and Care of Home Humidifiers</i>	1996		
<i>Indoor Air Quality Basics for Schools</i>	1996		
<i>Carbon Monoxide Poisoning</i>	1993		
<i>Flood Cleanup</i>			
<i>Setting the Record Straight: Secondhand Smoke is a Preventable Health Risk</i>	1994		IAQ INFO, NSCEP
<i>Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders</i>	1993		IAQ INFO, NSCEP
<i>Secondhand Smoke: What You Can Do (402-F 93-003)</i>	1993	EPA	IAQ INFO, NSCEP
<i>Flood Cleanup: Avoiding Indoor Air Quality Problems</i>	1993		IAQ INFO, NSCEP
<i>Residential Air-Cleaning Devices: A Summary of Available Information (400/1-90-002)</i>	1990	EPA/OAR/ORIA	IAQ INFO, NSCEP
<i>Consumers Guide to Radon Reduction (EPA 402-K 92-003)</i>	1992	EPA	IAQ INFO, NSCEP
<i>Home Buyer's and Seller's Guide to Radon (EPA 402-R 93-003) (2/93)</i>	1993	EPA/OAR/ORIA	IAQ INFO, NSCEP
<i>Radon Measurements in Schools - Revised Edition</i> EPA 402-R-92-014 (7/93)	1993	EPA/OAR/ORIA/Radon	IAQ INFO, NSCEP
<i>Radon Measurements in Schools - Self-Paced Training Workbook</i> EPA 402-B-94-001	1994	EPA/OAR/ORIA/Radon	IAQ INFO, NSCEP
<i>Reducing Radon in Schools: A Team Approach (EPA 402-R 94-008)</i>	1994	EPA/OAR/ORIA/Radon	Bryan Ligman (202) 564-9432
<i>Indoor Radon and Radon Decay Product Measurement Device Protocols</i> EPA 402-R-92-004	1992		IAQ INFO, NSCEP
<i>Protocols for Radon and Radon Decay Product Measurements in Homes</i> EPA 402-R-93-003 (6/93)	1993		IAQ INFO, NSCEP
<i>Asbestos in the Home: A Homeowner's Guide</i>	1988	EPA Region 10	Mary Frances Briggs (202) 553-1255

<i>Asbestos in the Home: A Homeowner's Guide</i>	Jan. 1997	EPA Region 8 (ENF-T)	Robert Vick (303) 312-6204
<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	TSCA Hotline (202) 554-1404
<i>ABCs of Asbestos in Schools</i>	1989	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>Guidelines for Conducting the AHERA TEM Clearance Test to Determine the Completion of an Asbestos Abatement Project</i>	1989	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>Assessing Asbestos Exposure in Public Buildings</i>	1988	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>A Guide to Performing Reinspections Under the Asbestos Hazard Emergency Response Act (AHERA)</i>	1992	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>Indoor Air Pollutants from Household Product Sources (EPA 600/4-91/025)</i>	1991	EPA/OPPTS/OPPT	Janet Remmers (202) 260-1583
<i>EPA Study of Asbestos-Containing Materials in Public Buildings</i>	1988	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>Environmental Hazards in Your Schools: A Resource Handbook</i>	1990	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>Asbestos in Schools: A Guide to New Federal Requirements for Local Education Agencies</i>	1988	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>A Guide to Respiratory Protection for the Asbestos Abatement Industry</i>	1986	EPA and NIOSH	TSCA Hotline (202) 554-1404
<i>Airborne Asbestos Health Assessment Update</i>	1986	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>Guidance for Preventing Asbestos Disease Among Mechanics</i>	1986	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404
<i>Guidance for Controlling Asbestos-Containing Materials in Buildings</i>	1985	EPA/OPPTS/OPPT	TSCA Hotline (202) 554-1404

Measuring Airborne Asbestos Following An Abatement Action

1985 EPA/OPPTS/OPPT TSCA Hotline
(202) 554-1404

1984 EPA/OPPTS/OPPT TSCA Hotline
(202) 554-1404

1992 EPA/HUD/CDC/DoD National Lead Information
Center
1-800-LEAD-FYI

Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials

Lead Brochures and Fact Sheets:

- *Lead Poisoning and Your Children*
- *Envenenamiento de Plomo y Sus Niños* (Spanish version of above)
- *Home Repairs and Renovations: What You Should Know About Lead-Based Paint*
- *Reparaciones y Renovaciones de Casas: Lo Que Usted Debe Saber sobre el Plomo Basado en La Pintura* (Spanish version of above)
- *Questions Parents Ask About Lead Poisoning*
- *Preguntas que Los Padres Hacen sobre el Envenenamiento de Plomo* (Spanish version of above)
- *Testing Your Home for Lead*
- *Inspeccionar su Casa por el Plomo* (Spanish version of above)

Inside IAQ: EPA's Indoor Air Quality Research Update

Published
twice per
year
EPA/ORD/NRMRL
(EPA 600/10-97/001)

Kelly Levoic
(919) 541-2157

Interim, Rn-Resistant Construction Guidelines for Use in FL-1989 (EPA 600/8-90-062)

NSCEP

Identification of Candidate Houses for the North FL Rn Mitigation Project (EPA 600/8-90-070)

EPA/ORD/NRMRL

1990

Correlation of FI Soil-Gas Permeabilities with Grain Size, Moisture, and Porosity (EPA 600/8-91-039).

EPA/ORD/NRMRL

1991

Proceedings of the Workshop on Radon Potential Mapping, FL Radon Research Program (EPA 600/9-91-044)

EPA/ORD/NRMRL

1991

Feasibility an Approach for Mapping Rn Potentials in FL (EPA 600/8-91-046)

EPA/ORD/NRMRL

1991

An Assessment of Soil-Gas Measurement Technologies (EPA 600/8-91-050)

EPA/ORD/NRMRL

1991

Recommended Foundation Fill Materials Construction Standard of the FL Radon Research Program (EPA 600/8-91-206)

EPA/ORD/NRMRL

1991

<i>Recommended Sub-Slab Depressurization Systems Design Standard of the FL Radon Research Program (EPA 600/8-91-208)</i>	1991	EPA/ORD/NRMRL
<i>Development of Alternative Performance Standards for Radon-Resistant Construction Based on Short/long Term Indoor Rn Concentrations, Volume 1 (EPA 600/8-91-210a)</i>	1991	EPA/ORD/NRMRL
<i>Development of Alternative Performance Standards for Radon-Resistant Construction Based on Short/long Term Indoor Rn Concentrations, Volume 2 (EPA 600/8-91-210b)</i>	1991	EPA/ORD/NRMRL
<i>Standard Measurement Protocols, FL Radon Research Program (EPA 600/8-91-212)</i>	1991	EPA/ORD/NRMRL
<i>Rn Pressure Differential Project, Phase I, FL Radon Research Program (EPA 600/R-92-008)</i>	1992	EPA/ORD/NRMRL
<i>Recommended HVAC Standard for the FL Rn Research Program (EPA 600/R-92-010)</i>	1992	EPA/ORD/NRMRL
<i>Modeling of Rn Entry into FL Houses w/Concrete Slabs and Concrete-Block Stem Walls (EPA 600/R-92-119)</i>	1992	EPA/ORD/NRMRL
<i>Guidance of Research House Studies of the FL Radon Research Program, Volume 1 (EPA 600/R-92-191a)</i>	1992	EPA/ORD/NRMRL
<i>Guidance of Research House Studies of the FL Radon Research Program, Volume 2 (EPA 600/R-92-191b)</i>	1992	EPA/ORD/NRMRL
<i>Recommended Performance Standard of the FL Radon Research Program (EPA 600/R-92-198)</i>	1992	EPA/ORD/NRMRL
<i>Radon Mitigation Studies: South Central FL Demonstration (EPA 600/R-92-207)</i>	1992	EPA/ORD/NRMRL
<i>Reference Manual for RASSMIT ver. 2.1: Sub-Slab Depressurization System Design Performance Simulation Program (EPA 600/R-93-027)</i>	1993	EPA/ORD/NRMRL
<i>Proceedings of the Indoor Rn Modeling Workshop, FL Radon Research Program (EPA 600/R-93-052)</i>	1993	EPA/ORD/NRMRL
<i>Recommended Foundation Barrier Construction Standard of the FL Rn Research Program (EPA 600/R-93-091)</i>	1993	EPA/ORD/NRMRL
<i>Radon Prevention in the Design and Construction of Schools and Other Large Buildings (3rd Edition)</i>	1994	EPA/ORD/NRMRL/APPCD
<i>Radon in Schools - Every School Should Take This Simple Test</i>	1989	EPA/OAR/ORIA
		NSCEP
		NSCEP

<i>A Citizen's Guide to Radon, 2nd Edition (EPA 402-K 92-001) (5/92)</i>	1992	EPA and HHS	NSCEP
<i>Technical Support Document for the 1992 Citizen's Guide to Radon (EPA 400-R 92-11)</i>	1992	EPA/OAR/ORIA	NSCEP
<i>National Residential Radon Survey Summary Report</i>	1992	EPA/OAR/ORIA	NSCEP
<i>Tracer Gas Measurement of Indoor-Outdoor Air Exchange Rates</i>	1994	EPA/ORD/NRMRL	John Chang (919) 541-3747 jchang@engineer. aeerl.epa.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. aeerl.epa.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>Indoor Air Research: Characterizing Air Emissions from Indoor Sources (EPA 600-F-95-005)</i>	1995	EPA/ORD/NRMRL	
<i>Office Equipment: Design, Indoor Air Emissions, and Pollution Prevention Opportunities (EPA 600/R-95-045)</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

Measurement of the Effects of Moisture Distribution on the Transport Properties of Radon and Other Soil Contaminants in EPA's Soil Chamber	1994	EPA/ORD/NRMRL	
Large Building Characterization	1994	EPA/ORD/NRMRL	Marc Y. Menetrez (919) 541-7981
Radon Reduction Techniques for Existing Detached Houses: Technical Guidance (Third Edition) for Active Soil Depressurization Systems (EPA 625-R 93-011)	1993	EPA/ORD/NRMRL	Bruce Henschel (919) 541-4112
Analysis of Radon Mitigation Techniques Used in Existing U.S. Houses	1994	EPA/ORD/NRMRL	
Physical and Numerical Modeling of ASD Exhaust Dispersion Around Houses (EPA 600-R 94-115)	1994	EPA/ORD/NRMRL	
Physical and Numerical Modeling of Active Soil Depressurization Exhaust Dispersion Around Houses	1994	EPA/ORD/NRMRL	
Soil and Fill Laboratory Support-1991, Florida Radon Research Program (EPA 600-R 94-064)	1994	EPA/ORD/NRMRL	NSCEP
Supplement to: Standard Measurement Protocols, Florida Radon Research Program (EPA 600-R 94-001)	1994	EPA/ORD/NRMRL	
Laboratory Assessment of the Permeability and Diffusion Characteristics of Florida Concretes: Phase I. Methods Development and Testing (EPA 600-R 94-053)	1994	EPA/ORD/NRMRL	
Air Infiltration Measurements Using Tracer Gases: A Literature Review (EPA 600/R-95-013)	1995	EPA/ORD/NRMRL	
Development of a Lumped-Parameter Model of Indoor Radon Concentrations (EPA 600/R-95-020)	1995	EPA/ORD/NRMRL	
Feasibility of Characterizing Concealed Openings in the House-Soil Interface for Modeling Radon Gas Entry	1995	EPA/ORD/NRMRL	
Development of a Radon Protection Map for Large Buildings in Florida (EPA 600/R-96-028)	1996	EPA/ORD/NRMRL	
Radon Generation and Transport in Aged Concrete (EPA 600/R-95-032)		EPA/ORD/NRMRL	
The RAETRAD Model of Radon Gas Generation, Transport, and Indoor Entry (EPA 600-SR 94-198)	1995	EPA/ORD/NRMRL	

RAETRAD Version 3.1 User Manual (EPA 600-SR 94-105)	1995	EPA/ORD/NRMRL
Rn Generation and Transport Through Concrete Foundations (EPA 600/R-94-175)	1994	EPA/ORD/NRMRL
Soil Radon Potential Mapping of Twelve Counties in North-Central Florida (EPA 600-SR 94-218)	1995	EPA/ORD/NRMRL
Characteristics of Florida Fill Materials and Soils -- 1990 (Florida Radon Research Program)	1994	EPA/ORD/NRMRL
Lumped-Parameter Model Analysis of Data from the 1992 New House Evaluation Project - Florida Radon Research Program (600/R-95-090)	1995	EPA/ORD/NRMRL
Laboratory Assessment of the Permeability and Diffusion Characteristics of Florida Concrete - Phase II Field Samples and Analysis (EPA 600/R-95-103)	1995	EPA/ORD/NRMRL
Evaluation of Building Design, Construction and Performance for the Control of Radon in Florida Houses - Evaluation of Radon Resistant Construction Techniques in Eight Houses (EPA 600/R-95-114)	1995	EPA/ORD/NRMRL
Statewide Mapping of Florida Soil Potentials, Volume 1: Technical Report (EPA 600/R-95-142a)	1995	EPA/ORD/NRMRL
Statewide Mapping of Florida Soil Potentials, Volume 2: Appendices A-P (EPA 600/R-95-142b)	1995	EPA/ORD/NRMRL
Soil and Fill (Analysis) Laboratory Support - 1992 Radiological Analysis (EPA 600/R-95-145)	1995	EPA/ORD/NRMRL
Design and Testing of Sub-Slab Depressurization for Radon Mitigation in North Florida Houses Part I: Performance and Durability, Volume 1 (EPA 600/R-95-149a)	1995	EPA/ORD/NRMRL
Design and Testing of Sub-Slab Depressurization for Radon Mitigation in North Florida Houses Part I: Performance and Durability, Volume 2 (EPA 600/R-95-149b)	1995	EPA/ORD/NRMRL
Demonstration of Radon Resistant Construction Techniques - Phase II (EPA 600/R-95-159)	1995	EPA/ORD/NRMRL
Site-Specific Characterization of Soil Radon Potentials for Florida Houses (EPA 600/R-95-161)	1995	EPA/ORD/NRMRL
New House Evaluation of Potential Building Design and Construction for the Control of Radon in Marion and Alachua Counties, Florida (EPA 600/R-95-170)	1995	EPA/ORD/NRMRL

HVAC Systems as a Tool in Controlling Indoor Air Quality - A Literature Review (EPA 600/R-95-170)	1995	EPA/ORD/NRMRL	
Residential Radon Resistant Construction Feature Selection System (EPA 600/R-96-005)	1996	EPA/ORD/NRMRL	
Test Cell Studies of Radon Entry (EPA 600/R-96-010)	1996	EPA/ORD/NRMRL	
Technical Basis for a Candidate Building Materials Radium Standard (EPA 600/R-96-022)	1996	EPA/ORD/NRMRL	
Development of a Radon Protection Map for Large Buildings in Florida (EPA 600/R-96-028)	1996	EPA/ORD/NRMRL	
Effectiveness of Radon Control Features in New House Construction South Central Florida (EPA 600/R-96-044)	1996	EPA/ORD/NRMRL	
Site-Specific Protocol for Measuring Soil Radon Potentials for Florida Houses (EPA 600/R-96-045)	1996	EPA/ORD/NRMRL	
Contribution of Building Materials to Indoor Radon Levels in Florida Buildings (EPA 600/R-96-107)	1996	EPA/ORD/NRMRL	
Site-Specific Measurements of Residential Radon Protection Category (EPA 600/R-96-108)	1996	EPA/ORD/NRMRL	Marc Y. Menetrez (919) 541-7981
Large Building HVAC Simulation (EPA 600/R-96-116)	1996	EPA/ORD/NRMRL	
RAETRAD-F: Version 1.1 User's Guide for Analyzing Site-Specific Measurements of Soil Radon Potential Category for Florida Houses (EPA 600/R-96-126)	1996	EPA/ORD/NRMRL	
Characterization of Environmental Chambers for Evaluating Microbial Growth on Building Materials	1994	EPA/ORD/NRMRL	John C. S. Chang (919) 541-3747
Design and Operation of a Dynamic Test Chamber for Measurement of Biocontaminant Pollutant Emission and Control	1994		
Evaluation of Fungal Growth (<i>Penicillium Glabrum</i>) on a Ceiling Tile	1994		
Small Chamber and Test Protocol Design for Chemical and Toxicological Emissions Characterization of Indoor Sources	1994		Mark A. Mason (919) 541-4835

Source Testing and Data Analysis for Exposure and Risk Assessment of Indoor Pollutant Sources

Leslie E. Sparks
(919) 541-2458

Ventilation Technology Systems Analysis

1994 EPA/ORD/NRMRL

Russell N. Kulp
(919) 541-7980
rkulp@engineer.
aerl.epa.gov

HVAC Systems as Emission Sources: A Critical Literature Review

1994 EPA/ORD/NRMRL

Microbiological Screening of the Indoor Air Quality in the Polk County Administrative Building

1995 EPA/ORD/NRMRL

Energy Analysis of Applying ASHRAE 62 in the Polk County Administrative Building

1995 EPA/ORD/NRMRL

Indoor Air Quality Research Programs: A Literature Review

1994 EPA/ORD/NRMRL

HVAC Systems as Emission Sources Affecting Indoor Air Quality: A Critical Review

1995

Characterization of Manufacturing Processes and Emissions and Pollution Prevention Options for the Composite Wood Panel Industry (EPA 600/R-96-066)

1996 EPA/ORD/NRMRL

Elizabeth Howard
(919) 541-7915

Non-Occupational Pesticide Exposure Survey

1990 EPA/ORD/EMS

Andrew Bond
(919) 541-4329

Methods of Analysis for Environmental Carcinogens

1990 EPA/ORD/NCEA

Indoor Air Concentrations of Environmental Carcinogens

1991 EPA/ORD/NCEA

Indoor Environmental Characterization of a Non-problem Building: Assessment of Cleaning Effectiveness

1994 EPA/ORD/NCEA

Indoor Air Quality Monitoring in Carpeted Environments

1992 EPA/ORD/NCEA

Indoor Air - Reference Bibliography

1994 EPA/ORD/NCEA

Consumer Product Safety Commission

Asbestos in Your Home

1990 CPSC, EPA, and ALA CPSC Hotline
(800) 638-CPSC
or write to:
CPSC
Washington, DC 20207

Biological Pollutants in Your Home

1990 CPSC and ALA

An Update on Formaldehyde

1990 CPSC

Safety Alert on Mercury Vapors

1991 CPSC

What You Should Know About Combustion Appliances and Indoor Air Pollution

1991 CPSC, EPA, and ALA

Indoor Air Pollution: An Introduction for Health Professionals

1994 CPSC/EPA, ALA, and AMA CPSC Hotline
(800) 638-CPSC
or write to:
CPSC
Washington, DC 20207

Protect Your Family from Lead in Your Home

1995 CPSC, EPA

The Senseless Killer

1997 CPSC

Safety Alert on Art Materials

1992 CPSC

What You Should Know About Using Paint Strippers

1995 CPSC, EPA

Carbon Monoxide Q's and A's

1997 CPSC

Department of Health and Human Services

Building Air Quality: A Guide for Building Owners and Facility Managers

1991 DHHS/CDC/NIOSH and EPA GPO (see EPA listing)

DHHS (NIOSH) Publication No. 91-114

Current Intelligence Bulletin 54: Environmental Tobacco Smoke in the Workplace -- Lung

1991 DHHS/CDC/NIOSH

Cancer and Other Health Effects

Technical Information
Branch, NIOSH
Information Number
(800) 356-4674

DHHS (NIOSH) Publication No. 91-108

Department of Health and Human Services

<i>Preventing Carbon Monoxide Poisoning from Small Gasoline-Powered Engines and Tools</i>	1986	DHHS/CDC/NIOSH and CDPHE, CPSC, OSHA, EPA	Technical Information Branch, NIOSH Information Number (800) 356-4674
<i>The NIOSH Environmental Evaluation Experience: Part One: Building Environmental Evaluations; Part Two: Symptom Prevalence; Part Three: Association Between Environmental Factors and Self-Reported Health Conditions</i>	1986	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 & Programming Branch, NCHS (301) 436-7087
<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	404) 488-5705
<i>Secondhand Smoke: We're All At Risk</i>	1993	DHHS/CDC/NCCDPHP/OSH	404) 488-5705
<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>			404) 488-5705
<i>Respiratory Health Effects of Passive Smoking-EPA Fact Sheet (3987)</i>			404) 488-5705
<i>What You Can Do About Secondhand Smoke (4219)</i>			404) 488-5705
<i>Bibliography on Environmental Tobacco Smoke in the Workplace (4423)</i>			404) 488-5705

Department of Health and Human Services

<i>Breath: Bar and Restaurant Employees Against Tobacco Hazards Pamphlet (4309)</i>			404) 488-5705
<i>Testimony of NIOSH on the OSHA Notice of Proposed Rulemaking on Indoor Air Quality</i>	1994	DHHS/CDC/NIOSH	NIOSH Docket Office (800) 356-4674
<i>Something in the Air: Airborne Allergens (No. 93-493)</i>	1993	DHHS/NIH/NIH/IAID	404) 488-5705
<i>How to Create a Dust-Free Bedroom</i>	1994	DHHS/NIH/NIH/IAID	
<i>African Americans and Smoking: At a Glance</i>	1991	DHHS/OSHA/NCCCDPHP/OSH	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		
<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		

Department of Labor

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				OSHA Publications Office (202) 219-4667 or (202) 219-9266
<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		OSHA Publications Office
<i>Chemical Hazard Communication</i> (OSHA Publication No. 3084)	1992 (Rev.)	OSHA		OSHA Publications Office
<i>Exposure to Hazardous Chemicals in Laboratories</i> (OSHA Publication No. 3119)	1989	OSHA		OSHA Publications Office
<i>4,4' Methyleneedianiline (MDA) for General Industry</i> (OSHA Publication No. 3135)	1992	OSHA		OSHA Publications Office
<i>4,4' Methyleneedianiline (MDA) in the Construction Industry</i> (OSHA Publication No. 3137)	1992	OSHA		OSHA Publications Office
<i>Grain Handling</i> (OSHA Publication No. 3103)	1991 reprint	OSHA		OSHA Publications Office
<i>Hazardous Waste and Emergency Response</i> (OSHA Publication No. 3114)	1992 reprint	OSHA		OSHA Publications Office
<i>Informacion Sobre los Riesgos de los Productos Quimicos</i> (Spanish translation of OSHA Publication No. 3084; OSHA Publication No. 3117)	1989	OSHA		OSHA Publications Office
<i>Occupational Exposure to Cadmium</i> (OSHA Publication No. 3136)	1992	OSHA		OSHA Publications Office
<i>Occupational Exposure to Cadmium in the Construction Industry</i> (OSHA Publication No. 3139)	1992	OSHA		OSHA Publications Office
<i>Safety and Health Guide for the Chemical Industry</i> (OSHA Publication No. 3091)	1986	OSHA		OSHA Publications Office
<i>Safety and Health Guide for the Microelectronics Industry</i> (OSHA Publication No. 3107)	1988	OSHA		OSHA Publications Office
<i>Working with Lead in the Construction Industry</i> (OSHA Publication No. 3126)	1991	OSHA		OSHA Publications Office

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Occupational Exposure to Hazardous Chemicals in Labs (Program Highlights #33)

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OSHA Publications Office

Waste Anesthetic Gas (Program Highlights #38)

OSHA

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Department of Housing and Urban Development

Radon Testing Protocols and Measurement Devices for HUD-Assisted Housing

1996

HUD

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P.O. Box 6091
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Credit Card Orders:
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Health Basis for Radon Concerns

1996

HUD

Development of the EPA Map of Radon Zones: Literature Review and Critique

1996

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Assessment of Radon Mitigation Methods in Low-Rise Residential Buildings

1996

HUD

HUD USER

Review and Critique of the EPA Model Standards and Techniques for Control in New Residential Buildings

1996

HUD

HUD USER

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
<i>The HUD Lead-Based Paint Abatement Demonstration (FHA)</i> (HUD-5845)	1991	HUD	HUD USER
<i>The HUD Lead-Based Paint Abatement Demonstration (FHA), Vol. I, Appendices A-H</i> (HUD-5846)	1991	HUD	HUD USER
<i>The HUD Lead-Based Paint Abatement Demonstration (FHA), Vol. I, Appendices I-P</i> (HUD-5647)	1991	HUD	HUD USER
<i>Lead-Based Paint Bibliographies: Problem Identification Strategies</i>	1990	HUD	HUD USER
<i>Lead-Based Paint Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing</i>	1991	HUD	HUD USER
<i>Training Course -- Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing</i>	1991	HUD	HUD USER
<i>EPA Model Training Course for Lead Abatement -- Contractors/Supervisors</i> (AVI-6059)	1992	EPA/HUD	HUD USER
<i>Distance Learning Broadcast on Lead-Based Paint: Out with the Old, In with the New</i> (AVI-6059)	1996	HUD	HUD USER
<i>Putting the Pieces Together: Controlling Lead Hazards in the Nation's Housing</i> Summary (HUD-6640), Full Report (HUD-6649)	1995	HUD	HUD USER
<i>Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing</i> (HUD-6700)	1995	HUD	HUD USER

Bonneville Power Administration

<i>Northwest Residential Radon Standards -- Volume I Project Report</i> (DOE/BP-1273)	1989	BPA	Sue Ludeman (503) 230-7334
<i>Northwest Residential Radon Standards -- Volume II Comment Letters</i> (DOE/BP-1274)	1989	BPA	Sue Ludeman (503) 230-7334

<i>Air Leakage Control Manual</i> (DOE/BP-1687)	1992	BPA	Sue Ludeman (503) 230-7334
<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	Sue Ludeman (503) 230-7334
<i>Influence of Subslab Aggregate Permeability on Subslab Ventilation Performance</i> (DOE/BP-1757)	1992	BPA	Sue Ludeman (503) 230-7334
<i>Analysis of Innovative Ventilation Systems in Multi-family Buildings: RCDP Cycle III</i> (DOE/BP-2092)	1993	BPA	Sue Ludeman (503) 230-7334
<i>Measured Infiltration and Ventilation in Manufactured Homes</i> (DOE/BP-13330-1)	1992	BPA	Sue Ludeman (503) 230-7334
<i>Spillage of Combustion By-products from Woodstoves Operated in Negative Pressure Environments</i>	1993	BPA	Sue Ludeman (503) 230-7334
<i>Radon Mitigation Expert System (Handbook and Computer Diskette)</i>	1993	BPA	Eileen Jensen (503) 230-3462

Department of Energy

Lawrence Berkeley National Laboratory Indoor Environment Program, Energy and Environment Division, Bibliography, 1988-1995 (21 pages)	1995	DOE/LBL	Joan Daisey (510) 486-7491
Lawrence Berkeley National Laboratory Indoor Environment Program, Energy and Environment Division, Bibliography, 1992-1996 (16 pages)	1996	DOE/LBL	Joan Daisey (510) 486-7491

General Services Administration

Asbestos Management and Control (video) QLA 19126

1992 GSA

National Audiovisual
Center
8700 Edgeworth Dr.
Capitol Heights, MD
20743-3701
(301) 763-1891
1-800-788-6282

Asbestos Management and Control (brochure) QLA 19126

1992 GSA

Breathing Easy: What You Should Know About Indoor Air Quality

1992 GSA

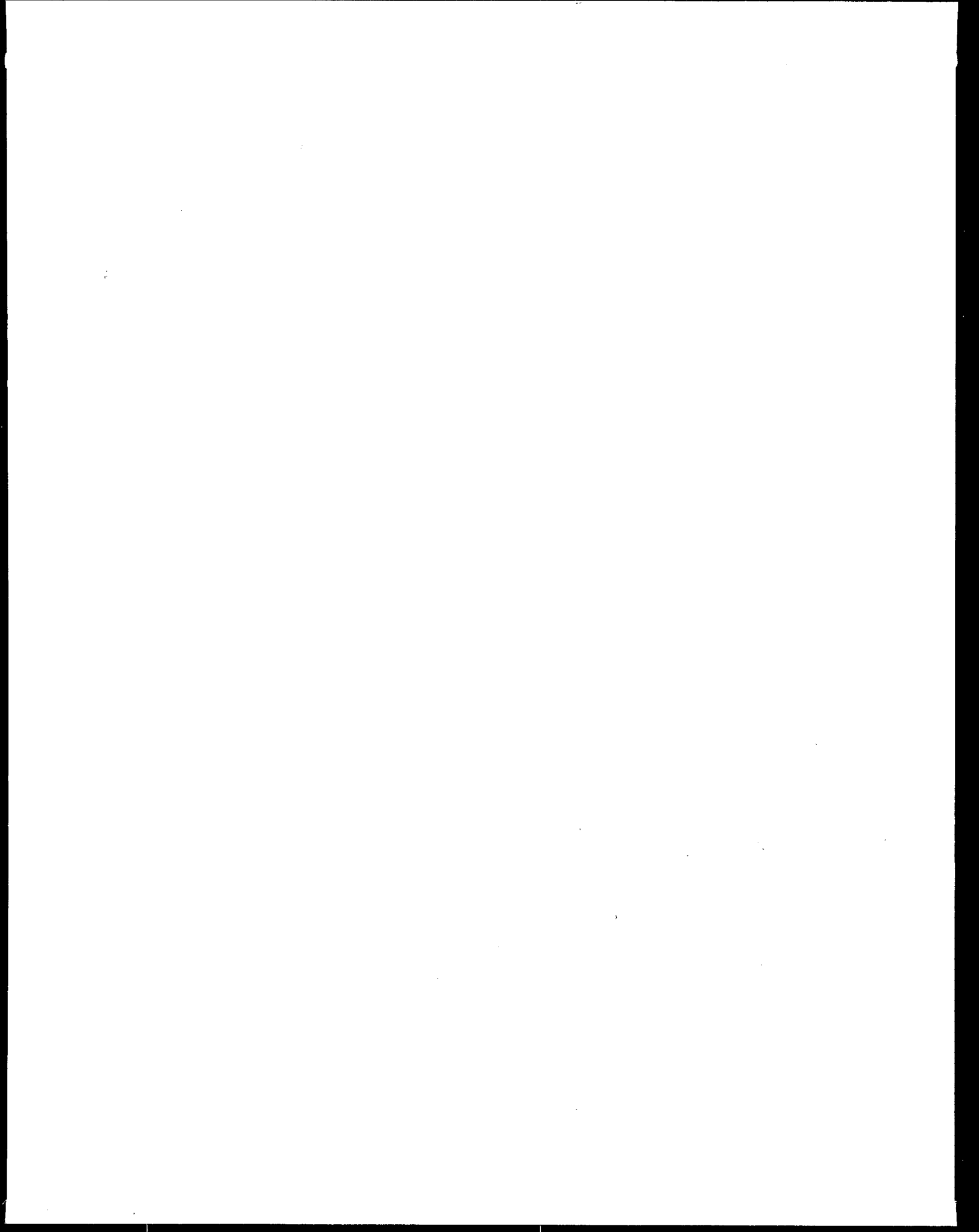
Breathing Easy (video) QLA 19194

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