

## INDOOR ENVIRONMENTAL QUALITY POLICY

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### 1. PURPOSE AND SCOPE

This policy establishes guidance and procedures to protect and maintain safe indoor environmental quality (IEQ) and guidelines for reporting and investigating complaints. This policy applies to all CDC<sup>1</sup> workers (employees, contractors, guest researchers, etc.) at all CDC facilities, both leased and owned, and all CDC work areas including animal facilities.

### 2. BACKGROUND

Indoor environmental quality concerns relate to air quality and other environmental factors (lighting, cleanliness, etc.) in office workplaces. CDC is committed to providing all CDC workers a safe place of employment, and will take actions to keep the workplace free of recognized hazards. When possible, the agency will take steps to eliminate or materially reduce recognized workplace hazards.

The goal of this policy is to: promote and protect the health and well being of CDC personnel, contractors, and visitors; prevent work-related injury and illness; prevent harm to and pollution of the environment; and ensure compliance with all applicable federal, state, and local regulations.

The goal for safe IEQ is an on-going and high priority CDC commitment. This policy provides a clear statement of CDC management's commitment to implement and continually improve a comprehensive and effective health, safety and environmental protection program.

### 3. POLICY

CDC strives to maintain indoor environmental quality standards that protect the health of workers. This policy establishes guidance and procedures to protect and maintain safe IEQ and for reporting and investigating complaints. Specific guidance is provided in the

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<sup>1</sup> References to CDC also apply to the Agency for Toxic Substances and Disease Registry (ATSDR).

appendix "Indoor Environmental Quality Guidelines." All CDC facilities (leased or owned) are subject to this policy and the major components are identified below:

**A. Prevention and Management of IEQ Concerns During Construction and Renovation Projects**

Key factors must be assessed by the Office of Health and Safety (OHS) and/or local Safety Officer and the Buildings and Facilities Office (BFO) during a renovation or construction project.

**B. Building Operation and Maintenance**

CDC and the BFO commits to operating and maintaining CDC's owned and leased facilities using best practices that cause minimal interruption to workers and protect them from hazards.

**C. Building Occupants**

It is important that personnel be aware that the use of some personal care products may have detrimental effects on the health of chemically sensitive co-workers. Personal care products (colognes, perfumes, essential oils and scented skin and hair products) should not be brought into, used, or otherwise applied at or near actual workstations, in restrooms, or anywhere in CDC facilities.

**D. Communication**

Information must be communicated among all affected parties in a timely manner relating to materials used in buildings (e.g., cleaning supplies, chemicals, personal care products), and maintenance activities that may potentially affect air quality so that preventive measures can be taken in advance. At least five (5) working days notice must be normally given before construction and maintenance activities are undertaken or new chemicals introduced.

**E. Evaluation of IEQ Concerns**

Building occupants who experience irritation or symptoms that may be related to the quality of indoor air should notify their supervisors, and the OHS or local Safety Officer to initiate a complaint. BFO must also be contacted upon initiation of a complaint, to identify and/or review any potential structural, maintenance, or heating, ventilating or air conditioning (HVAC) issues. Building occupants must also complete the Indoor Air Quality Questionnaire (see [Attachment B](#)) in order to properly document the complaint. Each IEQ complaint poses a unique set of circumstances that will determine the investigative procedures used to resolve each IEQ concerns.

**4. RESPONSIBILITIES**

**A. Office of Health and Safety/Designated Safety Officer**

Administers the Indoor Environmental Quality Program and serves as the primary coordinator and investigator for reported incidents involving IEQ hazards or conditions; educates CDC supervisors and workers; develops report findings and recommendations for corrective action; and reviews and updates to meet future needs and regulatory changes.

**B. Occupational Health Clinic**

Conducts medical evaluations as required and contacts OHS to initiate investigation of reported health problems related to the work environment.

**C. Buildings and Facilities Office**

Coordinates with OHS on all controllable aspects of facility design, construction, and maintenance to ensure that facilities are designed, built, renovated, and maintained consistent with IEQ policies, goals and objectives, as well as applicable federal and state regulatory requirements.

**D. Office of Dispute Resolution and Equal Employment Opportunity (ODREEO)**

Responds to and evaluates requests for reasonable accommodations and assists in the implementation of temporary and long-term accommodations to support this policy (see CDC-GA-2001-06, Policy for Processing Requests for Reasonable Accommodation <http://aops-mas-iis.cdc.gov/Policy/Doc/policy307.pdf>).

**E. Supervisors**

All CDC supervisors should be familiar with and adhere to IEQ policy provisions; communicate IEQ information to their workers; report IEQ concerns to OHS, the Facility Maintenance and Engineering Office (FMEO) for CDC-owned space and the Real Property Management Office (RPMO) for CDC-leased space, and coordinate activities with the OHS and BFO to identify solutions and corrective actions.

**F. Workers**

All CDC workers are expected to be familiar with and to adhere to IEQ policy provisions.

**5. REFERENCES**

- A. 29 CFR 1960.8(a), [Basic Program Elements for Federal Employees, General Duty Clause](#). Occupational Safety and Health Administration. Last updated July 2008.
- B. [CDC Tobacco-Free Campus Policy](#) (CDC-GA-2005-17). CDC, November 2005.
- C. [CDC Policy for Processing Requests for Reasonable Accommodation](#) (CDC-GA-2001-06). CDC, Last updated June 2007.
- D. Environmental Protection Agency/National Institute for Occupational Safety and Health. [Building Air Quality: A Guide for Building Owners and Facility Managers](#) (EPA 402-F-91-102, December 1991; HHS (NIOSH) Publication No. 91-114)

**6. ACRONYMS**

**ACGIH:** American Conference of Governmental Industrial Hygienists

**ANSI:** American National Standards Institute

**ASHRAE:** American Society for Heating, Refrigeration, and Air Conditioning Engineers

**BFO:** Buildings and Facilities Office

**FMEO:** Facilities Maintenance and Engineering Office.

**FTE:** full-time equivalent

**GSA:** Government Services Administration

**HEPA:** High efficiency particulate air

**HVAC:** Heating, ventilation and air conditioning system that provides the processes of heating, ventilating and/or air conditioning within, or associated with, a building.

**MSDS:** Material Safety Data Sheet

**NIOSH:** National Institute for Occupational Safety and Health

**ODREEO:** Office of Dispute Resolution and Equal Employment Opportunity

**OHS:** Office of Health and Safety ~ or a collateral duty safety officer or other equivalent safety official with qualifications to assess indoor air quality

**OSHA:** Occupational Safety and Health Administration

**RPMO:** Real Property Management Office

## 7. DEFINITIONS

**Acceptable Indoor Air Quality:** Quality of air in an occupied enclosed space that is within established limits of temperature and humidity and which does not contain known air contaminants at harmful concentrations

**Employees:** Those persons employed directly by the U.S. federal government (i.e., civilian full-time equivalent [FTE] and Commissioned Corps)

**Green Cleaning Products:** Janitorial cleaning products that are biodegradable, of low toxicity, fragrance-free, and otherwise less hazardous to human health or the environment

**Indoor Environmental Quality (IEQ):** Character of air and the environment that contribute to the health and comfort of occupants inside buildings. IEQ encompasses all aspects of the indoor setting including air quality, ventilation, temperature, lighting, etc.

**Indoor Environmental Quality Hazard:** Building condition that has the potential to adversely impact the health of building occupants. Potential hazards include chemicals, biological agents, fragrant products, and physical conditions that may cause irritation, illness, or exacerbate existing health conditions.

**Integrated Pest Management:** The coordinated use of pest and environmental information with available pest control methods to prevent unacceptable levels of pest damage by the most economical means and with the least possible hazard to people, property, and the environment

**Safety Officer:** Collateral duty safety officer or other OHS-equivalent safety official with qualifications to assess indoor air quality

**Volatile organic compounds (VOCs):** As defined in [40 C.F.R. 51.100 \(s\)](#), certain organic chemicals that are emitted as gases, often having short- and long-term adverse health effects, and are found in many building and commercial products

**Workers:** Those persons who work in CDC facilities regardless of their employer, including employees, contract workers, guest workers, and others

## INDOOR ENVIRONMENTAL QUALITY GUIDELINES

This document provides the following general guidelines to prevent and respond to indoor environmental quality complaints and concerns within CDC facilities.

### A. Prevention and Management of IEQ Concerns during Construction and Renovation Projects

#### 1. Pre-Planning

Key factors that must be assessed by the Office of Health and Safety (OHS) and/or local Safety Officer and the Buildings and Facilities Office (BFO) during the pre-planning phase of a renovation or construction project include:

- a) Identification of potential chemical and physical sources of odor and dust, including dusts or odors produced from construction and demolition activities, construction products, and construction equipment.
- b) Adherence to CDC design standards which specify use of low VOC-emitting furnishings, carpeting, flooring, and other interior finishes.
- c) Review of Material Safety Data Sheets (MSDSs) for each product specified for use on the project to determine the presence of pollutants that are a recognized hazard. A copy of the MSDS for each chemical product used during the project shall be provided to the OHS prior to pre-construction meetings or prior to the product being introduced on-site.
- d) Clear identification of:
  - occupied areas potentially affected by the project
  - times and locations where occupants are most likely to encounter airborne pollutants
  - estimated amount and duration of exposure occupants may have to these pollutants and identification of control options and assessment of available control measures
- e) Specific recommendations for control measures may include:
  - **Protection of HVAC systems** (e.g., shutting down of HVAC, sealing off all openings, using temporary filters on grills and diffusers, or replacing filters following project completion)
  - **Control of the pollutant source** (e.g., using no or low VOC-emitting products, controlling dust, or using electric-powered equipment rather than gas or diesel-powered equipment)
  - **Prohibiting vehicle idling or use of gasoline- or diesel-powered equipment** operating near entryways, loading docks, air intakes, and operable windows

- **Interruption of the pollutant pathway** (e.g., using HEPA-filtered exhaust systems to create a negative pressure in the work area, sealing off work areas, or using vapor barriers to prevent water intrusion, condensation, and other moisture problems)
- **Housekeeping practices**, including dust control measures and cleanup
- **Scheduling and conducting activities** that could produce high emissions (painting, roofing repair) to minimize occupant exposure to indoor air contaminants.
- **Proper storage and protection of building materials and products** to prevent damage before or during the construction phase of the project.

## 2. Occupant Notification

Notifying area occupants of the proposed work and work schedule, and describing the type of inconvenience it may cause is critical to the success of most projects. Specifically, occupants will be advised of potential odors, noise, dust generation, etc., at least 5 working days in advance of work. To the extent feasible, such work should be scheduled for non-duty hours (e.g., weekends, off-hours). This will allow individuals with pre-existing medical conditions or chemical sensitivities that could be aggravated by construction activities to make alternate arrangements to work away from the site.

This notification shall be provided for new construction projects, renovation projects, demolition projects, and maintenance and operation activities conducted in Government-owned facilities, as well as in leased facilities.

BFO will provide a project scope, schedule of activities, and a BFO Point-of-Contact. OHS will reach out to BFO for additional information required to assess and advise BFO on possible impacts to building occupants. OHS will communicate with potentially-affected building occupants regarding any potential environmental impacts.

## B. Building Operation and Maintenance

The BFO will operate and maintain all CDC owned and leased facilities using best practices to minimize interruption to workers and protect them from hazards.

### 1. HVAC System Maintenance and Repairs

The BFO will ensure that the buildings' HVAC systems are maintained in accordance with CDC standards for owned facilities and that they meet GSA standards for leased facilities.

## **2. Scheduling Maintenance**

BFO will ensure that routine maintenance that may adversely impact building occupants is conducted during off-hours, whenever possible. This particularly applies to those activities that may create large amounts of dusts, use of hazardous chemicals (when no safer alternatives are available), or generate loud noise.

Emergency repairs and maintenance will be conducted as required. Building occupants will be informed of any potential environmental impacts and expected timelines.

## **3. Remediation of Contaminants**

The OHS will assist BFO in the identification and remediation of any toxic contaminants (e.g., lead-based paint, asbestos, microbial contamination, hazardous chemicals) expected or discovered during renovation, demolition, or maintenance activities in accordance with federal and state worker safety and environmental regulations.

The OHS will conduct any necessary environmental or personal sampling required to ensure that CDC workers have not been exposed to the contaminants in concentrations higher than acceptable limits as established by the Occupational Safety and Health Administration, the American Conference of Governmental Industrial Hygienists, or the National Institute for Occupational Safety and Health, whichever is lowest.

## **4. Pest Management**

Pest management, for both buildings and lawn care, will emphasize non-chemical management strategies whenever practical, and the least-toxic chemical controls when pesticides are needed. Integrated Pest Management practices must be utilized.

Pest control products used in and around a building must be documented and the MSDS will be made available for building occupant review, if requested.

Dead pests must be removed from the premises promptly.

## **5. Housekeeping Guidelines**

CDC will ensure that products used in the workplace, such as soaps, cleaning products, paints, etc. are safe and odor-free or emit low levels of volatile organic compounds (VOCs) to the fullest extent feasible. Only green cleaning products shall be specified and used within CDC facilities and leased spaces unless otherwise approved by the Office of Health and Safety.

CDC will ensure the use of housekeeping practices which are deemed safer for building occupants and the environment. Specifically, BFO will require housekeeping staff at CDC owned and leased facilities to:



- Vacuum frequently and thoroughly using vacuums with high-efficiency particulate air (HEPA) filters.<sup>2</sup> If carpets must be cleaned, steam or least toxic, non-petroleum based, fragrance-free all-purpose cleaner or carpet cleaner will be used
- Keep storage and janitorial rooms clean and properly maintained
- Keep air handling rooms free of stored materials. If rooms are used as storage spaces, ensure that proper airflow, clearances and cleanliness standards are enforced. Keep maintenance and operational supplies in order and properly labeled in a clean, dry room to prevent contamination of the air and infestation of insects and rodents
- Be trained by supervisors or through their contract company in the proper usage, handling, and labeling of cleaning products and hazardous chemicals as required by the OSHA Hazard Communication Standard ([29 CFR 1910.1200](#))
- Keep waste containers away from air intakes and assure their regular emptying

## C. Building Occupants

### 1. Non-Permissible Products

Scented or fragranced products are prohibited at all times in all interior space owned, rented, or leased by CDC. This includes the use of:

- Incense, candles, or reed diffusers
- Fragrance-emitting devices of any kind
- Wall-mounted devices, similar to fragrance-emitting devices, that operate automatically or by pushing a button to dispense deodorizers or disinfectants
- Potpourri
- Plug-in or spray air fresheners
- Urinal or toilet blocks
- Other fragranced deodorizer/re-odorizer products

Personal care products (e.g. colognes, perfumes, essential oils, scented skin and hair products) should not be applied at or near actual workstations, restrooms, or anywhere in CDC owned or leased buildings.

In addition, CDC encourages employees to be as fragrance-free as possible when they arrive in the workplace. Fragrance is not appropriate for a professional work environment, and the use of some products with fragrance may be detrimental to the health of workers with chemical sensitivities, allergies, asthma, and chronic headaches/migraines.

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<sup>2</sup> if the HEPA filter requirement is not in existing leases and the lessor chooses not to adhere to this policy, then RPMO will incur costs to meet this guideline.

Employees should avoid using scented detergents and fabric softeners on clothes worn to the office. Many fragrance-free personal care and laundry products are easily available and provide safer alternatives.

## 2. Tobacco-Free Requirements

In accordance with the CDC Tobacco-Free Campus Policy (CDC-GA-2005-17) the use of tobacco products (including cigarettes, cigars, pipes, smokeless tobacco, or other tobacco products) is prohibited at all times. For more information regarding this policy, go to the following link: <http://aops-mas-iis.cdc.gov/Policy/Doc/policy477.htm>:

Outdoor environments in leased facilities not under full control of CDC and temporarily deferred locations will remain subject to the pre-existing policy,<sup>3</sup> which states that smoking tobacco products is prohibited:

- In all interior spaces owned, rented, or leased by CDC
- In government vehicles
- Within 20 feet of building entrances, exits, and air intake ducts
- Within 20 feet of the storage of flammable and combustible liquids or gases
- Within 20 feet of dumpsters provided for collecting combustible materials
- Inside any covered parking that is physically part of or connected to a facility where CDC workers regularly pass on their way to or from work
- Within designated CDC "Smoke-Free Zones"

## 3. Occupant Responsibilities

All building occupants are expected to:

- Refrigerate and store food in airtight containers, as necessary to prevent spoilage
- Dispose of food waste in break room trash disposal areas
- Keep offices and other areas clean and orderly to prevent contamination of indoor air and conditions conducive to insect or rodent infestations
- Keep supply air diffusers and return air grills free and clear of any obstructions within their workspace
- Clean up all spills promptly and properly
- Dispose of materials used to clean up hazardous chemical spills according to applicable federal, state, and local laws (contact OHS at 404.639.3041)
- Stay home if you are ill in accordance with CDC leave policy
- Refrain from bringing unwashed, fresh food products into the office as this may result in insect infestations

<sup>3</sup> Excepting CDC facilities at Morgantown, according to a Federal Service Impasses Panel ruling of February 12, 2008: [http://www.flra.gov/fsjp/finalact/08fs\\_015.pdf](http://www.flra.gov/fsjp/finalact/08fs_015.pdf), and Cincinnati, according to Article 40 of the AFGE Local 3840 Agreement, pp.62-63: [http://inside.niosh.cdc.gov/negotiatedagreements/afge3840contract.FINAL\\_10-31-00.pdf](http://inside.niosh.cdc.gov/negotiatedagreements/afge3840contract.FINAL_10-31-00.pdf).

#### **4. Sensitive individuals**

Supervisors will carefully consider and, to the extent feasible and in accordance with CDC policies, accommodate the needs of sensitive individuals. Specifically, supervisors will advise workers with allergies or chemical intolerances to consult, as necessary, with the CDC Occupational Health Clinic or their personal physician and also consult the Office of Dispute Resolution and Equal Employment Opportunity (ODREEO) for guidance on reasonable accommodations for sensitive individuals.

#### **D. Communication**

Communication must be maintained between management, building occupants, BFO Building Coordinators (owned spaces) or Facilities Integrators (leased spaces), OHS, and the union representative(s). Information must be communicated among all affected parties normally 5 working days prior to introduction of new materials to be used in buildings (e.g., cleaning supplies, chemicals), and maintenance activities that may potentially affect air quality so that preventive measures can be taken in advance.

#### **E. Evaluation of IEQ Concerns**

##### **1. Reporting of an IEQ event/concern**

a. The following complaints should be referred to FMEO at 404.639.3216 for owned property or RPMO at 770.488.2430 for leased spaces:

- Temperature or humidity problems
- Draftiness
- Lack of air or "stuffy" air
- Dirt or particulates coming from the ventilation system
- Vibrations from idling vehicles and equipment

For CDC facilities located outside the Atlanta area, workers should contact their facility maintenance or building manager in accordance with their local procedures.

b. If the cause of a problem cannot be found, complaints or concerns will be forwarded to the Office of Health and Safety at 404.639.7233. Workers may also report an IEQ concern through the Safety Help Desk at: <http://inside.od.cdc.gov/SafetyHelpDesk/Source/ServiceCenter.asp>. Workers located in facilities outside the Atlanta area should contact their Designated Safety Officer for assistance.

More complex concerns which may include unusual odors such as chemical smells and exhaust-type odors; any illness related to working in a particular work area/office; and visible mold growth should also be directed to the OHS/Designated Safety Officer.

##### **2. Identification of IEQ Problems**

Building occupants who experience irritation or symptoms that may be related to the quality of indoor air should notify their supervisor and also complete the Indoor Air Quality Questionnaire (see [Attachment B](#)) and forward the completed form to OHS for review. The questionnaire will be used to obtain information about the nature of the complaints/concerns and symptoms and also to determine the magnitude of the problem. OHS will review the form and take appropriate action.

### **3. IEQ Investigation**

Each IEQ investigation poses a unique set of circumstances that will dictate which of the following areas are addressed and if additional procedures are needed. Generally, following the receipt of an IEQ complaint, OHS/Designated Safety Officer will conduct an investigation in accordance with the phased approach outlined below.

#### **a. Phase I Assessment**

When notified of a potential problem or concern, OHS and/or the BFO Building Coordinator will conduct an initial on-site investigation. These Phase I Assessments include verification of information provided by the worker on the Indoor Air Quality Questionnaire and performance of a walk-through inspection of the building.

During the walk-through inspection, building ventilation systems will be evaluated by the Building Coordinator and/or OHS and potential sources of contamination will be identified. If a cause of the IEQ problem is confirmed, OHS, in conjunction with BFO, will initiate corrective action(s) for any cause of the IEQ issue through a work order or project. OHS or BFO will then report results and or corrective action to the worker, his or her supervisor, and the union representative(s).

If the immediate cause or source cannot be found, a Phase II assessment will be initiated.

#### **b. Phase II Assessment**

During a Phase II Assessment, common indoor air quality parameters including temperature, humidity, carbon dioxide, and, in some cases, other chemicals (e.g., carbon monoxide, ozone, formaldehyde and other volatile organic compounds) will be measured.

In addition to sampling, OHS/Designated Safety Officer will thoroughly evaluate the immediate work area and building for probable sources of contaminants, such as chemical use and storage, general housekeeping, recent renovations and/or new furnishing, water leaks, activities in the work area, and the building HVAC system.

Additional monitoring and/or evaluations may also be conducted as determined by Phase I and II Assessment results.

### **c. Phase III Assessment**

A Phase III Assessment is performed when a definitive cause for the symptoms cannot be determined during the Phase II Assessment of the investigation. Phase III Assessments consist of extensive and more specific monitoring for chemical and/or microbial contaminants in accordance with the EPA/NIOSH *Building Air Quality: A Guide for Building Owners and Facility Managers* methodologies; standard and customary industrial hygiene practices; and NIOSH, OSHA, and EPA sampling and analytical procedures.

If the immediate cause or source for the IEQ issue cannot be identified and confirmed at the completion of the Phase III Assessment and worker concerns still exist, expertise from outside OHS may become involved.

### **4. Limitations of IEQ Investigations**

Sampling methodologies and acceptable exposure limits have been established for many workplace contaminants. However, workers may continue to experience discomfort at contaminant levels below the standards set for occupational exposure. Individual sensitivities vary and the ability to measure possible irritants at low concentrations may be limited by technology. Thus, irritants may be present at concentrations that are undetected but which may cause health effects in sensitive individuals.

Also, the sampling and measuring of indoor mold contamination in the air and on surfaces is of limited value as mold is found in virtually all environments and because no consensus standards or regulatory standards have been established.

### **5. IEQ Investigation Report**

The IEQ investigation report will summarize the findings of all the investigated parameters and the results of any air sampling conducted and will provide conclusions regarding possible causes of the problems occupants are experiencing. Based on the findings of the IEQ investigation, recommendations as to how to resolve any potential or existing IEQ problems will be provided. The final report will be shared with BFO, workers, their supervisors, and the union representative(s).