



3640 Park 42 Drive • Cincinnati, OH 45241  
513-742-2020 • [mail@acgih.org](mailto:mail@acgih.org) • [acgih.org](http://acgih.org)

## **Operations Manual**

# **Threshold Limit Values for Physical Agents (TLV<sup>®</sup>-PA) Committee**

**Approved by the ACGIH<sup>®</sup> Board of Directors: July 21, 2022**

## Committee Mission

The Threshold Limit Values for Physical Agents (TLV<sup>®</sup>-PA) Committee is a standing Committee established by the Board of Directors of ACGIH<sup>®</sup> to develop occupational exposure guidelines for physical agents, including those of an acoustic, electromagnetic, radiological, ergonomic, mechanical, and thermal nature. The issuance of Threshold Limit Values (TLVs<sup>®</sup>) and their supporting *Documentation* is the principal mechanism for the dissemination of these guidelines, although the Committee may also develop more general positions, reports, white papers, instructional materials, or topical symposia to focus on issues or agents of concern.

The Committee's vision is to continue to be a respected, worldwide leader in the development and dissemination of health-based occupational exposure guidelines.

The mission of the TLV<sup>®</sup>-PA Committee is to recommend levels of occupational exposure to physical agents for use in the practice of industrial hygiene and by other qualified professionals to protect worker health. The charge of the TLV<sup>®</sup>-PA Committee is to develop and disseminate occupational exposure guidelines (i.e., TLVs<sup>®</sup>). TLVs<sup>®</sup> are based on the best available data and, whenever possible, peer-reviewed literature on human health effects resulting from industrial, occupational, or other exposure situations, from experimental human and animal studies, human epidemiological studies, and when possible, from a combination of all these sources.

TLVs<sup>®</sup> represent levels of exposure to physical agents to which nearly all workers may be repeatedly exposed, day after day, without adverse health effects. Other, more general, positions on classes of physical agents or work-related disorders (e.g., musculoskeletal disorders) provide guidance as to the expected standards of care for the professional evaluating an occupational environment.

The basis on which the values are established may differ from agent to agent — protection against physical impairment may be a guiding factor for some, whereas impairment to health or well-being may form the basis for others. TLVs<sup>®</sup> are established at exposure levels sufficient to minimize or eliminate adverse effects on human health or physiological function in average healthy workers. Because of wide variations in individual susceptibility, exposure of an individual at, or even below, the TLV<sup>®</sup> may result in annoyance, aggravation of an existing condition, or occasionally even physiological impairment. Certain individuals may also be hyper-susceptible or otherwise unusually responsive to some physical agents at the workplace because of a variety of factors such as genetic predisposition, body mass, age, personal habits (e.g., smoking, alcohol, or other drugs), medication, or previous or concurrent exposures. Such workers may not be adequately protected from adverse health effects from exposure to certain physical agents at or below the TLVs<sup>®</sup>.

The goal of the Committee is to develop occupational exposure guidelines for physical agents that are:

- Scientifically credible and valid
- Leading edge
- Well-supported (i.e., TLVs<sup>®</sup> are based on ACGIH<sup>®</sup>'s review of peer reviewed scientific literature)
- Reliable
- Understandable and clear
- Produced with a balanced, unbiased, and clearly-defined process

The TLV<sup>®</sup>-PA Committee operates under the Bylaws of ACGIH<sup>®</sup> and the administrative policies, guidelines, and procedures approved by the ACGIH<sup>®</sup> Board of Directors.

## **Membership**

### ***Eligibility***

A range of professional affiliation is necessary to ensure a balance of disciplines; however, the Committee will consist of a simple majority of members professionally affiliated with academia or government. Committee members serve in their individual capacity and do not serve as representatives of their organization or their employer. Each member of the Committee will have full voting rights for the purposes of the business of the Committee. Committee leadership (Committee Chair and Vice-Chair) must be Voting Members of ACGIH®. A Voting Member of ACGIH® shall be a professional who currently spends greater than 50% of his or her employment in the field of Occupational and Environmental Health and Safety, a professional who has retired from employment that involved greater than 50% of his or her time in the field of Occupational and Environmental Health and Safety, or a full-time student officially matriculated in an undergraduate or graduate program in environmental health, occupational health and safety or related discipline.

### ***Member Selection***

Individuals interested in joining the Committee will be asked to complete an application form ([Appendix A](#)) and provide a current résumé or curriculum vitae (CV). The Committee will review these documents and determine whether the applicant is qualified and has a level of expertise meeting the current needs of the Committee.

The following minimum criteria will be used to evaluate an applicant for membership:

- Disciplinary training and education
- Professional background
- Past relevant experience

The Chair, in consultation with the Vice Chair, will annually assess the overall membership of the Committee using the following additional criteria. These criteria may also be used to evaluate each new applicant to determine if the current needs of the Committee are met:

- The Committee should have a mix of persons, each of whom has expertise in one or more areas relevant to the field.
- A preference will be given to individuals with 10 or more years of professional experience, with multi-disciplinary backgrounds and experience, and with an advanced degree in his or her field of expertise.
- Individuals should demonstrate effective writing capabilities and communication skills through publications, presentations, and/or other activities.

To ensure the needs of the Committee are continually met and a balance of expertise is maintained, the Committee may recruit new members, as needed, utilizing various methods.

Any individual expressing interest in participating on the Committee will be sent an application form by staff. Applicants will be informed of all membership expectations and responsibilities and will be asked to review and accept these responsibilities as part of their application. Staff will review the completeness of applications received and issue notification confirming receipt. Completed applications, along with copies of résumés/CVs will be sent to the Chair of the Committee for consideration.

The Committee will then be notified by the Chair of the names of applicants under consideration. The Chair will ask the Committee members for an assessment of the applicant. The Committee will review and consider all new applicants as new applications are received. If the Committee agrees the applicant is acceptable and there is continued interest between both parties, the Chair will assess each application considering all Committee feedback. If the Chair, in consultation with the Vice Chair, believes there is a good fit, the Chair may then recommend to the Board of Directors appointment as a Member Candidate. After Board appointment, the Chair may extend an invitation to the Member Candidate to attend and participate at the next Committee meeting.

Once appointed by the Board of Directors, the Member Candidate will be asked to fully participate in all Committee activities for a minimum candidacy period of one year. The Chair will identify and assign responsibilities to the Member Candidate during this time. All responsibilities and expectations must be fulfilled to the satisfaction of the Chair for consideration of advancement to formal membership. At the discretion of the Chair, the candidacy period may be extended for more than one year. The candidacy period for any individual may be extended if he/she fails to satisfy all responsibilities and expectations as assigned but makes satisfactory progress within the candidacy period. The candidate may be considered for formal membership the following year.

The Chair will solicit input from the Committee concerning formal membership for candidates that successfully complete their candidacy period. The Chair will evaluate each candidate and make the final decision concerning a recommendation for formal membership.

Should a Member Candidate not fulfill the criteria for membership or fail to meet all responsibilities and expectations as assigned, the Chair will send notification to the applicant thanking him/her for their interest. Should an applicant not be selected, notification will be sent by staff thanking the person and asking for interest in remaining in the pool of applicants for future consideration.

### ***Responsibilities and Expectations***

Committee members are expected to contribute to the work of the Committee. This includes attending face-to-face meetings each year; participating in scheduled teleconferences; the development and internal review of TLVs<sup>®</sup> and their associated *Documentation*, position papers, special reports or white papers; contributing to the development of educational and outreach activities; and participating in Committee administrative functions. More senior members are expected to provide guidance and to mentor new members. As members serve additional terms, they will be expected to take on a greater role in the Committee.

Members are expected to comply with all policies and procedures of ACGIH<sup>®</sup>. Members are expected to always interact in a collegial fashion with other members of the Committee and staff.

Participation on the Committee is a privilege that must be continually earned through ongoing productivity, participation and collegial behavior.

### ***Terms***

Members serve three-year terms that are exclusive of any candidacy period previously served. Terms generally begin January 1 and are contingent upon annual reappointment by the ACGIH<sup>®</sup> Board of Directors, members may be reappointed to additional terms. The Committee Chair will determine re-nomination and make recommendations to the ACGIH<sup>®</sup> Board. Committee members who are not fulfilling their Committee responsibilities may not be re-nominated for membership on the Committee.

Expectations for continuing membership include:

- Attendance at and constructive contributions to meetings and teleconferences.
- Preparing and reviewing *Documentation*, as assigned.
- Contributing to the development of educational and outreach opportunities, as assigned.
- Contributing to the administrative functions of the Committee, as assigned.

A member's contributions to the work of the Committee and progress on assignments will be evaluated by the Chair, in consultation with the Vice Chair, on an annual basis.

## ***Member Candidates***

The TLV®-PA Committee may choose to invite potential members to participate in Committee activities as *Member Candidates* before recommending them for formal appointment. This practice allows the potential member to understand the role of Committee members and allows the Committee to evaluate the potential member. The Board of Directors must appoint Member Candidates. Member Candidates do not have voting privileges for purposes of Committee business, but are expected to participate in Committee activities, attend meetings of the Committee, and will be expected to participate fully in Committee discussions. Member Candidates are generally expected to complete a candidacy period before being eligible for full membership and are expected to follow all ACGIH® policies and procedures.

## ***Consultants***

Periodically the TLV®-PA Committee may need specialized technical expertise or assistance in completing a particular TLV® and may utilize the help of volunteer *consultants* to the Committee. These consultants are identified and vetted by Committee members — in a similar fashion to candidates for Committee membership — and nominated by the Committee Chair for review and appointment by the ACGIH® Board of Directors. Consultants are utilized when the expertise needed is of short duration and not present within the current Committee membership. Consultants may participate in the technical discussions surrounding the development of a particular TLV® but are not eligible to vote on Committee actions and attend meetings only at the invitation of the Chair.

## ***Awards***

### **MEMBERSHIP SERVICE AWARDS**

TLV®-PA Committee members, Member Candidates, and consultants volunteer their time and expertise in a range of scientific areas to contribute to international worker health and safety and the development of occupational exposure limit recommendations. At times, TLV®-PA Committee members, Member Candidates, and consultants will be recognized for special contributions and years of service to the TLV®-PA Committee. The Chair will recommend these awards and will coordinate with ACGIH® to prepare and present these awards.

### **WILLIAM D. WAGNER AWARD**

The William D. Wagner Award was established in 2003 and is presented annually to honor any person in the field of national and international worker health and safety who has been an outstanding example of commitment and dedication to the creation and dissemination of occupational exposure values (OEVs). The award recipient will be chosen by the TLV®-PA Committee, on a rotating basis, with the other two standing ACGIH® OEL Committees (TLVs® for Chemical Substances and Biological Exposure Indices).

Every third year, the TLV®-PA Committee will submit a recommendation to the Board of Directors regarding appointment of the award recipient. The award will be presented at one of the meetings of the TLV®-PA Committee and the awardee will be invited to speak on some aspect of national and international health and safety. Funds to support the travel expenses for the recipient will be determined by the Board of Directors and managed through ACGIH®.

## **Committee Structure and Function**

The TLV®-PA Committee is composed of volunteer members representing various scientific disciplines and is supported by ACGIH® administrative staff. The Committee strives for a balance of experts within its membership to support those technical areas of Committee interest. TLV®-PA Committee members are selected for their professional expertise as required by the products, services, and focus areas of the Committee. Committee members serve in their individual capacity and do not serve as representatives of their organizations or employers. The TLV®-PA Committee consists of members from a range of professional affiliations.

## *Position Descriptions*

### COMMITTEE CHAIR

**Method of Selection and Appointment:** Candidates for the Chair of the Committee are recommended through an internal Committee nomination and vote process, the results of which are forwarded to the Board of Directors for final selection and approval. Prior to the expiration of the current Chair's term, the Vice Chair will seek nominations from Committee members for candidates. Candidates may be drawn from the current Committee membership or may be individuals from outside the Committee. Candidates must meet eligibility requirements for membership on the Committee and be Voting Members, in good standing, of ACGIH®. The Vice Chair will review the list of nominees and present them to the Committee, accompanied by any background information (nomination letters, letters of support, curriculum vitas/resumes, etc.). The Vice Chair will tally the votes (assisted by ACGIH® staff). The slate of nominees and number of votes received by each nominee will be sent to the Board of Directors for final selection and appointment.

**Succession:** If the Chair position becomes vacant (i.e., the Chair becomes unable or unwilling to fulfill the duties of the position), the Vice Chair may assume the role of Chair and serve his/her predecessor's term. At the end of the term, a Chair will be selected following the selection and appointment process described above. To learn the duties of the position, the Chair-elect may be asked to participate as the Vice Chair during the last year of the current Chair's term.

**Term:** The Chair will hold the appointment for a term of three years. This appointment may be renewed for more than one term, following the nomination and selection process described above. The Chair is expected to serve no more than three consecutive, three year terms, however exceptions may be warranted under certain circumstances. The Chair will hold the position contingent upon annual re-appointment by the Board of Directors.

**Duties:** The Chair leads the Committee and works closely with the Vice Chair to ensure the Committee's progress toward fulfilling its mission and goals. The Chair:

- Oversees the Committee's activities, including conducting Committee meetings
- Oversees meeting plans (with assistance from staff)
- Monitors overall workload and makeup of the Committee
- Ensures regular, clear communications with staff and the Board of Directors by interacting with the Board liaison, staff, or Board members, as needed
- Ensures regular, clear communications with external parties by such processes as reviewing comments received, providing input to replies prepared by staff
- Ensures regular communication between all Committee members and that the Committee is functioning according to guidelines and policies
- Consults regularly with the Vice Chair to assure proper functioning of internal Committee activities
- Represents the Committee to the public in accordance with the ACGIH® Public Affairs and Communications Policy
- Represents the Committee to the ACGIH® Board of Directors and communicates and consults regularly with the Committee's Board liaison.

**Reporting:** The Chair reports directly to the Board of Directors and the Committee's assigned Board liaison.

### COMMITTEE VICE-CHAIR

**Method of Selection and Appointment:** The Committee Chair, in consultation with the current Committee members, recommends the Vice Chair to the Board of Directors, which approves the recommendation and appoints the Vice Chair. The Vice Chair may be a candidate for Committee Chair, but this is based on qualifications and a judicious selection rather than an established succession.

**Term:** The Vice Chair will serve a term of three years. The Vice Chair may be re-nominated by the Chair and appointed by the Board for more than one term.

**Duties:** The Vice Chair is responsible for assisting the Chair in assuring the internal Committee functions are operating satisfactorily. The Vice Chair:

- Assists the Chair as necessary
- Assists the Chair to oversee internal Committee activities that support the Committee's mission and goals
- Serves to fulfill the responsibilities of the Chair when he/she is unable or unavailable to do so

**Reporting:** The Vice Chair reports directly to the Chair of the Committee on his/her individual activities.

### ***Administrative Positions***

The ACGIH® Board Chair appoints from within the Board of Directors a non-voting liaison to communicate activities, initiatives and directives of the Board that may affect the Committee. Staff's role is to help create an appropriate atmosphere for Committee deliberations, but staff does not participate in the drafting of the TLVs® or *Documentation*. Conclusions and recommendations are those of the Committee.

### ***TLV®-PA Ad Hoc Subcommittees***

At times, the TLV®-PA Committee will establish an ad hoc subcommittee to develop or revise a specific TLV® or *Documentation*, prepare a position document, prepare a special report or white paper, prepare and present an educational session, or another specific task. These subcommittees are task-focused and are of short duration.

Each of the subcommittees is headed by a Chair, who is appointed by the TLV®-PA Committee Chair in consultation with the Vice Chair.

**Reporting:** The ad hoc subcommittee Chairs report to the TLV®-PA Committee Chair.

### **Conflict Of Interest**

TLV®-PA Committee members, Member Candidates, and consultants, hereafter referred to in this section as "members," are required to follow the ACGIH® Policy and Process on Bias and Potential Conflicts of Interest, published on the ACGIH® website ([Appendix B](#)).

Any "member" with a potential, real, or perceived conflict of interest with respect to an agent or issue under consideration by the Committee must orally disclose the conflict of interest to the entire Committee. In addition, a written declaration must also be completed. It is essential that potential, real, or perceived conflicts of interest be identified before the TLV® process begins. Likewise, it is important that Committee members recognize and identify their technical or scientific biases, so that these differing perspectives can be balanced during Committee deliberations. This declaration is required annually and when material changes in their status occur. Members should review all the details of this policy.

All 'members' must complete an annual declaration which includes information about their sources of funding, including professional services and consultancies, professional affiliations, service on boards or Committees, legal testimonies, and other activities that may represent a potential conflict of interest for participation in the affairs of the Committee. In addition, the individual should disclose any relevant publications history and identify any technical biases. The TLV®-PA Committee Chair will inquire, as appropriate, about material changes in each member's conflict of interest and bias status during each Committee meeting. The Committee will thus identify for itself and its members any agents or issues that represent a conflict of interest for any of its members.

The decision concerning authorship or review of a TLV® (or its *Documentation*), in such cases where a conflict or bias may exist, will rest with the Committee Chair with input from the individual and the full Committee. However, it may not always be in the best interests of the Committee for a member who has a significant conflict to remove him or herself entirely from the development process when s/he is very knowledgeable about that agent or issue. In circumstances where an individual's conflict of interest is considered significant (i.e., high degree of conflict), that member may be asked not to participate in specific discussions that may influence the value of the TLV® or be asked to abstain from voting on that TLV®. A member faced with a high degree of conflict of interest or bias may serve as a scientific expert or consultant and the Chair will manage a balanced discussion. If a member has a high degree of conflict of interest concerning a particular physical agent, that member may be asked to recuse herself or himself from the discussions after consultation with the Committee Chair.

Any issue regarding a member's possible conflict of interest should be referred to the Committee Chair. Failure by any member to report a conflict of interest is grounds for immediate termination of that member's service on the Committee. In such a case, the Chair's recommendation will be communicated to the respective Committee member and the ACGIH® Board of Directors. If the Chair is conflicted, the Vice-Chair will assume this role.

Members who have participated in the Committee discussions on conflict of interest and made their best effort to minimize their personal conflicts will be permitted to be involved in the development of the TLV® if appropriate remedies are put in place. The selection of remedies used will depend on the situation and the nature of the identified conflict. Remedies to address and minimize the effects of this conflict might include:

- assigning external reviewers to evaluate the TLV® and *Documentation*.
- assigning a Committee member, who has no conflict of interest, to participate in the development of the *Documentation* and facilitate discussion for conflicting viewpoints.
- recruiting additional expertise to participate on the Committee.
- appointing external consultants to present balancing viewpoints.
- recusing members with identified conflicts from Committee deliberations and votes
- assigning co-authors to aid in the development of the TLV® and *Documentation*.

## **Committee Operating Procedures**

### ***TLV®-PA Workplan and Agent Selection Process***

Agents are selected and assigned under study by a consensus of the voting Committee membership and can be added or removed throughout the year. A variety of factors are used in this selection process, including prevalence, use, number of workers exposed, availability of scientific data, existence/absence of a TLV®, input from the public, etc. Existing TLVs® will be considered for revision if there are new scientific data available to indicate the need to revise the existing TLV® or update its *Documentation*. The determination as to the need to consider the development of new TLVs® will be based on three criteria: the preponderance of evidence suggesting an agent is harmful to humans, a substantive risk of exposure to the agent in occupational environments, and sufficient scientific data to permit the development of a reasonable, defensible TLV®.

The Committee will consider options for work assignments over the next year (and beyond), and the resources that may be available to the Committee to complete the necessary reviews. The Committee Chair may designate individual members to further examine the need for developing new TLVs® and request support from ACGIH® staff. Based on the resources available to the Committee, the Chair will establish work assignments for the next year and request resources from the ACGIH® Board of Directors.

### ***Position Statements***

Although TLVs® are the primary product of the Committee, there are situations where sufficient or definitive scientific evidence is not available to establish a specific TLV® for a recognized occupational hazard, or that the situation is so complex that a TLV® cannot be issued. In those situations, the Committee may choose to recommend that the organization approve a position statement or white paper until more definitive information becomes available to establish a TLV®. In these situations, the Committee will indicate that the preponderance of evidence suggests a hazard or health concern, but that the levels to which that agent needs to be controlled are unclear.

### ***Notices (Postings for Agents on the Under Study list, Notice of Intent to Establish (NIE), or Notice of Intended Change (NIC) lists)***

Each year, the TLV®-PA Committee identifies agents for which TLVs® are being proposed or recommended for change. These agents are listed on the Committee's Under Study list, Notice of Intent to Establish (NIE), or Notice of Intended Change (NIC) lists and are posted on a variety of ACGIH® dissemination vehicles. These postings are intended to notify stakeholders as to the priorities and schedules of the Committee and to provide the opportunity to offer comments. It is the expectation of the Committee that parties with an interest in these agents will take advantage of these opportunities and submit to the Committee information or data in the form of peer-reviewed, published literature that the

Committee can use in its TLV<sup>®</sup> decision-making process, according to the process described in the TLV<sup>®</sup>/BEI<sup>®</sup> Development Process on the ACGIH<sup>®</sup> website.

## **Voting Procedures**

The Committee follows the ACGIH<sup>®</sup> Committee Voting Procedures ([Appendix C](#)).

## **Communications**

The TLV<sup>®</sup>-PA Committee follows the ACGIH<sup>®</sup> Public Affairs and Communication Policy posted on the ACGIH<sup>®</sup> website.

### ***External to the Committee***

The Committee recognizes that there are many different parties with an interest in the TLV<sup>®</sup> development process and its outcomes. The Committee has an obligation to follow ACGIH<sup>®</sup> policies about its process and decisions. At the same time, it is important that these external parties not compromise the Committee's decision process, which is based on scientific information that is accessible in the public domain. Emphasis is placed on published, peer-reviewed scientific information. Thus, the Committee follows the written policies adopted by the Board that allow input from external groups to the Committee concerning physical agents currently under review. These policies and procedures are described below.

External parties are encouraged to send their comments and input to the Committee, via the ACGIH<sup>®</sup> Science and Education Group, in writing. The Committee will review all written comments; responses will be prepared if necessary. The Chair, in consultation with the designated author of the TLV<sup>®</sup> and *Documentation*, will decide if a response is necessary and the nature of such response. The response will be drafted by the appropriate individuals on the Committee (e.g., Chair and author) and sent by ACGIH<sup>®</sup> staff.

The appropriate method for an interested party to contribute to the TLV<sup>®</sup> process is through the submission of literature that is peer-reviewed and public. ACGIH<sup>®</sup> strongly encourages interested parties to publish their studies, and not to rely on unpublished studies as their input to the TLV<sup>®</sup> process. Also, the best time to submit comments to ACGIH<sup>®</sup> is in the early stages of the TLV<sup>®</sup> development process, preferably while the agent is on the Under Study list.

ACGIH<sup>®</sup> periodically receives requests from external parties to make a presentation to the TLV<sup>®</sup>-PA about a specific agent or issue. It is by exception that such requests are granted. While there are various reasons for this position, the underlying fact is that the Committee focuses on data that have been peer-reviewed and published and not on data presented in a private forum. The Committee may grant a request when the data are significantly new, have received peer review, are the best vehicle for receipt of the information, and are essential to the Committee's deliberations. The presentation is not a forum to voice opinions about existing data. For the Committee to evaluate such a request, the external party must submit a request in writing that, at a minimum, addresses the following elements: (a) a detailed description of the presentation; (b) a clear demonstration of why the information is important to the Committee's deliberations; and (c) a clear demonstration of why a meeting is the necessary method of delivery. This request must be sent to the ACGIH<sup>®</sup> Science and Education Group at [science@acgih.org](mailto:science@acgih.org).

Occasionally Committee members may need to communicate with others regarding activities, initiatives, or technical positions under consideration by the Committee. On those occasions when potentially sensitive information may be discussed, certain procedures need to be followed to protect the integrity of the TLV<sup>®</sup> development process.

The Committee, at its discretion and under the conditions noted below, may invite outside parties to its meetings for the purpose of sharing experience or expertise, to add an additional or international perspective to the development of a TLV<sup>®</sup> and its *Documentation*, or to present data and research. TLV<sup>®</sup>-PA Committee meetings are closed to the public and guests are not permitted to participate in Committee deliberations or votes. The meeting minutes will reflect when guests were present and detail the extent of their participation.

### ***Groups That Set Occupational Exposure Values***

As part of its outreach initiatives, the TLV<sup>®</sup>-PA Committee may undertake as one of its goals regular communication and interaction with other national and international groups responsible for determining occupational exposure guidelines. When communicating and interacting with these outside groups, the Committee will follow the policies and procedures described in the ACGIH<sup>®</sup> Public Affairs and Communications Policy.

### ***Internal to the Committee***

The Committee relies on meeting minutes for documenting its activities and tracking its progress. Minutes shall follow standard ACGIH® format and should indicate the date, members present and absent, important points of discussion, major decisions taken, and future activities planned. The minutes will document formal votes of the Committee (without identification of individual names, except for noting abstentions due to conflict of interest). Minutes will not identify authorship of a particular TLV® or *Documentation*. Copies of minutes will be circulated to all members of the Committee and Board liaison.

### ***ACGIH® Staff and Board Liaisons***

The Committee assures timely and consistent communication with ACGIH® through its Board liaison and ACGIH® staff. ACGIH® staff attend full Committee meetings and communicate regularly with the Committee Chair about Committee activities. Staff work closely with the Committee Chair on all issues, including budgeting and spending, meeting arrangements, publications, and communications with external parties.

The Board liaison also attends Committee meetings, providing input to the Committee from the Board of Directors and relaying Committee concerns and thoughts to the Board. The Board liaison also works with the Chair during budgeting, policy-making and other issues that bear directly on the organization.

### **TLV® Production Guide**

#### ***Confidentiality***

Committee discussions must be kept confidential. Every member must respect the confidentiality of all other members of the Committee. The TLV®-PA Committee communicates with its users and interested parties by publishing its decisions as *Documentation*, following a clearly delineated process. Authorship of *Documentation* is a confidential matter. Such authorship may not be discussed with any person external to the Committee. Methods for seeking information from external parties while ensuring anonymity should be discussed with the Committee Chair and performed through ACGIH® staff.

#### ***TLV® Development Process***

The TLV®-PA Committee follows the TLV®/BEI® Development Process: An Overview, posted on the ACGIH® website.

#### **UNDER STUDY**

Once a substance or issue has been identified by the Committee for review, a list of agents/issues under study are published by February 1 each year in the *ACGIH® Annual Reports of the Committees on TLVs® and BEIs®*, the annual *TLVs® and BEIs®* book, and on the ACGIH® website. This Under Study list is published to serve as notification to stakeholders and to solicit comments and data. Changes to the Under Study list are posted on the ACGIH® website.

The Under Study list is updated by July 31 into a two-tier list. Tier 1 indicates which agents/issues may move forward as a Notice of Intended Change (NIC) in the upcoming year, based on their status in the development process. Tier 2 consists of those agents/issues that will not move forward, but will either remain on, or be removed from the Under Study list for the next year. This list will remain in two-tiers for the balance of the year. Agents/issues added to the Under Study list after publication of the two-tier list will be placed on tier two.

Once an agent is placed under study by the Committee, a member or Member Candidate may be assigned the task of preparing a draft *Documentation*.

#### **DRAFT DOCUMENTATION**

One or more Committee members are assigned the task of collecting information and data from the scientific literature and preparing a draft *Documentation*. The draft *Documentation* is reviewed and critiqued by the other Committee members. This may result in several revisions to the draft *Documentation* before the Committee accepts the proposed TLV®. Draft *Documentation* are not available to the public during this stage of the development process.

The TLV® should be succinct and define the exposure limits. The *Documentation* should describe the basis for the exposure limits including the relevant literature and why the threshold is established.

Once the proposed TLV® and draft *Documentation* are accepted by the Committee, a motion may be proposed to place the draft on the NIC. If the motion is seconded, the Committee will discuss and vote on

the proposed action. Voting requires a quorum of the voting Committee membership present (greater than 50%). If the vote is approved, the Committee's recommendation is then sent to the Board of Directors for review and ratification. If ratified by the Board, the TLV®(s) are listed on the NIC and the *Documentation* is published by February 1 each year.

#### **NOTICE OF INTENDED CHANGES**

The NIC is a listing of the proposed actions of the TLV®-PA Committee. Following the NIC ratification by the Board of Directors, interested parties are invited to provide data and substantive comments, preferably in the form of peer-reviewed scientific literature. A proposed TLV® and its draft *Documentation* are held on the NIC for a minimum of one year to allow for public review. The comment period for an NIC draft *Documentation* and its respective TLV®(s) is limited to a firm 4-month period running from February 1 to May 31 of each year. As general practice, the Committee reviews all submissions of comments regarding substances/issues on the Under Study list, as well as NICs, or currently adopted TLV®(s). Because of the time required to properly review, evaluate, and consider comments, any comments received after the May 31 deadline may not be considered in that year's Committee deliberations regarding the outcome for possible adoption of an NIC draft. Any comments regarding an NIC draft TLV® *Documentation* received after the May 31 deadline will be fully considered in the following year. If the Committee finds or receives substantive data and/or comments that change its scientific opinion regarding a TLV®, the Committee may revise the proposal(s) and make a motion to recommend to the Board of Directors that it be retained on the NIC the following year. If the motion is seconded, the Committee will review/critique the draft *Documentation* and subsequently vote on the proposed action for the matter to be retained. If the vote is approved, the Committee's recommendation is then sent to the Board of Directors for review and ratification. Draft *Documentation* are published annually and made available through the ACGIH® Customer Service Department ([customerservice@acgih.org](mailto:customerservice@acgih.org)) or from the ACGIH® website.

#### **ADOPTED DOCUMENTATION**

If the Committee neither finds nor receives any substantive data that change its scientific opinion regarding an NIC TLV® and its *Documentation*, the Committee may then make a motion to recommend to the Board of Directors that the matter be adopted. If the motion is seconded, the Committee will review/critique the draft *Documentation* and subsequently vote on the proposed action. If the vote is approved, the Committee's recommendation is sent to the Board of Directors. Once ratified by the Board, the TLV® is published as adopted in the *Annual Reports of the Committees on TLVs® and BEIs®*, in the annual *TLVs® and BEIs®* book, and the draft *Documentation* is finalized for formal publication.

#### **WITHDRAW FROM CONSIDERATION**

At any time while an agent/issue is on the NIC, the Committee may determine not to proceed with the development of a TLV® and make a motion to withdraw it from further consideration. If the motion is seconded, the Committee will review/critique the proposed action and subsequently vote on the matter to be withdrawn. If the vote is approved, the Committee's recommendation will be sent to the Board of Directors for review and ratification. If ratified by the Board, notification of the withdrawal will be made in the *Annual Reports of the Committees on TLVs® and BEIs®* and in the *TLVs® and BEIs®* book. Agents/issues that have been withdrawn from consideration may be reconsidered by placement on the Under Study list.

Agents/issues that are currently adopted by the Committee can be recommended for withdrawal by placement on the Under Study list and following the NIC adoption process described above. Agents/issues on the Under Study list can be withdrawn from consideration by a consensus of the voting Committee membership.

#### **USER GUIDES**

To complement a TLV® and *Documentation*, an associated User Guide may be drafted by the Committee members involved in the TLV® and *Documentation* development. This is intended to be a practical guide to provide users instructions on how to effectively apply the TLV® in workplace settings. For example, the guide may elaborate details of exposure monitoring, control and personal protection measures, health monitoring, recordkeeping, and program evaluation.

## ***Literature Search***

For new and revised TLVs<sup>®</sup>, the Committee member should conduct a full literature search using the appropriate databases. Staff or other Committee members may help with acquiring those references to which a member does not have access. For TLVs<sup>®</sup> requiring revision, the Committee member should request an electronic copy of the current TLV<sup>®</sup> *Documentation* from ACGIH<sup>®</sup> and any references on file.

Primary references should be relied upon whenever possible. Secondary sources such as books and reviews may be used for an overview of the data. Members are encouraged to use local libraries; however, if such access is difficult, they may request that staff obtain copies of the references for them. It should be kept in mind that peer-reviewed, published materials will serve as the backbone of all TLV<sup>®</sup> *Documentation*, particularly for the justification of the TLV<sup>®</sup>. If non-peer-reviewed materials are necessary, the member should discuss this with the Committee Chair. If these references are considered necessary, the information should undergo some form of peer review to determine their acceptability. It will be up to the Committee Chair to determine the nature of peer review that is appropriate; for example, an internal Committee peer review to ensure that accepted scientific methods were used to obtain and analyze the data and that no real or perceived biases exist. The member is expected to provide a copy of these materials to ACGIH<sup>®</sup> upon completion of the draft *Documentation*. If unpublished data are used, the owner of the data must first provide ACGIH<sup>®</sup> written permission to use, cite, and release the data/report to an outside party upon request.

In the case of translated information, care must be taken to ensure the information has been properly interpreted. Translation of non-English sources may be possible, if the study is critical to the TLV<sup>®</sup> recommendation. The need for such translation should be discussed with the Committee Chair; such requests should then be sent to the ACGIH<sup>®</sup> staff. Copies of translations should be sent to staff to be filed at ACGIH<sup>®</sup>.

If information is contained in a government or industry document, it should not be assumed that it has undergone peer review.

## ***Dissemination***

The Committee communicates with the public, its users, and interested parties by the *Annual Reports for the Committees on TLVs<sup>®</sup> and BEIs<sup>®</sup>*, the *TLVs<sup>®</sup> and BEIs<sup>®</sup>* book and information posted on the ACGIH<sup>®</sup> website. The Committee is under no obligation to individually inform any particular group about its activities or decisions.

## **Educational and Outreach**

A goal of the TLV<sup>®</sup>-PA Committee is to foster educational and outreach activities. This includes reviewing and developing ideas and plans for future symposia and workshops. Ideas for educational and outreach efforts will come from a variety of sources, including, but not limited to Committee members, staff, other ACGIH<sup>®</sup> Committees, the ACGIH<sup>®</sup> membership, and private and not-for-profit organizations. Since members of the Committee are best suited to judge the value of these activities, all such concepts will be discussed during a Committee meeting for initial evaluation.

Under certain circumstances, the Committee Chair may appoint an Education Development Coordinator from within the Committee membership to serve as a link between the Committee and ACGIH<sup>®</sup> staff. The TLV<sup>®</sup>-PA Education Development Coordinator represents the Committee in educational program discussions and planning, provides input and supports ACGIH<sup>®</sup> member educational needs assessment surveys, monitors various sources for areas of education interests, assists the Committee in annual educational effort planning, and coordinates with Committee members on specific educational offerings.

The Committee's educational plans, ideas, and offerings will be discussed within the full Committee and if the concept is deemed appropriate, the Committee Chair may appoint a lead instructor(s) or coordinator(s) from within the Committee membership whose responsibility will be to work with the Education Development Coordinator and the ACGIH<sup>®</sup> staff. The ACGIH<sup>®</sup> Education Event Planning Worksheet found in [Appendix D](#) should be completed in conjunction with staff for use in developing any external educational event.

## ***Web-Based Seminars (Webinars)***

The Committee may wish to organize webinars, or web-based presentations transmitted over the internet. Webinars are interactive sessions, with the ability to present, receive, and discuss information. The webinar combines a presentation and synchronized audio (via telephone or streaming audio).

Specific topics may be presented as this media is best suited for a focused presentation on a specific agent or issue. Usually these presentations are short (60–90 minutes) and can involve more than one speaker, often presenting from different geographic locations.

### *Symposia and Workshops*

From time to time, the Committee may wish to organize a technical symposium or seminar on a particular topic or TLV® in order to obtain additional information or points of view. The Committee will work with ACGIH® staff to organize events such as symposia or seminars as needed by the Committee. Initiation of the planning process requires completion of the Event Development Planner (EDP) ([Appendix D](#)). The overall objective of these symposia is to ensure a thorough vetting of the scientific data and perspectives available for Committee consideration.

Because of the timing of TLV® setting and *Documentation*, it is important that a symposium be suggested as early in the process as possible. Symposia require considerable time, commitment, and resources to develop and, thus, proposals should preferably be submitted while an agent is on the Under Study list. Symposium suggestions submitted while an agent is on the NIC will be considered, but usually this will be too late in the decision-setting process. A symposium will not be favorably reviewed if its purpose is solely to provide a forum for voicing opinions about existing data. Rather, there must be on-going research, scientific uncertainty about currently available data, or another scientific reason for the symposium.

Representatives of external organizations may have expressed a desire to meet with the TLV®-PA Committee because the Committee might benefit from discussions of the scientific data or because the many issues to be discussed on a given physical agent are likely to be important and of interest to a wide range of interested parties.

If a symposium proposal recommended by the TLV®-PA Committee is approved by the Board of Directors, the TLV®-PA Education Development Coordinator will identify a small "task force" to work with ACGIH® staff during the development phase. A Board member may act as liaison to the task force. The task force will work closely with the staff and will seek input and ideas from TLV®-PA Committee members about sponsors, speakers, format, etc. The task force will be responsible for ensuring that the TLV®-PA Committee's scientific decision-making needs are met and that all relevant external parties have an opportunity to give input to the planning of a symposium. To ensure that there is appropriate balance of scientific viewpoints and to maximize the available research to choose from, each symposium will utilize a call for papers to initiate and announce the planned symposium. The task force will be responsible for selecting speakers from responses as well as those identified from any other internal and external sources.

The symposium will typically be held immediately preceding or immediately following a scheduled meeting of the TLV®-PA Committee to facilitate the attendance of Committee members. Since the attendance of Committee members is in the interest of both the symposium and the TLV® development process, members will be encouraged to attend in their capacity as representatives of the TLV®-PA Committee.

**Appendix A: Membership Application**



**Threshold Limit Values (TLV<sup>®</sup>) for  
Physical Agents Committee  
Membership Application**

Thank you for your inquiry into membership on ACGIH<sup>®</sup> TLV<sup>®</sup> for Physical Agents Committee. To assist the Committee in its review and selection of new candidates, please provide the following information and **submit your current resume and/or curriculum vitae**. Feel free to expand the size of this application as needed to accommodate responses larger than the space allocated.

**Applicant's Name:**

**Address:**

**Phone:**

**Cell:**

**E-mail:**

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1. Name of Employer: \_\_\_\_\_

If employed by a regulatory/government agency, do your current activities relate to the development or setting of occupational health standards?

\_\_\_\_\_ Yes          \_\_\_\_\_ No

If yes, please indicate how your activities relate to regulations or regulatory policies and provide a list of substances or agents with which you have worked in relation to the development or setting of occupational health standards.

2. Check your area(s) of professional expertise. Use ++ for your major area(s) of expertise and + for minor area(s).

\_\_\_\_\_ Industrial Hygiene

\_\_\_\_\_ Occupational Medicine

\_\_\_\_\_ Epidemiology

\_\_\_\_\_ Toxicology

\_\_\_\_\_ Chemistry

\_\_\_\_\_ Physical Scientist, please specify \_\_\_\_\_

\_\_\_\_\_ Other, please specify \_\_\_\_\_

3. Within your area(s) of professional expertise, do you have specific fields of specialization (e.g., field industrial hygiene, noise, radiation, biological agents, aerosols, carcinogenicity, risk assessments, etc.)? List up to three fields in which you consider yourself specialized or could provide particular expertise to the Committee.

4. How many years have you spent in your major area of professional expertise?

\_\_\_\_\_ < 5 years                      \_\_\_\_\_ 11–20 years

\_\_\_\_\_ 5–10 years                      \_\_\_\_\_ > 20 years

5. Check all relevant professional certifications you hold.

\_\_\_\_\_ CIH    \_\_\_\_\_ PE    \_\_\_\_\_ CSP    \_\_\_\_\_ DABT    \_\_\_\_\_ ROH

\_\_\_\_\_ Medical Boards, please specify: \_\_\_\_\_

\_\_\_\_\_ Other, please specify: \_\_\_\_\_

6. Check all degrees you hold:

\_\_\_\_\_ BA    \_\_\_\_\_ MA    \_\_\_\_\_ DrPH    \_\_\_\_\_ DVM    \_\_\_\_\_ MD

\_\_\_\_\_ BS    \_\_\_\_\_ MS    \_\_\_\_\_ ScD    \_\_\_\_\_ VMD

\_\_\_\_\_ MPH    \_\_\_\_\_ PhD

\_\_\_\_\_ Other, please specify: \_\_\_\_\_

7. Describe your writing and verbal communication experience.

8. Check the number of years of experience serving on professional and scientific committees.

\_\_\_\_\_ < 3 years

\_\_\_\_\_ 6–9 years

\_\_\_\_\_ 3–5 years

\_\_\_\_\_ > 9 years

9. What are your primary reasons for wanting to join this Committee?

10. Participation on the Committee requires a considerable amount of your time annually to attend Committee meetings, participate on conference calls, write/review documents, and prepare/contribute to meetings. If you have questions about the time involved, please contact ACGIH® at the telephone number below. Do you have adequate time to devote to the activities of this Committee?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

Please submit your application and current resume and/or curriculum vitae in one of the following ways:

- E-mail to the Chair of ACGIH® in care of the Headquarters Office at [science@acgih.org](mailto:science@acgih.org)
- Mail to the Chair of ACGIH® in care of the Headquarters Office at 3640 Park 42 Drive, Cincinnati, Ohio 45241
- FAX to the Chair of ACGIH® in care of the Headquarters Office at 1-513-742-6170

If you have questions, please contact ACGIH® at 1-513-742-2020.

**Thank you for your willingness to serve!**

**Appendix B: ACGIH® Conflict of Interest Policy**



3640 Park 42 Drive • Cincinnati, OH 45241  
513-742-2020 • [mail@acgih.org](mailto:mail@acgih.org) • [acgih.org](http://acgih.org)

# **ACGIH® Policy and Process on Bias and Potential Conflicts of Interest**

(Approved and Adopted by the Board of Directors, September 17, 2000)  
(Revised by the Board of Directors, February 8, 2007)

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# ACGIH® Policy and Process on Bias and Potential Conflicts of Interest

This policy and process on bias and potential conflicts of interest has been established and implemented to safeguard the integrity and credibility of ACGIH® programs and activities. It applies to the Board of Directors, Ad Hoc Committees and other Working Groups. The Policy's general approach in defining and addressing bias and conflicts of interest has been modeled after that used by the National Academy of Sciences for its scientific study Committees.<sup>1</sup>

The ACGIH® core purpose is to advance occupational and environmental health. ACGIH®, as a not-for-profit association, is a private organization that operates for public purposes. There is a fundamental obligation of those having decision-making authority within ACGIH® to act in the best interests of the organization and the public good, rather than in furtherance of personal interests or those of third parties.

Members of ACGIH® have an individual obligation for ethical professional practice. Industrial hygiene associations in the U.S. have adopted a common "Code of Professional Ethics."<sup>2</sup> Canon 4 of the Code clearly establishes that avoidance of conflicts of interest is a basic principle of ethical practice: "Industrial Hygienists shall avoid circumstances where a compromise of professional judgment or conflict of interest may arise."

The bias and conflicts of interest policy is supported by other means of ensuring scientific accountability in the association's decision-making processes. ACGIH® exercises oversight and review of ad hoc Committee and other working group appointments and has developed procedures for internal and external review of their recommendations. Each of these plays an important part in the protection of ACGIH®'s programs and activities from inappropriate influences.

## ***About ACGIH® – Its Committee Process and Deliberations***

Since its founding in 1938, ACGIH® has provided technical knowledge, advice and guidance on occupational health and safety in several different forms: written reports reflecting the professional opinion reached by committees of experts; symposia engaging large audiences in discussion of issues; proceedings from conferences and workshops; peer reviewed scientific manuscripts; and an array of educational publications.

Through the efforts of the Committees, ACGIH® provides critical information and recommended practices to occupational and environmental health professionals. This history of sharing knowledge, based on careful study and independent judgment, has garnered international respect for ACGIH®. ACGIH® technical Committees focus on a range of issues in occupational/environmental hazard assessment and control techniques (e.g., occupational exposure values for chemical substances and physical agents, biological exposure indices, bioaerosols, infectious agents, air sampling instruments, and industrial ventilation).

The ACGIH® Committee process is characterized by the following:

- All members of the Board of Directors, Ad Hoc Committees and other Working Groups serve in a voluntary capacity without compensation. Certain expenses, such as travel costs to attend meetings, may be reimbursed according to an established expense reimbursement policy.
- Members of the Board of Directors, Ad Hoc Committees and other Working Groups serve as individuals and not as representatives of organizations or interest groups.

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<sup>1</sup> National Academy of Sciences. "Getting to Know the Committee Process". February, 1998.

<sup>2</sup> Code of Ethics for the Practice of Industrial Hygiene. Adopted by ACGIH®, AIHA, AAIH, and ABIH.

- The Board of Directors appoints Committee members for terms that begin on January 1. Each year the Committee Chair makes recommendations to the Board on the addition, retention, and retirement of Committee members. Other Working Groups are appointed as needed.
- Ad Hoc Committees and other Working Groups function under the authority of the Board of Directors. Ad Hoc Committees' and other Working Groups' actions are typically in the form of recommendations to the Board.
- No official action of the Board of Directors, Ad Hoc Committees or Other Working Groups can be taken unless a quorum is present.
- Under current ACGIH® policy, a Committee must maintain a simple majority of Regular members.
- The Board of Directors, Ad Hoc Committees or Other Working Groups are expected to be evenhanded and to examine all information dispassionately. One of their primary roles is to separate fact from opinion and analysis from advocacy. Scientific guidelines are essential in evaluating all arguments and alternatives.
- Members of the Board of Directors, Ad Hoc Committees or Other Working Groups should strive for consensus, but not at the cost of substantially weakening their analyses and conclusions.

### ***Bias and Conflict of Interest***

The credibility of ACGIH® can be weakened if members of the Board of Directors, Ad Hoc Committees or Other Working Groups are perceived as being biased. It is recognized that each individual who is knowledgeable about a subject brings his or her own biases and experiences to any study or Committee effort. Therefore, a basic intent of this policy is to ensure that biases are balanced and that conflicts of interests are eliminated in ACGIH® decision-making processes.

A further intent of the policy is to provide the framework for a common understanding of what constitutes bias and conflict of interest. The identification of such influences inherently involves the application of judgment. It is to be expected that a range of perspectives and interpretations will be voiced in the review of specific situations or relationships and their possible effect on a member's objectivity. The following definitions, taken from the National Academy of Sciences, will be used as a starting point in discussions and determinations on potential bias and conflict of interest:

***Bias*** is defined as views stated or positions taken that are largely intellectually motivated or arise from close identification or association of an individual with a particular point of view or the positions or perspectives of a particular group.

***Conflict of interest*** is defined as any financial or other interest which conflicts with the service of an individual because it could (1) impair the individual's objectivity, or (2) create an unfair competitive advantage for any person or organization.

The ***appearance*** of a conflict of interest can be just as damaging as the existence of a real conflict. An apparent conflict of interest arises when a reasonable person, with knowledge of the relevant facts, would question the impartiality of the individual in the matter being considered.

- Potential sources of bias and conflict of interest are significant issues that are taken into consideration in the selection of Committee members and are re-examined periodically throughout their terms of service (see "ACGIH® Bias and Conflict of Interest Procedures").

## **Verbal and Written Disclosure Process**

All members serving on the Board of Directors, Ad Hoc Committees or Other Working Groups are required to acknowledge that this policy has been received and read. Further, this policy shall also apply to all consultants who serve on Ad Hoc Committees and Other Working Groups. All professional, consulting, and financial connections, as well as pertinent intellectual positions and public statements that could constitute conflict of interest or bias or which could be perceived to constitute conflict of interest or bias should be described in writing on the confidential form, "Potential Sources of Bias and Conflict of Interest – Disclosure," and orally declared to its respective group. **Please complete the disclosure form (currently pages 7–8 and any additional pages as needed) and mail a printed copy of the completed forms, along with the signed Acknowledgement and Certification form (last page) to ACGIH® Headquarters, Attn: Executive Director (Personal & Confidential).** In addition, these forms can be completed either electronically or printed off and completed. These completed forms will be confidentially retained on file.

As part of the process of becoming acquainted with one another and with the specific tasks and projects to be undertaken during the year, the Board of Directors, Ad Hoc Committees and Other Working Groups conduct an annual closed session discussion on bias and conflict of interest. The purpose of this session is to allow members to share questions and concerns they may have, and to identify any circumstance(s) or relationship(s) that could be viewed as a potential conflict of interest. This session also provides a regular opportunity to review and highlight those issues that are most relevant to the respective group's work.

Examples of the types of relationships that a member of the Board of Directors, Ad Hoc Committees or Other Working Groups should disclose are listed below. This is not a comprehensive list. Because interpretations can vary from person to person concerning what situations constitute a potential conflict of interest, it is important that these relationships be identified and discussed within the Board, Ad Hoc Committees or Other Working Groups. In each of the examples below, the member is asked to disclose *only those relationships that have potential relevance to his or her own involvement in ACGIH® matters and decisions*. Sometimes these relationships may apply to a relative or other close associate of the member and therefore be relevant to the member as well.

- Owner, employee, or paid consultant to an organization or corporation that could be impacted by an ACGIH® recommendation or practice guideline.
- Significant financial interests (e.g., investments, loans, liabilities, etc.) in an organization or corporation that could be impacted by an ACGIH® recommendation or practice guideline or with which ACGIH® does business. (Excluded financial interests include personal mortgages, personal loans for vehicles or other furnishings, saving/checking deposit accounts, publicly available mutual funds not concentrated in a specific industry or sector).
- Recipient of a grant, award, or contract from an organization or corporation that could be impacted by an ACGIH® recommendation or practice guideline.
- Serve as an expert witness in judicial or regulatory proceedings.
- Serve on advisory or review panels of private corporations or non-profit organizations.
- Serve as an officer or member of the board of directors or committees for a trade group or an organization related to ACGIH®.
- Acceptance of gifts, entertainment, or other favors from any individual or organization that does, or is seeking to do business with ACGIH®, or may be impacted by ACGIH®.

If a potential conflict becomes apparent, a member may ask to be recused or may request to recuse his or herself from participation on specific matters or issues before the Board of Directors, Ad Hoc Committees or Other Working Groups (e.g., not participate in discussion or not vote or author documents). For more severe or extensive conflicts, the member may be requested to resign from the Board of Directors, Ad Hoc Committees or Other Working Groups. Failure to disclose a

relevant conflict of interest will result in dismissal from the Board of Directors, Ad Hoc Committee or Other Working Group. In some circumstances, an individual may continue to participate on the Board of Directors, Ad Hoc Committee or Other Working Group if the conflict of interest is promptly disclosed, and the Board of Directors has determined that the conflict is not relevant to the issues considered by the Board of Directors, Ad Hoc Committee or Other Working Group, as determined. When a question of balance arises, the usual procedure is to add members to the Ad Hoc Committee or Other Working Group to achieve the appropriate balance.

### ***Special Issues for Committees Involved in Risk Assessments***

Most ACGIH® technical committees are involved in some aspect of assessing occupational risk or hazard. Many times, recommendations for risk management must be made when the available scientific information is incomplete or inconclusive. In these situations, it is essential that there is a clear and traceable path from the application of sound judgment, scientific principles, and assumptions to the Committees' conclusions and recommendations. Committees may establish additional procedures, approved by the Board of Directors, to address specific bias and conflict of interest issues within their operations.

Of all ACGIH® Committees, there are a few in which human health risk assessment is at the core of their activities – Threshold Limit Values for Chemical Substances (TLV®-CS) Committee, Threshold Limit Values for Physical Agents (TLV®-PA) Committee, and the Biological Exposure Indices (BEI®) Committee. These Committees must constantly evaluate incomplete or inconclusive data, and the collective experience and reasoned judgment of Committee members become crucial factors in developing conclusions and recommendations. Conclusions based on scientific evidence and those based on informed judgment must be clearly distinguished. Special care is needed to explain how the Committees arrived at their conclusions and any assumptions used should be explicitly identified and justified. These aspects of the Committees' deliberations are explicitly described in the ACGIH® publication "*Documentation of the TLVs® and BEIs®.*"

The Committees that develop TLVs® and BEIs® employ a process that involves review of their proposed occupational exposure criteria by the public and scientific peers. New and revised TLVs®/BEIs® are published on a list giving "*Notice of Intended Changes*" (NIC).<sup>3</sup> Proposed values are placed on the NIC list for approximately one year or longer to solicit any new information that may have a bearing on their appropriateness. This step in the process provides an important mechanism for ensuring the Committees' findings are objective, balanced and based on all available information that is scientifically valid.

### ***Confidentiality and Public Access***

Procedures and practices have been developed to protect Ad Hoc Committees or Other Working Groups from outside pressures and thereby safeguard the credibility and integrity of their work. Ad Hoc Committee or Other Working Group meetings, particularly as the group gathers information, may include invited individuals who are not members of the Ad Hoc Committee or Other Working Group. However, meetings are closed when the group is deliberating to develop its findings or when discussing financial and personnel matters. Closed meetings are not open to the public or to any person who is not an Ad Hoc Committee or Other Working Group member, consultant or an official, agent, or employee of ACGIH®.

Ad Hoc Committee or Other Working Group reports and recommendations are the product of ACGIH® and not of the group alone or individual group members. Ad Hoc Committee or Other Working Group deliberations, drafts of documents, tentative conclusions – all are confidential until approved or ratified by the Board of Directors, in compliance with the ACGIH® Information Release Policy. Ad Hoc Committee or Other Working Group members are expected to treat their respective group's deliberations and draft products as confidential. Ad Hoc Committee or Other Working

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<sup>3</sup> The Notice of Intended Changes is published annually in the *TLVs® and BEIs®* Book, in the ACGIH® newsletter *Today! Online*, and on the ACGIH® website ([www.acgih.org](http://www.acgih.org)).

Group members should refer public requests for information to the headquarters staff, in compliance with the ACGIH® Public Affairs and Communication Policy.

### ***Role of Staff***

Each Ad Hoc Committee or Other Working Group is assisted in its work by qualified staff members who provide a variety of services. The overall staff role is to help create an objective and productive atmosphere in which deliberations can take place.

Examples of the services staff provide include coordinating meeting arrangements, record keeping, drafting meeting minutes, distributing meeting materials, and fielding inquiries from the public. In addition, staff ensures that ACGIH® procedures and practices are followed, and that the group stays on schedule and within budget.

Staff members can also assist with the many aspects of the group's research and editorial activities, including researching, writing, integrating portions written by others, and ensuring consistent style and format. However, the conclusions and recommendations are those of the group. Staff does not insert its personal views into the group's conclusions or recommendations.

## **ACGIH® Bias and Conflict of Interest Procedures**

### **For the Board of Directors:**

Declare both orally and describe in writing "Potential Sources of Bias and Conflict of Interest" during their term as a Director or Officer by participating in a closed session discussion at a convened Board Meeting that is conducted at least annually and completing the written ACGIH® Disclosure form.

Voluntarily and immediately disclose to the Board of Directors any circumstance or relationship that could be a real or apparent conflict of interest.

Questions on an individual Board member's real or apparent conflict of interest will be referred to the Board Chair for resolution.

### **For Ad Hoc Committee and Other Working Group Chairs:**

Declare both orally and describe in writing "Potential Sources of Bias and Conflict of Interest" during their term as Ad Hoc Committee or Other Working Group Chair.

Conduct a closed session discussion by the entire Committee at least annually and completing the written ACGIH® Disclosure form and ensure all Committee members participate.

Voluntarily and immediately disclose to the Board of Directors any circumstance or relationship that could be a real or apparent conflict of interest.

Questions on an Ad Hoc Committee or Other Working Group Chair's real or apparent conflict of interest will be referred to the Board of Directors for resolution.

### **For Ad Hoc Committee and Other Working Group Members and Consultants (including additional or supplemental publication authors):**

Declare orally and describe in writing "Potential Sources of Bias and Conflict of Interest" during their term as an Ad Hoc Committee or Other Working Group member or a consultant by participating in a closed session discussion by the entire group that is conducted at least annually and completing the written ACGIH® Disclosure form.

Voluntarily and immediately disclose to the Ad Hoc Committee or Other Working Group Chair any circumstance or relationship that could be a real or apparent conflict of interest.

Questions on an Ad Hoc Committee or Other Working Group member's or consultant's real or apparent conflict of interest will be referred to the respective Chair for resolution.

Adhere to any supplemental bias and conflict of interest procedures established for the Ad Hoc Committee or Other Working Group.

**POTENTIAL SOURCES OF BIAS,  
APPARENT CONFLICT OF INTEREST AND  
CONFLICT OF INTEREST – DISCLOSURE**

**ACKNOWLEDGEMENTS**

I declare that: **[PLEASE CHECK THE APPROPRIATE BOX(ES) THAT APPLY]. Note: If you checked any box(es) listed below, please provide an explanation in the shaded area underneath the respective statement and attach additional pages as needed. Forms can be completed either electronically or printed off and completed (attach additional pages if needed).**

- 1. I am the owner, employee, or paid consultant to an organization, including a government agency or educational institution, or corporation that could be impacted by an ACGIH® recommendation or practice guideline.
  
- 2. I have significant financial interests (e.g., investments, loans, liabilities, etc.) in an organization, including a government agency, educational institution, or corporation that could be impacted by an ACGIH® recommendation or practice guideline or with which ACGIH® does business. (Excluded financial interests include personal mortgages, personal loans for vehicles or other furnishings, saving/checking deposit accounts, publicly available mutual funds not concentrated in a specific industry or sector.)
  
- 3. I am the recipient of a grant, award, or contract from an organization, including a government agency, educational institution, or corporation that could be impacted by an ACGIH® recommendation or practice guideline.
  
- 4. I have served as an expert witness in judicial or regulatory proceedings within the past five years and I [am] [am not] currently scheduled to serve as an expert witness in any pending judicial or regulatory proceedings.
  
- 5. I do serve on advisory or review panels of private corporations, government agencies, or non-profit organizations.
  
- 6. I do serve as an officer or member of the Board of Directors or Committees for a trade group or an organization related to ACGIH®.
  
- 7. I have accepted gifts, entertainment, or other favors from an individual or organization that does, or is seeking to do business with ACGIH®, or may be impacted by ACGIH®.

I further acknowledge and state that I have no conflicts of interest, no apparent conflicts of interest and no biases regarding matters that will be considered by me, as an ACGIH® Board member, Ad Hoc

Committee or Other Working Group member, except for those matters listed above, or in the space below (attach additional pages if needed).

## **DEFINITIONS**

### **Conflict of Interest**

A conflict of interest is any financial or other interest which conflicts with my service on the ACGIH® Board of Directors, any ACGIH® Ad Hoc Committee, Subcommittee or Other Working Group because it could (1) impair my objectivity or (2) create an unfair competitive advantage for any person or organization.

1. Please list any Conflicts of Interest.

### **Apparent Conflict of Interest**

An apparent conflict of interest arises when a reasonable person, with knowledge of the relevant facts, would question my impartiality on a matter being considered.

2. Please list any Apparent Conflicts of Interest.

### **Bias**

Bias is views stated or positions taken that are largely intellectually motivated or arise from close identification or association of an individual with a particular point of view or the positions or perspectives of a particular group.

3. Please list any Bias.

**POTENTIAL SOURCES OF BIAS AND CONFLICT OF INTEREST**  
**ACKNOWLEDGEMENT AND CERTIFICATION**

By signing below, I acknowledge and certify that –

- 1) I have received a copy of and read the ACGIH® “Policy and Process on Bias and Conflicts of Interest.”
  
- 2) I have truthfully and to the best of my knowledge identified in writing and verbally disclosed all relevant potential sources of bias and conflicts of interest, including all professional, consulting, and financial connections, as well as pertinent intellectual positions and public statements, that could be associated with my ACGIH® activities and will do so as these may arise in the future. I further acknowledge and state that, if during the next year, any matters arise or issues are presented that could create a conflict of interest, apparent conflict of interest or bias for me, as those terms are described above, I will immediately provide ACGIH® with a written disclosure of such conflict of interest, apparent conflict of interest or bias.
  
3. The information I declare is solely for the confidential review by ACGIH®, and I do not authorize further disclosure or release of any of it for any other use.

<b>NAME:</b>	<b>ACGIH® BOARD/COMMITTEE</b> <b>Select Position:</b>
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<b>SIGNATURE: <i>SIGN OR INSERT SIGNATURE BELOW</i></b>	<b>DATE:</b>
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## **Appendix C: ACGIH® Voting Procedure**

## ACGIH® Committee Voting Procedure

This procedure is not intended to be inclusive, but rather as basic information/instructions.  
Robert's Rules of Order serves as additional guidance.

### 1. Motion/Voting Process According to ACGIH® Practices:

- Establish a quorum. At ACGIH®, a quorum is a majority (> 50%) of the voting Committee members (hereafter referred to as members). Although Member Candidates and consultants are full participants in discussions, they do not have voting privileges.
- Assure that motions are presented clearly and concisely and that all Voting Members are aware of the exact language/intent of the motion (Note: Any motion that requires Board of Directors' approval must begin with a "Vote to Recommend (VTR) to the Board that . . .").
- Procedure for handling a motion:
  - Member (not Chair) makes motion ("I move that . . ."),
  - Another member seconds motion,
  - Members debate motion (When a motion is on the table, keep remarks to the motion under consideration),
  - Chair puts question to members for vote,
  - Chair announces result of vote.
- All members present have an obligation to cast a vote (Note: Chair only votes to make or break a tie).
- Recording motions and votes:
  - Identity of who makes or seconds a motion is not recorded in the meeting minutes.
  - The number of "YES" and "NO" votes is not recorded in meeting minutes.
  - ABSTENTION votes are recorded in the meeting minutes as follows:
    1. When ABSTENTIONS are for reasons other than conflict of interest (COI), the number of members abstaining is recorded, but not the names or reasons for the abstention. Abstentions should be rarely used unless for COI.
    2. When ABSTENTIONS are for conflict of interest, names of members abstaining for COI are recorded along with a note that the abstentions are for COI.

2. Matters that require a vote:

- Any Committee business that may require formal Committee approval, and/or approval by the Board of Directors. When in doubt, use the voting process.
- *Documentations* and their respective TLVs<sup>®</sup>, BEIs<sup>®</sup> and/or notations for substances or agents that are proposed for Committee approval (and Board ratification) to:
  - adopt as final,
  - add to NIC (and NIE: Physical Agents Committee),
  - retain on NIC (and NIE: Physical Agents Committee),
  - withdraw from NIC (and NIE: Physical Agents Committee), or
  - remove an existing substance or agent from the adopted TLV<sup>®</sup>/BEI<sup>®</sup> list (Note: If a proposal to remove is approved and ratified, the substance or agent must remain on the adopted TLV<sup>®</sup>/BEI<sup>®</sup> list and the proposed action so listed on the NIC for public notification and comment. The reason(s) for the proposed removal must be stated).
- *Documentation* for an adopted TLV<sup>®</sup> or BEI<sup>®</sup> that was significantly revised (A note should be added to the history section of the *Documentation* indicating the date and what type of change(s) was made.)
- Revision(s) to the *TLVs<sup>®</sup> and BEIs<sup>®</sup>* book (e.g., appendices, etc.) that may warrant public comment or an NIC (and NIE: Physical Agents Committee) listing.

3. Matters that do not require a vote:

- Revisions (i.e., additions or deletions) made to Under Study list.
- Editorial changes/updates made to adopted TLV<sup>®</sup>/BEI<sup>®</sup> *Documentations*, when such revisions are minor, supportive of the adopted value(s)/notation(s), non-controversial, etc. When such changes are made:
  - They should be brought to the Committee's attention.
  - A note should be added to the history section of the *Documentation* indicating the date and what type of change(s) was made.

4. Conditions that must be met before full Committee votes on Draft *Documentations* and their respective TLV<sup>®</sup>(s), BEI<sup>®</sup>(s) and/or notation(s):

- The draft *Documentation* must be reviewed by the subcommittee (TLV<sup>®</sup>-CS Committee) or the author/co-author/assigned reviewer (TLV<sup>®</sup>-PA Committee, BEI<sup>®</sup> Committee, Bioaerosols Committee) and agreed upon that the *Documentation* with its numerical TLV<sup>®</sup>(s)/BEI<sup>®</sup>(s) and notation(s) are in order for full Committee final consideration/vote (Note: For the BEI<sup>®</sup>, PAC, and Bioaerosols Committees, this draft *Documentation* should include/address comments received from previous full Committee reviews).

- The draft *Documentation* with its numerical TLV®(s)/BEI®(s) and notation(s) must be in final (or near final) form and circulated in advance of the meeting to allow for full review by the Committee's members. The *Documentation* should be of sufficient quality to prevent the need for an inordinate amount of discussion or rushed review by the full Committee before vote.
- As needed, the principal author should be available to the Committee when the *Documentation* and its numerical TLV®(s)/BEI®(s) and notation(s) are up for Committee vote.

#### 5. Miscellaneous:

- Withdrawing or Modifying/Amending a Motion: Before a motion has been stated by the Chair, it can only be withdrawn or modified by the maker with agreement by the seconder. Once the motion is stated by the Chair, it can only be withdrawn or modified by general consent or a majority vote by the members.
- Motion to Reconsider: Hasty or ill-advised action can be corrected through the motion to reconsider. This motion can be made only by an individual who voted on the prevailing side and must be made on the same day or the next succeeding day after the original vote was taken (not counting a day which no business meeting is held during a session).
- Motion to Table: A Motion to Table can be made at any time an issue is before the Committee. The objective is to postpone the vote on the main motion. [The motion cannot specify a time for resumption; if it did, it would be equivalent to a motion to postpone definitely (which might be in order and even preferable.)] Such a motion is not in order when another member has the floor. The motion is not debatable, requires a second and a majority vote to pass. If passed, the issue before the Committee cannot be discussed further until another item has been considered and voted upon. Motions to Table are designed to be temporary in nature and merely reschedule the decision of an issue for a later time. When the Committee wishes to resume consideration of a tabled motion, any member may move to take a motion from the table. Such a motion requires a second, is not debatable, and requires a majority vote. If passed, the Chair announces the main motion and consideration is resumed. A tabled motion will expire if not acted on during the same session (if the group meets less than quarterly) or by the conclusion of the next session (if the group meets more than quarterly).
- Call the Question (Call the Vote): A Committee member may desire to have the vote taken before the Chair calls for the vote or before all members have finished discussing the issue. Rationale for this action could include moving a meeting along in a timely manner or determining how many members have already formed a conclusion. The motion (I call the question) is not in order when another member has the floor. The motion requires a second, is not debatable, and requires a 2/3 vote for passage. This vote determines if the discussion continues (No vote) or if the discussion ends (Yes vote). If passed, there can be no further discussion, and the Chair will ask for the vote on the motion under question. Note: Members must be very cautious about employing this method as it can restrict open dialogue.

## **Appendix D: Education Development Planner**

**ACGIH®**  
**Event Development Planner (E.D.P.)**

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**Instructions for completion:** This is a comprehensive form designed to assist both ACGIH® Committee members and staff in the planning of workshops, courses, conferences, and symposia. Since this is a working document, not all questions can be fully answered from the outset. However, please complete all pertinent items to the best of your ability. Please obtain the necessary signatures before submitting to ACGIH® staff. For assistance at any time in filling out this worksheet or for any other questions about educational events, please contact Phillip Rauscher, Senior Director of Science, Education, and Publications at 513-742-6176 or science@acgih.org.

**IMPORTANT NOTES:**

- Symposia and conference dates must be one year from submittal for domestic events and eighteen months from submittal for international events unless prior arrangements have been made.
- Please be detailed when answering questions. Please make sure all items marked with an asterisk are completed before the initial submittal.

**Original Date of Submittal:** \_\_\_\_\_

**Revision Date:** \_\_\_\_\_

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***PLEASE TYPE DIRECTLY IN THE FIELD BELOW THE PROMPT***

\*Items must be completed before submittal to ACGIH®

**1. EDUCATIONAL SCOPE OF EVENT**

**\*Type of Event:**

- Symposium** – A symposium is a focused meeting on a subject of current or continuing interest. A symposium's principal purpose is to bring expert authors on a given subject together to share their knowledge and expertise with an audience.
- Conference** – A conference consists of programming where multiple speakers present papers and/or presentations on different topics relating to a theme, material, process, or industry. Conferences typically have concurrent sessions.
- Workshop** – Workshops are 1–5 day programs devoted to one subject and are usually led by 1–3 instructors that are considered leaders in his or her field.
- Course** – A course is similar to a workshop in length and scope; however, a course typically culminates in a measured exam for certification purposes.
- Distance Education** – Distance education refers to any online education program including webinars and online courses.

**\*Description of Event:**

**\*Goals of Event (List educational goals):**

**\*Deliverables (What will be the contribution to the science?):**

**\*List the Committee supporting this educational event:**

**\*Signature of Committee Chair (Signature indicates that the Committee supports the Science behind the proposed educational event) -**

**\*Chair - Sign and Date:**

**\*Name of Person Submitting E.D.P. –**

## **2. AUDIENCE**

The determination of potential audience is a paramount step to a successful event for ACGIH®. Please keep the following items in mind when answering the questions below:

- For a symposium or conference that will utilize a hotel or conference center, a minimum of 125 paid attendees is necessary.
- For a course or workshop that will utilize a hotel or conference center, a minimum of 30 attendees is necessary.

**\*List projected attendance (please include a minimum and maximum):**

**\*Give a detailed description of the potential audience:**

**\*List industries that will be interested in this event:**

**\*List other associations or organizations that may have an interest in this event:**

**\*What continuing education should be offered?**

### **3. LOGISTICS**

\*What type of venue is needed for this event? Hotel ACGIH® Room Convention Center

\*Why is this type of venue needed?

\*Are there any special accommodations we need to be aware of?

1. \*What is the first choice of geographic location and why?
  
2. \*What is the second choice of geographic location and why?
  
3. \*When should this event be offered? Year:
  
4. Spring Summer Fall Winter
  
5. \*How many days will the event last?
  
6. \*Will there be any pre- or post-event activities?
  
7. \*List name and date of any other events you are aware of that may impact this event:
  
8. \*List names and dates of any similar events that have been held in the past:

## **EVENT FORMAT – SYMPOSIUM OR CONFERENCE**

**COMPLETE THIS SECTION ONLY IF PLANNING A SYMPOSIUM OR CONFERENCE**

1. Will there be a keynote speaker/s? YES NO
  
2. If yes, how many?
  
3. List names of potential keynote speakers:
  
  
4. List the number of general or plenary sessions per day:
  
  
5. Will the event have concurrent sessions? YES NO
  
6. If yes, list the number of concurrent sessions needed each day:
  
  
7. If yes, list the number of speakers needed for each concurrent session:
  
  
8. Will the event have roundtables or panel discussions? YES NO
  
9. If yes, list the number needed per day:
  
  
10. Will there be any pre- or post-event activities?
  
  
11. List the number of moderators needed per day:

12. **ACGIH® strongly encourages a “call for papers” for all conferences and symposia. If you do not plan on having a “call for papers” please explain:**
13. **List outlets where the call for papers should be advertised:**
14. **Will there be a poster session? YES NO**
15. **Is there a desire to print an abstract book? YES NO**
16. **Is there a desire to have a published proceeding? YES NO**
17. **If yes, list possible journals for the proceedings publication:**

*\*ACGIH® cannot guarantee publication in JOEH.*

**EVENT FORMAT – COURSE OR WORKSHOP**  
**COMPLETE THIS SECTION ONLY IF PLANNING A COURSE OR WORKSHOP**

1. **List the desired number of instructors:**
2. **List the name/s of potential instructors:**
3. **Will there be a demonstration section of the event? YES NO**
4. **If yes, is there any special equipment or software needed?**
5. **Will there be a hands-on portion of the event? YES NO**
6. **If yes, is there any special equipment or software needed?**
7. **Are there any books, manuals or other text needed?**

**EVENT FORMAT – DISTANCE EDUCATION**  
**COMPLETE THIS SECTION ONLY IF PLANNING AN ONLINE PROGRAM**

1. List the desired number of speakers?
2. List name/s of potential speakers?
3. Indicate whether speakers have previously presented in an online format:
4. Online courses and webinars typically have testing requirements to receive CM points. Who will develop the test?

**FINANCIAL**

1. Are there any other associations or organizations that might be willing to co-sponsor the event?
2. Are there any associations or organizations that might be willing to sponsor a welcome reception or meal?
3. List possible sources of additional funding (include contact names):
4. Projected number of individuals, if any, who will receive complimentary registrations (List by category):  Speakers \_\_\_\_\_  Task Force \_\_\_\_\_  Committee \_\_\_\_\_  Other \_\_\_\_\_
5. Projected number of individuals who will receive travel support. Please specify the type and extent of support offered:
6. List any extraordinary expenses anticipated (i.e., international travel support, honorarium, etc.):

## **TASK FORCE**

1. List the number of persons required on Technical Program Task Force (list).
2. List the suggested ACGIH® Committee Members for Technical Program Task Force (list).
3. List the names of other experts for the Technical Program Task Force. Please list area of expertise and organization name.
4. What is the expected number of meetings and conference calls needed to develop the event? In person meetings: \_\_\_\_\_ Conference Calls: \_\_\_\_\_
5. For in person meetings, where should they be held?

## **MARKETING**

1. List industry trade publications where this event might be advertised:
2. List any listservs that you are aware of that might be potential avenues of advertising:
3. List organizations that might be willing to share their member lists: