

# ERP G S

## **AIHA Guideline Foundation Emergency Response Planning (ERP) Committee**

# Procedures and Responsibilities

Procedures and Responsibilities  
of the AIHA Guideline  
Foundation ERP Committee are  
always open to comments,  
changes and revisions.

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## **Emergency Response Planning Guidelines (ERPG) Procedures and Responsibilities**

- Defines ERPGs
- Explains how to author an ERPG manuscript for review by the ERP Committee
- Explains the ERPG review process
- Defines responsibilities of ERP Committee members and officers
- Provides a template illustrating the format of ERPG documents

## Contents

Introduction.....	5
ERP Definitions .....	5
Members and Associate Members of the Committee .....	6
ERP Committee Officers, Terms of Office, and Succession .....	6
Sources of ERP Documents .....	7
ERP Authorship, Submission, and Review Procedure .....	7
The ERP manuscript should be drafted using the format outlined in .....	7
ERP Document Review Criteria .....	10
ERP Document Update Procedure .....	11
Responsibilities: ERP Committee Chair.....	11
Prescreens submitted Draft ERP Documents to ensure they are prepared in accordance with the ERP Document Format .....	12
Responsibilities: ERP Committee Vice Chair .....	12
Responsibilities: ERP Committee Secretary.....	13
Responsibilities of First Reviewers .....	14
Responsibilities of Second Reviewers .....	16
Responsibilities of ERP Committee Members .....	16
Responsibilities of AGF Staff Liaison .....	17
Dissenting Opinions.....	18
ERP Terminology.....	18
Appendix A: ERP Document Format .....	20
Appendix B: Notice for AGF Website or <i>The Synergist</i> .....	26
Appendix C: AGF Committee Conflict of Interest Policy.....	28

# Procedures and Responsibilities

## AIHA Guideline Foundation (AGF) ERP

### Committee Members and Officers

#### Introduction

Emergency Response Planning Guidelines (ERPGs) were developed for emergency planning and are intended as health based guideline concentrations for single exposures to chemicals. These guidelines (i.e., the ERPG documents and ERPG values) are intended for use as planning tools for assessing the adequacy of accident prevention and emergency response plans, including transportation emergency planning and for developing community emergency response plans. The emphasis is on ERPGs as *planning* values. When an actual chemical emergency occurs there is seldom time to measure airborne concentrations and then to take action.

ERPGs can be used to develop emergency response action plans, including mitigation steps, protective actions, administrative controls such as inventory reduction, and others. Emergency response plans will vary depending upon factors such as population density, type of population (e.g., schools), terrain, weather conditions, and the nature of the release.

#### ERPG Definitions

The AGF ERP Committee utilizes three guidance concentration levels. Each of these levels is defined and briefly discussed below:

**ERPG-3:** *"The maximum airborne concentration below which nearly all individuals could be exposed for up to 1 hour without experiencing or developing life-threatening health effects."*

The ERPG-3 level is a worst-case planning level above which there is the possibility that some members of the community may develop life threatening health effects. This guidance level could be used to determine the airborne concentration of a chemical that could pose life-threatening consequences should an accident occur. This concentration could be used in planning stages to project possible levels in the community. Once the distance from the release to the ERPG-3 level is known, the steps to mitigate the potential for such a release can be established.

**ERPG-2:** *"The maximum airborne concentration below which nearly all individuals could be exposed for up to 1 hour without experiencing or developing irreversible or other serious adverse health effects or symptoms that could impair an individual's ability to take protective action."*

Above ERPG-2, there may be significant adverse health effects, signs, or symptoms for some members of the community that could impair an individual's ability to take protective action. These effects might include severe eye or respiratory irritation, muscular weakness, CNS impairments, or serious adverse health effects.

### **ERPG-1:**

*"The maximum airborne concentration below which nearly all individuals could be exposed for up to 1 hour without experiencing more than mild, transient health effects or without perceiving a clearly defined objectionable odor."*

The ERPG-1 identifies a level that does not pose a health risk to the community but that may be noticeable due to slight odor or mild irritation. In the event that a small non-threatening release has occurred, the community could be notified that they may notice an odor or slight irritation but that concentrations are below those that could cause unacceptable health effects.

Because of their properties, there may not be an ERPG-1 for some materials. Such cases would include substances for which sensory perception levels are higher than the ERPG-2 level. In those cases, the ERPG-1 level would be given as "Not Appropriate."

It is also possible that no valid sensory perception data are available for the chemical. In these cases, the ERPG-1 level would be given as "Insufficient Data."

### **Members and Associate Members of the Committee**

Membership on the ERP Committee requires membership in the AIHA. Members cast one vote in all Committee actions, including the balloting of ERP documents. Members are expected to attend meetings (either face-to-face or virtually) on a regular basis and participate as outlined in the section on "Responsibilities of ERP Committee Members."

Associate members are non-voting members who advise the Committee and participate in meetings on a limited basis for specific needs. They may be previous members of the Committee or individuals with specialized knowledge or experience who can help the Committee fulfill its responsibilities and who express a willingness to assist on an as-needed basis. Associate members are not required to complete the "Committee Conflict of Interest Policy" shown in *Appendix C: AGF Committee Conflict of Interest Policy* (page #). Even though they are not required to be members of AIHA, they are encouraged to join AIHA.

### **ERP Committee Officers, Terms of Office, and Succession**

The ERP Committee has four officers: Secretary, Vice Chair, Chair, and Past Chair.

Each officer serves a 2-year term, with automatic progression from Secretary to Vice Chair to Chair to Past Chair. The rotation of officers takes effect as of the AIHA Conference and Exposition (AIHce) at the end of the second year in office.

In the second year of their terms, the officers serve as a nominating committee to identify candidates for Secretary. The new Secretary should be elected at the last ERP Committee meeting prior to the AIHce in the year officers are scheduled to rotate.

If an officer other than the Past Chair resigns before the end of his or her term, the remaining officers will advance upon the resignation and a new Secretary will be elected. The ERP Committee will determine on a case-by-case basis whether 2-year terms for all

officers should end as originally scheduled or be dated as of the election of the new Secretary.

## **Sources of ERPG Documents**

Draft ERPG documents may be submitted by individuals, U.S. federal or state agencies, non-governmental agencies or organizations, manufactures, emergency responders, or any group desiring peer-reviewed ERPG values. Draft ERPG manuscripts should comply with the criteria described in ERPG Authorship, Submission, and Review Procedure (next section) and the ERPG Format outlined in *Appendix A: ERPG Document Format* (page 20). These Draft ERPG documents should be submitted to the ERP Committee Chair for preliminary review and consideration by the Committee.

When an ERPG is needed but the requestor lacks the expertise to develop the Draft ERPG document, a letter should be submitted to the ERP Committee Chair requesting development of ERPG values and outlining the basis for the need. Such requests will be considered by the Committee, taking into account the availability of necessary funding and of Committee members with the appropriate expertise. The Committee Chair will respond in writing to the request.

## **ERPG Authorship, Submission, and Review Procedure**

When a Draft ERPG document is submitted, the Author must follow the procedures outlined below. When the Committee undertakes the development of a Draft ERPG document, or when the Committee is updating an existing ERPG document, the "First Reviewer" also serves as the "Author."

1. The authoring organization should use a multi-disciplinary team including industrial hygiene, toxicology, medical, and other health professionals to collect and review data and to develop Draft ERPG documents.
2. The Author should identify producers, major users, and industry associations having a significant interest in the chemical and should request unpublished data and other relevant information from them. Studies of effects in humans at known airborne concentrations are especially useful. Animal toxicity data are essential.
3. A comprehensive literature search should be conducted and should include appropriate on-line databases such as MEDLINE or TOXLINE. The literature search terms, databases searched, and search results should be provided with the Draft ERPG manuscript.
4. The Author should make every effort to obtain the original reference for all data used in the Draft ERPG document because there may be errors, unsupported interpretations, or significant omissions in secondary references.
5. The ERPG manuscript should be drafted using the format outlined in *Appendix A: ERPG Document Format* (page 20).
6. The authoring company, individual, or organization should submit the Draft ERPG document, marked "Preliminary Draft," to the ERP Committee Chair.

7. Copies of all the referenced literature must accompany the Preliminary Draft document either as paper copies or, preferably, as electronic copies in portable data format (\*.pdf). For some lengthy publications, such as NTP chronic studies, the full referenced item may not be needed. Unpublished, confidential company reports should not be used as references unless at least a summary containing sufficient details of the methods, results, and conclusions is provided with a written release for use in ERPGs. The release must include permission for the ERP Committee to make the material publicly available if cited in the ERPG documentation. The use of anecdotal reports is discouraged.
8. The ERP Chair (or designee) will perform an initial review of the Preliminary Draft ERPG document. If the manuscript is not suitable, the ERP Chair (or designee) will communicate the deficiencies to the Author.
9. If the manuscript is suitable, the ERP Chair will seek volunteers or assign First and Second reviewers. They will review the Preliminary Draft ERPG in depth and work directly with the Author for any necessary clarifications or corrections, as well as to ensure that copies of all references have been provided and correctly cited.
10. Only after this initial review and revision by the First and Second Reviewer will the Preliminary Draft ERPG document be presented to the full ERP Committee for a detailed discussion of the data summary, proposed ERPG values, and rationales.
11. All ERP Committee meetings are open to observers. Dates and places of meetings will be announced on the AGF website. Committee members are also encouraged to notify individuals they know of who have particular knowledge of or interest in a topic that will be discussed so that they can provide relevant information to the Committee, attend the meeting as an observer, or submit a request to the Committee Chair to attend and participate in discussions.
12. Comments on ERPG documents may be submitted to the Committee Chair in writing by any interested individual or organization.
  - Written responses (possibly brief) will be given to all written comments by the ERP Committee Chair after discussion with the Author, First and Second Reviewers, or the Committee as a whole.
  - Although the Committee may elect to incorporate new information based on these comments, they are under no obligation to do so.
13. If a responsible individual wishes to attend a Committee meeting to discuss a specific document, a written request to participate should be submitted to the Chair, who may, at his or her discretion, grant permission. The individual will be encouraged (but not required) to submit written comments in advance of the meeting. The Chair has the right to limit discussion as necessary to assure an orderly, productive meeting.
14. In the sole discretion of the ERP Committee Chair, drafts of documents may be provided to interested parties for review purposes if requested in writing. However, these must be stamped DRAFT on every page and the ERPG values

under consideration must be redacted. Draft documents will not be published since this could perpetuate incorrect information or fail to include pertinent information. The draft values under consideration may be communicated verbally, but with the caveat that they are subject to change and may not be transmitted to others.

15. A majority vote of members in attendance is needed for approval to send the draft of a new ERPG document to all members for final approval by written ballot.
16. When an ERPG Document is approved for ballot, the Secretary will develop and forward to the AGF staff a notice (as illustrated in *Appendix B: Notice for AGF Website or The Synergist*, page 26) to be posted on the AGF website to solicit public comment.
  - The AGF notice will include a request for comments to be submitted in writing or by E-mail directly to the ERP Committee Chair, who will forward all comments to the First and Second Reviewers and the other Committee Officers.
  - The proposed values with rationales will remain on the website for 45 days and then will be removed.
17. Members may return ballots with votes of ‘Yes,’ ‘No,’ or ‘Abstain.’ ‘No’ votes must be accompanied by a specific explanation. Two-thirds of the non-abstaining votes received are required for approval of the ERPG values. Although approval need not be unanimous, whenever negative votes are cast an attempt will be made to resolve the concerns of the member(s) who voted negatively.
18. An ERPG document will not be considered final until after public comments have been considered by the Committee, the document has been approved by ballot, and comments from the public and Committee members have been reconciled to the extent possible.
19. The First Reviewer will send the approved and reconciled ERPG document in electronic form, preferably MSWord or Rich Text Format (\*.rtf), to the ERPC Secretary for submission to the AGF staff liaison. The First Reviewer will also work with the ERPC Secretary and the AGF staff liaison to ensure that electronic copies of all references have been stored in the ERP Committee’s SharePoint site. Copies of the referenced literature may be made available to the public, as appropriate, and also facilitates the next revision of the ERPG document.
20. The Secretary will forward the approved and reconciled ERPG document to the AGF staff liaison to be prepared for publication. The Secretary will also retain the electronic copy submitted to guard against its loss due to electronic failure or other mishap.
21. The AIHA Manager of Product Development will edit the approved and reconciled ERPG document for style, format, spelling, and grammatical errors, and will check the reference list to verify that all cited references (and only cited references) are listed in the reference section and that they are correctly cited.

22. The AIHA Manager of Product Development will return the edited, corrected version of the final ERPG document in MSWord or \*.rtf format, ready to be submitted for typesetting, to the First Reviewer and the ERP Committee Secretary.
23. The First and Second Reviewers will check the edited final document to verify that no technical errors have been introduced. The First Reviewer will return the final ERPG document to the ERP Secretary with assurance that accuracy has been verified, or with identification of any errors.
24. The ERP Secretary will return the verified final ERPG document to the AIHA Manager of Product Development for printing. The Secretary will also coordinate with the AIHA Manager of Product Development to assure that the final electronic copy, as submitted in MSWord or \*.rtf format for typesetting and printing, is stored in the ERP Committee's SharePoint site to serve as the first draft when the same ERPG document is next reviewed.
25. When the verified final ERPG document is forwarded to the AIHA Manager of Product Development for printing, the typeset document for final printing should be developed as rapidly as possible. The final ERPG values and rationales will be posted (as illustrated in *Appendix B: Notice for AGF Website or The Synergist*, page 26) on the AGF website as soon as the typeset document is ready to provide copies on demand. The AGF notice should include information on how to purchase the new ERPG document as an ahead-of-print version so that it is not necessary to wait until the next AIHce to obtain new or updated ERPG documents. The Recommended ERPG values and rationales should remain on the AGF website until the next edition of the ERPG/WEEL Handbook and Annual Document Set are available for purchase.
26. The AIHA Manager of Product Development will also submit the same notice of Recommended ERPG values and rationales for publication in the next available edition of *The Synergist*. This notice should also advise readers that the complete ERPG document is available for purchase on the AGF website.
27. ERPGs can be reviewed and revised anytime relevant new data become available. ERPGs are automatically scheduled to be updated every 10 years to maintain document quality.

### **ERPG Document Review Criteria**

Draft ERPG Documents will not be formally reviewed by the ERP Committee unless the First or Second Reviewer(s) confirm that:

- The draft ERPG conforms to the ERPG Document Format illustrated in *Appendix A: ERPG Document Format* (page 20).
- Pages are numbered and each page is labeled with the word "DRAFT"
- Lines are consecutively numbered throughout the document.
- In-text reference citations in the document should use an author code (e.g. SUS99) rather than a reference number. This will facilitate technical

reviews and will not require manual renumbering of references as documents are updated. If the Author is using a software package such as Reference Manager or Endnote that automates the process, the output style for the American Chemical Society should be used.

- A preliminary review of the Draft ERPG manuscript shows it to be suitable for formal review by the ERP Committee.
- The complete set of supporting references has been received.

### **ERPG Document Update Procedure**

1. The ERPG update process should be initiated 10 years after publication, or sooner as needed, and should be completed before documents reach 12 years of age.
2. The Chair seeks volunteers or assigns First and Second Reviewers to each update document.
3. Update begins with an updated literature review (including the last year of the previous review). The First Reviewer evaluates the relevance of new data and presents the Committee with a recommendation on next steps. A voice vote of Committee members present is taken on the First Reviewer's recommendation.
4. If major revisions or committee review are not recommended, the First Reviewer will add new relevant data to the document for updated publication. The Update Draft will be presented to the committee for comments/approval by voice vote. Prior to publication of the updated ERPG, copies of any new references must be sent to the AIHA Manager of Product Development and added to the ERP Committee SharePoint site.
5. If a substantive revision is needed or if ERPG values are to be reconsidered, review procedures as outlined in ERPG Authorship, Submission, and Review Procedure (page 7) should be followed.
6. Balloting of a revised ERPG document is required only if one or more ERPG values are modified.

### **Responsibilities: ERP Committee Chair**

The ERP Committee Chair:

1. Approves meeting agendas developed jointly with ERP Vice Chair and Secretary.
2. Chairs ERP Committee meetings, ensuring effective and efficient meetings with a friendly and a productive atmosphere.
3. Coordinates with the ERP Vice Chair, Secretary, and First and Second Reviewers, as appropriate, to evaluate requests to participate in Committee meetings made by individuals who are not members of the Committee. The Chair or designee will communicate the decision and conditions, if any, to the requestor.

4. Prescreens submitted Draft ERPG Documents to ensure they are prepared in accordance with the ERPG Document Format *Appendix A: ERPG Document Format*, page 20) and that, upon initial reading, they appear to merit more detailed review by a Committee member.
5. Advises authors of submitted Draft ERPG Documents if deficiencies prevent review by the Committee and works with the Author to resolve deficiencies, or designates a Committee member to do so.
6. Seeks volunteers or assigns First and Second Reviewers for Draft and Update ERPG Documents.
7. Works as needed with the Vice Chair and First and Second Reviewers to identify problems and to facilitate problem resolution and document completion.
8. Receives comments in response to notices and requests for information posted on the AGF website, in *The Synergist*, or other notices and directs them to First and Second Reviewers or other Committee members as appropriate for action, with a copy to the Secretary.
9. Maintains and encourages enthusiasm and a path forward regarding the completion of documents.
10. Actively pursues and encourages new participants in the ERPG process. This could include foreign or domestic chemical companies, government agencies, or others with an interest in developing and using ERPGs, including qualified representatives of academia, emergency response organizations, and professional or trade groups.
11. Sets the annual ERP Committee budget in conjunction with the AGF Board and submits the annual Committee report.
12. Provides an annual report of Committee activities and accomplishments to the AGF Board.
13. Issues to the ERP Committee a request for candidates for ERP Secretary during the final year of his or her tenure.

### **Responsibilities: ERP Committee Vice Chair**

The ERP Committee Vice Chair:

1. Works with the Chair and Secretary to develop agendas for ERP Committee meetings.
2. Conducts ERP Committee meetings in the absence of the Chair.
3. Helps the Chair, Secretary, and First and Second Reviewers, as appropriate, evaluate requests to participate in Committee meetings made by individuals who are not members of the Committee.
4. Works as needed with the Chair and First and Second Reviewers to identify problems and to facilitate their resolution and document completion.

5. Works with the AIHA staff to coordinate logistical arrangements for the ERP Committee meetings. The Vice Chair is not responsible for making logistical arrangements, but is responsible for making sure that meeting arrangements are made and that the ERP Secretary is informed of them for timely distribution of details to the ERP Committee
6. Assures that meeting arrangements are transmitted to the Secretary for inclusion in the Draft ERPG Minutes that should be sent out by the Secretary to all Committee Members within two weeks after each meeting.
7. Subject to ERP Committee discussion and approval, identifies, adds, modifies, or deletes terms and definitions in the ERPG Glossary that appears annually in the ERPG Handbook.
8. Encourages ERP Committee members to organize a Professional Development Course (PDC), presentations, or publications that identify the accomplishments of the ERP Committee and advance the awareness among the AIHA membership, the emergency response community, and the public at large of the ERP Committee and its activities.
9. Works with the AIHA Manager of Product Development to regularly publish the ERP Committee's active chemical list in order to solicit outside comment from interested parties. Chemicals under consideration by the ERP Committee should be published periodically in *The Synergist*, the *Journal of Occupational and Environmental Hygiene* (JOEH), and posted to the AGF website. The following statement (or similar) should be included:

*"The following materials are currently being studied for future ERPGs. Information and comments are welcome. If you have any input on candidate or completed ERPGs, contact ... (ERP Committee Chair). Comments should be submitted within 60 days of the publication of this notice to allow for consideration at our next meeting."*

### **Responsibilities: ERP Committee Secretary**

The ERP Committee Secretary:

1. Works with the Chair and Vice Chair to develop agendas for ERP Committee meetings.
2. Helps the Chair, Vice Chair, and First and Second Reviewers, as appropriate, evaluate requests to participate in Committee meetings made by individuals who are not members of the Committee.
3. Prepares minutes of each meeting and circulates draft minutes to all Committee members within two weeks of the meeting.
4. Prepares revised minutes based on comments received on the Draft Minutes. Revised minutes should be circulated to the ERP Committee at least one week in advance of the next meeting, at which they will be discussed and a voice vote taken to accept.

5. Summarizes the action items resulting from the ERP Committee meeting, particularly with respect to manuscript review. This Action Item List should be reviewed and updated at each meeting and attached to the minutes as an appendix.
6. Prepares ballots for documents that have been approved to ballot and sends the document with ballots to all ERP Committee Members. A 45-day response time should be specified for all ballots. Reminders (telephone calls, E-mails, fax, or other as necessary) should be sent after 30 days and again after 45 days to any member(s) who have not yet responded to the ballot.
7. Forwards copies of all ballots and ballot comments to the First Reviewer of the document for reconciliation, to the extent possible, of dissenting votes and for incorporation of minor comments into a final document.
8. Retains archival copies of all ballots, ballot comments, or other comments received, e.g., through the AGF website, and uploads them to the Committee's SharePoint site.
9. Upon receipt from the First Reviewer, places the approved, final ERPG Document in a SharePoint folder designated for that document and its supporting documentation.
10. Notifies the AIHA Manager of Product Development by E-mail with copies to the ERP Chair and the First Reviewer that the approved, final ERPG Document has been placed in the Committee's SharePoint site. The notification should:
  - identify the First Reviewer as the contact for any questions, and
  - include the file name, the folder name where it can be located, and the SharePoint path to the folder.
11. Verifies that the First Reviewer or AIHA contact has placed all references in the designated SharePoint folder.
12. Maintains a list of ERPG documents that are under active development or update. This Active Status List will be reviewed and updated at each meeting and attached to the minutes as an appendix.
13. Maintains the ERP Committee Member Roster including names, titles, addresses, phone, fax, and E-mails. This Member Roster will be reviewed and updated at each meeting and attached to the minutes as an appendix.

### **Responsibilities of First Reviewers**

For new, externally developed Preliminary Draft ERPG Documents, the First Reviewer:

1. Reviews any assigned Preliminary Draft ERPG document received from a source outside the Committee and coordinates with the Second Reviewer to develop recommendations to the Chair of the ERP Committee for next steps or other actions.
2. Works with the Second Reviewer to draft a response for the Committee Chair to send to the draft document's originator outlining the decisions made, the

rationales for them, and explaining what (if any) additional development should be undertaken by the originator.

3. Once a decision is made to proceed with an official ERPG Document, works with the Author and the Second Reviewer to revise the Preliminary Draft Document prior to initially presenting it to the ERP Committee. As previously noted, the First Reviewer is the Author of new ERPGs being developed within the Committee.
4. Ensures that Draft ERPG Documents conform to the requirements outlined above in *ERPG Document Review Criteria* (page 10).
5. Provides an in-process Draft ERPG and copies of all key references to the Second Reviewer for review and comment. The First and Second Reviewers should have completed their reviews before the document is presented to the full Committee for discussion.
6. Leads and facilitates discussion, along with the Second Reviewer, when a Draft ERPG document is presented to the full Committee. The Reviewers should be prepared to discuss the document and have key references available at the meeting in case clarifications are needed. Initial review of a new document should serve to:
  - update the Committee on progress,
  - provide an overview of critical scientific and technical issues,
  - identify missing data and references,
  - discuss suitability of the data, and
  - gain advice from Committee members on next steps.

For ERPG Updates, the First Reviewer:

1. Obtains from the AIHA ERPG SharePoint site the references and a MS Word or Rich Text Format (\*.rtf) copy of the last-published version of the document to be updated. If assistance is needed to obtain any of these materials, a request should be sent to the AIHA Manager of Product Development with a copy to the ERP Committee Secretary.
2. Obtains comments from the Second Reviewer while revising the document
3. Presents a revised document to the Committee, identifying changes made to the previous draft (e.g., using redline/strikeout or bolding). This draft revised ERPG document should be forwarded to ERP Committee members at least one week prior to the meeting at which the document is to be discussed.
4. When the Committee votes to approve a revised ERPG Document, either for publication with no change in ERPG values or for balloting of new ERPG values, the First Reviewer finalizes the document by incorporating any revisions agreed to at the time of approval and sends the revised document to the ERP Secretary.
5. Resolves any issues that may arise during balloting, incorporates any revisions to the balloted manuscript, and sends it to the ERP Secretary. Resolution of issues

may also involve working with individuals who voted ‘No’ on their ballot to attempt a resolution of their concerns.

6. Ensures that a copy of every reference cited in the ERPG document is available on the AIHA ERPG SharePoint site and notifies the ERP Secretary and the AIHA Manager of Product Development of the location and name of the folder in which references can be found. Additional references that were obtained and considered but not cited should be placed in a subfolder within the same SharePoint folder.

### **Responsibilities of Second Reviewers**

For new, externally developed Preliminary Draft ERPG Documents, the Second Reviewer:

1. Reviews any assigned Preliminary Draft ERPG document and works with the First Reviewer as requested to develop recommendations to the Chair of the ERP Committee for next steps or other actions.
2. Works with the First Reviewer to draft a response for the Committee Chair to send to the draft document’s originator outlining the decisions made, the rationales for them, and explaining what (if any) additional development should be undertaken by the originator
3. Once a decision is made to proceed with a new ERPG Document, works with the Author and (or) the First Reviewer to revise the Preliminary Draft Document prior to initially presenting it to the ERP Committee.
4. Assures technical accuracy and consistency with *ERPG Document Review Criteria* (page 10) and *Appendix A: ERPG Document Format*, (page 20) .
5. Assists the First Reviewer as necessary to obtain copies of all cited references and put them into the Committee’s SharePoint site.
6. Investigates specific issues in the Draft ERPG Document in particular detail if requested by the First Reviewer. In coordination with the First Reviewer, experts within or outside the Committee who are known to be manufacturers or high-volume users of the chemical in question may be consulted to clarify or confirm specific issues.
7. Leads the discussion of the draft ERPG Document with the ERP Committee if the First Reviewer is unavailable, and takes the lead in discussion of any specific issues he or she addressed.
8. Works with the First Reviewer as requested to resolve any questions and recommendations raised by the Committee during its discussion of the document or during balloting.
9. Verifies that the document is technically accurate.

### **Responsibilities of ERP Committee Members**

1. All Committee members must:
  - be full members in good standing of the AIHA,

- review the AGF Conflict of Interest (COI) policy, and
  - complete the COI Disclosure Form when they initially join the Committee.
2. To maintain ERP Committee membership, AIHA membership in good standing must be maintained, the COI policy must be reviewed, and the COI Disclosure Form completed annually (Appendix C: AGF Committee Conflict of Interest Policy, page 28).
  3. Draft ERPG Documents should be reviewed in advance of meetings to facilitate effective discussions and conserve the Committee's time. Committee members should be prepared to discuss scientific and technical issues. Editorial suggestions or corrections should be provided by marking copies of the draft and returning them to the First Reviewer at the meeting.
  4. Draft ERP Committee meeting minutes should be reviewed promptly and comments, changes, additions, deletions, etc. (or a statement that the member has no comments) returned to the ERP Committee Secretary within two weeks of receipt.
  5. Members should participate in open discussion of all ERPG Documents. Significant comments first made when a document is balloted, especially comments that would require changes in the ERPG values themselves, can cause significant time delays and require recycling the document as part of the Committee review process.
  6. All members are expected to cast a ballot for all ERPG Documents that are circulated for ballot. Members may vote 'Yes,' 'No,' or 'Abstain,' but a ballot with one of these selections marked should be returned to the ERP Secretary by every ERP Committee member for every document circulated for ballot.

### **Responsibilities of AGF Staff Liaison**

1. When notified that an ERPG Document for publication is available in the ERP Committee SharePoint site, verifies that the approved, final version of the ERPG Document in editable electronic format, e.g., MS Word or Rich Text Format, along with copies of all references cited in that document are in fact present. If anything is missing or if there are any questions, the First Reviewer should be contacted immediately with a copy to the ERP Committee Secretary.
2. Assures that the ERP Committee SharePoint site serves as the archival data base for the ERP Committee. The lifetime for holding these documents may be twenty years or more. Anyone who wishes to validate an ERPG document may ask to be provided with these supporting materials and the AGF is obligated to make them available.
3. Assures that the Committee's SharePoint document folder contains:
  - a copy of the most recently published ERPG Document in \*.pdf format
  - the final document in editable electronic (MS Word or \*.rtf) format that served as the source for the published version

- a copy of all reference documents cited along with any ancillary documents provided by the ERP Committee
4. Assists, as necessary, the assigned First Reviewer for any ERPG Update with recovery from SharePoint of archival materials as described above

### **Dissenting Opinions**

The ERP Committee attempts to incorporate all relevant data and to carefully consider all points of view in ERPG Documents. The ERP Committee strives for consensus and attempts to resolve dissenting opinions of Committee members to reach a mutually agreeable position.

In the event that an ERP Committee member disagrees with the ERPG values, rationales, or any other part of an ERPG document, and if discussion has not resolved the issue(s), the dissenting member is welcome to place a dissenting statement in the SharePoint file. However, unanimous approval of balloted ERPG values is not required for the ERPG document to be approved and published.

### **ERPG Terminology**

**AIHA:** The American Industrial Hygiene Association.

**AIHA Guideline Foundation:** Formed in 2009, the AIHA Guideline Foundation (AGF) is dedicated to developing and disseminating occupational and community exposure guidelines for chemical and physical agents and stressors. The AGF conducts research intended to educate the public and is exempt from federal income taxation under Section 501(c)(3) of the Internal Revenue Code. Contributions to the AGF may be tax-deductible, as provided by law.

**Annual Document Set:** The ERPG Documents, including updated documents, that are published annually by the AGF.

**ERP Committee:** The Emergency Response Planning Committee of the AGF.

**ERPG Document:** The completed, reviewed, and published manuscript that summarizes relevant scientific literature and supports the ERPG values (ERPG-1, ERPG-2, ERPG-3). ERPG Documents are published annually and updated every ten years (or more often if warranted by new data).

**ERPG Document Set:** The entire collection of current ERPG Documents that exist for all chemicals having ERPGs.

**ERPG Documentation:** Same as ERPG Document.

**ERPG Handbook:** Formally titled "20xx (*year*) Emergency Response Planning Guidelines and Workplace Environmental Exposure Level Guides Handbook." The Handbook is published annually by the AGF.

**ERPG Values:** The airborne concentrations developed by the ERP Committee to meet the definitions of ERPG-1, ERPG-2, and ERPG-3 for a particular chemical.

**Update Document:** A previously published ERPG Document that is being reviewed either because of new data or because the update cycle (typically ten years) has expired.

*A More Complete List of Terms May Be Found in the ERPG/WEEL Handbook – Glossary.*

## **Appendix A: ERPG Document Format**

Author (optional), \_\_\_\_\_

Draft number \_\_\_\_\_

Date \_\_\_\_\_

### **EMERGENCY RESPONSE PLANNING GUIDELINE (ERPG)**

#### **CHEMICAL NAME**

**(Month and Year Published)**

**ERPG-3:**

**ERPG-2:**

**ERPG-1:**

#### **I. Identification**

Chemical Name:

Synonyms: *(separate by semi-colon; if using an abbreviation for the chemical name, include it as a synonym)*

CAS Number:

DOT: UN

Molecular Formula:

Structural Formula:

#### **II. Chemical and Physical Properties (References for this section go here)**

*NOTE: Give physical properties at 760 mm Hg and 20-25°C whenever possible. Specify the pressure and temperature if different.*

Physical State and Appearance:

Odor Detection: *(representative number or range; include “see also in IV. Human Experience”)*

Odor Recognition: *(representative number or range; include “see also in IV. Human Experience”)*

Odor Description: *(qualitative description)*

Molecular Weight:

Conversion Factors:  $1 \text{ mg/m}^3 = \text{___ ppm v/v}$   
 $1 \text{ ppm v/v} = \text{___ mg/m}^3$

Melting Point:  $^{\circ}\text{C}$   $^{\circ}\text{F}$

Boiling Point:  $^{\circ}\text{C}$   $^{\circ}\text{F}$  at  $\text{___ mm Hg}$

Vapor Pressure:  $\text{___ mm Hg}$  at  $^{\circ}\text{C}$   $^{\circ}\text{F}$

Vapor Density:

Specific Gravity:

Flash Point (closed cup):  $^{\circ}\text{C}$   $^{\circ}\text{F}$

Flammability Limits: LEL UEL

Autoignition Temperature:  $^{\circ}\text{C}$   $^{\circ}\text{F}$

Stability and Reactivity:

Solubility:

### III. Animal Toxicity Data

*NOTE: Summarize each study separately. Give duration, group size, route, species and strain, and the effects at each dose or exposure concentration. For acute studies, the highest dose or concentration with no lethality and the lowest dose or concentration with lethality should be identified. Include negative findings as well as positive. Lengthy detail is unnecessary for studies judged to be of minimal relevance for establishing an ERPG. When no information is available, retain the outline heading and state "No data available." Subheadings may be combined for this purpose.*

- A. Acute Toxicity, including Irritancy (*include studies of <5 days*)
1. Oral Toxicity - (*ex. LD<sub>50</sub> rats: 100 mg/kg*)
  2. Eye Irritation (*or Toxicity or both*)
  3. Dermal Toxicity (*if no applicable data are found for a) b) and c), use only the 3. Dermal Toxicity outline item with No data available. Otherwise, use all subpoints even if there are no data for 2 of the 3.*)
    - a) Skin Irritation
    - b) Skin Absorption (*e.g., LD<sub>50</sub>*)
    - c) Skin Sensitization
  4. Inhalation Toxicity (*NOTE: State exposure duration for all LC<sub>50s</sub>, state whether nominal or analytical concentrations were reported; include*

*pathology, if available, and mortalities at individual concentrations, not just the LC<sub>50</sub>; give lowest lethal concentration and highest nonlethal concentrations when available. For easy comparison of data, convert any mg/m<sup>3</sup> units to ppm for all vapors and gases. If there are data on inhalation sensitization, use subsections, e.g., a) Acute Toxicity and b) Inhalation Sensitization)*

5. Other

- B. Subacute Toxicity (*5- to 14-day studies*)
- C. Subchronic Toxicity (*15 -day to 6-month studies*)
- D. Chronic Toxicity and Carcinogenicity (*>6 months*)
- E. Reproductive/Developmental Toxicity (*teratology and reproduction studies*)
- F. Genotoxicity/Mutagenicity
- G. Metabolism/Pharmacokinetics
- H. Other

**IV. Human Experience**

- A. Odor Data (*NOTE: Give odor description and also include odor threshold when available. Give additional data to expand & explain any values listed in Section II.*)
- B. Toxicity Data (*NOTE: Include actual test data, i.e., where humans volunteers were exposed to known concentrations, not interpretations of animal test data.*)
- C. Workplace Experience
- D. Epidemiology (*NOTE: A brief summary is sufficient.*)
- E. Other (*NOTE: May include opinions or estimates of human effects that are based only on animal data as well as related chemicals such as degradation products.*)

**V. Mathematical Computation of Bioassay Data**

*When an appropriate  $q_1^*$  exists, an estimate of the potential for a carcinogenic response to short term exposures may be developed based on the Committee on Toxicology, National Research Council (NRC) approach (NRC 1994). The estimate will be developed when a  $q_1^*$  slope value has been published by the EPA or when appropriate*

*data are available to calculate a  $q_1^*$  value. The estimate from the NRC calculation will then be compared with the health-based derived value for the ERPG II. Based on the Committee's assessment of the quality of the chemical's database, the ERPG II value may be replaced by the NRC estimate. The Committee will make the final decision on the scientific appropriateness of the NRC estimate versus a health-based derived value based on the weight of the studies. The source of the  $q_1^*$  used, or all  $q_1^*$  calculations done by or on behalf of the Committee, along with calculations for the NRC estimate will be included as a supporting technical document in the ERPG file. When this computation is done, the following should serve as the model for a standard paragraph in the ERPG Document.)*

The theoretical cancer risk for CHEMICAL NAME was determined using the data obtained in [*identify and cite to the sources of data used*] and applying the method proposed by the National Research Council (NRC 1986). Based on this calculation, a one-hour exposure below xyz ppm is not expected to pose a significant (1 in 10,000) carcinogenic risk (ERP Year – *cite to the file with calculations in the ERPG archival documentation*).

**VI. (or V.) Current Exposure Guidelines**

*(NOTE: Give the source of organization, the guideline number, and a brief statement about the rationale used. Rationales for STEL's or other short-term guidelines are of particular interest. Use some or all of the following in the order given here.)*

1. AEGL
2. NRC EEGL, SPEGL
3. NASA SMAC
4. ACGIH TLV
5. WEEL
6. OSHA PEL
7. NIOSH REL
8. Other

**VII. (or VI.) Recommended ERPGs and Supporting Rationales**

*(NOTE: Although three ERPG levels are generally set for each chemical, occasionally only one or two ERPG levels will be judged appropriate. For instance, if the odor and irritancy concentrations are higher than the ERPG-2 level, an ERPG-1 value is inappropriate. This section should include the rationales for each ERPG level as well as an explanation for any level omitted).*

ERPG-3: \_\_\_\_\_ ppm ( \_\_\_\_\_ mg/m<sup>3</sup>)

\_\_\_\_\_ ppm of CHEMICAL NAME is the maximum airborne concentration below which nearly all individuals could be exposed for up to one hour without experiencing or developing life-threatening health effects. *(Add basis for number selected and cite the most important studies/data, with noted effects, that support the ERPG value selected.)*

ERPG-2: \_\_\_\_\_ ppm ( \_\_\_\_\_ mg/m<sup>3</sup>)

\_\_\_\_\_ ppm of CHEMICAL NAME is the maximum airborne concentration below which nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious adverse health effects or symptoms that could impair an individual's ability to take protective action. *(Add basis for ERPG value selected).*

ERPG-1: \_\_\_\_\_ ppm ( \_\_\_\_\_ mg/m<sup>3</sup>)

\_\_\_\_\_ ppm of CHEMICAL NAME is the maximum airborne concentration below which nearly all individuals could be exposed for up to one hour without experiencing or developing effects other than mild transient health effects or without perceiving a clearly defined objectionable odor. *(Add basis for ERPG value selected. If the threshold is above the ERPG-2 level, it is not appropriate to have an ERPG-1 level and the designation should be "Not Appropriate." If there are no data on odor or mild irritation, then the designation should be "Insufficient Data.")*

**VIII. (or VII.) History of [CHEMICAL NAME] ERPG**

First published in YEAR:

ERPG-1 X<sub>1</sub> ppm      ERPG-2 Y<sub>1</sub> ppm      ERPG-3 Z<sub>1</sub> ppm

Updated and republished in YEAR, YEAR, ... with no changes in ERPG values

Updated and republished in YEAR:

ERPG-1 X<sub>2</sub> ppm      ERPG-2 Y<sub>2</sub> ppm      ERPG-3 Z<sub>2</sub> ppm

## IX. (or VIII.) References

References should follow the format style of the American Chemical Society. For those who use Reference Manager or Endnote, this is an included output style.

Obtain, review, and cite primary references whenever possible.

If secondary references must be used, the reference should be cited as: Full citation for primary reference, [*As cited in: Full citation for secondary reference*], e.g.,

5. Levy, A.G., T. Lewis: Heart irregularities resulting from the inhalation of low percentages of chloroform vapour and their relationship to ventricular fibrillation. *Heart* 3:99-111 (1911). [*As cited in Brock, W.J., G.M.Rusch, and H.J.Trochicmowicz: Cardiac sensitization: methodology and interpretation in risk assessment. Regul Toxicol Pharmacol* 38(1):78-90 (2002).]

## **Appendix B: Notice for AGF Website or *The Synergist***

### **CHEMICAL NAME PROPOSED (or FINAL) ERPGs AND RATIONALES**

ERPG-3: \_\_\_ ppm (\_\_\_ mg/m<sup>3</sup>)

\_\_\_ ppm of CHEMICAL NAME is the maximum airborne concentration below which nearly all individuals could be exposed for up to one hour without experiencing or developing life-threatening health effects. ... *Follow with full text of the ERPG-3 rationale as proposed (for ERPGs being balloted) or as being adopted (for ERPGs that have been balloted and accepted). References cited in the rationales should be re-numbered starting from 1, and a reference list should be attached that lists only the references cited in the rationales.*

ERPG-2: \_\_\_ ppm (\_\_\_ mg/m<sup>3</sup>)

\_\_\_ ppm of CHEMICAL NAME is the maximum airborne concentration below which nearly all individuals could be exposed for up to 1 hr without experiencing or developing irreversible or other serious adverse health effects or symptoms that could impair an individual's ability to take protective action. ... *Follow with full text of the ERPG-2 rationale.*

ERPG-1: \_\_\_ ppm (\_\_\_ mg/m<sup>3</sup>)

\_\_\_ ppm of CHEMICAL NAME is the maximum airborne concentration below which nearly all individuals could be exposed for up to 1 hr without experiencing or developing effects other than mild transient health effects or without perceiving a clearly defined objectionable odor. ... *Follow with full text of the ERPG-1 rationale.*

#### Reference List

1. Smith et al.: .....
2. etc. listing in the order cited only those references cited in the rationales.

When an ERPG document with new or revised value(s) is approved for balloting, the set of proposed ERPG values and rationales is published in this format on the AGF website for 45 days and comments are solicited, to be sent to the ERP Committee Chair. After the 45 days have passed, the proposed values and rationales should be removed from the AGF website.

After an ERPG document has been approved for publication, with or without revised ERPG values, and AGF staff liaison has finalized the new document for printing, the final version of recommended ERPG values with rationales should be posted in this format to the AGF website,

where they should remain until the next ERPG Handbook and Annual Document Set are published. The final ERPG values and rationales should also be submitted in this format to *The Synergist* for publication in the next available issue with a notice advising that the complete ERPG document can be purchased from the AGF as an ahead-of-print version.

## **Appendix C: AGF Committee Conflict of Interest Policy**

All ERP Committee members must read and become familiar with the AGF Conflict of Interest Policy when they become member of the Committee and must complete the Conflict of Interest Disclosure Form, as described below. The form must be completed and resubmitted at least annually thereafter.

### **AGF Conflict of Interest Policy (Officially accepted by the ERP Committee.)**

**1. Policy Statement.** Each officer, director, and committee or task force member (“volunteer leader”) should avoid both actual and apparent conflicts of interest that would interfere with their ability to discharge their fiduciary responsibilities to the AGF. The AGF encourages its volunteer leaders to follow ethical standards, to be in compliance with all laws, and to avoid any conflict of interest, or appearance of such, including having their titles or affiliation used to publicize personal or company activities, programs, or events (especially those conducted for private profit).

**2. Conflict of Interest Defined.** The term "conflict of interest" includes, but is not limited to, circumstances where a volunteer leader, or a member of his or her immediate family: (a) owns any financial or other proprietary interest in any entity supplying (or seeking to supply) goods or services to AGF; (b) receives any substantial benefit from a third party on account of that party's past, present, or future business relationship with AGF; (c) receives any substantial financial benefit from a pending decision of AGF or from an organization or individual being evaluated by the AGF; or (d) serves as an officer, director or committee member of any competing organization, i.e., any nonprofit or business enterprise whose purposes, products, and/or services compete with those of the AGF.

**3. Disclosure of the Existence of a Conflict.** If any volunteer leader of AGF knows, believes, or has reason to know or believe, that a conflict of interest exists with respect to any transaction involving AGF, any decision of the Board, any decision of a committee or task force, or any action taken by an officer, such person shall inform the AGF Board or the Committee of the existence of such conflict of interest or potential conflict of interest.

**4. Effect of the Existence of a Conflict of Interest.** In the event that it is determined that a conflict of interest exists, and the volunteer leader has made full disclosure of the facts surrounding the conflict, then the ERP Committee shall determine whether the volunteer leader may fully participate in the deliberations and vote on the proposed transaction. If the volunteer leader merely discloses the existence of the conflict of interest or potential conflict of interest, yet fails to disclose or is prohibited from disclosing all material facts regarding the conflict, then such volunteer leader shall be prohibited in participating in any manner or form in the deliberations or decisions regarding the affected transaction.

**5. Resignation.** No individual who has an actual conflict of interest shall be required to resign his or her position with AGF merely because of the existence of a conflict. However, the remaining members of the ERP Committee may make a fair and full evaluation of all facts pertaining to the conflict of interest to determine its extent. If the remaining members of the ERP Committee make a determination in writing that the nature and extent of the conflict of interest is so substantial and of such a continuing nature that it would be impossible for the volunteer leader to discharge the duties of his or her office with the requisite degree of loyalty and integrity, then the ERP Committee may require the resignation of the volunteer leader who is subject to the conflict of interest.

**Form to be completed annually by ERP Committee Members**

**DISCLOSURE FORM**

I have reviewed the AGF Conflict of Interest Policy and agree to be bound by its provisions for the duration of my appointed or elected term.

Competing organization(s) to which I belong:

Organization(s) that I have a financial interest in that may be affected by my AGF service:

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date