

Report on Updates to the SCAPA Website

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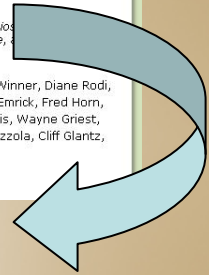
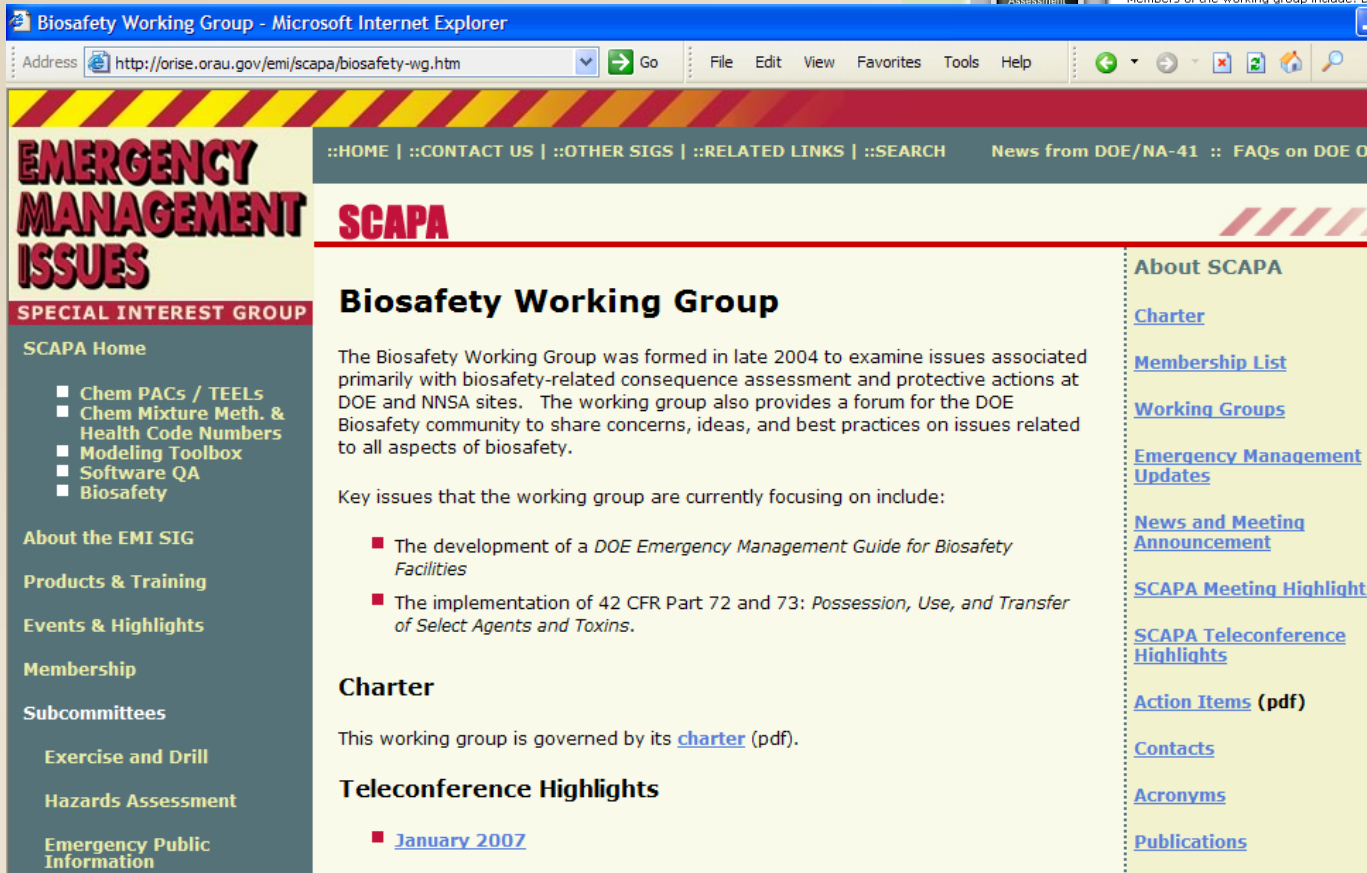
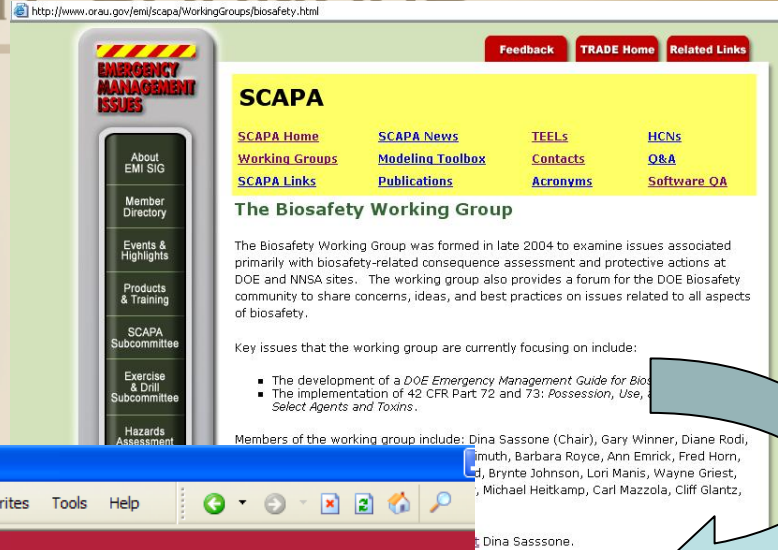
May 11, 2007



Many changes to the Website

- ORAU redesigned the EMI-SIG and SCAPA webpages
- New SQA webpage
- Upgraded the Biosafety webpages
- Added initial Source Term webpages
- TEEL webpage revised
- Redesigned Chemical Mixture Methodology and Health Code Number webpages

Design Change



Improved Menus



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New Software QA Webpage

Software Quality Assurance - Microsoft Internet Explorer

Address <http://orise.orau.gov/emi/scapa/softwareqa.htm> Go File Edit View Favorites Tools Help

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Software Quality Assurance

The Department of Energy's Office of Environment, Safety and Health (EH) has issued [DOE Order 414.1C](#), Quality Assurance, to address software quality assurance (SQA) requirements for nuclear safety-related applications at DOE nuclear facilities. Guidance associated with this DOE order is provided in [DOE Guide 414.1-4](#), the Safety Software Guide.

Because emergency preparedness and response software has a safety-related function (e.g., is used in planning for an emergency or to provide information used to make safety-related decisions during an actual event), this DOE SQA Order and Guide may be applicable to many of our software products.

The following links offer additional information. Further guidance on how to apply the Order and Guide to consequence assessment models is being developed by SCAPA in conjunction with DOE/EH.

[DOE Order Definition of Safety Software](#)
Definitions of Safety System Software, Safety and Hazard Analysis Software, and Safety Management and Administrative Controls Software.

[Ten Software Quality Work Activities](#)
Listing of the ten software quality work activities that are to be performed using a graded approach.

[Graded Approach to SOA](#)
DOE G 414.1-4 provides a graded implementation strategy for the 10 software quality work activities. The graded approach identifies activities and sub-activities that can be implemented at varying levels of rigor based upon the potential impact on safety and the type of software type.

[The Central Registry and DOE/EH Toolbox Codes](#)
The Central Registry provides information about DOE toolbox codes. These codes

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Upgraded Biosafety Webpages

SCAPA - Biosafety Information - Microsoft Internet Explorer

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Biosafety Information

This page presents biosafety-related information that may be of use to Biosafety Officers and others dealing with biosafety-related issues.

Biosafety-Related Links

The following are a number of useful links to Web-hosted resources that provide biosafety-related information:

[American Biological Safety Association \(ABSA\)](#)
This organization promotes biosafety as a scientific discipline and serves the growing needs of biosafety professionals. Its goals are to represent the interests and needs of practitioners of biological safety, and to provide a forum for the continued and timely exchange of biosafety information.

[Archives of ABSA Biosafety Forum](#)
Provides links to archived material on the ABSA's Biosafety Forum.

[Centers for Disease Control and Prevention \(CDC\) National Select Agent Registry \(NSAR\)](#)
Allows users to view current regulations regarding select agents, download application packages, and access additional resource information. The NSAR program oversees the activities of possession of biological agents and toxins that have the potential to pose a severe threat to public, animal or plant health, or to animal or plant product.

[CDC Office of Health and Safety - Biosafety Information](#)
Provides links to regulations, publications, guidelines, information sheets, and

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New Source Term Webpages

Untitled Document - Microsoft Internet Explorer

Address <http://orise.orau.gov/emi/scapa/source-term-info.htm> Go File Edit View Favorites Tools Help

Address bar: [http://orise.orau.gov/emi/scapa/source-term-info.htm](#)

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Draft Source Term Information

Radiological Source Term Information

- A key reference on radiological source terms is *DOE Handbook -- Airborne Release Fractions/Rates and Respirable Fractions for Nonreactor Nuclear Facilities (DOE-HDBK-3010-94)*. The handbook is available online at: <http://www.hss.energy.gov/NuclearSafety/techstds/standard/hdbk3010/h3010v1.pdf>

The handbook provides a compendium and analysis of experimental data from which airborne release fractions (ARFs) and respirable fractions (RFs) may be derived. These values are used to estimate quantities of radioactive material that may become airborne in a release event. This information is used to estimate the scope of the potential release spectrum and potential downwind consequences from a given facility or activity. The information provided in this handbook aids in making such estimates. The data in the handbook can be used in a variety of applications, such as safety and environmental analyses, and to provide information relevant to system and experiment design. The handbook cautions that the data and analyses it provides need to be critically evaluated for applicability in each situation in which they are used.

- In May 2006, the Chairman (A.J. Eggenberger) of the Defense Nuclear Facility Safety Board, reported (see http://www.dnfsb.gov/pub_docs/dnfsb/cor_20060501_multi.pdf) that the methodology derived from DOE-HDBK-3010 "contrasts with the technical simplicity and regulatory precedence" of the more conservative methodology used to calculate the "A2 values specified in 49 CFR 173.435, *Shippers—General Requirements for Shipments and Packagings*" (see http://a257.g.akamaitech.net/7/257/2422/12feb20041500/edocket.access.gpo.gov/cfr_2004/ocfr/nfr/49cfr173.435.pdf)

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Revised PACs/TEELs Webpages

Protective Action Criteria for Chemicals - TEELs, AEGLs, ERPGs - Microsoft Internet Explorer

Address <http://orise.orau.gov/emi/scapa/teels.htm> Go File Edit View Favorites Tools Help

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Protective Action Criteria for Chemicals - TEEL Values including AEGLs and ERPGs

Protective Action Criteria (PAC) for emergency planning of chemical release events are based on the chemical exposure limit values provided in the Acute Exposure Guideline Level (AEGL), Emergency Response Planning Guideline (ERPG), and Temporary Emergency Exposure Limit (TEEL) data sets. AEGLs are developed by the U.S. Environmental Protection Agency (EPA), ERPGs are produced by the American Industrial Hygiene Association (AIHA) Emergency Planning Committee, and Temporary Emergency Exposure Limits (TEELs) are developed by SCAPA.

TEEL Values Including AEGLs and ERPGs

The TEEL data set, including AEGLs and ERPGs, is available as a searchable database and as lists of tables and spreadsheets:

- [Searchable Database: AEGLs, ERPGs, and TEELs for Chemicals of Concern](#)
This searchable database provides AEGL, ERPG, and TEELs values data and other useful chemical information. Explanatory materials is also provided.
- [Tables and Spreadsheets: AEGLs, ERPGs, and TEELs for Chemicals of](#)

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Need TEELs for a New Chemical?

Please complete and submit this form: [Word format](#) | [PDF format](#)

If a chemical of interest does not have an AEGL, ERPG, or TEEL value, please complete this form and e-mail it to the contacts listed at the bottom of the form. Requested chemicals will be added to a list that is prioritized for TEEL development. Chemicals of critical importance can be given immediate attention.

Questioning an Existing TEEL Value?

Please complete and submit this form: [Word format](#) | [PDF format](#)

If you have a problem with an existing TEEL value (e.g., the value appears to be too high or too low), please document the problem and e-mail it to the contacts listed at the bottom of the form.

For further information on TEELs, please contact:

The screenshot shows a web browser window displaying a PDF form titled "Form to Request TEEL Values for New Chemicals" dated October 2000. The form is titled "Request for a Chemical to be Assigned TEEL Values" and contains the following text:

To date, the Temporary Emergency Exposure Level (TEEL) database provides TEEL values for over 3,000 chemicals. Periodically, a chemical without an AEGL, ERPG, or TEEL value is found to be produced or stored in quantities that could potentially pose a threat to human health and safety in the event of an environmental release. If such a concern exists, TEEL values should be developed for that chemical. To start this process, please provide a list of the chemicals for which you are requesting TEELs. Include both the name and the Chemical Abstract Service Registry Numbers (CASRN) for each chemical (if a CASRN is available for a chemical it is important that it be provided).

Request for TEELs	
Enter Chemical Name(s)	Enter CASRN

To help prioritize the development of TEELs for the chemicals you are proposing, it would be helpful for you to please describe:

- How the chemicals will be used, how they will be stored, and the approximate quantities that could be involved in a release to the environment?
- The concerns you may have about the potential threat posed by each chemical given the

The email client window shows the following details:

- To: craiqdk@earthlink.net; rocky.petrocchi@waint.com; Glantz, Clifford S
- Subject: New TEEL Request -- Attached the req

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EMI SCAPA TEEL Values Request for Review - Microsoft Internet Explorer

Address http://orise.orau.gov/emi/scapa/teel_vrfr.aspx Go File Edit View Favorites Tools Help

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TEEL Values Request for Review

TEELs are default values. Four levels representing thresholds of increasing severity are derived using published concentration-limit and toxicity data. These data are utilized in a fixed sequence based upon their applicability and availability. Published strategies are employed to fill in gaps when no suitable data have been published. This methodology sometimes yields values which might at first glance appear to be questionable. Published papers showing TEEL development methods are at <http://orise.orau.gov/emi/scapa/teels.htm>.

If you have questions about the TEEL values for any chemical, answer the questions below and submit the form. A member of the DOE TEEL Advisory Group will review the data in question, address your concerns, and contact you to resolve the issue. **Please submit a separate form for each chemical.**

Please provide the following (required) information to successfully submit a TEEL Values Request Review.

Chemical Name	CASRN
<input type="text"/>	<input type="text"/>
TEEL	Units
<input type="text"/>	<input type="text"/>

1) State problem or question:(required)

2) Data, with source, of which we may not be aware: (required)

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Revised CMM and HCN Webpages

The screenshot shows a Microsoft Internet Explorer browser window displaying the SCAPA website. The address bar shows the URL: <http://orise.orau.gov/emi/scapa/hcn.htm>. The page features a navigation menu with links for HOME, CONTACT US, OTHER SIGS, RELATED LINKS, SEARCH, and News from DOE/NA-41. The main content area is titled "SCAPA" and "The Chemical Mixture Methodology using Health Code Numbers". The text describes the CMM as a more realistic predictor of potential human health impacts than traditional methods. It mentions a new beta-version of the Chemical Mixture Methodology Workbook available for testing (Revision date: 4/14/07) and a previously released version (Revision date: 6/15/2006). A previously released version of the User's Guide for the Chemical Mixture Methodology (Revision Date: 10/20/2004) is also mentioned. The page includes a sidebar with a navigation menu and a list of links on the right side.

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The Chemical Mixture Methodology using Health Code Numbers

The Chemical Mixture Methodology (CMM) provides recommended default emergency exposure guidelines for mixtures of chemicals. The CMM makes extensive use of Health Code Numbers (HCNs) to examine the additive impact that each chemical component in a chemical mixture may have on specific target organs. The CMM is a more realistic predictor of potential human health impacts than can be obtained using the (1) non-conservative method of separately analyzing the consequences of each chemical component or the (2) overly-conservative method of adding the exposures from each chemical together regardless of the human organ targeted by the chemical. The CMM is recommended by SCAPA for potential use in emergency planning hazards assessments (EPHAs), safety analyses, and in emergency response situations. To use the CMM, download the CMM workbook and carefully review the CMM user's guide.

A new [beta-version of the Chemical Mixture Methodology Workbook](#) is available for testing (Revision date: 4/14/07). Final quality assurance checks are current being conducted. A [User's Guide for the Chemical Mixture Methodology \(Revision Date: 5/01/07\)](#) explains how to use this Excel workbook.

The previously released version of the [Chemical Mixture Methodology Workbook](#) (Revision date: 6/15/2006) is also available. *Please note that this June, 2006 version does not include all the new acute HCNs and an error has been detected in the "HIs by target organ" worksheet (the function used to calculate the "Liver toxin" HI sum).* A previously released version of the [User's Guide for the Chemical Mixture Methodology \(Revision Date: 10/20/2004\)](#) supports this version of the Excel workbook.

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Health Code Number Table - Microsoft Internet Explorer

Address <http://orise.orau.gov/emi/scapa/hcn-table.htm> Go File Edit View Favorites Tools Help

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Health Code Numbers (HCNs) Used to Classify Toxic Effects by Target Organ - Including Both new Acute and Chronic HCNs

HCN	Target Organ
1.00	OSHA carcinogen (29 CFR 1910.1000)
1.01	Bladder carcinogen
1.02	Liver carcinogen
2.00	Suspect carcinogen or mutagen
2.01	Kidney carcinogen
2.02	Liver carcinogen
3.00	Systemic toxin - chronic effects
3.01	Bladder - chronic effects
3.02	Hematological effects - chronic, unspecified
3.03	Bone - chronic effects

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Updated Meeting & Teleconference Reporting

SCAPA Meeting Highlights - Microsoft Internet Explorer

Address <http://orise.orau.gov/emi/scapa/highlights.htm> Go File Edit View Favorites Tools Help

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Meeting Highlights

The following documents are available as PDF files. To view them, you will need the Adobe Acrobat Reader, which can be downloaded free from the [Adobe Support Site](#).

SCAPA Meeting Reports


- [2006 presentations](#)
- [2005](#) (pdf)
- [2004](#) (pdf)

SCAPA Meeting Report Archives

For copies of the following meeting reports, please contact [Amparo Atencio](#).

- 2003
- 2002
- April 2001
- November 2001
- May 2000
- October 2000

SCAPA Teleconference Highlights



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