



**DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD
2461 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22331-0600**

30 JUL 2004

DDESB-KT

MEMORANDUM FOR SEE DISTRIBUTION

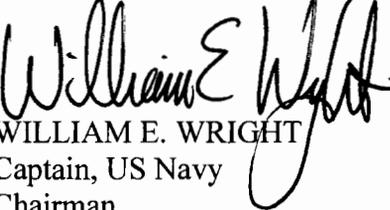
SUBJECT: Questionnaire for Developers of Explosion Effects Software

In October 2002, I established the Explosion Effects Software Working Group (EESWG) to review and evaluate all explosives safety-related software codes that are used by the explosives safety community to support projects that the DDESB Secretariat is then asked to approve. I did this because of the proliferation of software codes in which the Department of Defense Explosives Safety Board (DDESB) had no involvement, thereby raising concerns about the codes' capabilities, outputs, theory, pedigree, and documentation, as well as other aspects. Dr. Michelle Crull from the U.S. Army Engineering and Support Center, Huntsville (USAESCH), AL, was selected to chair this working group. The EESWG has since identified a number of codes used to support explosives safety and their technical point of contacts (POCs), and those are listed on attachment 1.

The working group's goal is to develop a DDESB technical paper that will list recommended codes that can be used to support explosives safety related projects being sent to the DDESB for approval. Codes will be listed in this technical paper based on the EESWG's assessment of the code. To assist in the conduct of this assessment, the EESWG has developed a questionnaire (attachment 2) for code developers to complete. The responses to the questionnaire will give the working group the information they need to complete their assessment. The decision to include the code is dependent on the information provided; in particular, on the soundness of the theory and/or science associated with the code, how well this theory and science is documented and on the level of code validation that has been conducted.

This memorandum and its attachments is only being sent electronically to the e-mail addresses of the contacts listed on attachment 1. Request that those receiving this memorandum complete the questionnaire by 17 September 2004 and return it (e-mail preferred) to Dr. Michelle Crull at Michelle.M.Crull@hnd01.usace.army.mil. If there are any questions, Dr. Crull can be reached at (256) 895-1653, fax: (256) 895-1602. The DDESB POC is Mr. Eric Deschambault who can be reached at (703) 325-1369, fax: (703) 325-6227, or by e-mail: Eric.Deschambault@ddesb.osd.mil.

If you receive this memorandum in error, please inform Dr. Crull and Mr. Deschambault so that they can locate the correct contact and forward the questionnaire to that person.


WILLIAM E. WRIGHT
Captain, US Navy
Chairman

Attachments
As stated

SOFTWARE CODES AND CONTACTS

SFTWARE	POC	E-mail
CDAW	Charles Oswald, Baker Engineering & Risk Consultants (210) 824-5960	coswald@BakerRisk.com
CMUDS	Charles Oswald, Baker Engineering & Risk Consultants (210) 824-5960	coswald@BakerRisk.com
SBEDS	Dale Nebuda, USACE-CENWO (402) 221-4914	Dale.T.Nebuda@nwo02.usace.army.mil
BICADS	Charles Oswald, Baker Engineering & Risk Consultants (210) 824-5960	coswald@BakerRisk.com
WST	Craig Bodily, Hill AFB	craig.bodily@hill.af.mil
FACEDAP	Dale Nebuda, USACE-CENWO (402) 221-4914	Dale.T.Nebuda@nwo02.usace.army.mil
CONWEP	David Hyde, USACE-ERDC (601) 634-3668	David.W.Hyde@erdc.usace.army.mil
VAPO	Doug Sunshine, DTRA (703) 325-1477	douglas.sunshine@dtra.mil
HEXDAM	Frank Tatom, Engineering Associates Inc (256) 533-9391	eai@mindspring.com
ASHS	Integrated Systems Analysts, Inc., Larry Becker (850) 862-7321 ext. 201	larry.becker@isa.com
BARCS	Jim Tancreto, NFESC (805) 982-1180	tancretoje@nfesc.navy.mil
WinLAC	Joe Smith, Applied Research Associates, Inc. (601) 638-5401	jsmith@ara.com
WinGARD	Joe Smith, Applied Research Associates, Inc. (601) 638-5401	jsmith@ara.com
BWACO	John Starkenberg, ARL (410) 278-6214	jstar@arl.army.mil
FRAGGEN	John Starkenberg, ARL (410) 278-6214	jstar@arl.army.mil
FRAGPROP	John Starkenberg, ARL (410) 278-6214	jstar@arl.army.mil
BDAM	Kirk Marchand, Walter P Moore (512) 330-1282	kmarchand@walterpmoore.com
Earthex	Michelle Crull, USACE-HNC (256) 895-1653	Michelle.M.Crull@hnd01.usace.army.mil
BEM	Michelle Crull, USACE-HNC (256) 895-1653	Michelle.M.Crull@hnd01.usace.army.mil
HFSTACK	Michelle Crull, USACE-HNC (256) 895-1653	Michelle.M.Crull@hnd01.usace.army.mil
Blast Effects Computer	Mike Swisdak, NSWC (301) 744-4404	swisdakmm@ih.navy.mil

INBLAST	Mike Swisdak, NSWC (301) 744-4404	swisdakmm@ih.navy.mil
FRAGHAZ	Mike Swisdak, NSWC (301) 744-4404	swisdakmm@ih.navy.mil
SAFER	Mike Swisdak, NSWC (301) 744-4404	swisdakmm@ih.navy.mil
TRAJ	Mike Swisdak, NSWC (301) 744-4404	swisdakmm@ih.navy.mil
BEEM	Pat Lindsey, USACE-CENWO (402) 221-3177	Patrick.D.Linsey@nwo02.usace.army.mil
PSADS	Pat Lindsey, USACE-CENWO (402) 221-3177	Patrick.D.Linsey@nwo02.usace.army.mil
Q-D Calculator	Phil Wager, NFESC (805) 982-1239	wagerpc@nfesc.navy.mil
SOLVER	Phil Wager, NFESC (805) 982-1239	wagerpc@nfesc.navy.mil
FRANG	Phil Wager, NFESC (805) 982-1239	wagerpc@nfesc.navy.mil
SHOCK	Phil Wager, NFESC (805) 982-1239	wagerpc@nfesc.navy.mil
MUDEMIMP	Phil Wager, NFESC (805) 982-1239	wagerpc@nfesc.navy.mil
ESS	Phil Wager, NFESC (805) 982-1239	wagerpc@nfesc.navy.mil
UXM?	Phil Wager, NFESC (805) 982-1239	wagerpc@nfesc.navy.mil
New Trajectory Code?	Phil Wager, NFESC (805) 982-1239	wagerpc@nfesc.navy.mil
ERASDAC	Quentin Baker, Baker Engineering & Risk Consultants (210) 824-5960	qbaker@BakerRisk.com
PENCRV	Rebecca Berger, USACE-ERDC (601) 634-4252	Rebecca.P.Berger@erdc.usace.army.mil
CBARCS	Stan Woodson, USACE-ERDC (601) 634-2479	Stanley.C.Woodson@erdc.usace.army.mil
HAZL	Steve Lofton (601) 634-4248 or Tom Slawson (601) 634-3537, USACE-ERDC	Steve.C.Lofton@erdc.usace.army.mil or Thomas.R.Slawson@erdc.usace.army.mil
WinDAS	Steve Lofton (601) 634-4248 or Tom Slawson (601) 634-3537, USACE-ERDC	Steve.C.Lofton@erdc.usace.army.mil or Thomas.R.Slawson@erdc.usace.army.mil
AT Planner	Structures Lab, USACE-ERDC	WGATPLAN@erdc.usace.army.mil

WAC	Tom Slawson, USACE-ERDC (601) 634-3537	Thomas.R.Slawson@erdc.usace.army.mil
DISPRE2	Trish Bowles, ARA (210) 344-7644 x 16	tbowles@ara.com
DISPRE2.HAS	Trish Bowles, ARA (210) 344-7644 x 16	tbowles@ara.com
BLASTX	Will McMahon, USACE-ERDC (601) 634-2183	Gordon.W.McMahon@erdc.usace.army.mil
CSDOOR	UNK	UNK

EXPLOSION EFFECTS SOFTWARE QUESTIONNAIRE

This questionnaire has been created by the DDESB Explosion Effects Software Working Group (EESWG) to gather information on explosion effects (blast, fragmentation, quantity-distance, etc.) software for possible inclusion in a DDESB Technical Paper as a DDESB-recommended software code. The decision to include the code is dependent on the information provided, in particular, how well the theory associated with the code is documented and the level of validation that has been conducted.

Points of contact (POCs) for this questionnaire are listed at the end of the questionnaire. **NOTE:** If the information in Sections 9.0, 11.0, 12.0, 13.0, 14.0, and/or 15.0 is detailed in a technical report or Users' Manual these sections may be completed by referencing the appropriate parts of the report/manual on this questionnaire and attaching the report/manual or providing a link for downloading.

1.0 Name of Software _____
Version & Date _____

2.0 Point(s) of Contact: List name(s) and contact information for obtaining software and for technical support. If this is a downloadable software, provide website information. Also indicate person/activity that controls the source code.

POC for Obtaining Software:

Name: _____
Agency/Company: _____
Address: _____

Phone: _____
Fax: _____
E-mail: _____

POC for Technical Support:

Name: _____
Agency/Company: _____
Address: _____

Phone: _____
Fax: _____
E-mail: _____

POC for Source Code:

Name: _____
Agency/Company: _____
Address: _____

Phone: _____
Fax: _____
E-mail: _____

3.0 Software's Primary Use: (check all that apply)
Structural Design _____ Structural Analysis _____

External Overpressure _ Internal Pressure Loads _____
Primary Fragmentation _ Secondary Debris _____
Other (specify) _____

4.0 **Hardware & Software Requirements:** Specify any and all hardware, software, and operating system requirements (Windows Version, DOS, UNIX, EXCEL, amount of RAM, printer requirements, etc.)

Operating System: _____
RAM: _____
Printer Requirements: _____
Other Software Required: _____

5.0 **Autonomous Executable:** Can this software be run from a CD/floppy disk without installation on the hard drive?

Yes _____ No _____

6.0 **Certifications:** List any certifications (NMCI, DITSCAP, etc.) that apply.

7.0 **Distribution:** Specify any distribution limitations on this software (unlimited, DOD only, DOD & DOD contractors, Government only, Government & Government contractors, etc.)

8.0 **Status of Software:** Is this software active (in use and supported by POC or other sponsor) or inactive (unsupported)?

Active _ Inactive _____ Sponsor _____

9.0 **Applicability and Limitations:** Describe the type(s) of conditions or situations this software was designed to address. When appropriate, indicate specific ranges where the variables (weight/volume, max NEW, structural limitations, size of problem, etc.) within the software have been validated. If known, include any conditions or situations where the software has been shown to provide suspect or erroneous data.

10.0 **Cautions:** Describe any known causes of crashes/corruptibility of the software.

11.0 **Theory:** Detail the complete theory used in development of the software including references. If the software is based on empirical data, list the source of the data and specify how the data is applied. The documentation must include the source of all equations used. If this information is provided in a users' guide or theory manual, this document may be attached.

12.0 **Relation to Other Software:** If this software is built on another software, list the original software and the relationship between this software and the original software. The original software must be documented using the requirements listed in this questionnaire. If this software requires the use of other software modules, list the additional software modules used and describe the relationship between this

software and the original software. Provide references to documentation for the other software modules used.

13.0 Validation: Present sufficient information to show that the software has been validated to the limits listed in Section 9.0 of this questionnaire. This may include sample problems with computational results compared to empirical data, validated hand calculations, or results from other validated software.

14.0 Users' Manual: Provide manual or Readme file showing user how to install and use this software.

15.0 Revisions/Versions: If this software is not the original version list all previous revisions/versions and a brief statement of the changes incorporated in each revision.

16.0 Recommendations of Developer: Include any recommendations the developer has for this software such as a) replaced by other software (list software), b) specific applications this software should not be used for, c) specific applications this software should be limited to, d) recommended other software for generating input, processing output, validating this software, e) recommended updates to this software that would be useful, f) anticipated future upgrades, etc.

17.0 Source Code Distribution: Has the source code been distributed to others? If so, list names and contact information for the people who have the source code.

For questions contact one of the POCs below:

Michelle Crull, PhD, PE
US Army Engineering & Support Center, Huntsville
Attn: HNC-ED-SY-T (Crull)
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Huntsville, AL 35816-1822
Commercial phone: (256) 895-1653 DSN 760-1653
E-mail Michelle.M.Crull@hnd01.usace.army.mil

Eric Deschambault
Department of Defense Explosives Safety Board
Attn: DDESB-KT2 (Deschambault)
2461 Eisenhower Ave
Alexandria, VA 22331-0600
Commercial phone: (703) 325-1369 DSN 221-1369
E-mail eric.deschambault@ddesb.osd.mil