

SOFTWARE RELEASE NOTICE

01. SRN Number: PA-SRN-136		
02. Project Title: KTI: Support Development of the EPA Standard		Project No. 20-5708-771
03. SRN Title: GENII-S Version 1.485 - Initial Release		
04. Originator/Requestor: R. Brient		Date: 7/29/96
05. Summary of Actions		
<input checked="" type="checkbox"/> Release of new software (acquired) <input type="checkbox"/> Release of modified software: <input type="checkbox"/> Enhancements made <input type="checkbox"/> Corrections made <input type="checkbox"/> Change of access software <input type="checkbox"/> Software Retirement		
06. Persons Authorized Access		
Name	RO/RW	A/C/D
Pat LaPlante Mark Jarzempa Hengameh Karimi	RO RO RO  (executable only)	
07. Element Manager Approval: <i>RG / zaca</i>		Date: <i>7/30/96</i>
08. Remarks:		

SOFTWARE SUMMARY FORM

01. Summary Date: 7/26/97		02. Summary prepared by (Name and phone) Patrick A. LaPlante (703) 881-0289		03. Summary Action:	
04. Software Date: 1/15/91		05. Short Title: GENII-S Stochastic Dose Assessment Code <i>Version 1.485 205 7129194</i>			
06. Software Title: Generation II				07. Internal Software ID:	
08. Software Type: <input type="checkbox"/> Automated Data System <input checked="" type="checkbox"/> Computer Program <input type="checkbox"/> Subroutine/Module		09. Processing Mode: <input type="checkbox"/> Interactive <input type="checkbox"/> Batch <input checked="" type="checkbox"/> Combination		10. APPLICATION AREA a. General: <input checked="" type="checkbox"/> Scientific/Engineering <input checked="" type="checkbox"/> Auxiliary Analyses <input type="checkbox"/> Total System PA <input type="checkbox"/> Subsystem PA <input type="checkbox"/> Other b. Specific:	
11. Submitting Organization and Address: CNWRA			12. Technical Contact(s) and Phone: P. LaPlante Phone: 301-881-0289		
13. Narrative:  The GENII-S dose assessment code is used for deterministic and stochastic dose assessment and pathway analysis for radionuclide contamination in the environment. The code is particularly detailed with respect to pathway parameters and modeling compared with similar available codes. The code was developed initially by PNL as GENII and later adopted into a statistical sampling software shell (called SUNS for sensitivity and uncertainty analysis software) by Sandia National Laboratories under contract to the Department of Energy. Following DOE restructuring, Intera took over control of the code. Recently, DOE budget cutbacks have resulted in a cessation of work related to GENII-S maintenance. As a result, Intera no longer supports the code and does not distribute copies. Inquiries regarding control and future work with the code should be directed to Hong Nian Jow at Intera (505)-848-0815. GENII-S has been used for CNWRA dose assessment modeling (CNWRA 95-018) due to the relevance of the pathway modeling to potential exposure pathways for YM, the detail of the models, and the capability to conduct Monte Carlo analyses with sampling of parameter distributions. Ascii output of parameter and dose distributions can be analyzed by statistical software within the SUNS shell using simple and partial correlation analysis and graphing techniques or more detailed (e.g., multiple regression analyses, graphics, etc.) available in other software packages.					
14. Computer Platform IBM 386 or greater		15. Computer Operating System: DOS (will not run in OS/2 DOS session)		16. Programming Language(s): N/A (executable only)	
17. Number of Source Program Statements: N/A (executable only)		18. Computer Memory Requirements: 550K available memory, 1.2 MB extended memory		19. Tape Drives: N/A	
20. Disk/Drum Units: N/A		21. Graphics: VGA			
22. Other Operational Requirements: Math co-processor, config.sys files >= 20, buffers >= 30, program files must be installed in /suns/genii path.					



Bruce Mabrito

TO: GENII-S  
Code

**From:** Randolph W. Folck [rfolck@satx.rr.com]  
**Sent:** Monday, September 16, 2002 7:52 AM  
**To:** plaplante@cnwra.swri.edu  
**Cc:** Bruce Mabrito; Maria Padilla; Mark Ehnstrom; Gordon Wittmeyer  
**Subject:** RE: Validation Plan Approach for GENII-S

Hi Pat:

Section 5.10.1 of TOP-018 allows three validation options: direct testing, comparison to existing research papers and test data, and/or comparison from another piece of software. The answer to your question is yes, the validation plan may be the statement that the references will be obtained, reviewed, and summarized in a cohesive discussion.

The validation plan should also describe how you plan to corroborate the information. After watching a BSC struggle with poor or inaccurate documentation for various DOE codes, I would suggest at a minimum, independent verification of a portion of the calculations and some testing.

Sincerely,  
Randy Folck

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Process Innovation, Inc.  
6434 Club Oaks  
San Antonio, Texas 78249  
210-558-4236  
<http://www.process-innovation.com/>

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-----Original Message-----

**From:** Bruce Mabrito [mailto:bmabrito@cnwra.swri.edu]  
**Sent:** Friday, September 13, 2002 6:11 PM  
**To:** plaplante@cnwra.swri.edu  
**Cc:** Gordon Wittmeyer; Randolph W. Folck; Mark Ehnstrom; Maria Padilla  
**Subject:** RE: Validation Plan Approach for GENII-S

This will be answered for you this weekend Pat. I am sorry I did not get an answer for you sooner. Randy Folck has been on travel for the CNWRA this week.

Randy, please include all these addressees on the answer.  
Bruce

> -----Original Message-----

> **From:** Patrick LaPlante [mailto:plaplante@cnwra.swri.edu]  
> **Sent:** Friday, September 13, 2002 1:24 PM  
> **To:** Bruce Mabrito  
> **Cc:** Gordon Wittmeyer  
> **Subject:** Validation Plan Approach for GENII-S

>  
>

> Bruce,  
>  
> I have obtained from the code developer about 2.5 pages of references to  
> technical journal articles and reports that relate to verification and  
> validation of the GENII-S code. I also have relevant excerpts from an  
> international code validation/comparison exercise that compared  
> code results  
> with independent chernobyl dose estimates and measured environmental data.  
> In a nutshell, there appears to be a substantial body of information  
> available to make the case w/o additional testing. Nonetheless, the  
> references have to be obtained and reviewed to put together a coherent  
> discussion of what has been done to date and whether that is sufficient to  
> meet our requirements. To me, this is the "plan" and the actual obtaining  
> and reviewing these references is the "work" needed to validate this code.  
> Of course there is no assurance that this "plan" is any good until the  
> references are obtained and reviewed. Thus, my question is:  
>  
> Can the validation plan be the statement that the references will be  
> obtained, reviewed, and summarized in a cohesive discussion or does the  
> validation plan have to be done after the references have been  
> obtained and  
> reviewed and I know exactly what I will do with them to validate the code  
> (i.e., use study X in reference Y etc)?  
>  
> Thanks  
> Pat  
>

**Subject: RE: Authorization for commercial use of software distributed b**

**Date: Tue, 11 Jan 2000 13:36:54 -0600**

**From: Wes Patrick <wpatrick@swri.edu>**

**To: LRodriguez@swri.edu**

**CC: "Budhi Sagar (bsagar)" <bsagar@swri.edu>, Gordon Wittmeyer <gwitt@swri.edu>, "Bruce Mabrito (bmabrito)" <bmabrito@swri.edu>**

*GENII Code Folder*

Louis,

The license/use conditions in the attached note have been reviewed by me, Gordon Wittmeyer (cognizant manager), Sitakanta Mohanty (lead for code development), and Pat LaPlante (primary user/implementer). All of us find it acceptable.

This completes all issues related to my original request. Please complete whatever actions remain to be done.

Wes.

-----Original Message-----

From: LRodriguez@swri.edu [<mailto:LRodriguez@swri.edu>]

Sent: Monday, January 10, 2000 9:44 AM

To: wpatrick@swri.edu

Subject: fwd: Authorization for commercial use of software distributed b

Dr. Patrick:

Please review and let me know if this completes your request.

Louis Rodriguez

-----[Original Message]-----

To: Mr. Louis Rodriguez, Deputy General Counsel, Southwest Research Institute

Dear Mr. Rodriguez,

Thank you for registering as a user of our Center. In regard to your request regarding use of software in RSICC's code/data collection, your client Dr. Wes Patrick of the CNWRC may redistribute GENII within a commercial software system provided he complies with the following requirements. We also require that Dr. Patrick (or whoever would be the contact for the code) registers as a user of RSICC.

- 1) Cite original work.
- 2) If you make changes to the software, you must give your software a different name. Code changes frequently cause the code to produce different results, and multiple versions of GENII producing different results is unacceptable.
- 3) Provide a copy of the software you develop to RSICC for inclusion in our code/data collection for distribution to U.S. government agencies and their contractors.
- 4) The distribution of software in RSICC's collection is governed by regulations of the Department of Energy and the Department of Commerce. RSICC has no authority to exempt you from these restrictions. Specific information can be obtained by contacting the Departments directly. Be sure to note restrictions on the issue of distribution to foreign sensitive countries .

Best Regards,  
Jennie

Jennie Manneschmidt  
RSICC, ORNL Bldg. 6025  
P.O.Box 2008  
Oak Ridge, TN 37831-6362  
423-574-6176 (voice); 423-574-6182 (fax)  
<http://www-rsicc.ornl.gov/rsic.html>

**Date:** 3/5/98  
**Sender:** Patrick LaPlante  
**To:** Bruce Mabrito  
**cc:** Henry Garcia, Ray Kotara  
**Priority:** Normal  
**Subject:** Re[2]:Fwd:Re: GENII and Year 2000 -Forwarded -Forwarded

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Bruce,

Perhaps your servers down there are encoding attachments (usually "uuencode/uudecode" or MIME format for which you need a software decoder). I had no problem viewing the file in ccMail. I will put the file on my G:/patl drive. I will name it GEN2000.TXT.

Pat

Reply Separator

**Subject:** Re:Fwd:Re: GENII and Year 2000 -Forwarded -Forwarded  
**Author:** Bruce Mabrito  
**Date:** 3/4/98 7:35 PM

Pat,

I am having trouble converting the attachment. Could you send it another way? Henry is working this issue with the NRC. Thanks for getting this which I cannot yet read. Bruce

Reply Separator

**Subject:** Fwd:Re: GENII and Year 2000 -Forwarded -Forwarded  
**Author:** Patrick LaPlante  
**Date:** 3/4/98 6:10 PM

Bruce,

Here (attached) is a note that C. McKenney received back from Bruce Napier the code developer for the GENII code regarding 2000 compliance.

Pat

Forward Header

**Subject:** Re: GENII and Year 2000 -Forwarded -Forwarded  
**Author:** "Christopher A. McKenney" <CAM1@nrc.gov>  
**Date:** 3/4/98 3:45 PM

Attached is Bruce's Email on GENII  
Christopher McKenney  
NMSS/DWM



RFC822.TXT



FileItem.txt

Date: Tue, 17 Feb 1998 11:09:13 -0500  
From: "Christopher A. McKenney" <CAM1@nrc.gov>  
To: PVD1@nrc.gov  
Cc: KIM@nrc.gov  
Subject: Re: GENII and Year 2000 -Forwarded  
Mime-Version: 1.0  
Content-Type: multipart/mixed; boundary="=\_7520B169.5F3E5233"

Y2K

--=\_7520B169.5F3E5233  
Content-Type: text/plain; charset=US-ASCII  
Content-Transfer-Encoding: quoted-printable  
Content-Disposition: inline

Paula,

Here is a response by Bruce Napier of PNL who developed the GENII code on =  
verification that it is Year 2000 compliant. This is for the code list =  
for DWM.

Chris McKenney  
--=\_7520B169.5F3E5233  
Content-Type: message/rfc822

Received: From [148.184.176.31] igate.nrc.gov  
By smtp (GroupWise SMTP/MIME daemon 4.11)  
Wed, 28 Jan 98 14:50:41 EST

Received: from nrc.gov  
by smtp-gateway ESMTP id OAA24926  
for <CAM1@nrc.gov>; Wed, 28 Jan 1998 14:50:35 -0500 (EST)

Received: from pnlmse1.pnl.gov by pnl.gov (PMDF V5.1-10 #21283)  
with ESMTP id <01ISWQT1DDGG8XWGOW@pnl.gov> for CAM1@nrc.gov; Wed,  
28 Jan 1998 11:49:36 PST

Received: from ccmail.pnl.gov ([130.20.128.23]) by pnlmse1.pnl.gov with SMTP  
(Microsoft Exchange Internet Mail Service Version 5.5.1960.3)  
id D617ZM2Y; Wed, 28 Jan 1998 11:49:36 -0800

Received: from ccMail by ccmail.pnl.gov (IMA Internet Exchange 2.12 Enterprise)  
id 003C620B; Wed, 28 Jan 1998 11:49:41 -0800

Date: Wed, 28 Jan 1998 11:41:47 -0800  
From: Bruce.Napier@ccmail.pnl.gov (Bruce A Napier)  
Subject: Re: GENII and Year 2000  
To: "Christopher A. McKenney" <CAM1@nrc.gov>  
Message-id: <003C620B.4025@ccmail.pnl.gov>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=US-ASCII  
Content-Transfer-Encoding: quoted-printable  
Content-Disposition: inline

I have tried GENII with my computer dates set to various years =  
before,=20

after and on the year 2000.

=20

There are no parts of the calculations that depend on the date, and =  
no=20

apparent deviations in results.

=20

However, the reporting routines still use the older two-digit date=20 format, and I did note that the run dates reported on the printed=20 output can be spurious.

=20

I have also received indications that the user interface APPRENTICE=20=

does not function at all on some Pentium platforms (specifically=20 Gateway machines). I'm not sure why this is, but I suspect that =  
the=20

older BASIC is interfering with the newer 32-bit architecture=20 somehow.

=20

We have no plans at this time to recompile GENII Version 1.485 =  
(issued=20  
in December of 1990).

=20

We are in the process of preparing a GENII Version 2.x that will=20 eliminate any such problems. This newer version is being sponsored =  
by=20

EPA. It will include numerous updates to the transport modeling,=20 dosimetry, and risk calculations; and run in a Windows-based user=20 interface. It will also include the stochastic capabilities of=20 GENII-S in the basic system. We hope to have this version =  
completed=20

by the end of FY 1998, so expect to see a release announcement =  
around=20  
October.

--\_7520B169.5F3E5233--