

SOFTWARE RELEASE NOTICE

1. SRN Number: MGFE-SRN- 310		
2. Project Title: RDTME		Project No. 20.06002.101
3. SRN Title: HyperMesh V. 3.1		
4. Originator/Requestor: G. Douglas Gute		Date: March 17, 2004
5. Summary of Actions <input checked="" type="checkbox"/> Release of new software <input type="checkbox"/> Change of access software <input type="checkbox"/> Release of modified software: <input type="checkbox"/> Software Retirement <input type="checkbox"/> Enhancements made <input type="checkbox"/> Corrections made		
6. Validation Status <input checked="" type="checkbox"/> Validated <input type="checkbox"/> Limited Validation <input type="checkbox"/> Not Validated Explain: _____		
7. Persons Authorized Access		
Name	Read Only/Read-Write	Addition/Change/Delete
CNWRA Staff	Read Only	Addition
8. Element Manager Approval: <i>Doug Gute for AHC</i>		Date: 03/18/04
9. Remarks: See attached memo for basis of the validation. This validation was performed to close-out Nonconformance Report NCR No. 2004-04.		

To: Bob Brient
From: Doug Gute
Re: Validation of the HyperMesh, Version 3.1, Pre- and Post-Processing Computer Program
Date: March 17, 2004

Nodal coordinates, element node numbering, material properties, and boundary conditions that were either defined by the user or calculated by the HyperMesh program for the drip shield and waste package rock block impact models were found to be correctly translated into an ABAQUS/Explicit input deck.

The displacements and Von Mises stresses calculated by the ABAQUS/Explicit finite element analyses of the drip shield and waste package rock block impact models were correctly translated into the HyperMesh format and graphically displayed. Correct graphical representation of the displacements and Von Mises stresses were checked by comparing actual hard copy documentation provided by ABAQUS/Explicit for specific nodes and elements with the values displayed in HyperMesh for the same nodes and elements.

Validation was done on the PC, Sun, and SGI platforms using the NT, Solaris, and IRIX operating systems, respectively.

SOFTWARE SUMMARY FORM

01. Summary Date: 03/17/04	02. Summary prepared by (Name and phone) G. Douglas Gute	03. Summary Action: Acquired Software	
04. Software Date: 7/17/99	05. Short Title: RDTME		
06. Software Title: HyperMesh Version 3.1		07. Internal Software ID: N/A	
08. Software Type: <input type="checkbox"/> Automated Data System <input checked="" type="checkbox"/> Computer Program <input type="checkbox"/> Subroutine/Module	09. Processing Mode: <input checked="" type="checkbox"/> Interactive <input type="checkbox"/> Batch <input type="checkbox"/> Combination	10. Application Area a. General: <input checked="" type="checkbox"/> Scientific/Engineering <input type="checkbox"/> Auxiliary Analyses <input type="checkbox"/> Total System PA <input type="checkbox"/> Subsystem PA <input type="checkbox"/> Other b. Specific: Pre- and post-processing for finite element modeling.	
11. Submitting Organization and Address: CNWRA/SwRI 6220 Culebra Road San Antonio, TX 78228		12. Technical Contact(s) and Phone: G. Douglas Gute, 210.522.2307	
13. Software Application: Used to create input decks for ABAQUS/Standard and ABAQUS/Explicit finite element analysis programs and visualize the results of the analyses.			
14. Computer Platform PC, Sun, and SGI	15. Computer Operating System: Windows NT, Solaris, and IRIX	16. Programming Language(s): N/A	17. Number of Source Program Statements: N/A
18. Computer Memory Requirements: 128 MB RAM minimum	19. Tape Drives: N/A	20. Disk Units: 400 MB minimum	21. Graphics:OpenGL 1.3 Compatible
22. Other Operational Requirements None			
23. Software Availability: <input type="checkbox"/> Available <input type="checkbox"/> Limited <input checked="" type="checkbox"/> In-House ONLY		24. Documentation Availability: <input checked="" type="checkbox"/> Available <input type="checkbox"/> Preliminary <input type="checkbox"/> In-House ONLY	
25. Software Developer: Altair Engineering, Inc. Date: 03/17/04 			

Volume in drive R is HYPERWORKS_31
Volume Serial Number is 4D66-70BA

Directory of R:\

07/23/1999	05:10a	<DIR>	DISK1
07/23/1999	05:10a	<DIR>	FLEXLM
		0 File(s)	0 bytes

Directory of R:\DISK1

07/23/1999	05:10a	<DIR>	.
07/23/1999	05:10a	<DIR>	..
07/17/1999	02:05a		116 DATA.TAG
07/17/1999	02:14a	81,982,066	DATA1.CAB
07/17/1999	02:14a	237,675	DATA1.HDR
07/17/1999	02:14a	23,541	LANG.DAT
07/17/1999	02:14a	590	LAYOUT.BIN
07/17/1999	02:14a	450	OS.DAT
07/17/1999	02:14a	61,440	SETUP.EXE
07/17/1999	02:14a	102	SETUP.INI
07/17/1999	02:14a	84,922	SETUP.INS
07/17/1999	02:14a	49	SETUP.LID
07/17/1999	02:14a	296,674	_INST32I.EX_
07/17/1999	02:14a	8,704	_ISDEL.EXE
07/17/1999	02:14a	11,264	_SETUP.DLL
07/17/1999	02:14a	175,466	_SYS1.CAB
07/17/1999	02:14a	6,643	_SYS1.HDR
07/17/1999	02:14a	748,044	_USER1.CAB
07/17/1999	02:14a	7,257	_USER1.HDR
		17 File(s)	83,645,003 bytes

Directory of R:\FLEXLM

07/23/1999	05:10a	<DIR>	.
07/23/1999	05:10a	<DIR>	..
07/23/1999	05:10a	<DIR>	I386
07/17/1999	01:53a	31,744	SETUP.EXE
07/17/1999	01:53a	39,424	SNTI386.DLL
		2 File(s)	71,168 bytes

Directory of R:\FLEXLM\I386

07/23/1999	05:10a	<DIR>	.
07/23/1999	05:10a	<DIR>	..
07/17/1999	01:53a	17,408	RNBOVTMP.DLL
07/17/1999	01:53a	14,321	SENTINEL.HLP
07/17/1999	01:53a	64,512	SENTTEMP.SYS
		3 File(s)	96,241 bytes

Total Files Listed:
22 File(s) 83,812,412 bytes
9 Dir(s) 0 bytes free

Volume in drive R is HYPERWORKS_31
Volume Serial Number is 41D5-2981

Directory of R:\

07/22/1999	11:26a	1,032	FS.Z
07/22/1999	11:26a	1,369,875	FS61FA1.Z
07/22/1999	11:26a	1,542,194	FS61FH1.Z
07/22/1999	11:26a	1,739,235	FS61FI1.Z
07/22/1999	11:26a	1,722,826	FS61FS1.Z
07/22/1999	11:26a	2,109,044	FS61FU1.Z
07/22/1999	11:26a	9,446,101	HF.Z
07/22/1999	11:28a	28,509,759	HF31A1.Z
07/22/1999	11:30a	40,867,300	HF31H1.Z
07/22/1999	11:32a	48,016,450	HF31I1.Z
07/22/1999	11:34a	31,170,735	HF31S1.Z
07/22/1999	11:34a	9,223,565	HG.Z
07/22/1999	11:35a	4,790,835	HG306A1.Z
07/22/1999	11:35a	7,404,771	HG306H1.Z
07/22/1999	11:35a	4,171,305	HG306I1.Z
07/22/1999	11:35a	3,802,127	HG306S1.Z
07/22/1999	11:36a	3,735,607	HH.Z
07/22/1999	11:36a	759,261	HH512A1.Z
07/22/1999	11:36a	822,319	HH512H1.Z
07/22/1999	11:36a	803,087	HH512I1.Z
07/22/1999	11:36a	1,847,842	HH512S1.Z
07/22/1999	11:37a	32,466,705	HM.Z
07/22/1999	11:40a	42,800,069	HM31A1.Z
07/22/1999	11:43a	63,531,327	HM31H1.Z
07/22/1999	11:46a	70,399,267	HM31I1.Z
07/22/1999	11:48a	40,055,829	HM31S1.Z
07/22/1999	11:48a	451,692	HO.Z
07/22/1999	11:48a	834,416	HO501A1.Z
07/22/1999	11:49a	1,102,882	HO501H1.Z
07/22/1999	11:49a	925,999	HO501I1.Z
07/22/1999	11:49a	861,087	HO501S1.Z
07/22/1999	11:49a	1,082,838	HO501U1.Z
07/22/1999	11:49a	389,169	HP.Z
07/22/1999	11:49a	7,403,884	INSTALL.Z
07/22/1999	11:50a	20,502,903	MVW.Z
07/22/1999	11:52a	36,433,071	MVW306H1.Z
07/22/1999	11:53a	15,717,999	MVW306I1.Z
07/22/1999	11:53a	8,820,669	MVW306S1.Z
07/22/1999	11:58a	5,431,200	OS.Z
07/22/1999	11:59a	8,781,383	OS35A1.Z
07/22/1999	11:59a	15,128,658	OS35H1.Z
07/22/1999	12:00p	14,071,065	OS35I1.Z
07/22/1999	12:01p	4,234,039	OS35S1.Z
07/22/1999	12:01p	3,648,586	OS35U1.Z
07/22/1999	12:01p	2,217,769	TP.Z
07/22/1999	12:01p	909	TR.Z
07/22/1999	12:01p	3,951,863	TR31A1.Z
07/22/1999	12:01p	3,285,324	TR31H1.Z
07/22/1999	12:01p	3,767,857	TR31I1.Z
07/22/1999	12:02p	3,423,749	TR31S1.Z
07/22/1999	12:02p	1,471,962	TR31U1.Z
07/22/1999	12:02p	2,455	TX.Z

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07/22/1999 12:02p      1,179,509 TX31A1.Z
07/22/1999 12:02p      686,778 TX31H1.Z
07/22/1999 12:02p      904,473 TX31I1.Z
07/22/1999 12:02p      588,521 TX31S1.Z
07/22/1999 12:02p       13,635 XF.Z
07/22/1999 12:02p      185,426 XF31A1.Z
07/22/1999 12:02p      200,653 XF31H1.Z
07/22/1999 12:02p      110,607 XF31I1.Z
07/22/1999 12:02p     1,428,613 XF31S1.Z
07/22/1999 12:02p      237,875 XR31A1.Z
07/22/1999 12:02p      377,345 XR31H1.Z
07/22/1999 12:02p      354,105 XR31I1.Z
07/22/1999 12:02p      891,051 XR31S1.Z
07/22/1999 12:02p        7,676 altairinst.sh
07/22/1999 12:02p        6,159 bominfo.sh
07/22/1999 12:02p         212 fs.install.bom
07/22/1999 12:02p         193 hf.install.bom
07/22/1999 12:02p         196 hg.install.bom
07/22/1999 12:02p         176 hh.install.bom
07/22/1999 12:02p         197 hm.install.bom
07/22/1999 12:02p         197 ho.install.bom
07/22/1999 12:02p          81 hp.install.bom
07/22/1999 12:02p         201 mvw.install.bom
07/22/1999 12:02p         206 os.install.bom
07/22/1999 12:02p          92 tp.install.bom
07/22/1999 12:02p         202 tr.install.bom
07/22/1999 12:02p         163 tx.install.bom
07/22/1999 12:02p         182 xf.install.bom
07/22/1999 12:02p         180 xr.install.bom
      81 File(s)      624,226,799 bytes
```

Total Files Listed:

```
      81 File(s)      624,226,799 bytes
       0 Dir(s)           0 bytes free
```

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES
QA VERIFICATION REPORT
FOR

→ ACQUIRED SOFTWARE NOT TO BE MODIFIED ←

Software Title/Name: Hyper Mesh
Version: 3.1
Demonstration workstation: —
Operating System: NT, Solaris, IRIX
User: Doug Gute

NOTE: Acquired software may or may not meet all requirements and will be evaluated on a case-by-case basis.

Installation Testing [TOP-018, Section 5.6]

Has *installation testing* been conducted for each intended computer platform and operating system?
Yes: No: N/A:
Computer Platforms: PC, Sun, SG Operating Systems: NT, Solaris, IRIX
Location of Acceptance Test Results: —
Comments: See memo Gute to Brent, March 17, 2004

Software Output [TOP-018, Section 5.5.4]

Is software designed so that individual runs are uniquely identified by date, time, name of software and version?
Yes: No: N/A:
Date and Time Displayed: —
Name/Version Displayed: —
Comments: —
NOTE: Output identification content and format is typically taken as is. ✓

Medium Documentation [TOP-018, Section 5.5.6]

The physical labeling of software medium (tapes, disks, etc.) contains: Program Name, Module/Name/Title, Module Revision, File type (ASCII, OBJ, EXE), Recording Date, and Operating System(s)?
Yes: No: N/A:
Comments: —

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User Documentation [TOP-018, Section 5.5.7]

Is there a Users' Manual for the software and is it up-to-date?

Yes: No: N/A:

User's Manual Version and Date:

Comments:

See NCR # 2004-01

Are there basic instructions for the *installation* and *use* of the software?

Yes: No: N/A:

Location of Instructions: _____

Comments:

See NCR # 2004-01

Configuration Control [TOP-018, Section 5.7, 5.9.3]

Is the Software Summary Form (Form TOP-4-1) completed and signed?

Yes: No: N/A:

Date of Approval: March 17, 2004

Is the list of files attached to the Software Summary Form complete and accurate?

Yes: No: N/A:

Comments:

Is the source code available or, is the executable code available in the case of (acquired/commercial codes)?

Yes: No: N/A:

Location of Source Code: _____

Comments:

Enclosed CD 

Have all the script/make files and executable files been submitted to the Software Custodian?

Only the executable files are being submitted.

Yes: No: N/A:

Location of executable files: Enclosed CD

Comments:

Software Release [TOP-018, Section 5.9]

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES
QA VERIFICATION REPORT
FOR

→ ACQUIRED SOFTWARE NOT TO BE MODIFIED ←

Upon acceptance of the software as verified above, has a Software Release Notice (SRN), Form TOP-6 been issued and does the version number of the software match the documentation?

Yes: No: N/A:

SRN Number: 310

Comments:

Software Validation [TOP-018, Section 5.10]

Has a Software Validation Test Plan (SVTP) been prepared for the *range of application* of the software?

Yes: No: N/A:

Version and Date of SVTP: ____

Date Reviewed and Approved via QAP-002: ____

Comments: Validated only to close NCR # 2004-04

Has a Software Validation Test Report (SVTR) been prepared that documents the results of the validation cases, interpretation of the results, and determination if the software has been validated?

Yes: No: N/A:

Version and Date of SVTR: ____

Date Reviewed and Approved via QAP-002: ____

Comments.: Validated only to close NCR # 2004-04

Additional Comments:

Covey Gault 4/2/04
Software Evaluator/User/Date

Randy Pelt 3/26/04
Software Custodian/Date

Code to be retired.