

September 27, 2006
9704-PFS-183

DOCUMENT CONTROL DESK
UNITED STATES NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

Subject: GT STRUDL Program Report Forms 2006.09 – 2006.11
Reference: a) Boeing Letter G-1151-RSO-92-365 dated August 31, 1992; R.S.
Orr to the NRC Operations Center

b) NRC Letter Docket No. 99901227 dated August 12, 1992; L. J.
Norrholm to R. S. Orr; Subject: Response to 10 CFR 21 Inquiry

Dear Sir or Madam:

In accordance with the Reference correspondence and 10 CFR 21, Boeing is sending the NRC the attached error notices received from our former software suppliers. Because of unknown current addresses, the following former customers were not notified:

Reactor Controls, Inc
Echo Energy Consultants
Nuclear Applications and Systems Analysis Company (Japan)
Nuclear Power Services
GPU Nuclear Corporation
Tenera, Inc.
Stone & Webster Engineering
Raytheon Engineers & Constructors
Gilbert Associates, Inc.
Duke Engineering & Services
Gilbert Associates
Holtec International

Error notices have been sent to our other former customers.

Very truly yours,



Pat Soroe
Nuclear Administrator
206-300-2845
patricia.f.soroe@boeing.com

Enclosures: GT STRUDL Program Report Forms 2006.09 – 2006.11

IE19

GTSTRUDL Program Report Form

GPRF No.: 2006.09

DATE: 8/24/06

FROM: Computer-Aided Structural Engineering Center
Georgia Institute of Technology
Atlanta, Georgia 30332-0355

SEVERITY LEVEL:

- URGENT Problem results in incorrect answers which may not be apparent or job aborts and cannot be recovered within the session or job.
- SERIOUS Problem results in incorrect answers which are obvious or problem prevents completion of a particular user's task.
- MINOR Problem can be worked around or problem poses high frustration factor.
- INFORMATIVE Documentation error, program usage tip, user inconveniences.

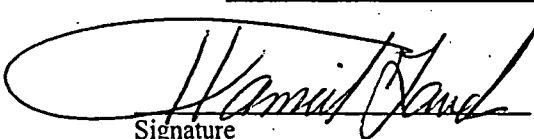
Date Problem Confirmed August 24, 2006

Date Notification Sent _____

Computers ALL

Operating System ALL

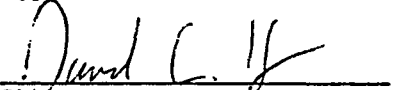
Version 26.0, 27.0, 28.0, 28.1


Signature
R & D Division

Senior Software Engineer
Title

Hamid Zand
Typed or Printed Name

8/24/2006
Date of Signature


Signature
Professional Services Division

Configuration Control Manager
Title

David C. Key
Typed or Printed Name

8/24/06
Date of Signature

GTSTRUDL Program Report Form
(Continued)

GPRF No.: 2006.09

DATE: 8/24/06

DESCRIPTION:

Applicable GTSTRUDL Command:

- 1 - LIST CODE CHECK RESULTS command
- 2 - Code Check Results Datasheet

GTSTRUDL Documentation Reference:

Section 2.1.14.4.3 of Volume 1

Explanation:

List Code Check Results and Code Check Results Datasheet show an incorrect section location value for the critical section. This value is off by a factor of 25.4. This problem only occurs to steel design metric codes listed below:

- EC3 code
- 00BS5950 code
- BS449 code
- BS5950 code
- CAN97 code
- IS800 code

Workaround:

To get the correct section location value, divide the section location shown in the LIST CODE CHECK RESULTS or the Code Check Results Datasheet by a value of 25.4.

GTSTRUDL Program Report Form

GPRF No.: 2006.10

DATE: 9/1/06

FROM: Computer-Aided Structural Engineering Center
Georgia Institute of Technology
Atlanta, Georgia 30332-0355

SEVERITY LEVEL:

URGENT

Problem results in incorrect answers which may not be apparent or job aborts and cannot be recovered within the session or job.

SERIOUS

Problem results in incorrect answers which are obvious or problem prevents completion of a particular user's task.

MINOR

Problem can be worked around or problem poses high frustration factor.

INFORMATIVE

Documentation error, program usage tip, user inconveniences.

Date Problem Confirmed August 30, 2006

Date Notification Sent 9/1/06

Computers PC

Operating System All Windows Versions

Version 9901 and later

Target Release for Correction Version 29.0

Michael H. Swanger
Signature
R & D Division

Sr. RE
Title

Michael H. Swanger
Typed or Printed Name

8/31/06
Date of Signature

David C. Key
Signature
Professional Services Division

Configuration Control Manager
Title

David C. Key
Typed or Printed Name

9/1/06
Date of Signature

GTSTRUDL Program Report Form
(Continued)

GPRF No.: 2006.10

DATE: 9/1/06

DESCRIPTION:

The computation of section force components M_y and M_z for nonlinear geometric frame members incorporates the $P-\delta$ effect, but when non-zero shear center eccentricities are present, the higher order contribution due to cross-section torsional rotation is neglected. This effect is on the order of $P \theta e_{sc}$, where P is the member axial force, θ is the cross section rotation, and e_{sc} is the shear center eccentricity. For channel, tee, and angle profiles that are used as frame members, this effect is small, if not insignificant, usually approximately 1%. Note that section forces and their related results are reported by the commands that list internal member results (LIST SECTION FORCES, LIST SECTION STRESSES, etc.) and are used in steel and reinforced concrete member code checking and design, and for the display of member force and moment diagrams in GTMenu.

GTSTRUDL Program Report Form

GPRF No.: 2006.11

DATE: 9/13/06

FROM: Computer-Aided Structural Engineering Center
Georgia Institute of Technology
Atlanta, Georgia 30332-0355

SEVERITY LEVEL:

- URGENT** Problem results in incorrect answers which may not be apparent or job aborts and cannot be recovered within the session or job.
- SERIOUS** Problem results in incorrect answers which are obvious or problem prevents completion of a particular user's task.
- MINOR** Problem can be worked around or problem poses high frustration factor.
- INFORMATIVE** Documentation error, program usage tip, user inconveniences.

Date Problem Confirmed September 12, 2006

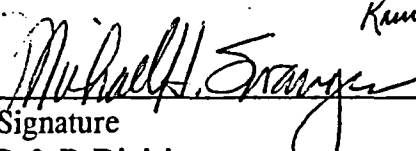
Date Notification Sent 9/13/06

Computers HP, PC, RS, Solaris, VAX

Operating System All Windows Versions (PC), VMS (VAX), UNIX (all other specified computers)

Version 9401 and later

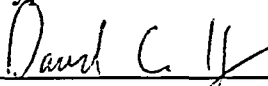
Target Release for Correction Version 29.0

Kam

Signature
R & D Division

Sr. RE
Title

Michael H. Swanger
Typed or Printed Name

9/13/06
Date of Signature


Signature
Professional Services Division

Configuration Control Manager
Title

David C. Ken
Typed or Printed Name

9/13/06
Date of Signature

GTSTRUDL Program Report Form
(Continued)

GPRF No.: 2006.11

DATE: 9/13/06

DESCRIPTION:

Analysis results may be incorrect when any static or dynamic analysis function is executed following the deletion of one or more rigid body elements using the conventional member/element deletion procedure as illustrated by the following command sequence:

```
DELETIONS
  MEMBERS 1 TO 10
ADDITIONS
STIFFNESS ANALYSIS
```

If any of the members/finite elements 1 to 10 are rigid bodies, the results of the subsequent STIFFNESS ANALYSIS may be incorrect.

Note that the DELETIONS procedure illustrated above does not represent the correct procedure for deleting rigid bodies, which is documented in Section 2.6.5.2.2, Volume 3 of the GTSTRUDL Reference Manual and illustrated by the following command sequence:

```
DELETIONS
  RIGID BODIES 1 TO 10
ADDITIONS
```

GTSTRUDL Reference Manual Sections

RIGID BODY INCIDENCES Command

Volume 3, Section 2.6.5.2.2,
GTSTRUDL Reference Manual