July 19, 2005
9704-PFS-107

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

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.
                 Nurrholm 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
> Raytheor Engineers & Constructors
> Gilbert Associates, Inc.

Error notices have been sent to our other former customers.

Very truly yours,

Pat Soroe
Nuclear Administrator
(425) 865-5386
patricia.f.soroe@boeing.com

Enclosures: GT STRUDL Program Report Forms 2005.02 – 2005.04

IE20

GTSTRUDL Program Report Form

GPRF No.: ___2005.02___

DATE: 6|15|05

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

SEVERITY LEVEL:

_X_ 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 ___June 9, 2005___

Date Notification Sent ___6/15/0 5___

Computers _All_

Operating System _All_

Version _All_

Target Release for Correction   Version 29.0

Signature
R & D Division

Michael H. Swanger
Typed or Printed Name

Signature
Professional Services Division

David C. Key
Typed or Printed Name

___Sr. RE___
Title

___6/10/05___
Date of Signature

___Configuration Control Manager___
Title

___6/15/0 5___
Date of Signature

GTSTRUDL Program Report Form
(Continued)

DESCRIPTION:

GTSTRUDL static and dynamic analyses will abort if member releases are specified for rigid bodies (TYPE RIGID PLANE/PLATE/PIN/SOLID). Member releases may be specified only for plane and space frame members. Rigid members that have member releases, or other special member end conditions such as member eccentricities and end joint sizes, are more appropriately modeled by plane/space frame members with large stiffness properties to model the rigid behavior.

GTSTRUDL Reference Manual Sections

Joint Constraints – Rigid Bodies and Joint Ties   Section 2.6.5, Volume 3

Rev. 2.5

GTSTRUDL Program Report Form

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.

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

___ INFORMATIVE   Documentation error, program usage tip, user inconveniences.
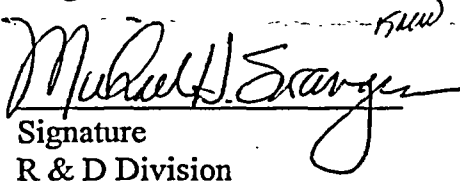
Date Problem Confirmed ___June 16, 2005___
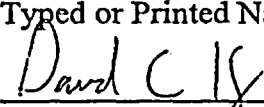
Date Notification Sent ___6/20/05___

Computers _All_

Operating System_All_

Version _All_

Target Release for Correction   Version 29.0

Michael H. Swanger (signature)
Signature
R & D Division

Michael H. Swanger
Typed or Printed Name

David C. Key (signature)
Signature
Professional Services Division

David C. Key
Typed or Printed Name

___Sr. RE___
Title

___6/16/05___
Date of Signature

___Configuration Control Manager___
Title

___6/20/05___
Date of Signature

Rev. 2.5

DESCRIPTION:

The execution of the FORM MISSING MASS command assumes that the DAMPING RATIO/PERCENT is 0.0 if neither of the words RATIO or PERCENT is given in the command following the DAMPING option. The following message will be reported if neither of the words RATIO or PERCENT is given in the command and the assumed damping ratio of 0.0 is not within the range of the damping values for the response spectrum curve(s) of the specified response spectrum loading:

```
{ 6151} > FORM MISSING MASS LOAD 'MM103' -
{ 6152} >_FROM RESPONSE SPECTRA LOAD 103 FREQ 33.00 DAMPING 0.05

**** ERROR_STDZPA -- DAMPING RATIO FOR MISSING MASS LOAD COMPUTATION
                     LIES OUTSIDE THE RANGE OF SPECTRAL CURVES FOR
                     RESPONSE SPECTRUM LOAD 103      .  SCAN MODE ENTERED.

CI-w-cmdnpro, ERROR: The following symbols were not processed.
0.05
```

If the assumed damping ratio of 0.0 is within the range for the response spectrum curve(s) of the specified response spectrum loading, then the following error message is reported and the missing mass loading is computed for a damping ratio of 0.0:

```
{ 6151} > FORM MISSING MASS LOAD 'MM103' -
{ 6152} >_FROM RESPONSE SPECTRA LOAD 103 FREQ 33.00 DAMPING 0.05

CI-w-cmdnpro, ERROR: The following symbols were not processed.
0.05
```

However, this situation can occur only if one of the response spectrum curve(s) of the specified response spectrum loading has a damping ratio/percent of 0.0.

In order to correct this error condition, add the appropriate word, either RATIO or PERCENT, to the FORM MISSING MASS command following the word DAMPING:

```
FORM MISSING MASS LOAD 'MM103' -
FROM RESPONSE SPECTRA LOAD 103 FREQ 33.00 DAMPING RATIO 0.05
```

Rev. 2.5

The FORM MISSING MASS Command   Section 2.4.9.1, Volume 3

GTSTRUDL Program Report Form

GPRF No.: 2005.4

DATE: 7/1/05

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

SEVERITY LEVEL:

X 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.

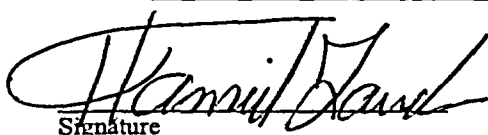_ INFORMATIVE   Documentation error, program usage tip, user inconveniences.

Date Problem Confirmed ___June 30, 2005_____
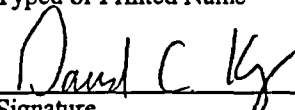
Date Notification Sent ___7/1/05_____

Computers ___ALL_____

Operating System ___ALL_____

Version ___Version 87.01 through and including version 28_____

Signature   _Senior Software Engineer_____
R & D Division   Title

_Hamid Zand_____   _June 30, 2005_____
Typed or Printed Name   Date of Signature

Signature   _Configuration Control Manager_
Professional Services Division   Title

_David C. Key_____   _7/1/05_____
Typed or Printed Name   Date of Signature

Rev. 2.5

GTSTRUDL Program Report Form
(Continued)

DESCRIPTION:

Applicable GTSTRUDL Command:
Steel design CHECK or SELECT MEMBERS command

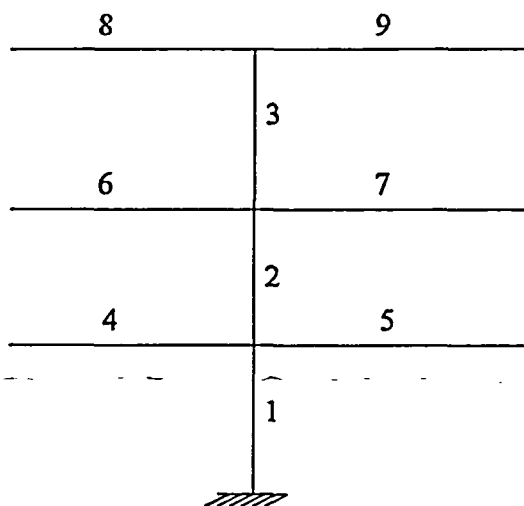Applicable GTSTRUDL Steel Design Function:
Automatic K-factor computation

GTSTRUDL Documentation Reference:
Sections 2.2 and 2.3 of Volume 2A

Explanation:
Automatic K-factor computations will be incorrect if the user specifies parameter FRLY or FRLZ for the beams or columns connected to the member for which the K-factor is being computed.

Example:

COLUMN LINE 'COL1' MEMBERS 1 TO 3

PARAMETERS
FRLY   0.5   MEMBERS 4 TO 9
COMPK   KZ   MEMBERS 1 TO 3

OR if problem is a 3D model

COMPK   YES   MEMBERS 1 TO 3

Rev. 2.5

CHECK MEMBERS 1 TO 3

OR

SELECT MEMBERS 1 TO 3

Workaround:
Specify the parameters LY and LZ for the unbraced length. Do not use FRLY and FRLZ when requesting the automatic K-factor computation.

Important Note:
The problem with parameters FRLY and FRLZ only affects the automatic K-factor computation. Parameters FRLY and FRLZ are correctly implemented for all other steel design code check or select commands.