The Boeing Company P.O. Box 3707 Seattle, WA 98124-2207

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

Raytheor 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

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 incorrec be recovered within the ses	answers which may not be apparent or job aborts and cannot sion or job.
X SERIOUS	Problem results in incorrect of a particular user's task.	answers which are obvious or problem prevents completion
_MINOR	Problem can be worked aro	und or problem poses high frustration factor.
_ INFORMATIVE	Documentation error, progr	am usage tip, user inconveniences.
Date Problem Confirmed	i <u>August 24, 2006</u>	
Date Notification Sent _		·
Computers ALL	·	
	L:	
Version 26.0, 27	7.0,28.0,28.1	
Version 26.0, 2; Signature	and Kuw	Senior Software Engineer Title
R & D Division	•	
Hamid Zand Typed or Printed Name		Date of Signature
Signature Professional Services Div	ision	Configuration Contal Manager Title
David C. K. Typed or Printed Name	7	8/24/06 Date of Signature

(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.

Computer-Aided Structural Engineering Center

Georgia Institute of Technology

GPRF No.: __2006.10

DATE: 9/1/06

Atlanta, Georgia 30332-0355 SEVERITY LEVEL: Problem results in incorrect answers which may not be apparent or X_ URGENT job aborts and cannot be recovered within the session or job. Problem results in incorrect answers which are obvious or problem **SERIOUS** prevents completion of a particular user's task. Problem can be worked around or problem poses high frustration MINOR Documentation error, program usage tip, user inconveniences. INFORMATIVE Date Problem Confirmed August 30, 2006 Date Notification Sent ______ \(\frac{\quad \seta / \text{1/06}}{\quad \text{200}} \) Computers PC Operating System All Windows Versions Version 9901 and later Target Release for Correction Version 29.0 Signature R & D Division Michael H. Swanger Typed or Printed Name Signature **Professional Services Division** Typed or Printed Name

FROM:

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- δ 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 θ_{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.

Computer-Aided Structural Engineering Center

FROM:

GPRF No.: <u>2006.11</u>

DATE: 9/13/06

	itute of Technology orgia 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	September 12, 2006
Date Notification Sent	5/13/06
Computers <u>HP, PC, RS,</u>	Solaris, VAX
Operating System All Win	dows Versions (PC), VMS (VAX), UNIX (all other specified)
Version 9401 and later	
Target Release for Correction K Signature R & D Division	Sr. RE Title
Michael H. Swanger	9/13/06
Typed or Printed Name Jawl C J Signature	Title Date of Signature Continuentian Control Manage Title
Professional Services Division	9/13/06
Typed or Printed Name	Date of Signature
Revision 2.5	

(Continued)

GPRF No.: <u>2006.11</u>

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