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

April 11, 2000
G-9000-JIM-00-023

Document Control Desk
United States Nuclear Regulatory Commission
Washington, D.C. 20555

BOEING

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 notice(s) received from our former software suppliers. Because of unknown current addresses, the following former customers were not notified:

Reactor Controls, Inc.

Echo Energy Consultants, Inc.

Nuclear Applications and Systems Analysis Company (Japan)

Nuclear Power Services

Error notices have been sent to our other former customers.

Very truly yours,

John Maughan

John I. Maughan
Nuclear Administrator
Phone: (425) 865-4785
FAX: (425) 865-4851
Mail Code: 7A-33
e-mail: john.i.maughan@boeing.com

Enclosure(s): GTSTRUDL Program Report Form 2000.07

IE20

Received 4-11-00

Georgia Institute of Technology

GT STRUDL®

April 5, 2000

Attention: Nuclear Administrator
Boeing Shared Services Group
P.O.Box 3707, MC 7A-43
Seattle, Washington 98124-2207

RE: GT STRUDL

Dear Sir or Madam:

Enclosed please find copies of GTSTRUDL PROGRAM REPORT FORM 2000.07 and a GTSTRUDL QA CUSTOMER ACKNOWLEDGEMENT FORM. Please sign and return the GTSTRUDL QA CUSTOMER ACKNOWLEDGEMENT FORM to acknowledge receipt of the GTSTRUDL Program Report.

Thank you for reviewing the Program Report and for returning the Acknowledgement Form.

Best regards,
CASE Center

David C. Key

David C. Key
Configuration Control Manager

Enclosures

Computer Aided Structural Engineering Center
School of Civil & Environmental Engineering
Atlanta, Georgia 30332-0355 USA

Phone: (404) 894-2260
Fax: (404) 894-8014
casec@ce.gatech.edu

GTSTRUDL Program Report Form

GPRF No.: 2000.07

DATE: 4/5/2000

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 April, 2000

Date Notification Sent 4/5/2000

Computers All

Operating System All

Version 9401 thru 9901

Target Release for Correction Version 25.0

Michael H. Swanger
Signature
R & D Division

Mgr. ASD
Title

Michael H. Swanger
Typed or Printed Name

4/4/2000
Date of Signature

David C. Key
Signature
Professional Services Division

Configuration Control Manager
Title

David C. Key
Typed or Printed Name

4/5/2000
Date of Signature

Rev. 2.2

GTSTRUDL Program Report Form
(Continued)

GPRF No.: 2000.07

DATE: 4/5/2000

DESCRIPTION:

Nonlinear analysis of structures having IPCABLE/IPTL elements:

A new nonlinear analysis for a new loading condition following a cable prestress analysis may exhibit convergence problems (require an unusually large number of equilibrium iterations) or may fail to converge. The following command sequence illustrates a situation which may exhibit this behavior:

```
.
.
.
PERFORM CABLE PRESTRESS ANALYSIS

LOAD 4  'Wind load -Z'
UNITS INCHES SECONDS DEGREES
WIND LOADS
  DESIGN SPEED 1408.0      $ INCHES/SEC = 80 MPH
  ELEVATION COORD Y
  DIRECTION 0.0
  1 to 4 GF 1.0 CF 1.0 DEFF 0.5625

NONLINEAR ANALYSIS
```

The NONLINEAR ANALYSIS execution at the end of the command example may fail to converge.

Note, however, that if convergence is achieved, the results are correct.

Work-around:

If this problem is encountered, a simple work-around is to add the CABLE ANALYSIS DATA/LOAD commands before the NONLINEAR ANALYSIS command, in which the new active loading condition for the nonlinear analysis is named:

```
PERFORM CABLE PRESTRESS ANALYSIS

LOAD 4  'Wind load -Z'
UNITS INCHES SECONDS DEGREES
WIND LOADS
  DESIGN SPEED 1408.0      $ INCHES/SEC = 80 MPH
  ELEVATION COORD Y
  DIRECTION 0.0
  1 to 4 GF 1.0 CF 1.0 DEFF 0.5625

CABLE ANALYSIS DATA
  LOAD 4
END

NONLINEAR ANALYSIS
```

GTSTRUDL User Reference Manual Sections:

Nonlinear Analysis of Cable Structures	Section 2.6.3, Volume 3, Rev. Q