

PROJECT INSTRUCTION

TITLE: NUTECH - EDS INTERFACE CONTROL

COM-PI-010

CLIENT: Commonwealth Edison Company

SUBJECT: IE Bulletin 79-14 and TAP Piping Evaluation
Quad Cities Units 1 & 2
Dresden Units 2 & 31.0 PURPOSE

This Project Instruction outlines the procedure to be used to control the interface between NUTECH and the other engineering consultant (EDS Nuclear, Inc.) currently involved with piping analysis for the subject stations.

2.0 SCOPE OF NUTECH SERVICES

2.1 NUTECH will interface with EDS to obtain data necessary to account for the effects of interface loads on nuclear safety-related piping within NUTECH's scope. The interface will also involve pipe anchor location and loads transmittal to EDS. This Instruction addresses the interface requirements between the two organizations. A complete listing of the piping subject to this interface is attached (Exhibit A). This listing identifies the technical data and schedule required. The information that will be transmitted between organizations is generally categorized as follows:

2.1.1 From NUTECH to EDS

- o 79-14 Loads on EDS Piping
- o Pipe Anchor Locations
- o Support Loading

2.1.2 From EDS to NUTECH

- o Bechtel Walkdown Information
- o Support Modification Drawings
- o Pipe Anchor Loading

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APPR: <i>[Signature]</i> QA ADMINISTRATOR	10-1-82 DATE	REVISION: <u>0</u>	nutech
APPR: <i>[Signature]</i> PROJECT MANAGER	10-1-82 DATE		
APPR: <i>[Signature]</i> ENGINEERING MANAGER	10/1/82 DATE		
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QEP-008.1

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- 2.2 NUTECH will use the data transmitted by EDS as design input. This design input will be controlled according to the NUTECH QA program requirements. NUTECH will consider all data received from EDS as final, unless otherwise noted. See Article 5.0 for the technical data requirements.
- 2.3 Data transmitted between EDS and NUTECH will be formally transmitted and verified by receipt acknowledgment form. Revision level of the information will be controlled.
- 2.4 Initial issue of NUTECH loading data will be Revision 0. Subsequent data revisions will be Revision 1, 2, 3, etc. Initial issue of NUTECH drawings will be Revision A. Subsequent drawing revisions will be Revision B, C, D, etc.
- 2.5 The initial issue of EDS loading data and drawings will be Revision 0. Subsequent revisions to loading data and drawings will be Revision 1, 2, 3, etc.
- 2.6 NUTECH and EDS will be responsible for transmitting all revisions of the interface data and drawings to the other organization.

3.0 PROJECT INTERFACE PERSONNEL

3.1 EDS Nuclear

Project Manager
Piping Project Engineer
Pipe Support Project Engineer

W. F. Tschudi
C. Y. Wong
O. W. Zuniga

3.2 NUTECH, San Jose Office

Project Manager
Assistant Project Manager
Engineering Manager (Quad Cities)
Engineering Manager (Dresden)
Piping Project Engineer (Quad Cities)
Piping Project Engineer (Dresden)
Pipe Support Project Engineer

T. J. Victorine
M. K. Mitchell
N. A. McClean
T. P. Khatua
A. K. Kundu
A. S. Herlekar
T. W. Soo Hoo

3.3 NUTECH, Chicago Office

Project Manager
Engineering Manager
Piping Project Engineer
Field Engineer

G. T. Seeley
J. W. Muffett
J. A. Gavula
A. Casillo

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- 6.2 The records generated within NUTECH and transmitted to EDS shall be controlled and retained in accordance with the NUTECH QA program requirements.
- 6.3 The records generated by EDS and transmitted to NUTECH will be controlled by NUTECH as design input in accordance with the NUTECH QA program requirements.

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4.0 COMMUNICATION RESPONSIBILITIES

4.1 Formal Communications

All correspondence is to be signed by and addressed to the respective project manager for this interface. All design input will be transmitted by letter. NUTECH letter numbers will use serial numbers COM-23-XXXX (Dresden) or COM-24-XXXX (Quad Cities). All incoming and outgoing correspondence will be controlled as required by the NUTECH QA program. A receipt acknowledgment for data transmitted by NUTECH is required. Mr. R. H. Mirochna and Mr. G. Frizzell of Commonwealth Edison Company will receive a copy of the transmittal letter and all attachments for all formal data transmittals.

4.2 Informal Communications

All telephone conversations, telecopied data, material distributed at meetings, etc. will be confirmed by formal transmittal within 30 days. NUTECH internal distribution of design input shall be in accordance with the NUTECH QA program.

5.0 TECHNICAL INTERFACE REQUIREMENTS

5.1 Exhibit A (COM-24-193, Revision 0) lists all of the piping affected in this interface. This listing will be used to track schedule commitments and technical data required. As such, it (COM-24-193) will be revised independently from this interface instruction.

5.2 Exhibit B consists of sample form which will be utilized to transmit piping displacement or loading information. All piping analyses input data will be controlled through the use of these forms whenever possible.

5.3 Exhibit C consists of a sample form which will be used by NUTECH to transmit pipe support load information to EDS.

6.0 RECORDS

6.1 The record retention of design input shall be the responsibility of the organization which produces the design input.

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EXHIBIT A

NUTECH/EDS INTERFACE DATA TRANSMISSION SCHEDULE

COM-24-193, Revision 0

Plant: Quad Cities Unit 1

P&ID	Line Numbers		SSDP	Data Transfer Commit Dates					Comments
	Branch Pipe	Run Pipe		Note A	Note B	Note C	Note D	Note E	
SR-37/SR-39	1-1032-3"	1-1406-10"		----	----	----	----	----	Branches into 1032A & 1032B NUTECH was able to qualify these lines without adding an anchor
SR-37	1-1032A-2"	1-1006A-12"		----	----	----	----	----	
SR-37	1-1032B-2"	1-1006B-12"		----	----	----	----	----	Branches into 1032C & 1032D NUTECH was able to qualify these lines without adding an anchor
SR-37/SR-39	1-1079-3"	1-1014B-14"	X	----	----	----	----	----	
SR-37	1-1032C-2"	1-1006C-12"	X	----	----	----	----	----	See Note F
SR-37	1-1032D-2"	1-1006D-12"	X	----	----	----	----	----	
SR-37	1-1033A-3"	1-1006A-12"	X	----	----	----	----	10/15	
SR-37	1-1033B-3"	1-1006B-12"	X	----	----	----	----	10/15	
SR-37	1-1034A-3"	1-1006C-12"	X	----	----	----	----	9/30	
SR-37	1-1034B-3"	1-1006D-12"	X	----	----	----	----	9/30	
SR-37	1-1035A-3"	1-1016C-14"	X	----	----	----	----	10/15	
SR-37	1-1035B-3"	1-1016D-14"	X	----	----	----	----	10/15	
SR-37	1-1054A-3"	1-1016A-14"	X	----	----	----	----	10/15	
SR-37	1-1054B-3"	1-1016B-14"	X	----	----	----	----	10/15	
SR-39/SR-46	1-2340-4"	1-1406-10"		9/9	11/15	----	----	----	
SR-39	1-1036-3"	1-1010-18"	X	----	----	----	----	9/30	
SR-39	1-1011-4"	1-1009B-18"	X	----	----	----	----	9/30	
SR-39	1-1065-3"	1-1012B-16"	X	----	----	----	----	9/30	
SR-39	1-1066-3"	1-1012A-16"	X	----	----	----	----	10/15	
SR-39	1-1067-3"	1-1010-18"	X	----	----	----	----	10/15	
SR-39	1-1068-3"	1-1025-20"	X	----	----	----	----	10/15	
SR-39	1-1086-6"	1-1010-18"		----	----	----	----	10/30	
SR-46	1-2311-4"	1-2301-16"		----	----	----	----	10/30	
SR-46	1-2325-6"	1-2302-16"		----	----	9/17	10/30	----	Boundary moves such that MX-I loads can attenuate
SR-34-1	----	1-1603-18"		9/7	10/20	----	----	----	

- NOTES: A) NUTECH owes EDS Anchor Locations
 B) EDS owes NUTECH Anchor Loads
 C) EDS owes NUTECH "As Modified" pipe support drawings and/or line isometric and/or math model
 D) NUTECH owes EDS Loads on EDS designed supports
 E) NUTECH owes EDS branch line displacements. The NUTECH information is final but unchecked. Checked data will follow within four weeks.
 F) EDS will confirm that their analysis is not overly conservative and contact NUTECH (CBO) by 9/24 to resolve whether the EDS supports need to be installed. CECO needs to know resolution by 10/1/82.

EXHIBIT A: NUTECH/EDS INTERFACE DATA TRANSMISSION SCHEDULE
COM-24-193, Revision 0
Plant: Quad Cities Unit 2

P&ID	Line Numbers		SGDP	Data Transfer Commit Dates					Comments
	Branch Pipe	Run Pipe		Note A	Note B	Note C	Note D	Note E	
SR-78/SR-79	2-1079-3"	2-1406-10"	X	10/15	11/15	9/17	---	---	Branches into 1032C & 1032D
SR-79	2-1032C-2"	2-1006C-12"	X	---	---	---	---	10/15	NUTECH may be able to qualify these lines without adding an anchor. Date applies if line can't be qualified. Branches into 1032A & 1032B
SR-79	2-1032D-2"	2-1006D-12"	X	---	---	---	---	10/15	
SR-79/ SR-81-1	2-1032-3"	2-1014A-14"		10/15	11/15	---	---	---	
SR-79	2-1032A-2"	2-1006A-12"		---	---	---	---	10/15	NUTECH may be able to qualify these lines without adding an anchor
SR-79	2-1032B-2"	2-1006B-12"		---	---	---	---	10/15	
SR-79	2-1033A-3"	2-1006A-12"	X	---	---	---	---	10/15	
SR-79	2-1033B-3"	2-1006B-12"	X	---	---	---	---	10/15	
SR-79	2-1034A-3"	2-1006C-12"	X	---	---	---	---	10/15	
SR-79	2-1034B-3"	2-1006D-12"	X	---	---	---	---	10/15	
SR-79	2-1035A-3"	2-1016C-14"	X	---	---	---	---	10/15	
SR-79	2-1035B-3"	2-1016D-14"	X	---	---	---	---	10/15	
SR-79	2-1054A-3"	2-1016A-14"	X	---	---	---	---	10/15	
SR-79	2-1054B-3"	2-1016B-14"	X	---	---	---	---	10/15	
SR-81-1/ SR-87	2-2340-4"	2-1406-10"	X	10/15	11/15	---	---	---	By 9/17 NUTECH shall verify that first check valve can be included inside anchor
SR-81-1	2-1036-3"	2-1010-18"	X	---	---	---	---	10/15	
11-1	2-1011-4"	2-1009A-18"	X	---	---	---	---	9/30	
SR-81-1	2-1065-3"	2-1012A-16"	X	---	---	---	---	9/30	
SR-81-1	2-1066-3"	2-1012B-16"	X	---	---	---	---	9/30	
SR-81-1	2-1067-3"	2-1010-18"	X	---	---	---	---	9/30	
SR-81-1	2-1068-3"	2-1025-20"	X	---	---	---	---	10/15	
SR-81-1	2-1086-6"	2-1010-18"		---	---	---	---	10/30	
SR-87	2-2311-4"	2-2301-16"		---	---	---	---	10/30	
SR-87	2-2325-6"	2-2302-16"		---	---	9/17	10/30	---	Boundary moves such that MK-I loads can attenuate
SR-81	-----	2-1025-20"	X	---	---	done	10/15	---	
SR-76-1	-----	2-1603-18"		9/7	10/20	---	---	---	

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E) NUTECH owes EDS branch line displacements. The NUTECH information is final but unchecked. Checked data will follow within four weeks.
F) EDS will confirm that their analysis is not overly conservative and contact NUTECH (CBO) by 9/24 to resolve whether the EDS supports need to be installed. CECO needs to know resolution by 10/1/82.

EXHIBIT A

NUTECH/EDS INTERFACE DATA TRANSMISSION SCHEDULE
COM-24-193, Revision 0
Plant: Dresden 2 & 3

Line Numbers				Data Transfer Commit Dates					Comments
P&ID	Branch Pipe	Run Pipe	SSDP	Note A	Note B	Note C	Note D	Note E	
SR-25	-----	2-8503-4"		---	---	9/17	---	---	EDS made no mods
SR-29	2-1541A-3"	2-1531-18"		---	---	---	---	10/15	
SR-29	2-1541B-3"	2-1531-18"		---	---	---	---	10/15	
SR-29/ SR-51	2-2340-4"	2-1522-14"	X	10/15	11/15	9/17	---	---	NUTECH has confirmed this is in SSDP
SR-51	2-2315-4"	2-2302-16"		---	---	---	---	12/30	
SR-51	2-2311-4"	2-2301-16"		---	---	---	---	12/30	
SR-27	---	2-1406-8"		---	---	done	10/15	---	
SR-27	---	2-1403-10"		---	---	done	10/15	---	
SR-25	---	2-1603-18"		9/7	10/20	---	---	---	
SR-360	3-1541A-3"	3-1531-18"		---	---	---	---	10/15	
SR-360	3-1541B-3"	3-1531-18"		---	---	---	---	10/15	
SR-360/ SR-374	3-2340-4"	3-1522-14"		10/15	11/15	9/17	---	---	NUTECH has confirmed this is not in SSDP
SR-374	3-2315-4"	3-2302-16"		---	---	---	---	1/31/83	
SR-374	3-2311-4"	3-2301-16"		---	---	---	---	1/31/83	
SR-356	---	3-8503-8"		---	---	9/17	10/15	---	
SR-356	---	3-1603-18"		9/7	10/20	---	---	---	

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C) EDS owes NUTECH "As Modified" pipe support drawings and/or line isometric and/or math model
D) NUTECH owes EDS Loads on EDS designed supports
E) NUTECH owes EDS branch line displacements. The NUTECH information is final but unchecked. Checked data will follow within four weeks.

Project Quad Cities Nuclear Power Station File No. _____
 Owner Commonwealth Edison Company
 Client Commonwealth Edison Company

DISPLACEMENT DATA AT RUN-BRANCH INTERSECTIONS

PLANT:

BRANCH PIPE LINE NUMBER:

RUN PIPE LINE NUMBER:

NUTECH DATA POINT:

COMPUTER RUN ID/DATE:

LOADING TYPE⁽¹⁾: Seismic Anchor Motions (SAM)

CASE	X DISPL. (IN)	Y DISPL. (IN)	Z DISPL. (IN)
OBE			
SSE			
	XX ROTATION (RAD)	YY ROTATION (RAD)	ZZ ROTATION (RAD)
OBE			
SSE			

LOADING TYPE: Thermal Anchor Motions .(TAM)

X DISPL. (IN)	Y DISPL. (IN)	Z DISPL. (IN)
XX ROTATION (RAD)	YY ROTATION (RAD)	ZZ ROTATION (RAD)

(1) Responses to the earthquake components X and Y are combined absolutely.

Where X, Y, Z are in the Global Coordinate System with North indicated.

NUTECH, Inc. EXHIBIT C
San Jose, California

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File No

Project Dresden Nuclear Power Station
Owner Commonwealth Edison Company
Client Commonwealth Edison Company

Support ID :	Dir*:
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	Load (lbs)	Displ. (x10 ⁻³ In)
DWT		
THERM		
OBEI		
OBED		
LEVEL A&B		
LEVEL C		
LEVEL D		

* Directions are Global. X is North and Y is up (Right Handed Coord.)

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Prepared By/Date						of
Checked By/Date						