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 AUTH. NAME AUTHOR AFFILIATION
 KOBER, R.W. Rochester Gas & Electric Corp.
 RECIP. NAME RECIPIENT AFFILIATION
 PAULSON, W.A. Operating Reactors Branch 5

SUBJECT: Forwards response to 840612 request for addl info re 831201
 request for one-time exemption from containment tendon
 visual insp requirements. Individual tendon force levels
 provided.

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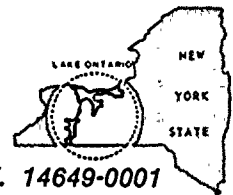
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ROGER W. KOBER
VICE PRESIDENT
ELECTRIC & STEAM PRODUCTION

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July 31, 1984

Director of Nuclear Reactor Regulation
Attention: Mr. Walter A. Paulson, Acting Chief
Operating Reactors Branch No. 5
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: December 1, 1983 Request for One-Time Exemption
from Containment Tendon Visual Inspection Requirements
(Ginna Technical Specification, Section 4.4.4.1)
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Paulson:

This letter provides the additional information regarding the above referenced subject requested during the conference call of June 12, 1984 with the NRC staff.

In our letter dated December 1, 1983, we reported that two of the four tendons adjacent to tendon 75 yielded lift-off forces of 701 and 724 kips. These values correspond to tendons 76 and 77 respectively. The data sheet for tendon 76 was included with the 1983 Ginna Tendon Surveillance Final Report submitted with our letter dated March 26, 1984. The data sheet for tendon 77 was not submitted because it was not included in the list of tendons originally selected for the surveillance. Subsequent to submitting our letter, a revision of the stressing rod calibration equation yielded lift-off forces of 700 kips (#76) and 723 kips (#77). These values are reflected in the attached data sheets for tendons 76 and 77.

The December 1, 1983 letter also provided results of an evaluation of the containment structural integrity considering the decreased pre-stress level of tendon 75. It was explained that the minimum design requirement in terms of a vertical membrane stress resultant is 299 kips per foot. The calculated stress resultant based upon actual and predicted pre-stress levels of the four adjacent tendons and tendon 75 was determined to be 315 kips per foot. The stress resultant corresponds to the vertical compressive stresses at the top of the containment structure acting beneath the tendon anchorages. It is calculated by dividing the total combined pre-stress force of the five tendons by the containment wall length being analyzed, which equals 10.65 feet (5 x 2.13 ft. [tendon spacing]).

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DATE July 31, 1984

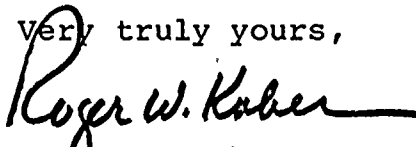
TO Mr. Walter A. Paulson, Acting Chief
Operating Reactors Branch No. 5

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Individual tendon force levels were determined as follows:

- 1) Tendon 77 - 724 kips determined by lift-off
- 2) Tendon 76 - 701 kips determined by lift-off
- 3) Tendon 75 - 532 kips determined by lift-off after
retensioning.
- 4) Tendon 74 - 720 kips determined by using the average
lift-off of twelve (12) tendons tested during
the 1983 Surveillance (not including tendons
75 & 76) which were retensioned in 1980.
- 5) Tendon 73 - 675 kips determined by using the average
lift-off of four (4) tendons tested during
the 1983 Surveillance which were retensioned
in 1969.

Very truly yours,


Roger W. Kober

DATA SHEET 1 - JULY 1983 TENDON SURVEILLANCE

- 1) DATE: 11-17-83 TENDON NO.: 76 SHIM STACK THICKNESS: 12 - 7/8"
- 2) HYDRAULIC JACK NO.: RT-500-12 RAM AREA: A
- 3) HYDRAULIC PUMP NO.: 797KRTA
M M 1904 PRESSURE GAUGE NO.: 0090
- 4) LOAD CELL FACTOR**: N/A STRESSING ROD GAGE FACTOR***: 0.1997
- 5) TENDON INSPECTION COMMENTS: Tendon head in good condition.
No surveillance wires present.

(1) CONDITION	(2) PRESSURE GAUGE		(3) STRESSING ROD		(4) LOAD CELL		(5) RAM POSITION	(6) COMMENTS
	(a) Pressure (psi)	(b) Force* (lbs)	(a) Strain (u in/in)	(b) Force** (lbs)	(a) Strain (u in/in)	(b) Force** (lbs)	inches	
INITIAL:	0	0	0	0	N/A	N/A	3-7/8"	
INCREASING:	2000	255.7	1253	250.2	N/A	N/A	3-7/8"	
INCREASING:	4000	510.5	2542	507.6	N/A	N/A	4	
LIFTOFF: 1)	5500	703.1	3496	699.6	N/A	N/A	4-1/8"	
2)	5525	703.1	3510	700.7	N/A	N/A	4-1/8"	
LIFTOFF +6%	—	—	—	—	N/A	N/A	4-1/8"	Step not performed due to lack of clearance betw Coupler & Jack
LIFTOFF: 1)	5500	701.6	3498	698.6	N/A	N/A	4-1/16"	
2)	"	701.6	"	698.6	N/A	N/A	4-1/16"	
DECREASING:	4000	510.5	2560	511.2	N/A	N/A	3-15/16"	
DECREASING:	2000	255.7	1285	256.6	N/A	N/A	3-7/8"	
DECREASING:	0	0	0	0	N/A	N/A	3-7/8"	

- NOTES: (*) Ram area to be used to calculate ram force in column 2b: Force = $0.896 + 0.1274X$
[Gage Pressure (PSIG)]
- (**) Load Cell Factor to be used to calculate force in column 4b: See Attachment 1
- (***) Stressing Rod Gage Factor to be used to calculate force in rod in column 3b:
stressing rod gage factor x (Strain - Initial Strain Reading) ~~1.12~~

COMPLETED BY: Clyde Fisher DATE: 11/21/83



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DATA SHEET 1 - JULY 1983 TENDON SURVEILLANCE

- 1) DATE: 11-17-83 TENDON NO.: 77 SHIM STACK THICKNESS: 11-5/8
- 2) HYDRAULIC JACK NO.: RJ-500-12 RAM AREA: ★
- 3) HYDRAULIC PUMP NO.: 797 KRTA
MM 1904 PRESSURE GAUGE NO.: 0090
- 4) LOAD CELL FACTOR**: N/A STRESSING ROD GAGE FACTOR***: 0.1997
- 5) TENDON INSPECTION COMMENTS: Tendon Head in good condition. Surveillance
wire button head resting atop collar. ALL other buttonheads in good condition

(1) CONDITION	(2) PRESSURE GAUGE		(3) STRESSING ROD		(4) LOAD CELL		(5) RAM POSITION	(6) COMMENTS
	(a) Pressure (psi)	(b) Force* (lbs)	(a) Strain (u in/in)	(b) Force** (lbs)	(a) Strain (u in/in)	(b) Force** (lbs)	inches	
INITIAL:.	0	0	0	0	N/A		3-5/8"	
INCREASING:	2000	255.7	1310	261.6	N/A		3-11/16"	
INCREASING:	4000	510.5	2576	514.4	N/A		3-3/4"	
LIFTOFF: 1)	5620	718.2	3617	722.9	N/A		3-7/8"	
2)	5640		3623					
LIFTOFF +6%	5970	761.5	3782	755.3	N/A		4-1/4"	
LIFTOFF: 1)	5560	714.3	3605	721.3	N/A		3-7/8"	
2)	5640		3620					
DECREASING:	4000	510.5	2560	511.2	N/A		3-3/4"	
DECREASING:	2000	255.7	1292	258.0	N/A		3-3/4"	
DECREASING:	0	0	0	0	N/A		3-5/8"	

- NOTES: (*) Ram area to be used to calculate ram force in column 2b: Force = $0.896 + 0.1274 \times$
[Gage Pressure (PSIG)]
- (**) Load Cell Factor to be used to calculate force in column 4b: See Attachment 1
- (***) Stressing Rod Gage Factor to be used to calculate force in rod in column 3b:
stressing rod gage factor x (Strain - Initial Strain Reading)

COMPLETED BY: Charles F. FabaDATE: 11/21/83