



**Constellation Energy**

February 27, 2006

U. S. Nuclear Regulatory Commission  
Washington, DC 20555

**ATTENTION:** Document Control Desk

**SUBJECT:** Calvert Cliffs Nuclear Power Plant  
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318  
2005 Steam Generator Tube Inspection Results Report

**REFERENCE:** (a) Calvert Cliffs Nuclear Power Plant Units 1 and 2 Technical  
Specification 5.6.9.b

Reference (a) requires that we report, on an annual basis, the results of the steam generator tube in-service inspection conducted in the past year.

This letter provides the results of the steam generator tube inspection conducted on Calvert Cliffs Unit 2 in 2005. This inspection was the first in-service inspection following steam generator replacement. There were no inspections conducted on the Calvert Cliffs Unit 1 Steam Generators in 2005. This report includes the number and extent of tubes examined and indications identified.

**Inspection Scope:**

The inspection of Calvert Cliffs Unit 2 Steam Generators (21 & 22) was conducted using bobbin coil and motorized rotating plus point inspection technologies. All distorted bobbin coil indications were dispositioned with the plus point probe. The table below identifies the number and extent of the tubes inspected.

Inspection Zone	Number of Tubes Inspected (SG 21/SG 22)	Tube Extent Examined
100% Full Length Bobbin Coil	8468/8471	Tube end to tube end

Inspection Zone	Number of Tubes Inspected (SG 21/SG 22)	Tube Extent Examined
Plus Point Probe – based on bobbin coil calls	60/145	Specific indication location

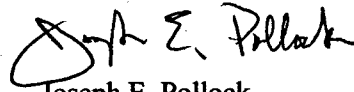
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**Results:**

Attachment (1) lists the upper bundle tube support wear indications detected with the bobbin coil and confirmed with the motorized rotating plus point probe. No steam generator tubes were found with crack-like indications. There were no tubes plugged in SG 21 during the 2005 inspection. During the pre-service examination at the manufacturing facility, three tubes were plugged in SG 21. To date, a total of three tubes have been plugged in SG 21. There were no tubes plugged at the manufacturing facility in SG 22. A total of 29 tubes were plugged and stabilized in SG 22. All of the tubes in SG 22 were plugged and stabilized due to loose parts concerns found during the 2005 inspection. To date, a total of 29 tubes have been plugged in SG 22.

Should you have questions regarding this matter, please contact Mr. L. S. Larragoite at (410) 495-4922.

Very truly yours,



Joseph E. Pollock  
Plant General Manager

JEP/CAN/bjd

Attachment: (1) Results of Bobbin Coil and Motorized Rotating Plus Point Exams for Unit 2  
Nos. 21 and 22 Steam Generators

cc: P. D. Milano, NRC  
S. J. Collins, NRC

Resident Inspector, NRC  
R. I. McLean, DNR

**ATTACHMENT (1)**

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**RESULTS OF BOBBIN COIL AND MOTORIZED ROTATING  
PLUS POINT EXAMS FOR UNIT 2  
NOS. 21 AND 22 STEAM GENERATORS**

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# ATTACHMENT (1)

## RESULTS OF BOBBIN COIL AND MOTORIZED ROTATING PLUS POINT EXAMS FOR UNIT 2 NOS. 21 AND 22 STEAM GENERATORS

Steam Generator	ROW	COL	Elevation	Offset (inch)	Amplitude (Volts)	Maximum Depth (Bobbin) (%TW)	Structural Length Assumed to be 1.5" Unless Specifically Available
21	45	79	F07	0.50	0.12	10	1.5
21	57	107	F08	1.42	0.13	6	1.5
21	58	98	F05	-1.86	0.1	10	1.5
21	63	69	F09	1.99	0.12	7	1.5
21	69	115	F04	-2.11	0.09	8	1.5
21	77	83	F08	0.58	0.12	5	1.5
21	80	74	F08	1.71	0.08	7	1.5
21	80	76	F07	-0.73	0.13	11	1.5
21	83	97	F08	1.70	0.1	10	1.5
21	84	76	F07	-0.84	0.14	11	1.5
21	85	75	F07	1.66	0.1	5	1.5
21	85	79	F08	0.86	0.25	14	1.5
21	86	84	F06	-0.72	0.12	10	1.5
21	87	75	F07	1.66	0.12	10	1.5
21	87	75	F08	0.68	0.11	9	1.5
21	87	83	F06	0.58	0.16	8	1.5
21	87	87	F08	1.68	0.15	12	1.5
21	87	93	F08	1.67	0.14	12	1.5
21	87	97	F08	1.91	0.11	10	1.5
21	88	78	F06	1.09	0.18	7	1.5
21	89	75	F06	-0.70	0.23	13	1.5
21	89	87	F07	0.67	0.13	7	1.5
21	92	78	F08	1.82	0.14	11	1.5
21	93	73	F08	-0.56	0.15	8	1.5
21	93	83	F06	-0.55	0.15	13	1.5
21	94	74	F06	-1.68	0.13	7	1.5
21	95	83	F07	-0.54	0.11	5	1.5
21	95	83	F08	-0.68	0.15	7	1.5
21	95	87	F08	1.73	0.33	22	1.24
21	95	87	F09	0.79	0.12	10	1.5
21	95	99	F05	-1.43	0.11	10	1.5
21	97	75	F07	1.75	0.13	7	1.5
21	97	83	F07	-0.55	0.11	10	1.5
21	98	74	F06	-1.80	0.13	7	1.5
21	98	82	F08	1.97	0.11	6	1.5
21	99	83	F08	-0.56	0.11	5	1.5
21	99	87	F06	-1.75	0.12	10	1.5
21	101	75	F06	-0.51	0.24	13	1.5
21	101	87	F07	0.70	0.16	9	1.5

**ATTACHMENT (1)**

**RESULTS OF BOBBIN COIL AND MOTORIZED ROTATING PLUS POINT EXAMS FOR  
UNIT 2 NOS. 21 AND 22 STEAM GENERATORS**

Steam Generator	ROW	COL	Elevation	Offset (inch)	Amplitude (Volts)	Maximum Depth (Bobbin) (%TW)	Structural Length Assumed to be 1.5" Unless Specifically Available
21	102	88	F06	-0.68	0.1	6	1.5
21	103	83	F06	0.44	0.15	7	1.5
21	103	87	F07	0.57	0.22	17	0.38
21	104	78	F08	1.93	0.09	7	1.5
21	104	84	F06	-0.65	0.13	6	1.5
21	104	88	F05	-1.80	0.25	19	0.61
21	104	88	F06	-0.66	0.25	19	0.4
21	105	83	F07	-0.14	0.35	12	1.5
21	106	76	F06	1.12	0.45	15	1.5
21	106	90	F06	-0.79	0.15	9	1.5
21	107	75	F07	1.78	0.1	9	1.5
21	107	83	F07	-0.07	0.45	15	1.5
21	107	87	F07	0.64	0.26	19	0.42
21	108	76	F06	1.21	0.41	14	1.5
21	110	76	F06	0.61	0.1	5	1.5
21	110	88	F06	-0.82	0.14	9	1.5
21	110	90	F06	-0.77	0.12	8	1.5
21	112	90	F06	-0.82	0.17	14	1.5
21	113	87	F07	0.72	0.17	9	1.5
22	32	6	F07	-1.26	0.11	6	1.5
22	37	35	F07	1.73	0.09	6	1.5
22	49	29	F07	1.76	0.14	7	1.5
22	57	127	F05	-2.21	0.1	5	1.5
22	69	83	F08	-0.61	0.13	6	1.5
22	74	82	F06	-1.84	0.11	6	1.5
22	74	94	F08	0.78	0.11	5	1.5
22	76	82	F06	-1.73	0.15	8	1.5
22	76	82	F08	1.89	0.12	6	1.5
22	78	82	F06	-1.78	0.2	11	1.5
22	79	81	F07	-0.85	0.16	9	1.5
22	79	93	F08	1.91	0.47	21	0.47
22	80	82	F06	-1.71	0.13	7	1.5
22	82	84	F08	0.75	0.12	6	1.5
22	82	94	F08	0.83	0.12	6	1.5
22	83	73	F08	0.73	0.36	15	1.5
22	83	75	F02	0.75	0.18	8	1.5
22	84	92	F08	0.64	0.13	7	1.5
22	84	94	F08	0.71	0.19	10	1.5
22	85	79	F08	0.71	0.16	9	1.5

# ATTACHMENT (1)

## RESULTS OF BOBBIN COIL AND MOTORIZED ROTATING PLUS POINT EXAMS FOR UNIT 2 NOS. 21 AND 22 STEAM GENERATORS

Steam Generator	ROW	COL	Elevation	Offset (inch)	Amplitude (Volts)	Maximum Depth (Bobbin) (%TW)	Structural Length Assumed to be 1.5" Unless Specifically Available
22	86	72	F05	-0.88	0.13	6	1.5
22	86	72	F06	-1.63	0.14	7	1.5
22	86	74	F06	-1.78	0.16	7	1.5
22	86	92	F08	0.77	0.13	7	1.5
22	86	94	F08	0.69	0.16	8	1.5
22	87	65	F08	0.68	0.2	9	1.5
22	87	83	F06	0.46	0.13	6	1.5
22	87	83	F07	0.46	0.41	17	0.72
22	87	83	F08	-0.62	0.21	10	1.5
22	88	76	F06	1.69	0.12	7	1.5
22	88	78	F06	-1.23	0.26	9	1.5
22	89	65	F08	0.76	0.21	11	1.5
22	89	69	F08	0.76	0.15	9	1.5
22	89	73	F08	0.74	0.33	16	0.65
22	89	83	F06	0.39	0.14	7	1.5
22	89	83	F07	0.43	0.14	7	1.5
22	89	83	F08	-0.68	0.12	6	1.5
22	90	82	F06	-1.86	0.14	8	1.5
22	91	65	F08	0.61	0.31	15	1.5
22	92	76	F06	1.64	0.16	9	1.5
22	93	73	F06	-0.86	0.12	7	1.5
22	93	83	F06	0.48	0.14	7	1.5
22	93	83	F07	0.39	0.15	7	1.5
22	94	76	F06	1.75	0.12	6	1.5
22	94	80	F06	-1.99	0.15	8	1.5
22	94	82	F06	-1.96	0.25	13	1.5
22	94	82	F07	0.70	0.13	7	1.5
22	95	83	F06	0.43	0.14	7	1.5
22	95	83	F07	0.43	0.19	9	1.5
22	96	82	F06	1.75	0.18	10	1.5
22	96	86	F06	-1.18	0.17	9	1.5
22	97	75	F06	-0.93	0.13	8	1.5
22	97	77	F06	-0.87	0.14	8	1.5
22	97	79	F06	-0.94	0.14	8	1.5
22	97	81	F07	-0.89	0.13	7	1.5
22	98	72	F08	1.82	0.13	6	1.5
22	98	76	F06	1.71	0.16	7	1.5
22	98	78	F08	1.57	0.14	7	1.5
22	98	82	F07	0.67	0.09	5	1.5

# ATTACHMENT (1)

## RESULTS OF BOBBIN COIL AND MOTORIZED ROTATING PLUS POINT EXAMS FOR UNIT 2 NOS. 21 AND 22 STEAM GENERATORS

Steam Generator	ROW	COL	Elevation	Offset (inch)	Amplitude (Volts)	Maximum Depth (Bobbin) (%TW)	Structural Length Assumed to be 1.5" Unless Specifically Available
22	99	71	F08	-0.70	0.13	6	1.5
22	99	73	F07	1.66	0.11	5	1.5
22	99	77	F06	-0.77	0.33	14	1.5
22	99	83	F05	-0.61	0.13	6	1.5
22	99	83	F06	0.43	0.17	8	1.5
22	100	76	F06	-2.05	0.1	6	1.5
22	100	78	F06	-1.73	0.11	6	1.5
22	100	82	F06	-1.80	0.47	21	0.39
22	100	82	F07	0.77	0.18	10	1.5
22	100	82	F08	1.68	0.13	7	1.5
22	100	84	F07	1.82	0.14	7	1.5
22	101	77	F06	-0.76	0.17	9	1.5
22	101	83	F06	0.48	0.37	16	0.59
22	101	83	F07	0.50	0.27	12	1.5
22	101	87	F07	0.74	0.13	7	1.5
22	102	76	F07	-1.39	0.24	3	1.5
22	102	82	F06	-1.78	0.13	7	1.5
22	102	82	F09	0.74	0.12	7	1.5
22	102	86	F02	0.79	0.14	8	1.5
22	103	77	F06	-0.80	0.25	11	1.5
22	103	79	F06	-0.87	0.18	8	1.5
22	103	83	F06	0.39	0.26	12	1.5
22	103	83	F07	-0.14	0.17	5	1.5
22	103	87	F07	0.66	0.17	9	1.5
22	104	82	F06	-1.84	0.13	7	1.5
22	104	82	F07	0.71	0.14	7	1.5
22	105	67	F07	-1.30	0.1	6	1.5
22	105	75	F06	-0.88	0.17	9	1.5
22	105	77	F06	-0.87	0.25	13	1.5
22	105	79	F06	-0.81	0.28	14	1.5
22	105	79	F07	1.66	0.15	9	1.5
22	105	81	F06	-0.84	0.18	10	1.5
22	105	83	F05	-0.11	0.21	6	1.5
22	105	83	F06	0.46	0.12	6	1.5
22	105	83	F07	0.43	0.26	12	1.5
22	106	82	F06	-1.67	0.2	11	1.5
22	106	82	F07	0.79	0.26	14	1.5
22	107	75	F06	-0.86	0.28	12	1.5
22	107	77	F06	-0.84	0.21	9	1.5

# ATTACHMENT (1)

## RESULTS OF BOBBIN COIL AND MOTORIZED ROTATING PLUS POINT EXAMS FOR UNIT 2 NOS. 21 AND 22 STEAM GENERATORS

Steam Generator	ROW	COL	Elevation	Offset (inch)	Amplitude (Volts)	Maximum Depth (Bobbin) (%TW)	Structural Length Assumed to be 1.5" Unless Specifically Available
22	107	79	F06	-0.82	0.17	8	1.5
22	107	81	F06	-0.84	0.2	11	1.5
22	107	83	F06	-0.05	0.17	5	1.5
22	107	83	F07	-0.07	0.46	12	1.5
22	108	74	F06	-1.86	0.1	6	1.5
22	108	76	F08	1.21	0.22	8	1.5
22	108	82	F07	0.80	0.2	11	1.5
22	108	82	F08	1.30	0.33	9	1.5
22	108	82	F09	0.64	0.2	11	1.5
22	108	84	F06	-0.85	0.2	9	1.5
22	108	84	F07	1.84	0.23	11	1.5
22	108	86	F06	-0.66	0.47	21	0.69
22	108	86	F07	1.59	0.15	8	1.5
22	108	86	F08	1.85	0.13	7	1.5
22	108	90	F06	-0.82	0.12	7	1.5
22	109	73	F06	-0.81	0.51	22	0.35
22	109	75	F06	-0.83	0.28	14	1.5
22	109	77	F06	-0.90	0.21	11	1.5
22	109	79	F06	-0.83	0.52	22	0.23
22	109	81	F06	-0.80	0.21	11	1.5
22	109	83	F06	0.46	0.12	6	1.5
22	109	85	F07	-1.32	0.7	16	0.65
22	109	87	F07	0.74	0.17	10	1.5
22	110	78	F07	0.73	0.19	9	1.5
22	111	73	F06	-0.84	0.27	12	1.5
22	111	75	F06	-0.79	0.3	13	1.5
22	111	77	F06	-0.89	0.62	23	0.42
22	111	79	F06	-0.77	0.3	13	1.5
22	111	81	F06	-0.84	0.19	11	1.5
22	113	75	F06	-0.94	0.16	9	1.5
22	113	77	F06	-0.90	0.65	25	0.4
22	113	81	F06	-0.75	0.17	9	1.5
22	113	83	F07	0.43	0.15	7	1.5
22	113	91	F02	-2.23	0.33	16	0.14
22	114	76	F06	0.73	0.11	5	1.5
22	114	84	F06	-1.23	0.24	7	1.5
22	115	73	F06	-0.89	0.14	7	1.5
22	115	77	F06	-0.89	0.13	6	1.5
22	115	93	F07	0.68	0.13	7	1.5



**ATTACHMENT (1)****RESULTS OF BOBBIN COIL AND MOTORIZED ROTATING PLUS POINT EXAMS FOR  
UNIT 2 NOS. 21 AND 22 STEAM GENERATORS**

Steam Generator	ROW	COL	Elevation	Offset (inch)	Amplitude (Volts)	Maximum Depth (Bobbin) (%TW)	Structural Length Assumed to be 1.5" Unless Specifically Available
22	117	91	F07	0.83	0.16	9	1.5
22	123	77	F06	-0.89	0.12	6	1.5
22	123	83	F07	0.07	0.57	14	1.5
22	123	113	F07	-0.63	0.12	6	1.5
22	124	76	F06	0.72	0.12	7	1.5