Appendix B
Results of the Pumping Test of MW-107C

MW-107 June 2006 Step Drawdown Analysis

Yankee Nuclear Power Station

Times at which pumping step changes					Harmonic well radius	0.25	ft	0.041666667
0.333337	0.37512	0.416902	0.458453		Harmonic storativity	0.03		
					transmissivity	2	ft2/day	

method of M.W. Kawecki, Meaningful Interpretation of Step-Drawdown Tests, Vol. 33, No. 1, Ground Water, Jan-Feb 1995

gpmrate	Step	Time, days	Discharge, ft3/day	increment al discharge	increm time	theoret dd	actual dd	well loss	loss/Qn
0.042269	1	0	8.13731	8.137309	0.041782	1.49193	6.28	4.7881	0.5884
0.052836	2	0.041782	10.1716	2.034327	0.041783	1.86492	9	7.1351	0.7015
0.073970	3	0.083565	14.2403	4.068655	0.041551	2.60773	12.76	10.152	0.7129
0.095105	4	0.125116	18.3089	4.068655	0.041551	3.35279	18.2	14.847	0.8109
		1	10.1716		1	3.15			

8.1373091	0.58841
10.171636	0.70147
14.240291	0.71293
18.308945	0.81093

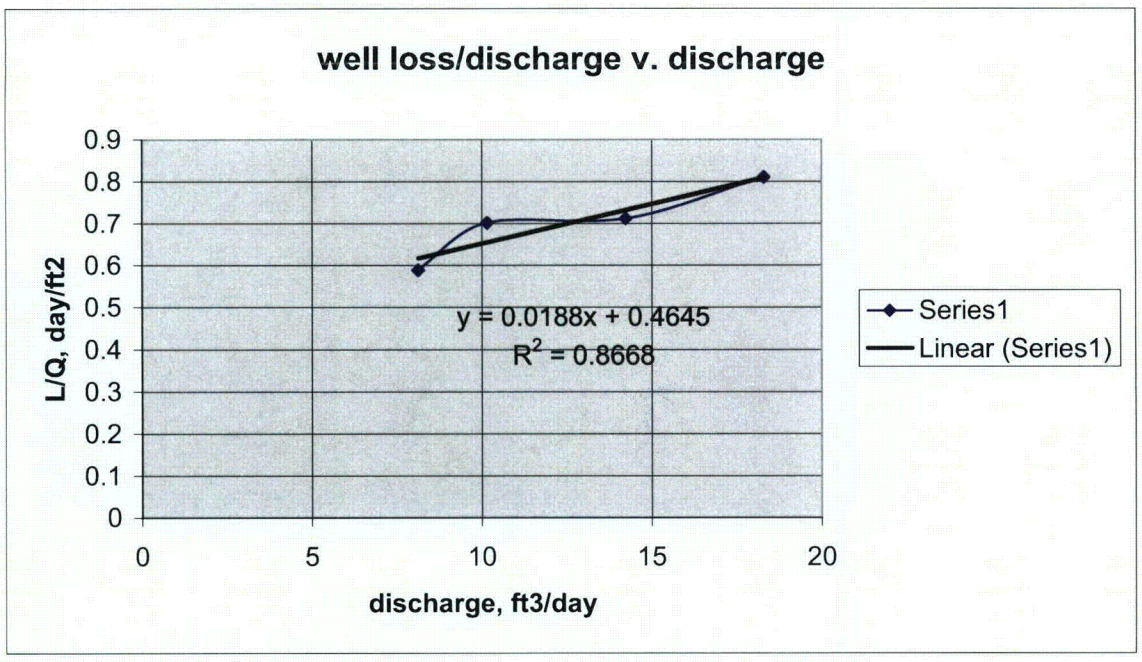
8.137309091	0.0422688	6.28
10.17163636	0.052836	9
14.24029091	0.0739704	12.76
18.30894545	0.0951048	18.2

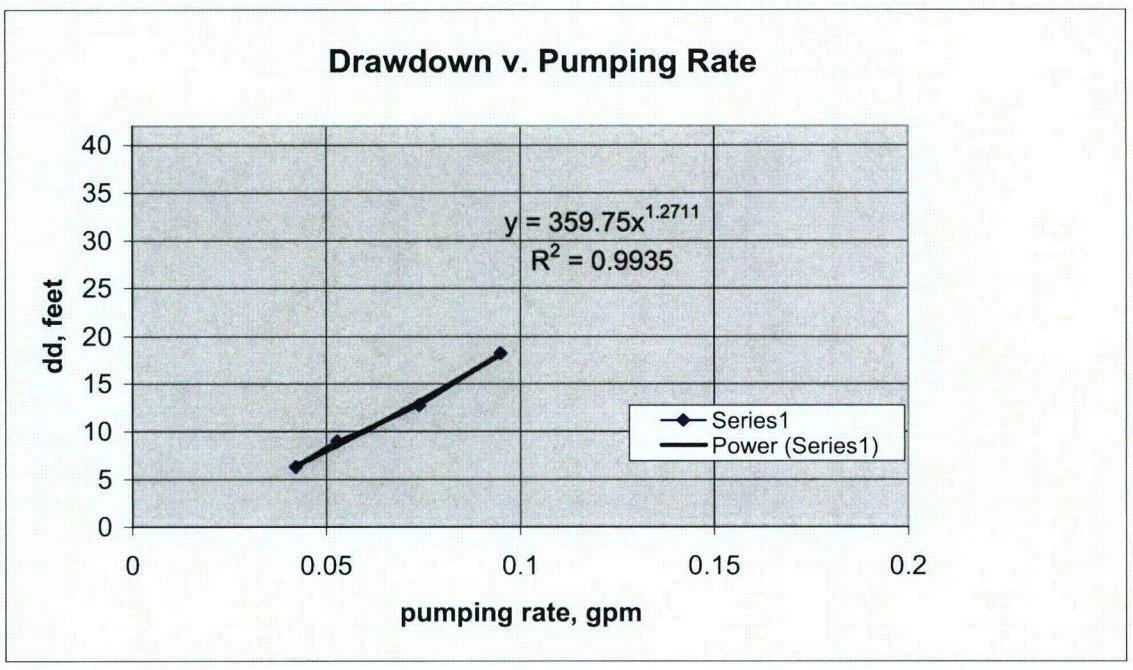
Lw=B2*Qn+CQn^2

B2= 0.4645
C= 0.0188

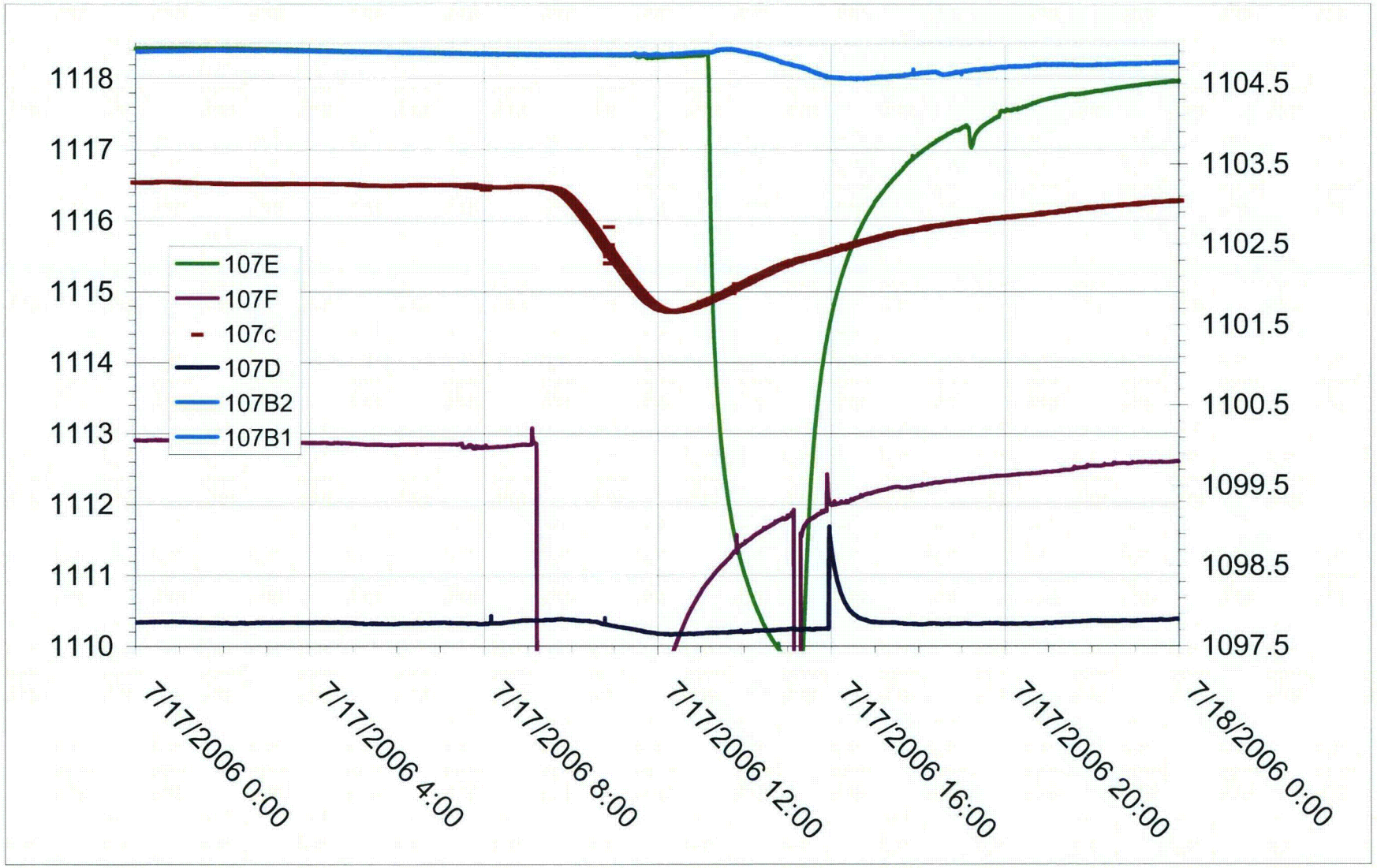
Loss at 0.0528 gpm 5.02464
8.1373091

Loss at .095 gpm 14.8066
18.308945





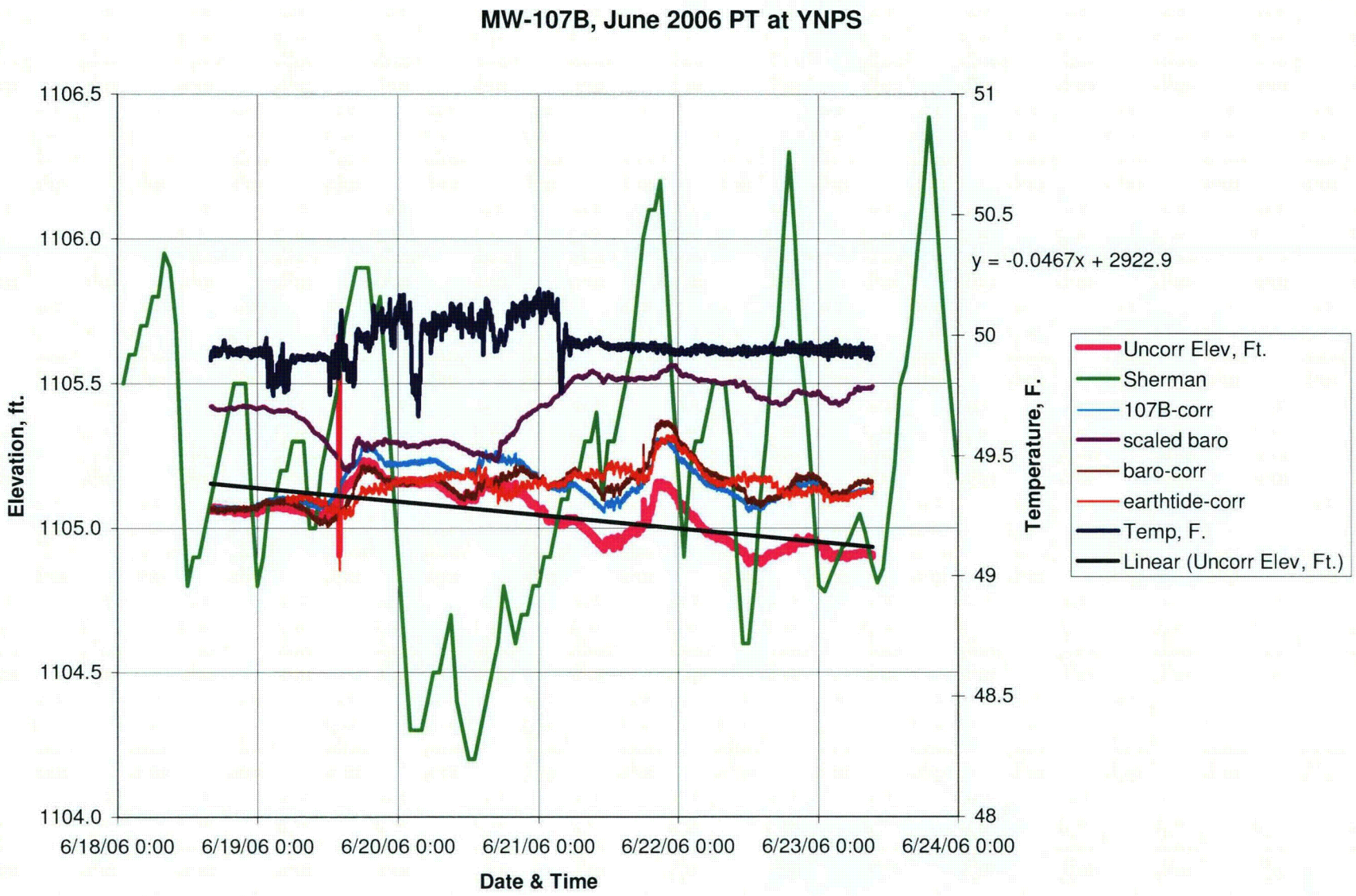
Comparison of Drawdowns at MW-107 on 7/17/06



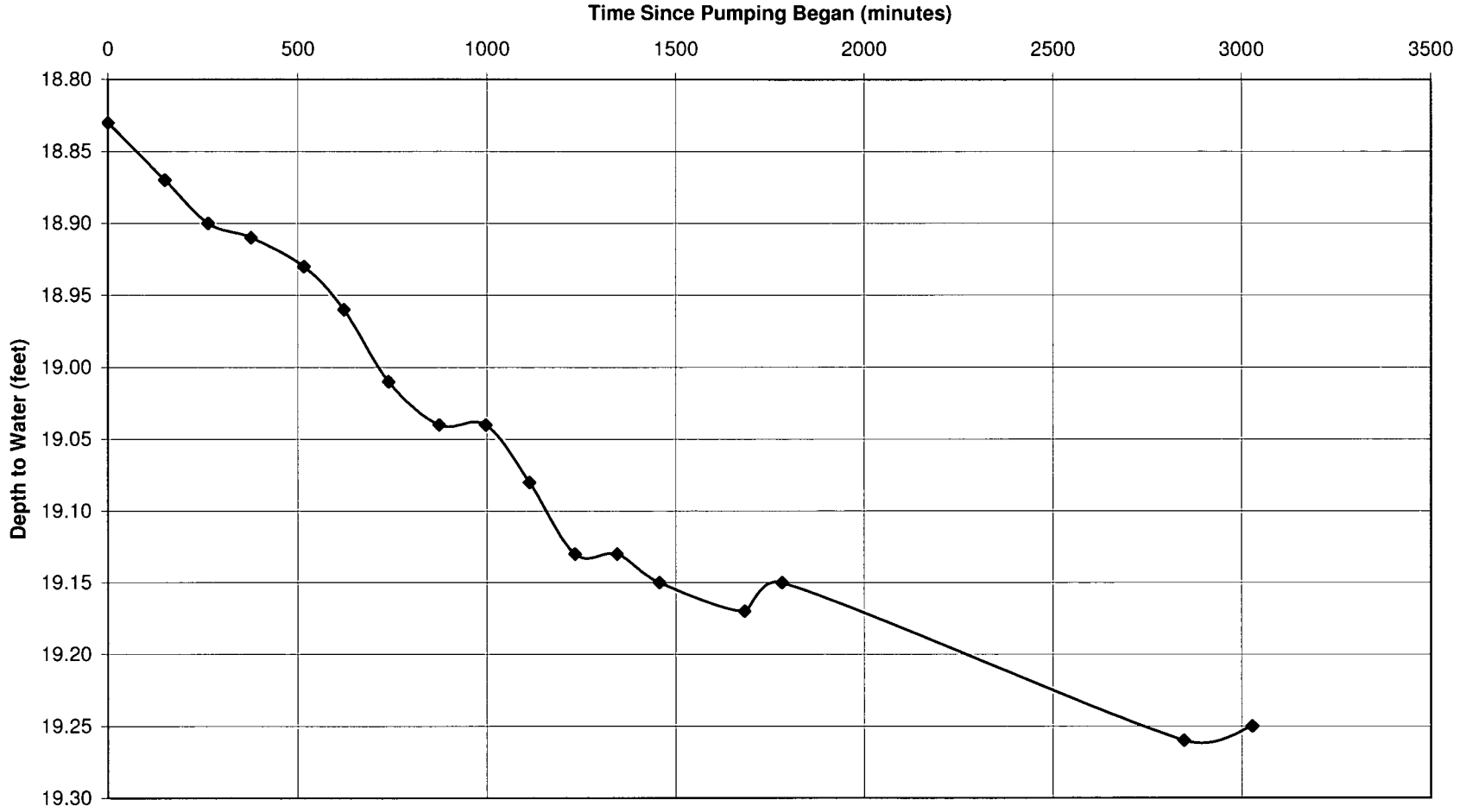
Yankee Nuclear
Power Station
Rowe, MA

10/6/2006

Figure


MW-107B, June 2006 PT at YNPS
1106.5
1106.0
1105.5
1105.0
1104.5
1104.0
Elevation, ft.
51
50.5
50
49.5
49
48.5
48
Temperature, F.
y = -0.0467x + 2922.9
6/18/06 0:00
6/19/06 0:00
6/20/06 0:00
6/21/06 0:00
6/22/06 0:00
6/23/06 0:00
6/24/06 0:00
Date & Time
Uncorr Elev, Ft.
Sherman
107B-corr
scaled baro
baro-corr
earthtide-corr
Temp, F.
Linear (Uncorr Elev, Ft.)

MW-100A (Screen Elevation: 1115.1 to 1105.1 feet, NAVD '88)

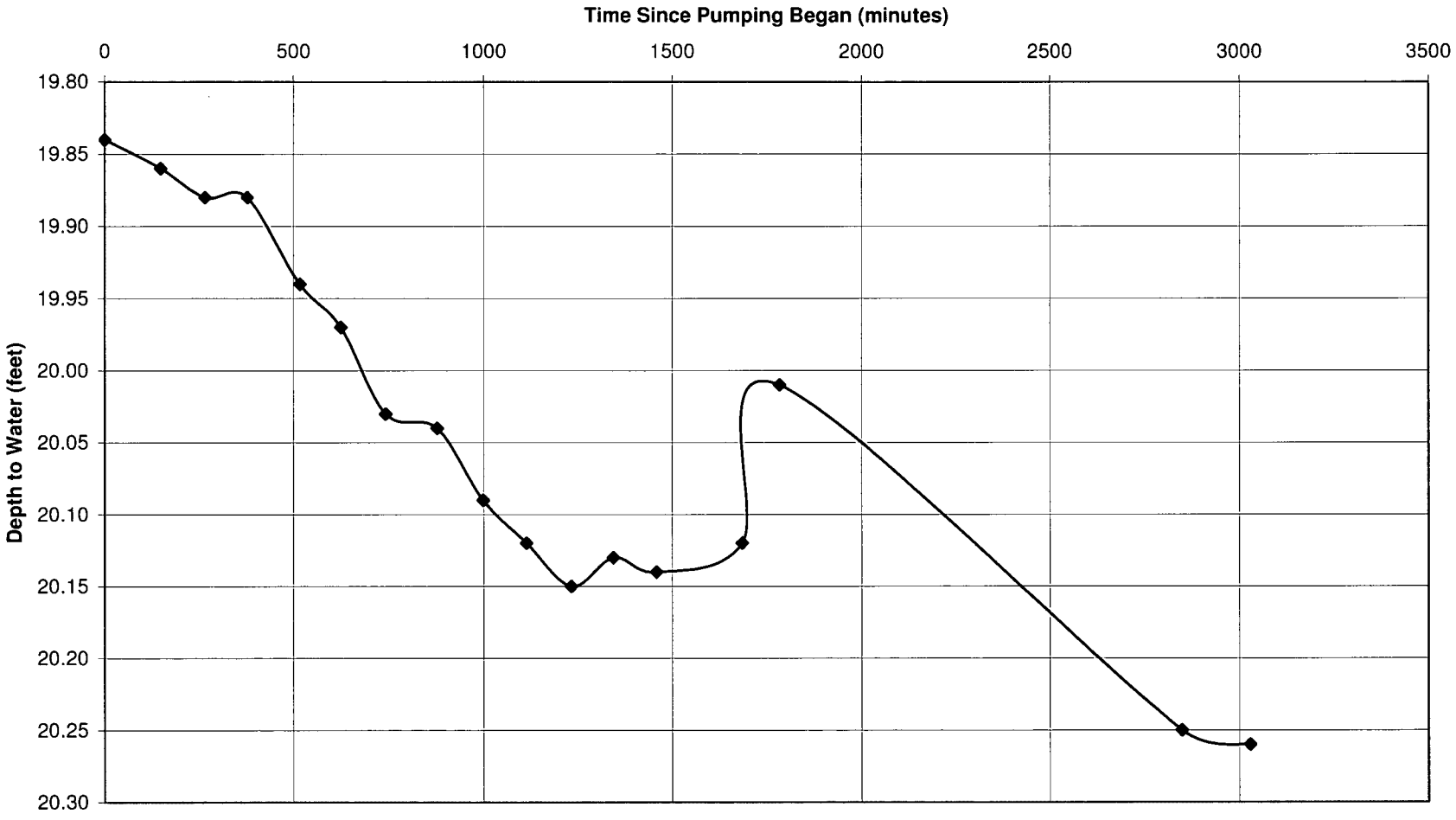


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-100B (Screen Elevation: 1092.2 to 1082.2 feet, NAVD '88)

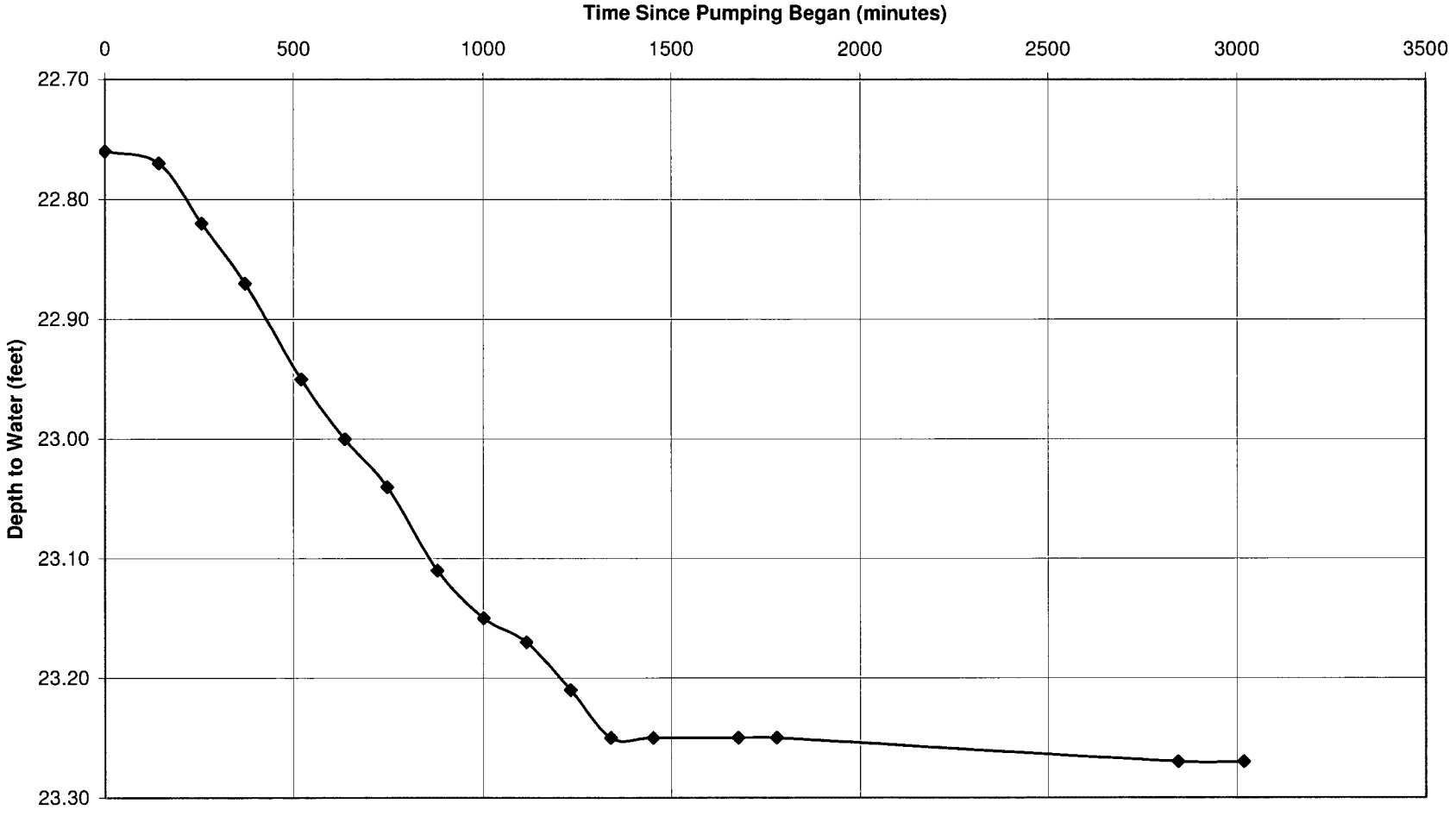


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-101A (Screen Elevation: 1120.0 to 1115.0 feet, NAVD '88)

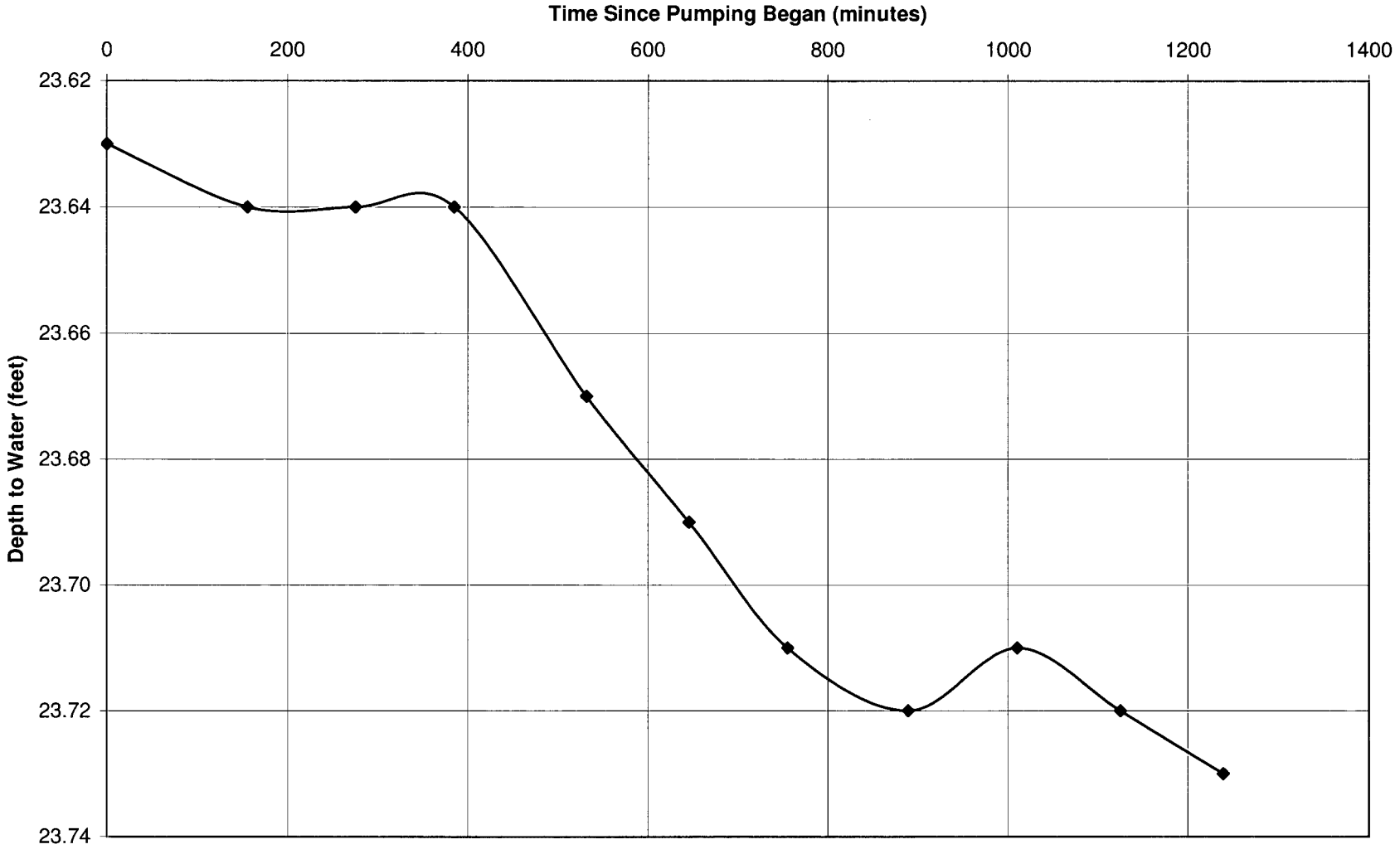


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-102D (Screen Elevation: 1122.8 to 1112.8 feet, NAVD '88)

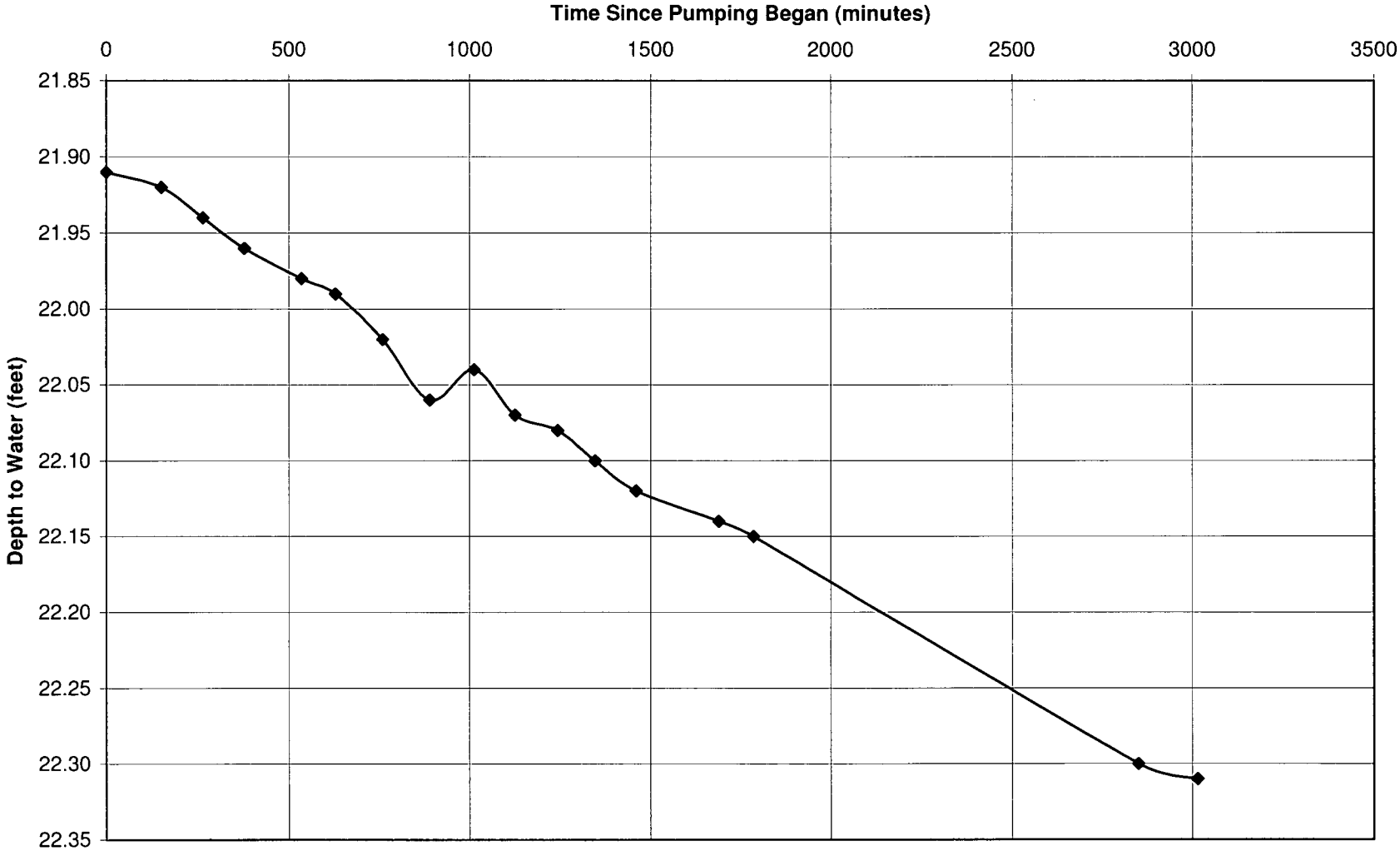


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-105A (Screen Elevation: 1116.9 to 1106.9 feet, NAVD '88)

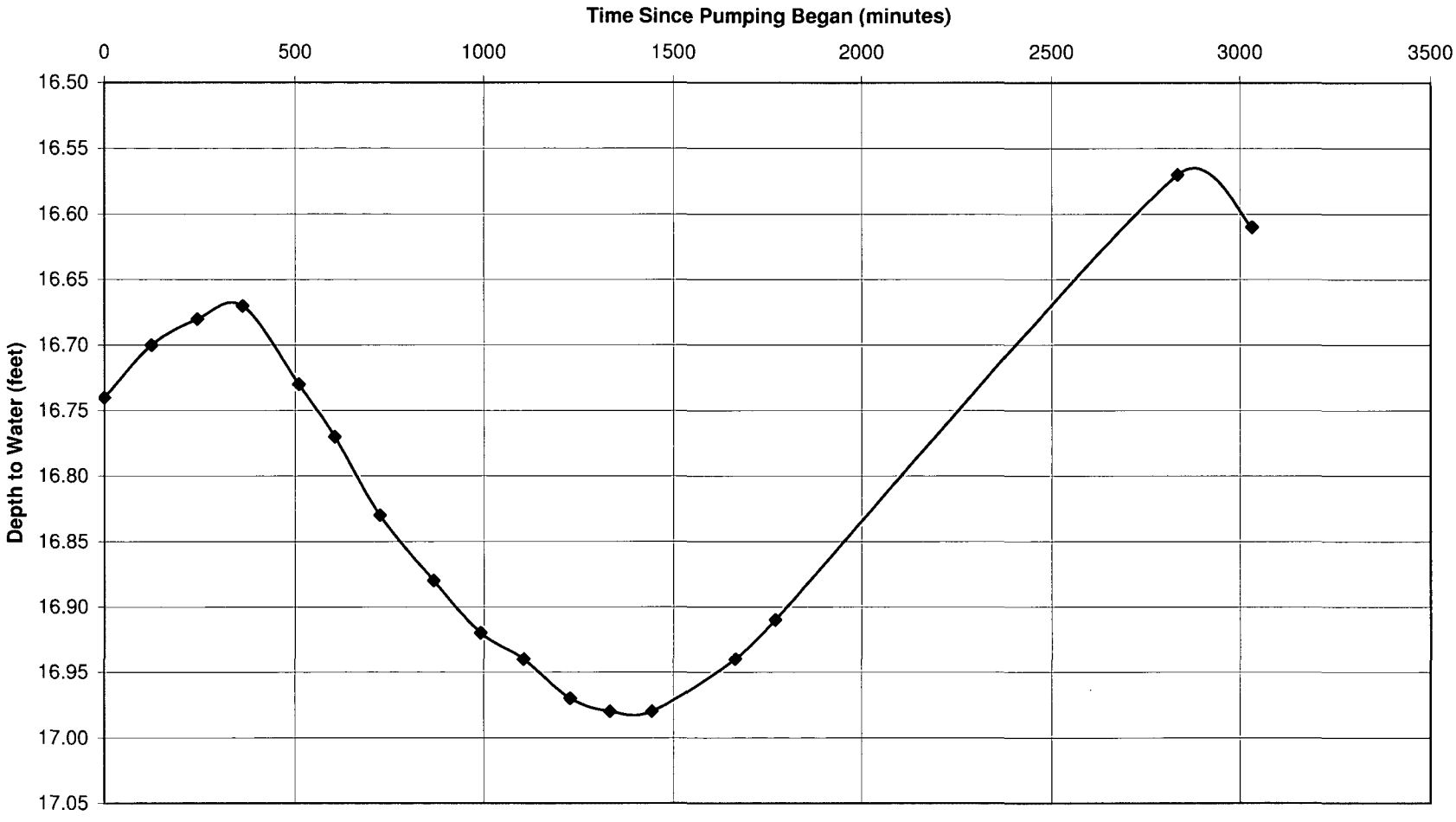


Yankee Nuclear Power Station
Rowe, MA

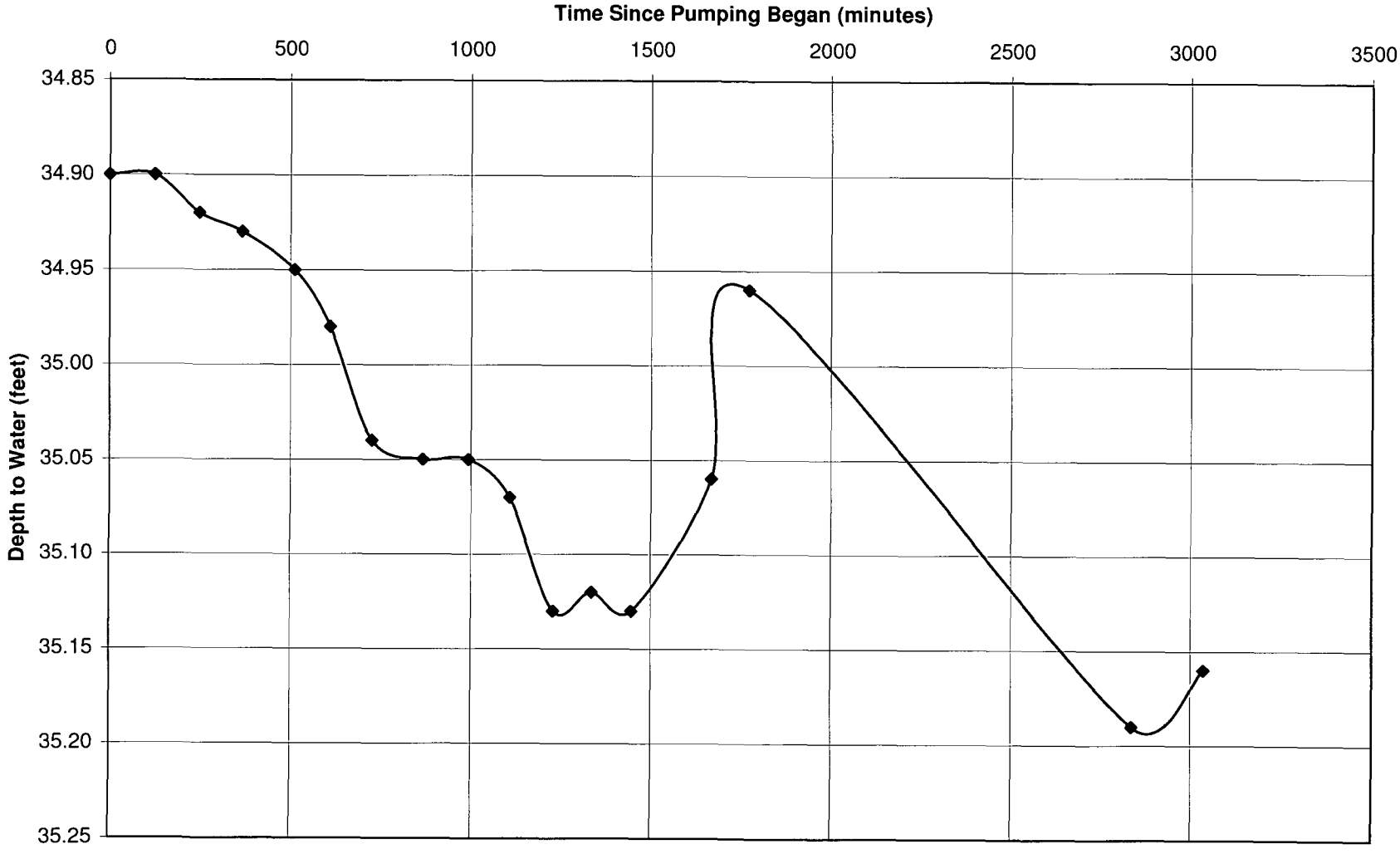
8/30/2006

Appendix

MW-107A (Screen Elevation: 1114.1 to 1109.1 feet, NAVD '88)



MW-107B (Screen Elevation: 1024.9 to 1014.9 feet, NAVD '88)

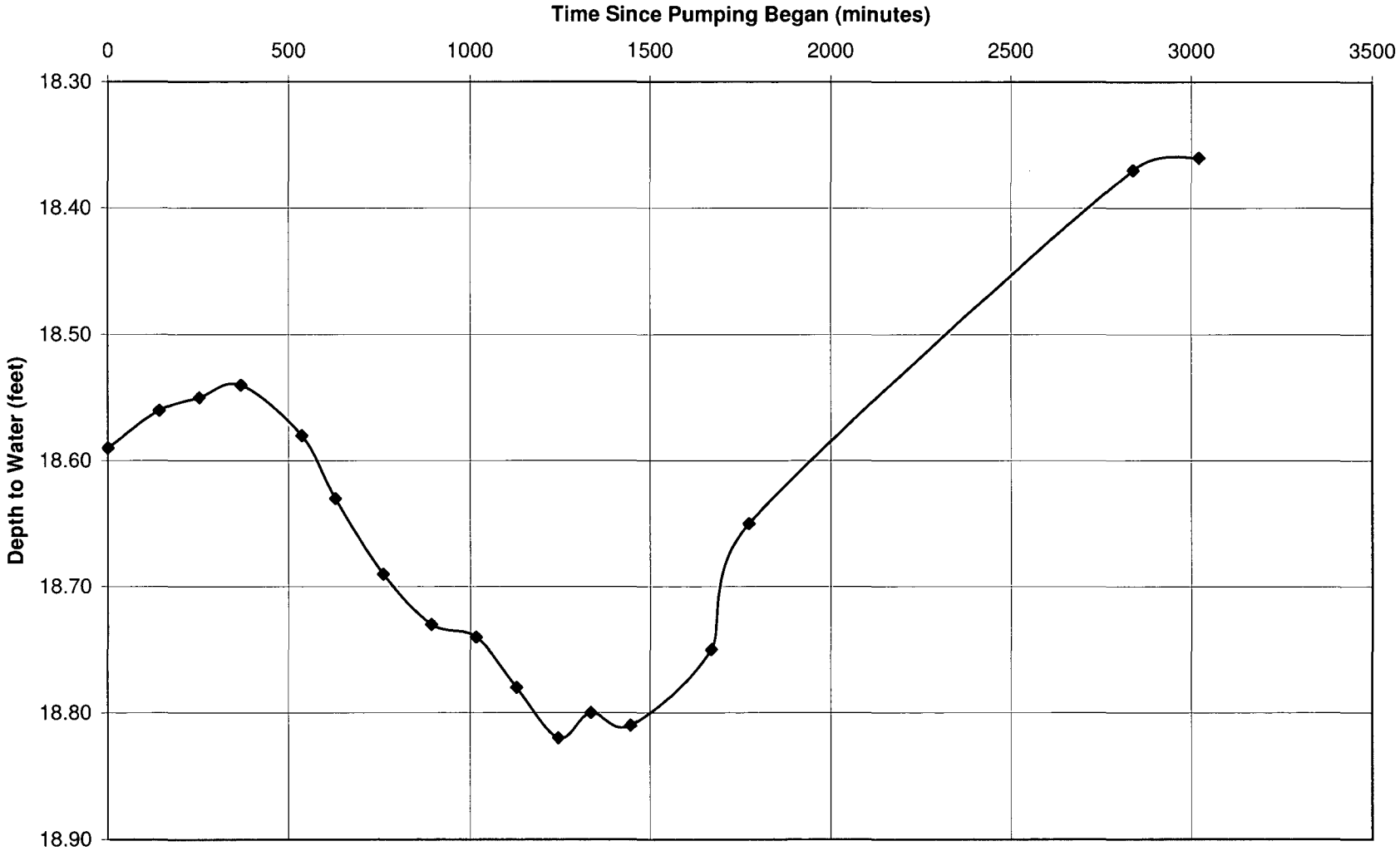


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-110A (Screen Elevation: 1113.4 to 1108.4 feet, NAVD '88)

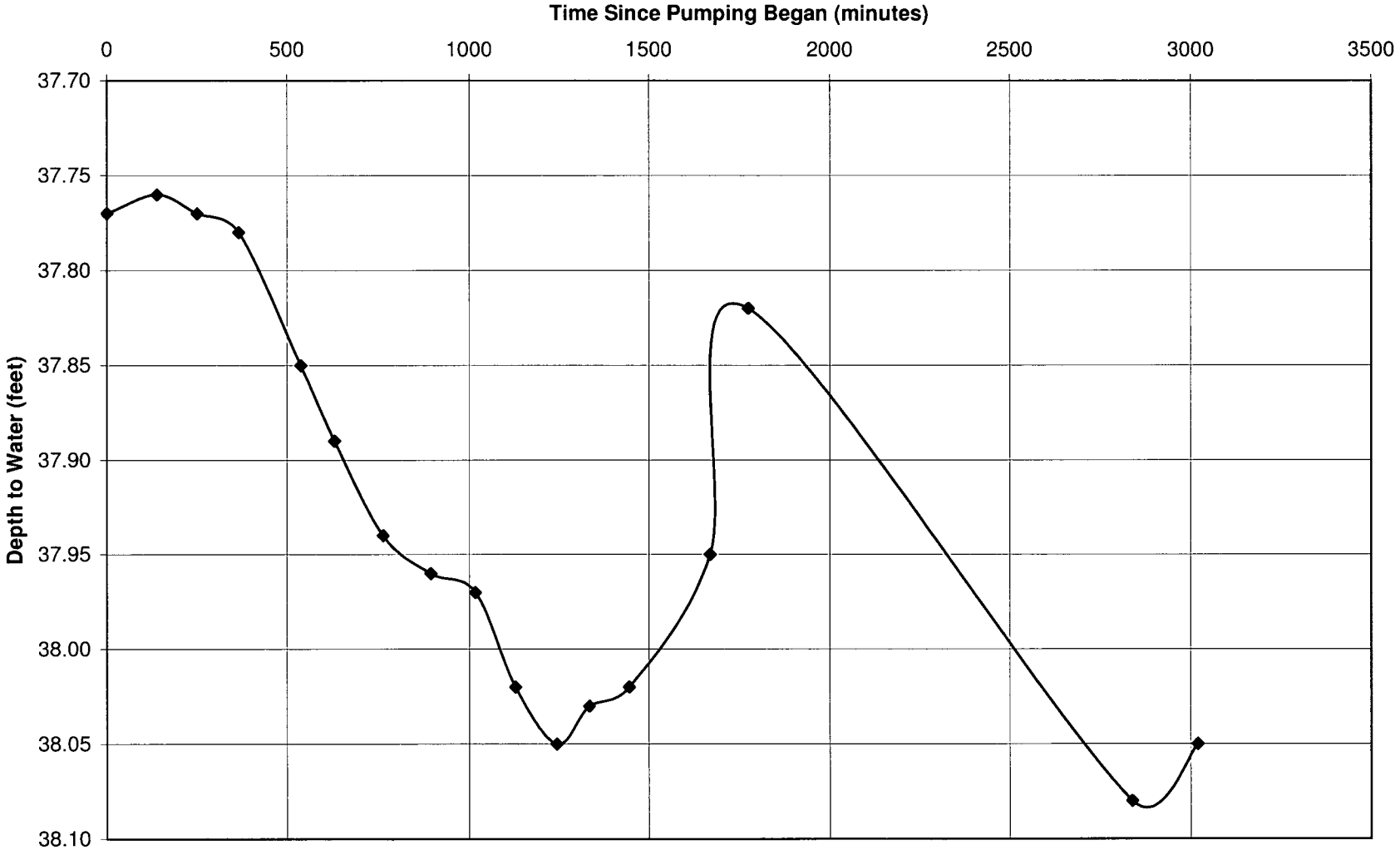


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-110B (Screen Elevation: 1038.2 to 1028.2 feet, NAVD '88)

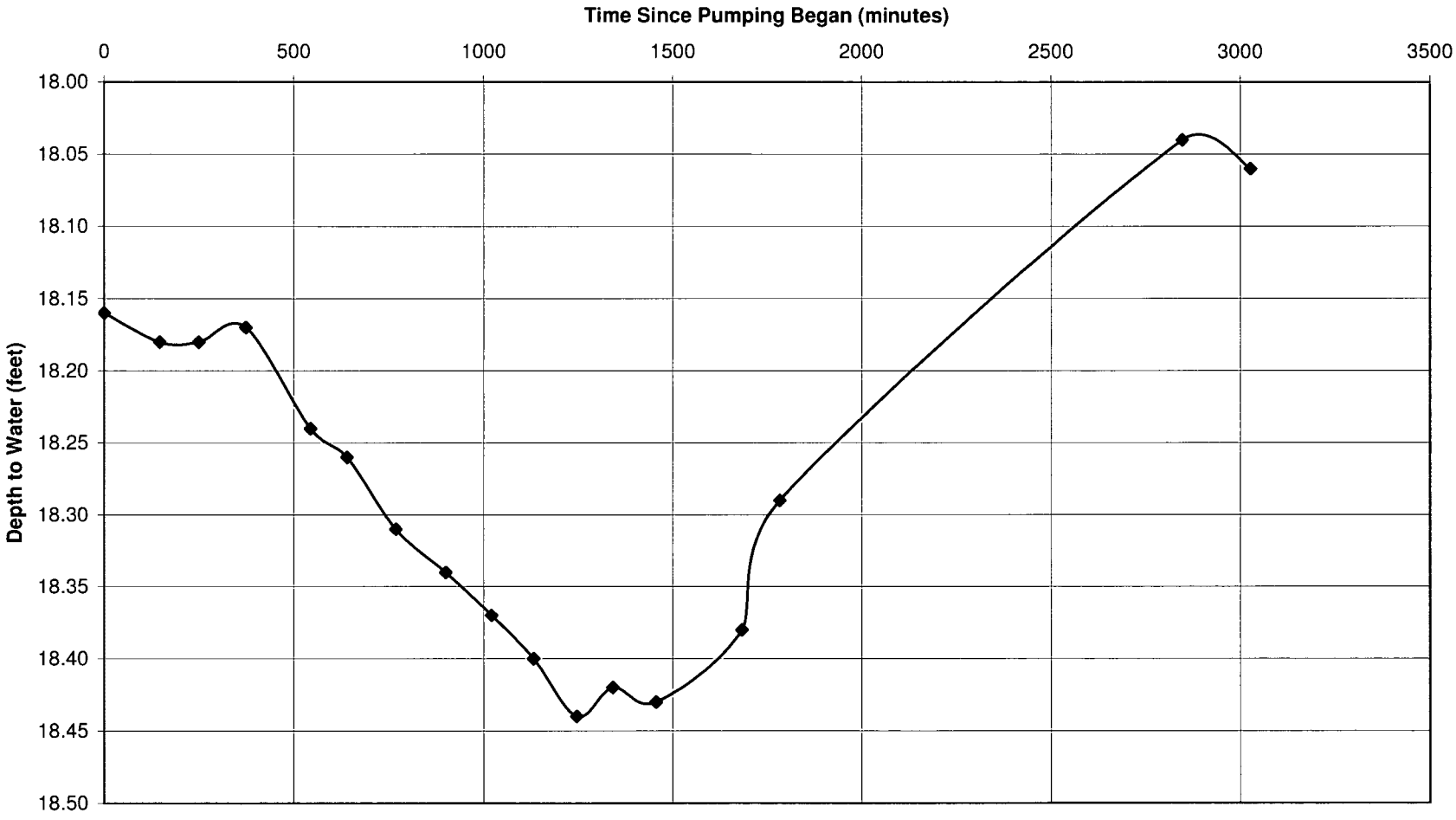


Yankee Nuclear Power Station
Rowe, MA

10/5/2006

Appendix

MW-111A (Screen Elevation: 1116.8 to 1111.8 feet, NAVD '88)

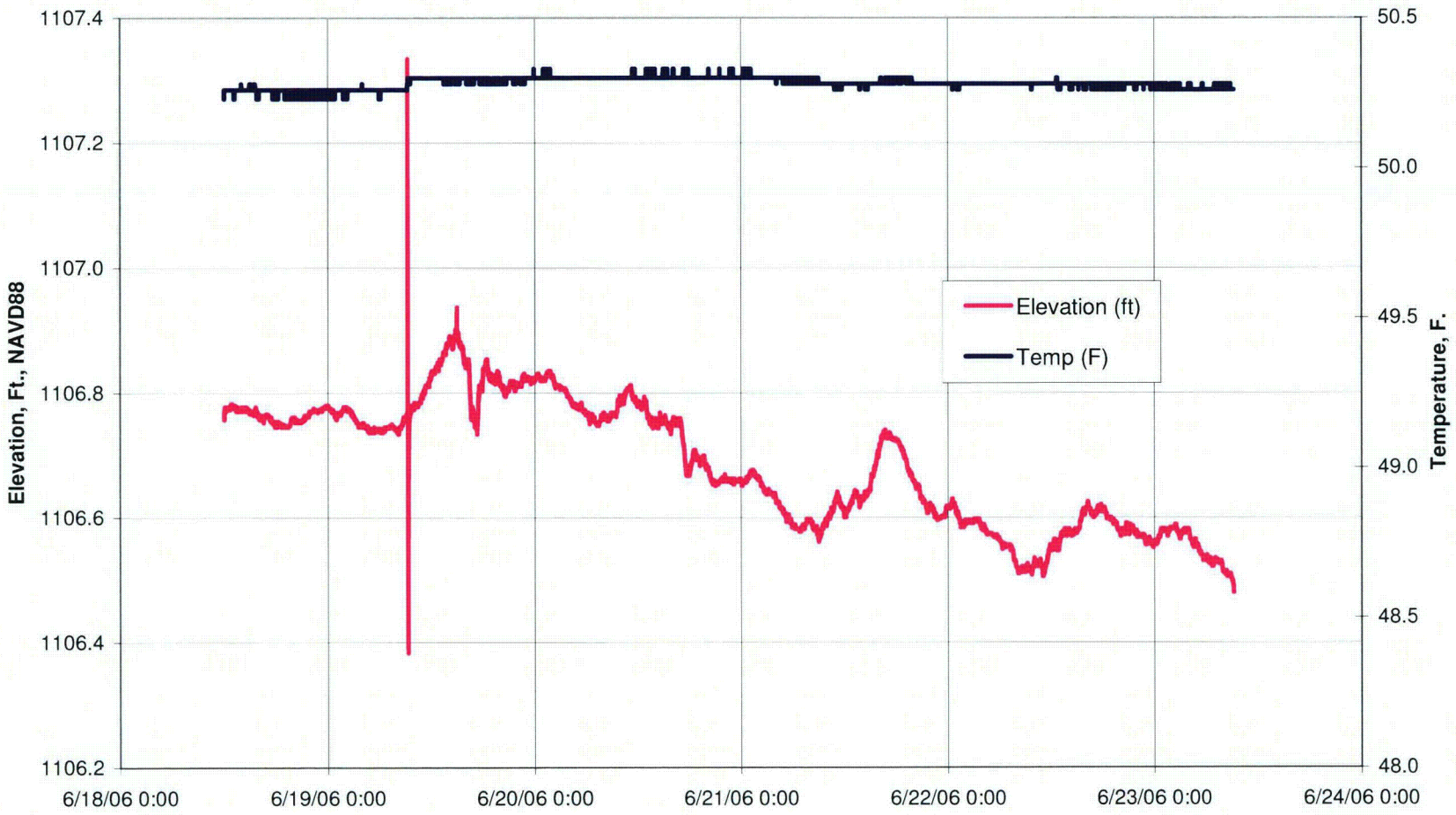


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

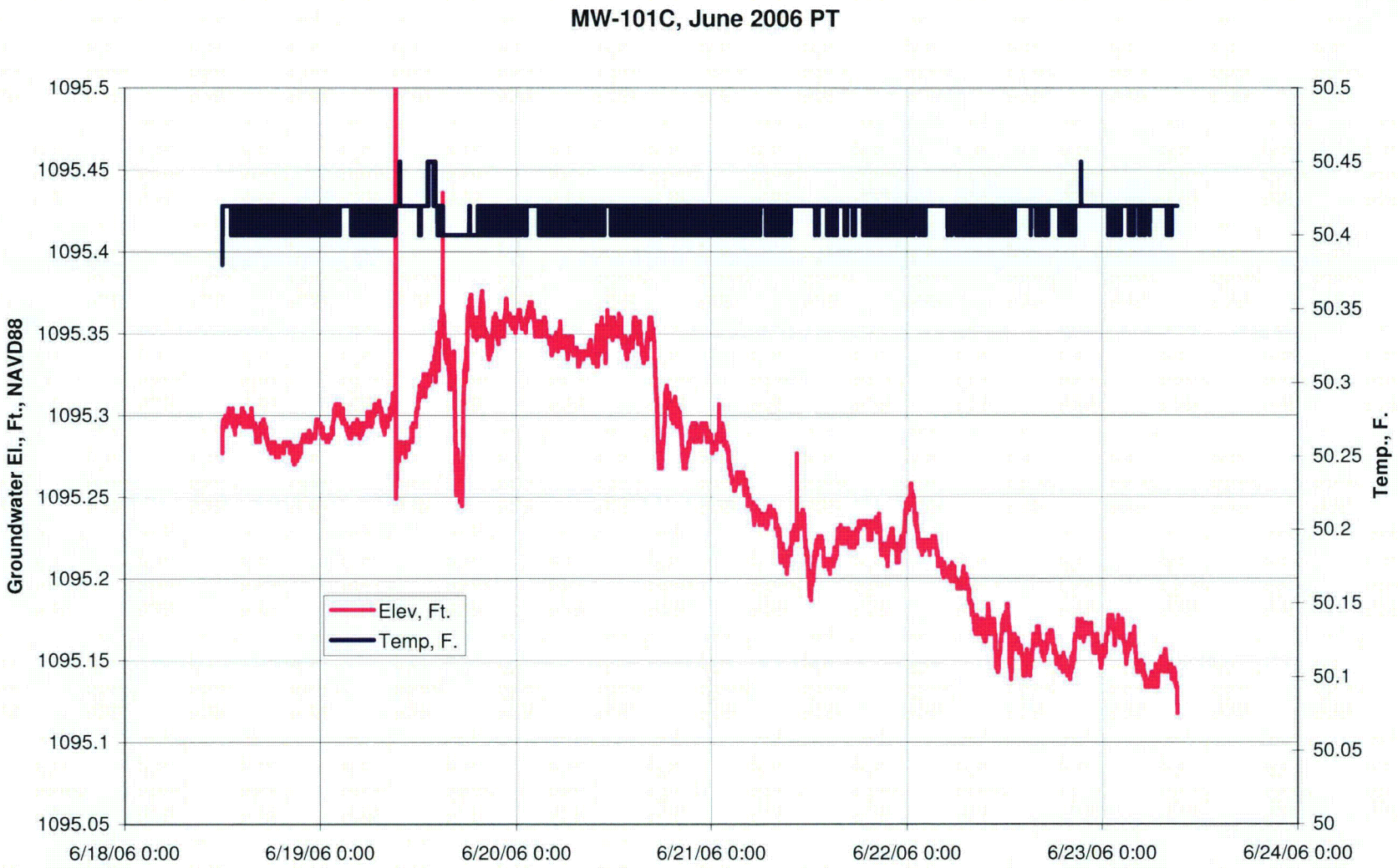
MW-101B, June 2006 PT



Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

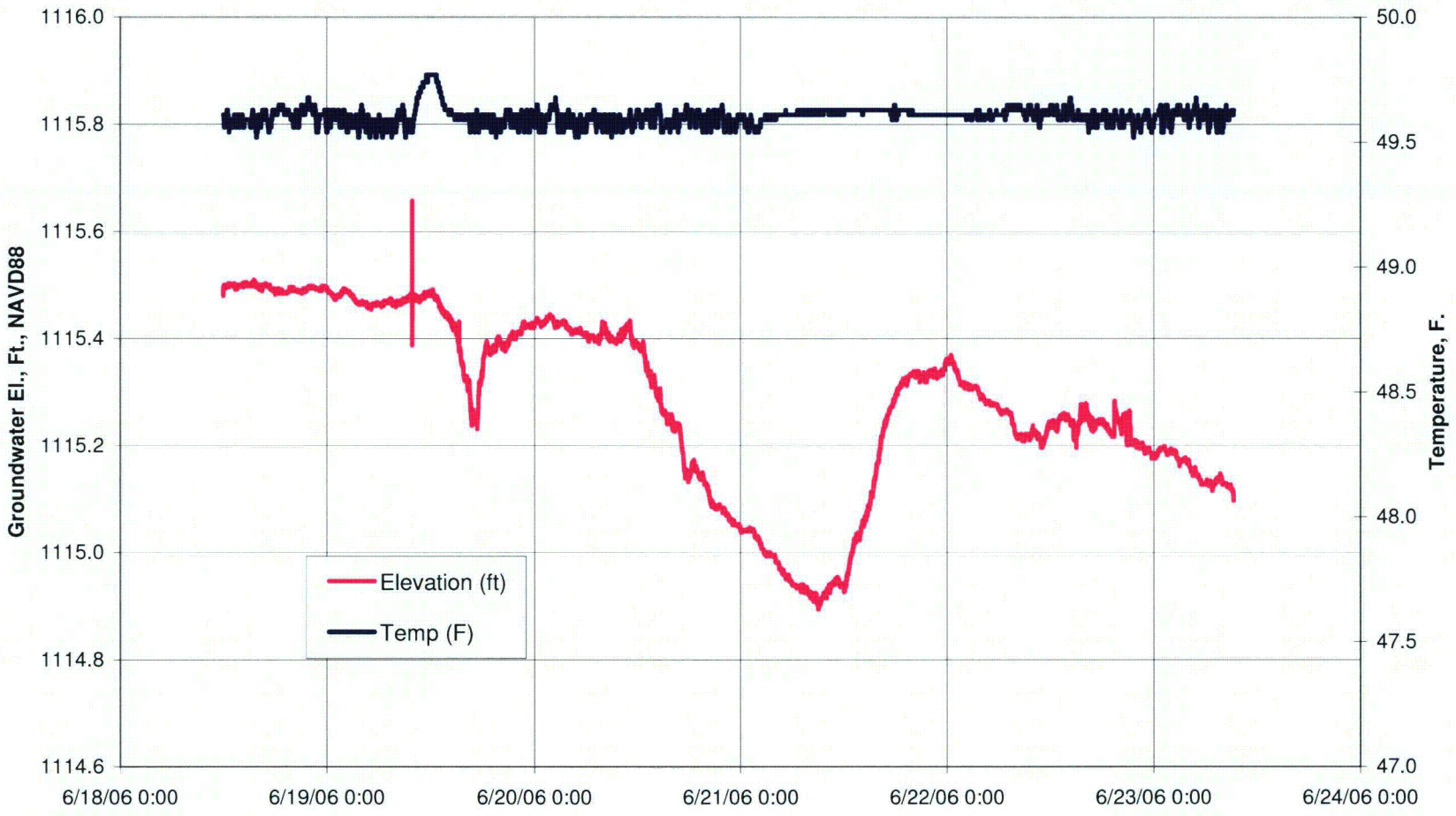


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-102A, June 2006 PT

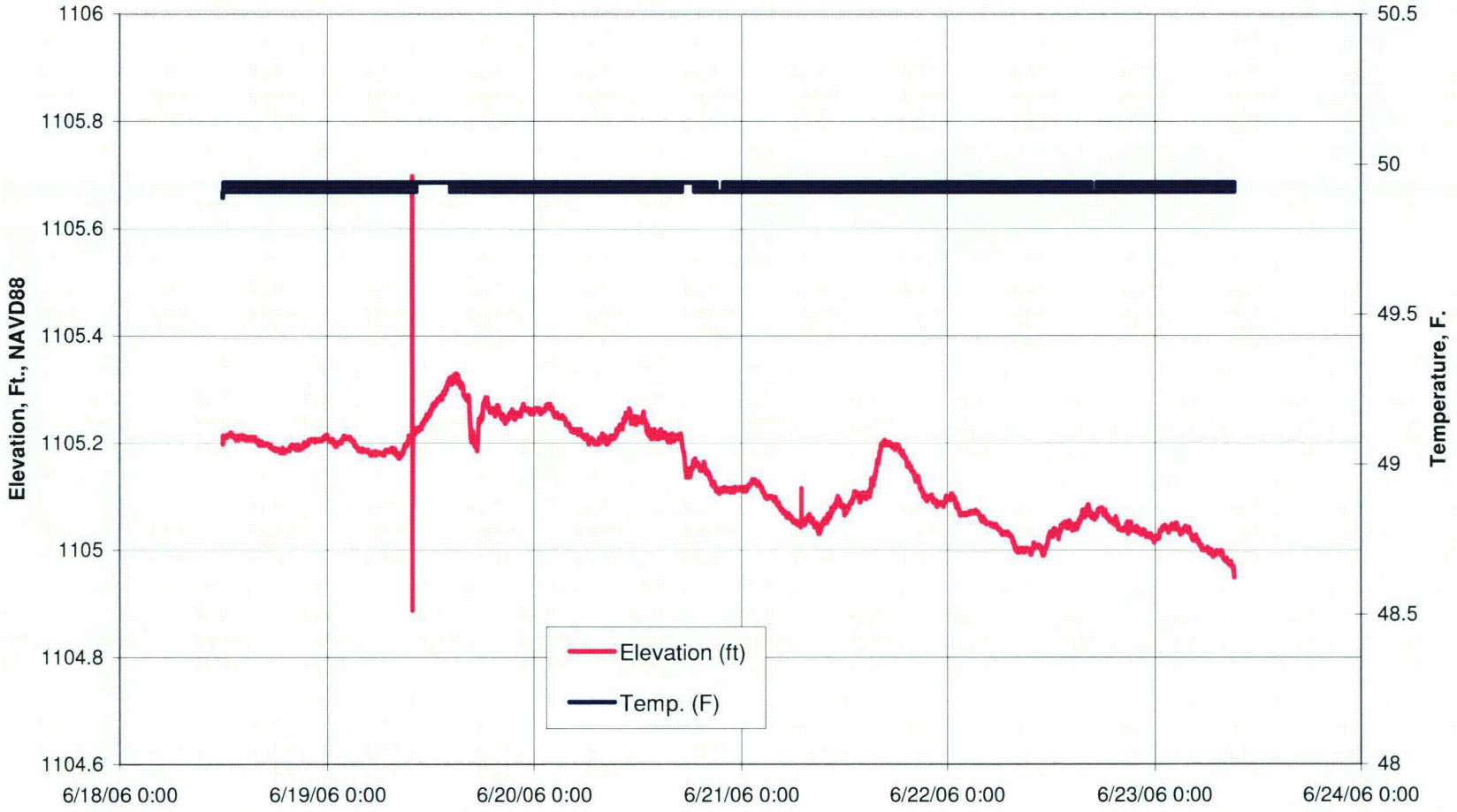


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-102B, June 2006 PT

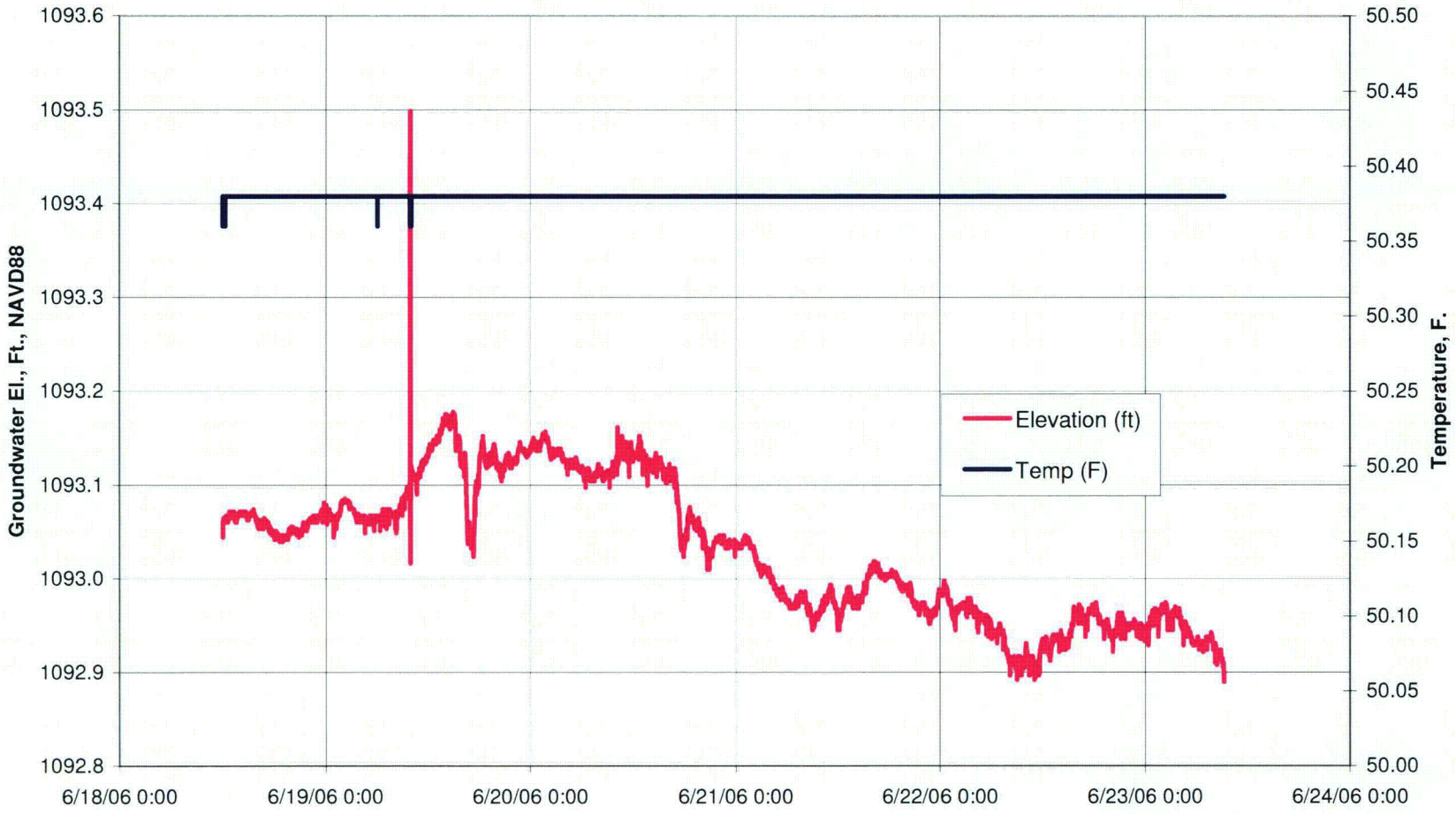


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-102C, June 2006 PT

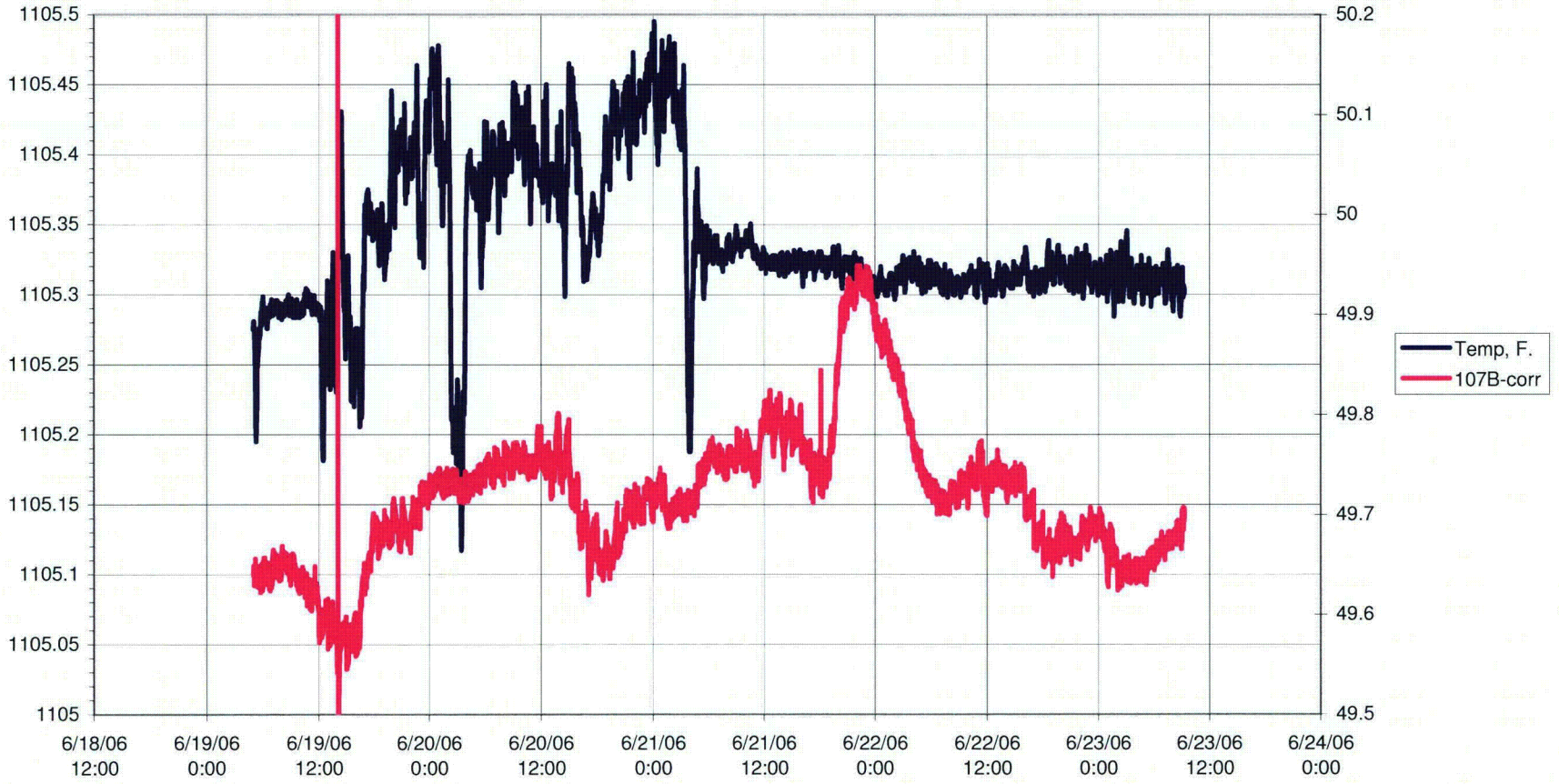


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

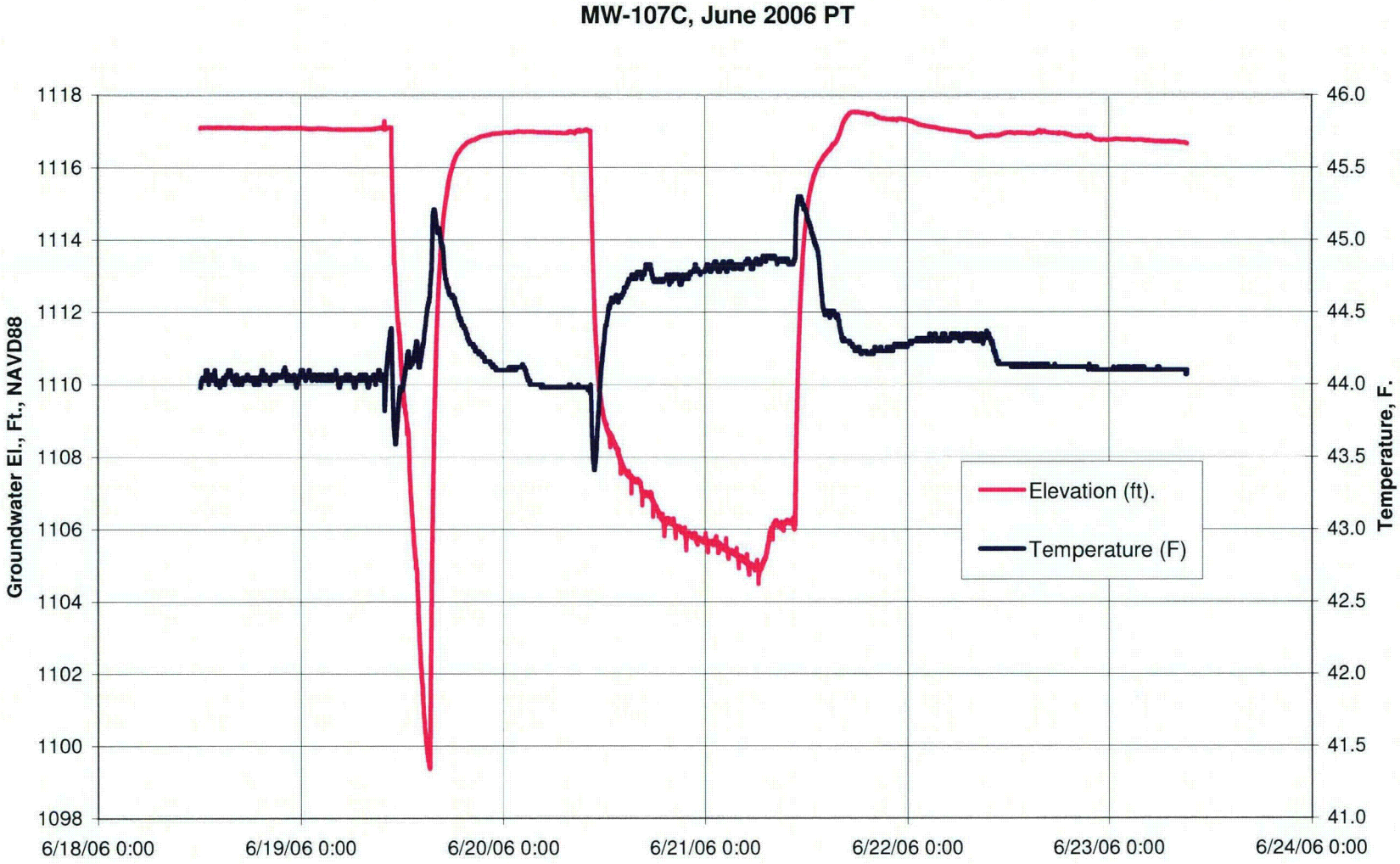
MW-107B, June 2006 PT at YNPS



Yankee Nuclear Power Station
Rowe, MA

10/5/2006

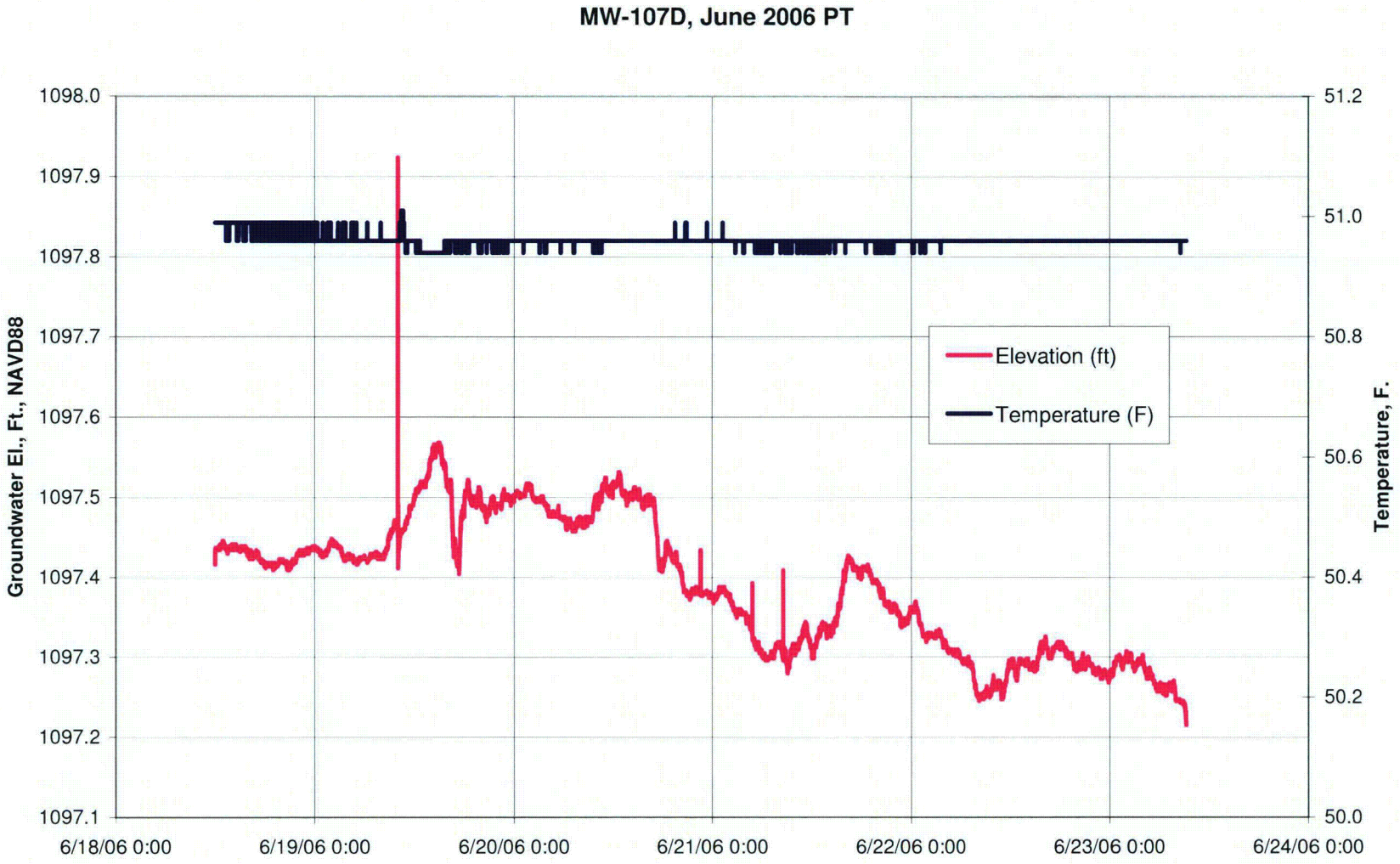
Appendix



Yankee Nuclear Power Station
Rowe, MA

8/30/2006

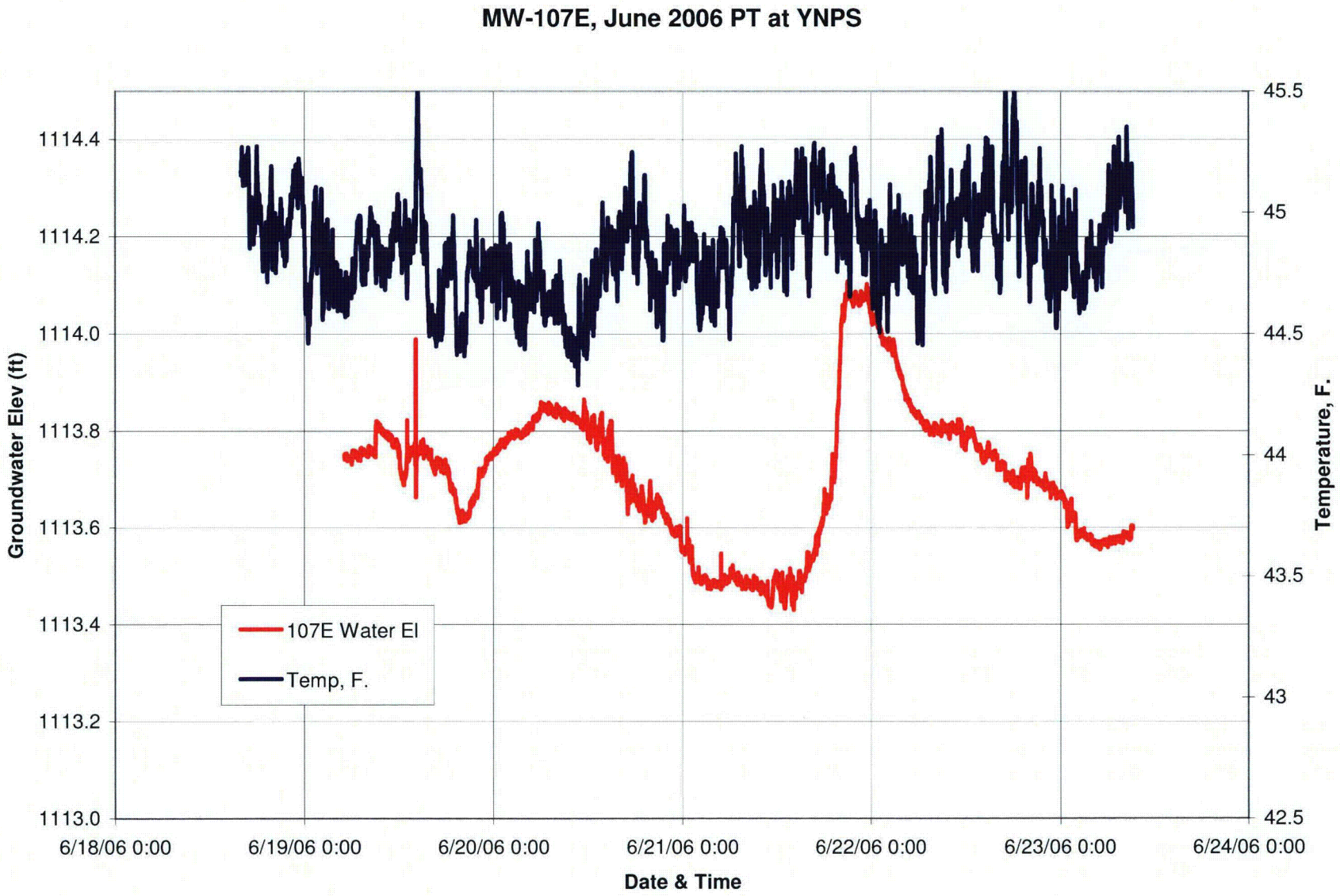
Appendix



Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

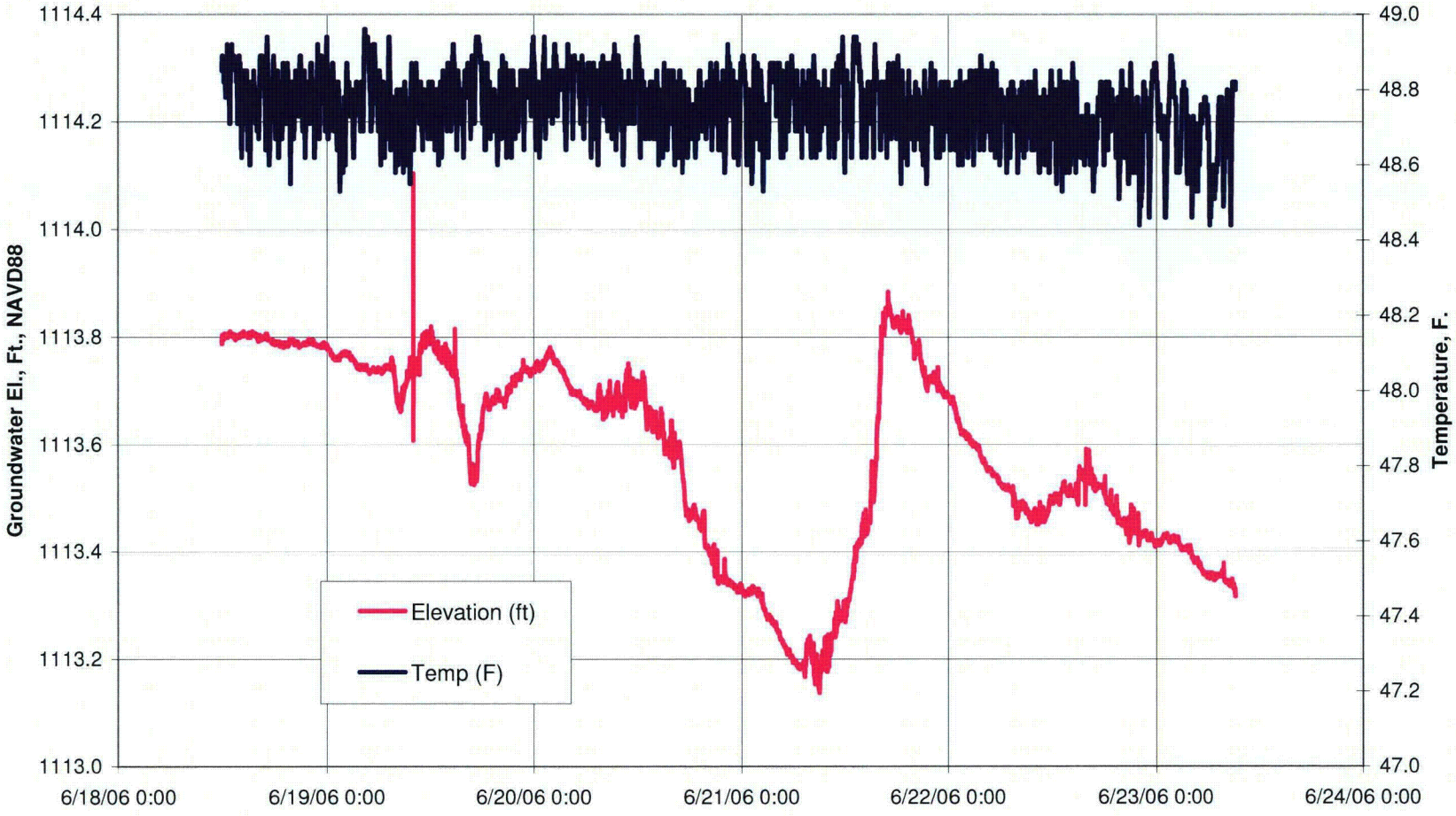


Yankee Nuclear Power Station
Rowe, MA

10/5/2006

Appendix

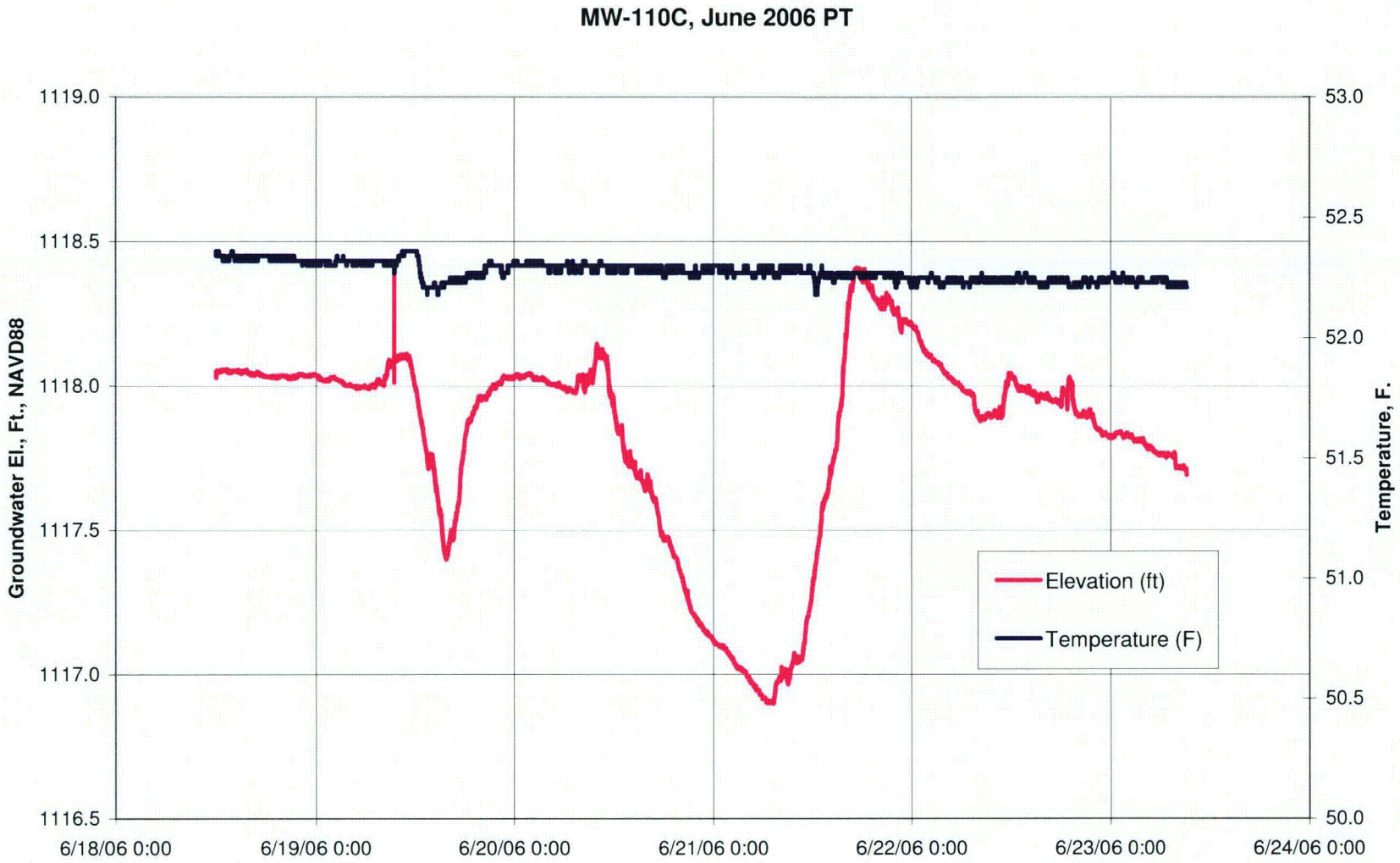
MW-107F, June 2006 PT



Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

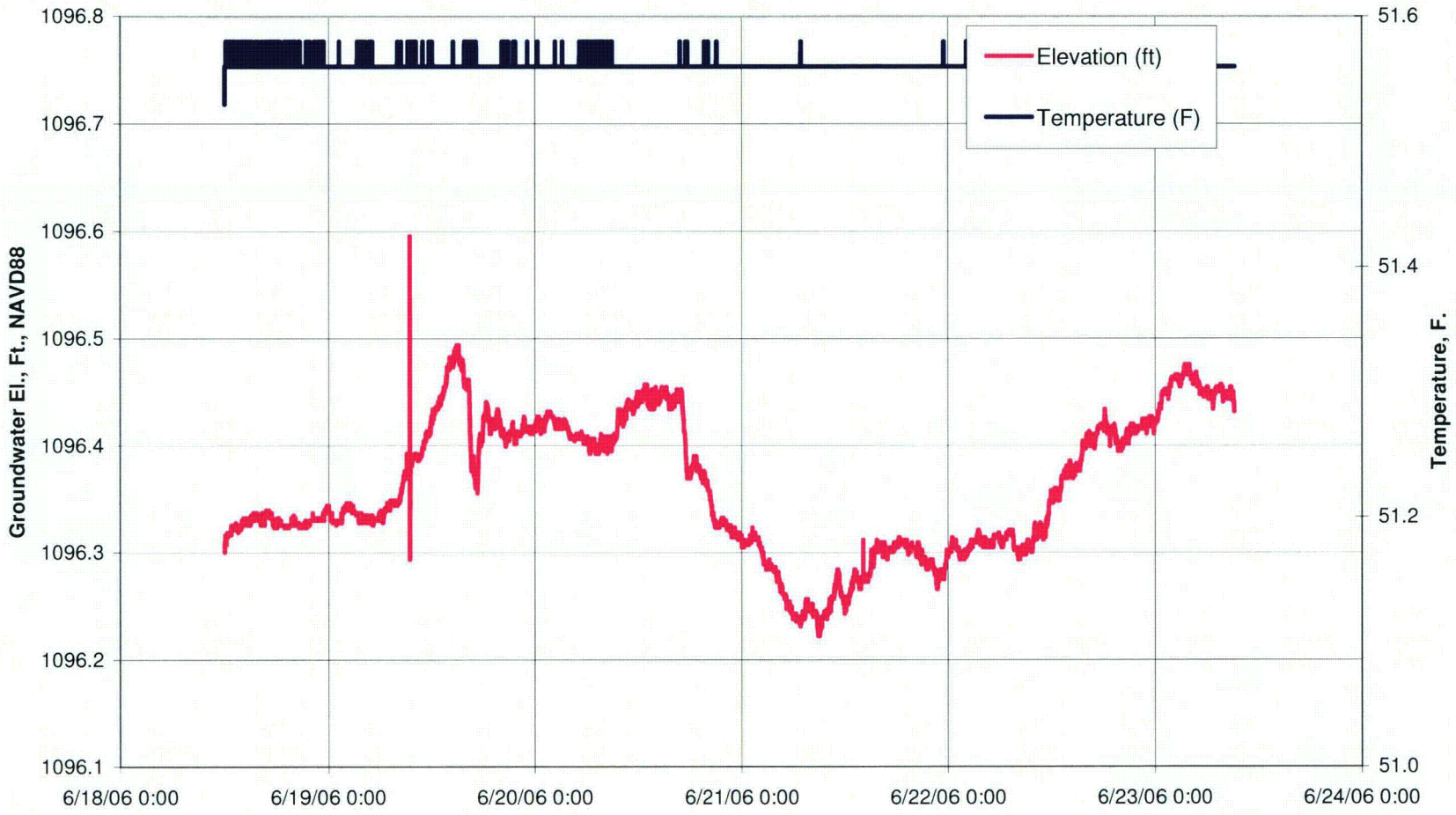


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

MW-110D, June 2006 PT

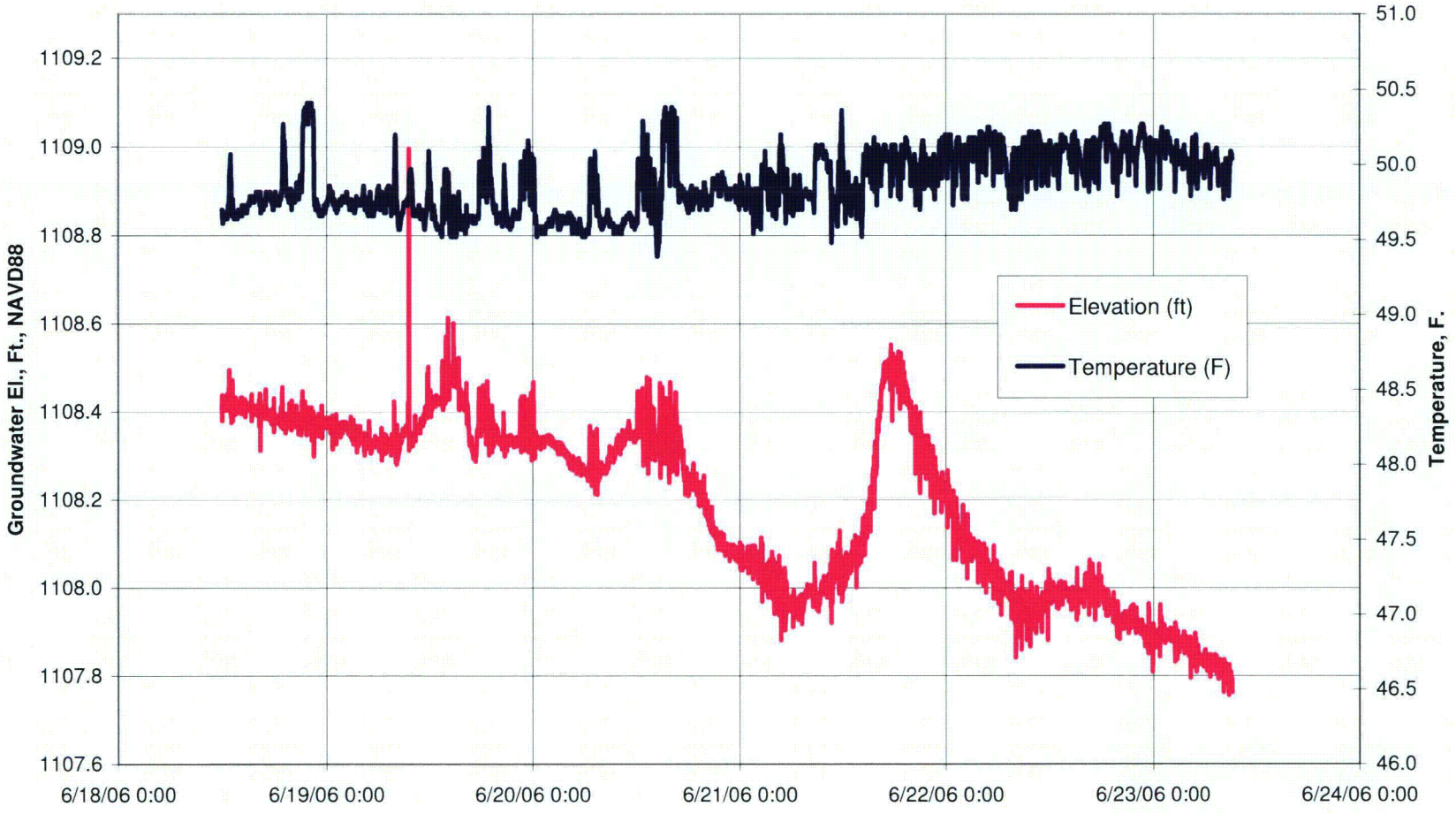


Yankee Nuclear Power Station
Rowe, MA

8/30/2006

Appendix

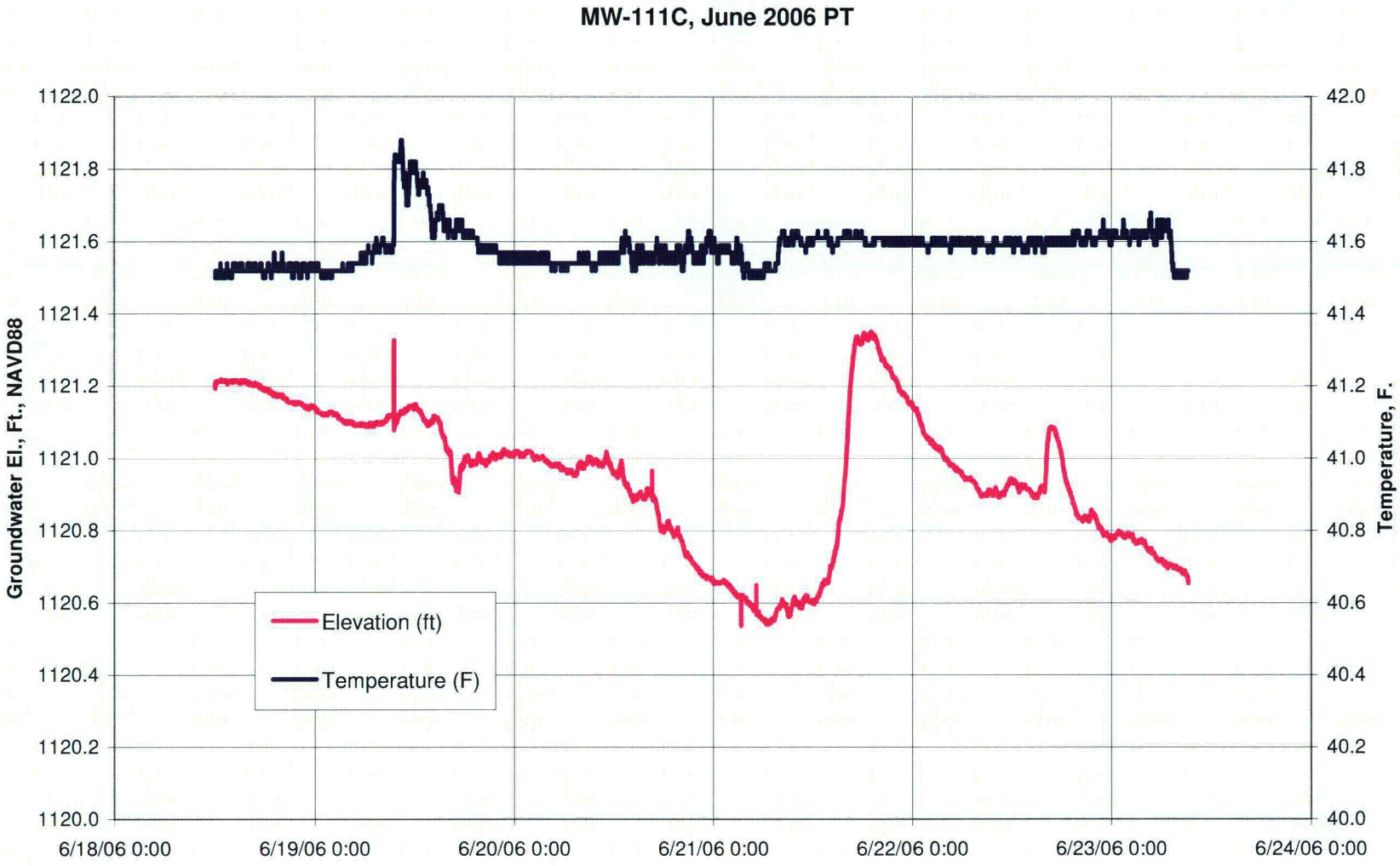
MW-111B, June 2006 PT



Yankee Nuclear Power Station
Rowe, MA

8/30/2006

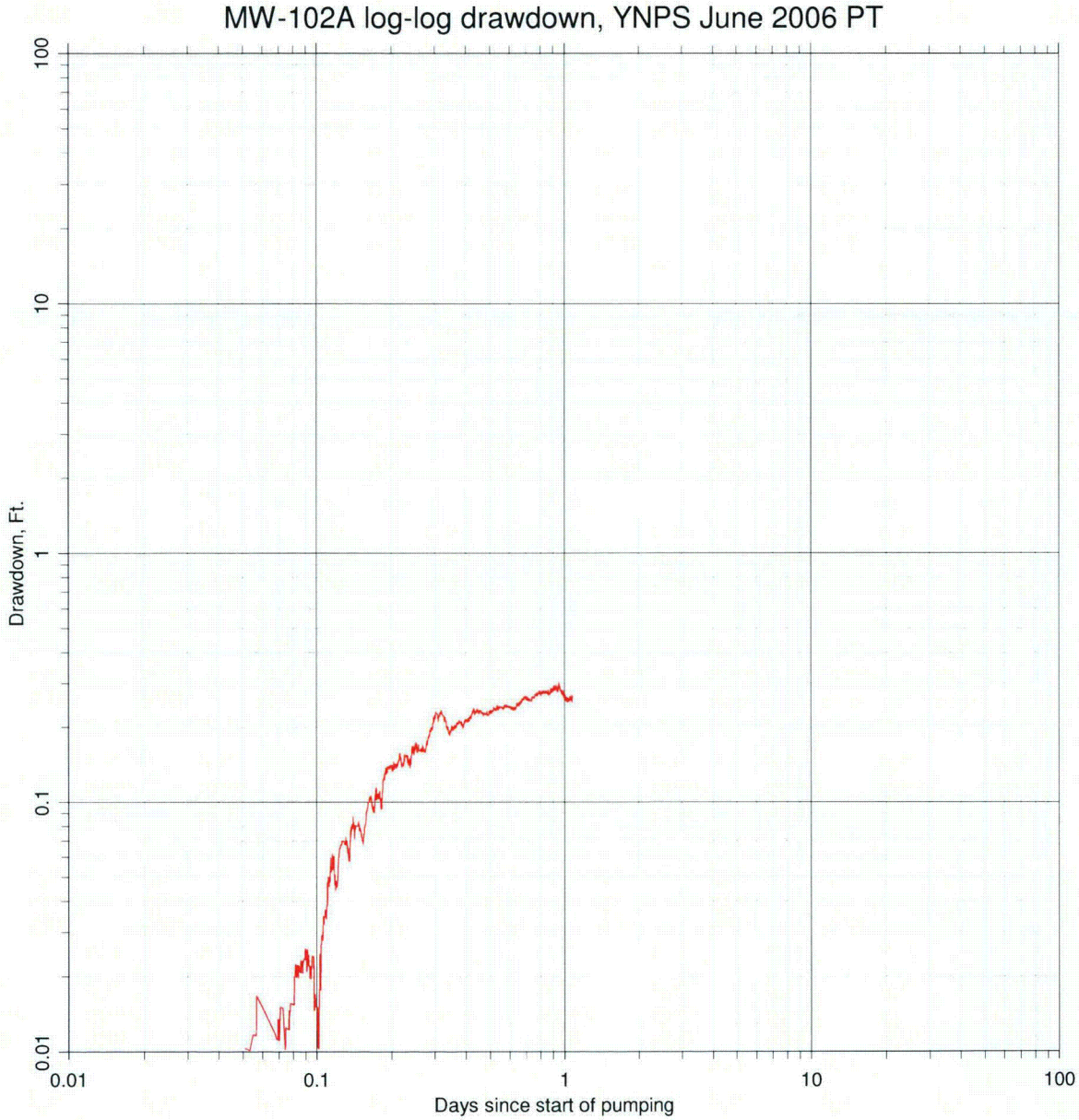
Appendix

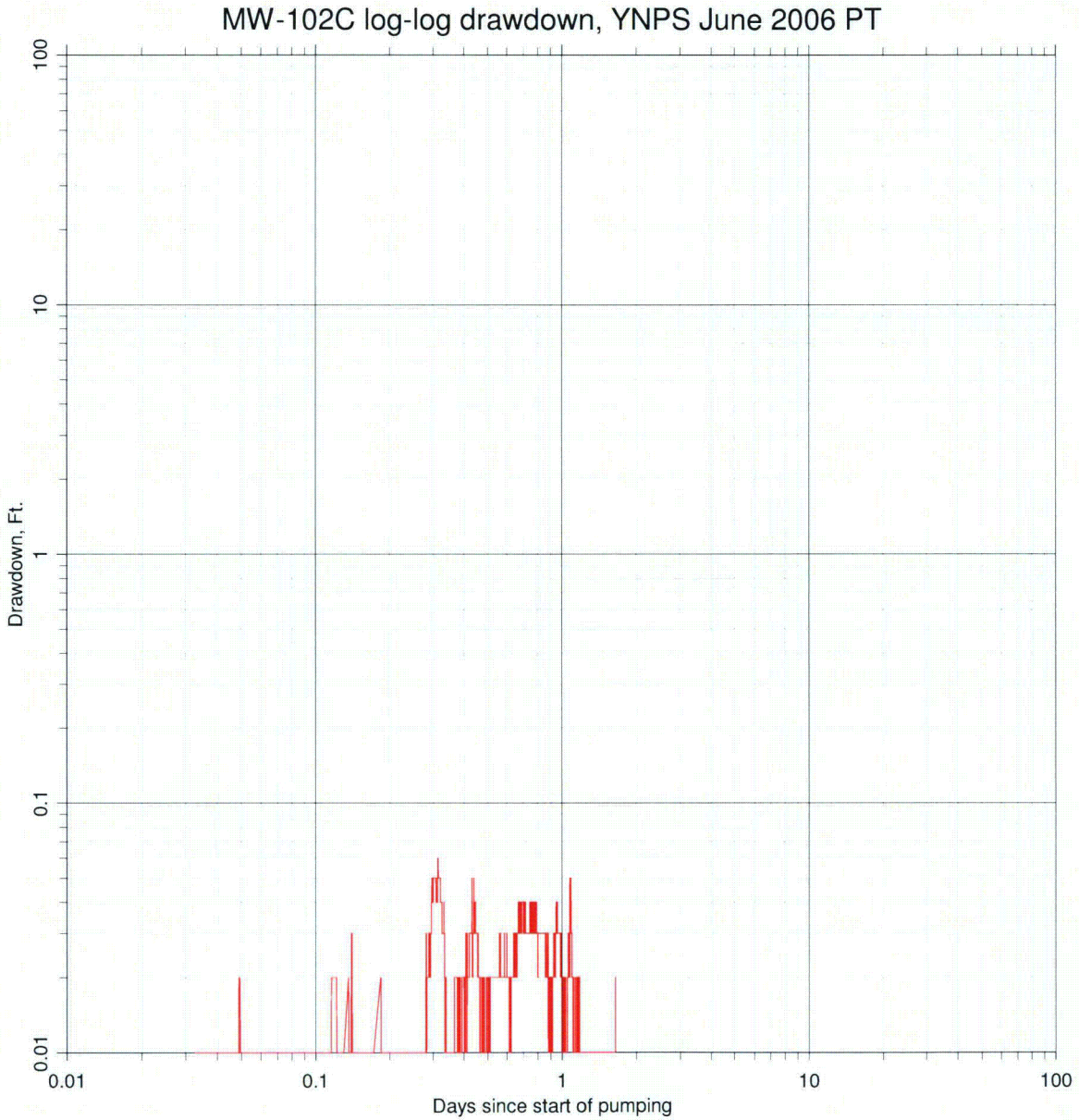


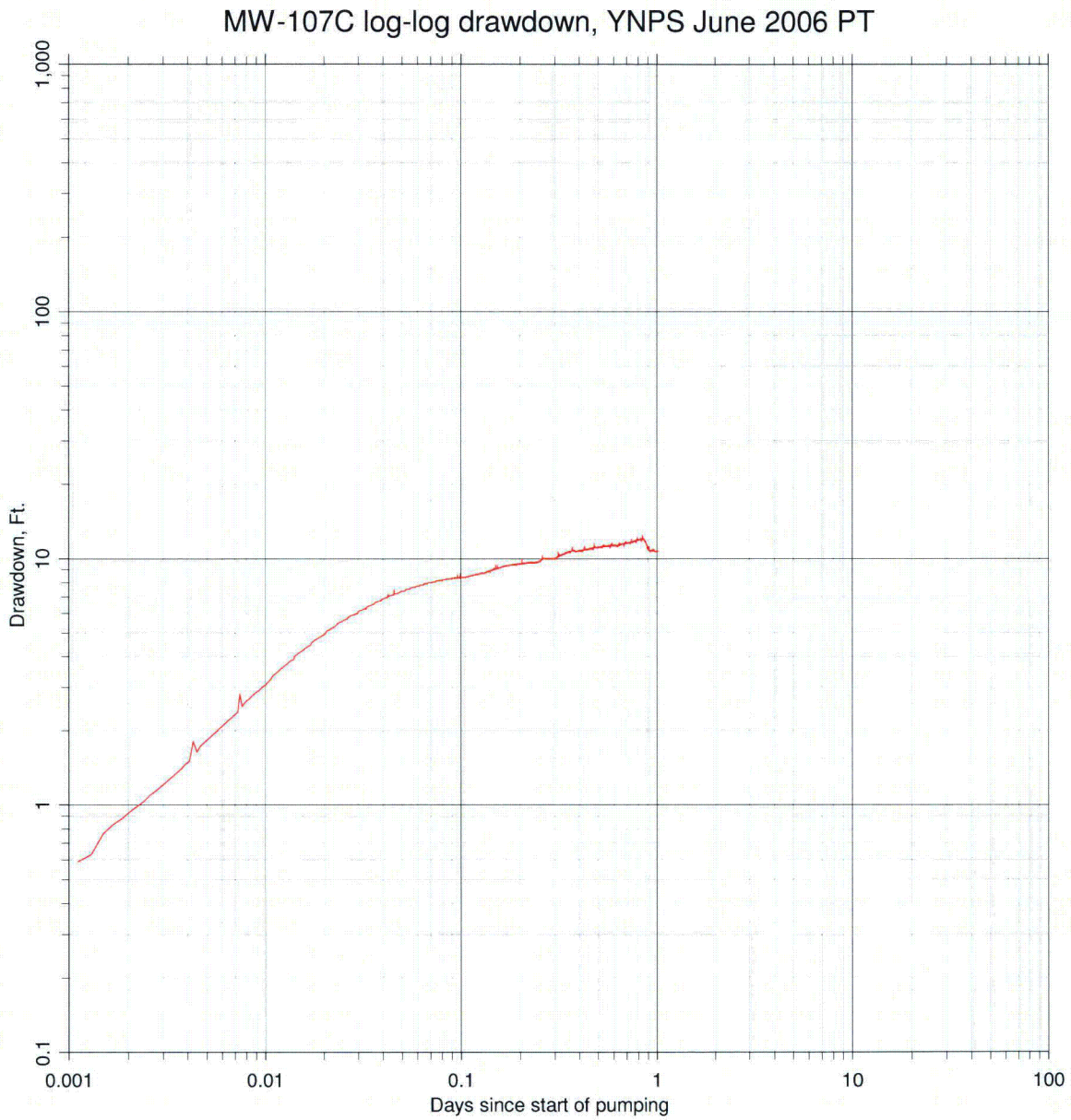
Yankee Nuclear Power Station
Rowe, MA

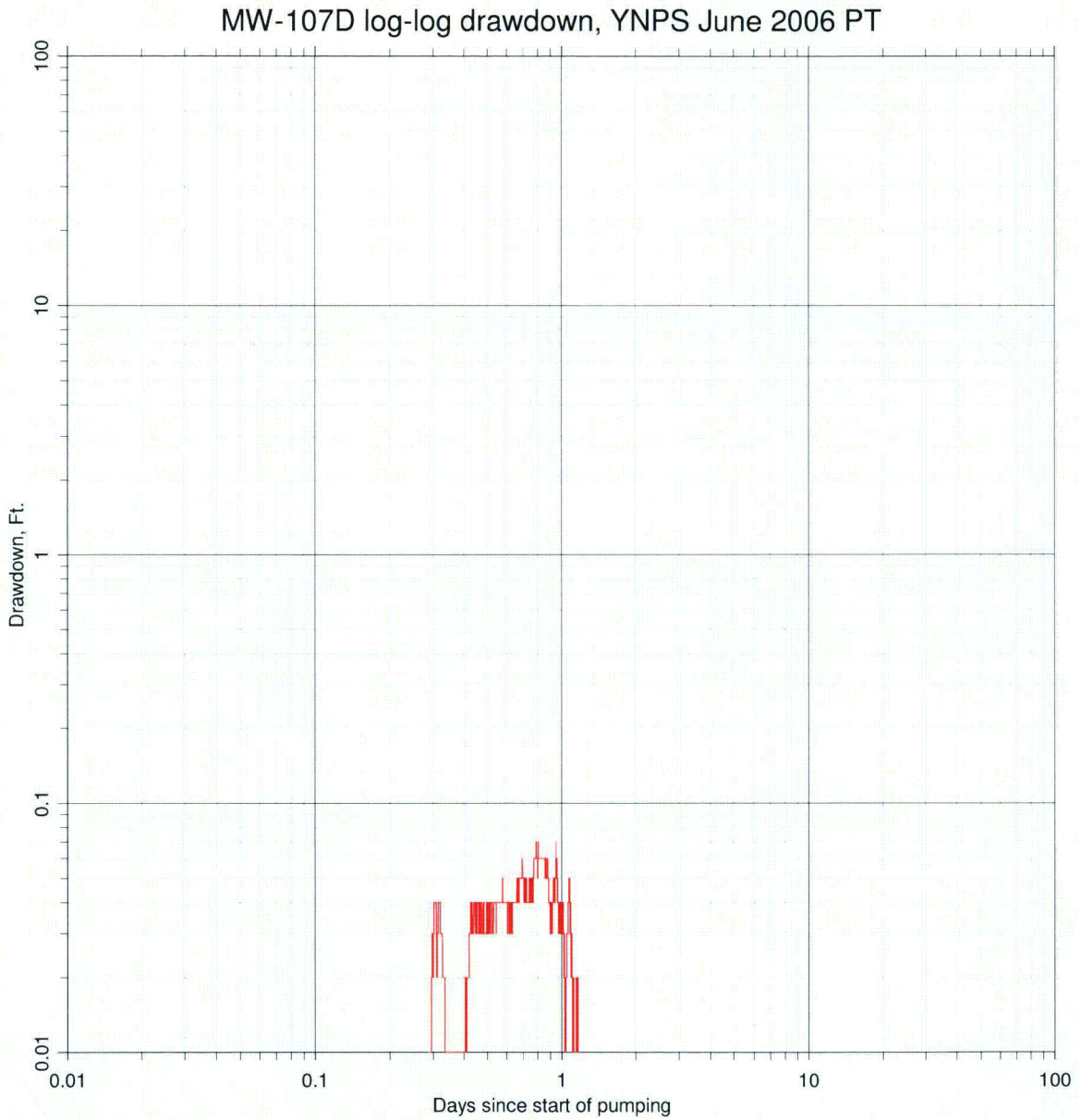
10/5/2006

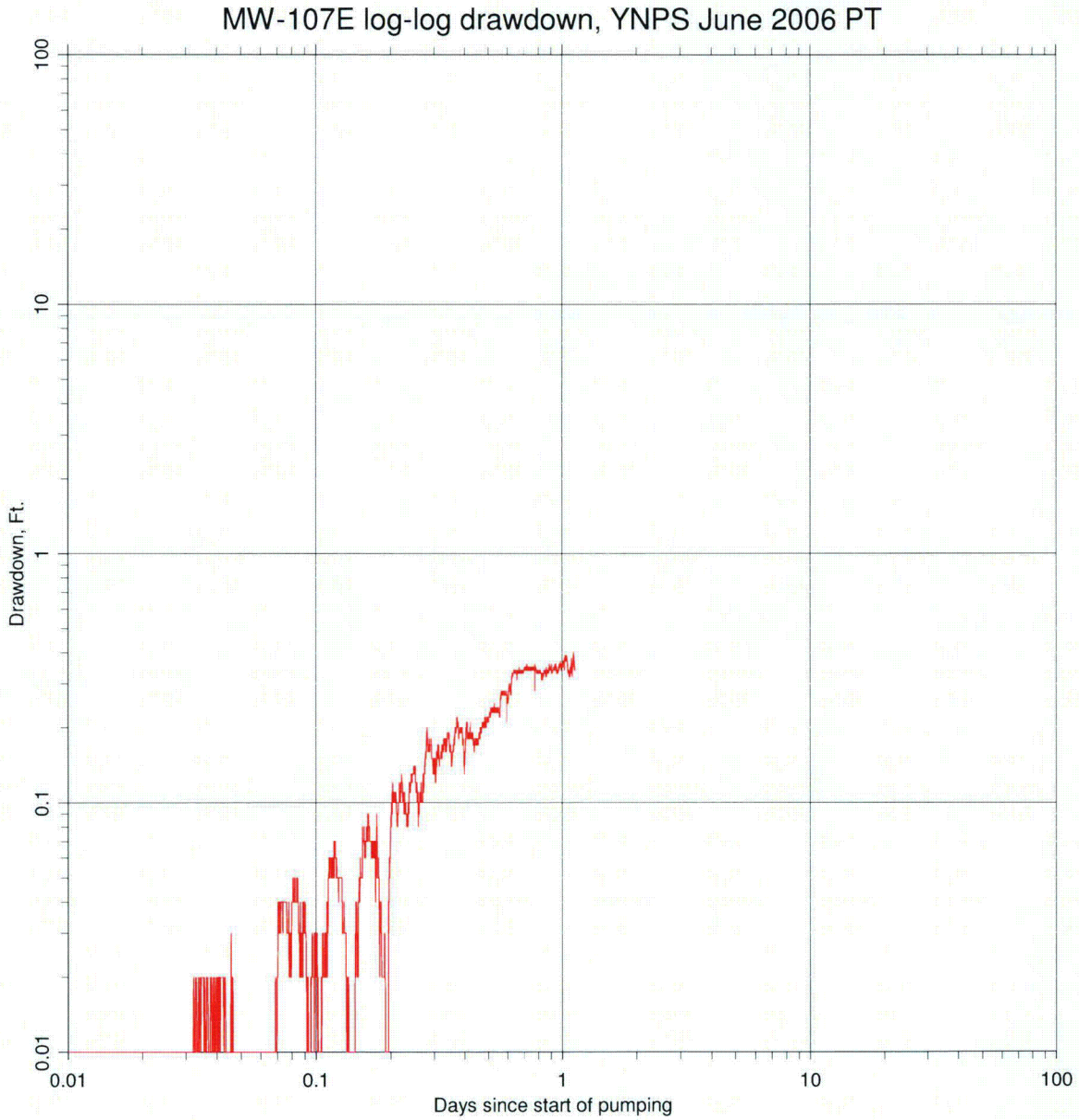
Appendix

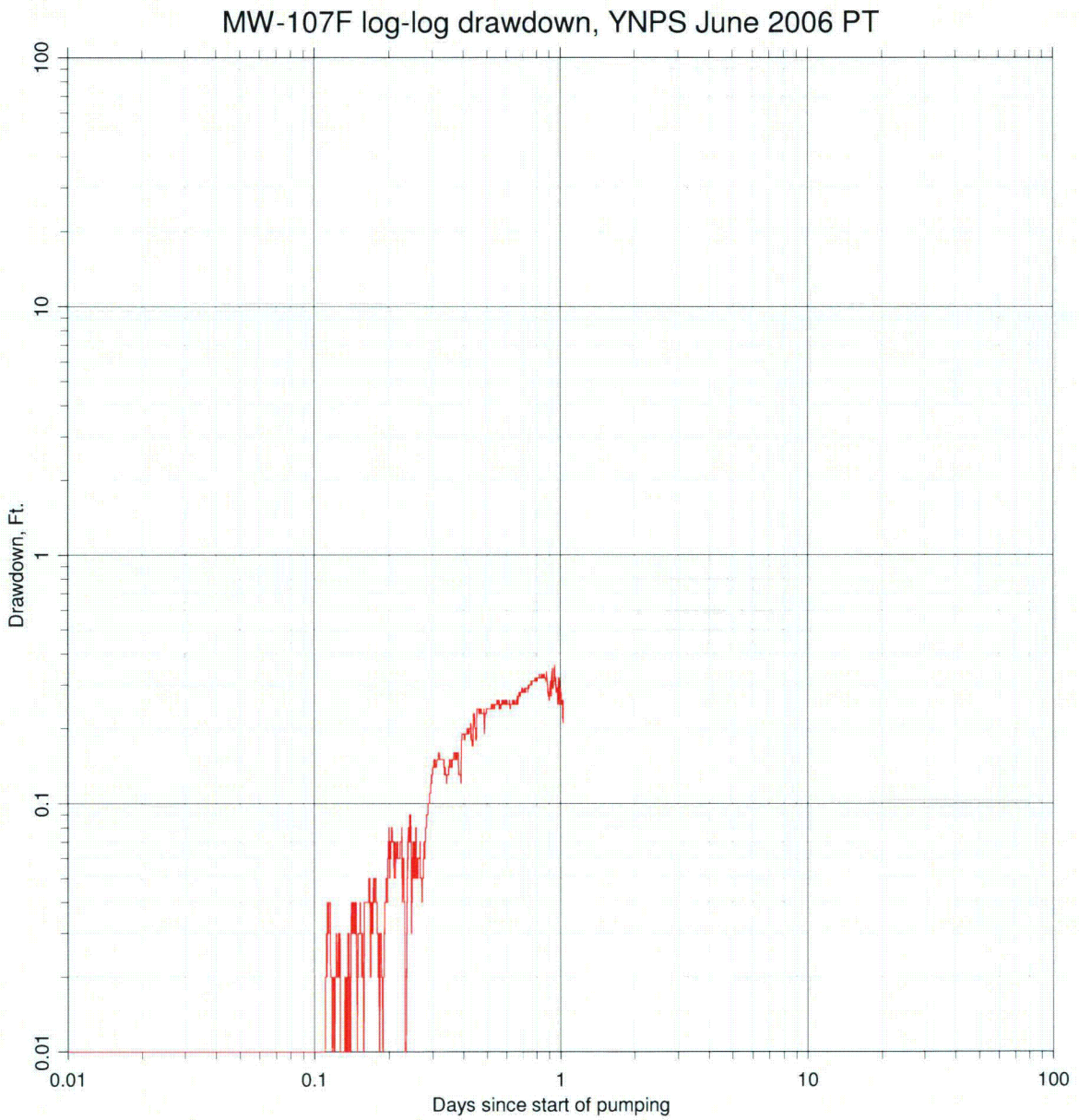

MW-102A log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
100
10
1
0.1
0.01
0.01
0.1
1
10
100
Days since start of pumping

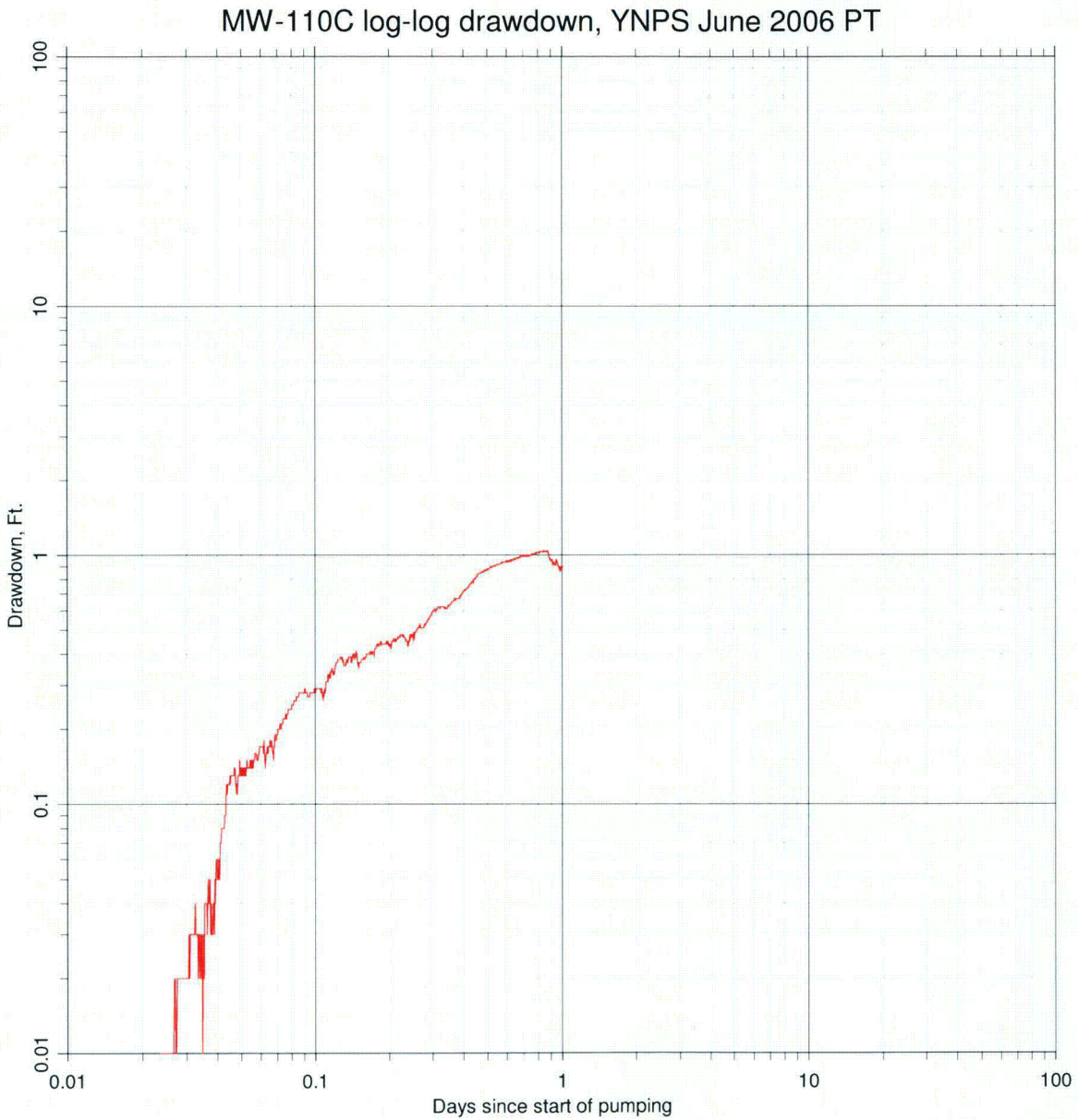

MW-102C log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
100
10
1
0.1
0.01
0.01
0.1
1
10
100
Days since start of pumping

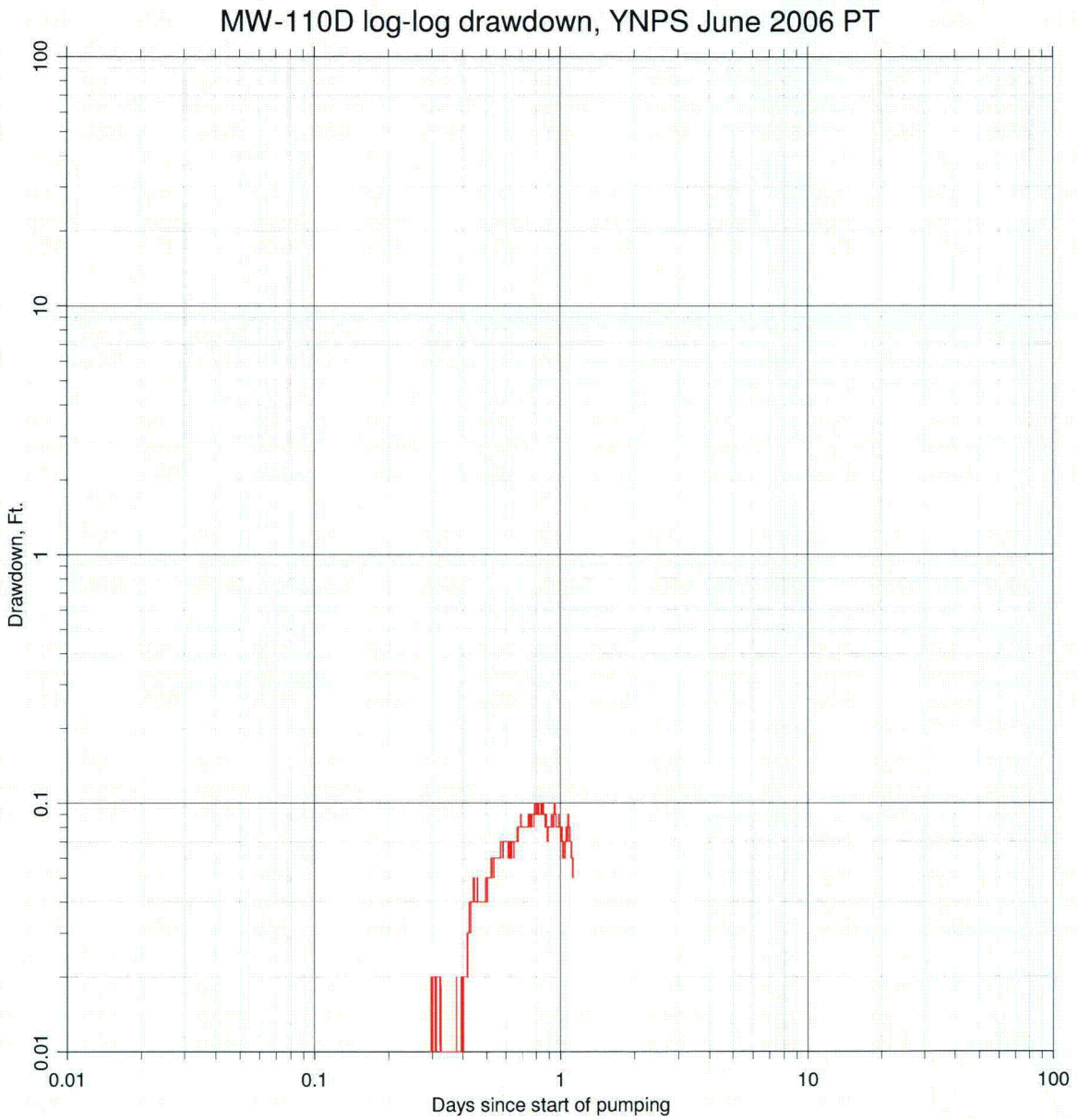

MW-107C log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
1,000
100
10
1
0.1
0.001
0.01
0.1
1
10
100
Days since start of pumping

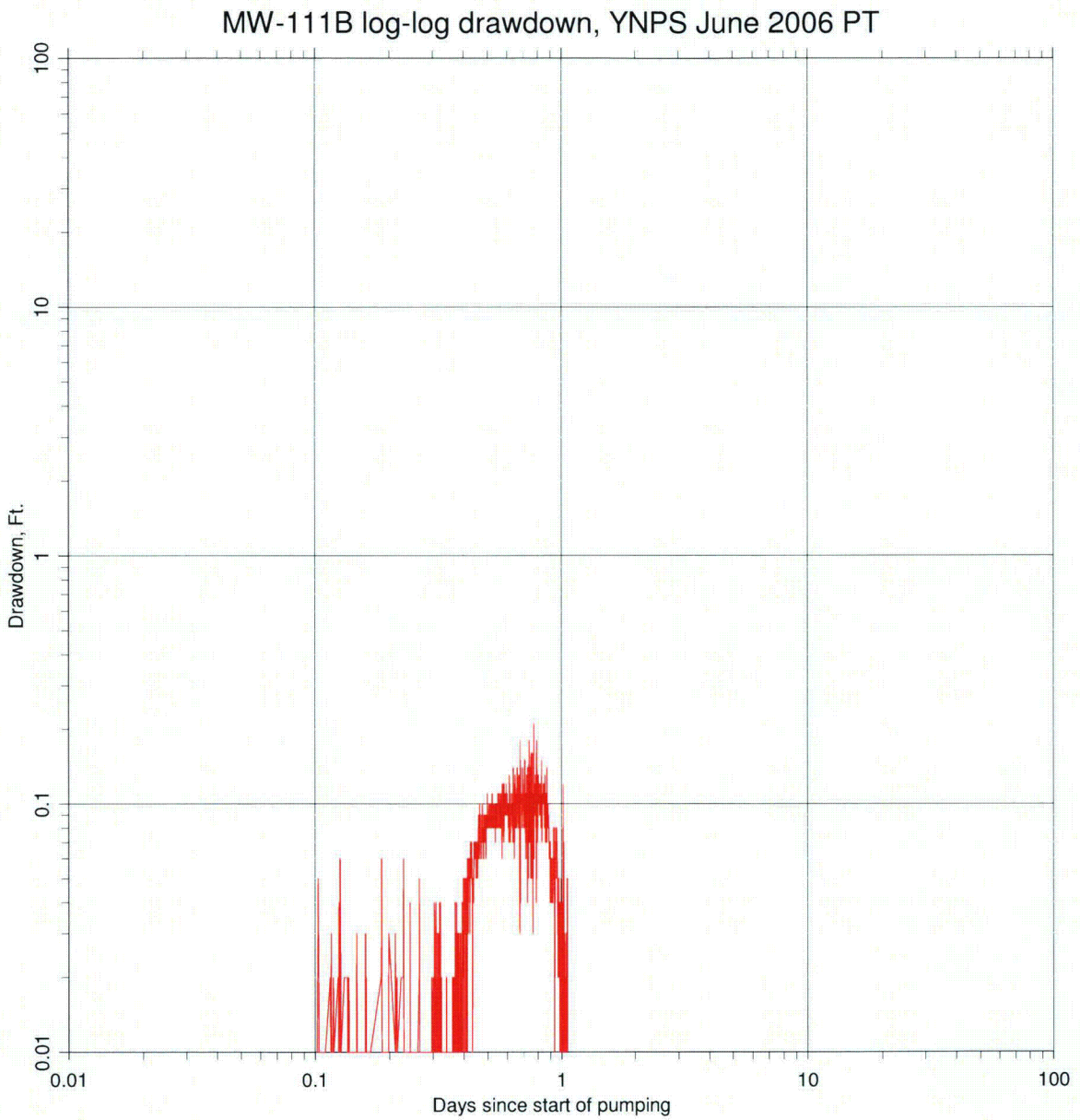

MW-107D log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
100
10
1
0.1
0.01
0.01
0.1
1
10
100
Days since start of pumping

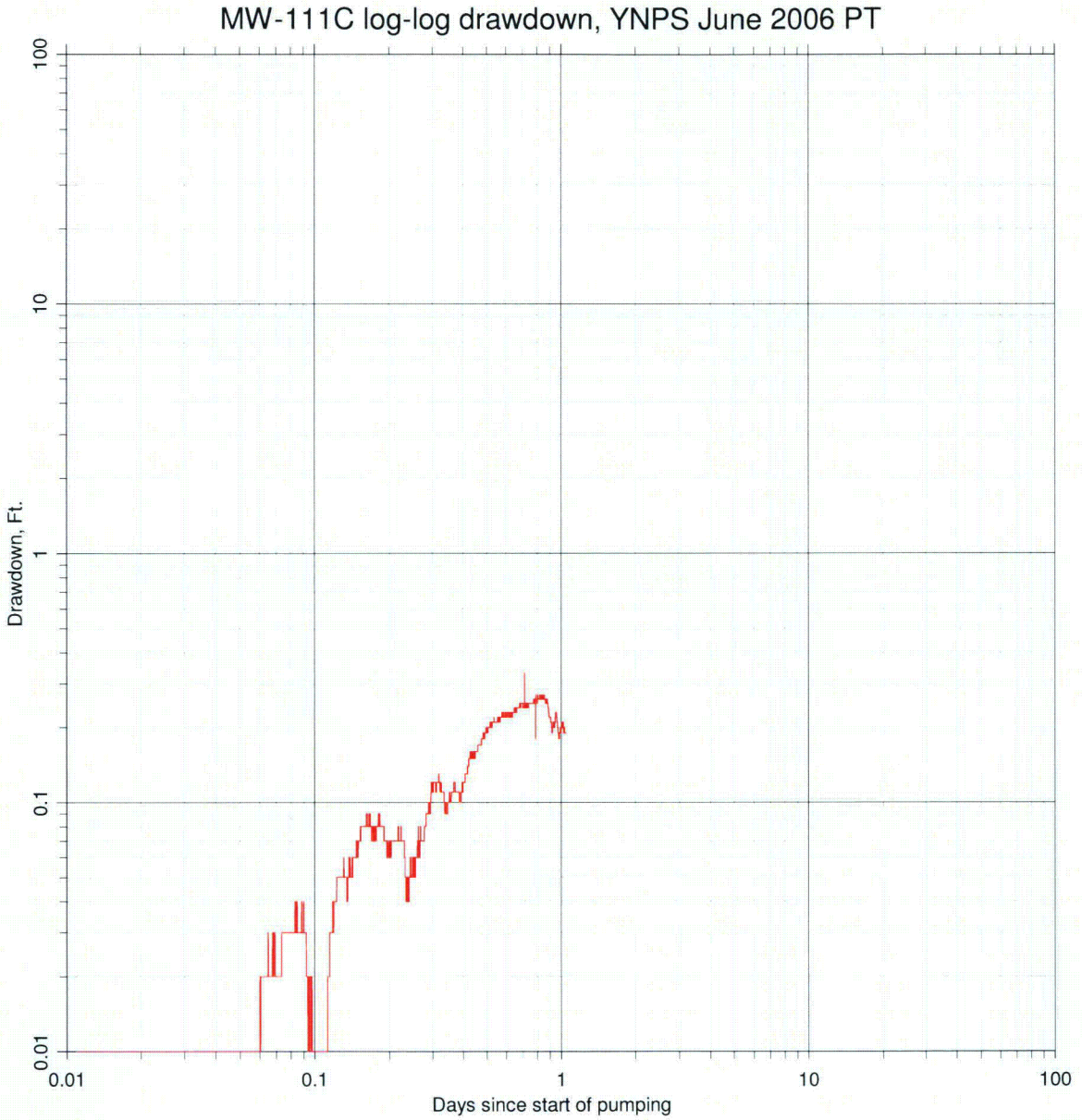

MW-107E log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
100
10
1
0.1
0.01
0.01
0.1
1
10
100
Days since start of pumping


MW-107F log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
100
10
1
0.1
0.01
0.01
0.1
1
10
100
Days since start of pumping


MW-110C log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
100
10
1
0.1
0.01
0.01
0.1
1
10
100
Days since start of pumping

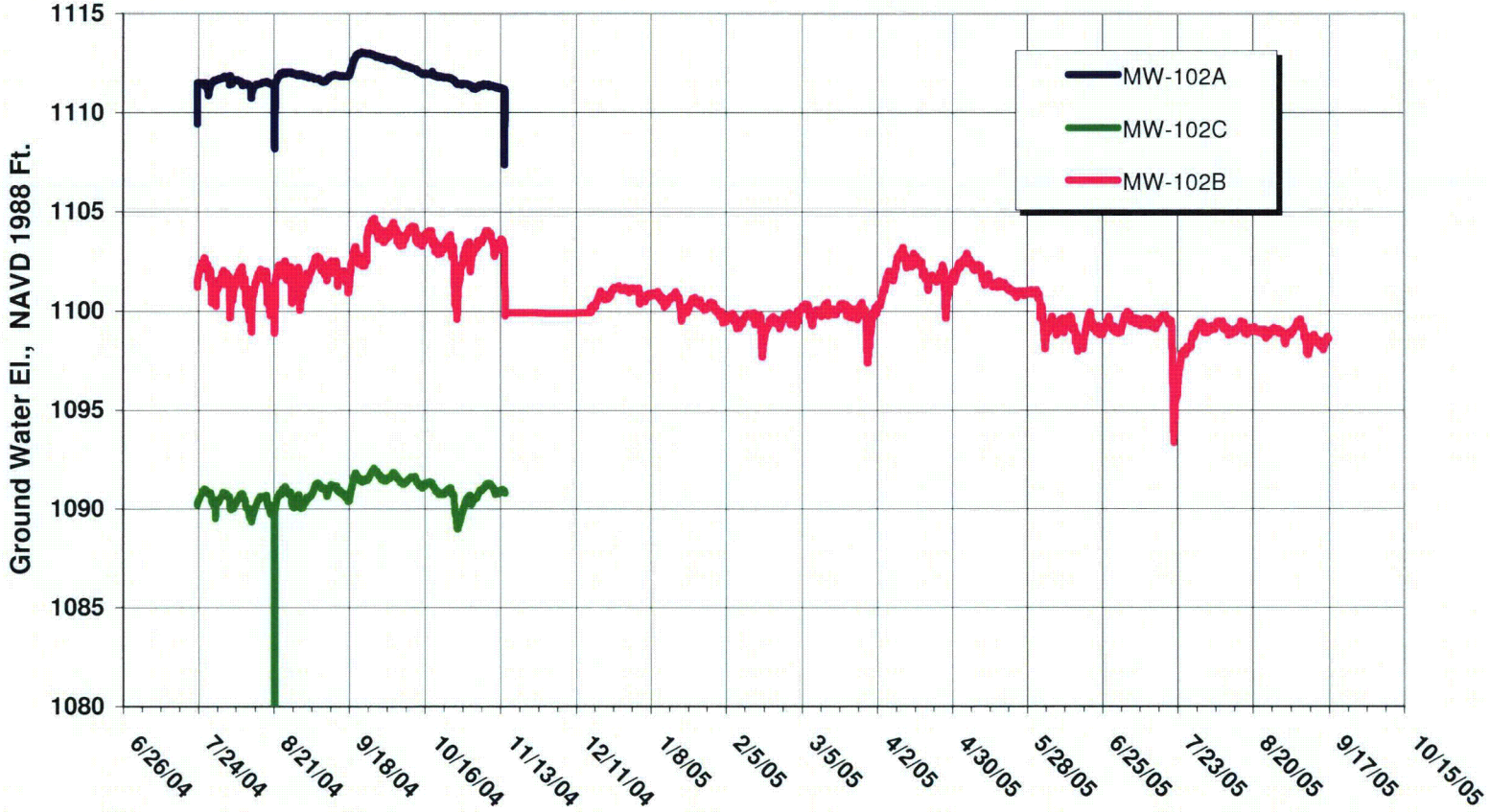

MW-110D log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
100
10
1
0.1
0.01
0.01
0.1
1
10
100
Days since start of pumping


MW-111B log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
100
10
1
0.1
0.01
0.01
0.1
1
10
100
Days since start of pumping


MW-111C log-log drawdown, YNPS June 2006 PT
Drawdown, Ft.
100
10
1
0.1
0.01
0.01
0.1
1
10
100
Days since start of pumping

Appendix C
Hydrographs Showing Vertical Groundwater Gradients in Selected Monitoring Wells

MW-102 Vertical Gradients

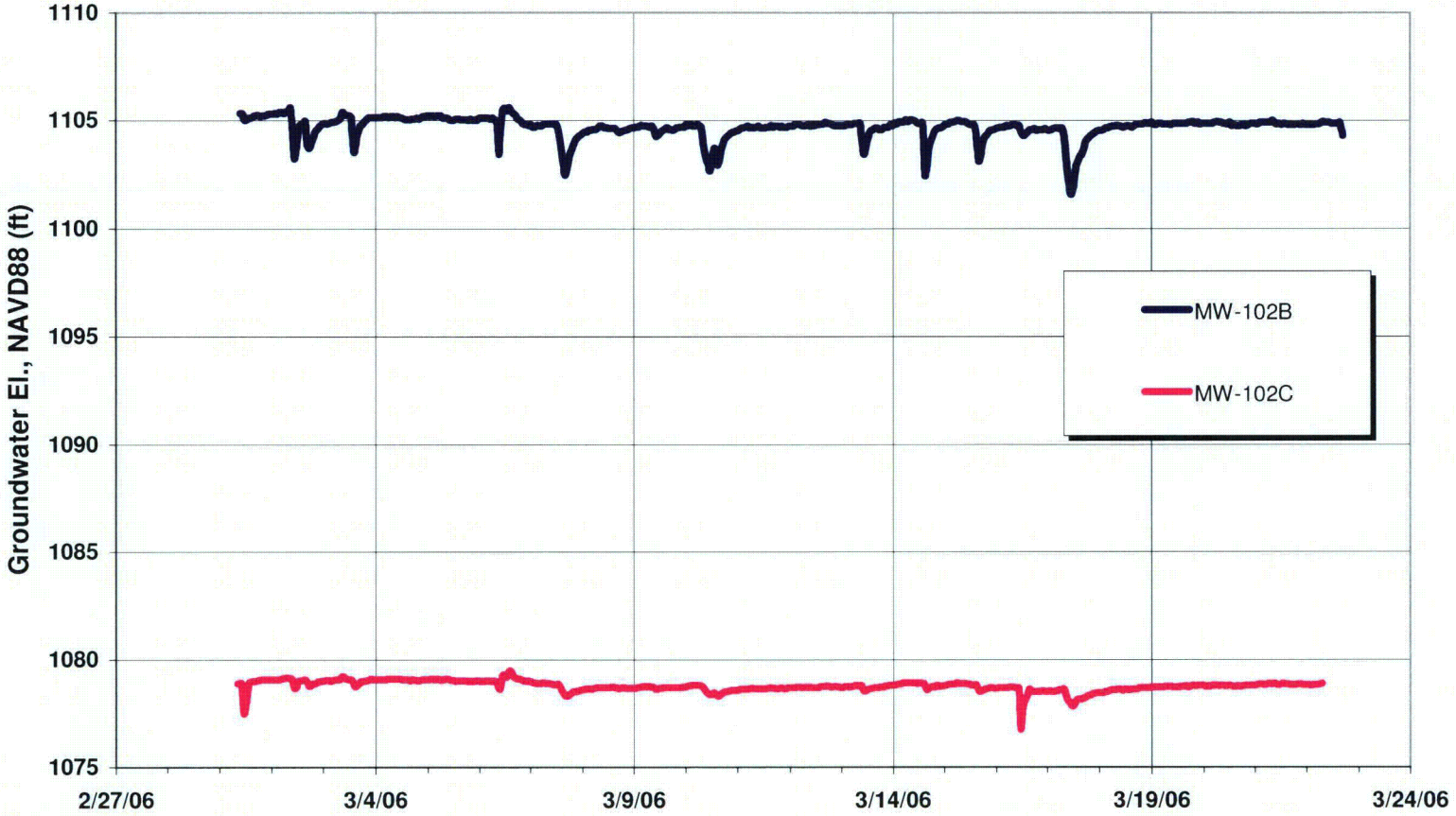


Yankee Nuclear Power Station
Rowe, MA

8/31/2006

Appendix

MW-102 Vertical Gradients

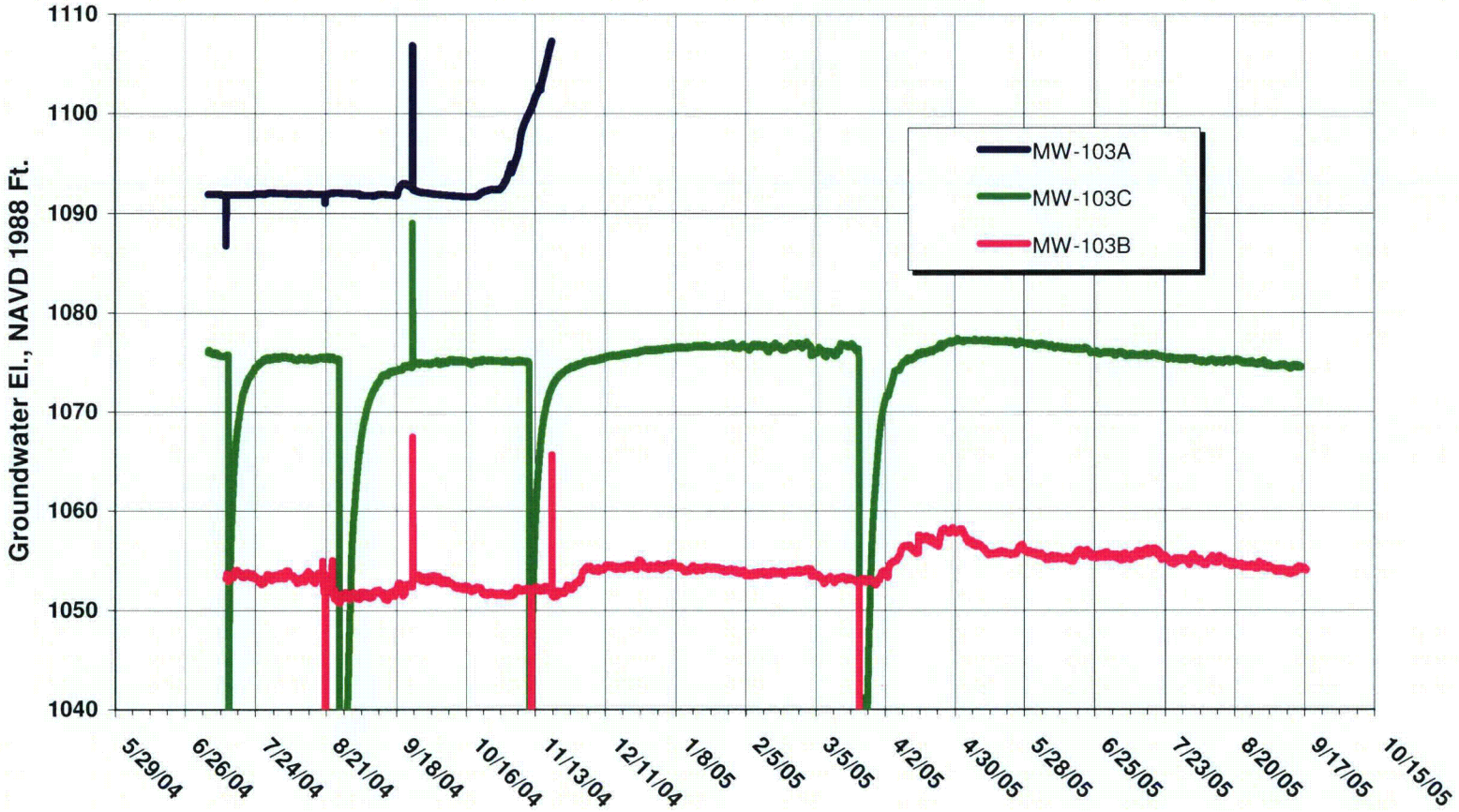


Yankee Nuclear Power Station
Rowe, MA

8/31/2006

Appendix

MW-103 Vertical Gradients

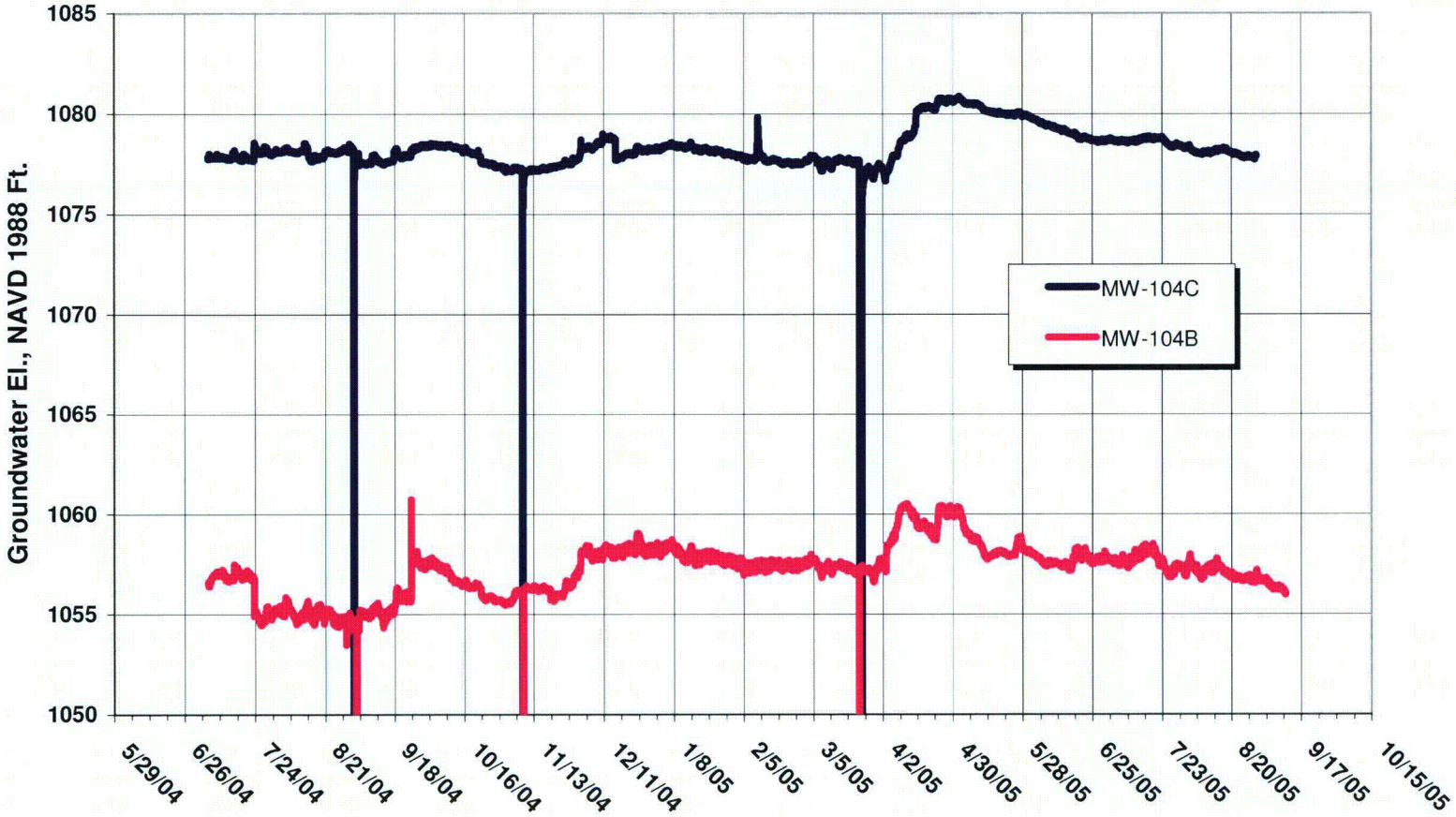


Yankee Nuclear Power Station
Rowe, MA

8/31/2006

Appendix

MW-104 Vertical Gradients



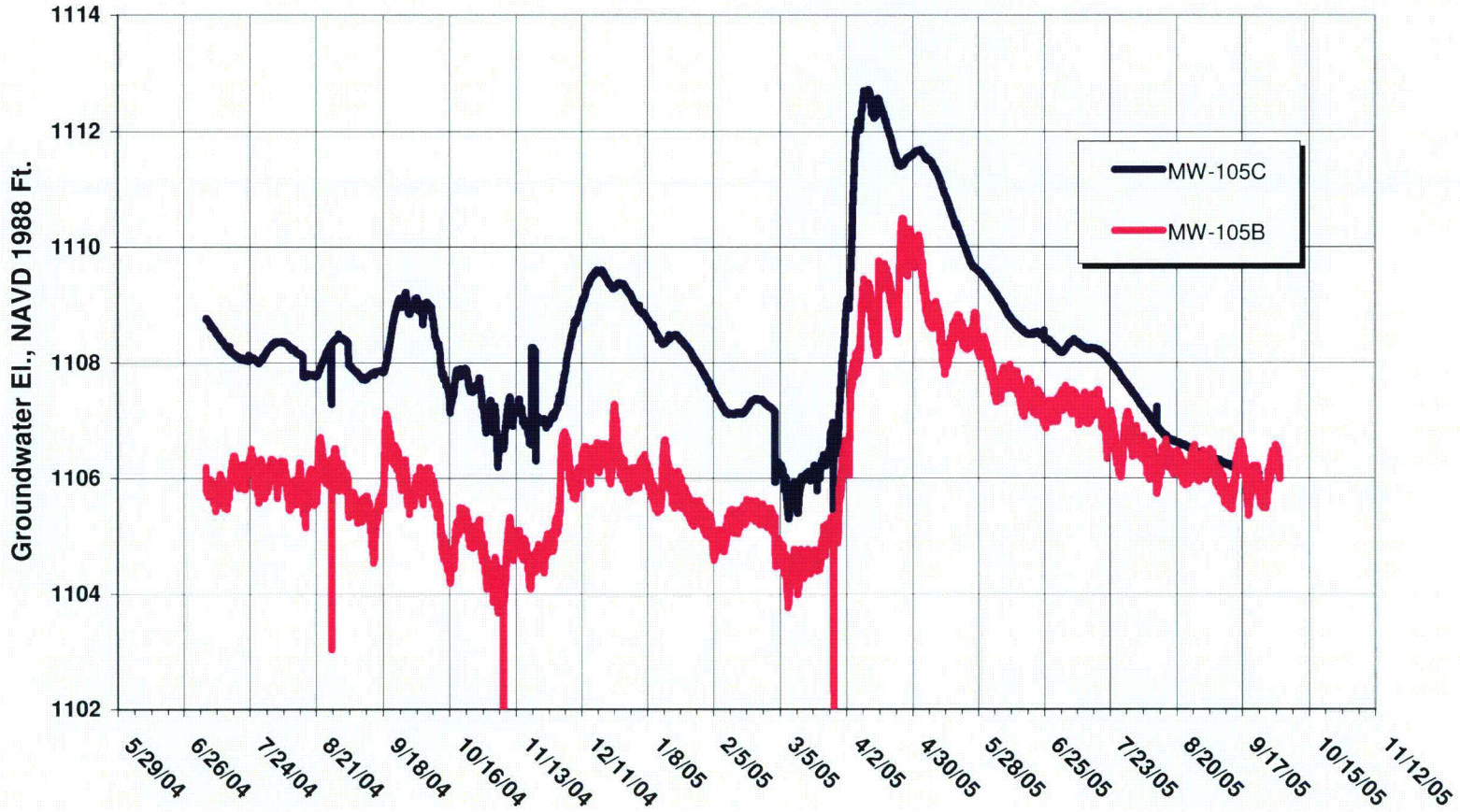
Yankee Nuclear Power Station
Rowe, MA

8/31/2006

Appendix

MW-104 Vertical Gradients

MW-105 Vertical Gradients

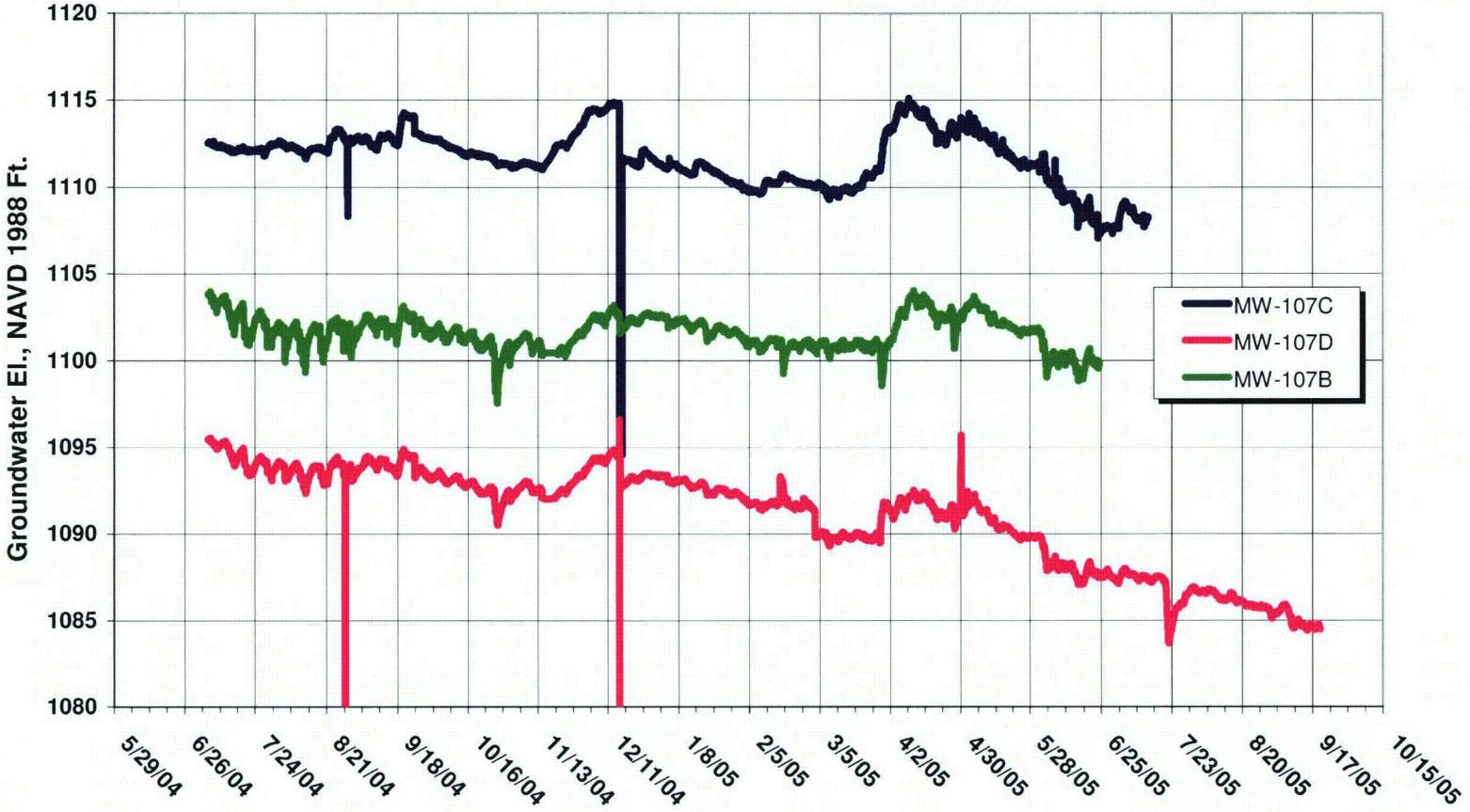


Yankee Nuclear Power Station
Rowe, MA

8/31/2006

Appendix

MW-107 Vertical Gradients

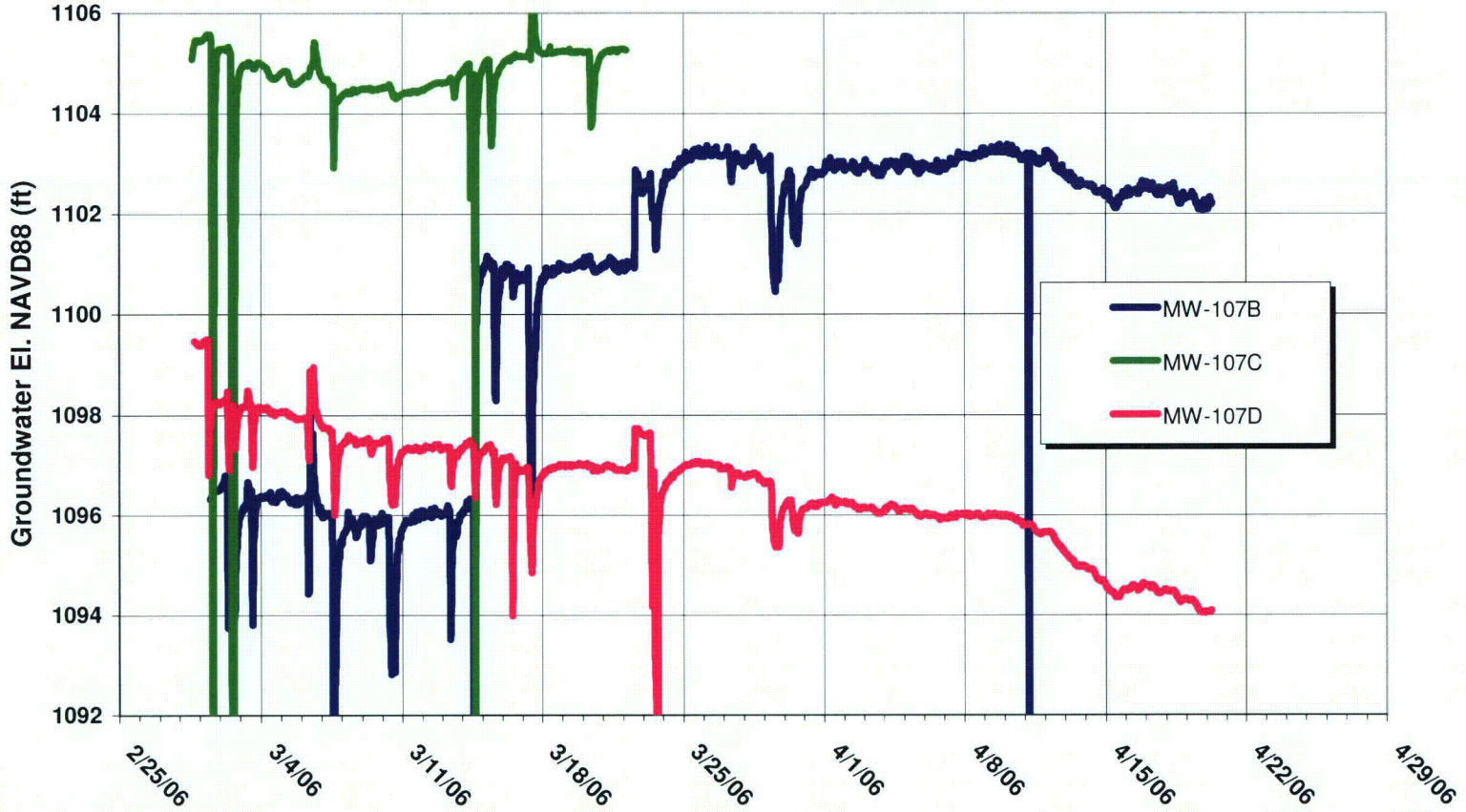


Yankee Nuclear Power Station
Rowe, MA

8/31/2006

Appendix

MW-107 Vertical Gradients

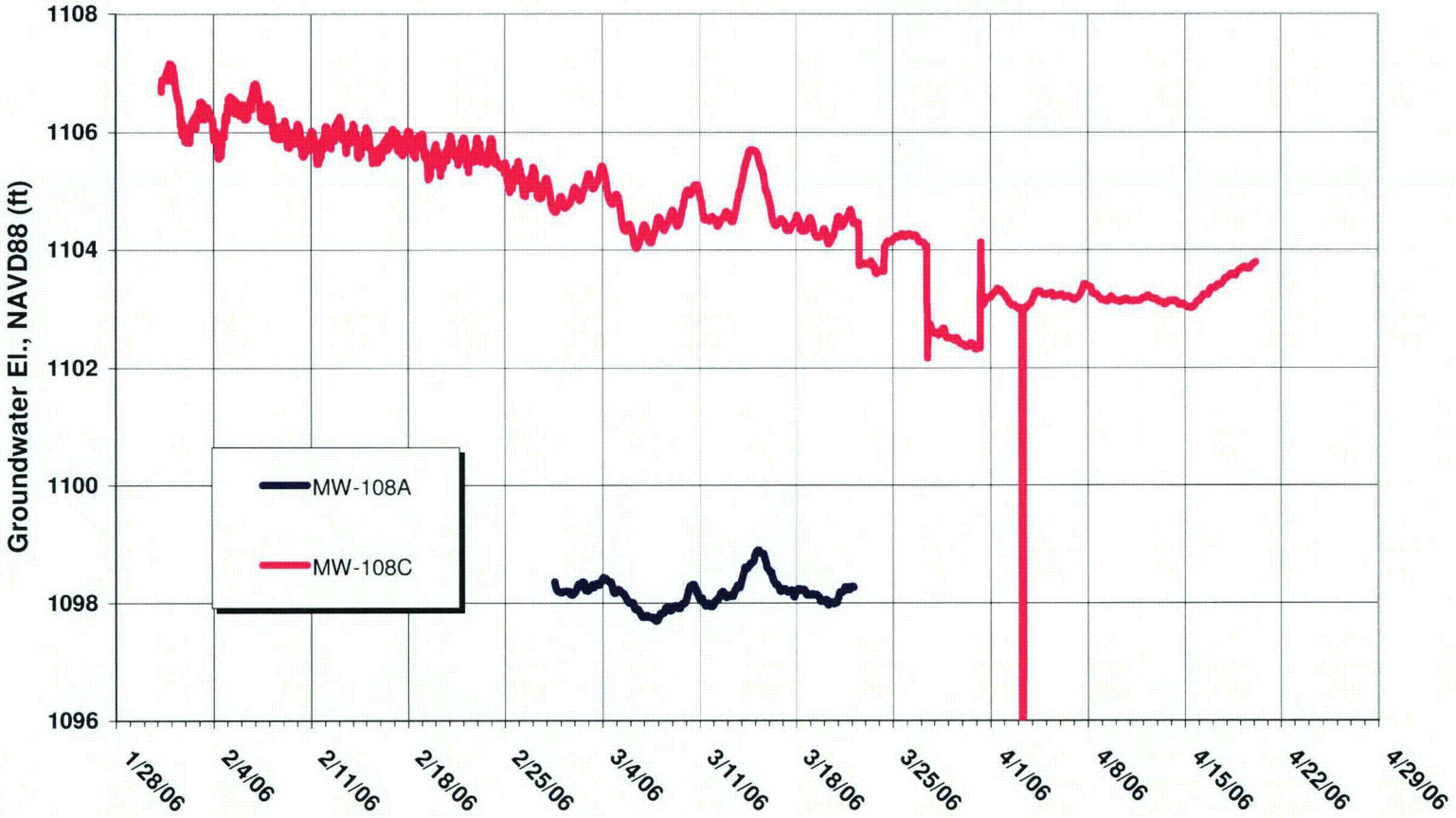


Yankee Nuclear Power Station
Rowe, MA

8/31/2006

Appendix

MW-108 Vertical Gradients



Yankee Nuclear Power Station
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8/31/2006

Appendix