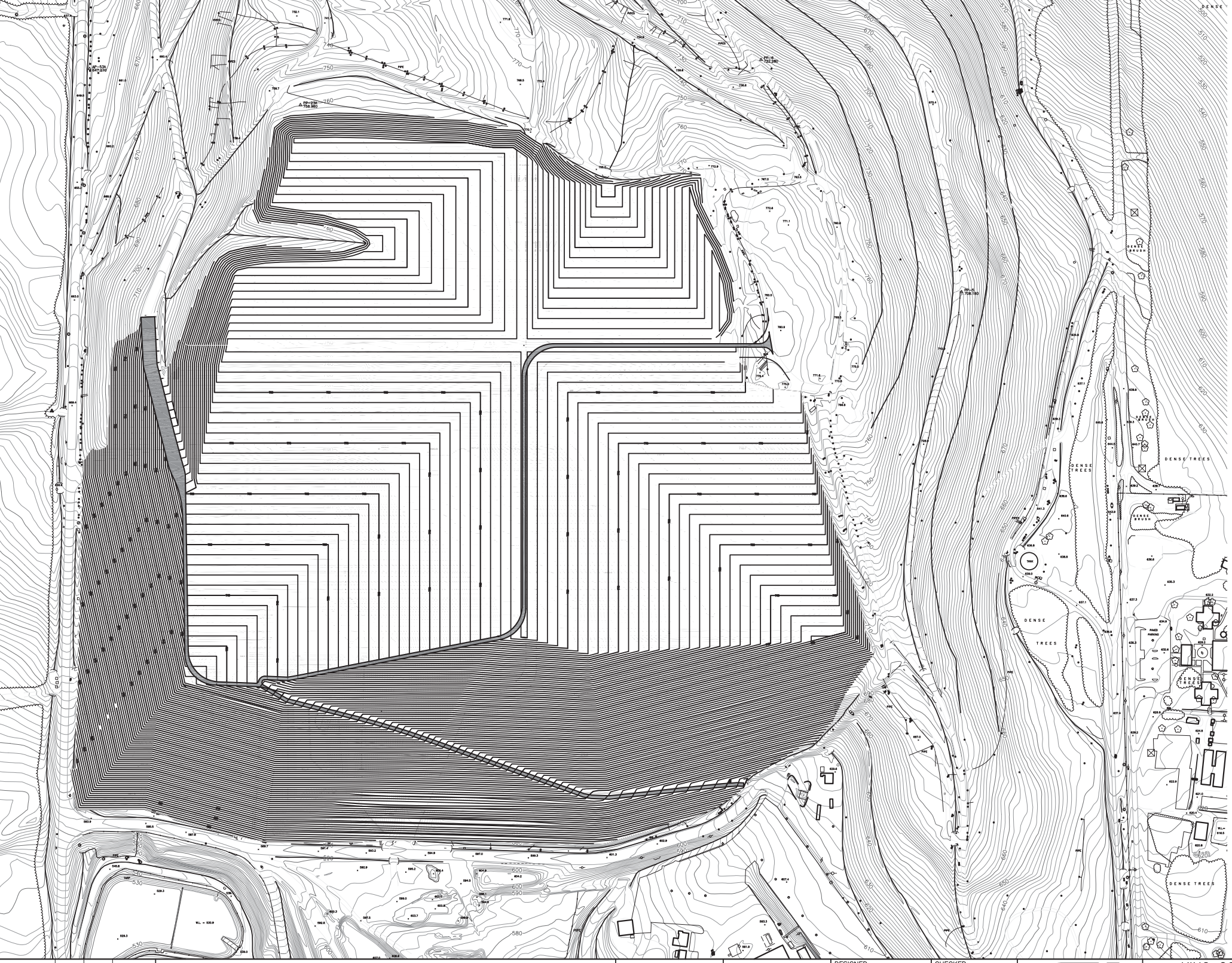
ATTACHMENT F

Landfill Topography and Settlement Monitoring Stations



DESIGNED:

CHECKED:

KING COUNT

Attachment F

Settlement Monitoring Data and Percent Settlement

Station	Period	Monthly Settlement Rate[1] (ft/month)	Annual Settlement Rate[1] (%/year)
PP-5 NORTHING: 171402.80 EASTING: 1701398.90 Start Elevation: 717.44 ft End Elevation: 707.46 ft	1992	0.075	0.91%
	1993	0.080	1.16%
	1994	0.076	1.09%
	1995	0.071	1.02%
	1996	0.066	0.96%
	1997	0.062	0.89%
	1998	0.058	0.83%
	1999	0.053	0.77%
	2000	0.050	0.71%
	2001	0.046	0.66%
	2002	0.042	0.60%
	2003	0.038	0.55%
	2004	0.035	0.50%
	2005	0.032	0.45%
	2006	0.029	0.41%
	2007	0.026	0.37%
	2008	0.023	0.33%
	2009	0.020	0.29%
	2010	0.017	0.25%
	2011	0.015	0.22%
PP-6[2] & PP-6A NORTHING: 172212.44 EASTING: 1700700.56 Start Elevation: 736.89ft End Elevation: 720.62ft	1992	0.204	1.87%
	1993	0.124	1.34%
	1994	0.115	1.25%
	1995	0.107	1.16%
	1996	0.100	1.08%
	1997	0.093	1.00%
	1998	0.086	0.93%
	1999	0.080	0.87%
	2000	0.075	0.81%
	2001	0.069	0.75%
	2002	0.065	0.70%
	2003	0.061	0.66%
	2004	0.057	0.62%
	2005	0.054	0.59%
	2006	0.052	0.56%
	2007	0.050	0.54%
	2008	0.048	0.52%
	2009	0.047	0.51%
	2010	0.046	0.50%
	2011	0.046	0.50%

Attachment F

Settlement Monitoring Data and Percent Settlement

Station	Period	Monthly Settlement Rate[1] (ft/month)	Annual Settlement Rate[1] (%/year)
CONCBLK NORTHING: 171168.28 EASTING: 1700716.24 Start Elevation: 782.50 ft End Elevation: 778.33 ft	2003	0.046	0.36%
	2004	0.047	0.43%
	2005	0.047	0.43%
	2006	0.048	0.44%
	2007	0.048	0.44%
	2008	0.049	0.45%
	2009	0.049	0.45%
	2010	0.050	0.46%
	2011	0.050	0.46%
PP-23A NORTHING: 172055.30 EASTING: 1699095.22 Start Elevation: 775.53 ft End Elevation: 756.34 ft	2001	0.363	2.20%
	2002	0.285	1.72%
	2003	0.248	1.50%
	2004	0.215	1.30%
	2005	0.184	1.11%
	2006	0.157	0.95%
	2007	0.133	0.80%
	2008	0.112	0.68%
	2009	0.094	0.57%
	2010	0.080	0.48%
	2011	0.069	0.41%
A5SM-1 NORTHING: 170865.75 EASTING: 1699107.52 Start Elevation: 699.18 ft End Elevation: 688.15 ft	2005	0.320	3.34%
	2006	0.279	2.81%
	2007	0.209	2.11%
	2008	0.154	1.55%
	2009	0.113	1.14%
	2010	0.086	0.87%
	2011	0.073	0.74%
A5SM-2 NORTHING: 171257.45 EASTING: 1699922.50 Start Elevation: 785.17 ft End Elevation: 766.32 ft	2005	0.572	3.47%
	2006	0.439	2.57%
	2007	0.336	1.97%
	2008	0.258	1.51%
	2009	0.202	1.18%
	2010	0.170	0.99%
	2011	0.162	0.95%
A4SM-3 NORTHING: 172704.89 EASTING: 1699170.71 Start Elevation: 763.20 ft End Elevation: 756.82 ft	2005	0.134	1.04%
	2006	0.123	0.90%
	2007	0.111	0.82%
	2008	0.100	0.74%
	2009	0.089	0.65%
	2010	0.077	0.57%
	2011	0.066	0.49%

Attachment F

Settlement Monitoring Data and Percent Settlement

Station	Period	Monthly Settlement Rate[1] (ft/month)	Annual Settlement Rate[1] (%/year)
13HUB[2] NORTHING: 171875.95 EASTING: 1699686.92 Start Elevation: 786.16ft End Elevation: 782.16ft	2005	0.490	2.76%
	2006	0.067	0.41%
AIRHUB NORTHING: 171855.47 EASTING: 1700517.68 Start Elevation: 776.48 ft End Elevation: 771.40 ft	2004	0.094	0.71%
	2005	0.075	0.63%
	2006	0.070	0.59%
	2007	0.065	0.55%
	2008	0.060	0.51%
	2009	0.055	0.47%
	2010	0.050	0.42%
	2011	0.045	0.38%
PMX20074 (NEAR 13HUB) NORTHING: 171861.13 EASTING: 1699809.82 Start Elevation: 781.56 ft End Elevation: 774.73 ft	2007	0.260	1.45%
	2008	0.207	1.75%
	2009	0.161	1.36%
	2010	0.116	0.98%
	2011	0.071	0.60%

1. Monthly and annual rates are calculated from best fit curves developed from plotted data points.
2. PP-6 and 13HUB were destroyed in 2008 and 2007 respectively.

GEND:

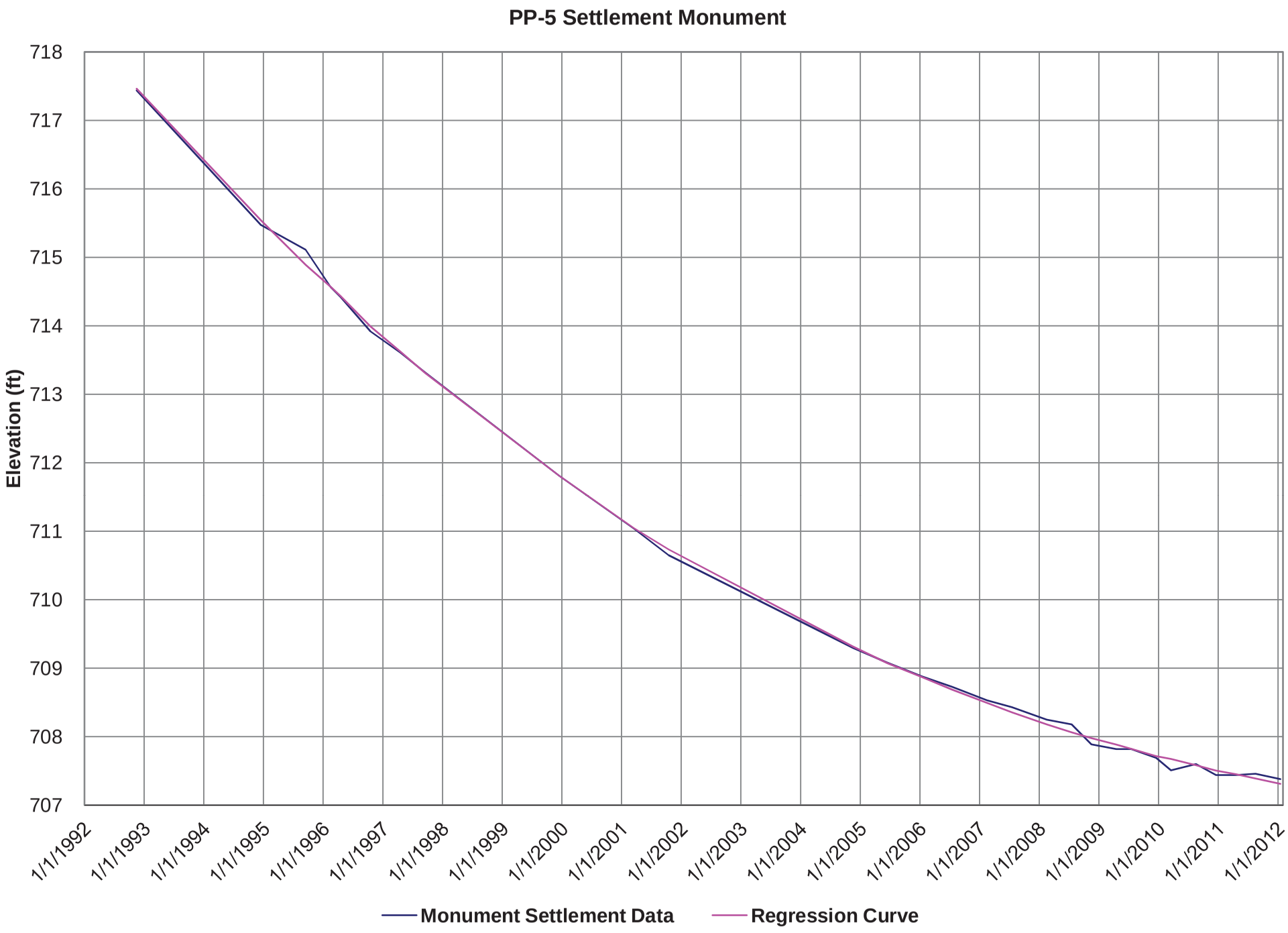
ACTIVE MONITORING STATION

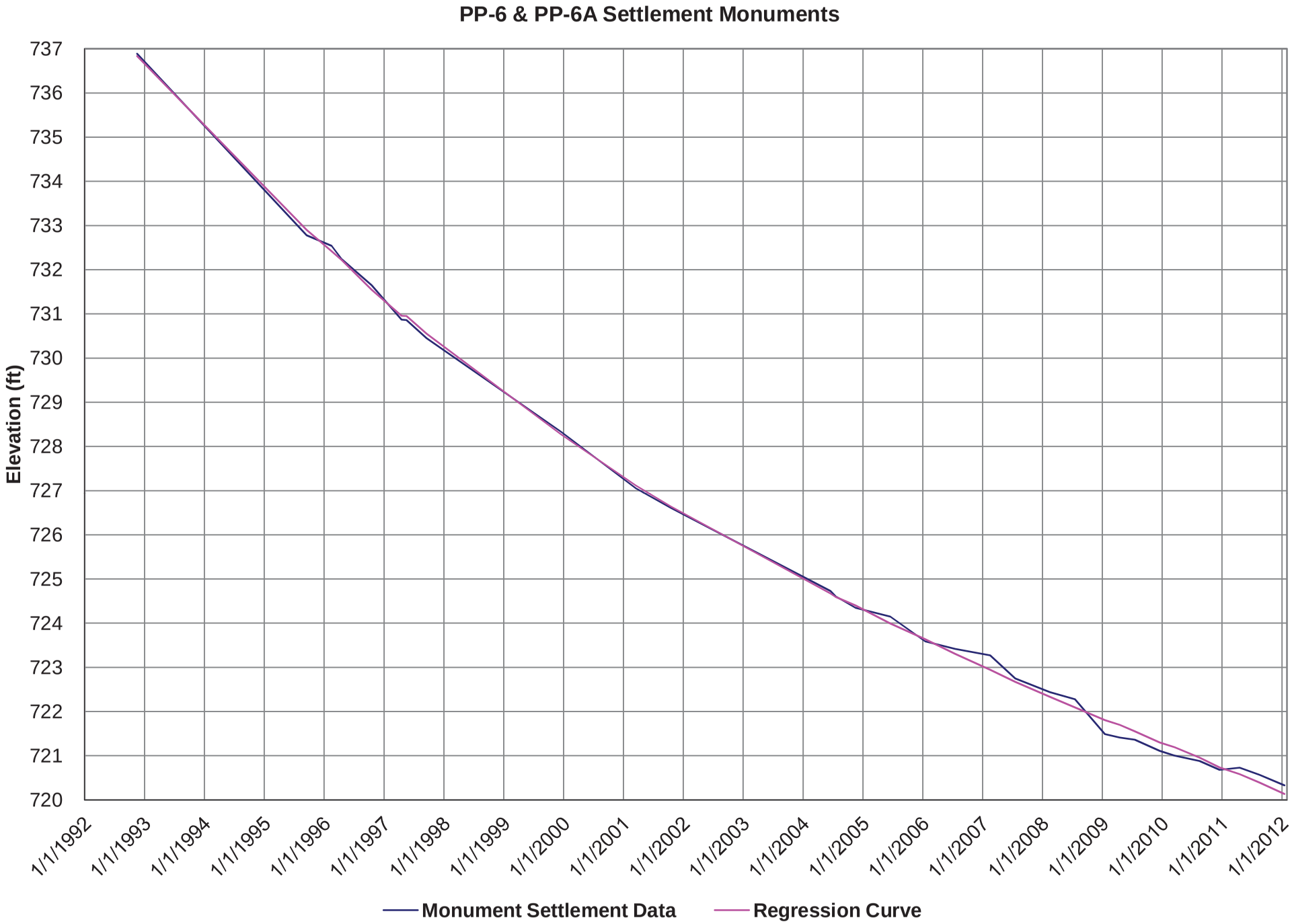
DATE	REVISION	BY

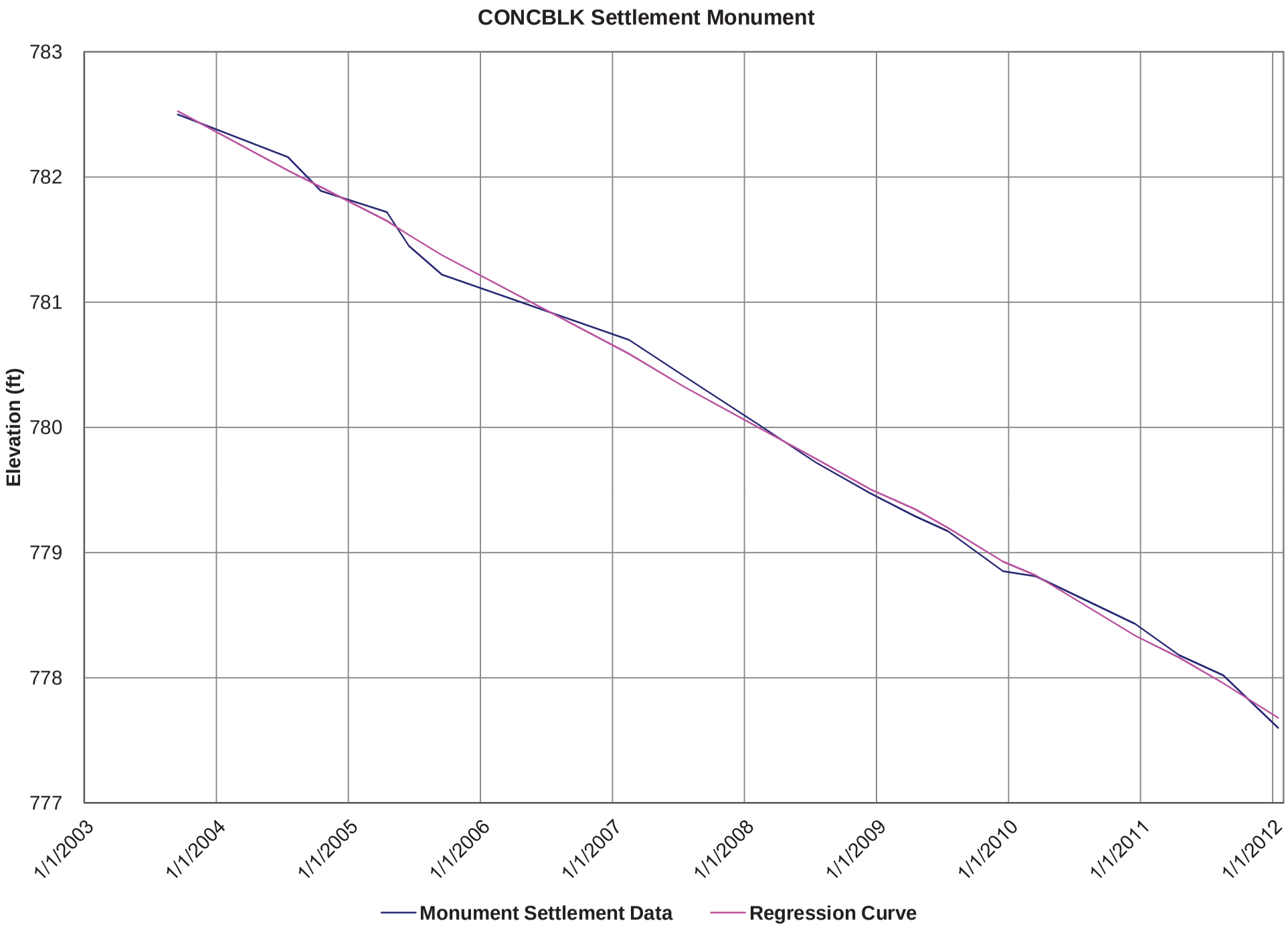
KING COUNTY
NATURAL RESO
SOLID WA

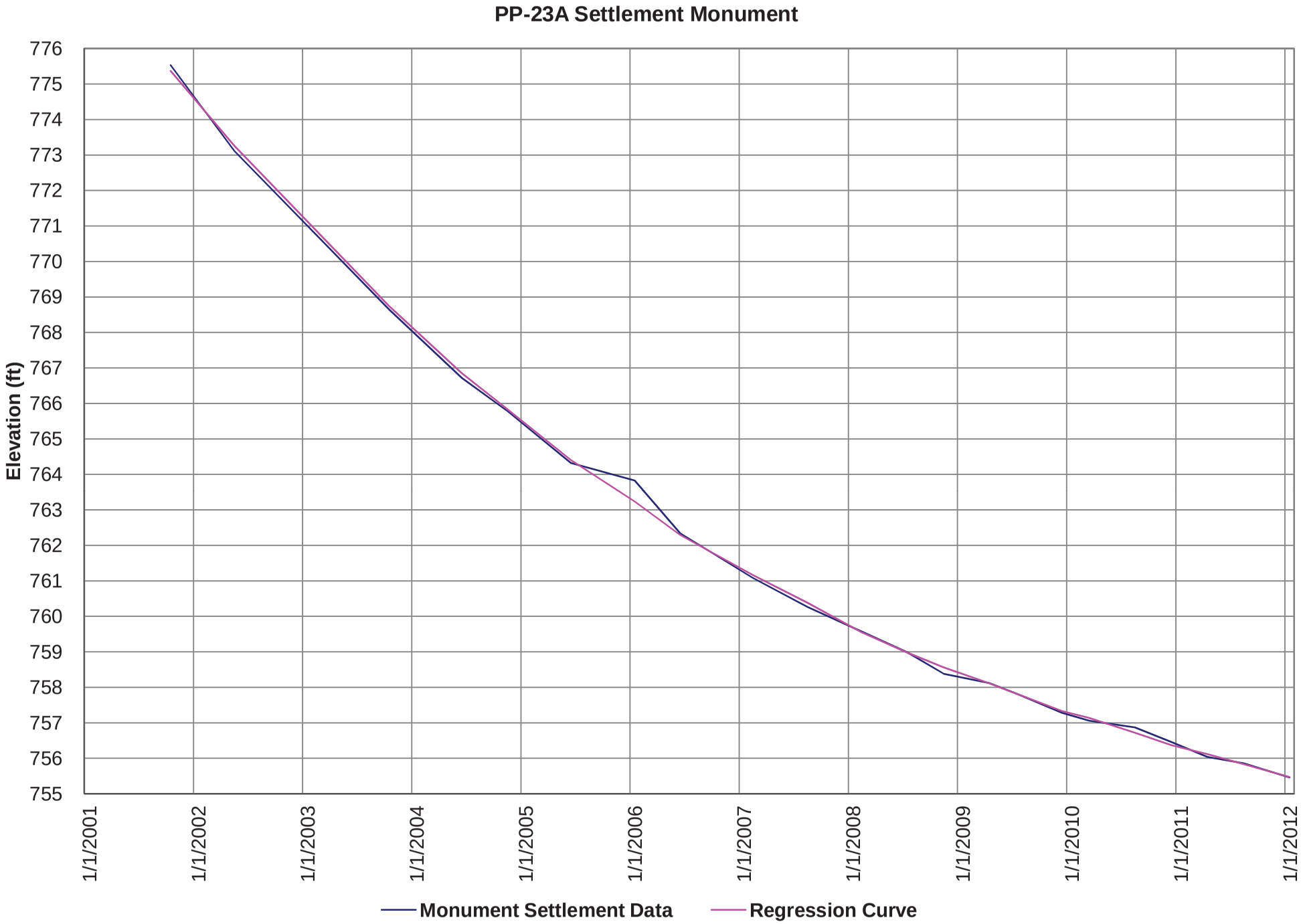
CEDAR HILLS REGION
SETTLEMENT MONITOR

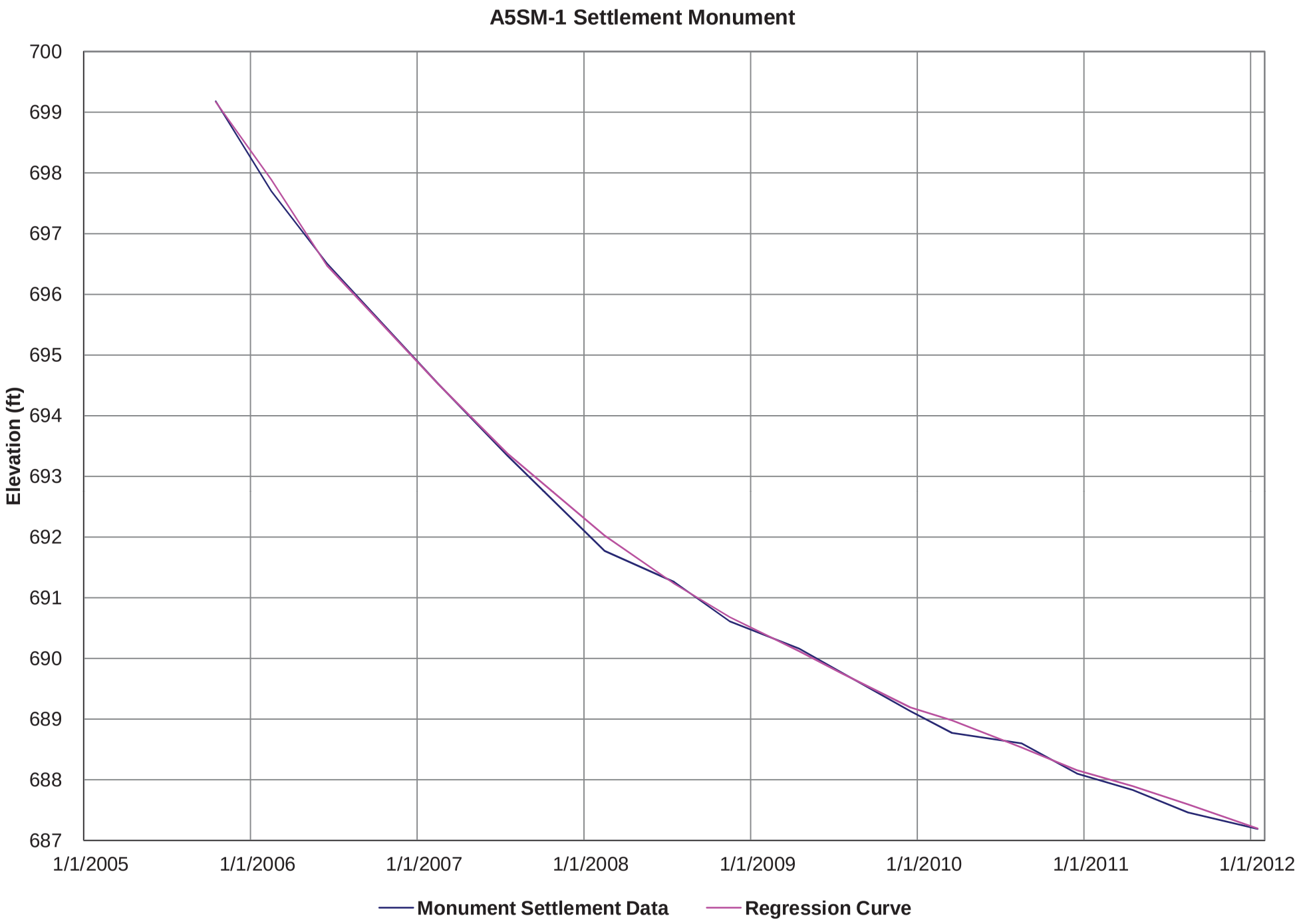
APPROVED VOO
RECOMMENDED —
DESIGNED XXX.XXXX DRAW
PROJECT NO. SURVEY NO.

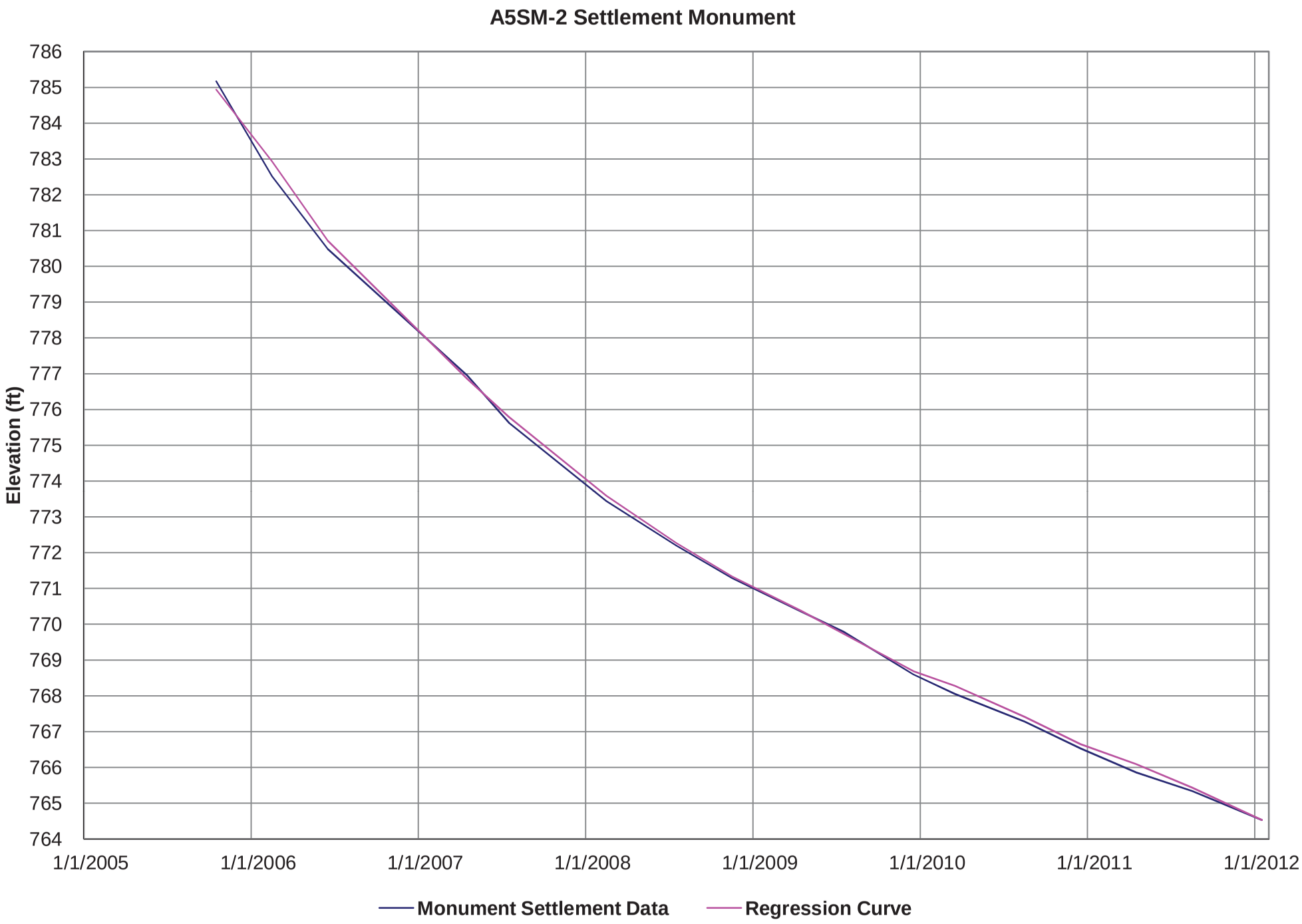

PP-5 Settlement Monument
Elevation (ft)
718
717
716
715
714
713
712
711
710
709
708
707
1/1/1992
1/1/1993
1/1/1994
1/1/1995
1/1/1996
1/1/1997
1/1/1998
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
Monument Settlement Data
Regression Curve

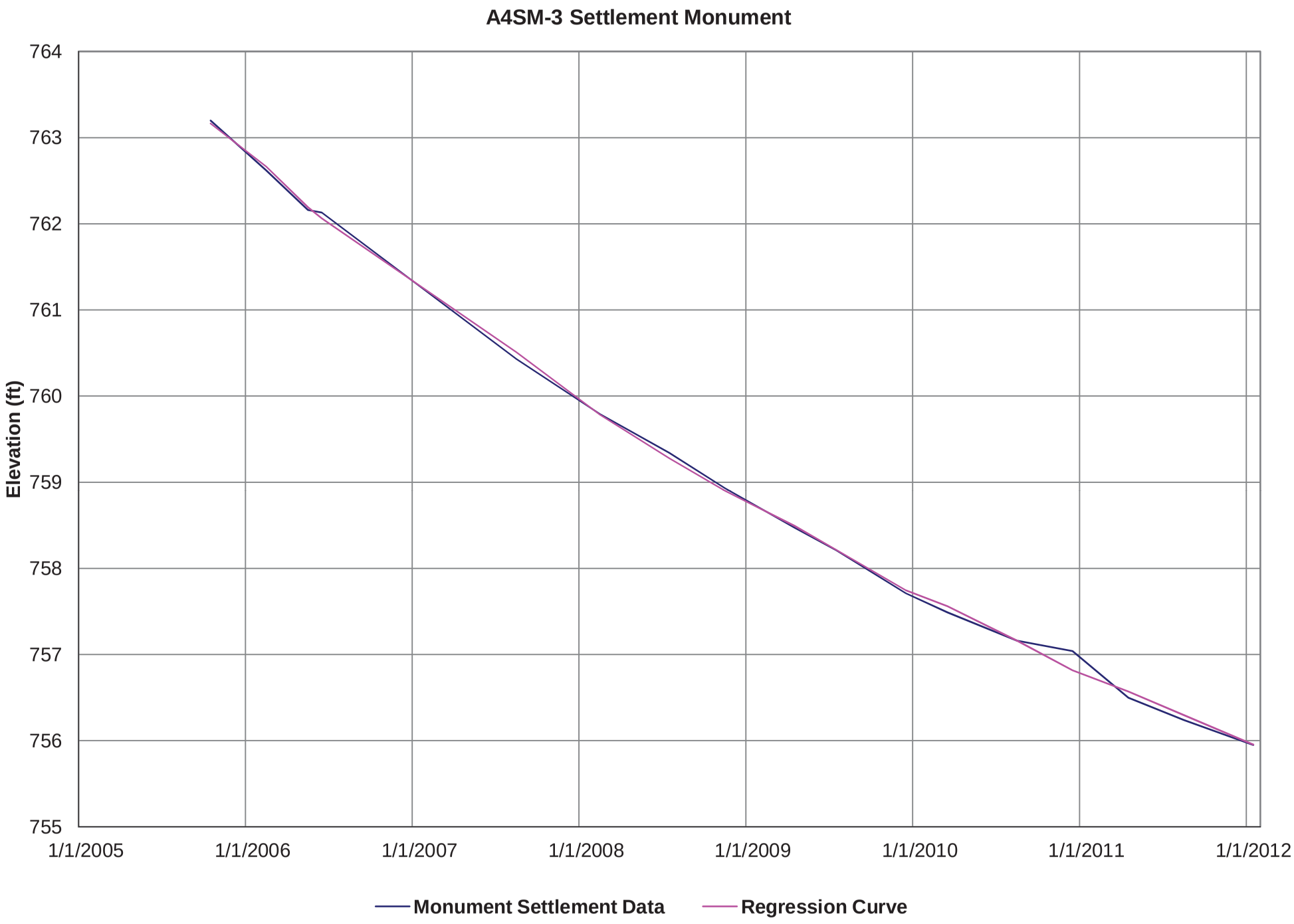

PP-6 & PP-6A Settlement Monuments
Elevation (ft)
737
736
735
734
733
732
731
730
729
728
727
726
725
724
723
722
721
720
1/1/1992
1/1/1993
1/1/1994
1/1/1995
1/1/1996
1/1/1997
1/1/1998
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
Monument Settlement Data
Regression Curve

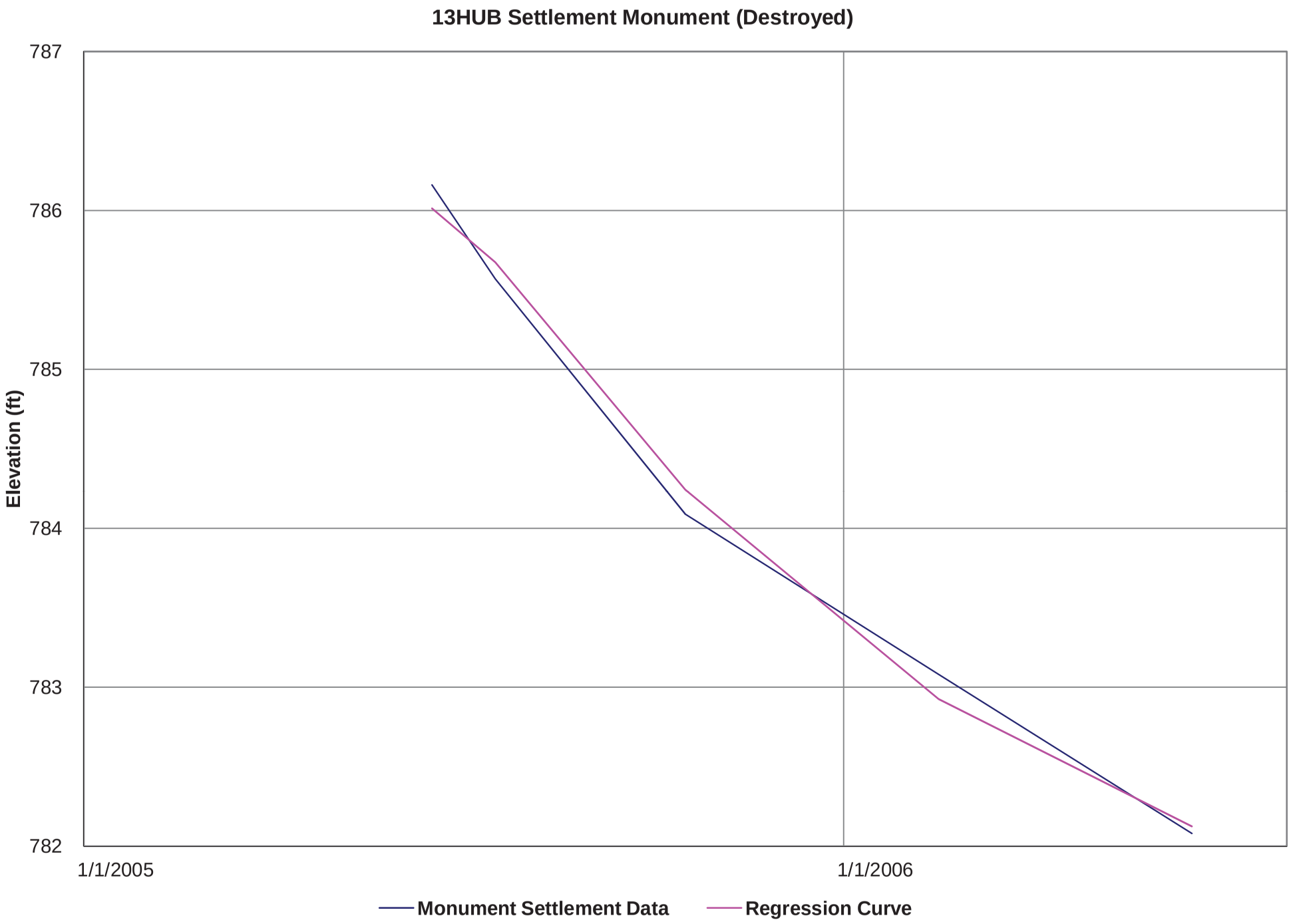

CONCBLK Settlement Monument
Elevation (ft)
783
782
781
780
779
778
777
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
Monument Settlement Data
Regression Curve

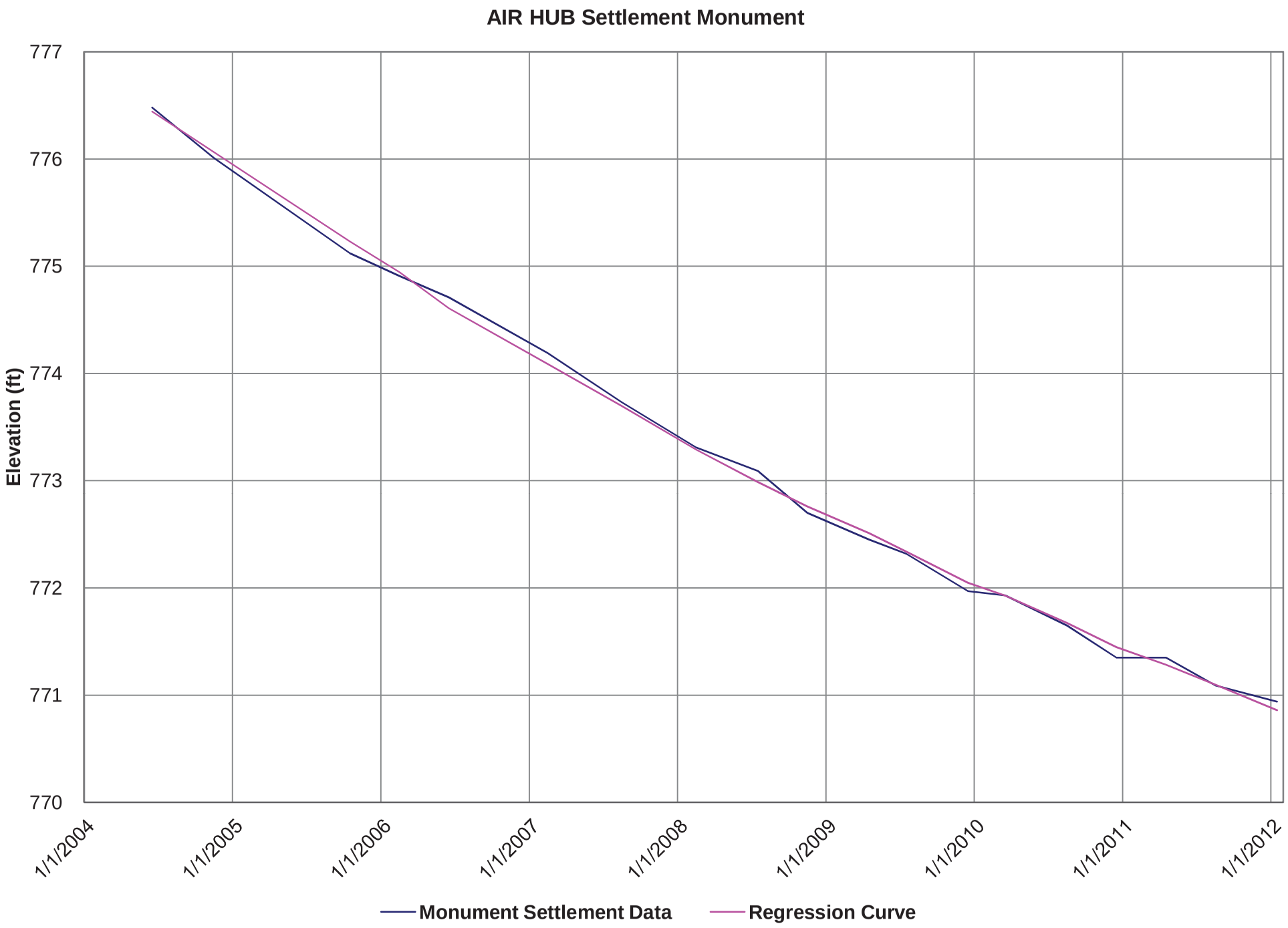

PP-23A Settlement Monument
Elevation (ft)
776
775
774
773
772
771
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
Monument Settlement Data
Regression Curve

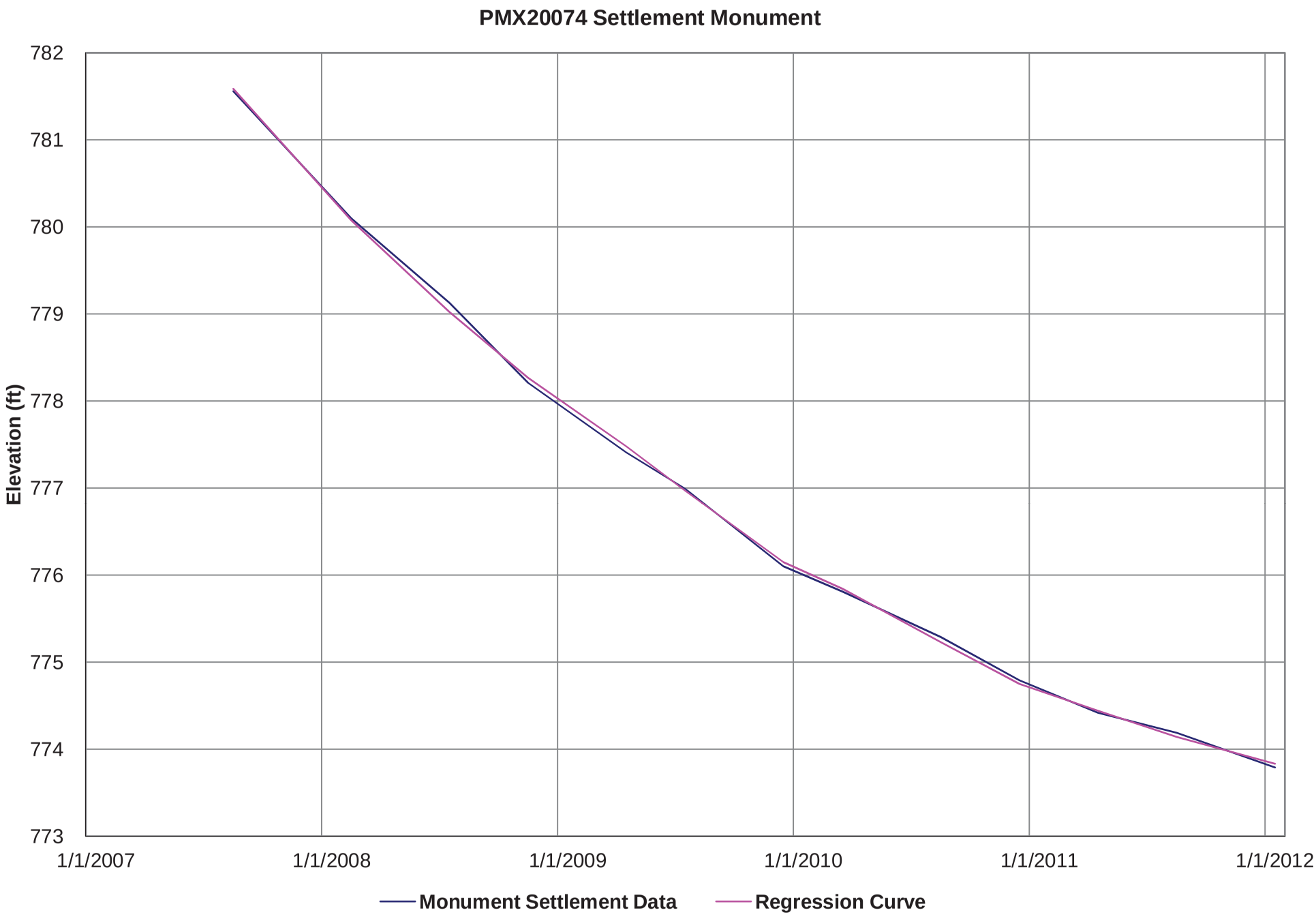

A5SM-1 Settlement Monument
Elevation (ft)
700
699
698
697
696
695
694
693
692
691
690
689
688
687
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
Monument Settlement Data
Regression Curve


A5SM-2 Settlement Monument
Elevation (ft)
786
785
784
783
782
781
780
779
778
777
776
775
774
773
772
771
770
769
768
767
766
765
764
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
Monument Settlement Data
Regression Curve


A4SM-3 Settlement Monument
Elevation (ft)
764
763
762
761
760
759
758
757
756
755
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
Monument Settlement Data
Regression Curve


13HUB Settlement Monument (Destroyed)
787
786
785
784
783
782
Elevation (ft)
1/1/2005
1/1/2006
Monument Settlement Data
Regression Curve


AIR HUB Settlement Monument
Elevation (ft)
777
776
775
774
773
772
771
770
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
Monument Settlement Data
Regression Curve


PMX20074 Settlement Monument
Elevation (ft)
782
781
780
779
778
777
776
775
774
773
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
Monument Settlement Data
Regression Curve