

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

May 26, 1994

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 94-325
NL&P/MAE: R0
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
SETTLEMENT MONITORING PROGRAM


On October 5, 1992, the NRC issued Amendment Nos. 167 and 147 to the North Anna Units 1 and 2 Technical Specification 3/4.7.12, involving settlement of Class I structures. The amendments deleted the requirement for monitoring the settlement of most of the Category I structures and increased the allowable differential settlement limits for certain structures.

In support of that amendment, Virginia Electric and Power Company committed on August 24, 1992 (Serial No. 92-249A) to submit the results of the next four semi-annual surveys to the NRC for information. This submittal is required to be within 60 days of the survey completion. The periodic test for the fourth semi-annual survey was completed on May 5, 1994. Attached are the results of that survey.

This satisfies our commitment associated with this license amendment.

If you have any questions or require additional information, please contact us.

Very truly yours,



M. L. Bowling, Manager
Nuclear Licensing and Programs

Attachment

9406030196 940526
PDR ADDCK 05000338
P PDR

JE25

cc: U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N.W.
Suite 2900
Atlanta, Georgia 30323

Mr. R. D. McWhorter
NRC Senior Resident Inspector
North Anna Power Station

Attachment 1

Results of Settlement Monitoring Survey and Graphs

Point No: 113 (113R)
 Location: Unit 2 Quench Spray
 Foundation Conditions: Structural Backfill Over Residual Soil
 Commitment to Monitor: Technical Specifications

Date	(1) Surveyed Elevation	(2) Change From '76 Datum	(3) '76 Datum 5/29/79 To 10/23/86	(4) Adjusted Value (3)-Avg.	(5) '76 Datum 5/14/87 To 3/09/89	(6) Adjusted Value (5)-Avg.	(7) '76 Datum 3/13/89 To Present	(8) Adjusted Value (7)-Avg.	(9) Corrected Data 5/29/79 To Present
07-07-77	272.557								
12-14-77	272.547	0.010							
05-01-78	272.563	-0.006							
11-21-78	272.557	0.000							
05-07-79	272.550	0.007							
05-29-79	272.563	-0.006	-0.006	-0.005				-0.005	
11-14-79	272.563	-0.006	-0.006	-0.005				-0.005	
05-05-80	272.559	-0.002	-0.002	-0.001				-0.001	
11-03-80	272.567	-0.010	-0.010	-0.009				-0.009	
12-23-80	272.562	-0.005	-0.005	-0.004				-0.004	
01-07-81	272.561	-0.004	-0.004	-0.003				-0.003	
02-09-81	272.562	-0.005	-0.005	-0.004				-0.004	
03-03-81	272.563	-0.006	-0.006	-0.005				-0.005	
04-06-81	272.560	-0.003	-0.003	-0.002				-0.002	
05-06-81	272.559	-0.002	-0.002	-0.001				-0.001	
07-07-81	272.556	0.001	0.001	0.002				0.002	
08-05-81	272.551	0.006	0.006	0.007				0.007	
09-02-81	272.562	-0.005	-0.005	-0.004				-0.004	
10-06-81	272.557	0.000	0.000	0.001				0.001	
11-04-81	272.559	-0.002	-0.002	-0.001				-0.001	
12-04-81	272.564	-0.007	-0.007	-0.006				-0.006	
01-08-82	272.558	-0.001	-0.001	-0.000				-0.000	
02-02-82	272.558	-0.001	-0.001	-0.000				-0.000	
03-02-82	272.561	-0.004	-0.004	-0.003				-0.003	
04-07-82	272.559	-0.002	-0.002	-0.001				-0.001	
05-14-82	272.558	-0.001	-0.001	-0.000				-0.000	
06-02-82	272.558	-0.001	-0.001	-0.000				-0.000	
07-02-82	272.553	0.004	0.004	0.005				0.005	
08-02-82	272.554	0.003	0.003	0.004				0.004	
09-02-82	272.557	0.000	0.000	0.001				0.001	
10-05-82	272.549	0.008	0.008	0.009				0.009	
12-09-82	272.551	0.006	0.006	0.007				0.007	
05-17-83	272.555	0.002	0.002	0.003				0.003	
11-15-83	272.558	-0.001	-0.001	-0.000				-0.000	
05-17-84	272.556	0.001	0.001	0.002				0.002	
10-16-84	272.554	0.003	0.003	0.004				0.004	
04-01-85	272.558	-0.001	-0.001	-0.000				-0.000	
11-01-85	272.552	0.005	0.005	0.006				0.006	
05-05-86	272.550	0.007	0.007	0.008				0.008	
10-23-86	272.552	0.005	0.005	0.006				0.006	

Point 113/113R - Continued

05-14-87	272.634	-0.003	Note: Switched to	-0.003	0.001		0.001	
05-29-87	272.636	-0.005	Point 113R (Baseline	-0.005	-0.001		-0.001	
06-03-87	272.634	-0.003	Elevation = 272.631)	-0.003	0.001		0.001	
06-29-87	272.633	-0.002	on 5-14-87.	-0.002	0.002		0.002	
08-05-87	272.633	-0.002		-0.002	0.002		0.002	
09-01-87	272.637	-0.006		-0.006	-0.002		-0.002	
10-06-87	272.636	-0.005		-0.005	-0.001		-0.001	
11-02-87	272.633	-0.002		-0.002	0.002		0.002	
12-01-87	272.636	-0.005		-0.005	-0.001		-0.001	
01-06-88	272.638	-0.007		-0.007	-0.003		-0.003	
02-02-88	272.634	-0.003		-0.003	0.001		0.001	
03-01-88	272.635	-0.004		-0.004	-0.000		-0.000	
03-31-88	272.633	-0.002		-0.002	0.002		0.002	
04-01-88	272.637	-0.006		-0.006	-0.002		-0.002	
05-04-88	272.635	-0.004		-0.004	-0.000		-0.000	
06-01-88	272.633	-0.002		-0.002	0.002		0.002	
07-05-88	272.632	-0.001		-0.001	0.003		0.003	
08-01-88	272.633	-0.002		-0.002	0.002		0.002	
09-02-88	272.632	-0.001		-0.001	0.003		0.003	
10-04-88	272.634	-0.003		-0.003	0.001		0.001	
11-03-88	272.634	-0.003		-0.003	0.001		0.001	
12-01-88	272.636	-0.005		-0.005	-0.001		-0.001	
01-03-89	272.636	-0.005		-0.005	-0.001		-0.001	
02-03-89	272.636	-0.005		-0.005	-0.001		-0.001	
03-09-89	272.640	-0.009		-0.009	-0.005		-0.005	
03-13-89	272.627 *	0.004			0.004	-0.002	-0.002	
03-13-89	272.627 *	0.004	*Invar Rod substituted for Engineers Rule.		0.004	-0.002	-0.002	
03-16-89	272.624 *	0.007	Systematic error eliminated. Random error		0.007	0.001	0.001	
03-16-89	272.624 *	0.007	still present and corrected in cols. 7 & 8.		0.007	0.001	0.001	
04-03-89	272.624 *	0.007			0.007	0.001	0.001	
05-04-89	272.624 *	0.007			0.007	0.001	0.001	
10-27-89	272.624 *	0.007			0.007	0.001	0.001	
05-09-90	272.624 *	0.007			0.007	0.001	0.001	
10-17-90	272.624 *	0.007			0.007	0.001	0.001	
04-12-91	272.624 *	0.007			0.007	0.001	0.001	
09-15-91	272.621 *	0.010			0.010	0.004	0.004	
03-15-92	272.627 *	0.004			0.004	-0.002	-0.002	
09-10-92	272.624 *	0.007			0.007	0.001	0.001	
03-15-93	272.627 *	0.004			0.004	-0.002	-0.002	
09-13-93	272.626 *	0.005			0.005	-0.001	-0.001	
03-22-94	272.625 *	0.006			0.006	-0.000	-0.000	
Average		-0.000		-0.001	-0.000	-0.004	0.000	0.006
Standard Deviation		0.005						0.003
95% Conf. Factor		0.010						0.006

	Point No.:	114 (314)	
	Location:	Unit 2 Service Bldg. E-Line	
	Foundation Conditions:	Compacted Backfill Over Rock	
	Commitment to Monitor:	Technical Specifications	
Date	(1) Surveyed Elevation	(2) Change From '76 Datum	
05-13-76	271.472 O		
03-09-77	271.432 O	0.040	
05-30-77	271.461 O	0.011	
07-07-77	271.461 O	0.011	
12-14-77	271.437 O	0.035	
05-01-78	271.452 O	0.020	
11-21-78	271.434 O	0.038	
05-07-79	271.426	0.046	
05-29-79	271.439	0.033	
11-14-79	271.442	0.030	
05-05-80	271.437	0.035	
11-13-80	271.431	0.041	
05-06-81	271.426	0.046	
11-12-81	271.425	0.047	
05-14-82	271.425	0.047	
12-09-82	271.418	0.054	
05-30-83	271.417	0.055	
11-29-83	271.423	0.049	
05-30-84	271.425	0.047	
10-30-84	271.420	0.052	
04-03-85	271.426	0.046	
11-04-85	271.419	0.053	
05-05-86	271.420	0.052	
10-06-86	271.420	0.052	
05-14-87	271.417	0.055	
10-07-87	271.417	0.055	
05-05-88	271.420	0.052	
10-01-88	271.410	0.062	
05-16-89	271.410	0.062	
10-27-89	271.413	0.059	
05-09-90	271.410	0.062	
10-17-90	271.413	0.059	
04-12-91	271.413	0.059	
09-15-91	271.413	0.059	
03-15-92	271.410	0.062	
09-17-92	271.938 (Note 1)	0.059	
03-15-93	271.934	0.063	
09-13-93	271.940	0.057	
03-22-94	271.935	0.062	
Average		0.048	
Standard Deviation		0.013	
95% Confidence Factor		0.026	

Note: 1) Point 114 was relocated in August, 1992 and designated 314. Baseline elevation for 314 was established as 271.997.

Point No.: 116 (316)
 Location: Unit 2 Service Bldg. E-Line
 Foundation Conditions: Compacted Backfill Over Residual Soil
 Commitment to Monitor: Technical Specifications

Date	(1) Surveyed Elevation	(2) Change From '76 Datum	
	271.480 C		
05-13-76	271.459		
10-08-76	271.444	0.015	
03-09-77	271.424	0.035	
07-07-77	271.474	-0.015	
12-14-77	271.450	0.009	
05-01-78	271.462	-0.003	
11-21-78	271.453 C	0.027	
05-07-79	271.443	0.037	
05-29-79	271.456	0.024	
11-14-79	271.456	0.024	
05-05-80	271.452	0.028	
11-13-80	271.449	0.031	
05-06-81	271.443	0.037	
11-12-81	271.448	0.032	
05-14-82	271.442	0.038	
12-09-82	271.437	0.043	
05-30-83	271.435	0.045	
11-29-83	271.445	0.035	
05-30-84	271.442	0.038	
10-30-84	271.438	0.042	
04-03-85	271.443	0.037	
11-04-85	271.437	0.043	
05-05-86	271.434	0.046	
10-06-86	271.438	0.042	
05-14-87	271.437	0.043	
10-07-87	271.433	0.047	
05-05-88	271.436	0.044	
10-01-88	271.430	0.050	
05-16-89	271.430	0.050	
10-27-89	271.430	0.050	
05-09-90	271.427	0.053	
10-17-90	271.430	0.050	
04-12-91	271.430	0.050	
09-15-91	271.430	0.050	
03-15-92	271.430	0.050	
09-17-92	271.932 (Note 1)	0.047	
03-15-93	271.930	0.049	
09-13-93	271.934	0.045	
03-22-94	271.928	0.051	
Average		0.037	
Standard Deviation		0.015	
95% Confidence Factor		0.029	

Note: 1) Point 116 was relocated in August, 1992 and designated 316. Baseline elevation for 316 was established as 271.979.

Point No.: 117 (317)
 Location: Unit 2 Service Bldg. E-Line
 Foundation Conditions: Structural Backfill Over Residual Soil
 Commitment to Monitor: Technical Specifications

Date	(1) Surveyed Elevation	(2) Uncorrected Change From Base Line
07-07-77	271.385	
12-14-77	271.370	0.015
05-01-78	271.380	0.005
11-21-78	271.371	0.014
05-07-79	271.364	0.021
05-29-79	271.377	0.008
11-14-79	271.373	0.012
05-05-80	271.370	0.015
11-03-80	271.369	0.016
12-23-80	271.367	0.018
01-07-81	271.367	0.018
02-09-81	271.368	0.017
03-03-81	271.369	0.016
04-06-81	271.366	0.019
05-06-81	271.362	0.023
07-07-81	271.368	0.017
08-05-81	271.367	0.018
09-02-81	271.377	0.008
10-06-81	271.370	0.015
11-04-81	271.370	0.015
12-04-81	271.373	0.012
01-08-82	271.365	0.020
02-02-82	271.366	0.019
03-02-82	271.368	0.017
04-07-82	271.367	0.018
05-14-82	271.368	0.017
06-02-82	271.366	0.019
07-02-82	271.365	0.020
08-02-82	271.364	0.021
09-02-82	271.368	0.017
10-05-82	271.367	0.018
12-09-82	271.362	0.023
05-17-83	271.368	0.017
11-15-83	271.369	0.016
05-17-84	271.366	0.019
10-16-84	271.362	0.023
04-01-85	271.372	0.013
11-01-85	271.365	0.020
05-05-86	271.365	0.020
10-23-86	271.364	0.021

Point 117 (317) - Continued

05-14-87	271.364	0.021
05-29-87	271.364	0.021
06-03-87	271.364	0.021
06-29-87	271.364	0.021
08-05-87	271.364	0.021
09-01-87	271.363	0.022
10-06-87	271.363	0.022
11-02-87	271.361	0.024
12-01-87	271.366	0.019
01-06-88	271.364	0.021
02-02-88	271.361	0.024
03-01-88	271.361	0.024
03-31-88	271.361	0.024
04-01-88	271.364	0.021
05-04-88	271.361	0.024
06-01-88	271.361	0.024
07-05-88	271.363	0.022
08-01-88	271.361	0.024
09-02-88	271.364	0.021
10-04-88	271.363	0.022
11-03-88	271.361	0.024
12-01-88	271.361	0.024
01-03-89	271.361	0.024
02-03-89	271.360	0.025
03-09-89	271.361	0.024
03-13-89	271.361	0.024
03-13-89	271.363	0.022
03-16-89	271.358	0.027
03-16-89	271.358	0.027
04-03-89	271.358	0.027
05-04-89	271.358	0.027
10-27-89	271.361	0.024
05-09-90	271.358	0.027
10-17-90	271.361	0.024
04-12-91	271.358	0.027
09-15-91	271.358	0.027
03-15-92	271.361	0.024
09-17-92	271.909 (Note 1)	0.024
03-15-93	271.909	0.024
09-13-93	271.912	0.021
03-22-94	271.907	0.026
Mean		0.020
Standard Deviation		0.005
95% Confidence Factor		0.009

Note: 1) Point 117 was relocated in August, 1992 and designated Point 317. Baseline elevation for 317 was established as 271.933.

	Point No.:	25
	Location:	Service Water Valve House
	Foundation Conditions:	Residual Soil
	Commitment to Monitor:	Technical Specifications
Date	(1) Surveyed Elevation	(2) Change From '87 Datum
04-03-87	325.954	
04-07-87	325.954	0.000
05-02-87	325.956	-0.002
06-01-87	325.952	0.002
07-01-87	325.954	0.000
08-04-87	325.957	-0.003
09-01-87	325.954	0.000
10-06-87	325.951	0.003
11-03-87	325.951	0.003
12-01-87	325.950	0.004
01-06-88	325.951	0.003
02-02-88	325.943	0.011
02-29-88	325.948	0.006
03-30-88	325.946	0.008
05-04-88	325.948	0.006
10-01-88	325.950	0.004
04-04-89	325.944	0.010
10-02-89	325.941	0.013
04-09-90	325.938	0.016
09-10-90	325.941	0.013
03-18-91	325.944	0.010
09-16-91	325.941	0.013
03-01-92	325.941	0.013
09-10-92	325.941	0.013
03-15-93	325.936	0.018
09-13-93	325.939	0.015
03-22-94	325.935	0.019
Average		0.008
Standard Deviation		0.006
95% Confidence Factor		0.012

	Point No.:	26
	Location:	Service Water Valve House
	Foundation Conditions:	Residual Soil
	Commitment to Monitor:	Technical Specifications
Date	(1) Surveyed Elevation	(2) Change From '87 Datum
04-03-87	326.018	
04-07-87	326.021	-0.003
05-02-87	326.024	-0.006
06-01-87	326.022	-0.004
07-01-87	326.020	-0.002
08-04-87	326.023	-0.005
09-01-87	326.020	-0.002
10-06-87	326.020	-0.002
11-03-87	326.018	0.000
12-01-87	326.015	0.003
01-06-88	326.016	0.002
02-02-88	326.015	0.003
02-29-88	326.016	0.002
03-30-88	326.015	0.003
05-04-88	326.016	0.002
10-01-88	326.016	0.002
04-04-89	326.013	0.005
10-02-89	326.010	0.008
04-09-90	326.010	0.008
09-10-90	326.010	0.008
03-18-91	326.013	0.005
09-16-91	326.013	0.005
03-01-92	326.013	0.005
09-10-92	326.013	0.005
03-15-93	326.009	0.009
09-13-93	326.010	0.008
03-22-94	326.010	0.008
Average		0.003
Standard Deviation		0.004
95% Confidence Factor		0.009

Point No.: 27		
Location:		Service Water Valve House
Foundation Conditions:		Residual Soil
Commitment to Monitor:		Technical Specifications
Date	(1) Surveyed Elevation	(2) Change From '87 Datum
04-03-87	326.034	
04-07-87	326.037	-0.003
05-02-87	326.036	-0.002
06-01-87	326.032	0.002
07-01-87	326.033	0.001
08-04-87	326.035	-0.001
09-01-87	326.033	0.001
10-06-87	326.033	0.001
11-03-87	326.032	0.002
12-01-87	326.030	0.004
01-06-88	326.030	0.004
02-02-88	326.026	0.008
02-29-88	326.030	0.004
03-30-88	326.030	0.004
05-04-88	326.030	0.004
10-01-88	326.030	0.004
04-04-89	326.026	0.008
10-02-89	326.023	0.011
04-09-90	326.023	0.011
09-10-90	326.023	0.011
03-18-91	326.026	0.008
09-16-91	326.023	0.011
03-01-92	326.026	0.008
09-10-92	326.026	0.008
03-15-93	326.023	0.011
09-13-93	326.022	0.012
03-22-94	326.023	0.011
Average		0.005
Standard Deviation		0.004
95% Confidence Factor		0.009

	Point No.:	28
	Location:	Service Water Valve House
	Foundation Conditions:	Residual Soil
	Commitment to Monitor:	Technical Specifications
Date	(1) Surveyed Elevation	(2) Change From '87 Datum
04-03-87	326.146	
04-07-87	326.146	0.000
05-02-87	326.149	-0.003
06-01-87	326.144	0.002
07-01-87	326.144	0.002
08-04-87	326.146	0.000
09-01-87	326.144	0.002
10-06-87	326.141	0.005
11-03-87	326.141	0.005
12-01-87	326.140	0.006
01-06-88	326.141	0.005
02-02-88	326.135	0.011
02-29-88	326.138	0.008
03-30-88	326.137	0.009
05-04-88	326.140	0.006
10-01-88	326.140	0.006
04-04-89	326.135	0.011
10-02-89	326.131	0.015
04-09-90	326.128	0.018
09-10-90	326.135	0.011
03-18-91	326.131	0.015
09-16-91	326.131	0.015
03-01-92	326.128	0.018
09-10-92	326.128	0.018
03-15-93	326.127	0.019
09-13-93	326.128	0.018
03-22-94	326.125	0.021
Average		0.009
Standard Deviation		0.007
95% Confidence Factor		0.013

Point No.: 29		Location:
Foundation Conditions:		Service Water Tie-In Vault
Commitment to Monitor:		Residual Soil
		Technical Specifications
Date	(1) Surveyed Elevation	(2) Change From '87 Datum
04-03-87	303.028	
04-07-87	303.029	-0.001
05-02-87	303.031	-0.003
06-01-87	303.033	-0.005
07-01-87	303.037	-0.009
08-04-87	303.037	-0.009
09-01-87	303.034	-0.006
10-06-87	303.037	-0.009
11-03-87	303.034	-0.006
12-01-87	303.033	-0.005
01-06-88	303.034	-0.006
02-02-88	303.028	0.000
02-29-88	303.033	-0.005
03-30-88	303.033	-0.005
05-04-88	303.033	-0.005
10-01-88	303.036	-0.008
04-04-89	303.037	-0.009
10-02-89	303.031	-0.003
04-09-90	303.031	-0.003
09-10-90	303.034	-0.006
03-18-91	303.034	-0.006
09-16-91	303.034	-0.006
03-01-92	303.031	-0.003
09-10-92	303.034	-0.006
03-15-93	303.031	-0.003
09-13-93	303.032	-0.004
03-22-94	303.032	-0.004
Average		-0.005
Standard Deviation		0.002
95% Confidence Factor		0.005

	Point No.:	30
	Location:	Service Water Tie-In Vault
	Foundation Conditions:	Residual Soil
	Commitment to Monitor:	Technical Specifications
Date	(1) Surveyed Elevation	(2) Change From '87 Datum
04-03-87	303.030	
04-07-87	303.031	-0.001
05-02-87	303.031	-0.001
06-01-87	303.035	-0.005
07-01-87	303.037	-0.007
08-04-87	303.041	-0.011
09-01-87	303.037	-0.007
10-06-87	303.037	-0.007
11-03-87	303.036	-0.006
12-01-87	303.036	-0.006
01-06-88	303.038	-0.008
02-02-88	303.033	-0.003
02-29-88	303.038	-0.008
03-30-88	303.036	-0.006
05-04-88	303.038	-0.008
10-01-88	303.041	-0.011
04-04-89	303.041	-0.011
10-02-89	303.034	-0.004
04-09-90	303.034	-0.004
09-10-90	303.037	-0.007
03-18-91	303.038	-0.008
09-16-91	303.038	-0.008
03-01-92	303.037	-0.007
09-10-92	303.041	-0.011
03-15-93	303.036	-0.006
09-13-93	303.037	-0.007
03-22-94	303.037	-0.007
Average		-0.007
Standard Deviation		0.003
95% Confidence Factor		0.005

	Point No.:	31
	Location:	Service Water Tie-In Vault
	Foundation Conditions:	Residual Soil
	Commitment to Monitor:	Technical Specifications
Date	(1) Surveyed Elevation	(2) Change From '87 Datum
04-03-87	303.057	
04-07-87	303.057	0.000
05-02-87	303.060	-0.003
06-01-87	303.061	-0.004
07-01-87	303.064	-0.007
08-04-87	303.067	-0.010
09-01-87	303.064	-0.007
10-06-87	303.064	-0.007
11-03-87	303.060	-0.003
12-01-87	303.061	-0.004
01-06-88	303.062	-0.005
02-02-88	303.058	-0.001
02-29-88	303.062	-0.005
03-30-88	303.062	-0.005
05-04-88	303.064	-0.007
10-01-88	303.066	-0.009
04-04-89	303.067	-0.010
10-02-89	303.060	-0.003
04-09-90	303.060	-0.003
09-10-90	303.060	-0.003
03-18-91	303.064	-0.007
09-16-91	303.064	-0.007
03-01-92	303.064	-0.007
09-10-92	303.064	-0.007
03-15-93	303.062	-0.005
09-13-93	303.063	-0.006
03-22-94	303.062	-0.005
Average		-0.005
Standard Deviation		0.002
95% Confidence Factor		0.005

	Point No.:	32
	Location:	Service Water Tie-In Vault
	Foundation Conditions:	Residual Soil
	Commitment to Monitor:	Technical Specifications
Date	(1) Surveyed Elevation	(2) Change From '87 Datum
04-03-87	303.026	
04-07-87	303.027	-0.001
05-02-87	303.028	-0.002
06-01-87	303.030	-0.004
07-01-87	303.034	-0.008
08-04-87	303.036	-0.010
09-01-87	303.034	-0.008
10-06-87	303.034	-0.008
11-03-87	303.031	-0.005
12-01-87	303.031	-0.005
01-06-88	303.031	-0.005
02-02-88	303.028	-0.002
02-29-88	303.031	-0.005
03-30-88	303.031	-0.005
05-04-88	303.031	-0.005
10-01-88	303.034	-0.008
04-04-89	303.034	-0.008
10-02-89	303.028	-0.002
04-09-90	303.031	-0.005
09-10-90	303.031	-0.005
03-18-91	303.031	-0.005
09-16-91	303.031	-0.005
03-01-92	303.031	-0.005
09-10-92	303.031	-0.005
03-15-93	303.030	-0.004
09-13-93	303.031	-0.005
03-22-94	303.030	-0.004
Average		-0.005
Standard Deviation		0.002
95% Confidence Factor		0.004

	Point No.:	SM-7
	Location:	Service Water Pump House
	Foundation Conditions:	Residual Soil
	Commitment to Monitor:	Technical Specifications
Date	(1) Surveyed Elevation	(2) Uncorrected Change From Base Line
07-11-77	327.585	
12-12-77	327.546	0.039
03-15-78	327.526	0.059
03-30-78	327.528	0.057
04-25-78	327.540	0.045
05-10-78	327.542	0.043
05-15-78	327.539	0.046
06-01-78	327.550	0.035
06-30-78	327.537	0.048
08-03-78	327.534	0.051
09-06-78	327.531	0.054
10-02-78	327.529	0.056
11-06-78	327.527	0.058
11-20-78	327.528	0.057
01-03-79	327.522	0.063
02-06-79	327.524	0.061
03-07-79	327.524	0.061
04-06-79	327.513	0.072
04-25-79	327.516	0.069
05-01-79	327.519	0.066
05-09-79	327.512	0.073
05-15-79	327.519	0.066
05-23-79	327.519	0.066
05-28-79	327.516	0.069
06-04-79	327.518	0.067
06-11-79	327.518	0.067
06-18-79	327.518	0.067
06-25-79	327.519	0.066
07-02-79	327.510	0.075
07-09-79	327.511	0.074
07-18-79	327.508	0.077
08-02-79	327.519	0.066
09-04-79	327.516	0.069
10-02-79	327.516	0.069
11-05-79	327.513	0.072
12-04-79	327.507	0.078

Point SM-7 - Continued

01-03-80	327.512	0.073
02-05-80	327.506	0.079
03-05-80	327.505	0.080
04-01-80	327.505	0.080
05-01-80	327.504	0.081
06-03-80	327.511	0.074
07-03-80	327.509	0.076
08-05-80	327.514	0.071
09-04-80	327.510	0.075
10-02-80	327.503	0.082
11-05-80	327.498	0.087
12-01-80	327.501	0.084
01-06-81	327.499	0.086
02-06-81	327.500	0.085
03-03-81	327.499	0.086
04-03-81	327.499	0.086
05-05-81	327.497	0.088
06-01-81	327.497	0.088
07-06-81	327.495	0.090
08-04-81	327.500	0.085
09-01-81	327.506	0.079
10-06-81	327.497	0.088
11-03-81	327.498	0.087
12-02-81	327.493	0.092
01-07-82	327.493	0.092
02-04-82	327.488	0.097
03-03-82	327.496	0.089
04-06-82	327.492	0.093
05-04-82	327.490	0.095
06-03-82	327.492	0.093
07-02-82	327.494	0.091
08-03-82	327.490	0.095
09-02-82	327.491	0.094
10-05-82	327.496	0.089
11-03-82	327.496	0.089
12-06-82	327.498	0.087
01-06-83	327.494	0.091
02-03-83	327.490	0.095
03-03-83	327.492	0.093
04-08-83	327.489	0.096
05-03-83	327.491	0.094
06-02-83	327.490	0.095
07-06-83	327.490	0.095
08-04-83	327.490	0.095
09-06-83	327.490	0.095

Point SM-7 - Continued

10-04-83	327.487	0.098
11-01-83	327.485	0.100
12-05-83	327.486	0.099
01-04-84	327.480	0.105
02-06-84	327.476	0.109
03-01-84	327.481	0.104
04-05-84	327.479	0.106
05-01-84	327.483	0.102
06-01-84	327.479	0.106
10-03-84	327.477	0.108
04-04-85	327.485	0.100
10-09-85	327.467	0.118
04-07-86	327.472	0.113
10-06-86	327.474	0.111
04-21-87	327.465	0.120
10-07-87	327.463	0.122
04-04-88	327.453	0.132
10-01-88	327.460	0.125
04-04-89	327.453	0.132
10-02-89	327.450	0.135
04-09-90	327.447	0.138
09-10-90	327.450	0.135
03-18-91	327.450	0.135
09-16-91	327.447	0.138
03-01-92	327.444	0.141
09-10-92	327.447	0.138
03-15-93	327.440	0.145
09-13-93	327.439	0.146
03-22-94	327.432	0.153
Mean		0.087
Standard Deviation		0.028
95% Confidence Factor		0.055

Point No.:		SM-10
Location:		Service Water Pump House
Foundation Conditions:		Residual Soil
Commitment to Monitor:		Technical Specifications
Date	(1) Surveyed Elevation	(2) Uncorrected Change From Base Line
07-11-77	327.397	
12-12-77	327.355	0.042
03-15-78	327.334	0.063
03-30-78	327.338	0.059
04-25-78	327.348	0.049
05-10-78	327.342	0.055
05-15-78	327.341	0.056
06-01-78	327.350	0.047
06-30-78	327.340	0.057
08-03-78	327.341	0.056
09-06-78	327.336	0.061
10-02-78	327.338	0.059
11-06-78	327.331	0.066
11-20-78	327.333	0.064
01-03-79	327.328	0.069
02-06-79	327.329	0.068
03-07-79	327.327	0.070
04-06-79	327.317	0.080
04-25-79	327.321	0.076
05-01-79	327.322	0.075
05-09-79	327.318	0.079
05-15-79	327.323	0.074
05-23-79	327.319	0.078
05-28-79	327.320	0.077
06-04-79	327.322	0.075
06-11-79	327.319	0.078
06-18-79	327.320	0.077
06-25-79	327.322	0.075
07-02-79	327.314	0.083
07-09-79	327.314	0.083
07-18-79	327.315	0.082
08-02-79	327.321	0.076
09-04-79	327.315	0.082
10-02-79	327.319	0.078
11-05-79	327.318	0.079
12-04-79	327.313	0.084

Point SM-10 - Continued

01-03-80	327.317	0.080
02-05-80	327.308	0.089
03-05-80	327.308	0.089
04-01-80	327.309	0.088
05-01-80	327.307	0.090
06-03-80	327.308	0.089
07-03-80	327.307	0.090
08-05-80	327.314	0.083
09-04-80	327.306	0.091
10-02-80	327.300	0.097
11-05-80	327.297	0.100
12-01-80	327.302	0.095
01-06-81	327.300	0.097
02-06-81	327.301	0.096
03-03-81	327.299	0.098
04-03-81	327.299	0.098
05-05-81	327.299	0.098
06-01-81	327.297	0.100
07-06-81	327.296	0.101
08-04-81	327.298	0.099
09-01-81	327.303	0.094
10-06-81	327.296	0.101
11-03-81	327.297	0.100
12-02-81	327.294	0.103
01-07-82	327.288	0.109
02-04-82	327.289	0.108
03-03-82	327.295	0.102
04-06-82	327.290	0.107
05-04-82	327.289	0.108
06-03-82	327.289	0.108
07-02-82	327.294	0.103
08-03-82	327.291	0.106
09-02-82	327.290	0.107
10-05-82	327.291	0.106
11-03-82	327.291	0.106
12-06-82	327.293	0.104
01-06-83	327.291	0.106
02-03-83	327.287	0.110
03-03-83	327.291	0.106
04-08-83	327.287	0.110
05-03-83	327.289	0.108
06-02-83	327.286	0.111
07-06-83	327.283	0.114
08-04-83	327.287	0.110
09-06-83	327.287	0.110

Point SM-10 - Continued

10-04-83	327.285	0.112
11-01-83	327.285	0.112
12-05-83	327.282	0.115
01-04-84	327.279	0.118
02-06-84	327.272	0.125
03-01-84	327.274	0.123
04-05-84	327.276	0.121
05-01-84	327.276	0.121
06-01-84	327.279	0.118
10-03-84	327.273	0.124
04-04-85	327.278	0.119
10-09-85	327.269	0.128
04-07-86	327.269	0.128
10-06-86	327.264	0.133
04-21-87	327.250	0.147
10-07-87	327.250	0.147
04-04-88	327.237	0.160
10-01-88	327.243	0.154
04-04-89	327.237	0.160
10-02-89	327.234	0.163
04-09-90	327.230	0.167
09-10-90	327.234	0.163
03-18-91	327.234	0.163
09-16-91	327.227	0.170
03-01-92	327.224	0.173
09-10-92	327.227	0.170
03-15-93	327.220	0.177
09-13-93	327.219	0.178
03-22-94	327.212	0.185
Mean		0.100
Standard Deviation		0.035
95% Confidence Factor		0.069

	Point No.:		SM-17			
	Location:		Service Water Line			
	Foundation Conditions:		Residual Soil			
	Commitment to Monitor:		Technical Specifications			
Date	(1) Surveyed Elevation	(2) Uncorrected Change From Base Line	(3) Base Line Change 5/28/79 To 10/6/86	(5) Base Line Change 5/14/87 To 5/16/89	(6) Corrected Value Rod Adjustme	(7) Corrected Data 5/29/79 To Present
07-11-77	321.855					
12-12-77	321.797	0.058				
03-15-78	321.772	0.083				
03-30-78	321.771	0.084				
04-25-78	321.783	0.072				
05-10-78	321.779	0.076				
06-01-78	321.782	0.073				
06-30-78	321.780	0.075				
08-03-78	321.778	0.077				
09-06-78	321.776	0.079				
10-02-78	321.773	0.082				
11-06-78	321.767	0.088				
11-20-78	321.765	0.090				
01-03-79	321.762	0.093				
02-06-79	321.760	0.095				
03-07-79	321.761	0.094				
04-06-79	321.749	0.106				
04-25-79	321.743	0.112				
05-01-79	321.750	0.105				
05-09-79	321.753	0.102				
05-15-79	321.750	0.105				
05-23-79	321.753	0.102				
05-28-79	321.752	0.103	0.103			0.103
06-04-79	321.748	0.107	0.107			0.107
06-11-79	321.748	0.107	0.107			0.107
06-18-79	321.748	0.107	0.107			0.107
06-25-79	321.749	0.106	0.106			0.106
07-02-79	321.741	0.114	0.114			0.114
07-09-79	321.739	0.116	0.116			0.116
07-18-79	321.739	0.116	0.116			0.116
08-02-79	321.748	0.107	0.107			0.107
09-04-79	321.743	0.112	0.112			0.112
10-02-79	321.744	0.111	0.111			0.111
11-05-79	321.749	0.106	0.106			0.106
12-04-79	321.733	0.122	0.122			0.122
01-03-80	321.740	0.115	0.115			0.115

Point SM-17 - Continued

02-05-80	321.730	0.125	0.125	0.125
03-05-80	321.726	0.129	0.129	0.129
04-01-80	321.728	0.127	0.127	0.127
05-01-80	321.729	0.126	0.126	0.126
06-03-80	321.735	0.120	0.120	0.120
07-03-80	321.734	0.121	0.121	0.121
08-05-80	321.736	0.119	0.119	0.119
09-04-80	321.733	0.122	0.122	0.122
10-02-80	321.725	0.130	0.130	0.130
11-05-80	321.723	0.132	0.132	0.132
12-01-80	321.724	0.131	0.131	0.131
01-06-81	321.718	0.137	0.137	0.137
02-06-81	321.718	0.137	0.137	0.137
03-03-81	321.721	0.134	0.134	0.134
04-03-81	321.720	0.135	0.135	0.135
05-05-81	321.719	0.136	0.136	0.136
06-01-81	321.719	0.136	0.136	0.136
07-06-81	321.718	0.137	0.137	0.137
08-04-81	321.718	0.137	0.137	0.137
09-01-81	321.720	0.135	0.135	0.135
10-06-81	321.714	0.141	0.141	0.141
11-03-81	321.719	0.136	0.136	0.136
12-02-81	321.709	0.146	0.146	0.146
01-07-82	321.709	0.146	0.146	0.146
02-04-82	321.705	0.150	0.150	0.150
03-03-82	321.707	0.148	0.148	0.148
04-06-82	321.707	0.148	0.148	0.148
05-04-82	321.707	0.148	0.148	0.148
06-03-82	321.710	0.145	0.145	0.145
07-02-82	321.711	0.144	0.144	0.144
08-03-82	321.717	0.138	0.138	0.138
09-02-82	321.711	0.144	0.144	0.144
10-05-82	321.705	0.150	0.150	0.150
11-03-82	321.697	0.158	0.158	0.158
12-06-82	321.697	0.158	0.158	0.158
01-06-83	321.706	0.149	0.149	0.149
02-03-83	321.698	0.157	0.157	0.157
03-03-83	321.700	0.155	0.155	0.155
04-08-83	321.703	0.152	0.152	0.152
05-03-83	321.700	0.155	0.155	0.155
06-02-83	321.703	0.152	0.152	0.152
07-06-83	321.702	0.153	0.153	0.153
08-04-83	321.701	0.154	0.154	0.154
09-06-83	321.701	0.154	0.154	0.154
10-04-83	321.704	0.151	0.151	0.151

Point SM-17 - Continued

11-01-83	321.703	0.152	0.152		0.152
12-05-83	321.702	0.153	0.153		0.153
01-04-84	321.697	0.158	0.158		0.158
02-06-84	321.702	0.153	0.153		0.153
03-01-84	321.696	0.159	0.159		0.159
04-05-84	321.700	0.155	0.155		0.155
05-01-84	321.701	0.154	0.154		0.154
06-01-84	321.693	0.162	0.162		0.162
10-03-84	321.691	0.164	0.164		0.164
04-04-85	321.696	0.159	0.159		0.159
10-09-85	321.686	0.169	0.169		0.169
04-07-86	321.683	0.172	0.172		0.172
10-06-86	321.675	0.180	0.180		0.180
04-21-87	321.672	0.183	Note: 0.010 ft added to	0.183	0.193
10-07-87	321.666	0.189	column 5 to correct for	0.189	0.199
04-04-88	321.655	0.200	change from Yard rod	0.200	0.210
10-28-88	321.661	0.194	to Invar rod.	0.194	0.204
05-16-89	321.652	0.209 *	* Redundant point used.	0.209	0.219
10-27-89	321.650	0.211 *	Baseline elev. for	0.211	0.221
05-09-90	321.646	0.215 *	point is 321.861.	0.215	0.225
10-17-90	321.646	0.215 *		0.215	0.225
04-12-91	321.648	0.213 *		0.213	0.223
09-15-91	321.646	0.215 *		0.215	0.225
03-15-92	321.638	0.223 *		0.223	0.233
09-10-92	321.641	0.220 *		0.220	0.230
03-15-93	321.633	0.228 *		0.228	0.238
09-13-93	321.633	0.228 *		0.228	0.238
03-22-94	321.626	0.235 *		0.235	0.245
Mean		0.136	0.139	0.212	0.222
Standard Deviation		0.043			0.036
95% Confidence Factor		0.086			0.072

	Point No.:		SM-18			
	Location:		Service Water Line			
	Foundation Conditions:		Residual Soil			
	Commitment to Monitor:		Technical Specifications			
Date	(1) Surveyed Elevation	(2) Uncorrected Change From Base Line	(3) Base Line Change 5/28/79 To 10/6/86	(5) Base Line Change 5/14/87 To 5/16/89	(6) Corrected Value Rod Adjustment	(7) Corrected Data 5/29/79 To Present
07-11-77	321.660					
12-12-77	321.602	0.058				
03-15-78	321.579	0.081				
03-30-78	321.583	0.077				
04-25-78	321.594	0.066				
05-10-78	321.589	0.071				
06-01-78	321.593	0.067				
06-30-78	321.590	0.070				
08-03-78	321.591	0.069				
09-06-78	321.589	0.071				
10-02-78	321.587	0.073				
11-06-78	321.578	0.082				
11-20-78	321.577	0.083				
01-03-79	321.570	0.090				
02-06-79	321.570	0.090				
03-07-79	321.572	0.088				
04-06-79	321.565	0.095				
04-25-79	321.563	0.097				
05-01-79	321.564	0.096				
05-09-79	321.562	0.098				
05-15-79	321.564	0.096				
05-23-79	321.562	0.098				
05-28-79	321.560	0.100	0.100			0.100
06-04-79	321.565	0.095	0.095			0.095
06-11-79	321.565	0.095	0.095			0.095
06-18-79	321.565	0.095	0.095			0.095
06-25-79	321.566	0.094	0.094			0.094
07-02-79	321.559	0.101	0.101			0.101
07-09-79	321.554	0.106	0.106			0.106
07-18-79	321.557	0.103	0.103			0.103
08-02-79	321.565	0.095	0.095			0.095
09-04-79	321.560	0.100	0.100			0.100
10-02-79	321.559	0.101	0.101			0.101
11-05-79	321.556	0.104	0.104			0.104
12-04-79	321.557	0.103	0.103			0.103
01-03-80	321.553	0.107	0.107			0.107

Point SM-18 - Continued

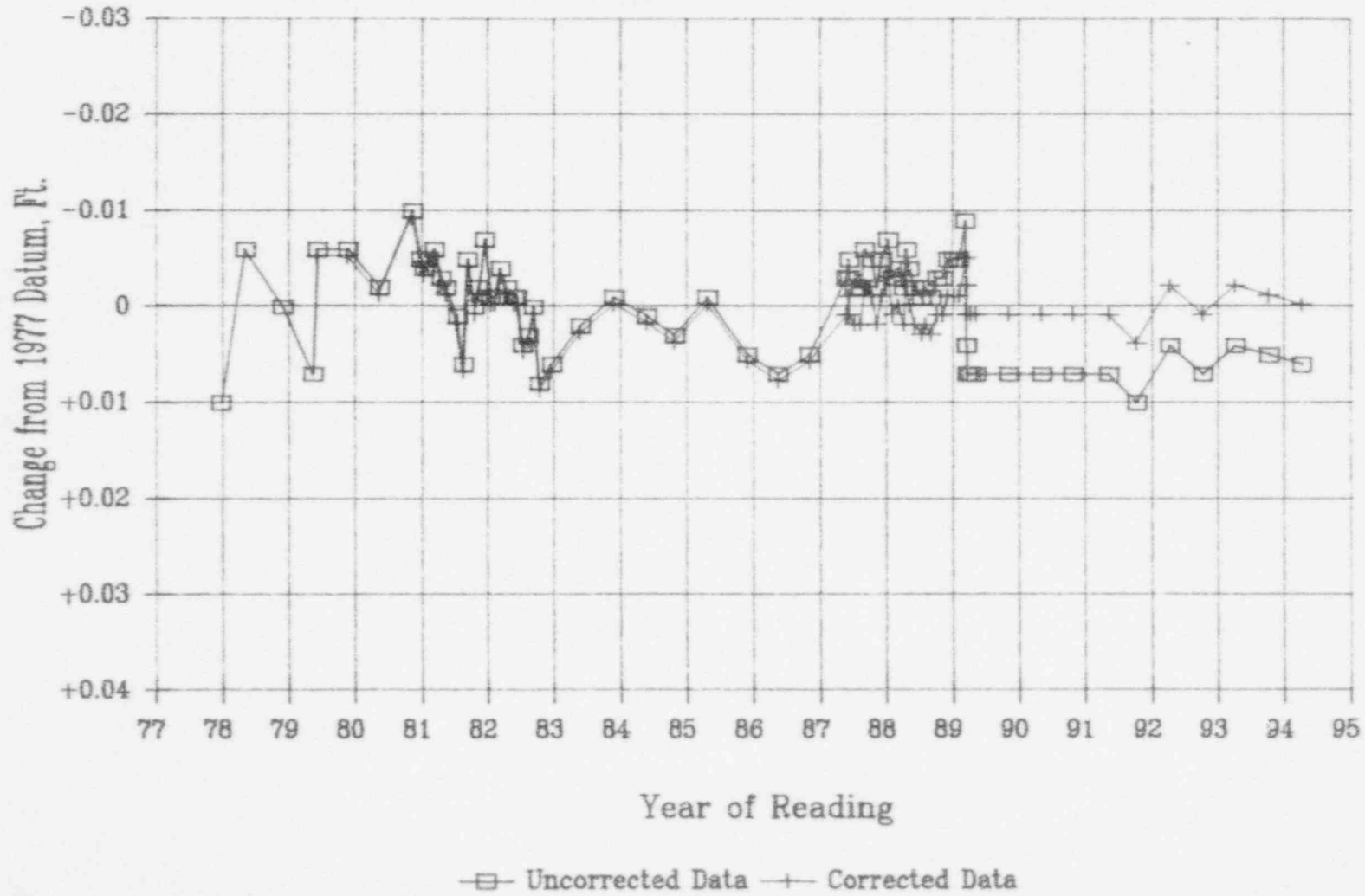
02-05-80	321.546	0.114	0.114	0.114
03-05-80	321.542	0.118	0.118	0.118
04-01-80	321.546	0.114	0.114	0.114
05-01-80	321.545	0.115	0.115	0.115
06-03-80	321.550	0.110	0.110	0.110
07-03-80	321.549	0.111	0.111	0.111
08-05-80	321.551	0.109	0.109	0.109
09-04-80	321.549	0.111	0.111	0.111
10-02-80	321.542	0.118	0.118	0.118
11-05-80	321.540	0.120	0.120	0.120
12-01-80	321.541	0.119	0.119	0.119
01-06-81	321.536	0.124	0.124	0.124
02-06-81	321.536	0.124	0.124	0.124
03-03-81	321.538	0.122	0.122	0.122
04-03-81	321.538	0.122	0.122	0.122
05-05-81	321.537	0.123	0.123	0.123
06-01-81	321.536	0.124	0.124	0.124
07-06-81	321.534	0.126	0.126	0.126
08-04-81	321.533	0.127	0.127	0.127
09-01-81	321.536	0.124	0.124	0.124
10-06-81	321.530	0.130	0.130	0.130
11-03-81	321.535	0.125	0.125	0.125
12-02-81	321.525	0.135	0.135	0.135
01-07-82	321.526	0.134	0.134	0.134
02-04-82	321.520	0.140	0.140	0.140
03-03-82	321.522	0.138	0.138	0.138
04-06-82	321.523	0.137	0.137	0.137
05-04-82	321.523	0.137	0.137	0.137
06-03-82	321.524	0.136	0.136	0.136
07-02-82	321.527	0.133	0.133	0.133
08-03-82	321.523	0.137	0.137	0.137
09-02-82	321.525	0.135	0.135	0.135
10-05-82	321.520	0.140	0.140	0.140
11-03-82	321.511	0.149	0.149	0.149
12-06-82	321.514	0.146	0.146	0.146
01-06-83	321.521	0.139	0.139	0.139
02-03-83	321.514	0.146	0.146	0.146
03-03-83	321.515	0.145	0.145	0.145
04-08-83	321.518	0.142	0.142	0.142
05-03-83	321.514	0.146	0.146	0.146
06-02-83	321.519	0.141	0.141	0.141
07-06-83	321.516	0.144	0.144	0.144
08-04-83	321.517	0.143	0.143	0.143
09-06-83	321.515	0.145	0.145	0.145
10-04-83	321.522	0.138	0.138	0.138

Point SM-18 - Continued

11-01-83	321.518	0.142	0.142		0.142		
12-05-83	321.517	0.143	0.143		0.143		
01-04-84	321.513	0.147	0.147		0.147		
02-06-84	321.517	0.143	0.143		0.143		
03-01-84	321.512	0.148	0.148		0.148		
04-05-84	321.513	0.147	0.147		0.147		
05-01-84	321.515	0.145	0.145		0.145		
06-01-84	321.506	0.154	0.154		0.154		
10-03-84	321.505	0.155	0.155		0.155		
04-04-85	321.508	0.152	0.152		0.152		
10-09-85	321.498	0.162	0.162		0.162		
04-07-86	321.497	0.163	0.163		0.163		
10-06-86	321.490	0.170	0.170		0.170		
04-21-87	321.487	0.173		Note: 0.010 ft added to column 5 to correct for change from Yard rod to Invar rod. * Redundant point used. Baseline elev. for point is 321.666.	0.173	0.183	0.183
10-07-87	321.481	0.179			0.179	0.189	0.189
04-04-88	321.468	0.192			0.192	0.202	0.202
10-28-88	321.474	0.186			0.186	0.196	0.196
05-16-89	321.463	0.203 *			0.203	0.213	0.213
10-27-89	321.463	0.203 *			0.203	0.213	0.213
05-09-90	321.458	0.208 *			0.208	0.218	0.218
10-17-90	321.458	0.208 *			0.208	0.218	0.218
04-12-91	321.458	0.208 *			0.208	0.218	0.218
09-15-91	321.457	0.209 *			0.209	0.219	0.219
03-15-92	321.451	0.215 *			0.215	0.225	0.225
09-10-92	321.453	0.213 *			0.213	0.223	0.223
03-15-93	321.445	0.221 *			0.221	0.231	0.231
09-13-93	321.443	0.223 *			0.223	0.233	0.233
03-22-94	321.435	0.231 *			0.231	0.241	0.241
Mean		0.127	0.128			0.205	0.215
Standard Deviation		0.043					0.038
95% Confidence Factor		0.085					0.075

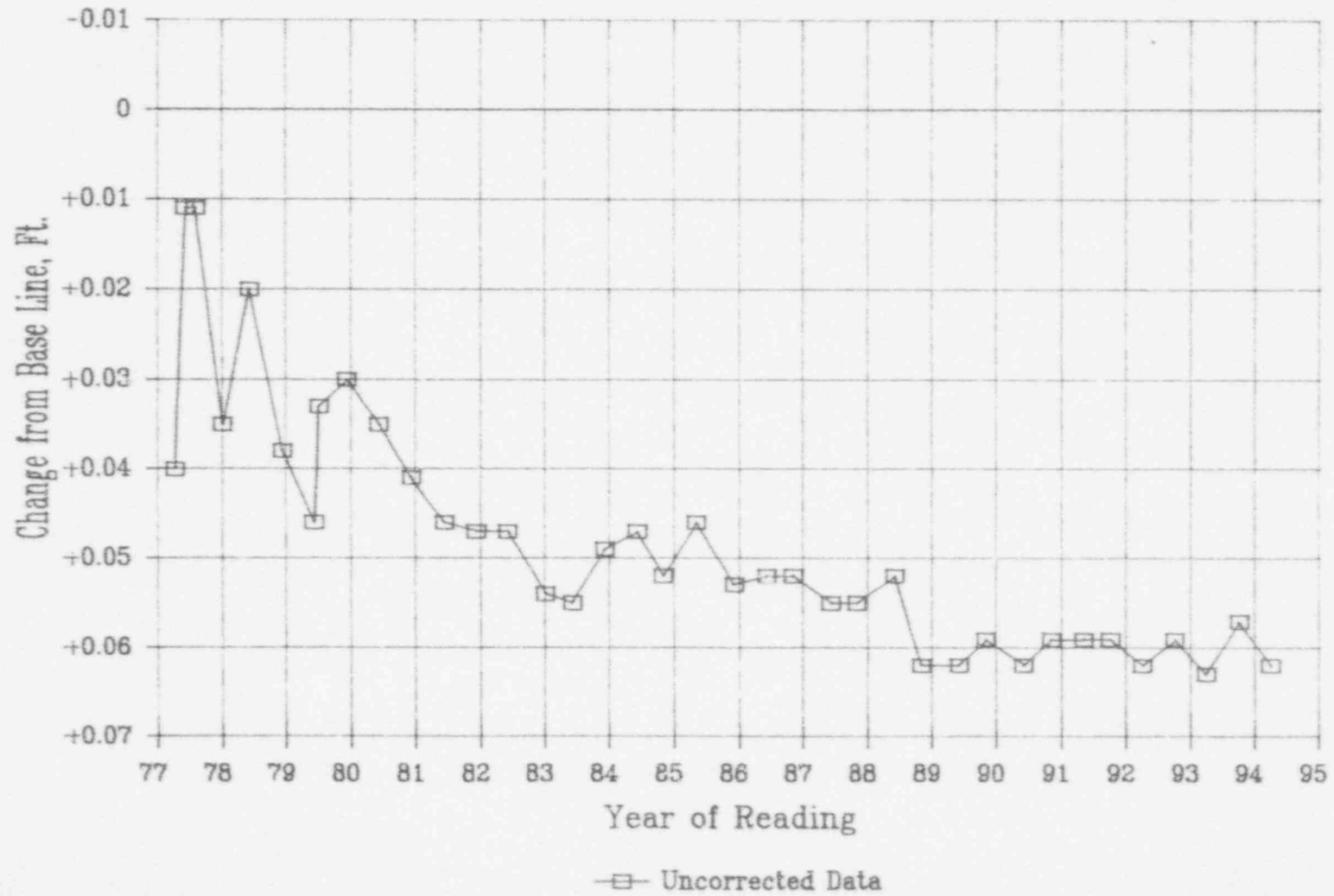
Point 113 (113R)

Unit 2 Quench Spray Area

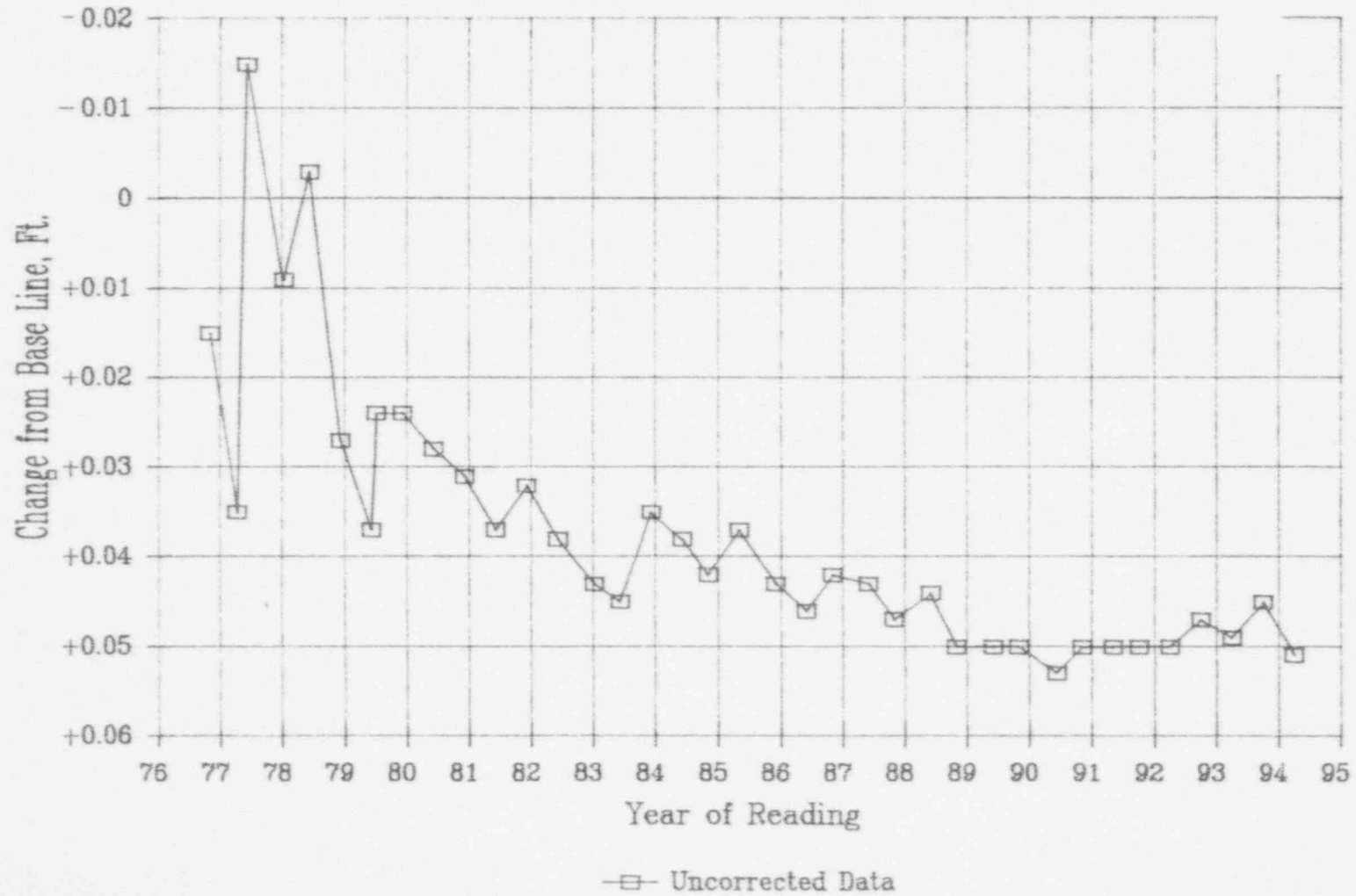


Point 114

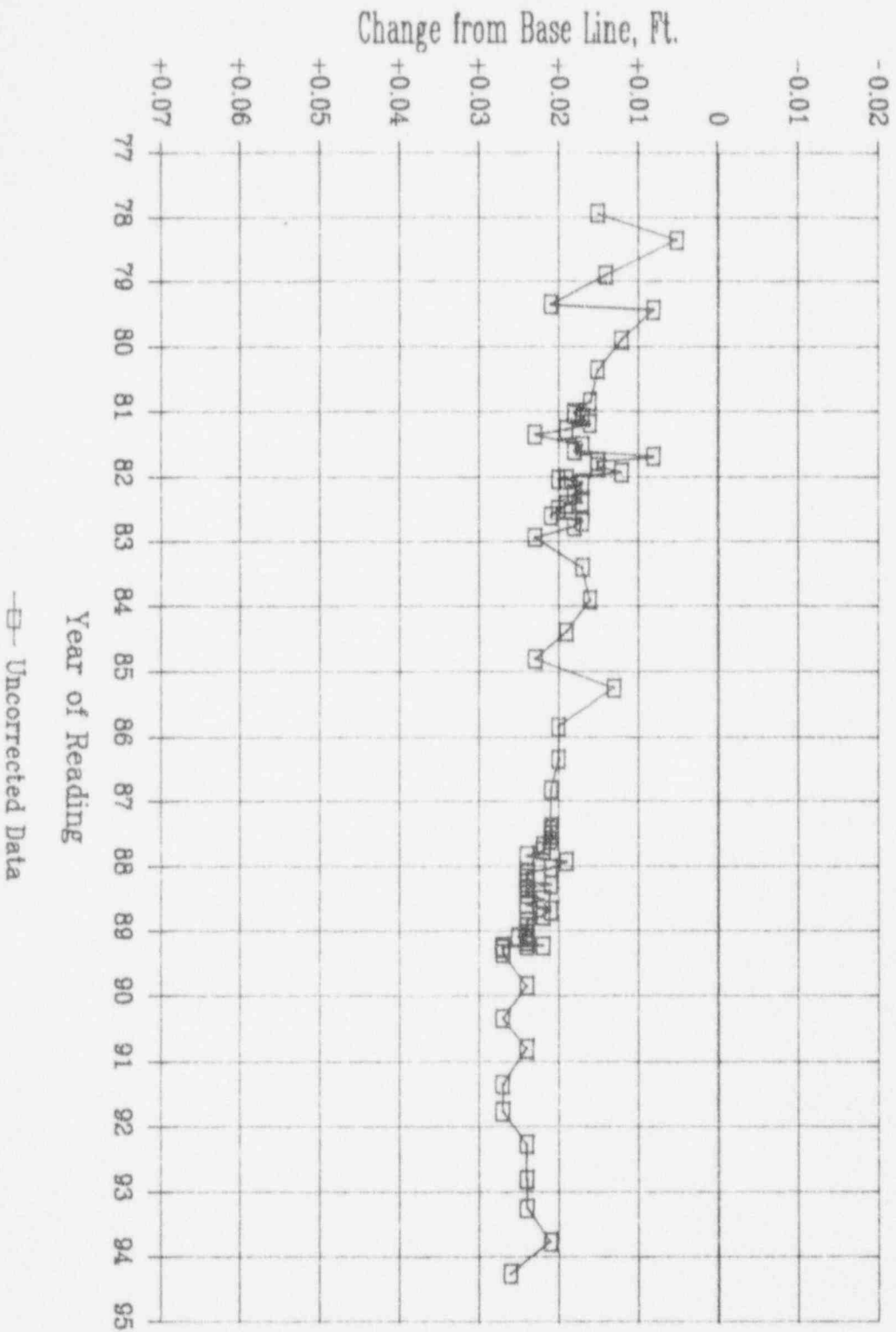
Unit 2 Service Building E-Line



Point 116
Unit 2 Service Building E-Line

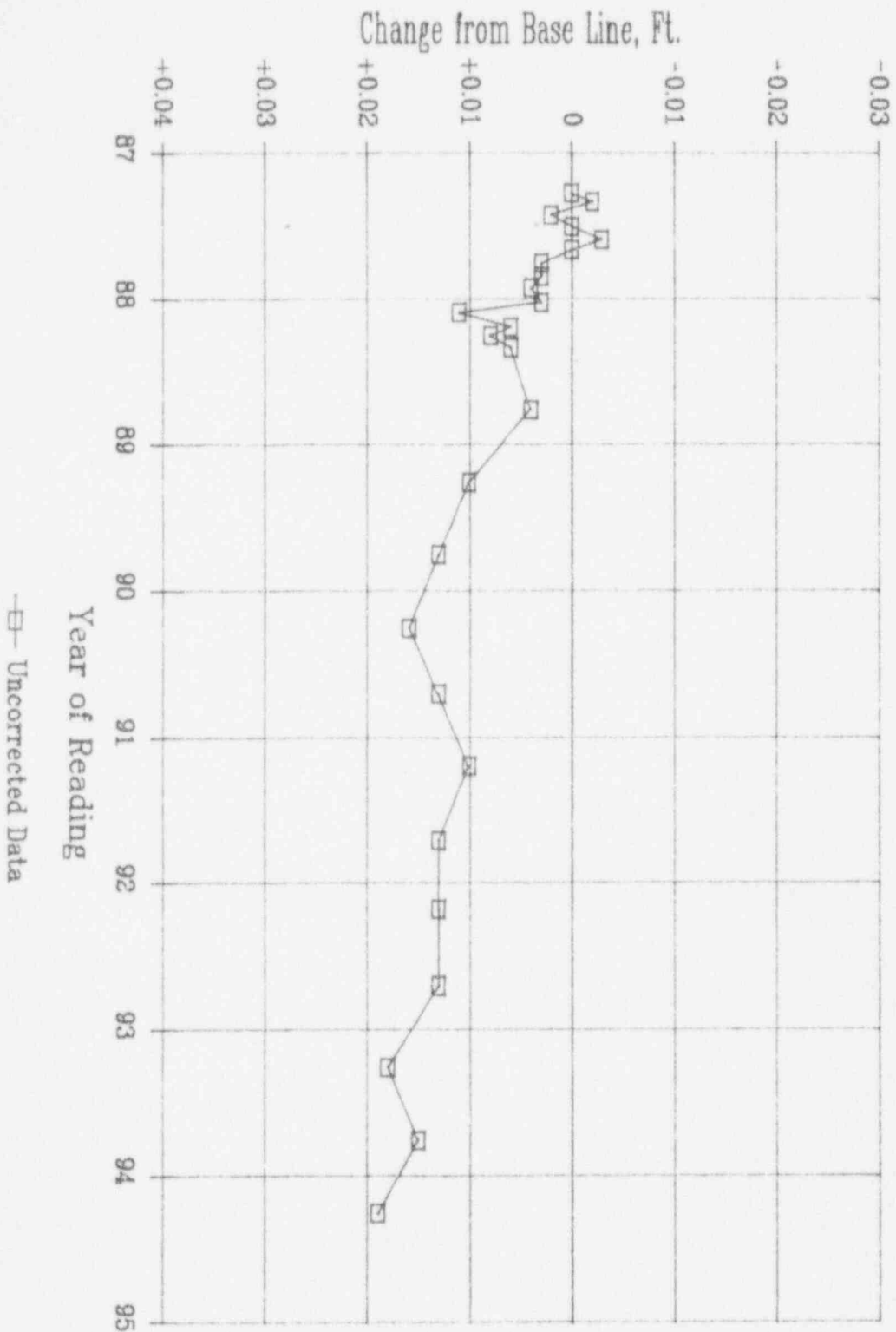


Point 117
 Unit 2 Service Building E-line

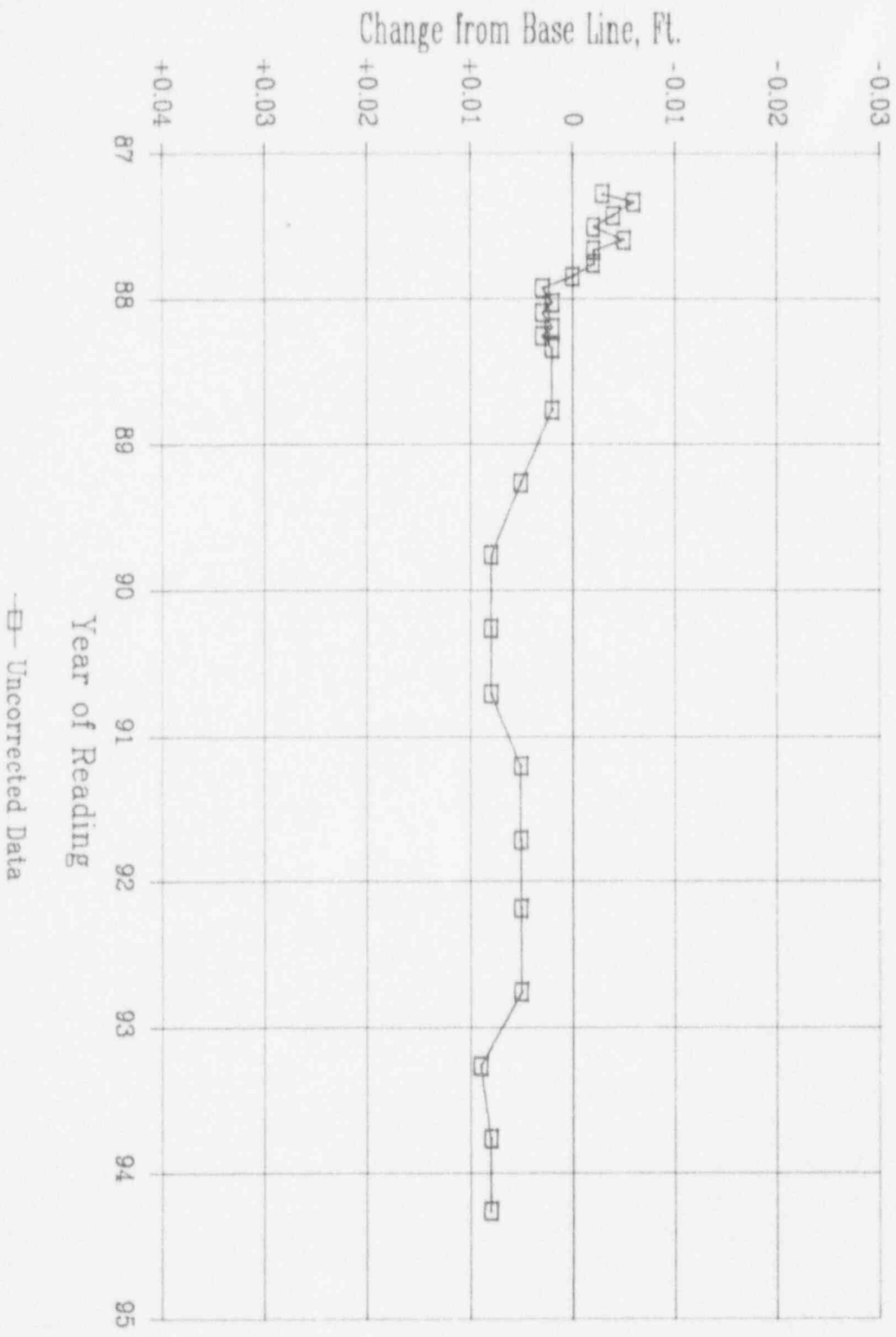


—□— Uncorrected Data

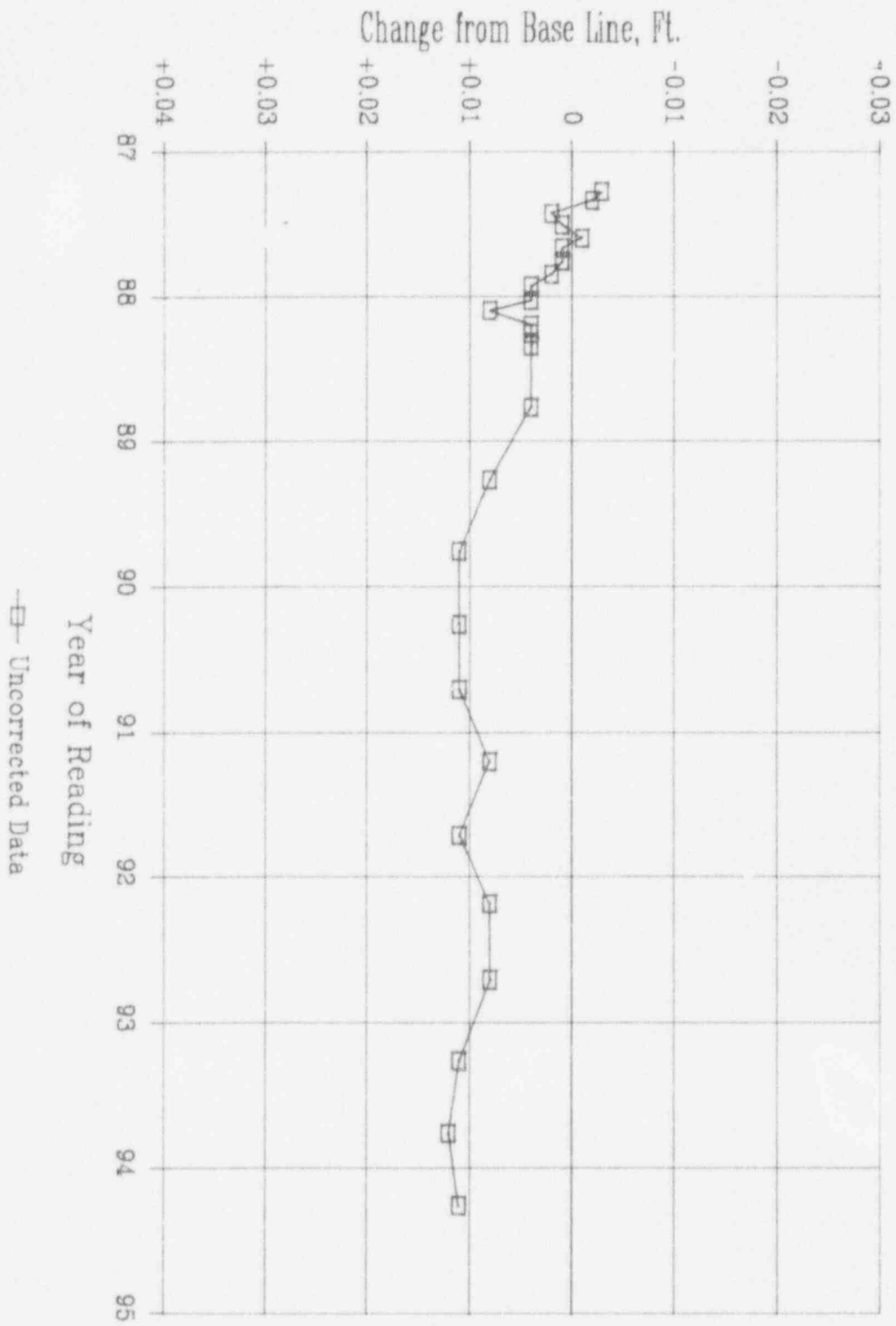
Point 25
Service Water Valve House



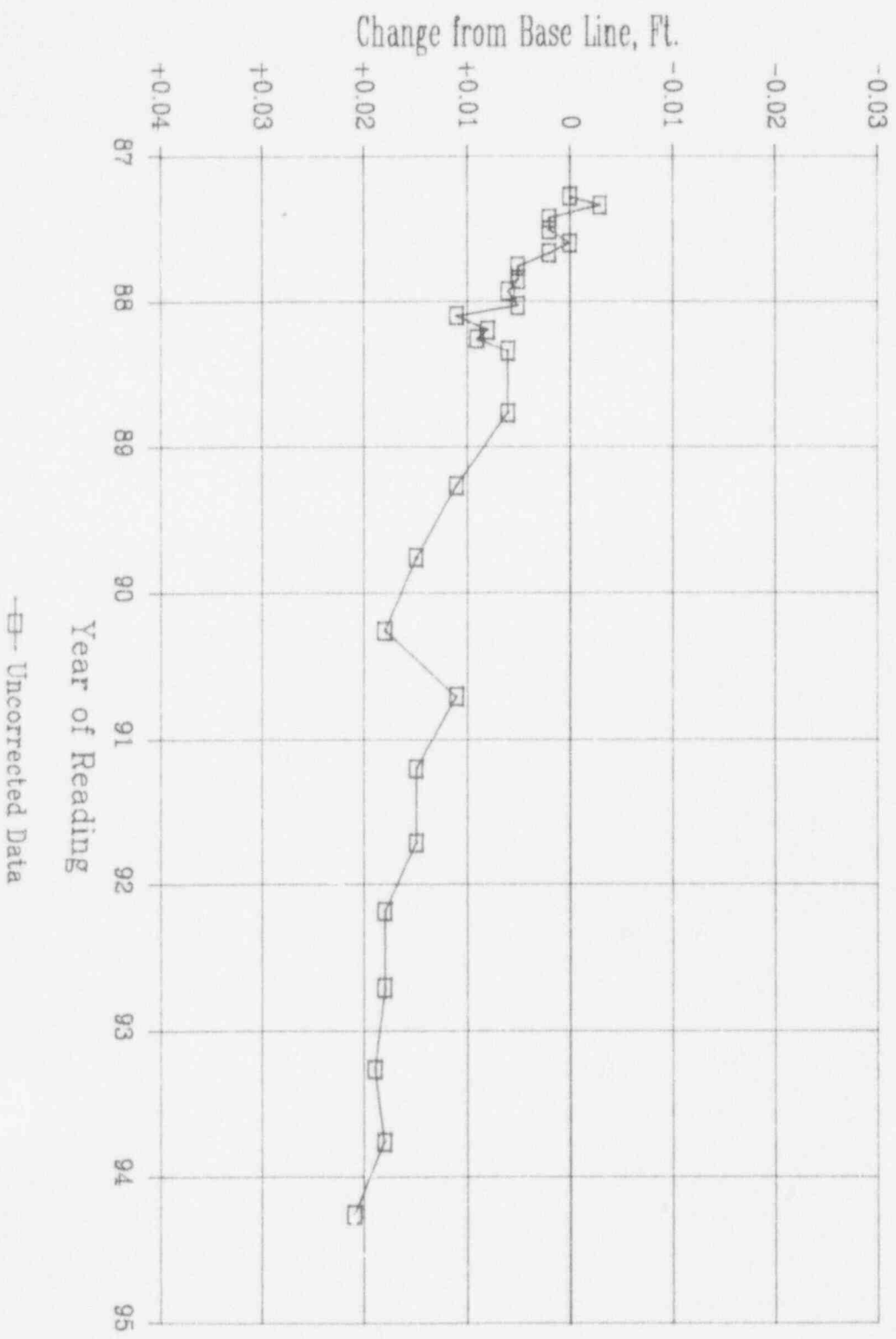
Point 26
Service Water Valve House



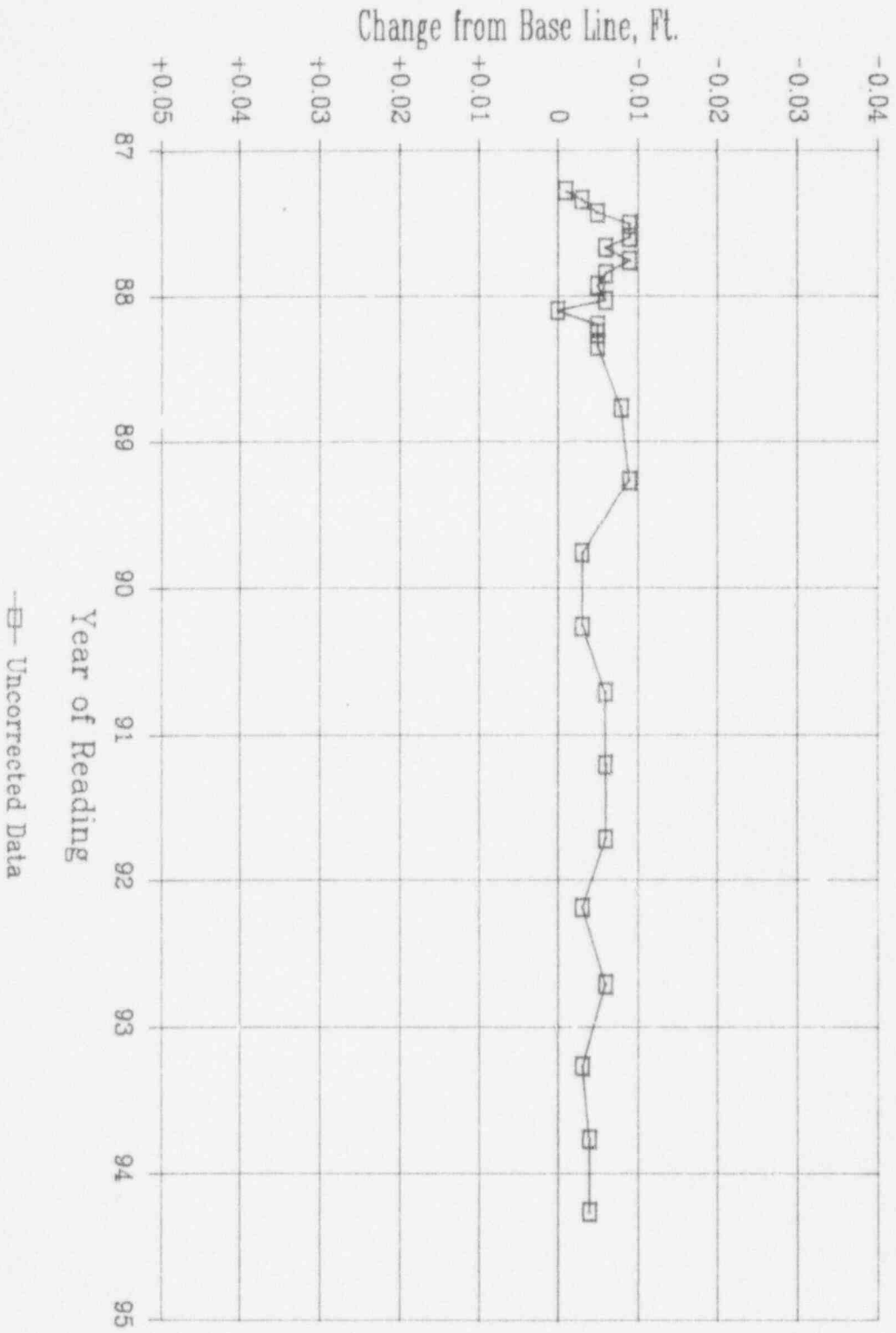
Point 27
Service Water Valve House



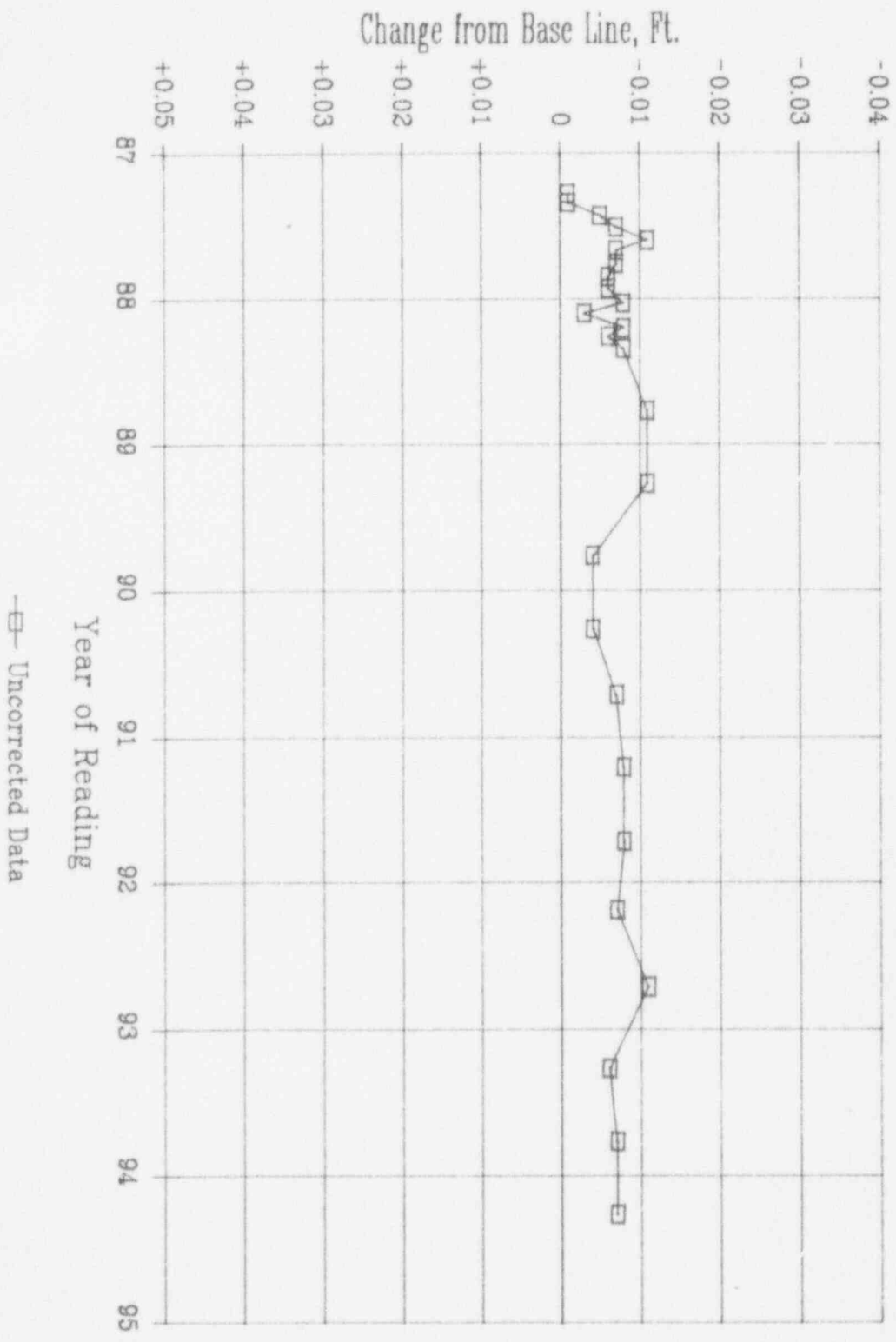
Point 28
Service Water Valve House



Point 29
Service Water Tie-In Vault



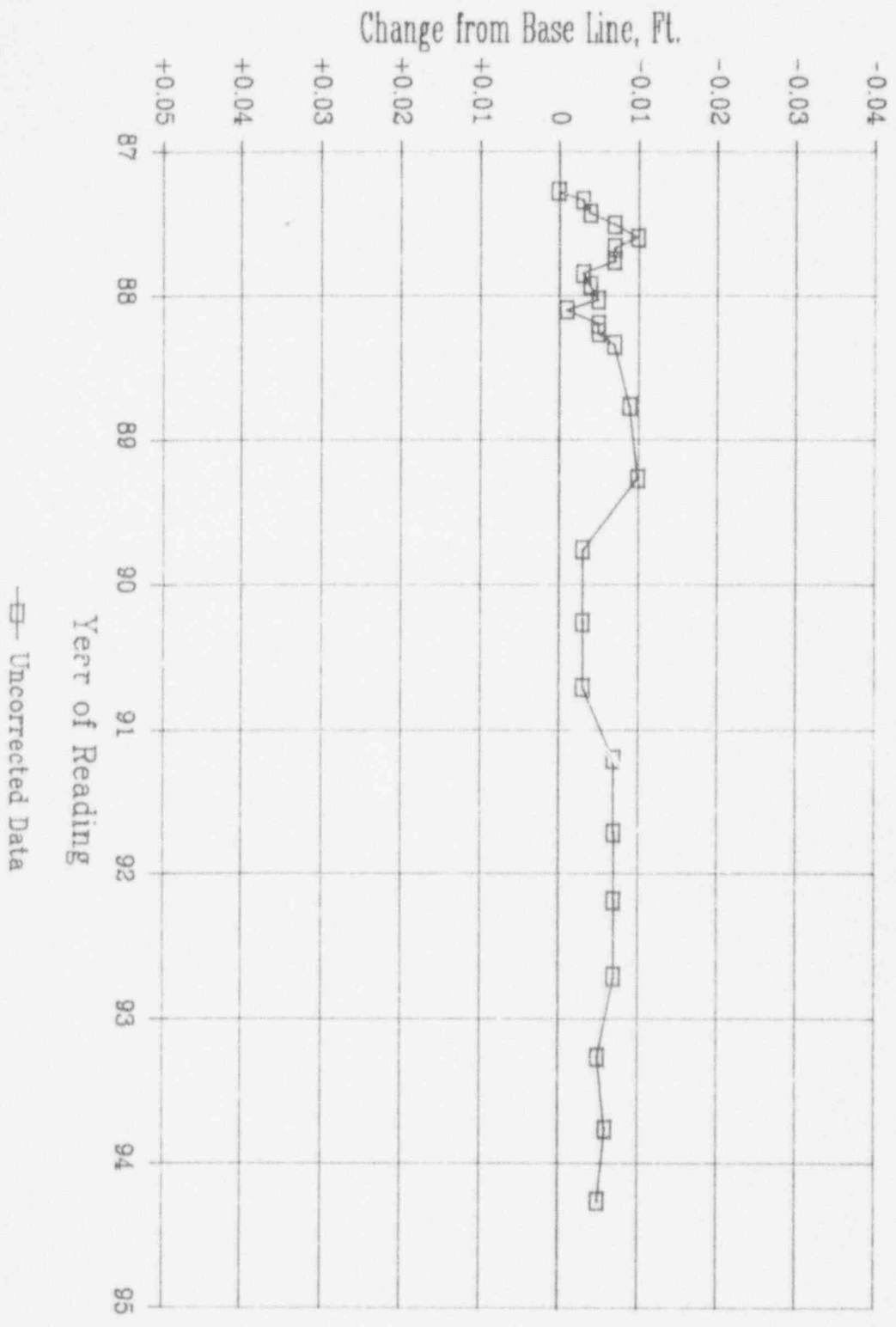
Point 30
Service Water Tie--In Vault



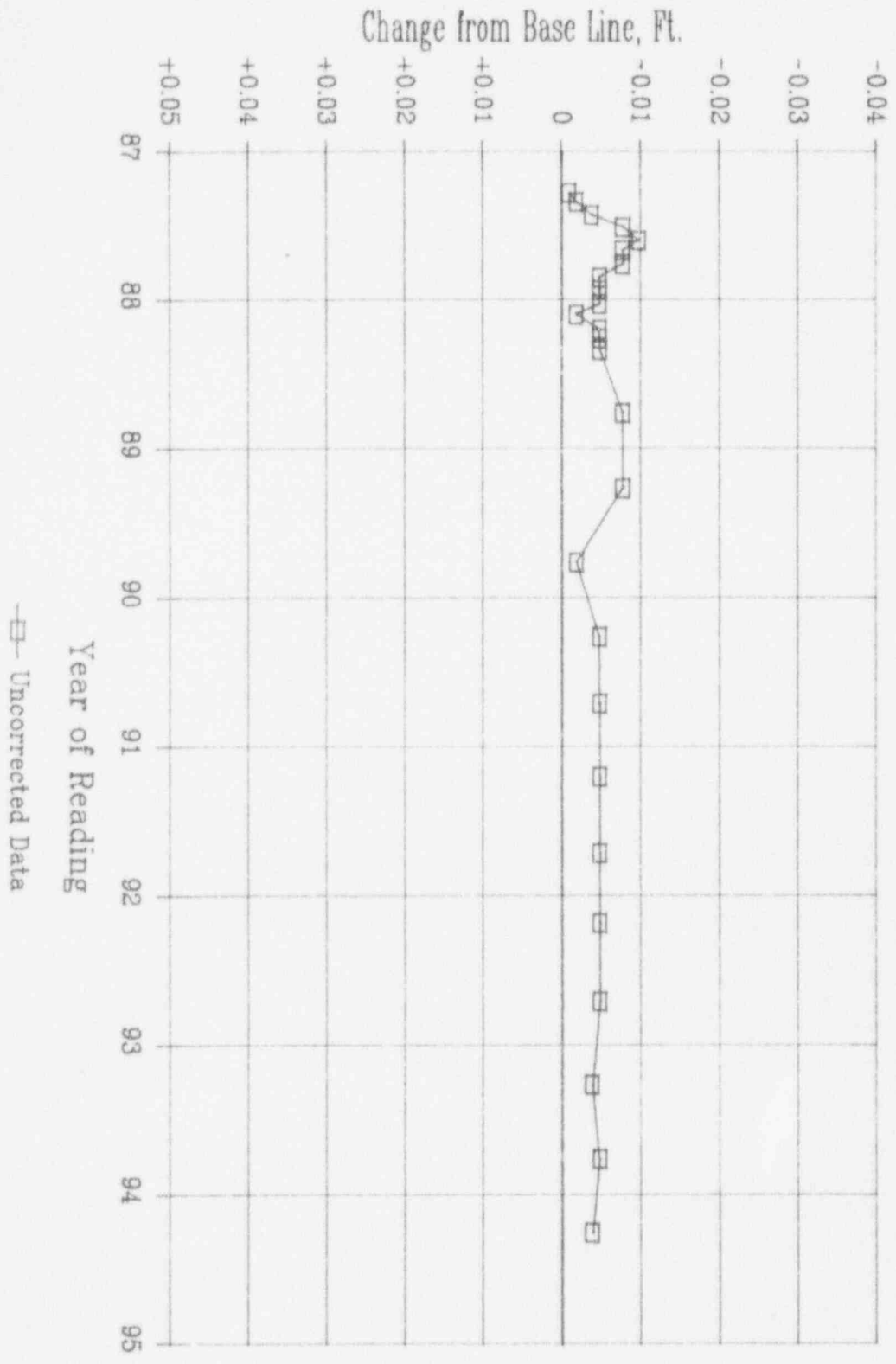
□ Uncorrected Data

Point 31

Service Water Tie-In Vault

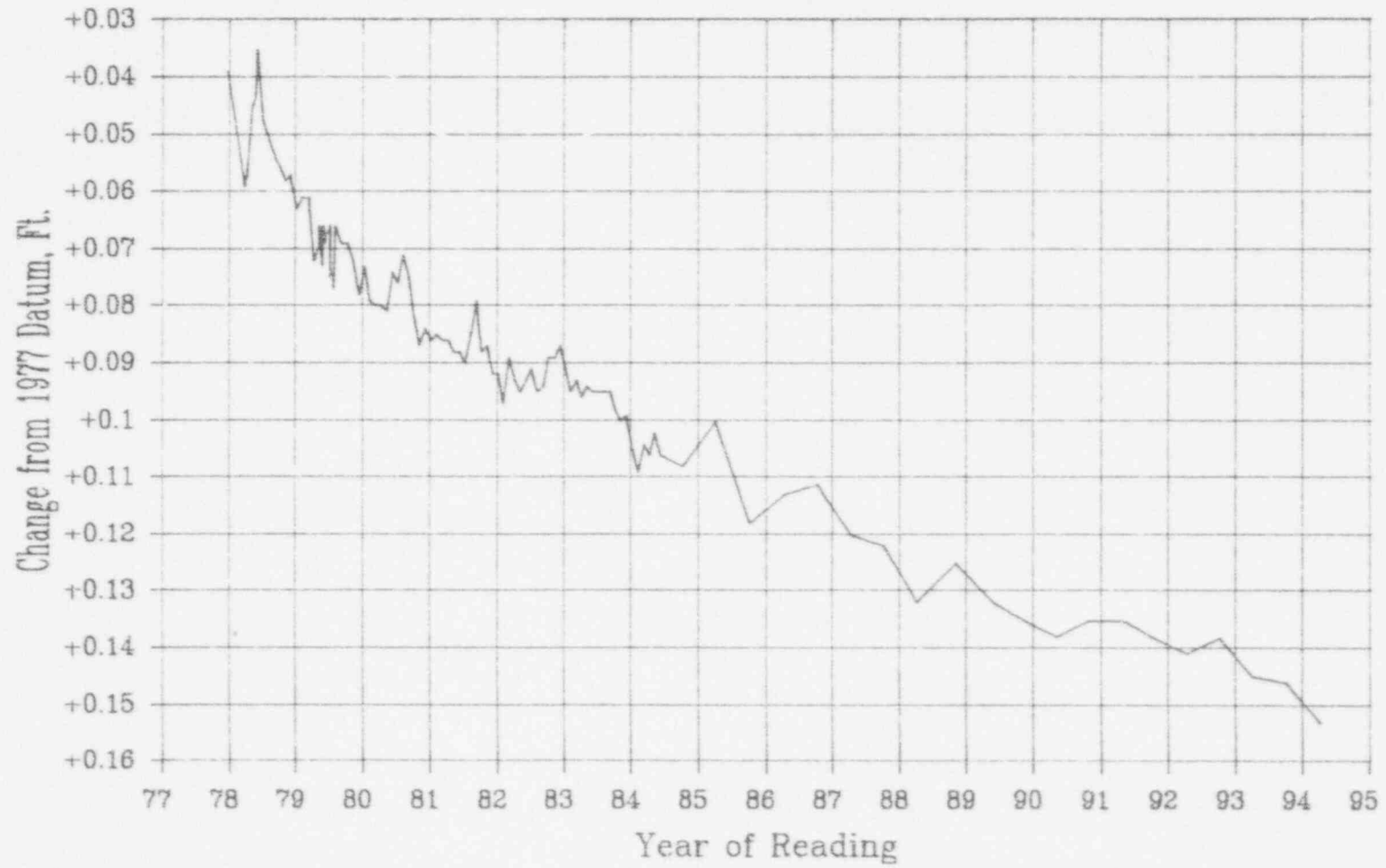


Point 32
Service Water Tie-In Vault



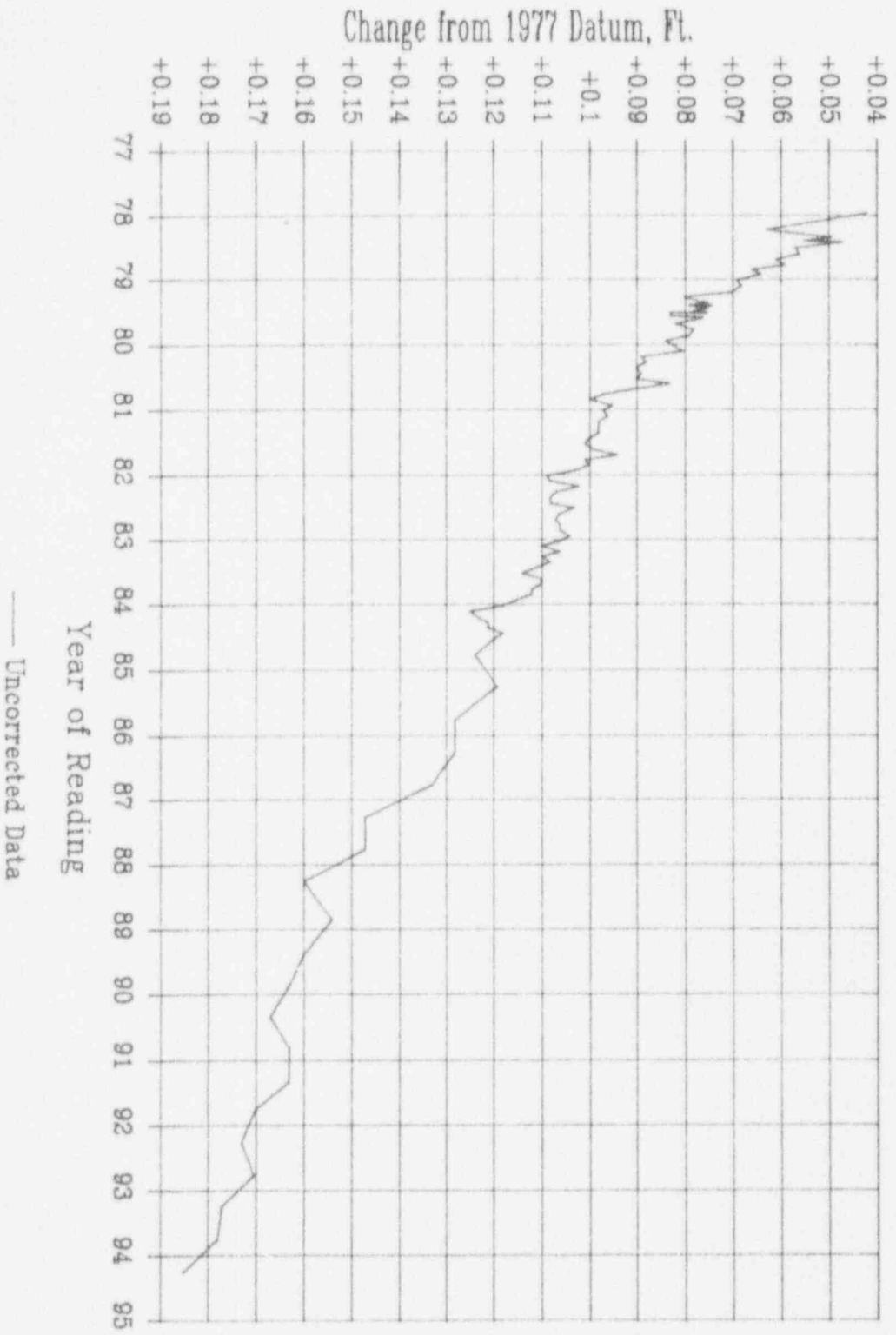
SM-7

Service Water Pump House

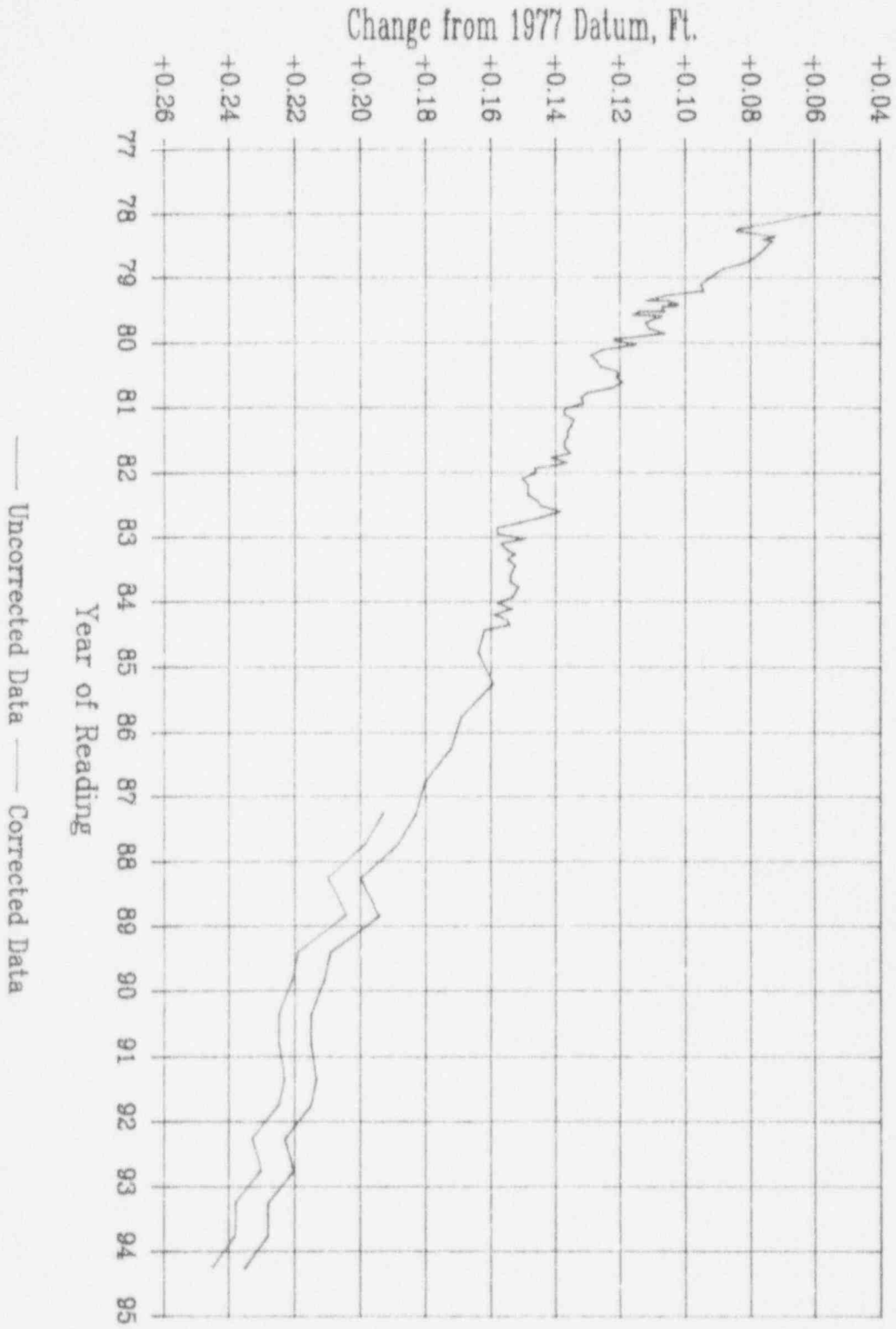


— Uncorrected Data

SM-10
Service Water Pump House



SM-17
Service Water Pump House



SM-18
Service Water Pump House

