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November 11, 1982
4410-82-L-0038

TMI Program Office
Attn: Mr. L. H. Barrett, Deputy Program Director
US Nuclear Regulatory Commission
c/o Three Mile Island Nuclear Station
Middletown, PA 17057-0191

1982 NOV 11 PM 3 13
U.S. NUCLEAR
REGULATORY COMMISSION

Dear Sir:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Radioactive Water Management Program

This is the periodic report presenting results of the program to detect radioactive water leakage to the groundwater of TMI-2.

Groundwater Monitoring

The following groundwater monitoring data is attached:

1. Individual computer graphs (Figure 1) of tritium concentrations for each monitoring station, observation station, and the East Dike Catch Basin (EDCB) up to and including September 13, 1982. The graphs for MS-1, MS-2, MS-3, OS-10, OS-16, and OS-17 including data up to and including October 11, 1982.
2. Individual computer graphs (Figure 2) including water levels within the monitoring stations up to and including October 4, 1982.
3. Computer Tables (Table 1 and 2) of gamma scan data up to and including September 7, 1982.
4. A graph (Figure 3) indicating gamma scan data from Monitoring Station MS-2 sample analysis.
5. A composite drawing showing all monitoring locations with a graph of the tritium concentrations reported in each station.

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Tritium concentrations during this report period in the monitoring stations, observation stations, and the East Dike Catch Basin remained within the range of previously reported values.

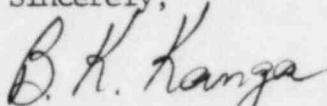
The gamma results from Unit 2 for selected stations were less than detectable (except for MS-2 and OS-17) for the September 20 and 28, October 4 and 11 dates. On October 4 and October 11, Cs-137 was detected in MS-2 samples at concentrations of 57 ± 14 pCi/l and 31 ± 11 pCi/l, respectively. Cs-137 was also detected in an OS-17 sample on October 11 at a concentration of 14 ± 5.6 pCi/l. The MS-2 sample from the October 4 date has been sent to an off-site laboratory as part of the "monthly" groundwater monitoring program. The results will be available in next month's report. The presence of Cs-137 in the groundwater from both stations is attributed to the sediment found in the stations.

Gamma results for September 13 show only naturally occurring Ra-226 present in MS-1, MS-2, MS-3, MS-4, MS-6, MS-7, and MS-8. Also K-40, another naturally occurring isotope was detected in MS-2.

Results of the strontium reanalyses for OS-16 (first quarter) and MS-8 (second quarter) have not been received. Next month's report will contain an update on all the first and second quarter strontium data.

Samples from OS-16 were not obtained from September 28 through November 3 due to blockage in the station which has since been removed and sample was reinstated on November 4, 1982.

Sincerely,



B. K. Kanga
Director, TMI-2

BKK/SWS/jep

Attachments

CC Dr. B. J. Snyder, Program Director - TMI Program Office

LIST OF ATTACHMENTS

Figures

- Figure 1 Graphs of Tritium Concentrations of Monitoring Stations and East Dike Catch Basin Samples Versus Time
- Figure 2 Graphs of Water Levels in Monitoring Stations Versus Time
- Figure 3 Gamma Scan Results for Monitoring Station MW-2 Versus Time

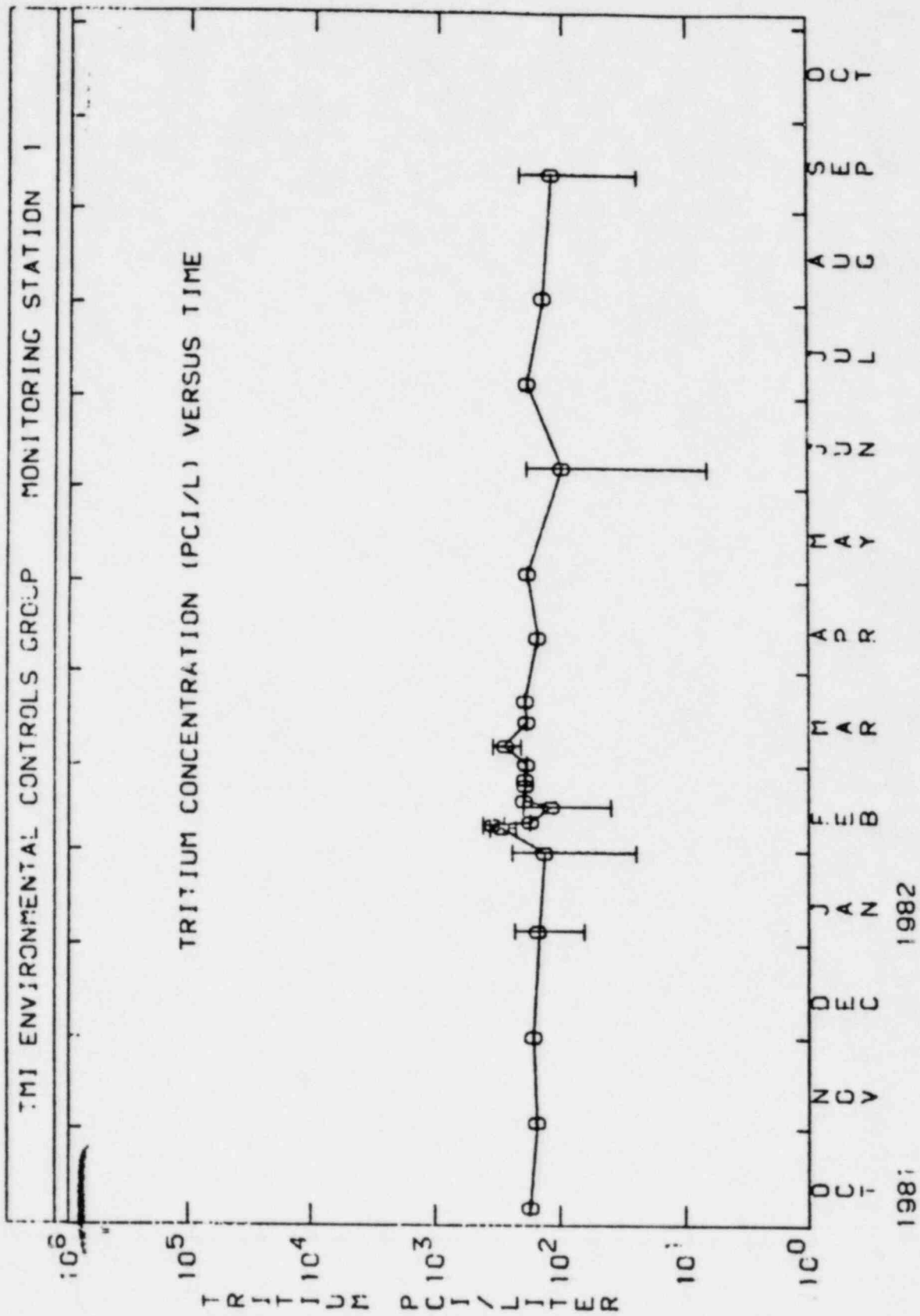
Tables

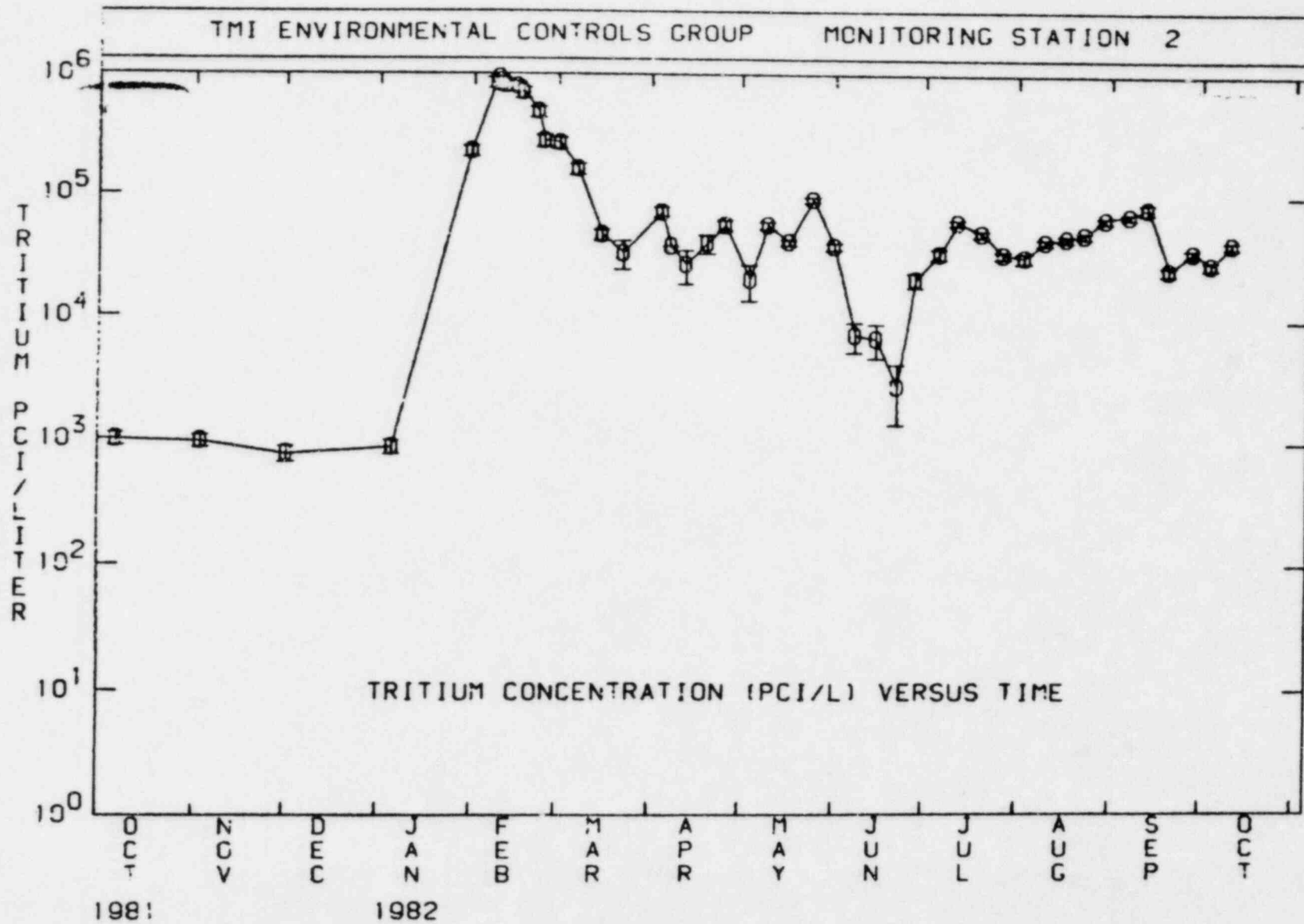
- Table 1 Cesium 137 Concentrations in Monitoring Stations MS-1 to MS-8
- Table 2 Cesium 134 Concentrations in Monitoring Stations MS-1 to MS-8

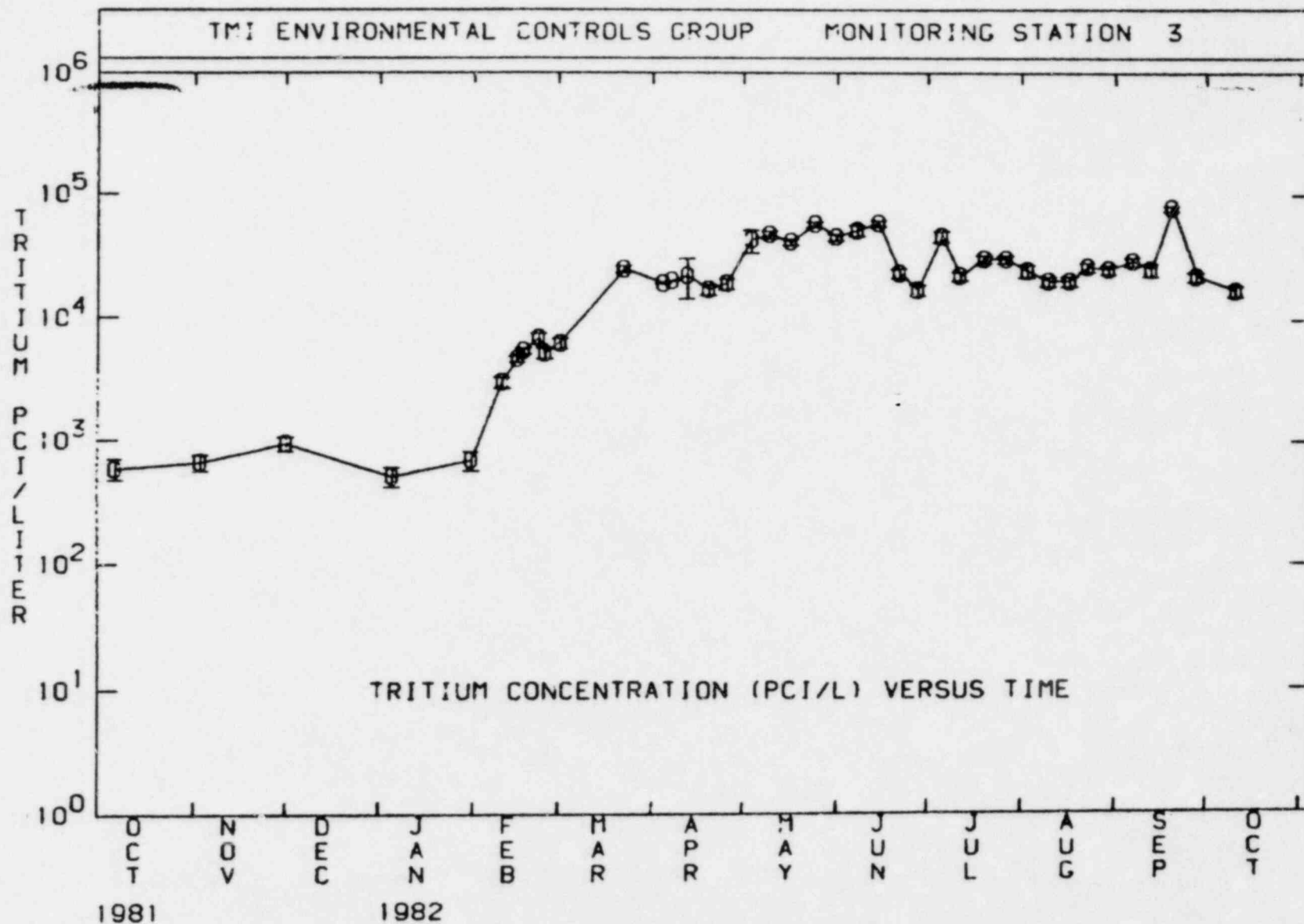
Drawing

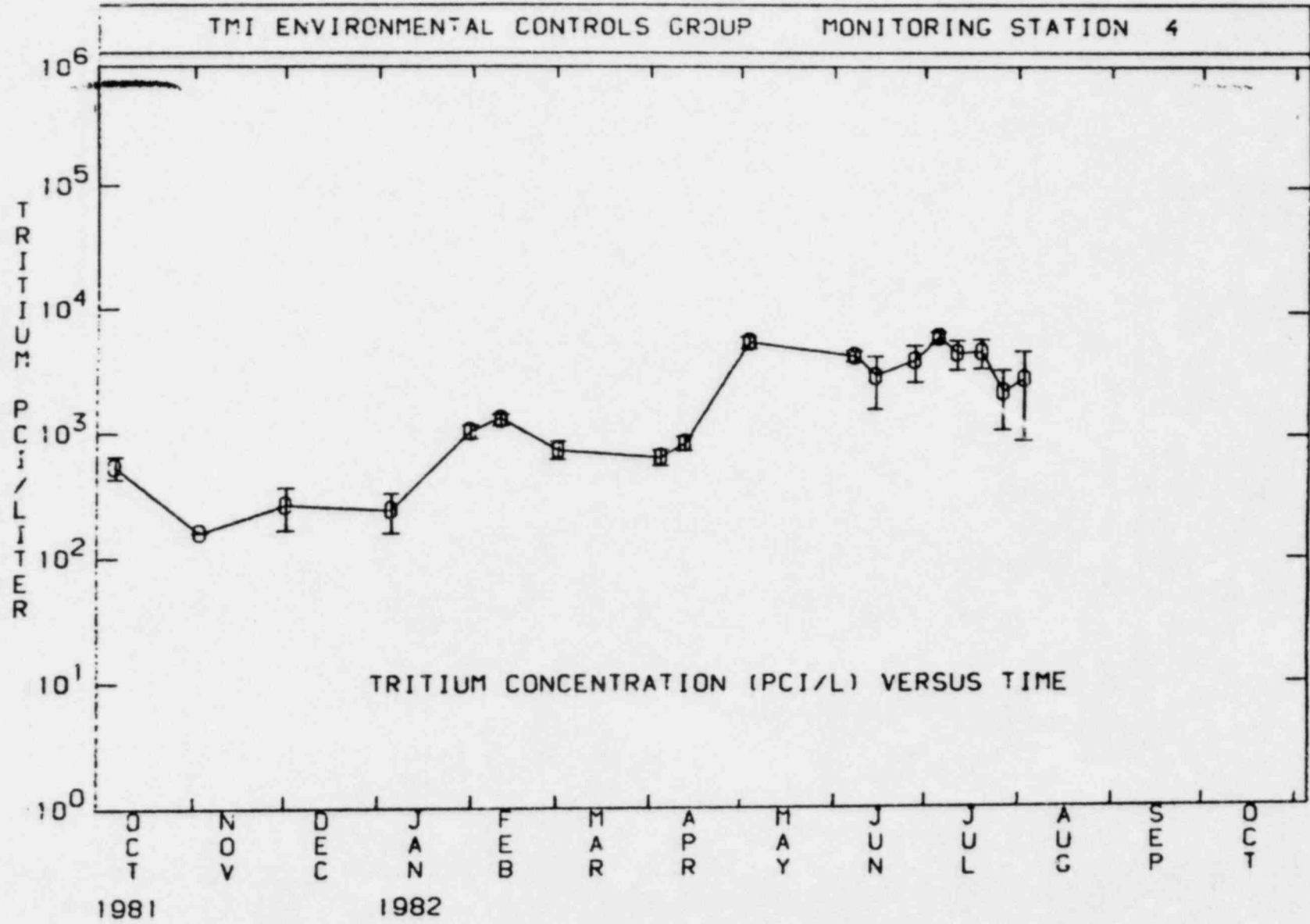
Groundwater Tritium Concentrations at Site Liquid Monitoring Stations

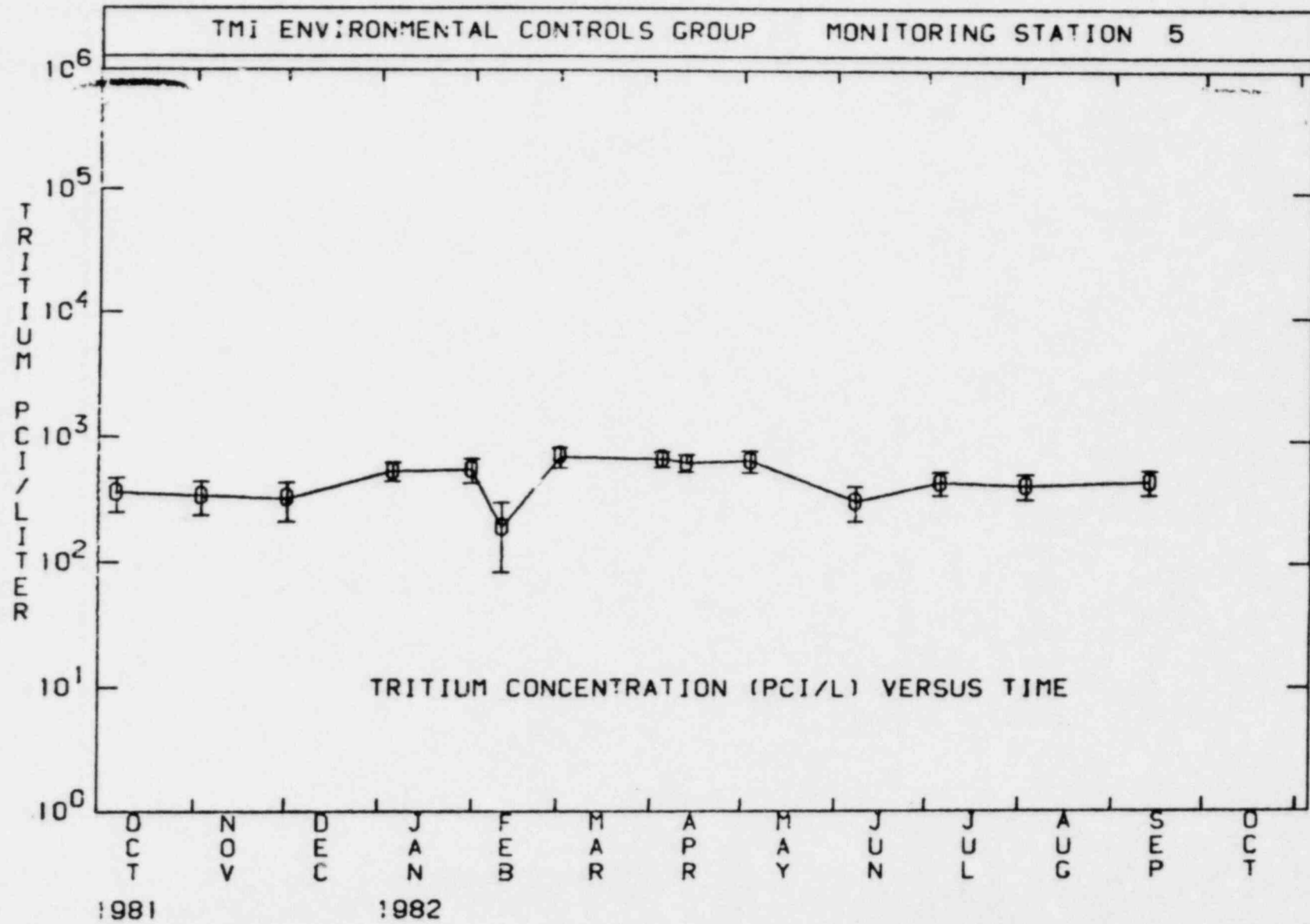
Figure 1
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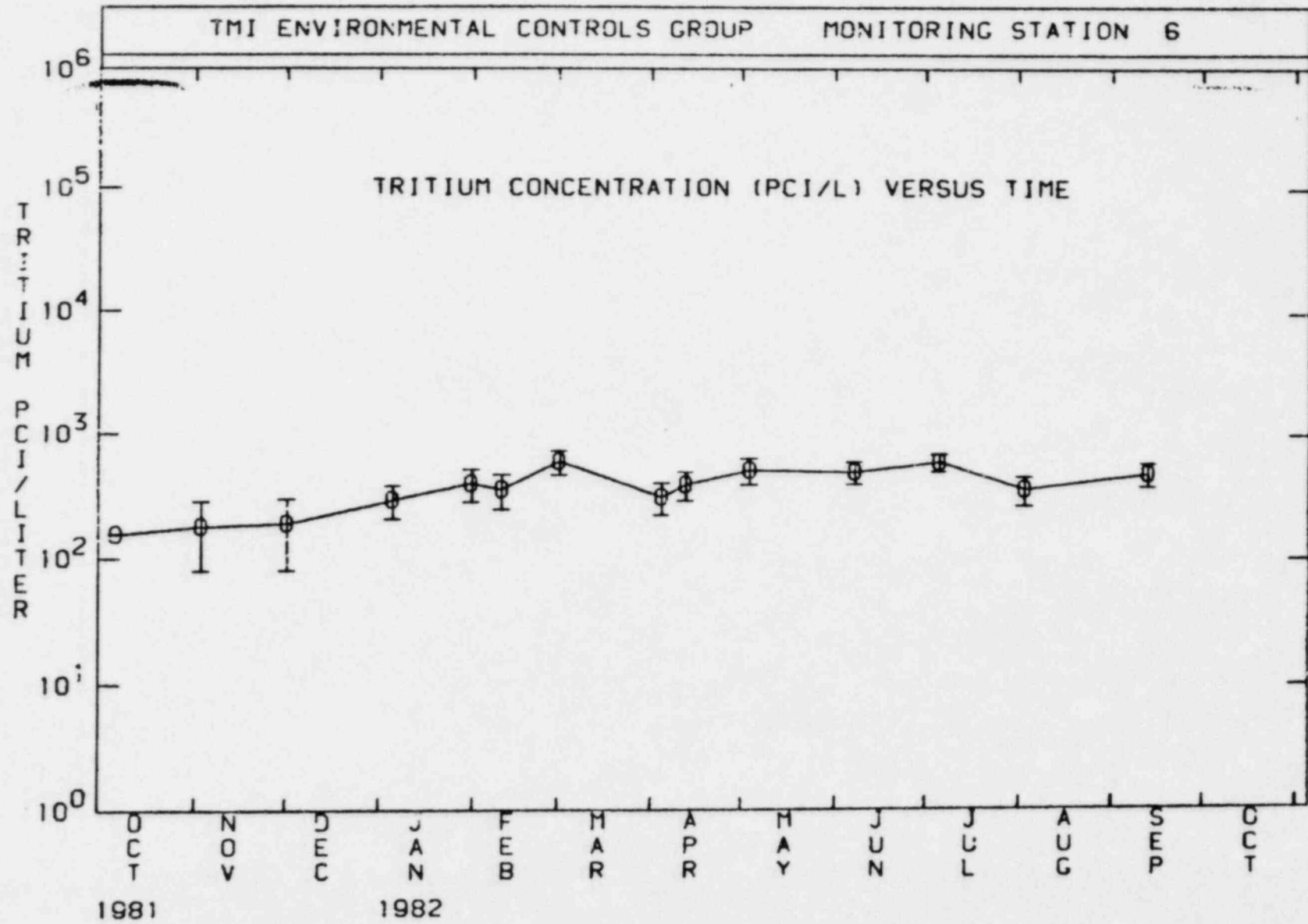


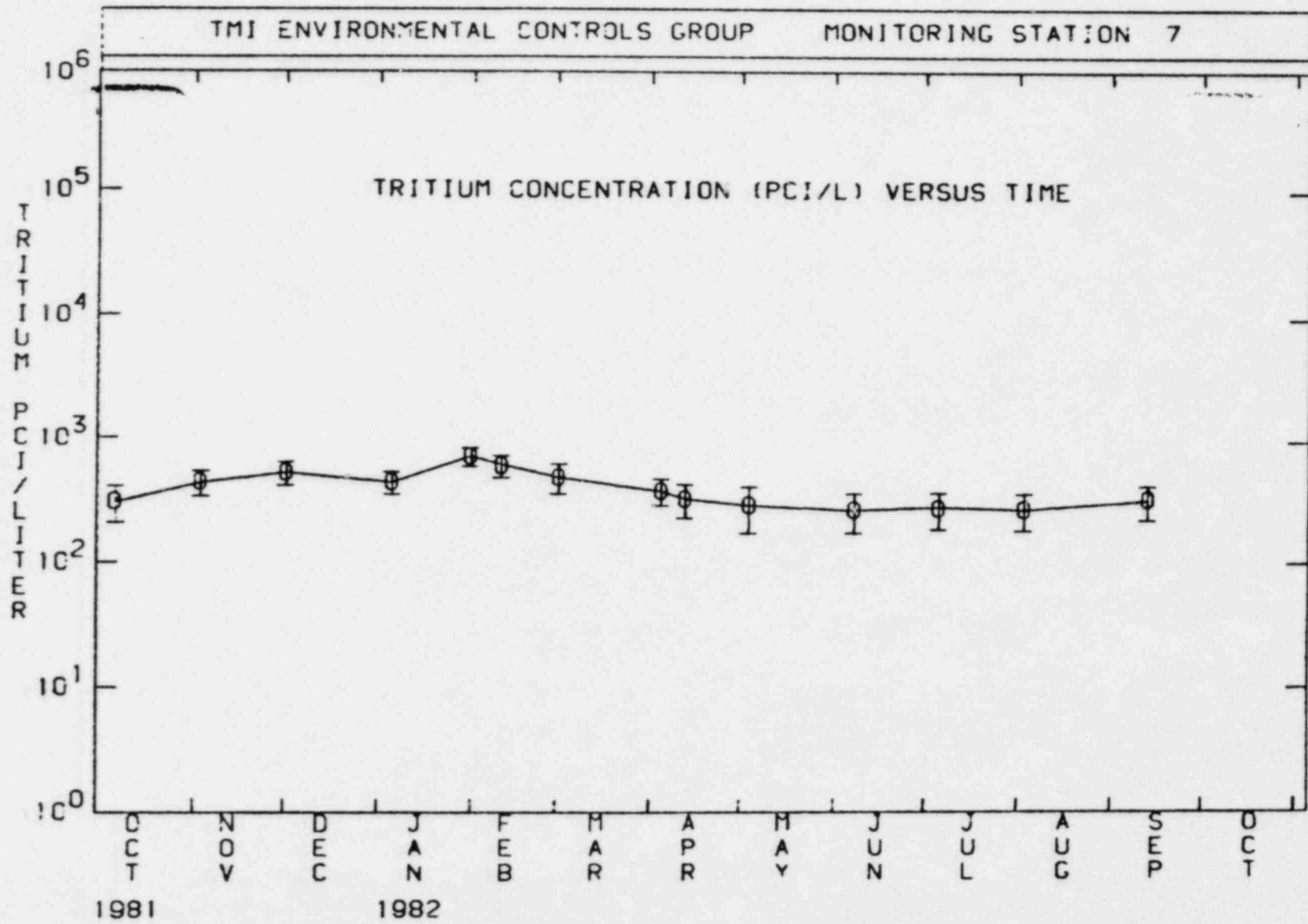


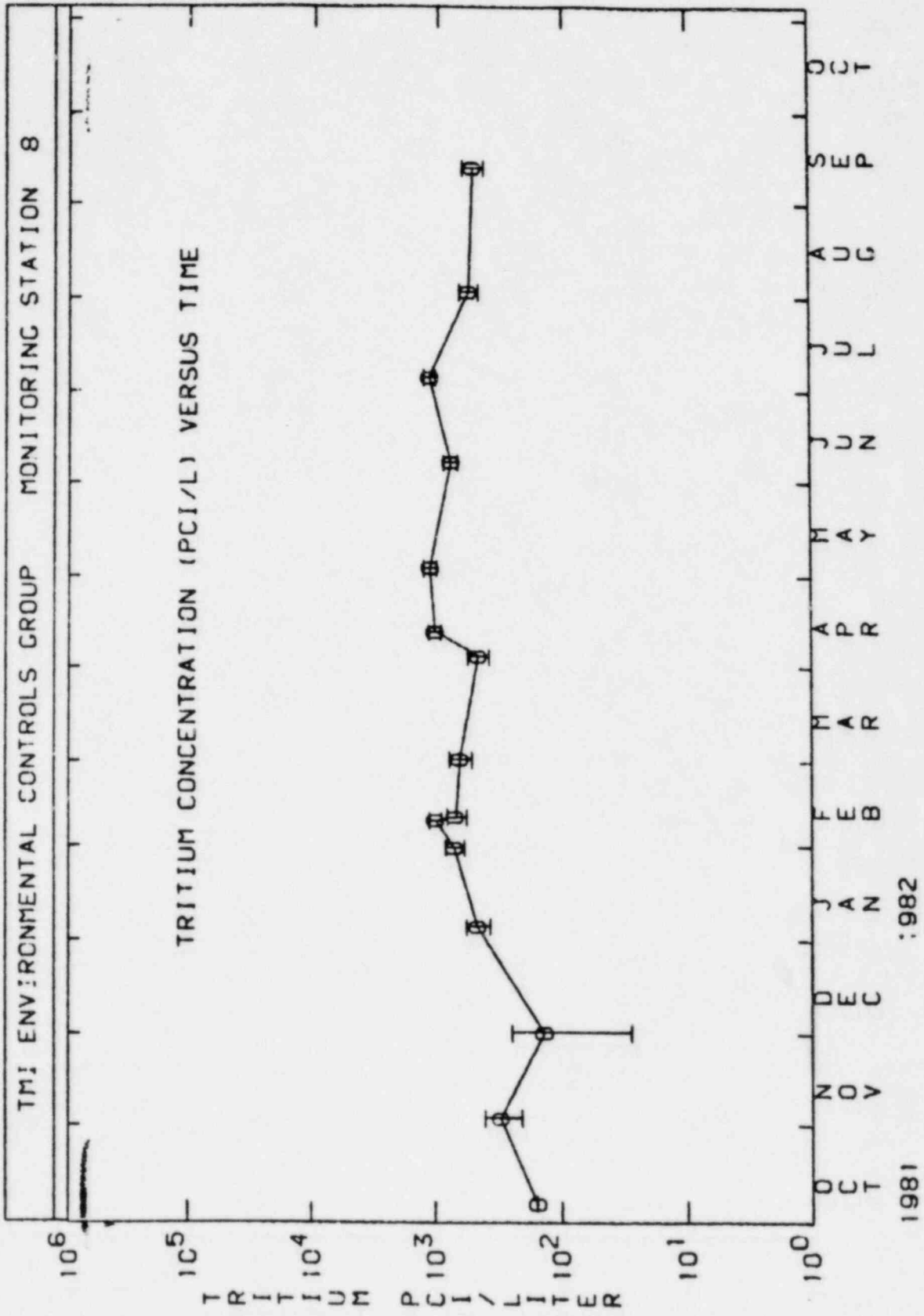


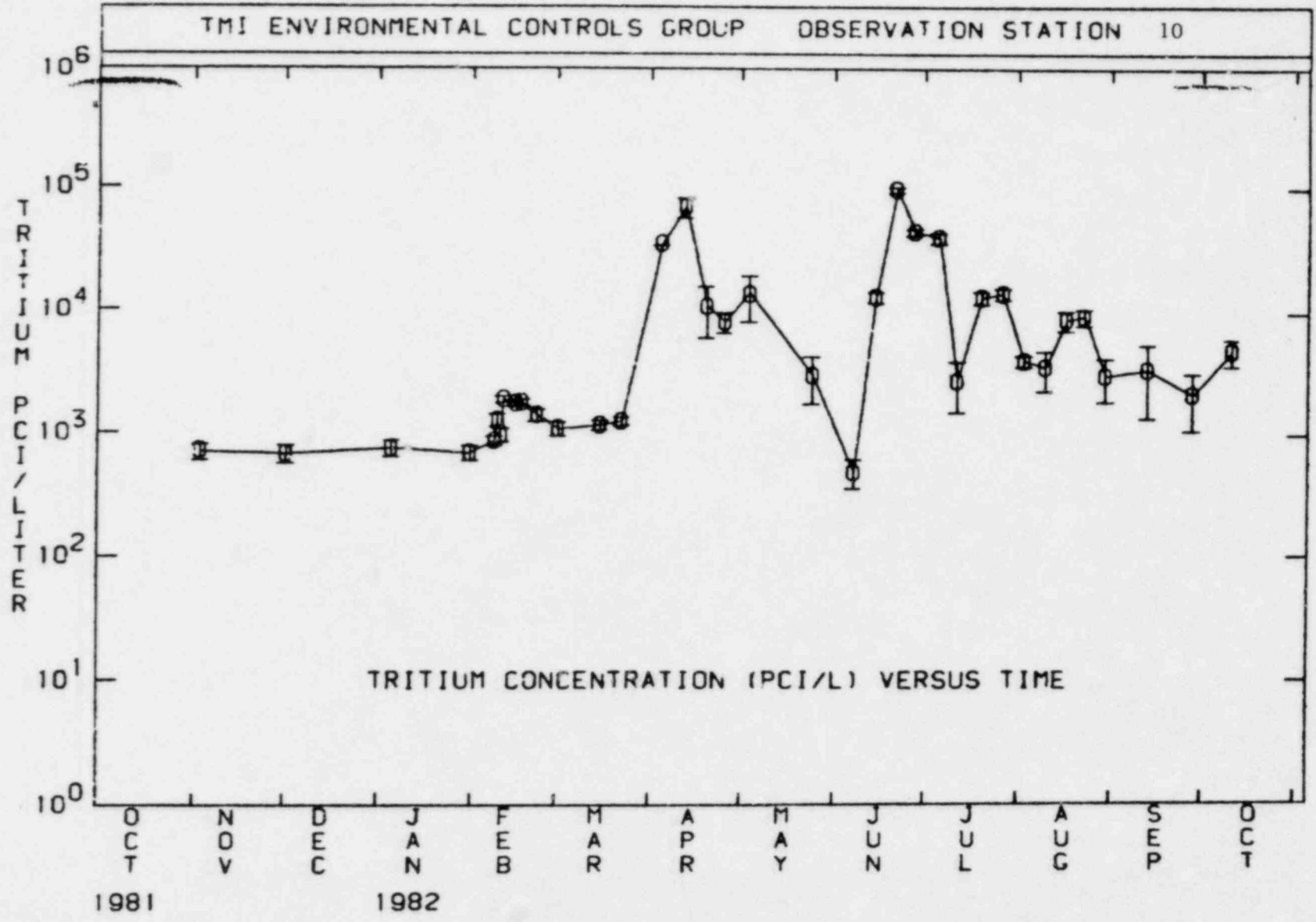


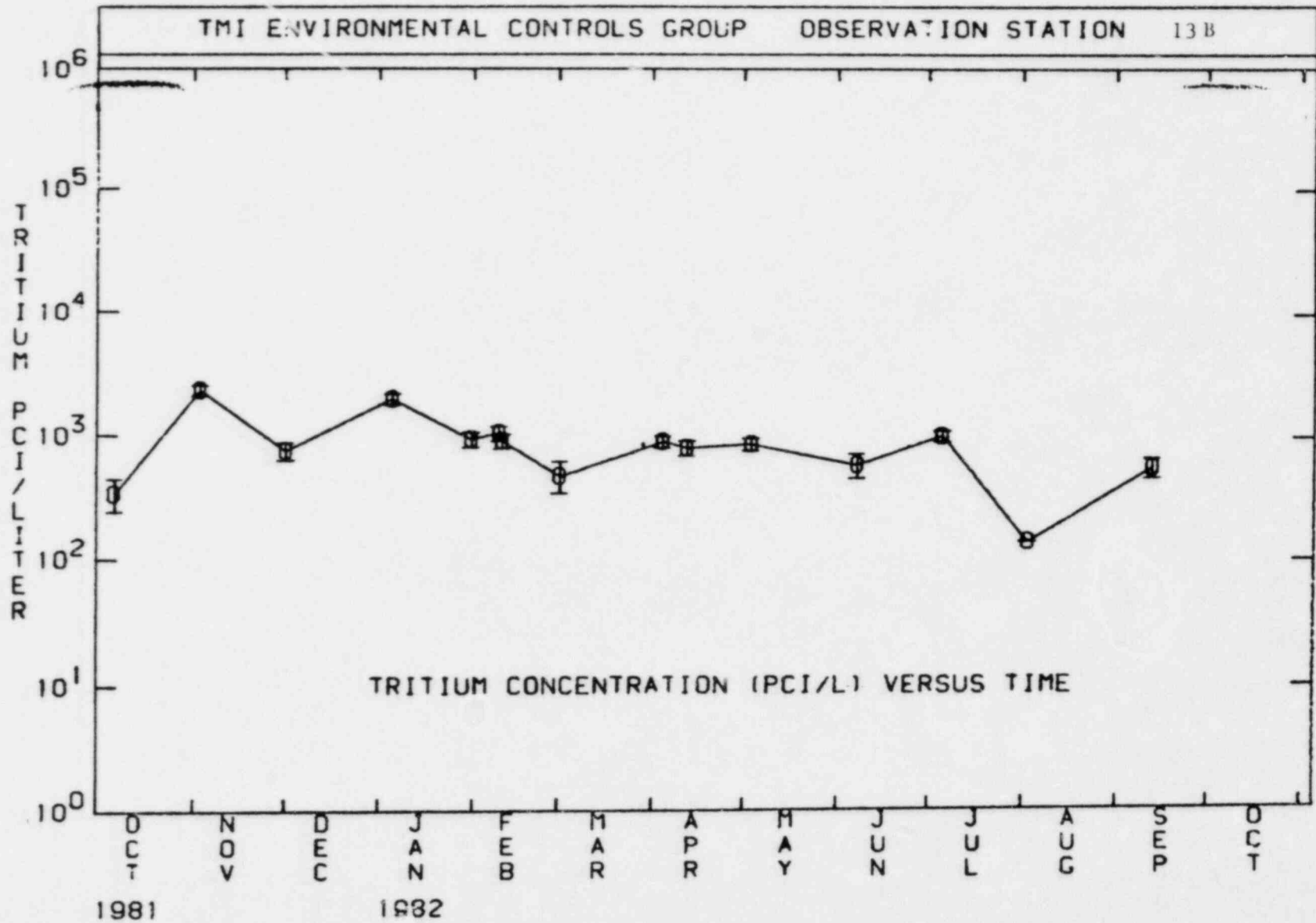












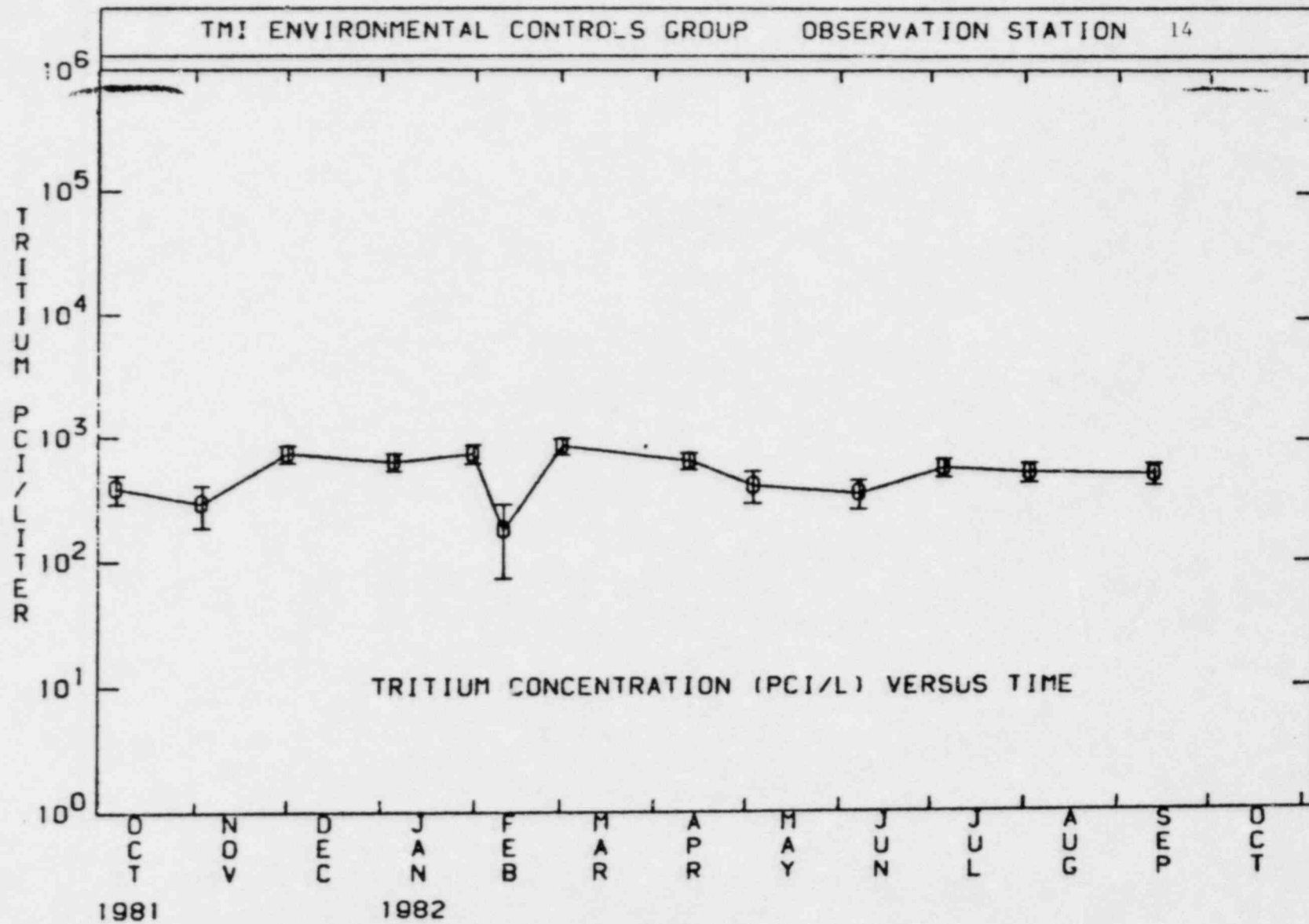
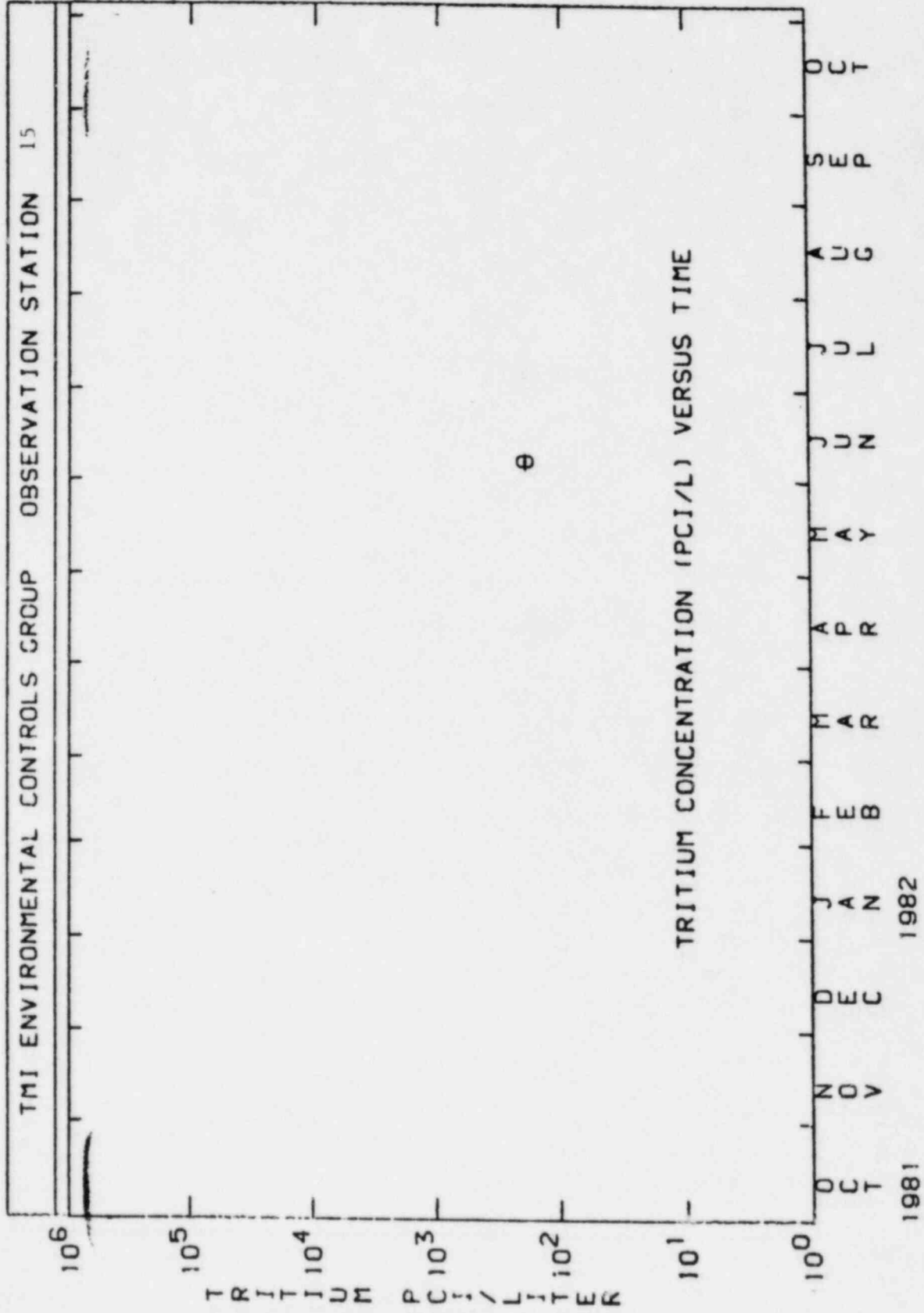
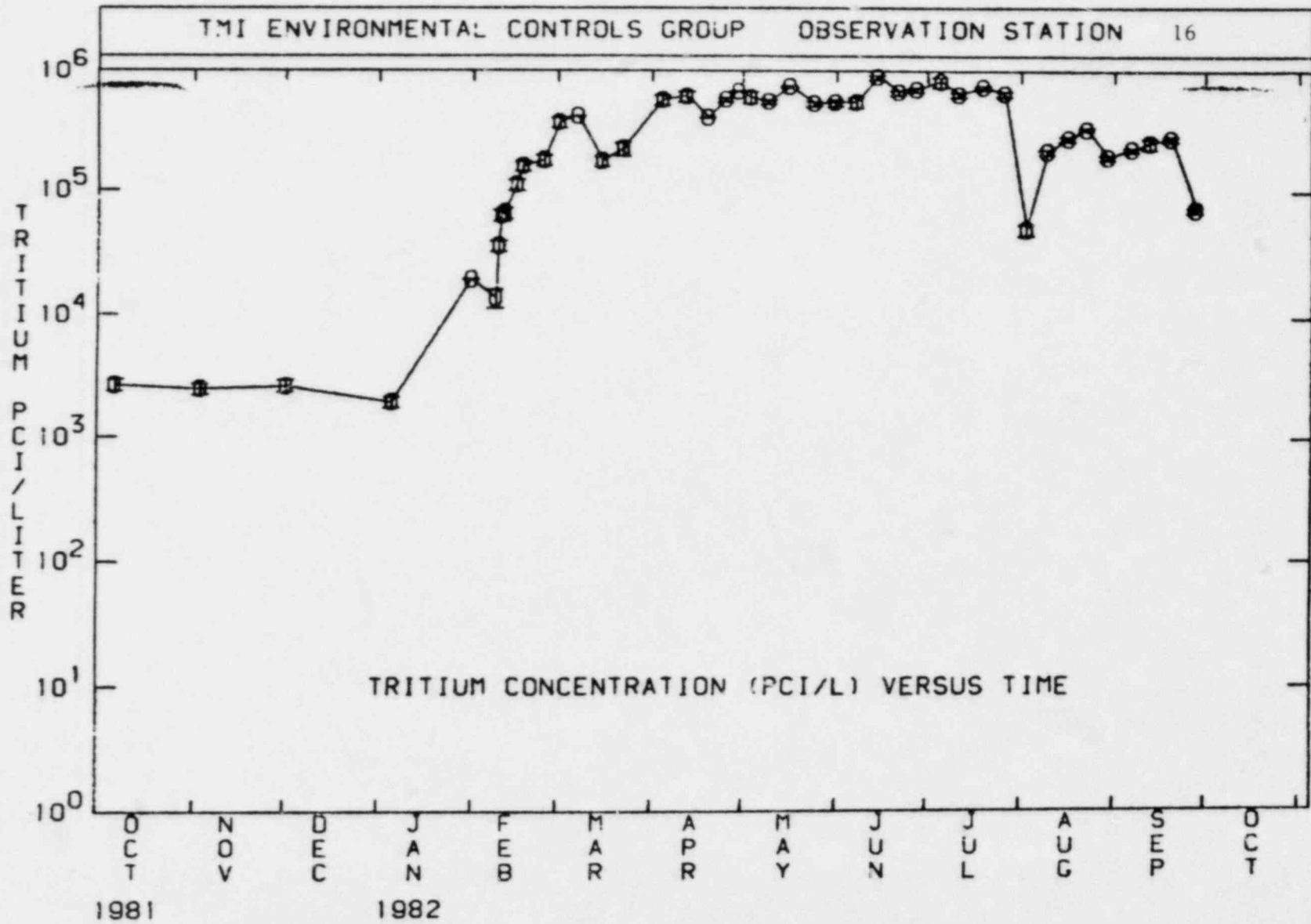
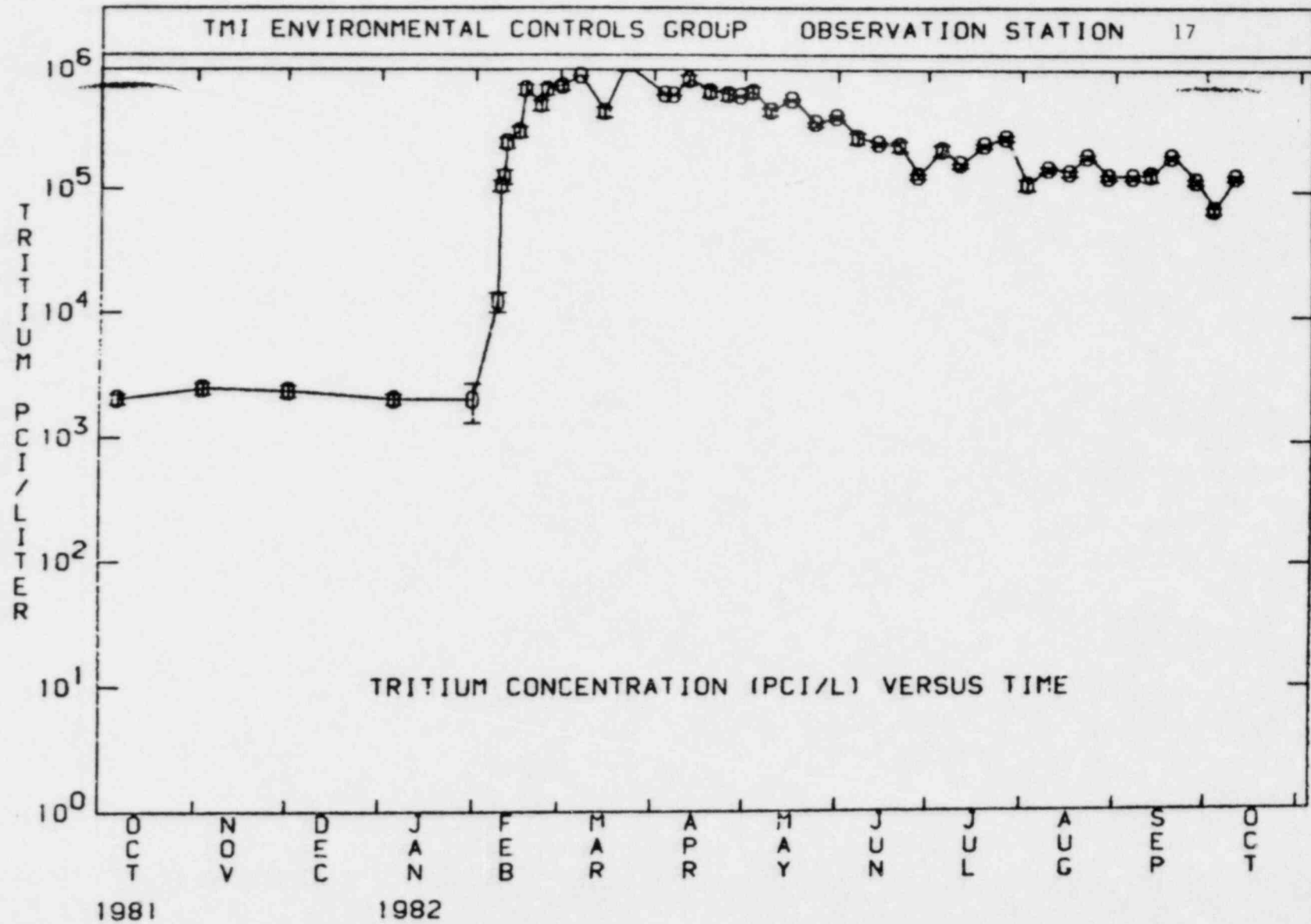
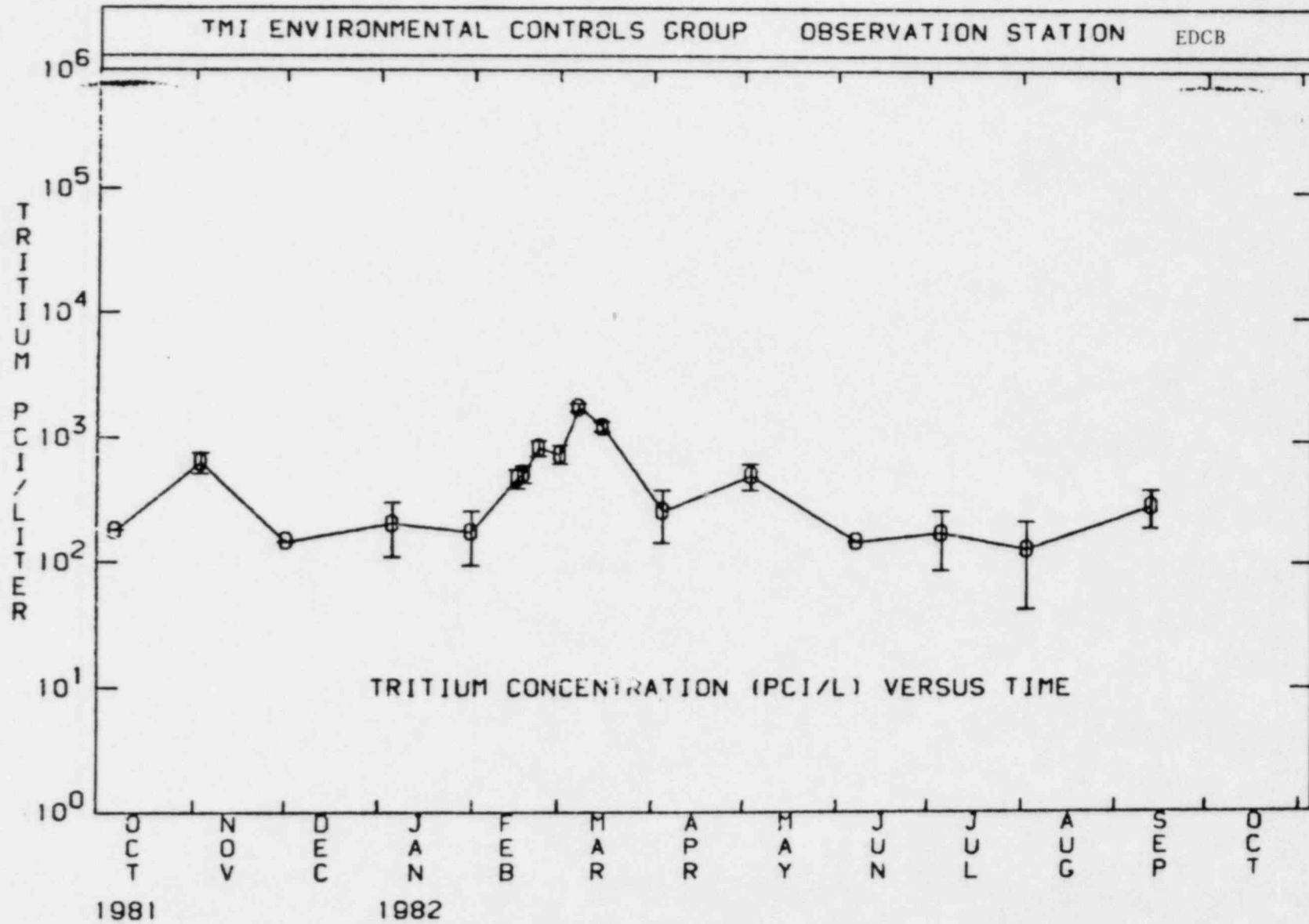


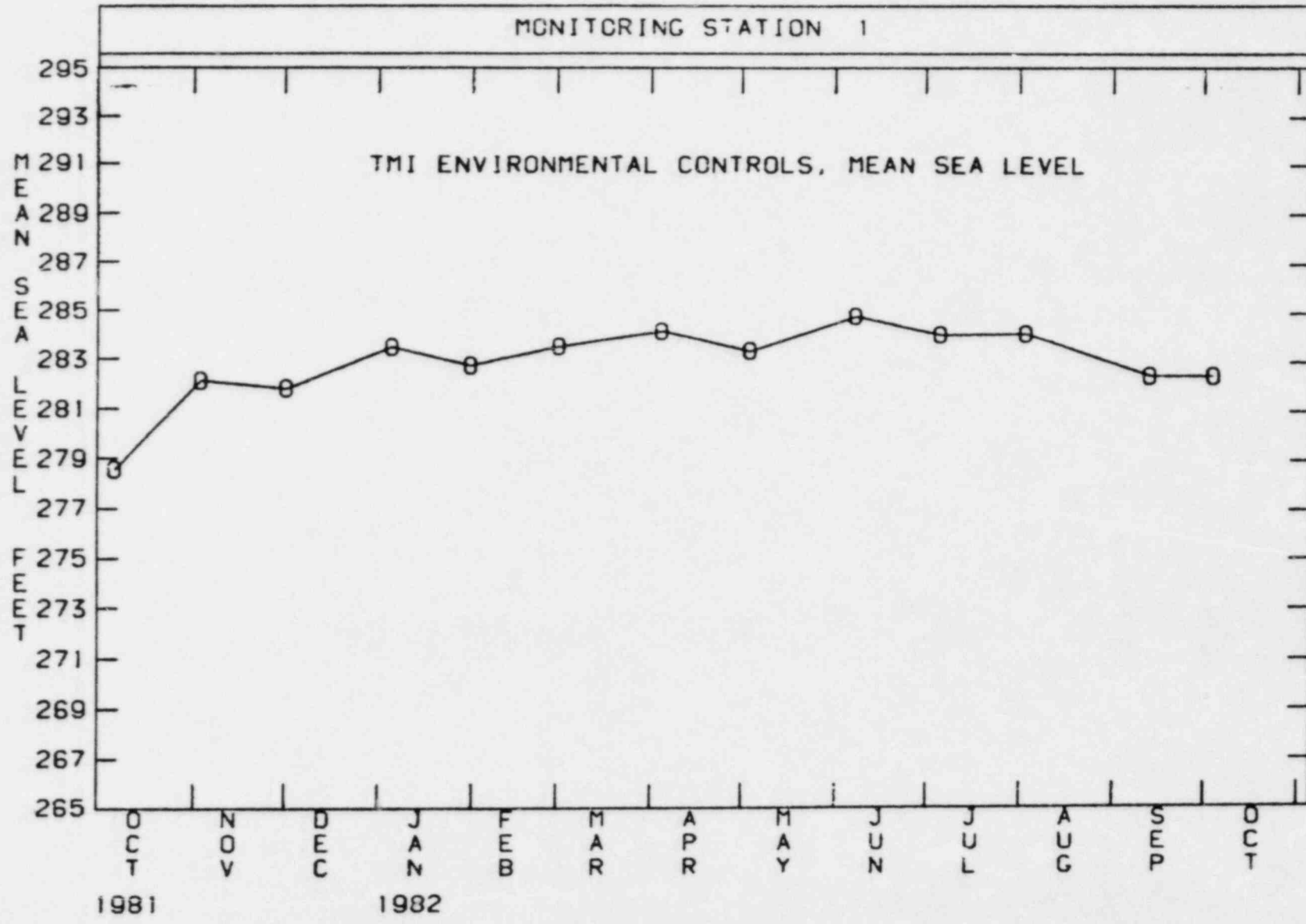
Figure 1
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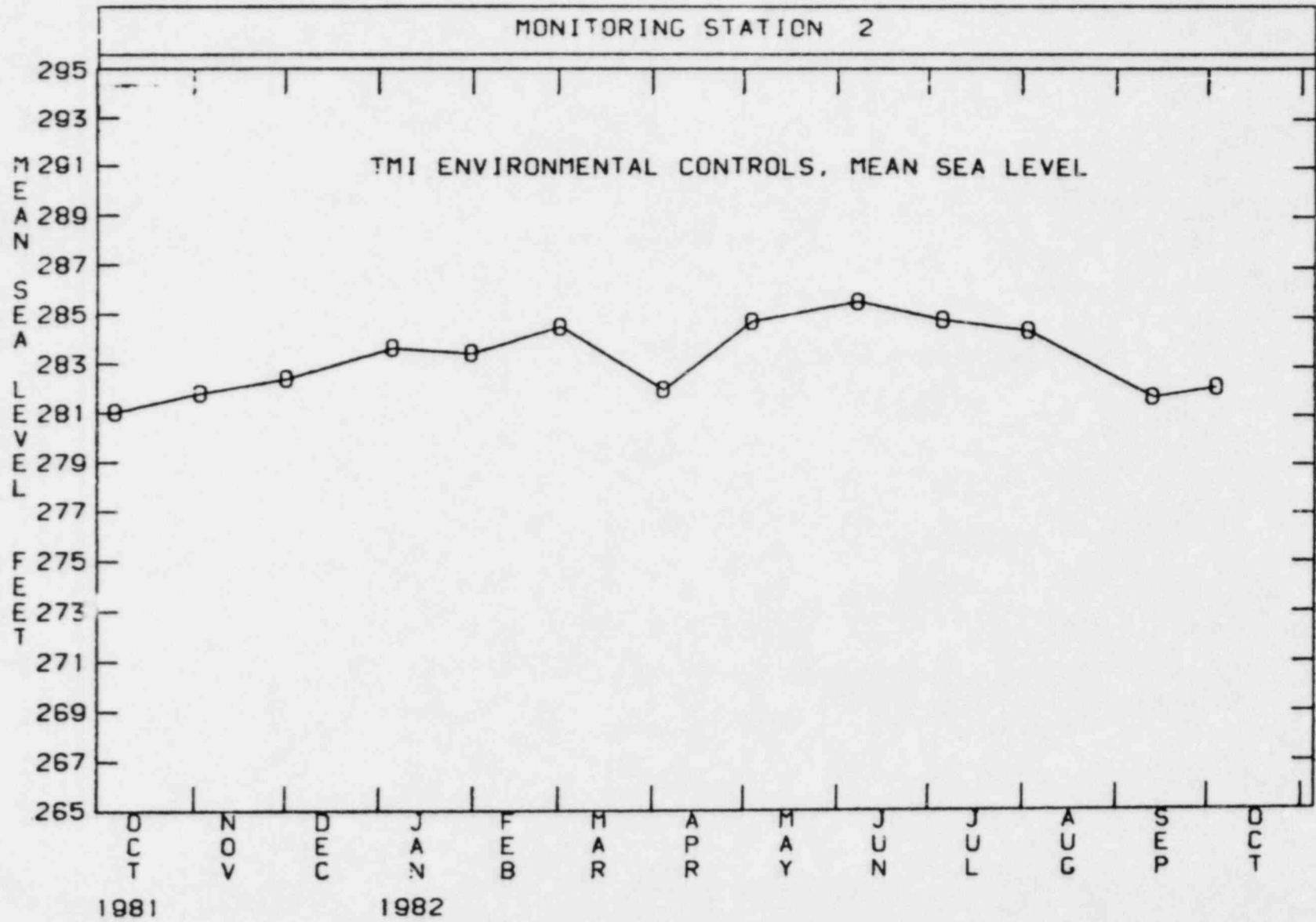


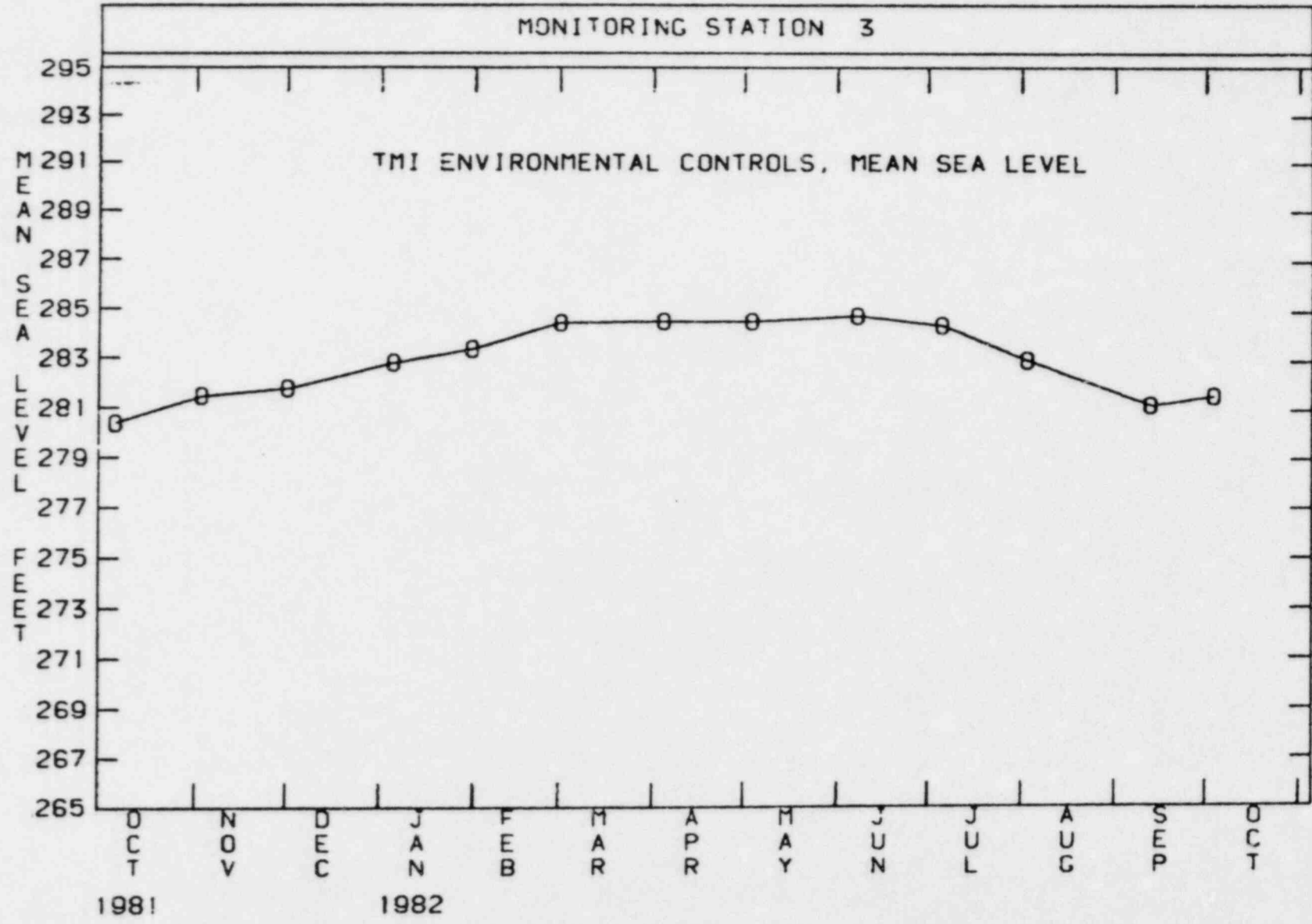


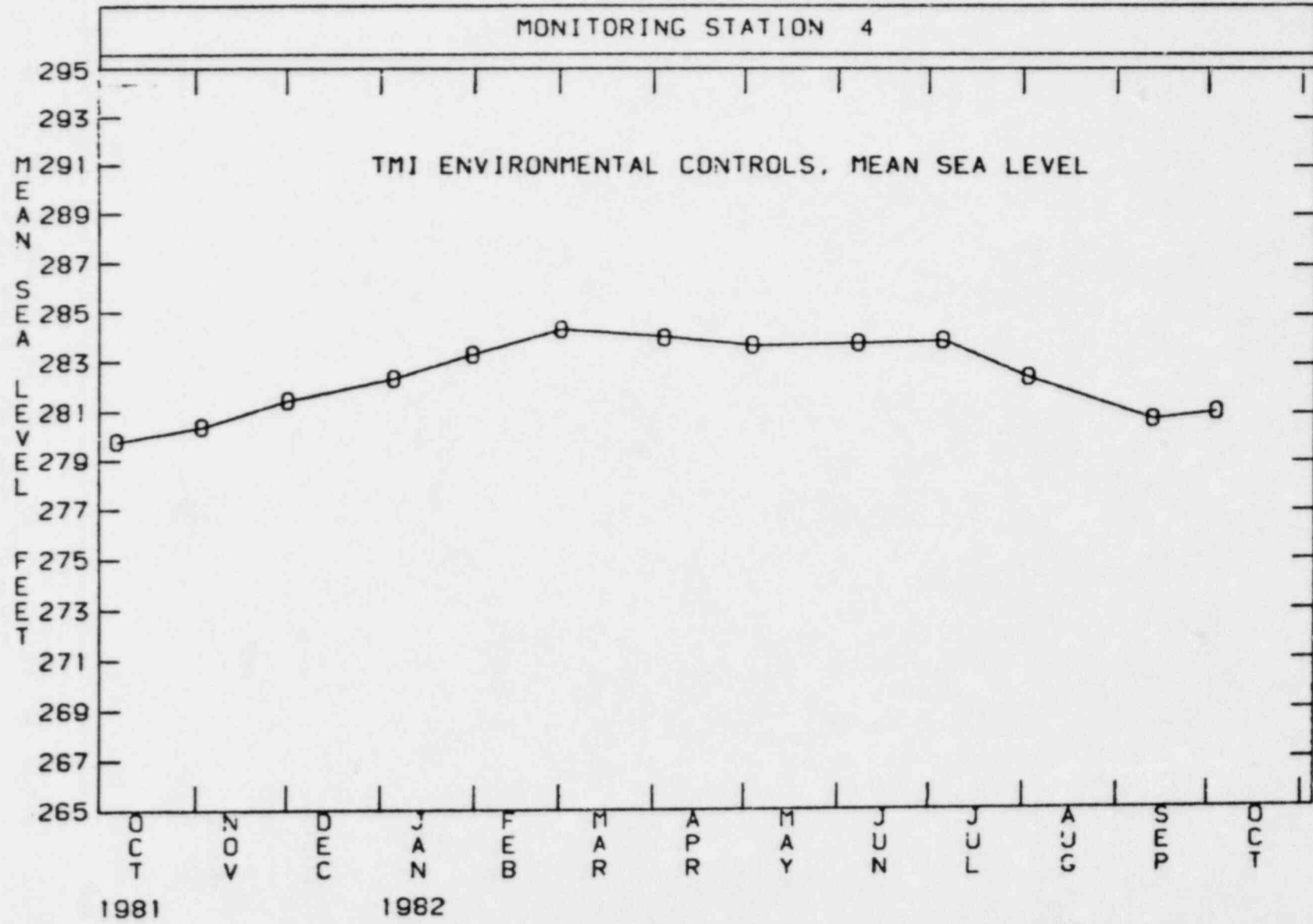


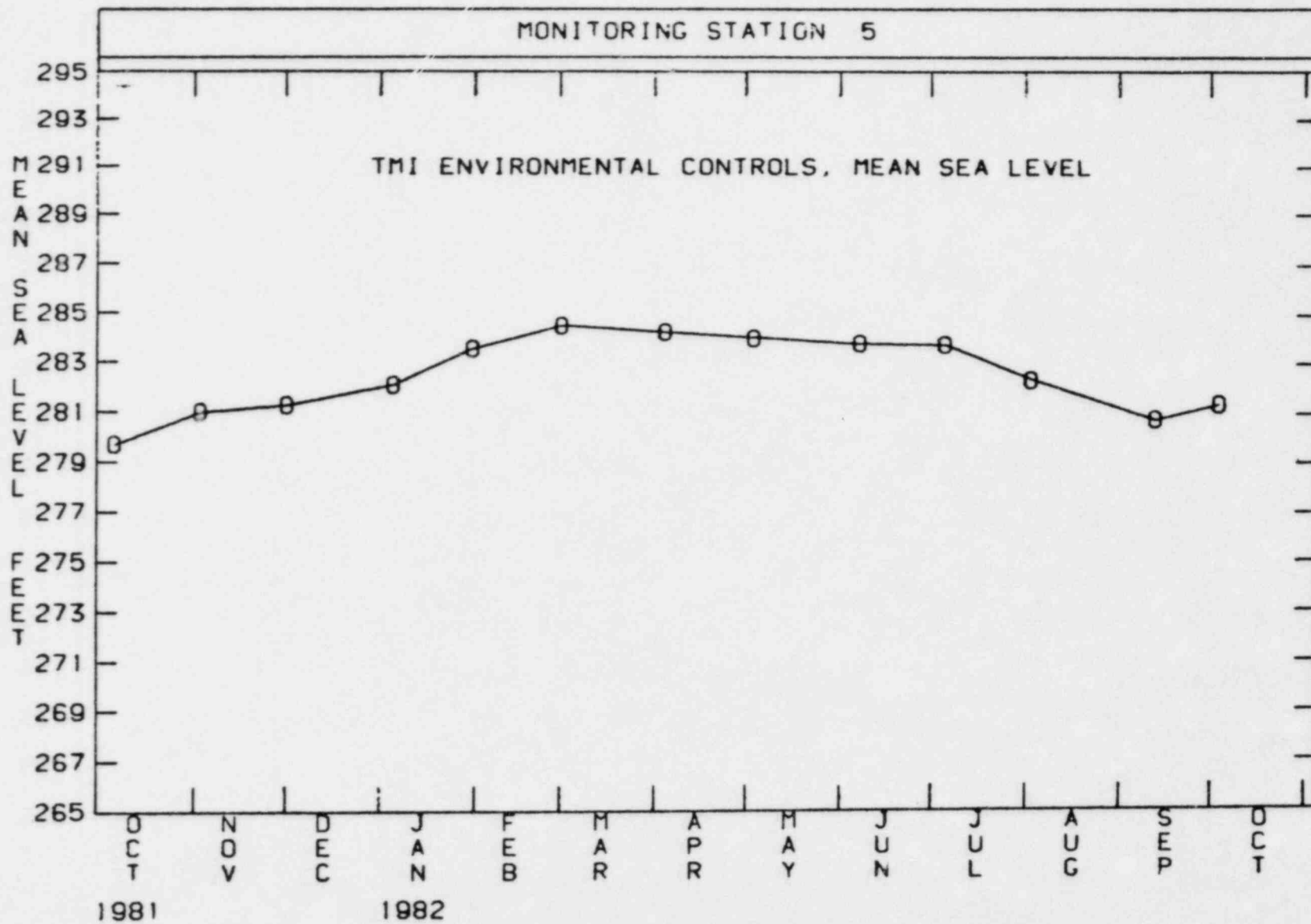


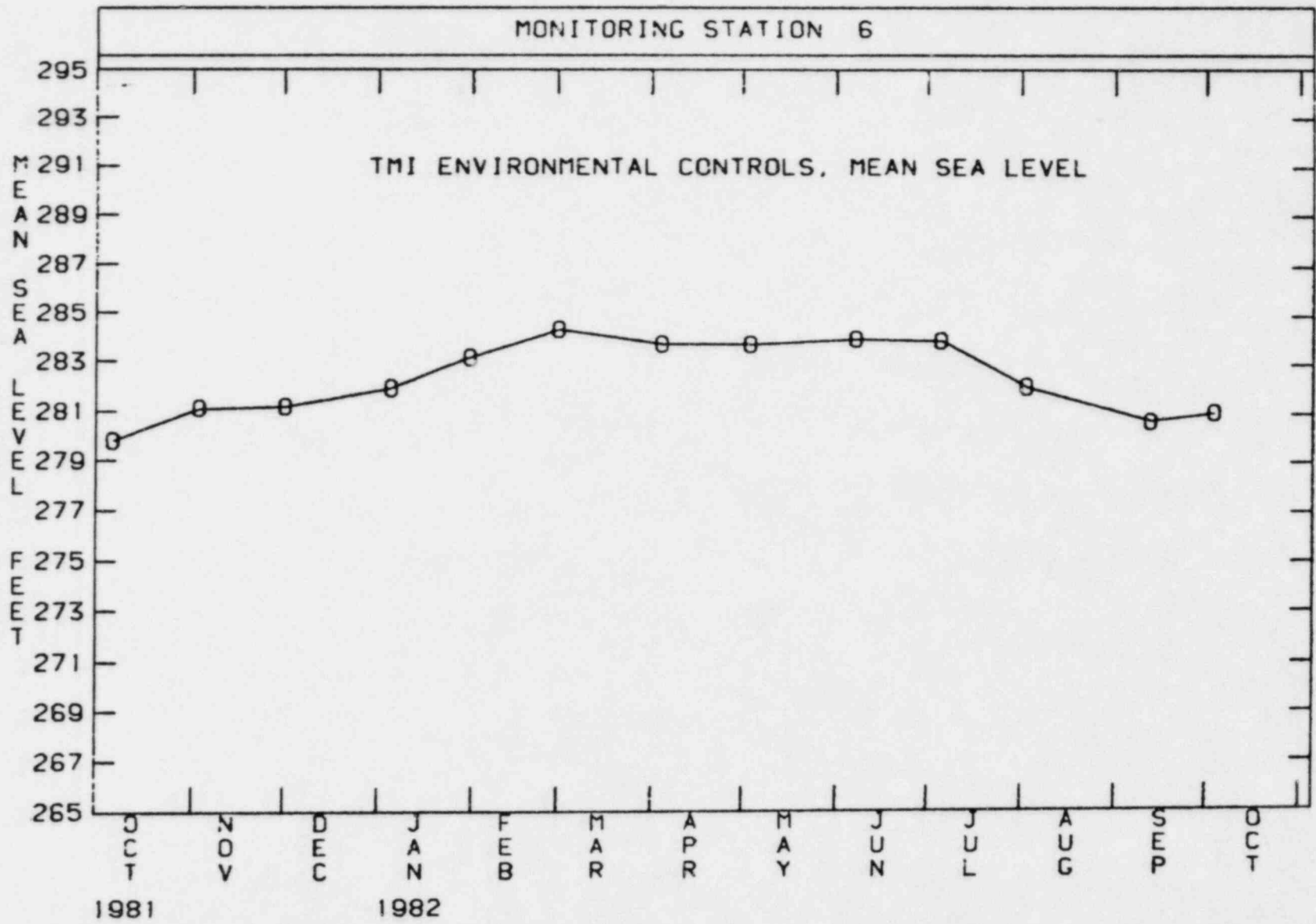


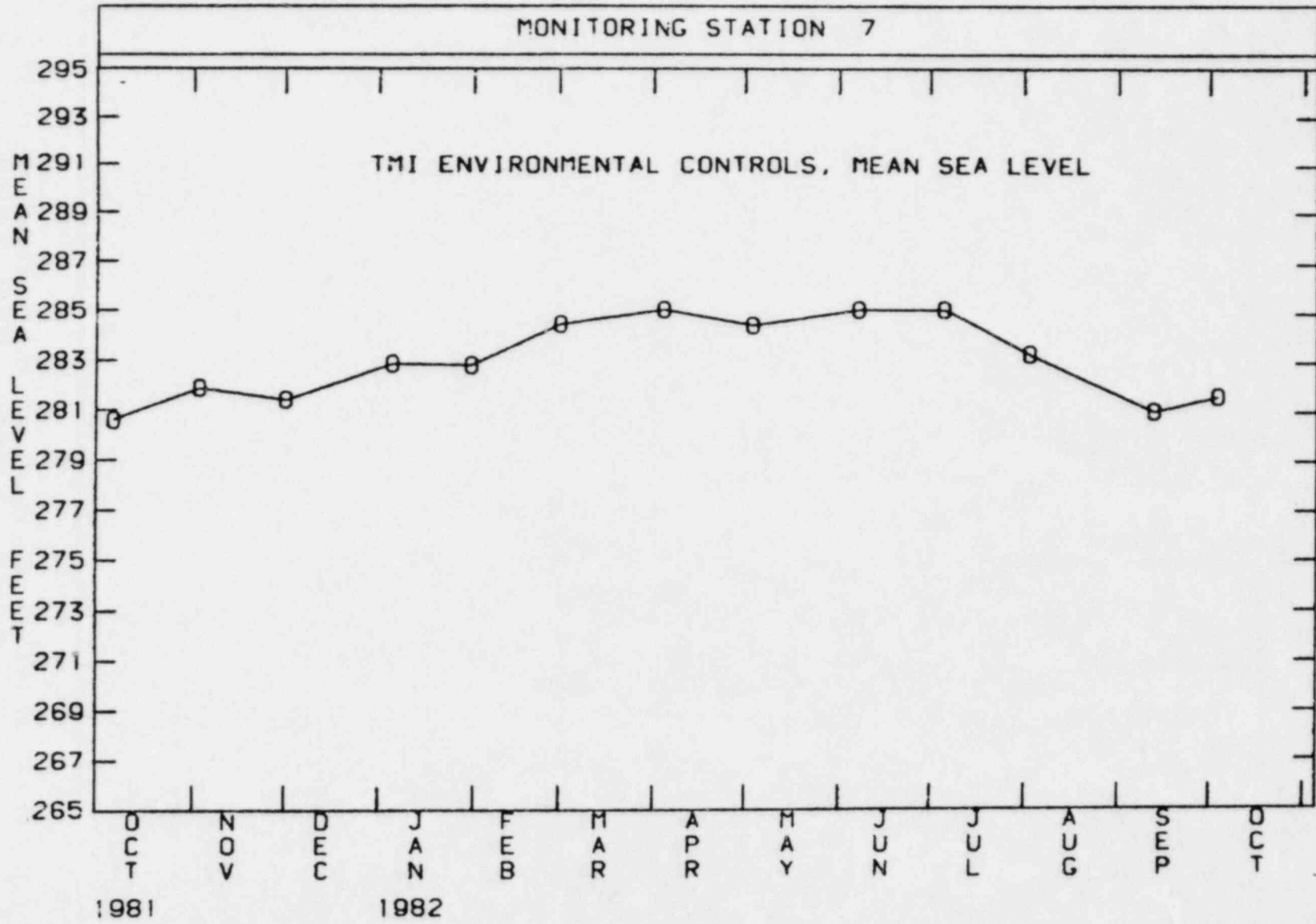












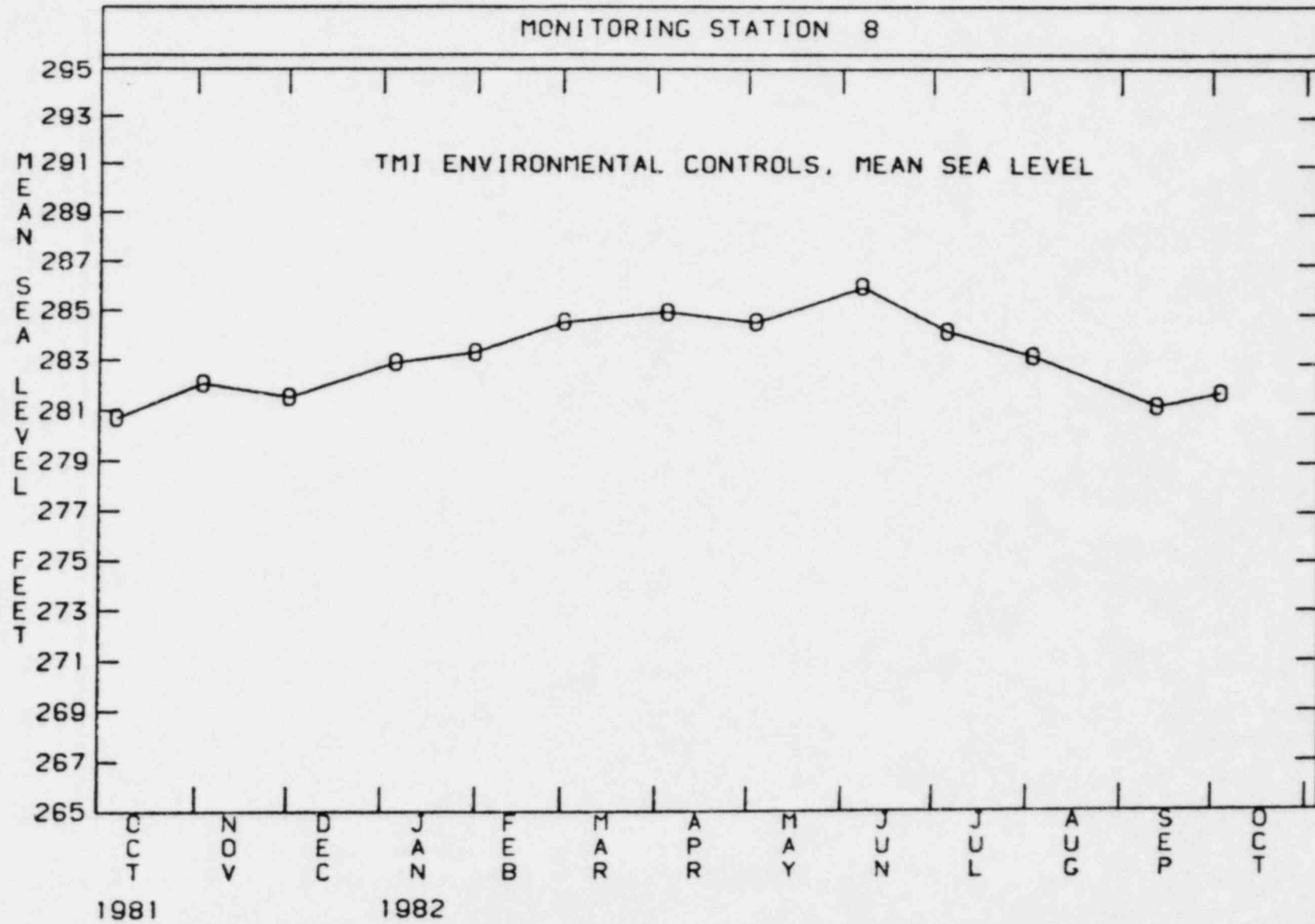


Figure 2
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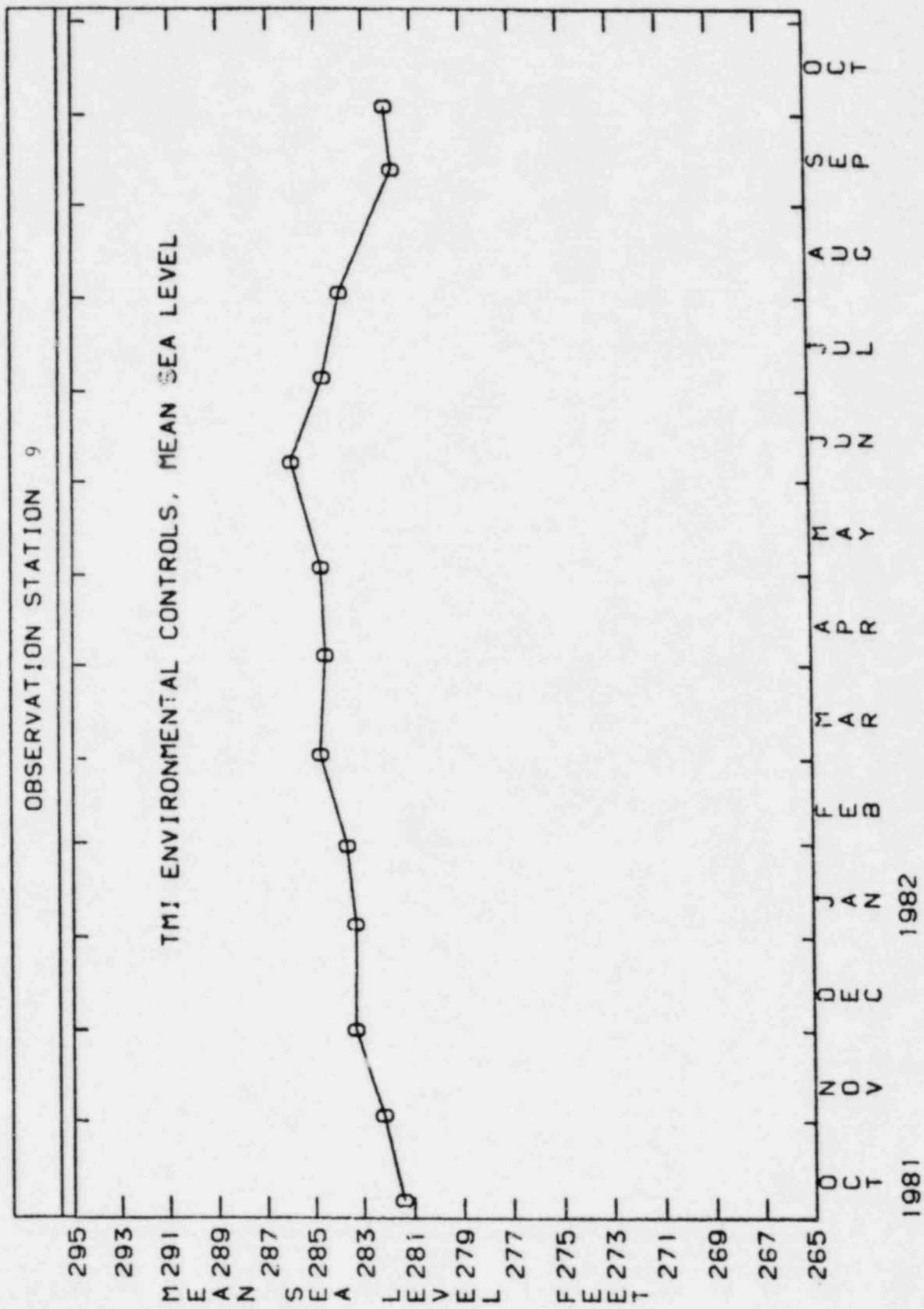
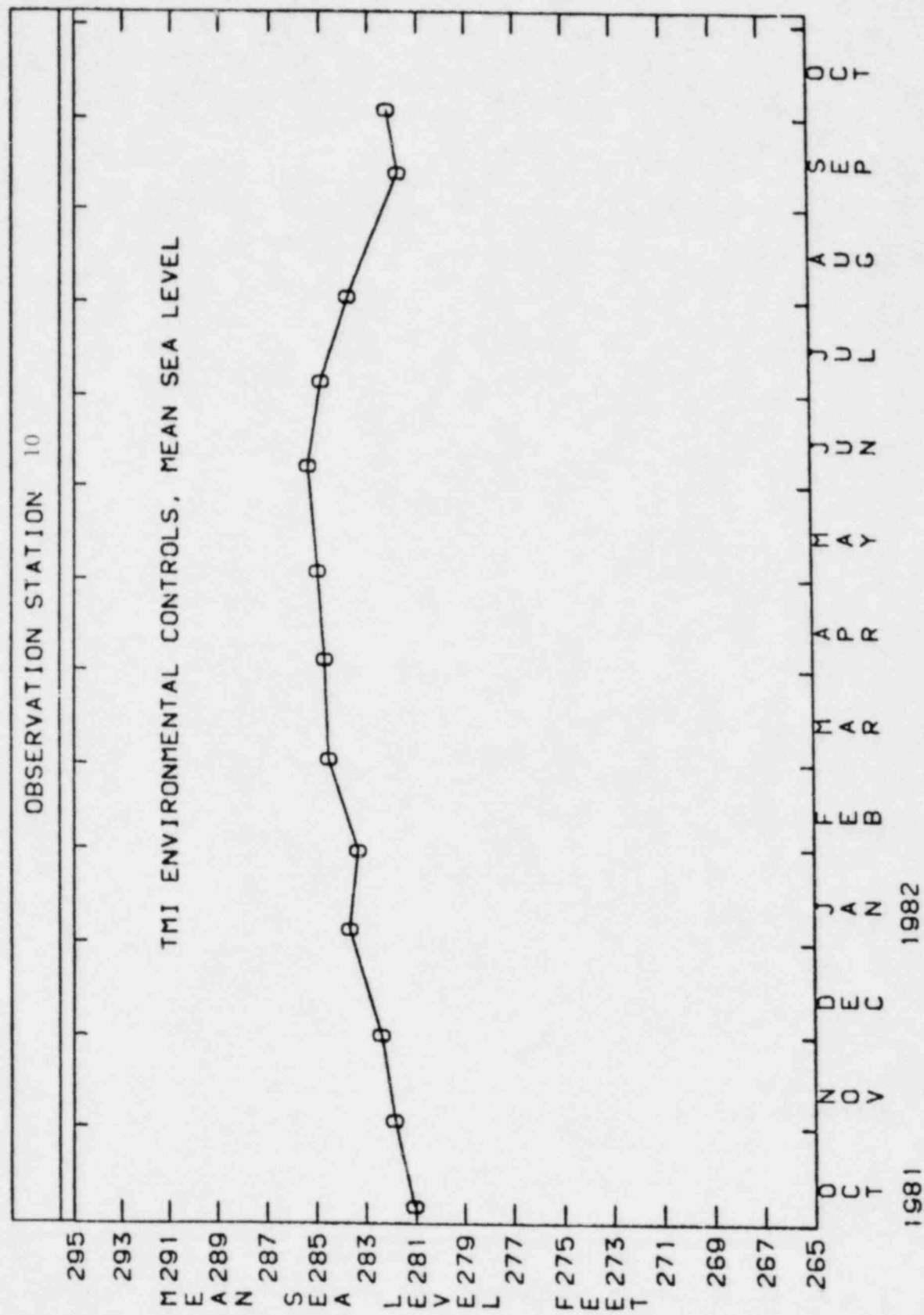
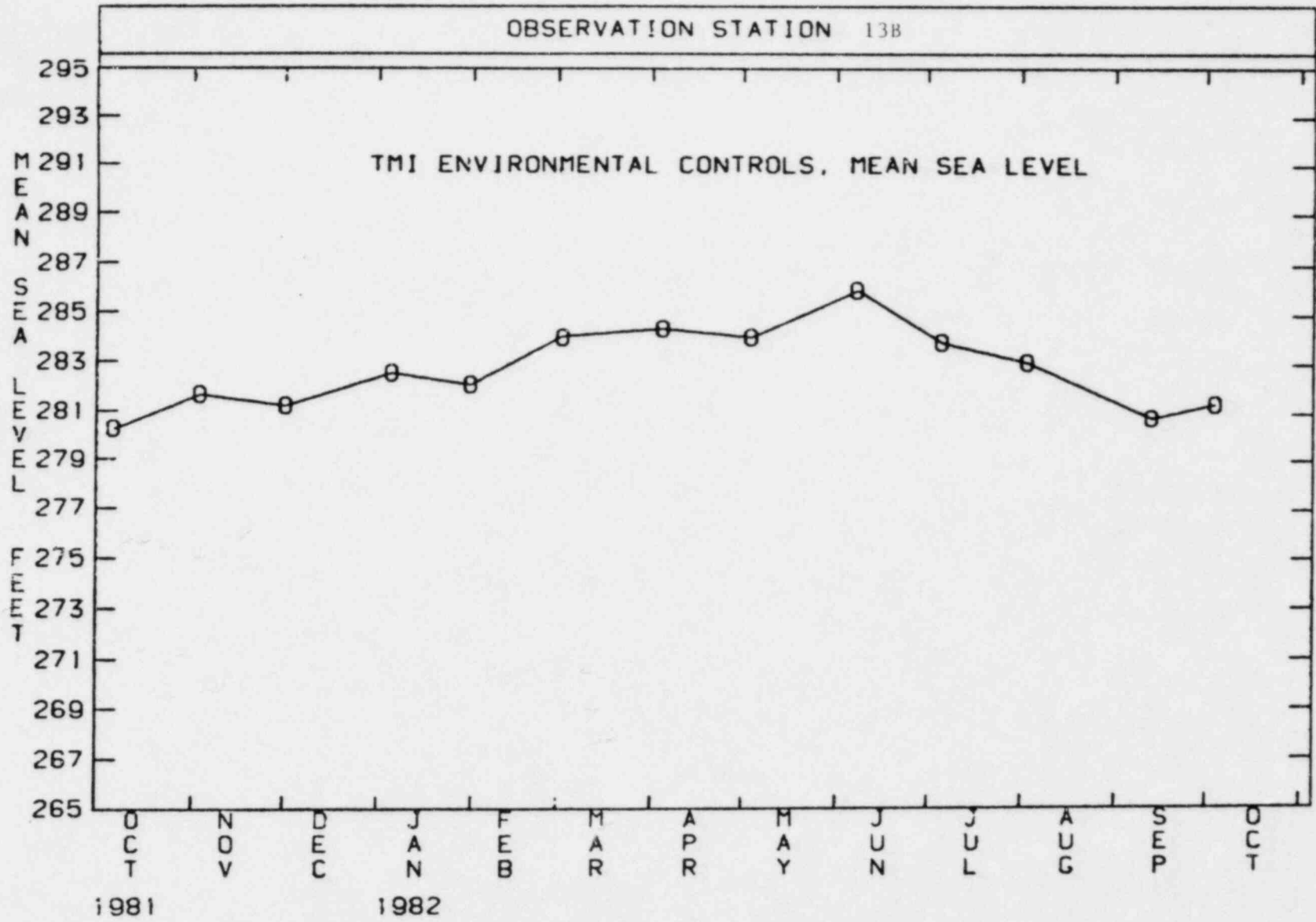
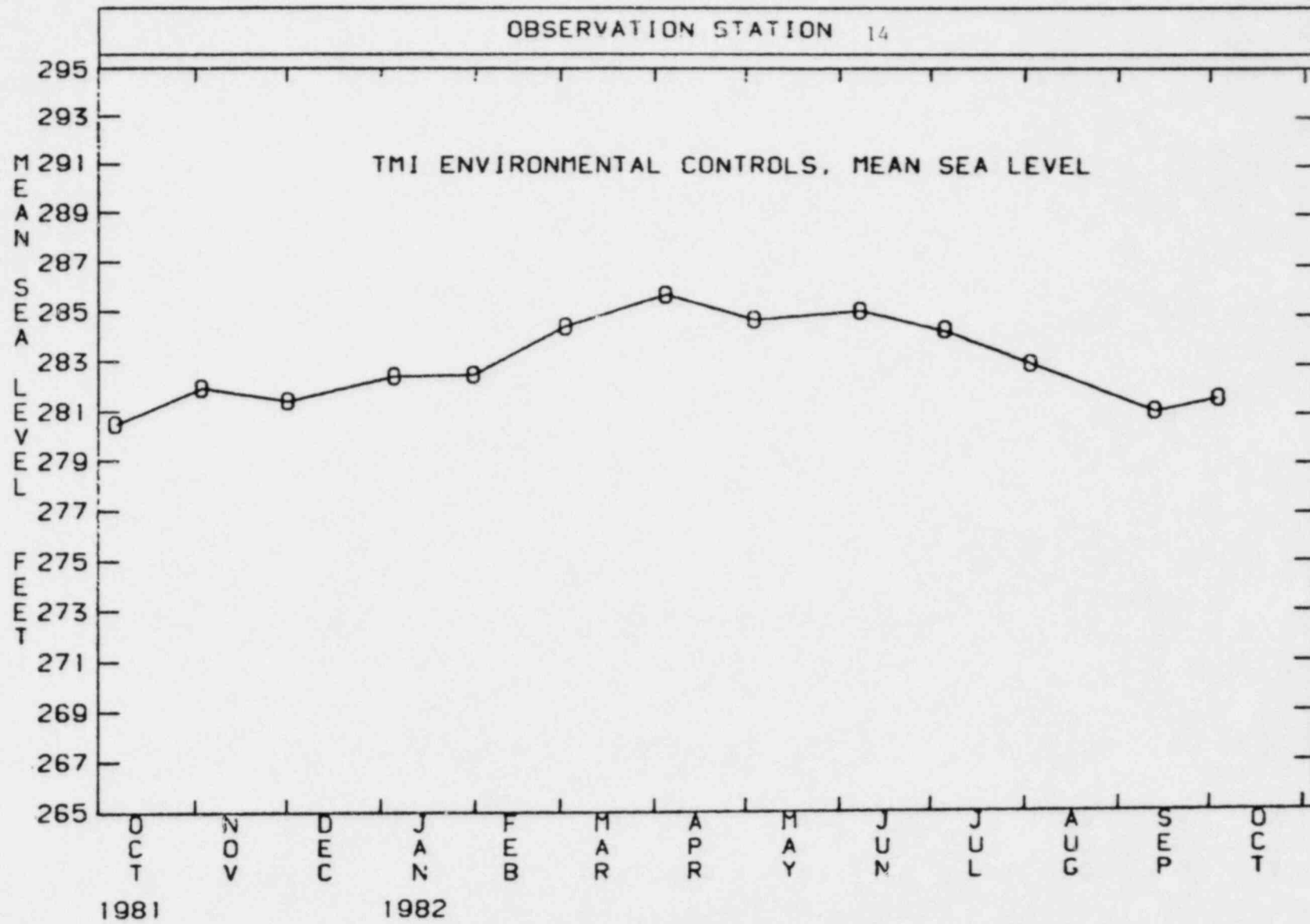
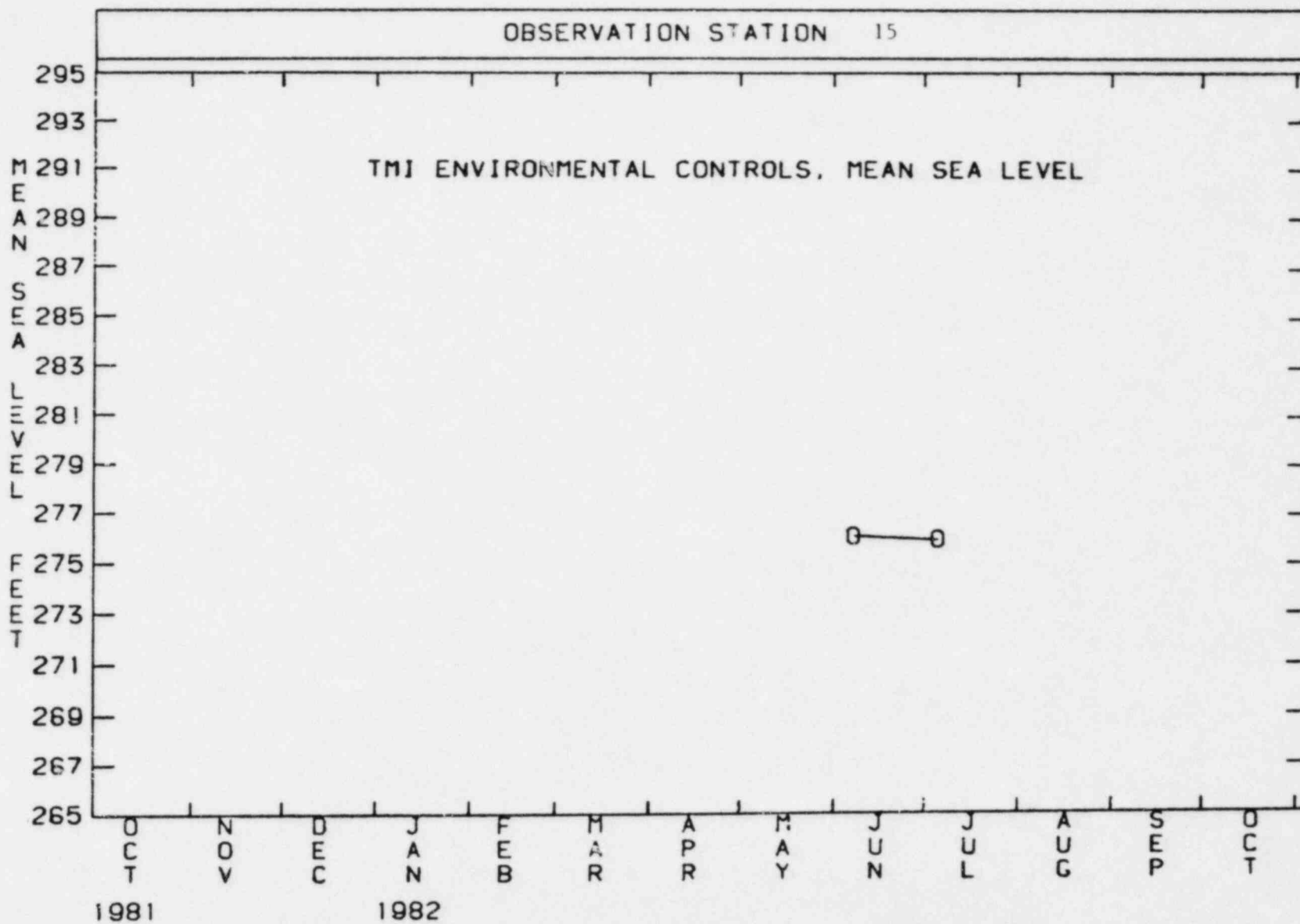


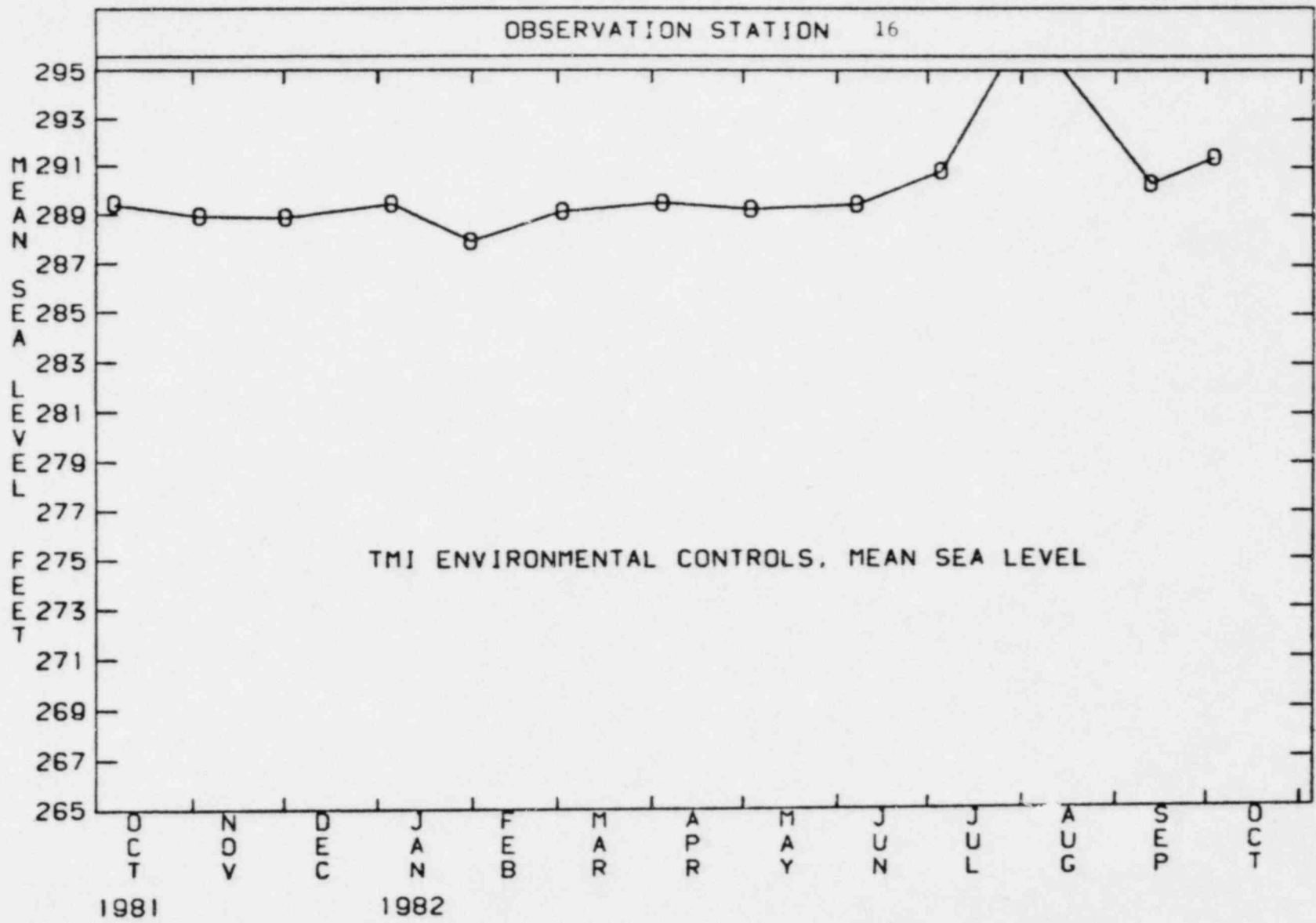
Figure 2
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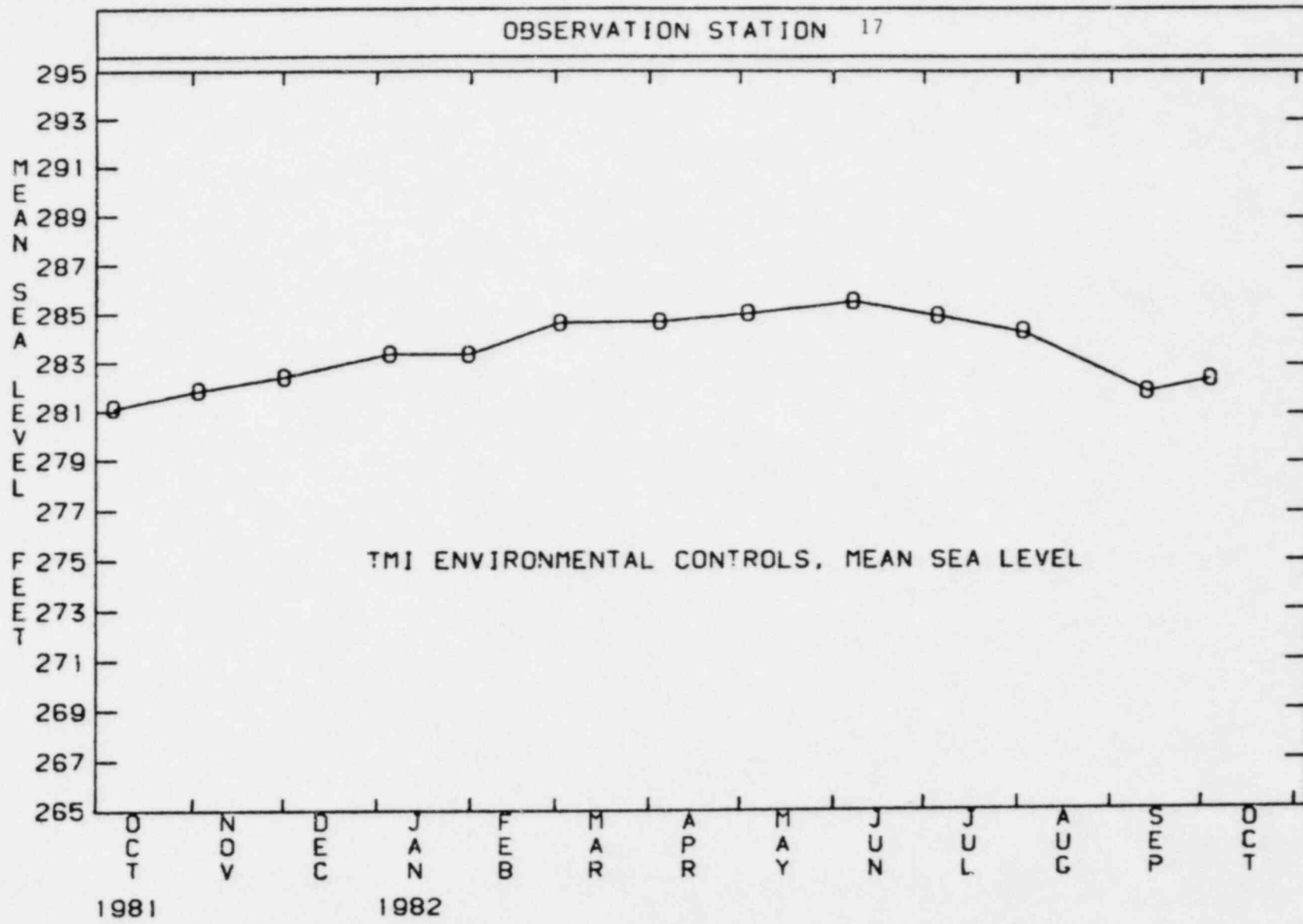




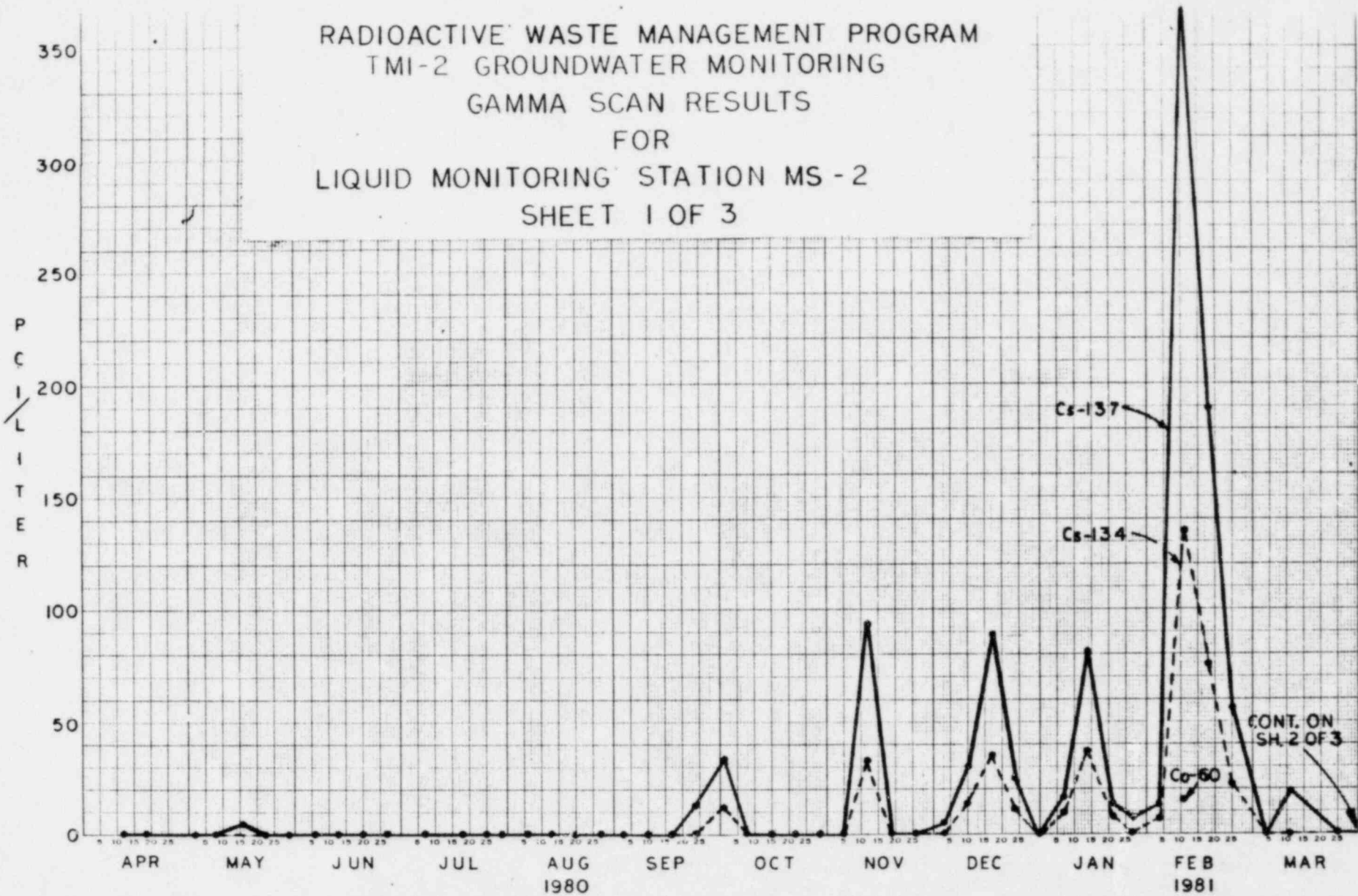






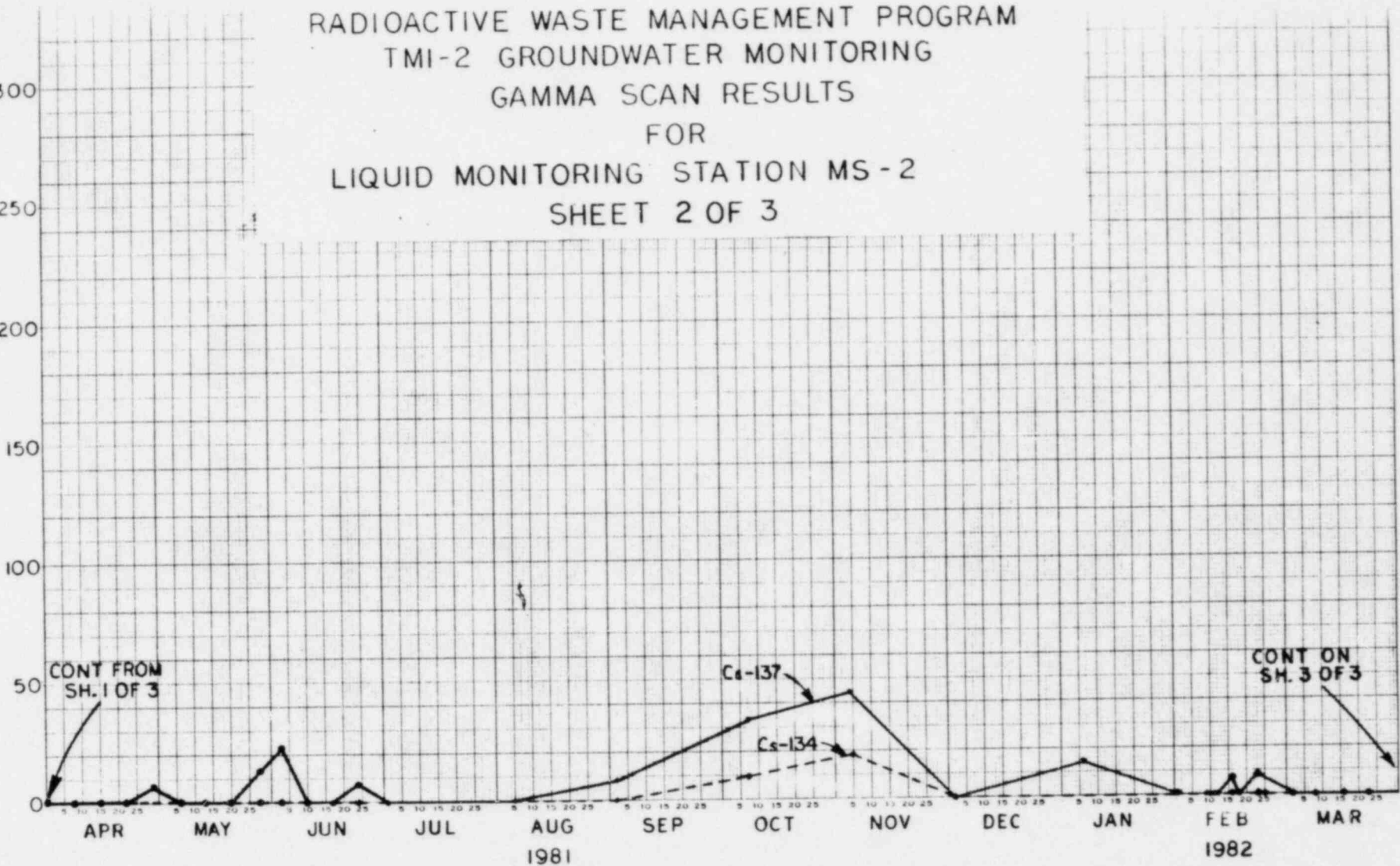


RADIOACTIVE WASTE MANAGEMENT PROGRAM
TMI-2 GROUNDWATER MONITORING
GAMMA SCAN RESULTS
FOR
LIQUID MONITORING STATION MS - 2
SHEET 1 OF 3



RADIOACTIVE WASTE MANAGEMENT PROGRAM
TMI-2 GROUNDWATER MONITORING
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RADIOACTIVE WASTE MANAGEMENT PROGRAM
TMI-2 GROUNDWATER MONITORING
GAMMA SCAN RESULTS
FOR
LIQUID MONITORING STATION MS - 2
SHEET 3 OF 3

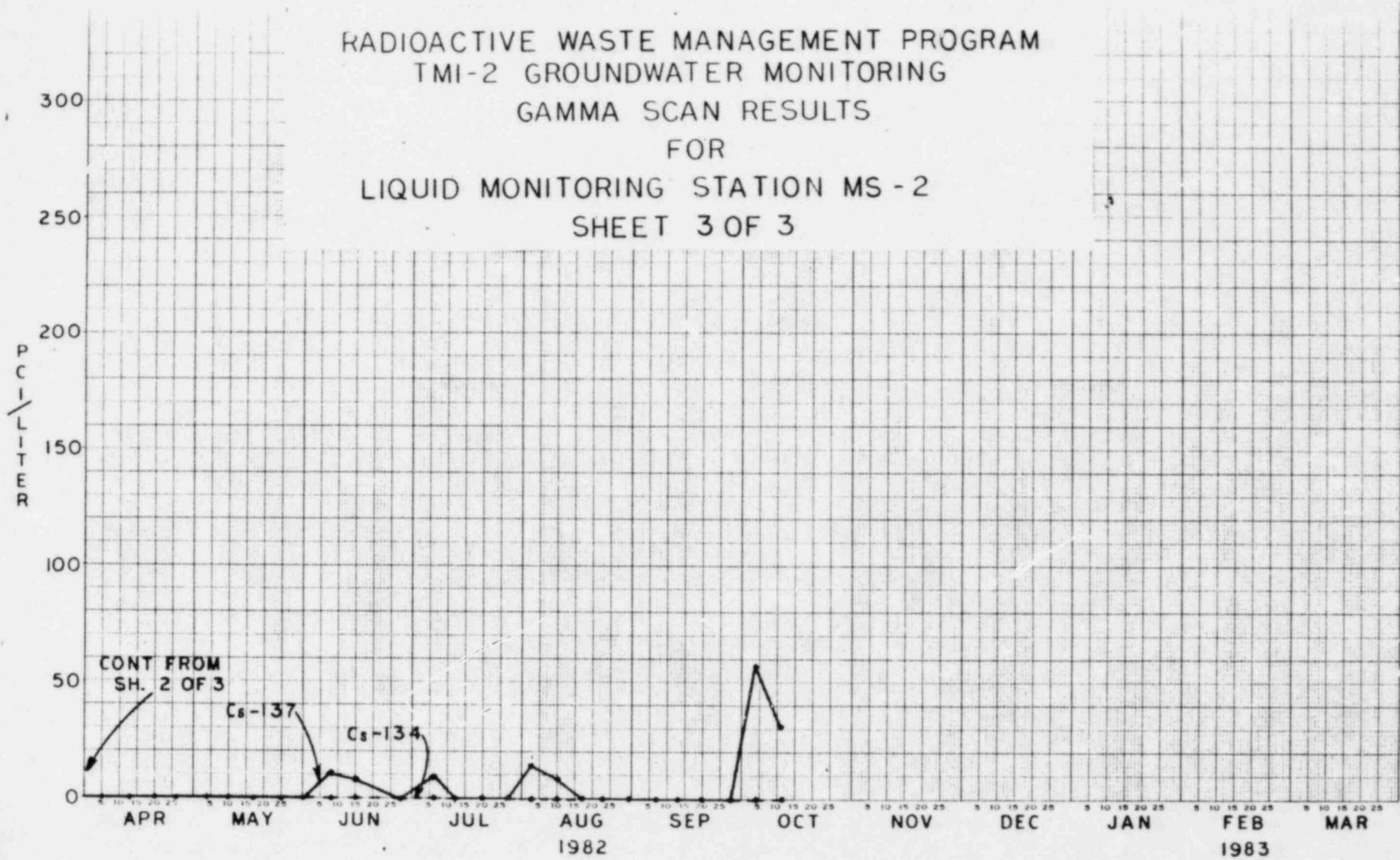


Table 1

DATE	M.S. 1	M.S. 2	M.S. 3	M.S. 4	M.S. 5	M.S. 6	M.S. 7	M.S. 8
May 17, 1982	<	<	<	<	<	<	<	<
May 25, 1982	<	<	<	<	<	<	<	<
June 1, 1982	<	<	<	<	<	<	<	<
June 8, 1982	18	4.5	<	<	<	<	<	<
June 15, 1982	8.1	5.1	<	<	<	<	<	<
June 22, 1982	11	4.2	<	<	<	<	<	<
June 28, 1982	<	<	<	<	<	<	<	<
July 6, 1982	9.2	5.0	<	<	<	<	<	<
July 12, 1982	<	<	<	<	<	<	<	<
July 20, 1982	<	<	<	<	<	<	<	<
July 27, 1982	<	<	<	<	<	<	<	<
August 3, 1982	14	4.7	<	<	<	<	<	<
August 10, 1982	8.6	4.7	<	<	<	<	<	<
August 17, 1982	<	<	<	<	<	<	<	<
August 23, 1982	<	<	<	<	<	<	<	<
August 30, 1982	<	<	<	<	<	<	<	<
September 7, 1982	<	<	<	<	<	<	<	<
September 13, 1982	<	<	<	<	<	<	<	<
September 20, 1982	<	<	<	<	<	<	<	<
September 28, 1982	<	<	<	<	<	<	<	<
October 4, 1982	57	14	<	<	<	<	<	<
October 11, 1982	31	11	<	<	<	<	<	<

