



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

February 2, 1981
NRC/TMI-81-008

MEMORANDUM FOR: Harold R. Denton, Director,
Office of Nuclear Reactor Regulation

Bernard J. Snyder, Program Director,
TMI Program Office

FROM: Lake H. Barrett, Acting Deputy Program Director,
TMI Program Office

SUBJECT: NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT.

Enclosed is the status report for the period of January 25-31, 1981.

Lake H. Barrett
Acting Deputy Program Director
TMI Program Office

Enclosure: As Stated

cc w/encl:
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NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of January 25-31, 1981

Plant Status

Core Cooling Mode: Heat transfer from the reactor coolant system (RCS) loops to reactor building ambient.

Available Core Cooling Modes: Long-term cooling "B" (once through steam generator-B); decay heat removal systems.

RCS Pressure Control Mode: Standby pressure control (SPC) system.

Backup Pressure Control Mode: One decay heat removal pump to supply pressure in conjunction with variable recirculation back to the borated water storage tank (BWST).

Major Parameters (as of 0500, January 30, 1981) (approximate values)
Average Incore Thermocouples: 124°F
Maximum Incore Thermocouple: 156°F

RCS Loop Temperatures:

	A	B
Hot Leg	120°F	123°F
Cold Leg (1)	68°F	68°F
(2)	68°F	67°F

RCS Pressure: 106 psig

Reactor Building: Temperature: 64°F
Water level: Elevation 290.5 ft. (8.0 ft. from floor)
via penetration 401 manometer)
Pressure: -0.4 psig (Heise)
Concentration: 1.8×10^{-4} uCi/cc (Kr-85) (sample taken 1/26/81)

Effluent and Environmental (Radiological) Information

1. Liquid effluents from TMI site released to the Susquehanna River after processing, were made within the regulatory limits and in accordance with NRC requirements and City of Lancaster Agreement dated February 27, 1980.

During the period January 23, 1981, to January 29, 1981, the effluents contained no detectable radioactivity at the discharge point and individual effluent sources which originated within Unit 2 contained no detectable radioactivity.

2. EPA Environmental Data. Results from EPA monitoring of the environment around the TMI site were as follows:

-- The EPA measured Krypton-85 (Kr-85) concentrations (pCi/m³) at several environmental monitoring stations and reported the following results:

<u>Location</u>	<u>January 16 - January 23, 1981</u> (pCi/m ³)
Bainbridge	25
Goldsboro	19
Observation Center	21
Middletown	29

All of the above levels of Kr-85 are considered to be background levels.

-- No radiation above normally occurring background levels was detected in any of the samples collected from the EPA's air and gamma rate networks during the period from January 21, 1981, through January 29, 1981.

3. NRC Environmental Data. Results from NRC monitoring of the environment around the TMI site were as follows:

-- The following are the NRC air sample analytical results for the onsite continuous air sampler:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> (uCi/cc)	<u>Cs-137</u> (uCi/cc)
HP-252	January 21, 1981-January 28, 1981	<9.0 E-14	<9.0 E-14

No reactor related radioactivity was detected.

-- Environmental TLD measurements for the period November 26, 1980, to January 9, 1981, indicate gamma radiation to be at the natural background levels. Fifty-four TLD's registered doses ranging from 0.18 mR/day to 0.31 mR/day. Average dose was 0.23 mR/day. These dose rates are consistent with natural background radiation in the TMI area.

4. Licensee Radioactive Material and Radwaste Shipments. The following shipments were made:

-- On Monday, January 26, 1981, a 40 ml Unit 2 reactor coolant sample was sent to Babcock and Wilcox (B&W), Lynchburg, Virginia.

- On Tuesday, January 27, 1981, a shipment containing 26 drums of compacted LSA waste and 2 boxes of non-compacted LSA waste was shipped from Unit 1 to Chem Nuclear Systems, Inc., Barnwell, South Carolina.
- On Thursday, January 29, 1981, a Unit 2 shipment of 79 drums of laundry was sent to Tri-State Industrial Laundries, Utica, New York.

Major Activities

1. Reactor Building Entry and Purge. The sixth entry into the Unit 2 reactor building (RB) is scheduled to commence on Tuesday morning, February 3, 1981. Activities inside the RB will continue for approximately seven hours on Tuesday and for four hours on Thursday, February 5, 1981. A total of thirty persons are scheduled to participate in the entry during the two days. The planned activities include the installation of a closed circuit television (CCTV) system, decontamination experiments, and additional testing of the source range neutron detectors.

Eight CCTV cameras will be installed inside the RB. CCTV monitors will be installed in the control room, entry command center, and on the turbine deck. The eight cameras include zoom and pan capability. The CCTV system will be used to monitor future activities in the RB.

Decontamination experiments, which commenced during the fifth entry, will be continued. Stripable coatings applied to the RB floor in December will be removed and their decontamination effectiveness will be assessed. Additionally, decontamination experiments with concentrated flush solutions will be continued. A decontamination foam will be applied to the vertical surface to test its effectiveness in removing surface contamination.

Testing from outside the RB has identified that the triaxial cable between the NI-2 neutron source range preamplifier and its RB penetration is defective. During the sixth entry a time domain reflectometer will be brought into the RB to test the two NI-2 neutron sensors and the associated cables.

Prior to the entry, a RB purge will be conducted to reduce the concentrations of Kr-85 gas. Based on RB air sample taken on January 26, 1981, there are approximately 10 curies of Kr-85 dispersed in the RB air.

2. Submerged Demineralizer System (SDS). Initial testing of components of the SDS is in progress while construction is ongoing. The licensee is conducting a program to further evaluate SDS performance. The program includes obtaining a sample of water from the reactor building which is tentatively scheduled for March 1981.
 3. Contaminated Building Expansion Joint. The licensee submitted a report to the onsite TMI Program Office which concluded that the source of contamination is the seal injection cubicle in the auxiliary building and not the reactor building. The staff is continuing its review of this report.
 4. Ground Water Monitoring Status. No new ground water analysis were received during the past week. A sketch showing the location of ground water monitoring wells is attached to this report. Also, is a tabulation of cesium activity which was detected in some of the wells. Graphs showing variations in tritium activity in all the wells are included.
- Well water samples are taken weekly by the licensee and sent to the laboratory for analysis. Sample results through December 26, 1981 are included in this report. Sample results for Well #2 were given priority after trace quantities of radioactive cesium were detected. Radioactive cesium sample results from Well #2 are available through January 14, 1981. The NRC sent a sample of water from Well #2 to the Radiological and Environmental Sciences Laboratory in Washington for an independent analysis. The results of the analysis have not been received.

Meetings Attended

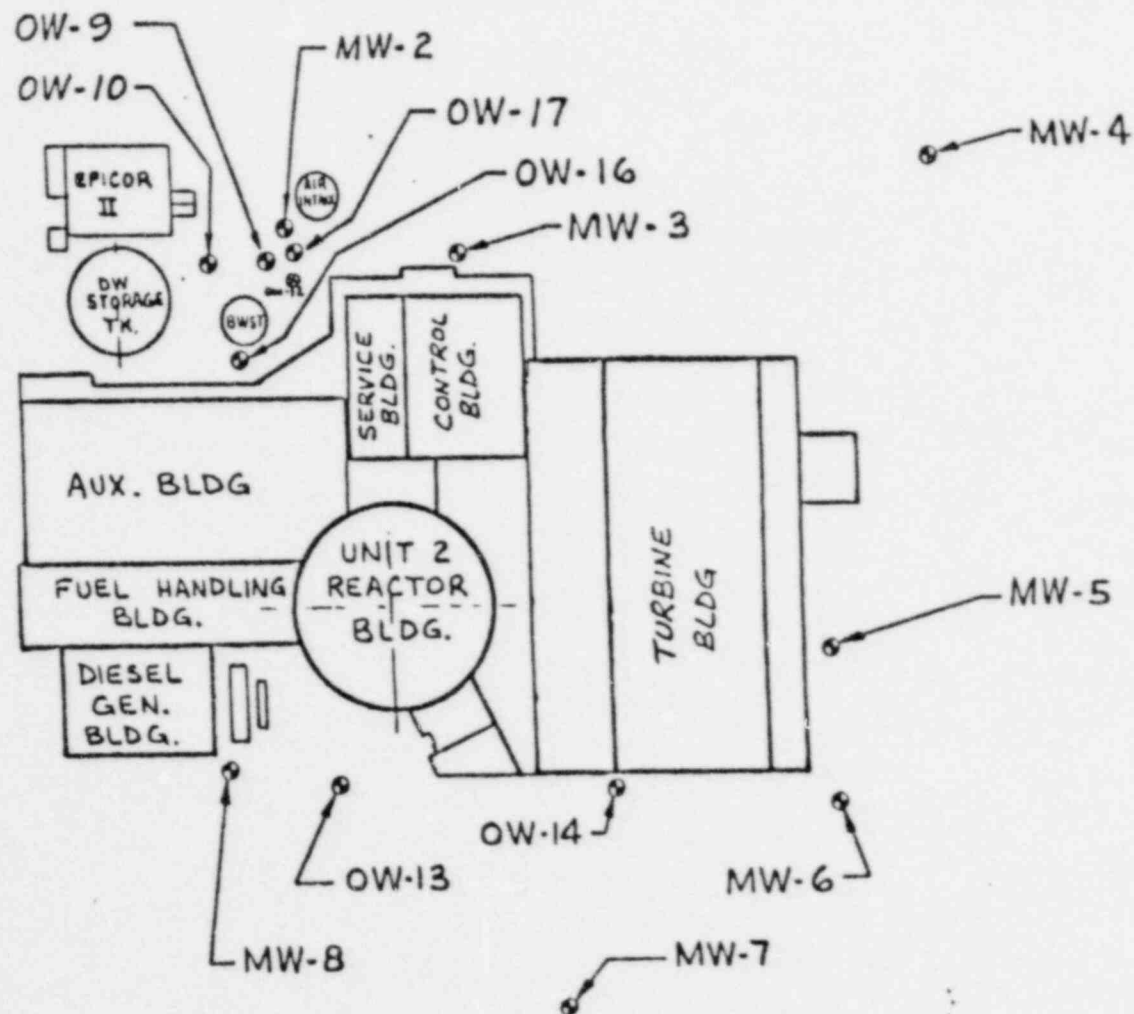
On Thursday, January 28, 1981, Lake Barrett met with the Mayor of Lancaster to discuss the status of TMI-2. Their discussion centered around TMI's history of liquid effluents and future TMI Advisory Panel meetings.

Future Meetings

1. The NRC's Advisory Panel for the Decontamination of Three Mile Island Unit 2, will hold meetings in Harrisburg, on February 4, 11 and 19, 1981. The public is invited to observe all three of these meetings, which will be held at the Forum of the Education Building on Commonwealth and Walnut Streets, Harrisburg. Each of these meetings are scheduled to begin at 7:30 p.m. and end at 10:30 p.m.
2. On Friday, February 6, 1981, Lake Barrett and Willis Bixby (DOE) will meet with Mayor Reid of Middletown to discuss the decontamination efforts of TMI-2.

WELL LOCATIONS

NORTH 



ATTACHMENT

COMMENTS:

1. CONTROL WELL, MW-1, IS LOCATED IN THE NORTH PARKING LOT
2. CONTROL WELL, OW-15, IS LOCATED ON THE SOUTH END OF ISLAND

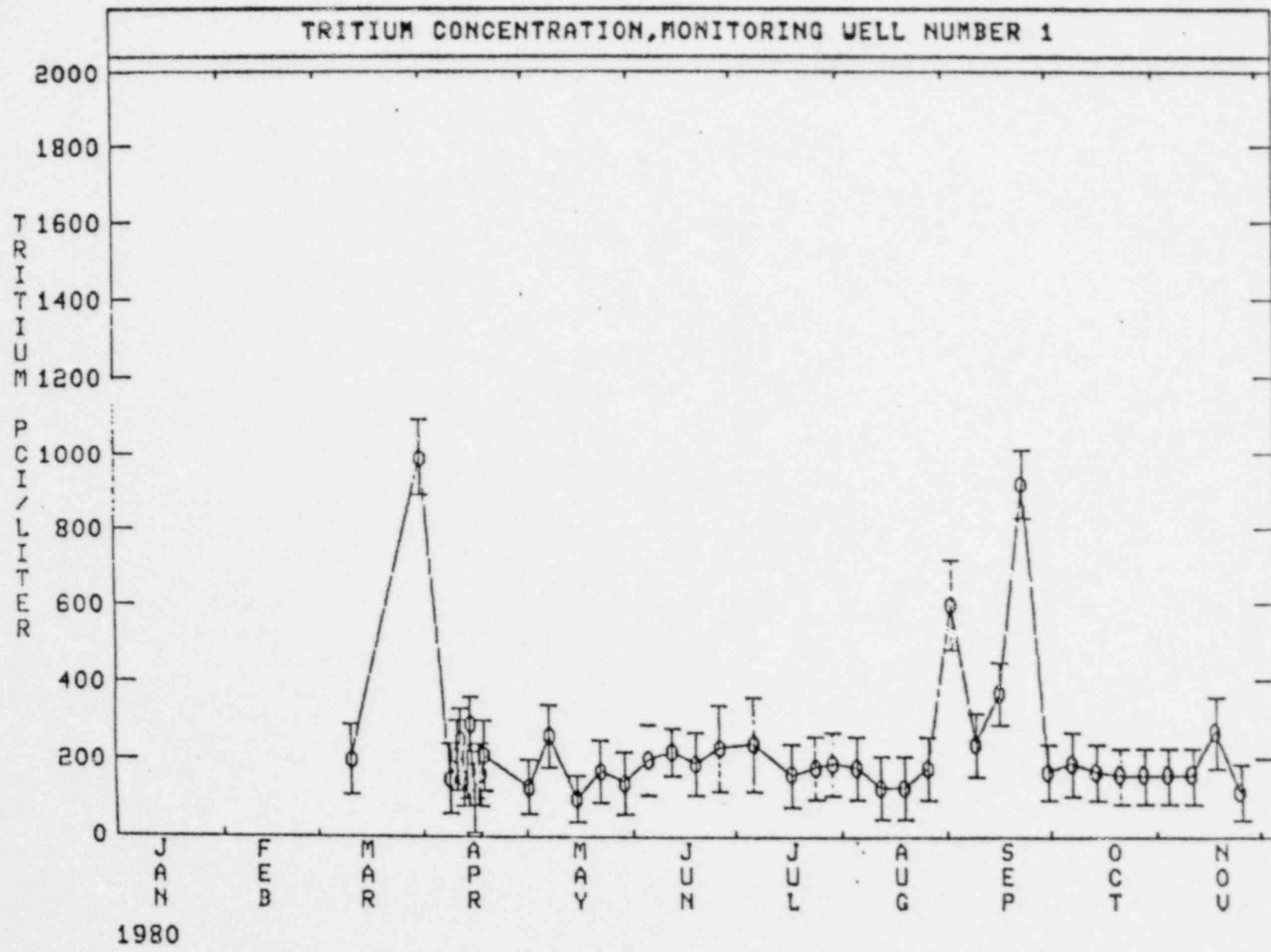
GAMMA SCAN RESULTS

Test results received for the November 12, 1980 to December 17, 1980 reporting period were negative with the exceptions listed below in Table 1. MW-2 results are listed through January 14, 1981. The other well results have not been received.

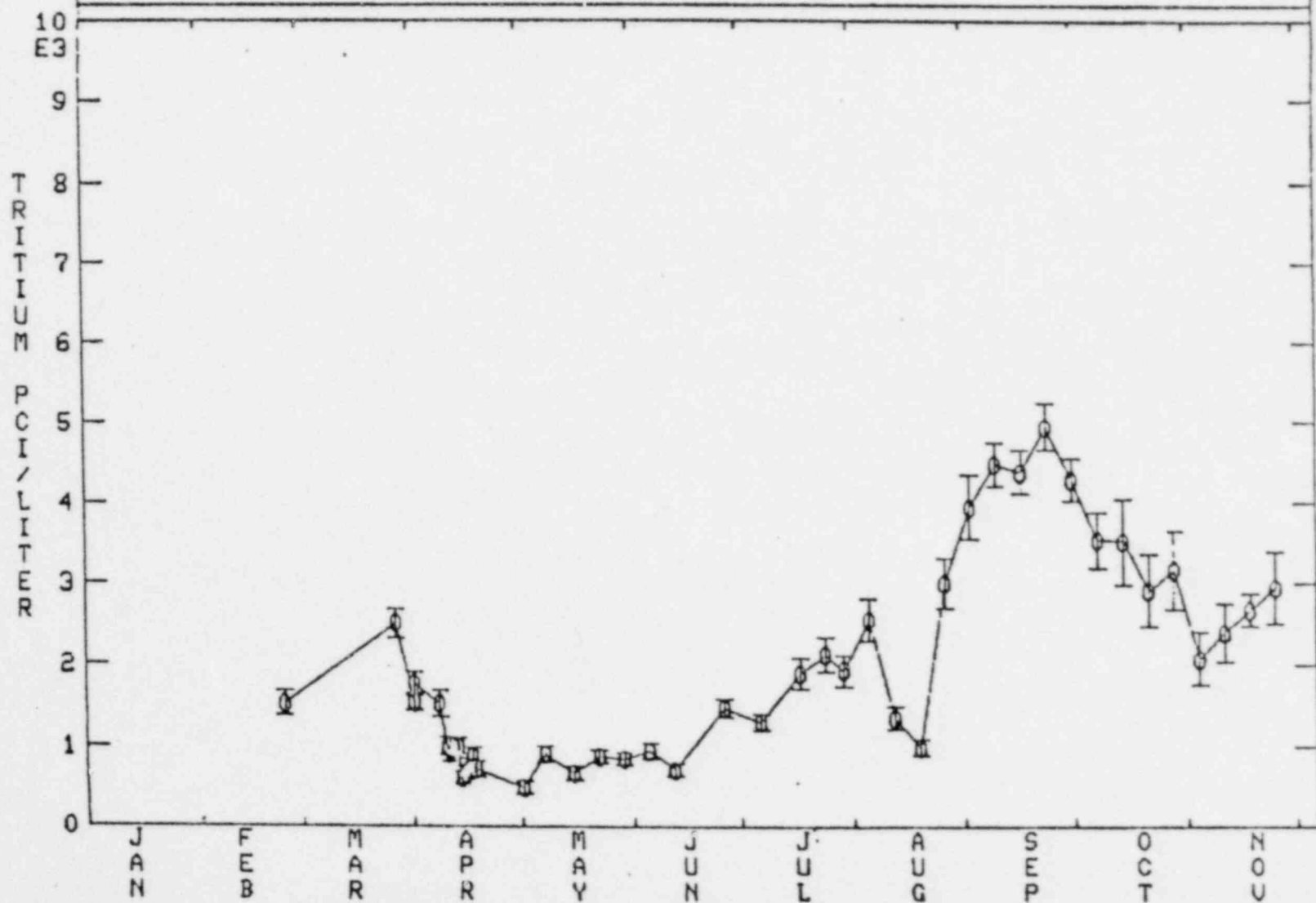
Table 1

Date	Well	Cs-137 (pCi/l)	C-137 (pCi/l)
November 12, 1980	2		
November 12, 1980	16*		
November 26, 1980	14*		
December 3, 1980	2		
December 10, 1980	2	12.9±6.2	54.2
December 17, 1980	2	35.0±4.9	67.1
December 24, 1980	2	10.5±3.9	24.1
December 31, 1980	2	<9.0	1.0
January 7, 1980	2	9.68±4.28	
January 14, 1980	2	36.6±5.0	81.4±1.1

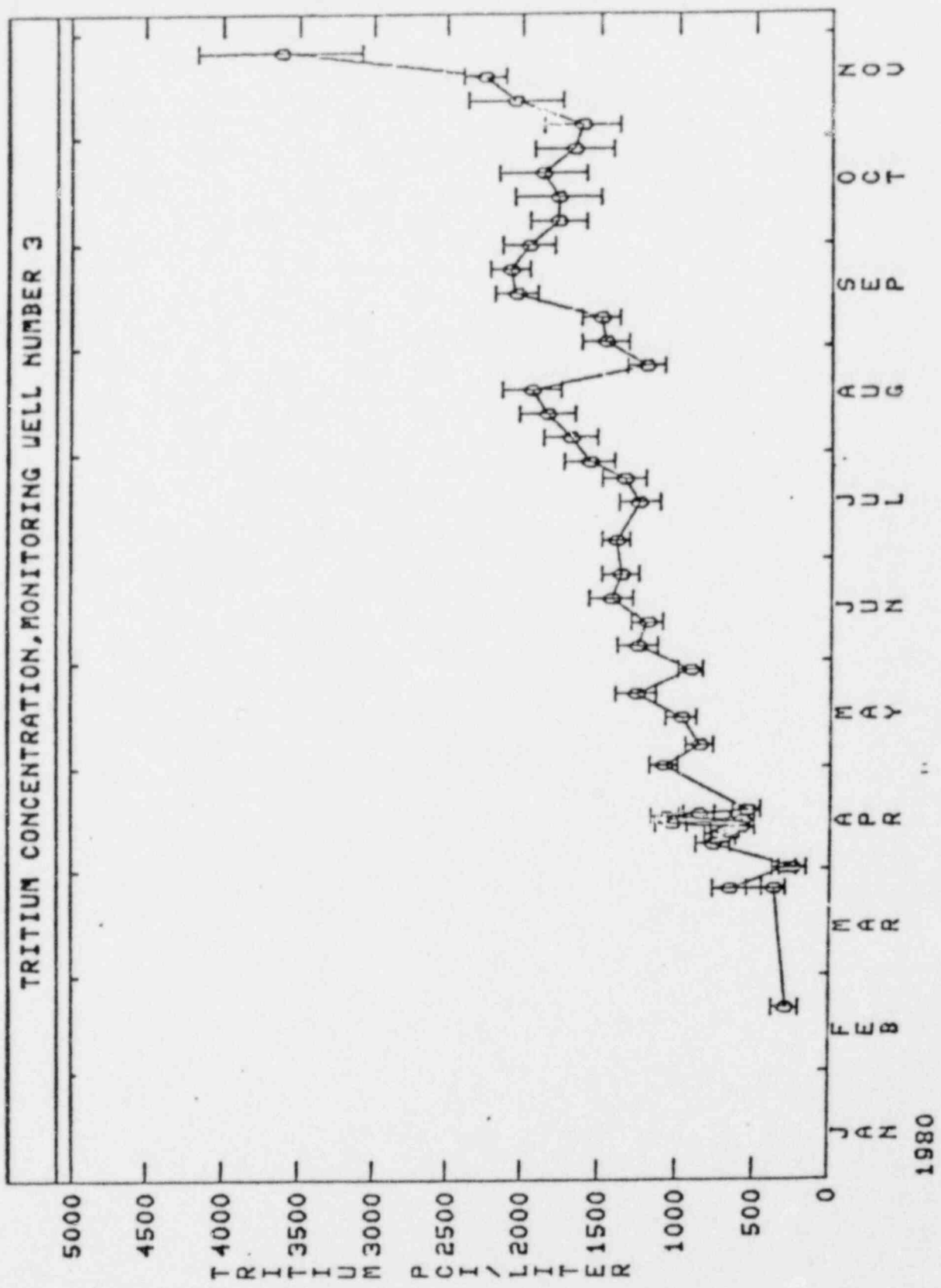
*Sample being reanalyzed

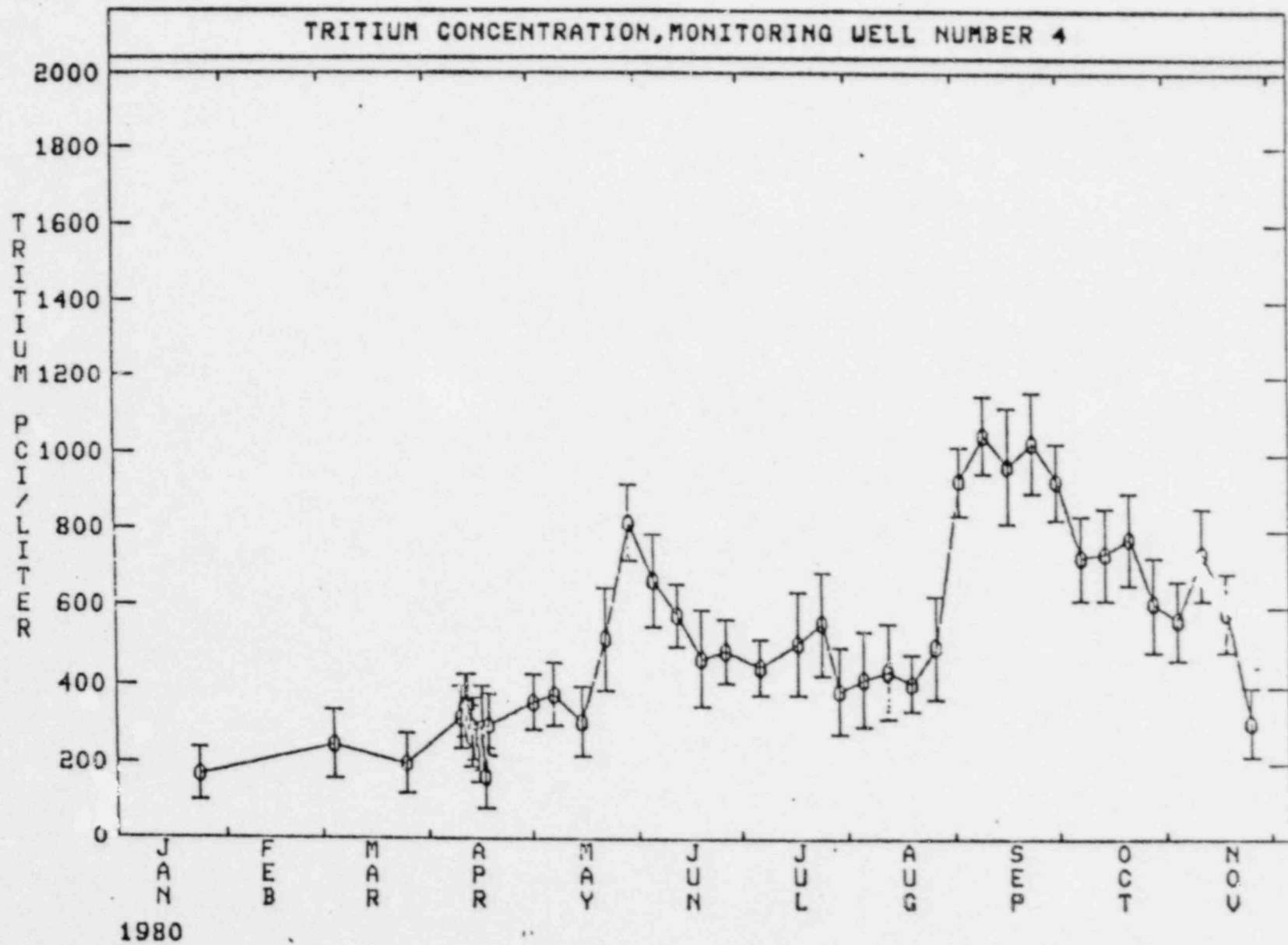


TRITIUM CONCENTRATION, MONITORING WELL NUMBER 2

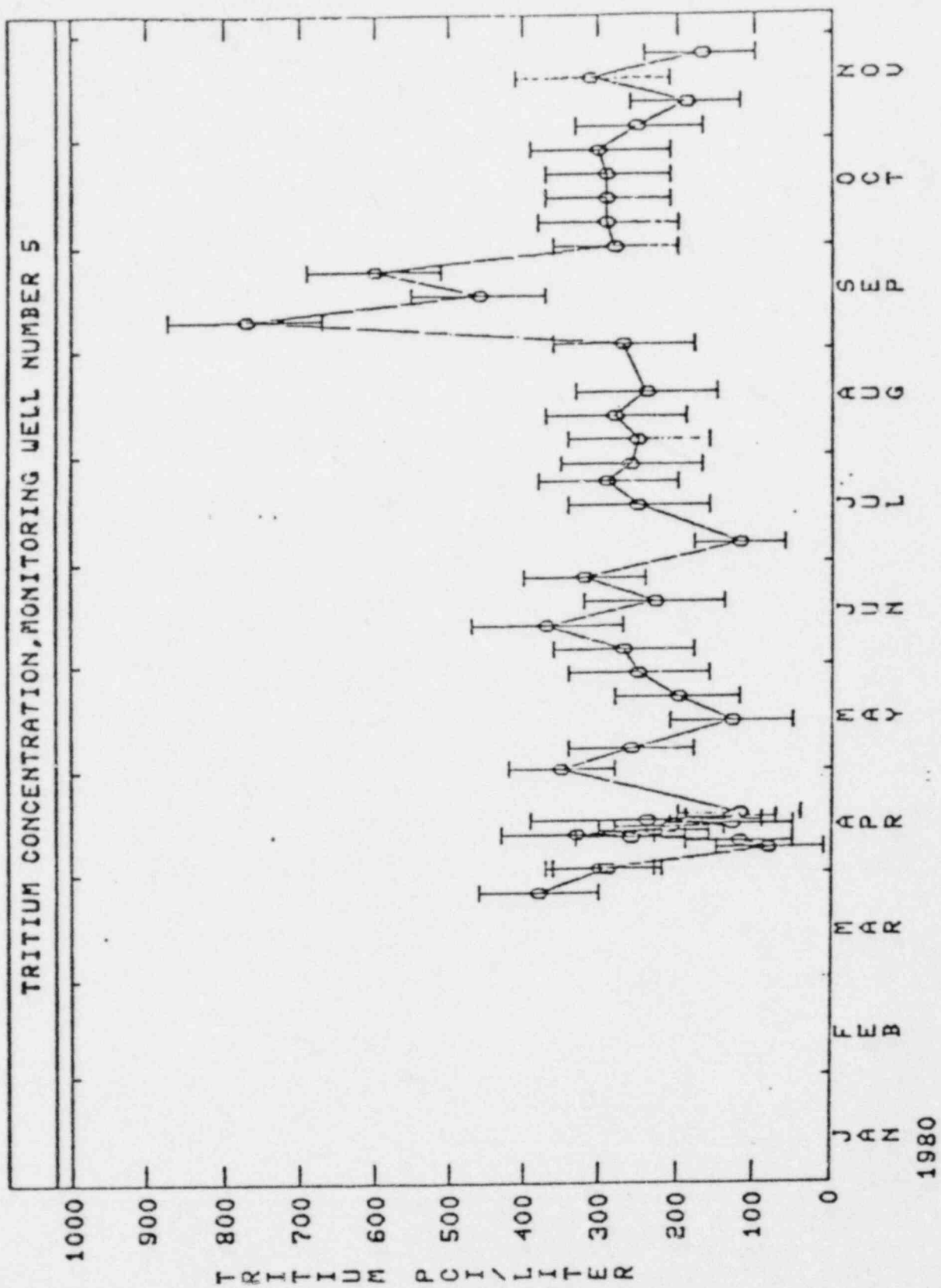


1980

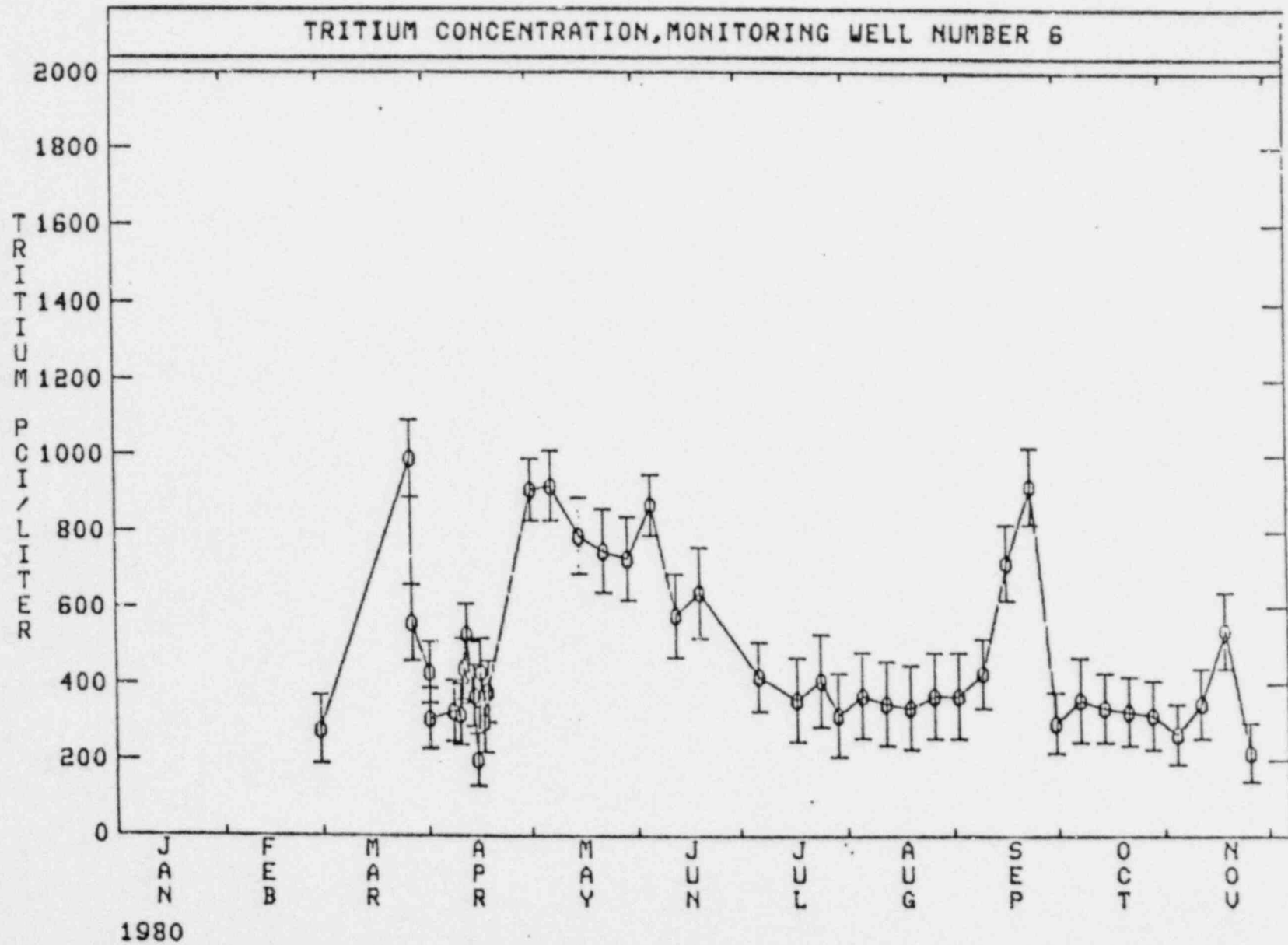


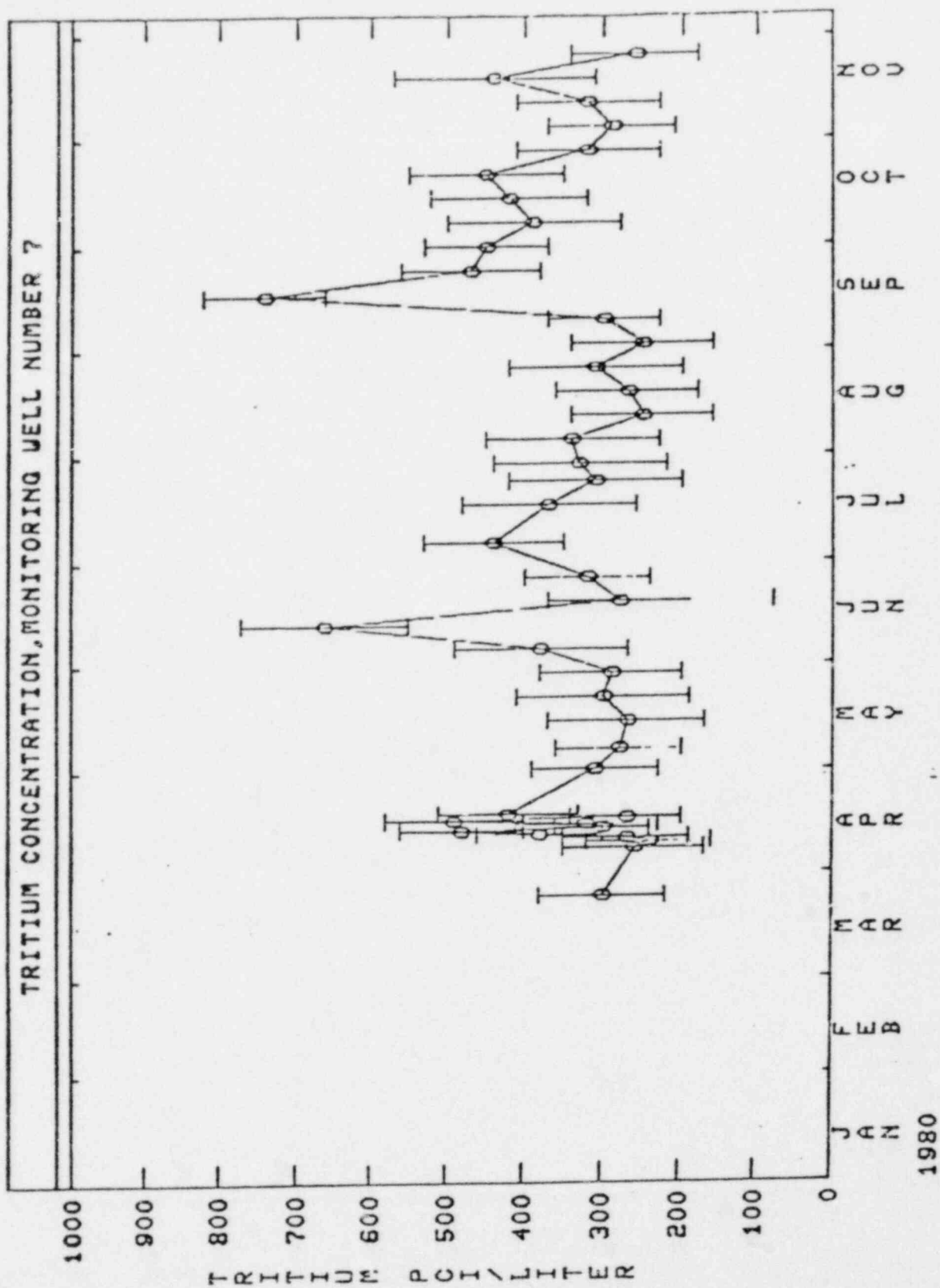


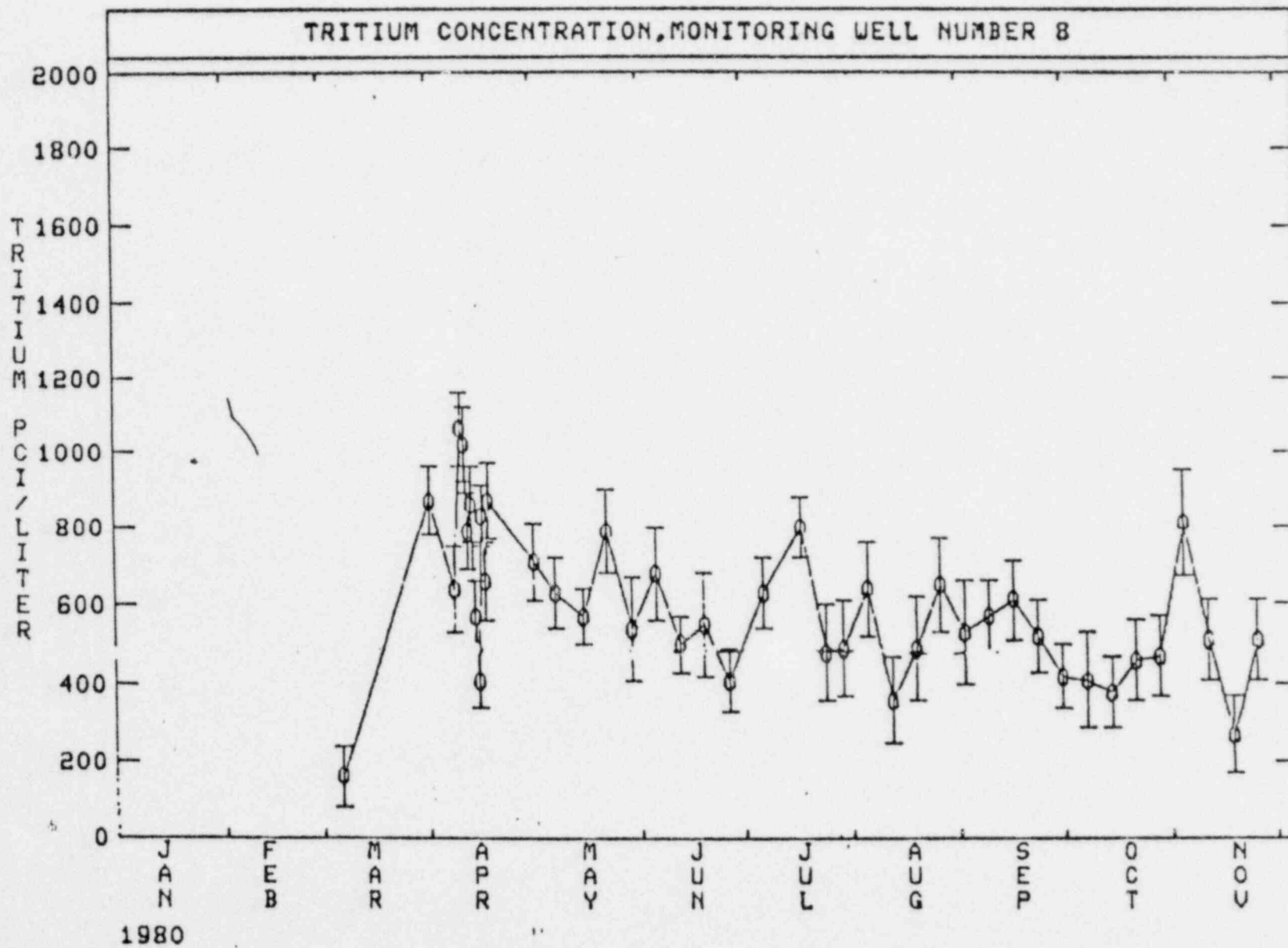
TRITIUM CONCENTRATION, MONITORING WELL NUMBER 5

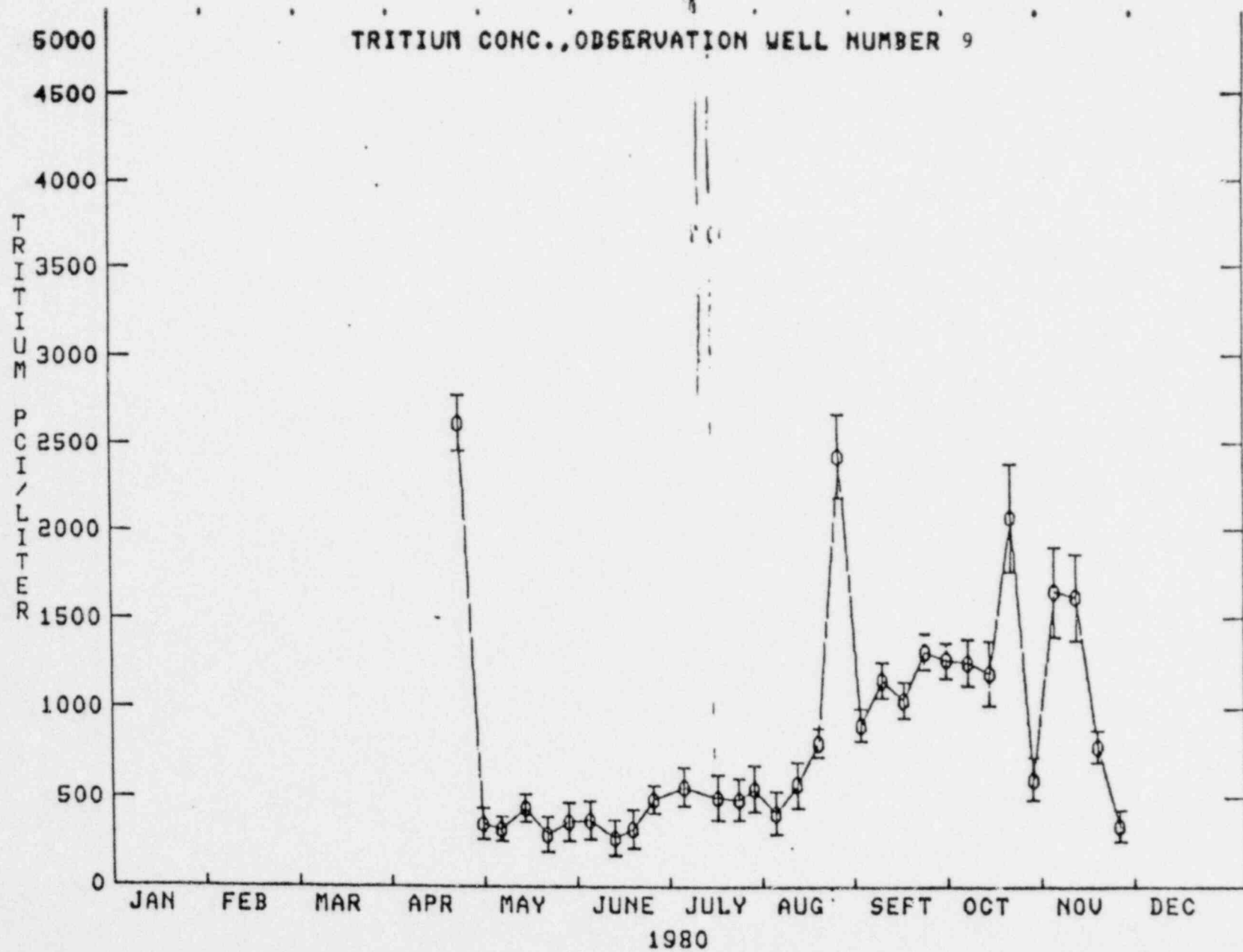


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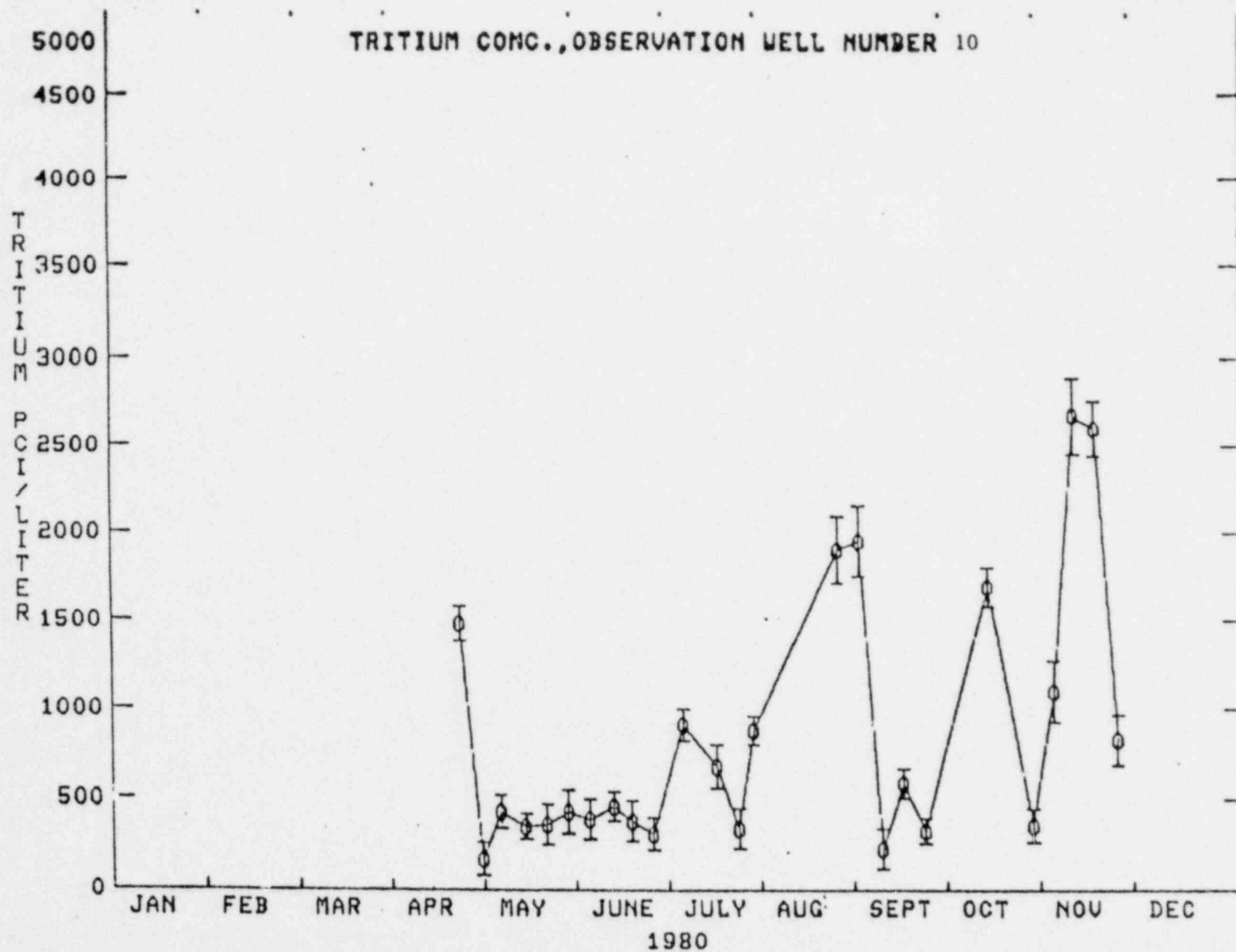


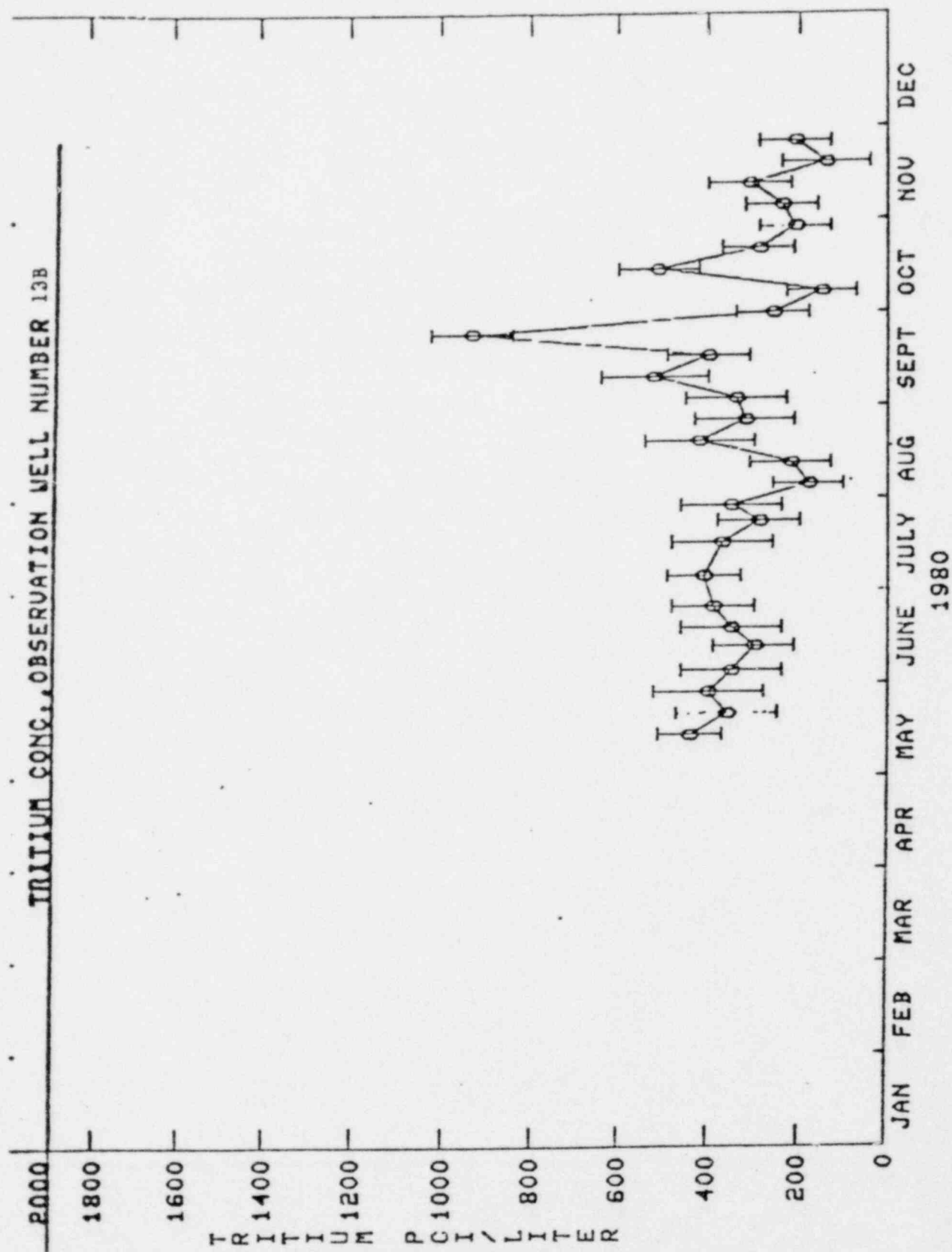




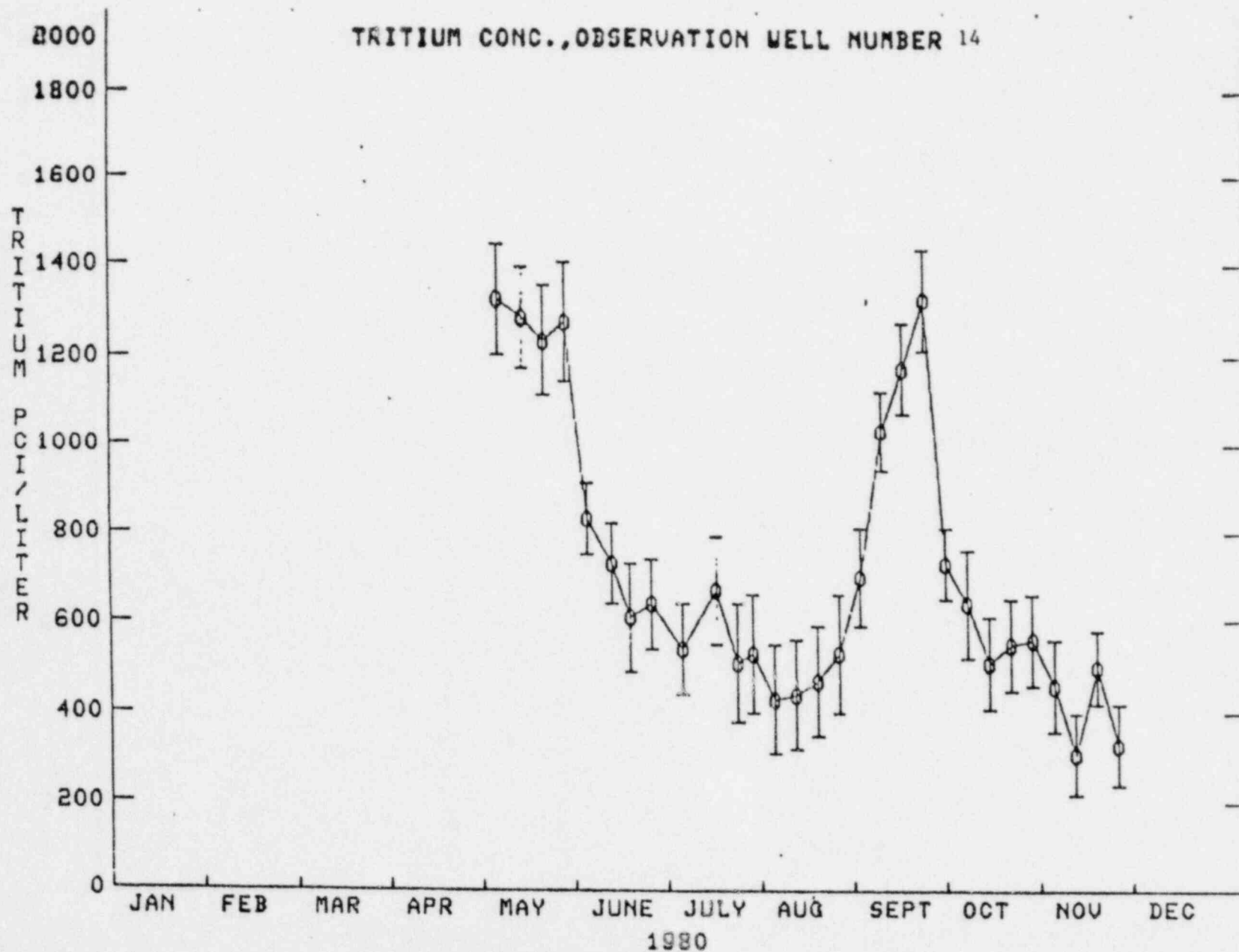


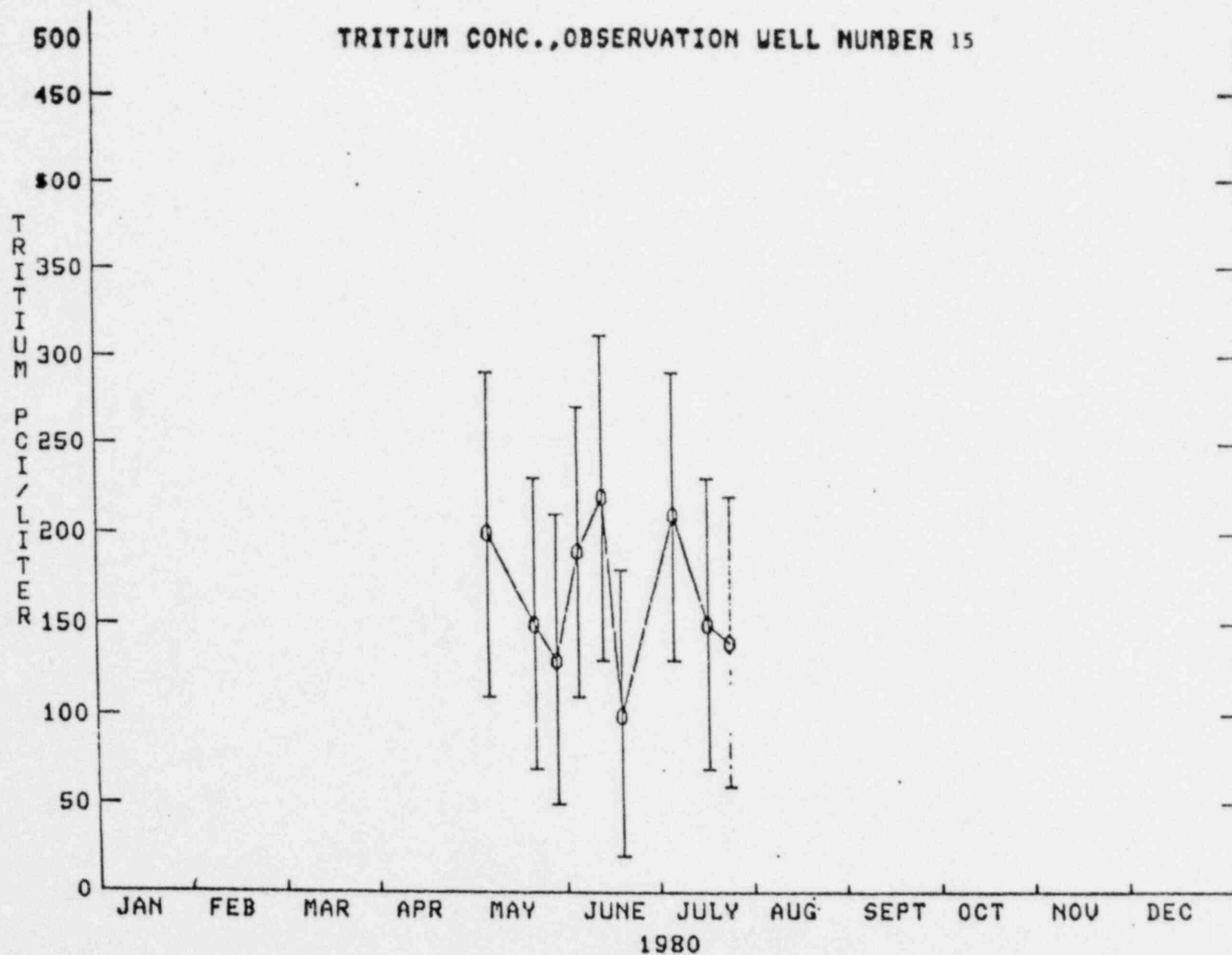
TRITIUM CONC., OBSERVATION WELL NUMBER 10

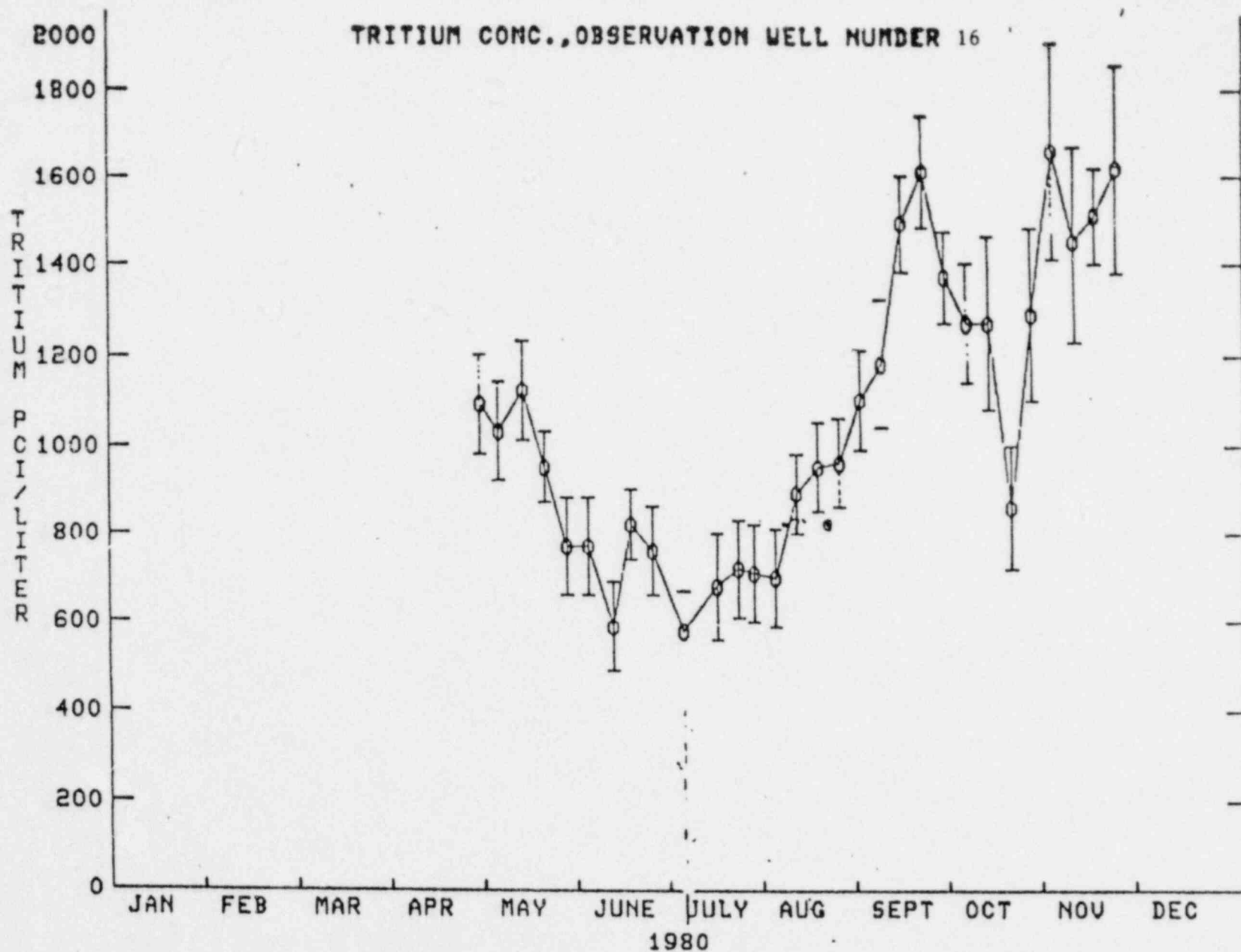




TRITIUM CONC., OBSERVATION WELL NUMBER 14







TRITIUM CONC., OBSERVATION WELL NUMBER 17

