1901 Chouteau Avenue
Post Office Box 149
St. Louis, Missouri 63166
314-621-3222

UNION ELECTRIC

May 31, 1990

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Gentlemen: ULNRC-2219

DOCKET NUMBER 50-483
CALLAWAY PLANT
NPDES RENEWAL APPLICATION

On May 18, 1990 Union Electric submitted a National Pollutant Discharge Elimination System (NPDES) renewal application to the Missouri Department of Natural Resources. In accordance with Callaway Plant Operating License NPF-30, Appendix B, Section 3.2 we are providing NRC a copy of the application. The slight delay in this transmittal was needed to allowed for reproduction of the renewal application.

Very truly yours,

for A. C. Passwater
Manager, Licensing & Fuels

DS/sla

Attachment

Cool
1/1

cc: Gerald Charnoff, Esq.
Shaw, Pittman, Potts & Trowbridge
2300 N. Street, N.W.
Washington, D.C. 20037

Dr. J. O. Cermak
CFA, Inc.
4 Professional Drive (Suite 110)
Gaithersburg, MD 20879

R. C. Knop
Chief, Reactor Project Branch 1
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Bruce Little
Callaway Resident Office
U.S. Nuclear Regulatory Commission
RR#1
Steedman, Missouri 65077

Anthony T. Gody, Jr. (2)
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
1 White Flint, North, Mail Stop 13E21
11555 Rockville Pike
Rockville, MD 20852

Manager, Electric Department
Missouri Public Service Commission
P.O. Box 360
Jefferson City, MO 65102

bcc: D. Shafer/A160.761
/QA Record (CA-758)
Nuclear Date
E210.01
DFS/Chrono
D. F. Schnell
J. E. Birk
J. V. Laux
M. A. Stiller
G. L. Randolph
R. J. Irwin
H. Wuertenbaecher
W. R. Campbell
A. C. Passwater
R. P. Wendling
D. E. Shafer
D. J. Walker
O. Maynard (WCNOC)
N. P. Goel (Bechtel)
T. P. Sharkey
NSRB (Sandra Auston)

N.G. Slaten

May 18, 1990

Mr. Bill Kesler
Regional Administrator
Department of Natural Resources
Central Regional Office
P. O. Box 176
Jefferson City, MO 65102

Dear Mr. Kesler:

Enclosed is the NPDES renewal application for Union Electric Callaway Power Plant (MO-0098001). Also enclosed is a check for the seventy-five dollar application fee.

Please note that Attachments H and J of the renewal application deal with requested modifications to our permit. Attachment H requests three changes to allow greater flexibility in plant operations. Attachment J provides an analysis of past radiological monitoring data. Based on the analysis of the data, Attachment J requests specific modifications to the radiological monitoring program.

Note that the application contains the required flow diagram and a larger copy is also enclosed for your convenience. If there are any questions regarding this reapplication, please contact Mike Bollinger at 554-3652.

Sincerely,

Thomas E. Siedhoff

Thomas E. Siedhoff, P. E.
Manager
Environmental Services

PMB/klm
Enclosures
cc: Mr. Robert Hentges

bcc: D. F. Schnell
W. H. Anderson
A. C. Passwater
M. F. Bollinger
P. M. Bell
J. R. Peevy
T. E. Siedhoff/P-3.2.11.1
N. G. Slaten
J. D. Smith
R. D. Miller
M. F. Barnes

Union Electric Company

Callaway Power Plant

NPDES Permit Reapplication

May, 1990

Contents

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
FORM A — APPLICATION FOR DISCHARGE PERMIT

P.O. BOX 176
JEFFERSON CITY, MO 65102

DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

NOTE: FILING FEES MUST BE IN THE FORM OF CHECK, BANK DRAFT, OR MONEY ORDER, PAYABLE TO THE STATE OF MISSOURI. CASH WILL NOT BE ACCEPTED.

1.10 CONSTRUCTION PERMIT APPLICATION _____. A $25.00 FILING FEE MUST ACCOMPANY EACH APPLICATION FOR A CONSTRUCTION PERMIT.

1.20 OPERATING PERMIT APPLICATION X. A $75.00 FILING FEE MUST ACCOMPANY EACH APPLICATION FOR A OPERATING PERMIT.

FOR AGENCY USE ONLY

APPLICATION NUMBER
MO -
DATE RECEIVED

2.10 NAME OF FACILITY
Callaway Power Plant

2.20 FACILITY ADDRESS	CITY	STATE	ZIP CODE
P.O. Box 620	Fulton	MO	65251

2.30 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER
MO - 0098001

2.40 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER

2.50 OWNER'S NAME	TELEPHONE
Union Electric Company	314/554-2637

ADDRESS	CITY	STATE	ZIP CODE
1901 Chouteau	St. Louis	MO	63166

2.60 OPERATING AUTHORITY NAME
same

ADDRESS	CITY	STATE	ZIP CODE

2.70 FACILITY CONTACT NAME	TITLE	TELEPHONE
John D. Blosser	Plant Manager	314/676-8190

2.80 ADDITIONAL FORMS NECESSARY TO COMPLETE THIS APPLICATION:

A. DOES YOUR FACILITY RECEIVE AND TREAT BASICALLY DOMESTIC WASTE:

☐ YES ☒ NO (IF YES, COMPLETE FORM B)

B. IS YOUR FACILITY A MANUFACTURING, COMMERCIAL, MINING OR SILVICULTURE WASTE TREATMENT FACILITY:

☒ YES ☐ NO (IF YES, COMPLETE FORM C AND ANSWER C OF THIS SUBPART)

C. IS YOUR FACILITY CONSIDERED A "PRIMARY INDUSTRY" UNDER EPA GUIDELINES:

☒ YES ☐ NO (IF YES, COMPLETE FORM C AND D)

2.90 I CERTIFY THAT I AM FAMILIAR WITH THE INFORMATION CONTAINED IN THE APPLICATION, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF SUCH INFORMATION IS TRUE, COMPLETE AND ACCURATE, AND IF GRANTED THIS PERMIT, I AGREE TO ABIDE BY THE MISSOURI CLEAN WATER LAW AND ALL RULES, REGULATIONS, ORDERS AND DECISIONS, SUBJECT TO ANY LEGITIMATE APPEAL AVAILABLE TO APPLICANT UNDER THE MISSOURI CLEAN WATER LAW, OF THE MISSOURI CLEAN WATER COMMISSION.

APPLICANT'S SIGNATURE (SEE INSTRUCTIONS)	DATE
Donald F. Schnell	21 May 90

D. F. Schnell, Senior Vice President, Nuclear

CWC 105A 12-85

Rule 10 CSR 20-6.020 sets forth the procedures which the department will follow in providing opportunity for the participation by the public and other governmental agencies during the permit issuing process. Further, it is the department's policy to notify the person(s) immediately downstream of the applicant's permit pending. Please provide the following information:

Name of first downstream landowner: Louis Garrett

Mailing Address: 9815 Benson

City: Overland State: MO

Zip: 63114

FOR AGENCY USE ONLY
APPLICATION NUMBER
MO -
DATE RECEIVED

FORM C - APPLICATION FOR DISCHARGE PERMIT

MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS

DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

MISSOURI DEPARTMENT OF NATURAL RESOURCES - DIVISION OF ENVIRONMENTAL QUALITY
P. O. Box 1368
Jefferson City, Missouri 65102

1.00 NAME OF FACILITY Callaway Power Plant

1.10 This facility is now in operation under Missouri Operating Permit Number MO-0098001

1.20 This is a new facility and was constructed under Missouri Construction Permit Number _____. (Complete only if this facility does not have an operating permit.)

2.00 List the Standard Industrial Classification (SIC) codes applicable to your facility (4 digit code).

a. first 4911 Electric Services b. second _____

c. third _____ d. fourth _____

2.10 For each outfall give the legal description

Outfall Number (list) ____¼ ____¼ Sec ___ T ____ R ____ _____ County

See Attachment A

2.20 For each outfall list the name of the receiving water

Outfall number (list)	Receiving water
001, 002, 003, 004, 007, 009	Missouri River
010, 011, 012, 013, 014, 015	Tributaries to the Missouri River

2.30 Briefly describe the nature of your business: Steam Electric Power Plant (Nuclear)

EMO 1350

2.40 All Flows in MGPD

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, public sewers and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. Outfall No. (list)	2. Operation(s) contributing flow		3. Treatment	
	a. Operation (list)	b. Average flow (include units) (maximum flow)	a. Description (MGD)	b. List codes from Table A
001	Radwaste Treatment System	.080 (.258)	Discharge*	4-A
	Subsystems -			
	Boron Recycle	.0025		
	Liquid Radwaste	.007		
	Train A	.002		
	Train B	.005		
	Laundry/Hot Shower	.0005		
	Secondary Liquid Waste	.070		
	Condensate Regen.	.050		
	Floor Drains	.020		

* Treatment - Other wastewater treatment systems are used as required to treat this wastestream for recycle or discharge in compliance with NRC requirements, and may be used to treat this discharge to meet NPDES permit limitations.

Note: Solid waste from the radwaste treatment system is disposed of in accordance with Nuclear Regulatory Commission (NRC) regulations.

2.40

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, public sewers and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. Outfall No. (list)	2. Operation(s) contributing flow		3. Treatment	
	a. Operation (list)	b. Average flow (include units) (maximum flow)	a. Description (MGD)	b. List codes from Table A
002	Cooling Tower Blowdown	4.25 (14.40)	Discharge	4-A
003	Water Treatment Plant Wastes	.360 (1.305)*	Sedimentation	1-U
			Recycle	4-C
			Discharge	4-A
	Subsystems -			
	Clarifier Blowdown	.330		
	Carbon Filter Backwash	.030		
	Oily Waste System	.001		

* These flows represent wastewater discharged to the treatment lagoon. Actual outfall discharge may vary from 0, with total recycle to the maximum listed above, with direct discharge.

004	Demineralizer System Wastes	.060 (.340)	Neutralization	2-K
	Subsystems -		Sedimentation	1-U
	Cation Regeneration	.018	Discharge	4-A
	Anion Regeneration	.018		
	Mixed Bed Regeneration	.018		
	Building Sumps	.006		

2.40

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, public sewers and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. Outfall No. (list)	2. Operation(s) contributing flow		3. Treatment	
	a. Operation (list)	b. Average flow (include units) (maximum flow)	a. Description (MGD)	b. List codes from Table A
007	Sanitary Treatment Plant	.020 (.040)	Activated Sludge	3-A
			Sedimentation	1-U
			Discharge	4-A
009	Intake Electric Heaters	0 (.006)	Neutralization	2-K
			Discharge	4-A
010	Storm Water Runoff (SWR)	.014 (7.14)*	Sedimentation	1-U
			Discharge	4-A

Note: Sanitary treatment sludge is accumulated on site in an aerated holding basin, then transferred for disposal to a publicly owned treatment works. At the present time, the city of Fulton, MO, receives our sludge for treatment and disposal.

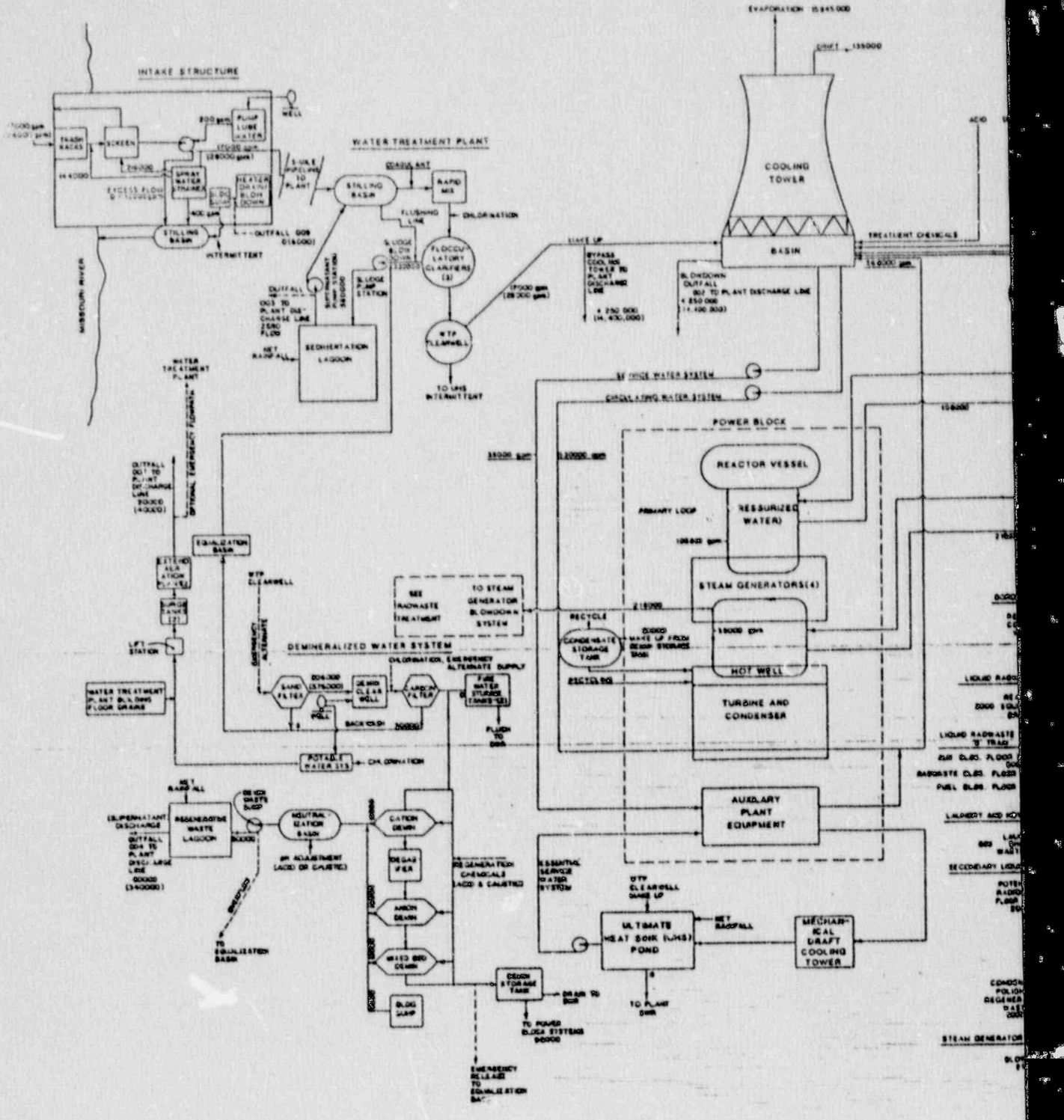
* Maximum flow is based on a 10 year 24 hour storm event with a rainfall of 5.2 inches. The normal flow is based on a rainfall event of 1 inch. Both maximum and normal flows assume a runoff co-efficient of one.

2.40

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, public sewers and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

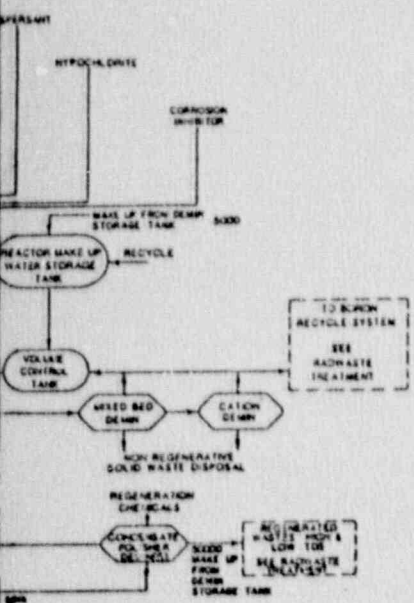
1. Outfall No. (list)	2. Operation(s) contributing flow		3. Treatment	
	a. Operation (list)	b. Average flow (include units) (maximum flow)	a. Description (MGD)	b. List codes from Table A
011	Storm Water Runoff (SWR)	.023 (12.01)	Discharge	4-A
012	Storm Water Runoff (SWR)	.015 (7.79)	Discharge	4-A
013	Storm Water Runoff (SWR)	.002 (1.25)	Discharge	4-A
014	Storm Water Runoff (SWR)	.017 (8.93)	Discharge	4-A
015	Storm Water Runoff (SWR)	.008 (4.34)	Discharge	4-A

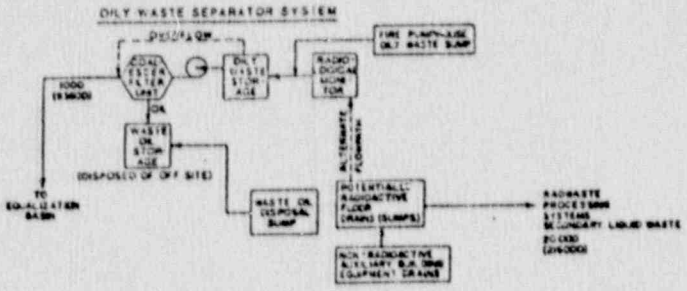

INTAKE STRUCTURE
WATER TREATMENT PLANT
COOLING TOWER
BASIN
REACTOR VESSEL
STEAM GENERATORS(4)
TURBINE AND CONDENSER
AUXILARY PLANT EQUIPMENT
POWER BLOCK
SEDIMENTATION LAGOON
DEMINERALIZED WATER SYSTEM
REGENERATIVE WASTE LAGOON
NEUTRALIZATION BASIN
ULTIMATE HEAT SINK (UHS) POND
MECHANICAL DRAFT COOLING TOWER
MISSOURI RIVER

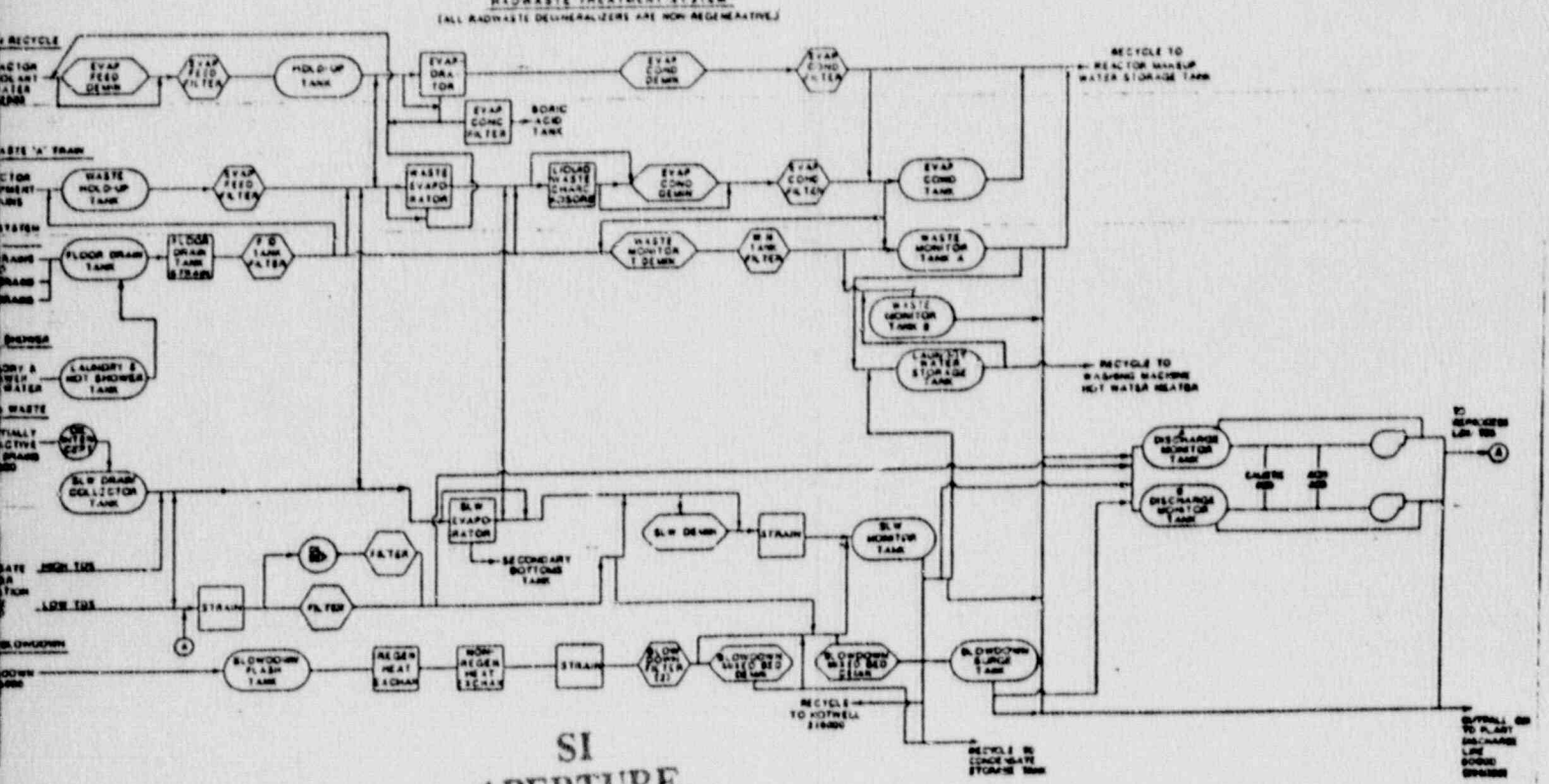
CALLAWAY NPDES FLOW DIAGRAM

NOTES

1. ALL PLANT OUTFALLS EXCEPT 008 TO BE INTO A SINGLE PIPELINE, WHICH DISCHARGES TO THE MISSOURI RIVER JUST DOWNSTREAM OF THE INTAKE STRUCTURE.
2. ALL SYSTEMS HAVE BEEN SAMPLED FOR GRAB.
3. ALL SYSTEMS AND MOST SIGNIFICANTLY, RADWASTE TREATMENT, ARE DESIGNED FOR FLEXIBILITY. IN RADWASTE, THE TREATMENT LEVEL IS DICTATED BY a) RADIOLOGICAL CONTAMINATION, AND b) NRC MANDATED DISCHARGE CRITERIA, AND c) THE NEED, FEASIBILITY AND ECONOMICS OF RECYCLE VS. DISCHARGE.
4. ALL FLOWS IN gpd UNLESS OTHERWISE SPECIFIED.
5. INTERNAL DETAILS OF THE RADWASTE TREATMENT SYSTEM ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.







2.40 continued

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items A or B intermittent or seasonal?

☐ YES (complete the following table) ☒ NO (go to Section 2.50)

1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd) 1. LONG TERM AVERAGE	2. MAXIMUM DAILY	b. TOTAL VOLUME (specify with units) 1. LONG TERM DAILY	2. MAXIMUM AVERAGE	c. DURATION (in days)
	See Attachment C							

2.50 MAXIMUM PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☒ YES (complete B) ☐ NO (go to Section 2.60)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?

☐ YES (complete C) ☒ NO (go to Section 2.60)

C. If you answered "Yes" to B, list the quantity which represents an actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

2.60 IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of waste-water treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (complete the following table) ☒ NO (to go 3.00)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL. You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

MARK 'X' IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.

EPA Form 3510-2C

3.00 INTAKE AND EFFLUENT CHARACTERISTICS

A & B. See instructions before proceeding - Complete one table for each outfall - Annotate the outfall number in the space provided.
NOTE: Table 1 is included on separate sheets numbered 6 through 7.

C. Use the space below to list any of the pollutants listed in Table B of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. Pollutant	2. Source	1. Pollutant	2. Source
Asbestos	Asbestos cement board is used for cooling tower fill. Tower fill deterioration is minimized by controlling cooling tower chemistry.		
Strontium, Zirconium	Several isotopes of Strontium and Zirconium are produced in the reactor by fission and activation processes. Calculations indicate that trace quantities of these isotopes (approximately 1E-10 milligrams/day) may be released from Outfall 001.		
Monoethylamine	A small amount of this chemical would be present from sampling waste from in-line sodium analyzers. It would be released from Outfall 001. From the usage of this chemical, the discharge concentration is estimated to be less than 0.05 milligrams per liter.		

3.10 BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

____ Yes (identify the test(s) and describe their purposes below) __X__ No (go to 3.20)

3.20 CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported performed by a contract laboratory or consulting firm?

__X__ Yes (list the name, address, and telephone number of, and pollutants analyzed, by each such laboratory or firm below) ____ No (go to 3.30)

A. Name	B. Address	C. Telephone (area code & No.)	D. Pollutants Analyzed (list)
Envirodyne Engineers	1908 Innerbelt Business Center Drive St. Louis, MO 63114	(314) 426-0880	See Attachment F

3.30 CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

D. F. Schnell, Senior Vice President, Nuclear	(314) 554-2650
A. Name & Official Title (type or print)	B. Phone No. (area code & No.)
Ronald F Schnell	21 May 90
C. Signature (see instructions)	D. Date Signed

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages
SEE INSTRUCTIONS.

Form C
TABLE I for 3.00 Item A & B

OUTFALL NO. 001

INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2 C)

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVG. VALUE (1) CONCENTRATION	c. LONG TERM AVG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<6	<5					1	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	<5	<4					1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	4.2	3.3					1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	<1.0	<0.8	6.3	3.3	3.5	1.8	1/21/251	mg/l	lbs/d			
e. Ammonia (as N)	10.4	8.1					1	mg/l	lbs/d			
f. Flow	VALUE 93000		VALUE 82000		VALUE 62000		1/31/365	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 22		VALUE		VALUE		1	C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			C		VALUE		
i. pH	MINIMUM 7.17	MAXIMUM 7.17	MINIMUM 7.12	MAXIMUM 8.32			1/13/20	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVG. VALUE (1) CONCENTRATION	c. LONG TERM AVG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		<1.0	<0.8					1	mg/l	lbs/d			
f. Nitrate-Nitrite (as N)	X		0.007	0.005					1	mg/l	lbs/d			

EPA Form 3510-2C

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)		X												
h. Oil and Grease	X		<5	<4	4.7	1.7	1.4	0.7	1/17/251	mg/l	lbs/d			
i. Phosphorus (as P) Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha Total	X		<2.0	<0.7	160	40	73	17.1	1/20/251	pCi/l	uCi/d			
(2) Beta Total	X		1,280	450	1000	250	500	117	1/21/251	pCi/l	uCi/d			
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X		122	95					1	mg/l	lbs/d			
l. Sulfide (as S)	X		<1.0	<0.8					1	mg/l	lbs/d			
m. Sulfite (as SO_3) (14265-45-3)		X												
n. Surfactants	X		<0.01	<0.008					1	mg/l	lbs/d			
o. Aluminum Total (7429-90-5)	X		<0.086	<0.067					1	mg/l	lbs/d			
p. Barium Total (7440-39-3)	X		<0.010	<0.008					1	mg/l	lbs/d			
q. Boron Total (7440-42-8)	X		* 1.318	1.021					1	mg/l	lbs/d			
r. Cobalt Total (7440-48-4)	X		<0.023	<0.018					1	mg/l	lbs/d			
s. Iron Total (7439-89-6)	X		0.330	0.256					1	mg/l	lbs/d			
t. Magnesium Total (7439-95-4)	X		1.576	1.221					1	mg/l	lbs/d			
u. Molybdenum total (7439-98-7)	X		0.123	0.095					1	mg/l	lbs/d			
v. Manganese Total (7439-96-5)	X		0.008	0.006					1	mg/l	lbs/d			
w. Tin Total (7440-31-5)	X		<0.140	<0.11					1	mg/l	lbs/d			
x. Titanium Total (7440-32-6)		X												

EPA Form 3510-2C Rev. 10-80

* See Attachment H

Form C

TABLE I for 3.00 Item A & B

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

OUTFALL NO. 002

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<6	<302					1	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	78	3930					1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	48	2420					1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	73	3678	179	7360	89	3206	1/4/50	mg/l	lbs/d			
e. Ammonia (as N)	0.12						1	mg/l	lbs/d			
f. Flow	VALUE 6048000		VALUE 6410000		VALUE 4325000		1/31/365	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 25		VALUE 29		VALUE 23		8/31/182	C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE 33		VALUE 28		31/148	C		VALUE		
i. pH	MINIMUM 8.19	MAXIMUM 8.48	MINIMUM	MAXIMUM			8	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X											X		
b. Chlorine, Total Residual	X		0.09*	4.53	0.09	4.3	0.06	2.2	8/27/270	mg/l	lbs/d			
c. Color	X											X		
d. Fecal Coliform	X											X		
e. Fluoride (16984-48-8)	X		1.6	80.6					1	mg/l	lbs/d			
f. Nitrate-Nitrite (as N)	X											X		

EWC 105C

*Chlorine is reported as free available in accordance with permit limitation.

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)	X											X		
h. Oil and Grease	X		<5	<252	2.8	67	1.4	50.4	4/4/50	mg/l	lbs/d			
i. Phosphorus (as P) Total (7723-14-0)	X		1.79*	90.2					1	mg/l	lbs/d			
j. Radioactivity														
(1) Alpha Total	X											X		
(2) Beta Total	X											X		
(3) Radium Total	X											X		
(4) Radium 226 Total	X											X		
k. Sulfate (as SO_4) (14808-79-8)	X		1008	50780					1	mg/l	lbs/d			
l. Sulfide (as S)	X											X		
m. Sulfite (as SO_3) (14265-45-3)	X											X		
n. Surfactants	X											X		
o. Aluminum Total (7429-90-5)	X		2.44	123					1	mg/l	lbs/d			
p. Barium Total (7440-39-3)	X		0.44	22					1	mg/l	lbs/d			
q. Boron Total (7440-42-8)	X											X		
r. Cobalt Total (7440-48-4)	X											X		
s. Iron Total (7439-89-6)	X		2.82	142					1	mg/l	lbs/d			
t. Magnesium Total (7439-95-4)	X		80.2	4040					1	mg/l	lbs/d			
u. Molybdenum total (7439-98-7)	X											X		
v. Manganese Total (7439-96-5)	X		0.11	5.5					1	mg/l	lbs/d			
w. Tin Total (7440-31-5)	X		<0.1	5					1	mg/l	lbs/d			
x. Titanium Total (7440-32-6)	X											X		

EPA Form 3510-2C (8-90) Rev. 10-90

*Value represents total phosphate.
See Attachment F.

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

Form C

TABLE I for 3.00 Item A & B

OUTFALL NO 003

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2 C)*

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<6	<18					1	mg/l	lbs/d	< 6		1
b. Chemical Oxygen Demand (COD)	5.0	15					1	mg/l	lbs/d	15		1
c. Total Organic Carbon (TOC)	3.95	11.8					1	mg/l	lbs/d	2.9		1
d. Total Suspended Solids (TSS)	34 **	102					1	mg/l	lbs/d	22		1
e. Ammonia (as N)	0.09	0.27					1	mg/l	lbs/d	0.23		1
f. Flow	VALUE 360000		VALUE		VALUE		1	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 7		VALUE		VALUE			C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			C		VALUE		
i. pH	MINIMUM 8.2	MAXIMUM 8.2	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO OF ANALYSES
a. Bromide (24959-67-9)	X											X		
b. Chlorine, Total Residual		X												
c. Color	X											X		
d. Fecal Coliform	X											X		
e. Fluoride (16984-48-8)	X		0.50	1.5					1	mg/l	lbs/d	0.43		1
f. Nitrate-Nitrite (as N)	X*									mg/l	lbs/d	0.7		1

CWC 105C

*Believed present only due to pollutant being present in intake.

**Sample taken at a later date and analyzed by plant personnel was 10 ppm TSS. See Attachment F.

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)	X*									mg/l	lbs/d	0.146		1
h. Oil and Grease	X		<5.0	<15					1	mg/l	lbs/d	<5		1
i. Phosphorus (as P) Total (7723-14-0)	X		0.13**	0.39					1	mg/l	lbs/d	<0.01		1
j. Radioactivity														
(1) Alpha Total	X											X		
(2) Beta Total	X											X		
(3) Radium Total	X											X		
(4) Radium 226 Total	X											X		
k. Sulfate (as SO_4) (14808-79-8)	X		123	369					1	mg/l	lbs/d	0.077		1
l. Sulfide (as S)	X											X		
m. Sulfite (as SO_3) (14265-45-3)	X											X		
n. Surfactants	X		0.02	0.06					1	mg/l	lbs/d			
o. Aluminum Total (7429-90-5)	X		1.67	5.0					1	mg/l	lbs/d	0.74		1
p. Barium Total (7440-39-3)	X		0.09	0.27					1	mg/l	lbs/d	0.107		1
q. Boron Total (7440-42-8)	X								1	mg/l	lbs/d	0.19		1
r. Cobalt Total (7440-48-4)	X											X		
s. Iron Total (7439-89-6)	X		1.45	4.3					1	mg/l	lbs/d	1.01		1
t. Magnesium Total (7439-95-4)	X		23.5	70.5					1	mg/l	lbs/d	21.8		1
u. Molybdenum total (7439-98-7)	X											X		
v. Manganese Total (7439-96-5)	X		.497	1.5					1	mg/l	lbs/d	0.08		1
w. Tin Total (7440-31-5)	X		<0.1	<0.3					1	mg/l	lbs/d	0.10		1
x. Titanium Total (7440-32-6)	X											X		

EWC 105C
Rev 10-80

* Believed present only due to pollutant being present in intake.

** Value represents total phosphate. See Attachment F.

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

Form C

TABLE I for 3.00 Item A & B

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2 C)*

OUTFALL NO. 004

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	2. EFFLUENT d. NO OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<6	<0.4					1	mg/l	lbs/d	<6		1
b. Chemical Oxygen Demand (COD)	<5	<0.3					1	mg/l	lbs/d	<5		1
c. Total Organic Carbon (TOC)	2.07	0.12					1	mg/l	lbs/d	<1		1
d. Total Suspended Solids (TSS)	<5	<0.3	22	4.7	5	2	1/1/12	mg/l	lbs/d	<1		1
e. Ammonia (as N)	0.038	<0.002					1	mg/l	lbs/d	0.516		1
f. Flow	VALUE 7200		VALUE 142000		VALUE 52000		1	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 9		VALUE		VALUE		1	C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			C		VALUE		
i. pH	MINIMUM 8.04	MAXIMUM 8.04	MINIMUM 7.04	MAXIMUM 8.86			1/1/1	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	3. EFFLUENT d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		1.75	0.11						mg/l	lbs/d	0.84		1
f. Nitrate-Nitrite (as N)	X									mg/l	lbs/d	0.136		1

EWC 105C

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)		X												
h. Oil and Grease	X		6	0.4	2.9	3.4	1.4	0.6	1/1/12	mg/l	lbs/d	<5		1
i. Phosphorus (as P) Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X		2328	140					1	mg/l	lbs/d	0.057		1
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum Total (7429-90-5)	X		<0.133	<0.008					1	mg/l	lbs/d	<0.86		1
p. Barium Total (7440-39-3)	X		0.035	0.002					1	mg/l	lbs/d	<0.10		1
q. Boron Total (7440-42-8)		X												
r. Cobalt Total (7440-48-4)		X												
s. Iron Total (7439-89-6)	X		0.303	0.018					1	mg/l	lbs/d	<0.015		1
t. Magnesium Total (7439-95-4)	X		69.6	4.2					1	mg/l	lbs/d	5.7		1
u. Molybdenum total (7439-98-7)		X												
v. Manganese Total (7439-96-5)	X		0.017	0.001					1	mg/l	lbs/d	<0.005		1
w. Tin Total (7440-31-5)	X		<0.1	<0.006					1	mg/l	lbs/d	< 0.1		1
x. Titanium Total (7440-32-6)		X												

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

Form C
TABLE I for 3.00 Item A & B

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2 C)*

OUTFALL NO. 007

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	d. NO OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	15.7	0.9	23.9	2.3	10.2	1.4	1/1/11	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	20.0	1.2					1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	5.8	0.35					1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	9	0.54	84.4	10.5	22.8	3.2	1/2/12	mg/l	lbs/d			
e. Ammonia (as N)	0.17						1	mg/l	lbs/d			
f. Flow	VALUE 7200		VALUE 29000		VALUE 17000		1/4/52	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 11		VALUE		VALUE		8	C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			C		VALUE		
i. pH	MINIMUM 6.99	MAXIMUM 7.06	MINIMUM 6.08	MAXIMUM 7.44			8/6/1	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform	X		863	NA					4	#/100ml				
e. Fluoride (16984-48-8)	X		0.81	0.05					mg/l	lbs/d				
f. Nitrate-Nitrite (as N)	X													

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)	X		1.09	0.07					1					
h. Oil and Grease	X		<5	0.3					4					
i. Phosphorus (as P) Total (7723-14-0)	X		0.01*	0.001					1					
j. Radioactivity														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X		74.6	4.5					1					
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) (14265-45-3)		X												
n. Surfactants	X													
o. Aluminum Total (7429-90-5)	X		<0.09	<0.005					1					
p. Barium Total (7440-39-3)	X		0.01	0.001					1					
q. Boron Total (7440-42-8)	X		0.38	0.023					1					
r. Cobalt Total (7440-48-4)		X												
s. Iron Total (7439-89-6)	X		0.15	0.009					1					
t. Magnesium Total (7439-95-4)	X		7.55	0.45					1					
u. Molybdenum total (7439-98-7)		X												
v. Manganese Total (7439-96-5)	X		<0.005	<0.0003					1					
w. Tin Total (7440-31-5)	X		<0.14	<0.008					1					
x. Titanium Total (7440-32-6)		X												

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* Value represents total phosphate. See Attachment F.

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

Form C

TABLE I for 3.00 Item A & B

OUTFALL NO 009

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG VALUE (1) CONCENTRATION	c. LONG TERM AVRG VALUE (2) MASS	d. NO OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	10	0.08					1	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	59	0.49					1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	30	0.25					1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	12	0.10					1	mg/l	lbs/d			
e. Ammonia (as N)	18	0.15					1	mg/l	lbs/d			
f. Flow	VALUE 6000*		VALUE		VALUE		NA	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE No Data		VALUE		VALUE			°C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM	MAXIMUM 9.74**	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG VALUE (1) CONCENTRATION	c. LONG TERM AVRG VALUE (2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual	X		0.0						1	mg/l	lbs/d			
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		0.13	0.0011					1	mg/l	lbs/d			
f. Nitrate-Nitrite (as N)		X												

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* Maximum Estimated Flow - See Attachment F

** Before Neutralization

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)		X												
h. Oil and Grease	X		2.9	0.15					1	mg/l	lbs/d			
i. Phosphorus (as P) Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X		1590	79.6					1	mg/l	lbs/d			
l. Sulfide (as S)	X		4.7	0.23					1	mg/l	lbs/d			
m. Sulfite (as SO_3) (14265-45-3)	X		54.5	2.72					1	mg/l	lbs/d			
n. Surfactants		X												
o. Aluminum Total (7429-90-5)	X		0.3	0.018					1	mg/l	lbs/d			
p. Barium Total (7440-39-3)		X												
q. Boron Total (7440-42-8)		X												
r. Cobalt Total (7440-48-4)		X												
s. Iron Total (7439-89-6)	X		0.11	0.00092					1	mg/l	lbs/d			
t. Magnesium Total (7439-95-4)	X		0.2	0.002					1	mg/l	lbs/d			
u. Molybdenum total (7439-98-7)		X												
v. Manganese Total (7439-96-5)	X		0.02	0.0002					1	mg/l	lbs/d			
w. Tin Total (7440-31-5)	X		< 0.1	0.0008					1	mg/l	lbs/d			
x. Titanium Total (7440-32-6)		X												

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PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

Form C

TABLE 1 for 3.00 Item A & B

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 010

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	2. EFFLUENT d. NO OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<6						1	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	15						1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	6.2						1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	8.5						1	mg/l	lbs/d			
e. Ammonia (as N)	0.073						1	mg/l	lbs/d			
f. Flow	VALUE 0		VALUE		VALUE		1	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 0		VALUE		VALUE		1	C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			C		VALUE		
i. pH	MINIMUM 8.22	MAXIMUM 8.22	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. EFFLUENT PRESENT	2. MARK "X" b. EFFLUENT ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	3. EFFLUENT d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)	X											X		

CWC 1B5C

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)	X											X		
h. Oil and Grease	X		<5						1	mg/l	lbs/d			
i. Phosphorus (as P) Total (7723-14-0)	X		0.05 *						1	mg/l	lbs/d			
j. Radioactivity														
(1) Alpha Total	X											X		
(2) Beta Total	X											X		
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X											X		
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum Total (7429-90-5)		X												
p. Barium Total (7440-39-3)		X												
q. Boron Total (7440-42-8)		X												
r. Cobalt Total (7440-48-4)		X												
s. Iron Total (7439-89-6)	X											X		
t. Magnesium Total (7439-95-4)	X											X		
u. Molybdenum total (7439-98-7)		X												
v. Manganese Total (7439-96-5)		X												
w. Tin Total (7440-31-5)		X												
x. Titanium Total (7440-32-6)		X												

CWC 105C
Rev. 10/80

* Value represents total phosphate.
See Attachment F.

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

Form C

TABLE I for 3.00 Item A & B

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 011

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	2. EFFLUENT d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<6						1	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	11						1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	6.3						1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	12						1	mg/l	lbs/d			
e. Ammonia (as N)	0.06						1	mg/l	lbs/d			
f. Flow	VALUE 0		VALUE		VALUE		1	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 0		VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 8.33	MAXIMUM 8.33	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)	X											X		

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO OF ANALYSES
g. Nitrogen Total Organic (as N)	X											X		
h. Oil and Grease	X		5						1	mg/l	lbs/d			
i. Phosphorus (as P) Total (7723-14-0)	X		0.055*						1	mg/l	lbs/d			
j. Radioactivity														
(1) Alpha Total	X											X		
(2) Beta Total	X											X		
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X											X		
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum Total (7429-90-5)		X												
p. Barium Total (7440-39-3)		X												
q. Boron Total (7440-42-8)		X												
r. Cobalt Total (7440-48-4)		X												
s. Iron Total (7439-89-6)	X											X		
t. Magnesium Total (7439-95-4)	X											X		
u. Molybdenum Total (7439-98-7)		X												
v. Manganese Total (7439-96-5)		X												
w. Tin Total (7440-31-5)		X												
x. Titanium Total (7440-32-6)		X												

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Rev 10/80

* Value represents total phosphate.
See Attachment F.

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

Form C

TABLE I for 3.00 Item A & B

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 012

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	2. EFFLUENT d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<6	<0.4					1	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	5	0.3					1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	2.7	0.16					1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	50	3					1	mg/l	lbs/d			
e. Ammonia (as N)	0.14	0.008					1	mg/l	lbs/d			
f. Flow	VALUE 7200		VALUE		VALUE		1	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 0		VALUE		VALUE		1	C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			C		VALUE		
i. pH	MINIMUM 8.52	MAXIMUM 8.52	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)	X											X		

CWC 105C

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO OF ANALYSES
g. Nitrogen Total Organic (as N)	X											X		
b. Oil and Grease	X		< 5	<0.3					1	mg/l	lbs/d			
i. Phosphorus (as P) Total (7723-14-0)	X		0.432 *	1.7					1	mg/l	lbs/d			
j. Radioactivity														
(1) Alpha Total	X											X		
(2) Beta Total	X											X		
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X											X		
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum Total (7429-90-5)		X												
p. Barium Total (7440-39-3)		X												
q. Boron Total (7440-42-8)		X												
r. Cobalt Total (7440-48-4)		X												
s. Iron Total (7439-89-6)	X											X		
t. Magnesium Total (7439-95-4)	X											X		
u. Molybdenum total (7439-98-7)		X												
v. Manganese Total (7439-96-5)		X												
w. Tin Total (7440-31-5)		X												
x. Titanium Total (7440-32-6)		X												

CWC 1056
Rev 10-80

* Value represents total phosphate.
See Attachment F.

Form C

TABLE I for 3.00 Item A & B

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

OUTFALL NO 013

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	2. EFFLUENT d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	22.9						1	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	17						1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	6.6						1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	28						1	mg/l	lbs/d			
e. Ammonia (as N)	0.08						1	mg/l	lbs/d			
f. Flow	VALUE 0		VALUE		VALUE		1	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 0		VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 8.55	MAXIMUM 8.55	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. PRESENT	2. MARK "X" b. ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)	X											X		

EPA 1980

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)	X											X		
b. Oil and Grease	X		<5						1	mg/l	lbs/d			
i. Phosphorus (as P) Total (7723-14-0)	X		0.028 *						1	mg/l	lbs/d			
j. Radioactivity														
(1) Alpha Total	X											X		
(2) Beta Total	X											X		
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X											X		
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum Total (7429-90-5)		X												
p. Barium Total (7440-39-3)		X												
q. Boron Total (7440-42-8)		X												
r. Cobalt Total (7440-48-4)		X												
s. Iron Total (7439-89-6)	X											X		
t. Magnesium Total (7439-95-4)	X											X		
u. Molybdenum total (7439-98-7)		X												
v. Manganese Total (7439-96-5)		X												
w. Tin Total (7440-31-5)		X												
x. Titanium Total (7440-32-6)		X												

CWC 105C
Rev 10-80

* Value represents total phosphate.
See Attachment F.

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.
SEE INSTRUCTIONS.

Form C
TABLE I for 3.00 Item A & B

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 014

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<6	<0.07					1	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	15	0.18					1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	6.7	0.08					1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	<1	<0.01					1	mg/l	lbs/d			
e. Ammonia (as N)	0.067	<0.001					1	mg/l	lbs/d			
f. Flow	VALUE 1440		VALUE		VALUE		1	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 0		VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 8.11	MAXIMUM 8.11	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)	X											X		

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)	X											X		
h. Oil and Grease	X		< 5	<0.06					1	mg/l	lbs/d			
i. Phosphorus (as P, Total) (7723-14-0)	X		0.043 *	0.001					1	mg/l	lbs/d			
j. Radioactivity														
(1) Alpha Total	X											X		
(2) Beta Total	X											X		
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO4) (14808-79-8)	X											X		
l. Sulfide (as S)		X												
m. Sulfite (as SO3) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum Total (7429-90-5)		X												
p. Barium Total (7440-39-3)		X												
q. Boron Total (7440-42-8)		X												
r. Cobalt Total (7440-48-4)		X												
s. Iron Total (7439-89-6)	X											X		
t. Magnesium Total (7439-95-4)	X											X		
u. Molybdenum total (7439-98-7)		X												
v. Manganese Total (7439-96-5)		X												
w. Tin Total (7440-31-5)		X												
x. Titanium Total (7440-32-6)		X												

CMC 105C
Rev. 10-80

* Value represents total phosphate. See Attachment F.

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. **SEE INSTRUCTIONS.**

Form C

TABLE I for 3.00 Item A & B

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2 C)*

OUTFALL NO. 015

PART A — You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (BOD)	<6						1	mg/l	lbs/d			
b. Chemical Oxygen Demand (COD)	18						1	mg/l	lbs/d			
c. Total Organic Carbon (TOC)	6.5						1	mg/l	lbs/d			
d. Total Suspended Solids (TSS)	4.5						1	mg/l	lbs/d			
e. Ammonia (as N)	0.07						1	mg/l	lbs/d			
f. Flow	VALUE 0		VALUE		VALUE		1	NA	gal/d	VALUE		
g. Temperature (winter)	VALUE 0		VALUE		VALUE		1		C	VALUE		
h. Temperature (summer)	VALUE NA		VALUE		VALUE				C	VALUE		
i. pH	MINIMUM 8.22	MAXIMUM 8.22	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)	X											X		

EWC 105C

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen Total Organic (as N)	X											X		
h. Oil and Grease	X		<5						1	mg/l	lbs/d			
i. Phosphorus (as P) Total (7723-14-0)	X		0.028 *						1	mg/l	lbs/d			
j. Radioactivity														
(1) Alpha Total	X											X		
(2) Beta Total	X											X		
(3) Radium Total		X												
(4) Radium 226 Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X											X		
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum Total (7429-90-5)		X												
p. Barium Total (7440-39-3)		X												
q. Boron Total (7440-42-8)		X												
r. Cobalt Total (7440-48-4)		X												
s. Iron Total (7439-89-6)	X											X		
t. Magnesium Total (7439-95-4)	X											X		
u. Molybdenum Total (7439-98-7)		X												
v. Manganese Total (7439-96-5)		X												
w. Tin Total (7440-31-5)		X												
x. Titanium Total (7440-32-6)		X												

CWC 185C
Rev 10/80

* Value represents total phosphate.
See Attachment F.

FOR AGENCY USE ONLY
APPLICATION NUMBER
MO -
DATE RECEIVED

FORM D - APPLICATION FOR DISCHARGE PERMIT - PRIMARY INDUSTRIES

DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

MISSOURI DEPARTMENT OF NATURAL RESOURCES - DIVISION OF ENVIRONMENTAL QUALITY
P. O. Box 1368
Jefferson City, Missouri 65102

1.00 NAME OF FACILITY Callaway Power Plant

1.10 This facility is now in operation under Missouri Operating Permit Number MO-0098001

1.20 This is a new facility and was constructed under Missouri Construction Permit Number _____. (Complete only if this facility does not have an operating permit).

This form is to be filled out in addition to forms A & C "Application for Discharge Permit" for the Primary Industries listed below:

INDUSTRY CATEGORY

Adhesives and sealants
Aluminum forming
Auto and other laundries
Battery manufacturing
Coal mining
Coil coating
Copper forming
Electric and electronic compounds
Electoplating
Explosives manufacturing
Foundries
Gum and wood chemicals
Inorganic chemicals manufacturing
Iron and steel manufacturing
Leather tanning and finishing
Mechanical products manufacturing
Nonferrous metals manufacturing
Ore mining
Organic chemicals manufacturing
Paint and ink formulation
Pesticides
Petroleum refining
Pharmaceutical preparations
Photographic equipment and supplies
Plastic & synthetic materials manufacturing
Plastic processing
Porcelain enameling
Printing and publishing
Pulp and paperboard mills
Rubber processing
Soap and detergent manufacturing
Steam electric power plants
Textile mills
Timber products processing

APPLICATION FOR DISCHARGE PERMIT
Form B — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	001

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"			3. EFFLUENT						4. UNITS			5. INTAKE *(optional)*		
	a. TEST DOES NOT BE REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)	X			< 18	< .014					1	ug/l	lbs/d			
2M Arsenic Total (7440-38-2)	X			< 2	< .002					1	ug/l	lbs/d			
3M Beryllium Total (7440-41-7)	X			< 3	< .002					1	ug/l	lbs/d			
4M Cadmium Total (7440-43-9)	X			< 3	< .002					1	ug/l	lbs/d			
5M Chromium Total (7440-47-3)	X			< 10	< .008					1	ug/l	lbs/d			
6M Copper Total (7550-50-8)	X			16	.012					1	ug/l	lbs/d			
7M Lead Total (7439-97-6)	X			< 73	< .057					1	ug/l	lbs/d			
8M Mercury Total (7439-97-6)	X			< .2	<.0002					1	ug/l	lbs/d			
9M Nickel Total (7440-02-0)	X			< 15	< .012					1	ug/l	lbs/d			
10M Selenium Total (7782-49-2)	X			< 1	<.0008					1	ug/l	lbs/d			
11M Silver Total (7440-22-4)	X			11	.009					1	ug/l	lbs/d			
12M Thallium Total (7440-28-0)	X			< 1	<.0008					1	ug/l	lbs/d			
13M Zinc Total (7440-66-6)	X			< 16	< .013					1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)	X			< 5	<.004					1	ug/l	lbs/d			
15M Phenols Total	X			< 5	< .004					1	ug/l	lbs/d			
DIOXIN															
2,3,7,8 Tetrachlorodibenzo-P Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST- ED FOR b. KNOWN OR BELIEVED PRESENT c. KNOWN OR BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS													
1V Acrolein (107-02-8)	X	< 100	< .08					1	ug/l	lbs/d			
2V Acrylonitrile (107-13-1)	X	< 100	< .08					1	ug/l	lbs/d			
3V Benzene (71-43-2)	X	< 5	< .004					1	ug/l	lbs/d			
4V Bis (Chloromethyl) Ether (542-88-1)		*											
5V Bromoform (75-25-2)	X	< 5	< .004					1	ug/l	lbs/d			
6V Carbon Tetrachloride (56-23-5)	X	< 5	< .004					1	ug/l	lbs/d			
7V Chlorobenzene (108-90-7)	X	< 10	< .008					1	ug/l	lbs/d			
8V Chlorodibromomethane (124-48-1)	X	< 5	< .004					1	ug/l	lbs/d			
9V Chloroethane (75-00-3)	X	< 10	< .008					1	ug/l	lbs/d			
10V 2-Chloroethylvinyl Ether (110-75-8)	X	< 10	< .008					1	ug/l	lbs/d			
11V Chloroform (67-66-3)	X	< 5	< .004					1	ug/l	lbs/d			
12V Dichlorobromomethane (75-27-4)	X	< 5	< .004					1	ug/l	lbs/d			
13V Dichlorodifluoromethane (75-71-8)		*											
14V 1,1-Dichloroethane (75-34-3)	X	< 5	< .004					1	ug/l	lbs/d			
15V 1,2-Dichloroethane (107-06-2)	X	< 5	< .004					1	ug/l	lbs/d			
16V 1,1-Dichloroethylene (75-35-4)	X	< 5	< .004					1	ug/l	lbs/d			
17V 1,2-Dichloropropane (78-87-5)	X	< 5	< .004					1	ug/l	lbs/d			
18V 1,2-Dichloropropylene ** (542-75-6)	X	< 5	< .004					1	ug/l	lbs/d			
19V Ethylbenzene (100-41-4)	X	< 5	< .004					1	ug/l	lbs/d			
20V Methyl Bromide (74-83-9)	X	< 10	< .008					1	ug/l	lbs/d			
21V Methyl Chloride (74-87-3)	X	< 5	< .004					1	ug/l	lbs/d			

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CONTINUE ON PAGE 4

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D)

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

CONTINUED FROM PAGE 3

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 001

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST INCLUDED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS *(continued)*															
22V Methyl Chloride (75-09-2)	X			<5	<.004					1	ug/l	lbs/d			
23V 1,1,2,2-Tetrachloroethane (79-34-5)	X			<5	<.004					1	ug/l	lbs/d			
24V Tetrachloroethylene (127-18-4)	X			<5	<.004					1	ug/l	lbs/d			
25V Toluene (108-88-3)	X			<5	<.004					1	ug/l	lbs/d			
26V 1,2-Trans-Dichloroethylene (156-60-5)	X			<5	<.004					1	ug/l	lbs/d			
27V 1,1,1-Trichloroethane (71-55-6)	X			<5	<.004					1	ug/l	lbs/d			
28V 1,1,2-Trichloroethane (79-00-5)	X			<5	<.004					1	ug/l	lbs/d			
29V Trichloroethylene (79-01-6)	X			<5	<.004					1	ug/l	lbs/d			
30V Trichlorofluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)	X			<10	<.008					1	ug/l	lbs/d			
GC/MS FRACTION — ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)	X			<10	<.008					1	ug/l	lbs/d			
2A 2,4-Dichlorophenol (120-83-2)	X			<10	<.008					1	ug/l	lbs/d			
3A 2,4-Dimethylphenol (105-67-9)	X			<10	<.008					1	ug/l	lbs/d			
4A 4,6-Dinitro-O-Cresol (534-52-1)	X			<50	<.04					1	ug/l	lbs/d			
5A 2,4-Dinitrophenol (51-28-5)	X			<50	<.04					1	ug/l	lbs/d			
6A 2-Nitrophenol (88-75-5)	X			<10	<.008					1	ug/l	lbs/d			
7A 4-Nitrophenol (100-02-7)	X			<50	<.04					1	ug/l	lbs/d			
8A P-Chloro-M-Cresol (59-50-7)	X			<50	<.04					1	ug/l	lbs/d			
9A Pentachlorophenol (87-86-5)	X			<50	<.04					1	ug/l	lbs/d			
10A Phenol (108-95-2)	X			<10	<.008					1	ug/l	lbs/d			
11A 2,4,6-Trichlorophenol (88-06-2)	X			<10	<.008					1	ug/l	lbs/d			

CONTINUE ON REVERSE

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)			X												
2B Acenaphtylene (208-96-8)			X												
3B Anthracene (120-12-7)			X												
4B Benzidine (92-87-5)			X												
5B Benzo (a) Anthracene (56-55-3)			X												
6B Benzo (a) Pyrene (50-32-8)			X												
7B 3,4-Benzo fluoranthene (205-99-2)			X												
8B Benzo (ghi) Perylene (191-24-2)			X												
9B Benzo (k) Fluoranthene (207-08-9)			X												
10B Bis (2-Chloroethoxy) Methane (111-91-1)			X												
11B Bis (2-Chloroethyl) Ether (111-44-4)			X												
12B Bis (2-Chloroisopropyl) Ether (39638-32-9)			X												
13B Bis (2-Ethylhexyl) Phthalate (117-81-7)			X												
14B 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B Butyl Benzyl Phthalate (85-68-7)			X												
16B 2-Chloronaphthalene (91-58-7)			X												
17B 4-Chlorophenyl Phenyl Ether (7005-72-3)			X												
18B Chrysene (218-01-9)			X												
19B Dibenzo (a,h) Anthracene (53-70-3)			X												
20B 1,2-Dichlorobenzene (95-50-1)			X												
21B 1,3-Dichlorobenzene (541-73-1)			X												

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CONTINUE ON PAGE 6

CONTINUED FROM PAGE 5

NPDES # (If Assigned)	OUTFALL NUMBER
MO-0098001	001

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS (continued)															
27B 1,4-Dichlorobenzene (106-46-7)			X												
23B 3,3'-Dichlorobenzidine (91-94-1)			X												
24B Diethyl Phthalate (84-66-2)			X												
25B Dimethyl Phthalate (131-11-3)			X												
26B Di-N-Butyl Phthalate (84-74-2)			X												
27B 2,4-Dinitrotoluene (121-14-2)			X												
28B 2,6-Dinitrotoluene (606-20-2)			X												
29B Di-N-Octyl Phthalate (117-84-0)			X												
30B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
31B Fluoranthene (206-44-0)			X												
32B Fluorene (86-73-7)			X												
33B Hexachlorobenzene (118-74-1)			X												
34B Hexachlorobutadiene (87-68-3)			X												
35B Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B Indeno (1,2,3-c,d) Pyrene (193-39-5)			X												
38B Isophorone (78-59-1)			X												
39B Naphthalene (91-20-3)			X												
40B Nitrobenzene (98-95-3)			X												
41B N-Nitrosodimethylamine (62-75-9)			X												
42B N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST and BELIEVED PRESENT	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL YSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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CONTINUED FROM PAGE 7

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 001

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST INC. BELIEVED TO BE	b. KNOWN OR BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — PESTICIDES (continued)															
17. Heptachlor (76-44-8)			X												
18. PCB 1242 (53469-21-9)			X												
19. PCB 1254 (11097-69-1)			X												
20. PCB 1221 (11104-28-2)			X												
21. PCB 1232 (11141-16-5)			X												
22. PCB 1248 (12672-29-6)			X												
23. PCB 1260 (11096-82-5)			X												
24. PCB 1016 (12674-11-2)			X												
25. Toxaphene (8001-35-2)			X												

APPLICATION FOR DISCHARGE PERMIT
Form D — Primary Industries

TABLE H

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	002

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X" a. TESTED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	4. UNITS d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	5. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)		X											X		
2M Arsenic Total (7440-38-2)		X											X		
3M Beryllium Total (7440-41-7)		X											X		
4M Cadmium Total (7440-43-9)		X											X		
5M Chromium Total (7440-47-3)		X		< 10	< .5					1	ug/l	lbs/d			
6M Copper Total (7550-50-8)		X		103	5.19	60	.5	30	1.1	1	ug/l	lbs/d			
7M Lead Total (7439-97-6)		X											X		
8M Mercury Total (7439-97-6)		X											X		
9M Nickel Total (7440-02-0)		X		< 19	< .96	120	4.9	64	2.3	1	ug/l	lbs/d			
10M Selenium Total (7782-49-2)		X											X		
11M Silver Total (7440-22-4)		X											X		
12M Thallium Total (7440-28-0)		X											X		
13M Zinc Total (7440-66-6)		X		774	39.0	1760	42.2	905	32.5	1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)		X											X		
15M Phenols Total		X											X		
DIOXIN															
2,3,7,8 Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST(S) REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)		X											A		
2V Acrylonitrile (107-13-1)		X											X		
3V Benzene (71-43-2)		X											X		
4V Bis (Chloromethyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)		X											X		
6V Carbon Tetrachloride (56-23-5)		X											X		
7V Chlorobenzene (108-90-7)		X											X		
8V Chlorodibromomethane (124-48-1)		X											X		
9V Chloroethane (75-00-3)		X											X		
10V 2-Chloroethylvinyl Ether (110-75-8)		X											X		
11V Chloroform (67-66-3)		X		<5	<.3					1	ug/l	lbs/d			
12V Dichlorobromomethane (75-27-4)		X											A		
13V Dichlorodifluoromethane (75-71-8)				*											
14V 1,1-Dichloroethane (75-34-3)		X											X		
15V 1,2-Dichloroethane (107-06-2)		X											X		
16V 1,1-Dichloroethylene (75-35-4)		X											X		
17V 1,2-Dichloropropane (78-87-5)		X											X		
18V 1,2-Dichloropropylene ** (542-75-6)		X											X		
19V Ethylbenzene (100-41-4)		X											X		
20V Methyl Bromide (74-83-9)		X											X		
21V Methyl Chloride (74-87-3)		X											X		

CONTINUE ON PAGE 4

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* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D)

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

CONTINUED FROM PAGE 3

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 002

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. TEST BELIEVED PRESENT	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG VALUE (if available) (2) MASS	d. NO OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS (continued)																
22V METHYLENE Chloride (75-09-2)		X											X		
23V 1,1,2,2-Tetrachloroethane (79-34-5)		X											X		
24V Tetrachloroethylene (127-18-4)		X											X		
25V Toluene (108-88-3)		X											X		
26V 1,2-Trans-Dichloroethylene (156-60-5)		X											X		
27V 1,1,1-Trichloroethane (71-55-6)		X											X		
28V 1,1,2-Trichloroethane (79-00-5)		X											X		
29V Trichloroethylene (79-01-6)		X											X		
30V Trichlorofluoromethane (75-69-4)				*									X		
31V Vinyl Chloride (75-01-4)		X											X		
GC/MS FRACTION — ACID COMPOUNDS																
1A 2-Chlorophenol (95-57-8)		X											X		
2A 2,4-Dichlorophenol (120-83-2)		X											X		
3A 2,4-Dimethylphenol (105-67-9)		X											X		
4A 4,6-Dinitro-O-Cresol (534-52-1)		X											X		
5A 2,4-Dinitrophenol (51-28-5)		X											X		
6A 2-Nitrophenol (88-75-5)		X											X		
7A 4-Nitrophenol (100-02-7)		X											X		
8A P-Chloro-M-Cresol (59-50-7)		X											X		
9A Pentachlorophenol (87-86-5)		X											X		
10A Phenol (108-95-2)		X											X		
11A 2,4,6-Trichlorophenol (88-06-2)		X											X		

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CONTINUE ON REVERSE

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST INC. b. BELIEVED PRESENT c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS								
1B Acenaphthene (83-32-9)	X						X	
2B Acenaphtylene (208-96-8)	X						X	
3B Anthracene (120-12-7)	X						X	
4B Benzidine (92-87-5)	X						X	
5B Benzo (a) Anthracene (56-55-3)	X						X	
6B Benzo (a) Pyrene (50-32-8)	X						X	
7B 3,4-Benzo fluoranthene (205-99-2)	X						X	
8B Benzo (ghi) Perylene (191-24-2)	X						X	
9B Benzo (k) Fluoranthene (207-08-9)	X						X	
10B Bis (2-Chloro-ethoxy) Methane (111-91-1)	X						X	
11B Bis (2-Chloro-ethyl) Ether (111-44-4)	X						X	
12B Bis (2-Chloro-isopropyl) Ether (39638-32-9)	X						X	
13B Bis (2-Ethyl-hexyl) Phthalate (117-81-7)	X						X	
14B 4-Bromo-phenyl Phenyl Ether (101-55-3)	X						X	
15B Butyl Benzyl Phthalate (85-68-7)	X						X	
16B 2-Chloro-naphthalene (91-58-7)	X						X	
17B 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X						X	
18B Chrysene (218-01-9)	X						X	
19B Dibenzo (a,h) Anthracene (53-70-3)	X						X	
20B 1,2-Dichloro-benzene (95-50-1)	X						X	
21B 1,3-Dichloro-benzene (541-73-1)	X						X	

EPC 1050

CONTINUE ON PAGE 6

NPDES # (If Assigned) MO-0098001

OUTFALL NUMBER 002

CONTINUED FROM PAGE 5

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTED FOR	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B 1,4-Dichlorobenzene (106-46-7)		X											X		
23B 3,3-Dichlorobenzidine (91-94-1)		X											X		
24B Diethyl Phthalate (84-66-2)		X											X		
25B Dimethyl Phthalate (131-11-3)		X											X		
26B Di-N-Butyl Phthalate (84-74-2)		X											X		
27B 2,4-Dinitrotoluene (121-14-2)		X											X		
28B 2,6-Dinitrotoluene (606-20-2)		X											X		
29B Di-N-Octyl Phthalate (117-84-0)		X											X		
30B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)		X											X		
31B Fluoranthene (206-44-0)		X											X		
32B Fluorene (86-73-7)		X											X		
33B Hexachlorobenzene (118-74-1)		X											X		
34B Hexachlorobutadiene (87-68-3)		X											X		
35B Hexachlorocyclopentadiene (77-47-4)		X											X		
36B Hexachloroethane (67-72-1)		X											X		
37B Indeno (1,2,3-c,d) Pyrene (193-39-5)		X											X		
38B Isophorone (78-59-1)		X											X		
39B Naphthalene (91-20-3)		X											X		
40B Nitrobenzene (98-95-3)		X											X		
41B N-Nitrosodimethylamine (62-75-9)		X											X		
42B N-Nitrosodi-N-Propylamine (621-64-7)		X											X		

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
43B N-Nitrosodiphenylamine (86-30-6)		X											X		
44B Phenanthrene (85-01-8)		X											X		
45B Pyrene (129-00-0)		X											X		
46B 1,2,4-Trichlorobenzene (120-82-1)		X											X		
GC/MS FRACTION — PESTICIDES															
1P Aldrin (309-00-2)		X											X		
2P α-BHC (319-84-6)		X											X		
3P β-BHC (319-85-7)		X											X		
4P γ-BHC (58-89-9)		X											X		
5P δ-BHC (319-86-8)		X											X		
6P Chlordane (57-74-9)		X											X		
7P 4,4'-DDT (50-29-3)		X											X		
8P 4,4'-DDE (72-55-9)		X											X		
9P 4,4'-DDD (72-54-8)		X											X		
10P Dieldrin (60-57-1)		X											X		
11P α-Endosulfan (115-29-7)		X											X		
12P β-Endosulfan (115-29-7)		X											X		
13P Endosulfan Sulfate (1031-07-8)		X											X		
14P Endrin (72-20-8)		X											X		
15P Endrin Aldehyde (7421-93-4)		X											X		
16P Heptachlor (76-44-8)		X											X		

CONTINUE ON PAGE 8

CONTINUED FROM PAGE 7

NPDES # (If assigned) MO-0098001

OUTFALL NUMBER 002

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST AND BELIEVED TO BE PRESENT	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — PESTICIDES (continued)															
[illegible] Heptachlor Epoxide (1024 57 3)		X											X		
[illegible] PCB 1242 (53469 21 9)		X											X		
[illegible] PCB 1254 (11097 69 1)		X											X		
[illegible] PCB 1221 (11104 28 2)		X											X		
[illegible] PCB 1232 (11141 16 5)		X											X		
[illegible] PCB 1248 (12672 29 6)		X											X		
[illegible] PCB 1260 (11096 82 5)		X											X		
[illegible] PCB 1016 (12674 11 2)		X											X		
[illegible] Toxaphene (8001 35 2)		X											X		

EPA Form 3510-2C

APPLICATION FOR DISCHARGE PERMIT
Form D — Primary Industries

TABLE D

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	003

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"			3. EFFLUENT						4. UNITS			5. INTAKE *(optional)*		
	a. TEST DOES NOT BE REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE *(if available)* (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE *(if available)* (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)	X			< 18	< .05					1	ug/l	lbs/d	< 18		1
2M Arsenic Total (7440-38-2)	X			3.4	.01					1	ug/l	lbs/d	2.8		1
3M Beryllium Total (7440-41-7)	X			< 2	< .006					1	ug/l	lbs/d	3		1
4M Cadmium Total (7440-43-9)	X			< 2	< .006					1	ug/l	lbs/d	< 3		1
5M Chromium Total (7440-47-3)	X			< 8	< .024					1	ug/l	lbs/d	< 10		1
6M Copper Total (7550-50-8)	X			30	.09					1	ug/l	lbs/d	< 14		1
7M Lead Total (7439-97-6)	X			< 66	< .2					1	ug/l	lbs/d	2.6		1
8M Mercury Total (7439-97-6)	X			< .2	< .006					1	ug/l	lbs/d	< .2		1
9M Nickel Total (7440-02-0)	X			< 19	< .06					1	ug/l	lbs/d	< 15		1
10M Selenium Total (7782-49-2)	X			< 1	< .003					1	ug/l	lbs/d	< 1		1
11M Silver Total (7440-22-4)	X			< 1	< .003					1	ug/l	lbs/d	< 1		1
12M Thallium Total (7440-28-0)	X			< 1	< .003					1	ug/l	lbs/d	< 1		1
13M Zinc Total (7440-66-6)	X			< 14	< .042					1	ug/l	lbs/d	< 16		1
14M Cyanide Total (57-12-5)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
15M Phenols Total	X			1.7	< .005					1	ug/l	lbs/d	< 5		1
DIOXIN															
2,3,7,8 Tetra Chlorodibenzo P Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST(S) REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)	X			< 100	< .3					1	ug/l	lbs/d	< 100		1
2V Acrylonitrile (107-13-1)	X			< 100	< .3					1	ug/l	lbs/d	< 100		1
3V Benzene (71-43-2)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
4V Bis (Chloromethyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
6V Carbon Tetrachloride (56-23-5)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
7V Chlorobenzene (108-90-7)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
8V Chlorodibromomethane (124-48-1)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
9V Chloroethane (75-00-3)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
10V 2-Chloroethylvinyl Ether (110-75-8)	X			< 5	< .02					1	ug/l	lbs/d	< 10		1
11V Chloroform (67-66-3)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
12V Dichlorobromomethane (75-27-4)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
13V Dichlorodifluoromethane (75-71-8)				*											
14V 1,1-Dichloroethane (75-34-3)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
15V 1,2-Dichloroethane (107-06-2)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
16V 1,1-Dichloroethylene (75-35-4)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
17V 1,2-Dichloropropane (78-87-5)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
18V 1,2-Dichloropropylene ** (542-75-6)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
19V Ethylbenzene (100-41-4)	X			< 10	< .03					1	ug/l	lbs/d	< 5		1
20V Methyl Bromide (74-83-9)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
21V Methyl Chloride (74-87-3)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1

CONTINUE ON PAGE 4

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D)

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

CONTINUED FROM PAGE 3

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 003

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK X a. TEST CODE REQUIRED	b. BE LIKELY PRESENT	c. BE KNOWN OR BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS *(continued)*															
22V METHYLENE Chloride (75-09-2)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
23V 1,1,2,2-Tetrachloroethane (79-34-5)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
24V Tetrachloroethylene (127-18-4)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
25V Toluene (108-88-3)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
26V 1,2-Trans-Dichloroethylene (156-60-5)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
27V 1,1,1-Trichloroethane (71-55-6)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
28V 1,1,2-Trichloroethane (79-00-5)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
29V Trichloroethylene (79-01-6)	X			< 10	< .03					1	ug/l	lbs/d	< 5		1
30V Trichlorofluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
GC/MS FRACTION — ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
2A 2,4-Dichlorophenol (120-83-2)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
3A 2,4-Dimethylphenol (105-67-9)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
4A 4,6-Dinitro-O-Cresol (534-52-1)	X			< 50	< .2					1	ug/l	lbs/d	< 50		1
5A 2,4-Dinitrophenol (51-28-5)	X			< 50	< .2					1	ug/l	lbs/d	< 10		1
6A 2-Nitrophenol (88-75-5)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
7A 4-Nitrophenol (100-02-7)	X			< 50	< .2					1	ug/l	lbs/d	< 50		1
8A P-Chloro-M-Cresol (59-50-7)	X			< 50	< .2					1	ug/l	lbs/d	< 10		1
9A Pentachlorophenol (87-86-5)	X			< 50	< .2					1	ug/l	lbs/d	< 50		1
10A Phenol (108-95-2)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
11A 2,4,6-Trichlorophenol (88-06-2)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1

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CONTINUE ON REVERSE

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST KNOWN OR BELIEVED PRESENT	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)		X											X		
2B Acenaphtylene (208-96-8)		X											X		
3B Antivacene (120-12-7)		X											X		
4B Benzidine (92-87-5)		X											X		
5B Benzo (a) Anthracene (56-55-3)		X											X		
6B Benzo (a) Pyrene (50-32-8)		X											X		
7B 3,4 Benzo fluoranthene (205-99-2)		X											X		
8B Benzo (ghi) Perylene (191-24-2)		X											X		
9B Benzo (k) Fluoranthene (207-08-9)		X											X		
10B Bis (2 Chloro ethoxy) Methane (111-91-1)		X											X		
11B Bis (2 Chloro ethyl) Ether (111-44-4)		X											X		
12B Bis (2 Chloro isopropyl) Ether (39638-32-9)		X											X		
13B Bis (2 Ethyl hexyl) Phthalate (117-81-7)		X											X		
14B 4 Bromo phenyl Phenyl Ether (101-55-3)		X											X		
15B Butyl Benzyl Phthalate (85-68-7)		X											X		
16B 2 Chloro naphthalene (91-58-7)		X											X		
17B 4 Chloro phenyl Phenyl Ether (7005-72-3)		X											X		
18B Chrysene (218-01-9)		X											X		
19B Dibenzo (a,h) Anthracene (53-70-3)		X											X		
20B 1,2 Dichloro benzene (95-50-1)		X											X		
21B 1,3 Dichloro benzene (541-73-1)		X											X		

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CONTINUE ON PAGE 6

NPDES # (If Assigned) MO-0098001

OUTFALL NUMBER 003

CONTINUED FROM PAGE 5

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST (GC or GC/MS FRACTION)	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B 1,4-Dichlorobenzene (106-46-7)		X											X		
23B 3,3-Dichlorobenzidine (91-94-1)		X											X		
24B Diethyl Phthalate (84-66-2)		X											X		
25B Dimethyl Phthalate (131-11-3)		X											X		
26B Di-N-Butyl Phthalate (84-74-2)		X											X		
27B 2,4-Dinitrotoluene (121-14-2)		X											X		
28B 2,6-Dinitrotoluene (606-20-2)		X											X		
29B Di-N-Octyl Phthalate (117-84-0)		X											X		
30B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)		X											X		
31B Fluoranthene (206-44-0)		X											X		
32B Fluorene (86-73-7)		X											X		
33B Hexachlorobenzene (118-74-1)		X											X		
34B Hexachlorobutadiene (87-68-3)		X											X		
35B Hexachlorocyclopentadiene (77-47-4)		X											X		
36B Hexachloroethane (67-72-1)		X											X		
37B Indeno (1,2,3-c,d) Pyrene (193-39-5)		X											X		
38B Isophorone (78-59-1)		X											X		
39B Naphthalene (91-20-3)		X											X		
40B Nitrobenzene (98-95-3)		X											X		
41B N-Nitrosodimethylamine (62-75-9)		X											X		
42B N-Nitrosodi-N-Propylamine (621-64-7)		X											X		

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST and REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS (continued)															
43B. N-Nitrosodiphenylamine (86-30-6)		X											X		
44B. Phenanthrene (85-01-8)		X											X		
45B. Pyrene (129-00-0)		X											X		
46B. 1,2,4-Trichlorobenzene (120-82-1)		X											X		
GC/MS FRACTION — PESTICIDES															
1P. Aldrin (309-00-2)		X											X		
2P. α-BHC (319-84-6)		X											X		
3P. β-BHC (319-85-7)		X											X		
4P. γ-BHC (58-89-9)		X											X		
5P. δ-BHC (319-86-8)		X											X		
6P. Chlordane (57-74-9)		X											X		
7P. 4,4'-DDT (50-29-3)		X											X		
8P. 4,4'-DDE (72-55-9)		X											X		
9P. 4,4'-DDD (72-54-8)		X											X		
10P. Dieldrin (60-57-1)		X											X		
11P. α-Endosulfan (115-29-7)		X											X		
12P. β-Endosulfan (115-29-7)		X											X		
13P. Endosulfan Sulfate (1031-07-8)		X											X		
14P. Endrin (72-20-8)		X											X		
15P. Endrin Aldehyde (7421-93-4)		X											X		
16P. Heptachlor (76-44-8)		X											X		

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CONTINUE ON PAGE 8

NPDES # (If assigned) MO-0098001

OUTFALL NUMBER 003

CONTINUED FROM PAGE 7

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST IS REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — PESTICIDES (continued)															
Heptachlor (76-44-8)		X											X		
PCB 1242 (53469-21-9)		X											X		
PCB 1254 (11097-69-1)		X											X		
PCB 1221 (11104-28-2)		X											X		
PCB 1232 (11141-16-5)		X											X		
PCB 1248 (12672-29-6)		X											X		
PCB 1260 (11096-82-5)		X											X		
PCB 1016 (12674-11-2)		X											X		
Toxaphene (8001-35-2)		X											X		

EPA 1358

APPLICATION FOR DISCHARGE PERMIT
Form B — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	004

1.3B If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X" a. TEST MUST BE GIVEN	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	(2) MASS	4. UNITS d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	5. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)	X			< 18	< .001					1	ug/l	lbs/d	< 18		1
2M Arsenic Total (7440-38-2)	X			< 2	< .0001					1	ug/l	lbs/d	< 2		1
3M Beryllium Total (7440-41-7)	X			< 2	< .0001					1	ug/l	lbs/d	< 3		1
4M Cadmium Total (7440-43-9)	X			< 2	< .0001					1	ug/l	lbs/d	< 3		1
5M Chromium Total (7440-47-3)	X			< 8	< .0005					1	ug/l	lbs/d	< 10		1
6M Copper Total (7550-50-8)	X			63	.004					1	ug/l	lbs/d	< 14		1
7M Lead Total (7439-97-6)	X			< 66	< .004					1	ug/l	lbs/d	3.8		1
8M Mercury Total (7439-97-6)	X			< 0.2	< .00001					1	ug/l	lbs/d	< .2		1
9M Nickel Total (7440-02-0)	X			< 19	< .001					1	ug/l	lbs/d	< 15		1
10M Selenium Total (7782-49-2)	X			12	.0007					1	ug/l	lbs/d	< 1		1
11M Silver Total (7440-22-4)	X			10	.001					1	ug/l	lbs/d	< 1		1
12M Thallium Total (7440-28-0)	X			< 1	< .0006					1	ug/l	lbs/d	< 1		1
13M Zinc Total (7440-66-6)	X			< 14	< .0008					1	ug/l	lbs/d	< 16		1
14M Cyanide Total (57-12-5)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
15M Phenols Total	X			1.7	.001					1	ug/l	lbs/d	< 5		1
DIOXIN															
2,3,7,8 Tetrachlorodibenzo P Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST ADD ON QUIRED	b. BE LIEVED PRE SENT	c. BE LIEVED AB SENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107 02 8)	X			< 100	< .06					1	ug/l	lbs/d	< 100		1
2V Acrylonitrile (107 13 1)	X			< 100	< .06					1	ug/l	lbs/d	< 100		1
3V Benzene (71 43 2)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
4V Bis (Chloro methyl) Ether (542 88 1)				*											
5V Bromoform (75 25 2)	X			< 10	< .0006					1	ug/l	lbs/d	< 10		1
6V Carbon tetrachloride (56 23 5)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
7V Chlorobenzene (108 90 7)	X			< 10	< .0006					1	ug/l	lbs/d	< 10		1
8V Chlorodibromomethane (124 48 1)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
9V Chloroethane (75 00 3)	X			< 10	< .0006					1	ug/l	lbs/d	< 10		1
10V 2 Chloro ethylvinyl Ether (110 75 8)	X			< 5	< .0003					1	ug/l	lbs/d	< 10		1
11V Chloroform (67 66 3)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
12V Dichloro bromomethane (75 27 4)	X			< 5	< .0006					1	ug/l	lbs/d	< 5		1
13V Dichloro difluoromethane (75 71 8)				*											
14V 1 1 Dichloro ethane (75 34 3)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
15V 1 2 Dichloro ethane (107 06 2)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
16V 1 1 Dichloro ethylene (75 35 4)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
17V 1 2 Dichloro propane (78 87 5)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
18V 1 2 Dichloro propylene ** (542 75 6)	X			< 10	< .0006					1	ug/l	lbs/d	< 10		1
19V Ethylbenzene (100 41 4)	X			< 10	< .0006					1	ug/l	lbs/d	< 5		1
20V Methyl Bromide (74 83 9)	X			< 10	< .0006					1	ug/l	lbs/d	< 10		1
21V Methyl Chloride (74 87 3)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1

CONTINUE ON PAGE 4

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D)

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

CONTINUED FROM PAGE 3

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 004

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST AND REASON BE	b. BE LIKELY PRESENT	c. BE LIMITED OR ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS (continued)															
22V METHYLENE Chloride (75-09-2)	X			<5	<.0003					1	ug/l	lbs/d	<5		1
23V 1122 Tetra chloroethane (79-34-5)	X			<5	<.0003					1	ug/l	lbs/d	<5		1
24V Tetrachloro ethylene (127-18-4)	X			<5	<.0003					1	ug/l	lbs/d	<5		1
25V Toluene (108-88-3)	X			<5	<.0003					1	ug/l	lbs/d	<5		1
26V 12 Trans Dichloroethylene (156-60-5)	X			<5	<.0003					1	ug/l	lbs/d	<5		1
27V 111 Tri chloroethane (71-55-6)	X			<5	<.0003					1	ug/l	lbs/d	<5		1
28V 112 Tri chloroethane (79-00-5)	X			<5	<.0003					1	ug/l	lbs/d	<5		1
29V Trichloro ethylene (79-01-6)	X			<10	<.0006					1	ug/l	lbs/d	<5		1
30V Trichloro fluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)	X			<10	<.0006					1	ug/l	lbs/d	<10		1
GC/MS FRACTION — ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)	X			<10	<.0006					1	ug/l	lbs/d	<10		1
2A 24-Dichloro phenol (120-83-2)	X			<10	<.0006					1	ug/l	lbs/d	<10		1
3A 24-Dimethyl phenol (105-67-9)	X			<10	<.0006					1	ug/l	lbs/d	<10		1
4A 46-Dinitro-O-Cresol (534-52-1)	X			<50	<.003					1	ug/l	lbs/d	<50		1
5A 24-Dinitro phenol (51-28-5)	X			<50	<.003					1	ug/l	lbs/d	<10		1
6A 2-Nitrophenol (88-75-5)	X			<10	<.0006					1	ug/l	lbs/d	<10		1
7A 4-Nitrophenol (100-02-7)	X			<50	<.003					1	ug/l	lbs/d	<50		1
8A P-Chloro-M Cresol (59-50-7)	X			<50	<.003					1	ug/l	lbs/d	<10		1
9A Pentachloro phenol (87-86-5)	X			<50	<.003					1	ug/l	lbs/d	<50		1
10A Phenol (108-95-2)	X			<10	<.0006					1	ug/l	lbs/d	<10		1
11A 246 Tri chlorophenol (88-06-2)	X			<10	<.0006					1	ug/l	lbs/d	<10		1

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CONTINUE ON REVERSE

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST ING REQUIRED	b. BE LIEVED PRE SENT	c. BE LIEVED AB SENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)			X												
2B Acenaphtylene (208-96-8)			X												
3B Anthracene (120-12-7)			X												
4B Benzidine (92-87-5)			X												
5B Benzo (a) Anthracene (56-55-3)			X												
6B Benzo (a) Pyrene (50-32-8)			X												
7B 3,4 Benzo fluoranthene (205-99-2)			X												
8B Benzo (ghi) Perylene (191-24-2)			X												
9B Benzo (k) Fluoranthene (207-08-9)			X												
10B Bis (2 Chloro-ethoxy) Methane (111-91-1)			X												
11B Bis (2 Chloro-ethyl) Ether (111-44-4)			X												
12B Bis (2 Chloro-isopropyl) Ether (39638-32-9)			X												
13B Bis (2 Ethyl-hexyl) Phthalate (117-81-7)			X												
14B 4 Bromo-phenyl Phenyl Ether (101-55-3)			X												
15B Butyl Benzyl Phthalate (85-68-7)			X												
16B 2 Chloro-naphthalene (91-58-7)			X												
17B 4 Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B Chrysene (218-01-9)			X												
19B Dibenzo (a,h) Anthracene (53-70-3)			X												
20B 1,2 Dichloro-benzene (95-50-1)			X												
21B 1,3 Dichloro-benzene (541-73-1)			X												

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CONTINUE ON PAGE 6

CONTINUED FROM PAGE 5

NPDES # (If Assigned)	OUTFALL NUMBER
MO-0098001	004

1. POLLUTANT AND CAS NUMBER (If available)	2. MARK "X" a. TEST DATA REQUIRED	2. MARK "X" b. BELIEVED PRESENT	2. MARK "X" c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS (continued)															
22B 1 4 Dichloro benzene (106 46 7)			X												
23B 3 3 Dichloro benzidine (91 94 1)			X												
24B Diethyl Phthalate (84 66 2)			X												
25B Dimethyl Phthalate (131 11 3)			X												
26B Di N Butyl Phthalate (84 74 2)			X												
27B 2 4 Dinitro toluene (121 14 2)			X												
28B 2 6 Dinitro toluene (606 20 2)			X												
29B Di N Octyl Phthalate (117 84 0)			X												
30B 1 2 Diphenyl hydrazine (as Azo benzene) (122 66 7)			X												
31B Fluoranthene (206 44 0)			X												
32B Fluorene (86 73 7)			X												
33B Hexa chlorobenzene (118 74 1)			X												
34B Hexa chlorobutadiene (87 68 3)			X												
35B Hexachloro cyclopentadiene (77 47 4)			X												
36B Hexachloro ethane (67 72 1)			X												
37B Indeno (1 2 3 c d) Pyrene (193 39 5)			X												
38B Isophorone (78 59 1)			X												
39B Naphthalene (91 20 3)			X												
40B Nitrobenzene (98 95 3)			X												
41B N Nitro sodimethylamine (62 75 9)			X												
42B N Nitrosodi N Propylamine (621 64 7)			X												

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST ADD REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS (continued)															
43B N Nitrosodiphenylamine (86-30-6)			X												
44B Phenanthrene (85-01-8)			X												
45B Pyrene (129-00-0)			X												
46B 1,2,4 Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P Aldrin (309-00-2)			X												
2P α-BHC (319-84-6)			X												
3P β-BHC (319-85-7)			X												
4P γ-BHC (58-89-9)			X												
5P δ-BHC (319-86-8)			X												
6P Chlordane (57-74-9)			X												
7P 4,4'-DDT (50-29-3)			X												
8P 4,4'-DDE (72-55-9)			X												
9P 4,4'-DDD (72-54-8)			X												
10P Dieldrin (60-57-1)			X												
11P α-Endosulfan (115-29-7)			X												
12P β-Endosulfan (115-29-7)			X												
13P Endosulfan Sulfate (1031-07-8)			X												
14P Endrin (72-20-8)			X												
15P Endrin Aldehyde (7421-93-4)			X												
16P Heptachlor (76-44-8)			X												

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CONTINUE ON PAGE 8

CONTINUED FROM PAGE 7

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 004

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST(ING) REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — PESTICIDES (continued)															
(35) Heptachlor (76-44-8)			X												
(36) PCB 1242 (53469-21-9)			X												
(37) PCB 1254 (11097-69-1)			X												
(38) PCB 1221 (11104-28-2)			X												
(39) PCB 1232 (11141-16-5)			X												
(40) PCB 1248 (12672-29-6)			X												
(41) PCB 1260 (11096-82-5)			X												
(42) PCB 1016 (12674-11-2)			X												
(43) Toxaphene (8001-35-2)			X												

EPA 1320

APPLICATION FOR DISCHARGE PERMIT
Form B — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	007

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"			3. EFFLUENT						4. UNITS			5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE *(if available)* (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE *(if available)* (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)			X												
2M Arsenic Total (7440-38-2)			X												
3M Beryllium Total (7440-41-7)			X												
4M Cadmium Total (7440-43-9)			X												
5M Chromium Total (7440-47-3)			X												
6M Copper Total (7550-50-8)			X												
7M Lead Total (7439-97-6)			X												
8M Mercury Total (7439-97-6)			X												
9M Nickel Total (7440-02-0)			X												
10M Selenium Total (7782-49-2)			X												
11M Silver Total (7440-22-4)			X												
12M Thallium Total (7440-28-0)			X												
13M Zinc Total (7440-66-6)		X		137	.008					1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)			X												
15M Phenols Total			X												
DIOXIN															
2,3,7,8 Tetrachlorodibenzo P Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST ING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)			X												
2V Acrylonitrile (107-13-1)			X												
3V Benzene (71-43-2)			X												
4V Bis (Chloromethyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)			X												
6V Carbon Tetrachloride (56-23-5)			X												
7V Chlorobenzene (108-90-7)			X												
8V Chlorodibromomethane (124-48-1)			X												
9V Chloroethane (75-00-3)			X												
10V 2-Chloroethylvinyl Ether (110-75-8)			X												
11V Chloroform (67-66-3)			X												
12V Dichlorobromomethane (75-27-4)			X												
13V Dichlorodifluoromethane (75-71-8)				*											
14V 1,1-Dichloroethane (75-34-3)			X												
15V 1,2-Dichloroethane (107-06-2)			X												
16V 1,1-Dichloroethylene (75-35-4)			X												
17V 1,2-Dichloropropane (78-87-5)			X												
18V 1,2-Dichloropropylene (542-75-6) **			X												
19V Ethylbenzene (100-41-4)			X												
20V Methyl Bromide (74-83-9)			X												
21V Methyl Chloride (74-87-3)			X												

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D).

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

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NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER: 007

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK X a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS *(continued)*															
22V METHYLENE Chloride (75-09-2)			X												
23V 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V Tetrachloroethylene (127-18-4)			X												
25V Toluene (108-88-3)			X												
26V t,2-Trans-Dichloroethylene (156-60-5)			X												
27V 1,1,1-Trichloroethane (71-55-6)			X												
28V 1,1,2-Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V Trichlorofluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION — ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)			X												
2A 2,4-Dichlorophenol (120-83-2)			X												
3A 2,4-Dimethylphenol (105-67-9)			X												
4A 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A 2,4-Dinitrophenol (51-28-5)			X												
6A 2-Nitrophenol (88-75-5)			X												
7A 4-Nitrophenol (100-02-7)			X												
8A P-Chloro-M-Cresol (59-50-7)			X												
9A Pentachlorophenol (87-86-5)			X												
10A Phenol (108-95-2)			X												
11A 2,4,6-Trichlorophenol (88-06-2)			X												

CONTINUE ON REVERSE

EPC 1459

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. PRAM II			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TEST (if required)	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)			X												
2B Acenaphtylene (208-96-8)			X												
3B Anthracene (120-12-7)			X												
4B Benzidine (92-87-5)			X												
5B Benzo (a) Anthracene (56-55-3)			X												
6B Benzo (a) Pyrene (50-32-8)			X												
7B 3,4 Benzo fluoranthene (205-99-2)			X												
8B Benzo (ghi) Perylene (191-24-2)			X												
9B Benzo (k) Fluoranthene (207-08-9)			X												
10B Bis (2-Chloroethoxy) Methane (111-91-1)			X												
11B Bis (2-Chloroethyl) Ether (111-44-4)			X												
12B Bis (2-Chloroisopropyl) Ether (39638-32-9)			X												
13B Bis (2-Ethylhexyl) Phthalate (117-81-7)			X												
14B 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B Butyl Benzyl Phthalate (85-68-7)			X												
16B 2-Chloronaphthalene (91-58-7)			X												
17B 4-Chlorophenyl Phenyl Ether (7005-72-3)			X												
18B Chrysene (218-01-9)			X												
19B Dibenzo (a,h) Anthracene (53-70-3)			X												
20B 1,2-Dichlorobenzene (95-50-1)			X												
21B 1,3-Dichlorobenzene (541-73-1)			X												

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NPDES # (If Assigned) MO-0098001 | OUTFALL NUMBER 007

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST(S) REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B 1,4-Dichlorobenzene (106-46-7)			X												
23B 3,3-Dichlorobenzidine (91-94-1)			X												
24B Diethyl Phthalate (84-66-2)			X												
25B Dimethyl Phthalate (131-11-3)			X												
26B Di-N-Butyl Phthalate (84-74-2)			X												
27B 2,4-Dinitrotoluene (121-14-2)			X												
28B 2,6-Dinitrotoluene (606-20-2)			X												
29B Di-N-Octyl Phthalate (117-84-0)			X												
30B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
31B Fluoranthene (206-44-0)			X												
32B Fluorene (86-73-7)			X												
33B Hexachlorobenzene (118-74-1)			X												
34B Hexachlorobutadiene (87-68-3)			X												
35B Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B Indeno (1,2,3-cd) Pyrene (193-39-5)			X												
38B Isophorone (78-59-1)			X												
39B Naphthalene (91-20-3)			X												
40B Nitrobenzene (98-95-3)			X												
41B N-Nitrosodimethylamine (62-75-9)			X												
42B N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

EPA Form 3510-2C (8-90)

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST AND REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
43B N-Nitrosodiphenylamine (86-30-6)			X												
44B Phenanthrene (85-01-8)			X												
45B Pyrene (129-00-0)			X												
46B 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P Aldrin (309-00-2)			X												
2P α-BHC (319-84-6)			X												
3P β-BHC (319-85-7)			X												
4P γ-BHC (58-89-9)			X												
5P δ-BHC (319-86-8)			X												
6P Chlordane (57-74-9)			X												
7P 4,4'-DDT (50-29-3)			X												
8P 4,4'-DDE (72-55-9)			X												
9P 4,4'-DDD (72-54-8)			X												
10P Dieldrin (60-57-1)			X												
11P α-Endosulfan (115-29-7)			X												
12P β-Endosulfan (115-29-7)			X												
13P Endosulfan Sulfate (1031-07-8)			X												
14P Endrin (72-20-8)			X												
15P Endrin Aldehyde (7421-93-4)			X												
16P Heptachlor (76-44-8)			X												

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NPDES # (If assigned) MO-0098001

OUTFALL NUMBER 007

CONTINUED FROM PAGE 7

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST IS REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL YSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANAL YSES
GC/MS FRACTION — PESTICIDES (continued)															
15. Heptachlor (76-44-8)			X												
16. PCB 1242 (53469-21-9)			X												
17. PCB 1254 (11097-69-1)			X												
18. PCB 1221 (11104-28-2)			X												
19. PCB 1232 (11141-16-5)			X												
20. PCB 1248 (12672-29-6)			X												
21. PCB 1260 (11096-82-5)			X												
22. PCB 1016 (12674-11-2)			X												
23. Toxaphene (8001-35-2)			X												

APPLICATION FOR DISCHARGE PERMIT
Form B — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	009

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"			3. EFFLUENT						4. UNITS			5. INTAKE *(optional)*		
	a. TEST IS REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)	X			<10	<.0005					1	ug/l	lbs/d			
2M Arsenic Total (7440-38-2)	X			<10	<.0005					1	ug/l	lbs/d			
3M Beryllium Total (7440-41-7)	X			<1	<.00005					1	ug/l	lbs/d			
4M Cadmium Total (7440-43-9)	X			8	.0004					1	ug/l	lbs/d			
5M Chromium Total (7440-47-3)	X			<10	<.0005					1	ug/l	lbs/d			
6M Copper Total (7550-50-8)	X			<10	<.0005					1	ug/l	lbs/d			
7M Lead Total (7439-97-6)	X			<10	<.0005					1	ug/l	lbs/d			
8M Mercury Total (7439-97-6)	X			<0.4	<.00002					1	ug/l	lbs/d			
9M Nickel Total (7440-02-0)	X			<100	<.005					1	ug/l	lbs/d			
10M Selenium Total (7782-49-2)	X			<10	<.0005					1	ug/l	lbs/d			
11M Silver Total (7440-22-4)	X			30	.002					1	ug/l	lbs/d			
12M Thallium Total (7440-28-0)	X			20	.001					1	ug/l	lbs/d			
13M Zinc Total (7440-66-6)	X			<100	<.005					1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)	X			<100	<.005					1	ug/l	lbs/d			
15M Phenols Total	X			<1	<.00005					1	ug/l	lbs/d			
DIOXIN															
2,3,7,8 Tetrachlorodibenzo-P Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST ARE REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)	X			<7.5	<3.7E-4					1	ug/l	lbs/d			
2V Acrylonitrile (107-13-1)	X			<5.2	<2.6E-4					1	ug/l	lbs/d			
3V Benzene (71-43-2)	X			<4.4	<2.2E-4					1	ug/l	lbs/d			
4V Bis (Chloromethyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)	X			< 4.7	<2.2E-4					1	ug/l	lbs/d			
6V Carbon Tetrachloride (56-23-5)	X			< 2.8	<1.4E-4					1	ug/l	lbs/d			
7V Chlorobenzene (108-90-7)	X			<6.0	<3.0E-4					1	ug/l	lbs/d			
8V Chlorodibromomethane (124-48-1)	X			<3.1	<1.6E-4					1	ug/l	lbs/d			
9V Chloroethane (75-00-3)	X			< 8.2	<4.1E-4					1	ug/l	lbs/d			
10V 2-Chloroethylvinyl Ether (110-75-8)	X			<2.6	<1.3E-4					1	ug/l	lbs/d			
11V Chloroform (67-66-3)	X			<1.6	<8.0E-5					1	ug/l	lbs/d			
12V Dichlorobromomethane (75-27-4)	X			<2.2	<1.1E-4					1	ug/l	lbs/d			
13V Dichlorodifluoromethane (75-71-8)				*											
14V 1,1-Dichloroethane (75-34-3)	X			<4.7	<2.4E-4					1	ug/l	lbs/d			
15V 1,2-Dichloroethane (107-06-2)	X			< 2.8	<1.4E-4					1	ug/l	lbs/d			
16V 1,1-Dichloroethylene (75-35-4)	X			< 2.8	<1.4E-4					1	ug/l	lbs/d			
17V 1,2-Dichloropropane (78-87-5)	X			<6.0	<3.0E-4					1	ug/l	lbs/d			
18V 1,2-Dichloropropylene ** (542-75-6)	X			< 4.0	<2.0E-4					1	ug/l	lbs/d			
19V Ethylbenzene (100-41-4)	X			< 7.2	<3.6E-4					1	ug/l	lbs/d			
20V Methyl Bromide (74-83-9)	X			< 1.2	<6.0E-5					1	ug/l	lbs/d			
21V Methyl Chloride (74-87-3)	X			<1.0	<5.0E-5					1	ug/l	lbs/d			

EPA Form 3510-2C (8-90)

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* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D)

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

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NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 009

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TESTED	b. REQUIRED	c. REQUIRED	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS (continued)															
22V Methylene Chloride (75-09-2)	X			<2.8	<1.4E-4					1	ug/l	lbs/d			
23V 1,1,2,2-Tetrachloroethane (79-34-5)	X			<6.9	<3.5E-4					1	ug/l	lbs/d			
24V Tetrachloroethylene (127-18-4)	X			<4.1	<2.1E-4					1	ug/l	lbs/d			
25V Toluene (108-88-3)	X			<6.0	<3.0E-4					1	ug/l	lbs/d			
26V 1,2-Trans-Dichloroethylene (156-60-5)	X			<1.6	<8.0E-5					1	ug/l	lbs/d			
27V 1,1,1-Trichloroethane (71-55-6)	X			<3.8	<1.9E-4					1	ug/l	lbs/d			
28V 1,1,2-Trichloroethane (79-00-5)	X			<5.0	<2.5E-4					1	ug/l	lbs/d			
29V Trichloroethylene (79-01-6)	X			<1.9	<9.5E-5					1	ug/l	lbs/d			
30V Trichlorofluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)	X			<1.3	<6.5E-5					1	ug/l	lbs/d			
GC/MS FRACTION — ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)	X			<3.3	<1.7E-4					1	ug/l	lbs/d			
2A 2,4-Dichlorophenol (120-83-2)	X			<2.7	<1.4E-4					1	ug/l	lbs/d			
3A 2,4-Dimethylphenol (105-67-9)	X			<2.7	<1.4E-4					1	ug/l	lbs/d			
4A 4,6-Dinitro-O-Cresol (534-52-1)	X			< 24	< .0012					1	ug/l	lbs/d			
5A 2,4-Dinitrophenol (51-28-5)	X			< 42	< .0021					1	ug/l	lbs/d			
6A 2-Nitrophenol (88-75-5)	X			<3.6	<1.8E-4					1	ug/l	lbs/d			
7A 4-Nitrophenol (100-02-7)	X			<2.4	<1.2E-4					1	ug/l	lbs/d			
8A P-Chloro-M-Cresol (59-50-7)	X			<3.0	<1.5E-4					1	ug/l	lbs/d			
9A Pentachlorophenol (87-86-5)	X			<3.6	<1.8E-4					1	ug/l	lbs/d			
10A Phenol (108-95-2)	X			<1.5	<7.5E-5					1	ug/l	lbs/d			
11A 2,4,6-Trichlorophenol (88-06-2)	X			<2.7	<1.4E-4					1	ug/l	lbs/d			

EPA 1320

CONTINUED ON REVERSE

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D).

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST (IDENTIFIED)	b. BE LIKELY PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)			X												
2B Acenaphtylene (208-98-8)			X												
3B Anthracene (120-12-7)			X												
4B Benzidine (92-87-5)			X												
5B Benzo (a) Anthracene (56-55-3)			X												
6B Benzo (a) Pyrene (50-32-8)			X												
7B 3,4 Benzo fluoranthene (205-99-2)			X												
8B Benzo (ghi) Perylene (191-24-2)			X												
9B Benzo (k) Fluoranthene (207-08-9)			X												
10B Bis (2-Chloro-ethoxy) Methane (111-91-1)			X												
11B Bis (2-Chloro-ethyl) Ether (111-44-4)			X												
12B Bis (2-Chloro-isopropyl) Ether (39638-32-9)			X												
13B Bis (2-Ethyl-hexyl) Phthalate (117-81-7)			X												
14B 4-Bromo-phenyl Phenyl Ether (101-55-3)			X												
15B Butyl Benzyl Phthalate (85-68-7)			X												
16B 2-Chloro-naphthalene (91-58-7)			X												
17B 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B Chrysene (218-01-9)			X												
19B Dibenzo (a,h) Anthracene (53-70-3)			X												
20B 1,2-Dichloro-benzene (95-50-1)			X												
21B 1,3-Dichloro-benzene (541-73-1)			X												

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CONTINUE ON PAGE 6

CONTINUED FROM PAGE 5

NPDES # (If Assigned) MG-0098001

OUTFALL NUMBER 009

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST WAS REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B 1,4-Dichlorobenzene (106-46-7)			X												
23B 2,3-Dichlorobenzidine (91-94-1)			X												
24B Diethyl Phthalate (84-66-2)			X												
25B Dimethyl Phthalate (131-11-3)			X												
26B Di-N-Butyl Phthalate (84-74-2)			X												
27B 2,4-Dinitrotoluene (121-14-2)			X												
28B 2,6-Dinitrotoluene (606-20-2)			X												
29B Di-N-Octyl Phthalate (117-84-0)			X												
30B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
31B Fluoranthene (206-44-0)			X												
32B Fluorene (86-73-7)			X												
33B Hexachlorobenzene (118-74-1)			X												
34B Hexachlorobutadiene (87-68-3)			X												
35B Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B Indeno (1,2,3-c,d) Pyrene (193-39-5)			X												
38B Isophorone (78-59-1)			X												
39B Naphthalene (91-20-3)			X												
40B Nitrobenzene (98-95-3)			X												
41B N-Nitrosodimethylamine (62-75-9)			X												
42B N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL. YSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
43B N-Nitrosodiphenylamine (86-30-6)			X												
44B Phenanthrene (85-01-8)			X												
45B Pyrene (129-00-0)			X												
46B 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P Aldrin (309-00-2)			X												
2P α-BHC (319-84-6)			X												
3P β-BHC (319-85-7)			X												
4P γ-BHC (58-89-9)			X												
5P δ-BHC (319-86-8)			X												
6P Chlordane (57-74-9)			X												
7P 4,4'-DDT (50-29-3)			X												
8P 4,4'-DDE (72-55-9)			X												
9P 4,4'-DDD (72-54-8)			X												
10P Dieldrin (60-57-1)			X												
11P α-Endosulfan (115-29-7)			X												
12P β-Endosulfan (115-29-7)			X												
13P Endosulfan Sulfate (1031-07-8)			X												
14P Endrin (72-20-8)			X												
15P Endrin Aldehyde (7421-93-4)			X												
16P Heptachlor (76-44-8)			X												

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NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 009

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST BELIEVED TO BE	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANAL YSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — PESTICIDES *(continued)*															
Heptachlor (76-44-8)			X												
PCB 1242 (53469-21-9)			X												
PCB 1254 (11097-69-1)			X												
PCB 1221 (11104-28-2)			X												
PCB 1232 (11141-16-5)			X												
PCB 1248 (12672-29-6)			X												
PCB 1260 (11096-82-5)			X												
PCB 1016 (12674-11-2)			X												
Toxaphene (8001-35-2)			X												

CMI 1050

APPLICATION FOR DISCHARGE PERMIT
Form B — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	010

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X" a. TEST DES. OF CHARGED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	(2) MASS	4. UNITS d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	5. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)			X												
2M Arsenic Total (7440-38-2)			X												
3M Beryllium Total (7440-41-7)			X												
4M Cadmium Total (7440-43-9)			X												
5M Chromium Total (7440-47-3)			X												
6M Copper Total (7550-50-8)		X		23						1	ug/l	lbs/d			
7M Lead Total (7439-97-6)		X		<66						1	ug/l	lbs/d			
8M Mercury Total (7439-97-6)			X												
9M Nickel Total (7440-02-0)		X		<19						1	ug/l	lbs/d			
10M Selenium Total (7782-49-2)			X												
11M Silver Total (7440-22-4)			X												
12M Thallium Total (7440-28-0)			X												
13M Zinc Total (7440-66-6)		X		<14						1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)			X												
15M Phenols Total		X		1.7						1	ug/l	lbs/d			
DIOXIN															
2,3,7,8 Tetra chlorodibenzo-P Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST ING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)			X												
2V Acrylonitrile (107-13-1)			X												
3V Benzene (71-43-2)			X												
4V Bis (Chloromethyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)			X												
6V Carbon Tetrachloride (56-23-5)			X												
7V Chlorobenzene (108-90-7)			X												
8V Chlorodibromomethane (124-48-1)			X												
9V Chloroethane (75-00-3)			X												
10V 2-Chloroethylvinyl Ether (110-75-8)			X												
11V Chloroform (67-66-3)			X												
12V Dichlorobromomethane (75-27-4)			X												
13V Dichlorodifluoromethane (75-71-8)				*											
14V 1,1-Dichloroethane (75-34-3)			X												
15V 1,2-Dichloroethane (107-06-2)			X												
16V 1,1-Dichloroethylene (75-35-4)			X												
17V 1,2-Dichloropropane (78-87-5)			X												
18V 1,2-Dichloropropylene (542-75-6) **			X												
19V Ethylbenzene (100-41-4)			X												
20V Methyl Bromide (74-83-9)			X												
21V Methyl Chloride (74-87-3)			X												

CONTINUE ON PAGE 4

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

CONTINUED FROM PAGE 3

NPDES # (If assigned) MO-0098001

OUTFALL NUMBER 010

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK X a. TEST INCLUDED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS (Continued)															
22V Methylene Chloride (75-09-2)			X												
23V 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V Tetrachloroethylene (127-18-4)			X												
25V Toluene (108-88-3)			X												
26V 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V 1,1,1-Trichloroethane (71-55-6)			X												
28V 1,1,2-Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V Trichlorofluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION — ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)			X												
2A 2,4-Dichlorophenol (120-83-2)			X												
3A 2,4-Dimethylphenol (105-67-9)			X												
4A 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A 2,4-Dinitrophenol (51-28-5)			X												
6A 2-Nitrophenol (88-75-5)			X												
7A 4-Nitrophenol (100-02-7)			X												
8A P-Chloro-M-Cresol (59-50-7)			X												
9A Pentachlorophenol (87-86-5)			X												
10A Phenol (108-95-2)			X												
11A 2,4,6-Trichlorophenol (88-06-2)			X												

CONTINUE ON REVERSE

EPA Form 3510-2C

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. EXPECTED			3. EFFLUENT						4. UNITS		5. INTAKE (optional)		
	a. TEST (specify if blank)	b. # OF STORM PER SHOT	c. IN TO BE SAMPLED	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL YSES	a. CONCEN TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCEN TRATION	(2) MASS	b. NO. OF ANAL YSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS														
19 Acenaphthene (83-32-9)			X											
20 Acenaphtylene (208-96-8)			X											
21 Anthracene (120-12-7)			X											
22 Benzidine (92-87-5)			X											
56 Benzo (a) Anthracene (56-55-3)			X											
57 Benzo (a) Pyrene (50-32-8)			X											
58 3,4 Benzo fluoranthene (205-99-2)			X											
59 Benzo (ghi) Perylene (191-24-2)			X											
60 Benzo (k) Fluoranthene (207-08-9)			X											
153 Bis (2-Chloro ethoxy) Methane (111-91-1)			X											
154 Bis (2-Chloro ethyl) Ether (111-44-4)			X											
155 Bis (2-Chloro isopropyl) Ether (108-60-1)			X											
156 Bis (2-Ethyl hexyl) Phthalate (117-81-7)			X											
157 4-Bromo phenyl Phenyl Ether (101-55-3)			X											
158 Butyl Benzyl Phthalate (85-68-7)			X											
159 2-Chloro naphthalene (91-58-7)			X											
160 4-Chloro phenyl Phenyl Ether (7005-72-3)			X											
161 Chrysene (218-01-9)			X											
162 Dibenzo (a,h) Anthracene (53-70-3)			X											
163 1,2 Dichloro benzene (95-50-1)			X											
164 1,3 Dichloro benzene (541-73-1)			X											

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CONTINUED FROM PAGE 5

NPDES # (If Assigned)	OUTFALL NUMBER
MO-0098001	010

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST ...	b. ...	c. ...	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
27B 1,4-Dichlorobenzene (106-46-7)			X												
28B 3,3-Dichlorobenzidine (91-94-1)			X												
29B Diethyl Phthalate (84-66-2)			X												
30B Dimethyl Phthalate (131-11-3)			X												
31B Di-N-Butyl Phthalate (84-74-2)			X												
32B 2,4-Dinitrotoluene (121-14-2)			X												
33B 2,6-Dinitrotoluene (606-20-2)			X												
34B Di-N-Octyl Phthalate (117-84-0)			X												
35B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
36B Fluoranthene (206-44-0)			X												
37B Fluorene (86-73-7)			X												
38B Hexachlorobenzene (118-74-1)			X												
39B Hexachlorobutadiene (87-68-3)			X												
40B Hexachlorocyclopentadiene (77-47-4)			X												
41B Hexachloroethane (67-72-1)			X												
42B Indeno (1,2,3-c,d) Pyrene (193-39-5)			X												
43B Isophorone (78-59-1)			X												
44B Naphthalene (91-20-3)			X												
45B Nitrobenzene (98-95-3)			X												
46B N-Nitrosodimethylamine (62-75-9)			X												
47B N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST FOR REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL YSES	4. UNITS a. CONCEN TRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCEN TRATION	(2) MASS	b. NO. OF ANAL YSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS (continued)															
43B N-Nitro sodiphenylamine (86-30-6)			--												
44B Phenanthrene (85-01-8)			X												
45B Pyrene (129-00-0)			X												
46B 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P Aldrin (309-00-2)			X												
2P α-BHC (319-84-6)			X												
3P β-BHC (319-85-7)			X												
4P γ-BHC (58-89-9)			X												
5P δ-BHC (319-86-8)			X												
6P Chlordane (57-74-9)			X												
7P 4,4'-DDT (50-29-3)			X												
8P 4,4'-DDE (72-55-9)			X												
9P 4,4'-DDD (72-54-8)			X												
10P Dieldrin (60-57-1)			X												
11P α-Endosulfan (115-29-7)			X												
12P β-Endosulfan (115-29-7)			X												
13P Endosulfan Sulfate (1031-07-8)			X												
14P Endrin (72-20-8)			X												
15P Endrin Aldehyde (7421-93-4)			X												
16P Heptachlor (76-44-8)			X												

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NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 010

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST. BELIEVED PRESENT	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL YSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANAL YSES
GC/MS FRACTION — PESTICIDES *(continued)*															
[illegible] Heptachlor [illegible]			X												
[illegible] PCB 1242 [illegible]			X												
[illegible] PCB 1254 [illegible]			X												
[illegible] PCB 1221 [illegible]			X												
[illegible] PCB 1232 [illegible]			X												
[illegible] PCB 1248 [illegible]			X												
[illegible] PCB 1260 [illegible]			X												
[illegible] PCB 1016 [illegible]			X												
[illegible] Toxaphene [illegible]			X												

EPA 1 [illegible]

APPLICATION FOR DISCHARGE PERMIT
Form B — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	011

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part - please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"			3. EFFLUENT						4. UNITS			5. INTAKE *(optional)*		
	a. TEST DOES NOT BE REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE *(if available)* (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE *(if available)* (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)			X												
2M Arsenic Total (7440-38-2)			X												
3M Beryllium Total (7440-41-7)			X												
4M Cadmium Total (7440-43-9)			X												
5M Chromium Total (7440-47-3)			X												
6M Copper Total (7550-50-8)		X		31						1	ug/l	lbs/d			
7M Lead Total (7439-97-6)		X		<66						1	ug/l	lbs/d			
8M Mercury Total (7439-97-6)			X												
9M Nickel Total (7440-02-0)		X		<19						1	ug/l	lbs/d			
10M Selenium Total (7782-49-2)			X												
11M Silver Total (7440-22-4)			X												
12M Thallium Total (7440-28-0)			X												
13M Zinc Total (7440-66-6)		X		31						1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)			X												
15M Phenols Total		X		1.7						1	ug/l	lbs/d			
DIOXIN															
2,3,7,8 - Tetra chlorodibenzo P Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST IS REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL. YSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANAL. YSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)			X												
2V Acrylonitrile (107-13-1)			X												
3V Benzene (71-43-2)			X												
4V Bis (Chloromethyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)			X												
6V Carbon Tetrachloride (56-23-5)			X												
7V Chlorobenzene (108-90-7)			X												
8V Chlorodibromomethane (124-48-1)			X												
9V Chloroethane (75-00-3)			X												
10V 2-Chloroethylvinyl Ether (110-75-8)			X												
11V Chloroform (67-66-3)			X												
12V Dichlorobromomethane (75-27-4)			X												
13V Dichlorodifluoromethane (75-71-8)				*											
14V 1,1-Dichloroethane (75-34-3)			X												
15V 1,2-Dichloroethane (107-06-2)			X												
16V 1,1-Dichloroethylene (75-35-4)			X												
17V 1,2-Dichloropropane (78-87-5)			X												
18V 1,2-Dichloropropylene (542-75-6) **			X												
19V Ethylbenzene (100-41-4)			X												
20V Methyl Bromide (74-83-9)			X												
21V Methyl Chloride (74-87-3)			X												

CONTINUE ON PAGE 4

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

[redacted] (If assigned) MO-0098001 011

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST VOLUME REQUIRED BY EPA	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS *(continued)*															
22V METHYLENE Chloride (75-09-2)			X												
23V 1122 Tetra chloroethane (79-34-5)			X												
24V Tetrachloro ethylene (127-18-4)			X												
25V Toluene (108-88-3)			X												
26V 12-Trans Dichloroethylene (156-60-5)			X												
27V 111 Tri chloroethane (71-55-6)			X												
28V 112 Tri chloroethane (79-00-5)			X												
29V Trichloro ethylene (79-01-6)			X												
30V Trichloro fluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION — ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)			X												
2A 2 4-Dichloro phenol (120-83-2)			X												
3A 2 4-Dimethyl phenol (105-67-9)			X												
4A 4 6-Dinitro-O Cresol (534-52-1)			X												
5A 2 4-Dinitro phenol (51-28-5)			X												
6A 2-Nitrophenol (88-75-5)			X												
7A 4-Nitrophenol (100-02-7)			X												
8A P-Chloro-M Cresol (59-50-7)			X												
9A Pentachloro phenol (87-86-5)			X												
10A Phenol (108-95-2)			X												
11A 2 4 6-Tri chlorophenol (88-06-2)			X												

CONTINUE ON REVERSE

EPA 1980

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (a) Anthracene (56-55-3)			X												
6B. Benzo (a) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (ghi) Perylene (191-24-2)			X												
9B. Benzo (k) Fluoranthene (207-08-9)			X												
10B. Bis (2-Chloro-ethoxy) Methane (111-91-1)			X												
11B. Bis (2-Chloro-ethyl) Ether (111-44-4)			X												
12B. Bis (2-Chloro-isopropyl) Ether (39638-32-9)			X												
13B. Bis (2-Ethyl-hexyl) Phthalate (117-81-7)			X												
14B. 4-Bromo-phenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (a,h) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Dichloro-benzene (541-73-1)			X												

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NPDES # (If Assigned)	OUTFALL NUMBER
MO-0098001	011

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST (see instructions)	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (1) CONCENTRATION	(2) MASS	d. NO OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B 1,4-Dichlorobenzene (106-46-7)			X												
23B 3,3'-Dichlorobenzidine (91-94-1)			X												
24B Diethyl Phthalate (84-66-2)			X												
25B Dimethyl Phthalate (131-11-3)			X												
26B Di-N-Butyl Phthalate (84-74-2)			X												
27B 2,4-Dinitrotoluene (121-14-2)			X												
28B 2,6-Dinitrotoluene (606-20-2)			X												
29B Di-N-Octyl Phthalate (117-84-0)			X												
30B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
31B Fluoranthene (206-44-0)			X												
32B Fluorene (86-73-7)			X												
33B Hexachlorobenzene (118-74-1)			X												
34B Hexachlorobutadiene (87-68-3)			X												
35B Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B Indeno (1,2,3-c,d) Pyrene (193-39-5)			X												
38B Isophorone (78-59-1)			X												
39B Naphthalene (91-20-3)			X												
40B Nitrobenzene (98-95-3)			X												
41B N-Nitrosodimethylamine (62-75-9)			X												
42B N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL. YSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCEN-TRATION	(2) MASS	b. NO. OF ANAL. YSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS (continued)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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CONTINUED FROM PAGE 7

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 011

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST DATA BELIEVED TO BE	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL YSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANAL YSES
GC/MS FRACTION — PESTICIDES (continued)															
[illegible] Heptachlor [illegible]			X												
16P PCB 1242 53469-21-9			X												
17P PCB 1254 11097-69-1			X												
18P PCB 1221 11104-28-2			X												
[illegible] PCB 1232 11141-16-5			X												
[illegible] PCB 1248 12672-29-6			X												
[illegible] PCB 1260 11096-82-5			X												
[illegible] PCB 1016 [illegible]			X												
25P Toxaphene 8001-35-2			X												

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APPLICATION FOR DISCHARGE PERMIT
Form B — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	012

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"			3. EFFLUENT						4. UNITS			5. INTAKE *(optional)*		
	a. TEST REQUIRED	b. KNOWN OR BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE *(if available)* (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE *(if available)* (2) MASS	d. NO. OF ANAL. YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANAL. YSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)			X												
2M Arsenic Total (7440-38-2)			X												
3M Beryllium Total (7440-41-7)			X												
4M Cadmium Total (7440-43-9)			X												
5M Chromium Total (7440-47-3)			X												
6M Copper Total (7550-50-8)		X		37	.002					1	ug/l	lbs/d			
7M Lead Total (7439-97-6)		X		<66	<.004					1	ug/l	lbs/d			
8M Mercury Total (7439-97-6)			X												
9M Nickel Total (7440-02-0)		X		<19	<.001					1	ug/l	lbs/d			
10M Selenium Total (7782-49-2)			X												
11M Silver Total (7440-22-4)			X												
12M Thallium Total (7440-28-0)			X												
13M Zinc Total (7440-66-6)		X		32	<.002					1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)			X												
15M Phenols Total		X		2.87	.0002					1	ug/l	lbs/d			
DIOXIN															
2,3,7,8 Tetrachlorodibenzo P Dioxin (1764-01-5)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST(S) REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)			X												
2V Acrylonitrile (107-13-1)			X												
3V Benzene (71-43-2)			X												
4V Bis (Chloromethyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)			X												
6V Carbon Tetrachloride (56-23-5)			X												
7V Chlorobenzene (108-90-7)			X												
8V Chlorodibromomethane (124-48-1)			X												
9V Chloroethane (75-00-3)			X												
10V 2-Chloroethylvinyl Ether (110-75-8)			X												
11V Chloroform (67-66-3)			X												
12V Dichlorobromomethane (75-27-4)			X												
13V Dichlorodifluoromethane (75-71-8)				*											
14V 1,1-Dichloroethane (75-34-3)			X												
15V 1,2-Dichloroethane (107-06-2)			X												
16V 1,1-Dichloroethylene (75-35-4)			X												
17V 1,2-Dichloropropane (78-87-5)			X												
18V 1,2-Dichloropropylene (542-75-6) **			X												
19V Ethylbenzene (100-41-4)			X												
20V Methyl Bromide (74-83-9)			X												
21V Methyl Chloride (74-87-3)			X												

CONTINUE ON PAGE 4

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D).

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

CONTINUED FROM PAGE 3

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a			3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS (continued)															
22V Methylene Chloride (75-09-2)			X												
23V 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V Tetrachloroethylene (127-18-4)			X												
25V Toluene (108-88-3)			X												
26V 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V 1,1,1-Trichloroethane (71-55-6)			X												
28V 1,1,2-Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V Trichlorofluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION — ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)			X												
2A 2,4-Dichlorophenol (120-83-2)			X												
3A 2,4-Dimethylphenol (105-67-9)			X												
4A 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A 2,4-Dinitrophenol (51-28-5)			X												
6A 2-Nitrophenol (88-75-5)			X												
7A 4-Nitrophenol (100-02-7)			X												
8A P-Chloro-M-Cresol (59-50-7)			X												
9A Pentachlorophenol (87-86-5)			X												
10A Phenol (108-95-2)			X												
11A 2,4,6-Trichlorophenol (88-06-2)			X												

CONTINUE ON REVERSE

EPC 1510

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST (DESCRIBE ON REVERSE)	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)			X												
2B Acenaphtylene (208-96-8)			X												
3B Anthracene (120-12-7)			X												
4B Benzidine (92-87-5)			X												
5B Benzo (a) Anthracene (56-55-3)			X												
6B Benzo (a) Pyrene (50-32-8)			X												
7B 3,4 Benzo fluoranthene (205-99-2)			X												
8B Benzo (ghi) Perylene (191-24-2)			X												
9B Benzo (k) Fluoranthene (207-08-9)			X												
10B Bis (2-Chloro ethoxy) Methane (111-91-1)			X												
11B Bis (2-Chloro ethyl) Ether (111-44-4)			X												
12B Bis (2-Chloro isopropyl) Ether (39638-32-9)			X												
13B Bis (2-Ethyl hexyl) Phthalate (117-81-7)			X												
14B 4-Bromo phenyl Phenyl Ether (101-55-3)			X												
15B Butyl Benzyl Phthalate (85-68-7)			X												
16B 2-Chloro naphthalene (91-58-7)			X												
17B 4-Chloro phenyl Phenyl Ether (7005-72-3)			X												
18B Chrysene (218-01-9)			X												
19B Dibenzo (a,h) Anthracene (53-70-3)			X												
20B 1,2-Dichloro benzene (95-50-1)			X												
21B 1,3-Dichloro benzene (541-73-1)			X												

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CONTINUE ON PAGE 6

CONTINUED FROM PAGE 5

NPDES # (If Assigned) MO-0098001 | OUTFALL NUMBER 012

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST INCLUDED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B 1,4-Dichlorobenzene (106-46-7)			X												
23B 3,3-Dichlorobenzidine (91-94-1)			X												
24B Diethyl Phthalate (84-66-2)			X												
25B Dimethyl Phthalate (131-11-3)			X												
26B Di-N-Butyl Phthalate (84-74-2)			X												
27B 2,4-Dinitrotoluene (121-14-2)			X												
28B 2,6-Dinitrotoluene (606-20-2)			X												
29B Di-N-Octyl Phthalate (117-84-0)			X												
30B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
31B Fluoranthene (206-44-0)			X												
32B Fluorene (86-73-7)			X												
33B Hexachlorobenzene (118-74-1)			X												
34B Hexachlorobutadiene (87-68-3)			X												
35B Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B Indeno (1,2,3-c,d) Pyrene (193-39-5)			X												
38B Isophorone (78-59-1)			X												
39B Naphthalene (91-20-3)			X												
40B Nitrobenzene (98-95-3)			X												
41B N-Nitrosodimethylamine (62-75-9)			X												
42B N-Nitrosodi-N-Propylamine (621-64-7)			X												

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CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST AND KNOWN OR BELIEVED PRESENT	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL YSES	4. UNITS a. CONCEN TRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCEN TRATION	(2) MASS	b. NO. OF ANAL YSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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CONTINUE ON PAGE 8

CONTINUED FROM PAGE 7

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 012

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST WAS required by EPA	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — PESTICIDES (continued)															
Heptachlor (76-44-8)			X												
PCB 1242 (53469-21-9)			X												
PCB 1254 (11097-69-1)			X												
PCB 1221 (11104-28-2)			X												
PCB 1232 (11141-16-5)			X												
PCB 1248 (12672-29-6)			X												
PCB 1260 (11096-82-5)			X												
PCB 1016 (12674-11-2)			X												
Toxaphene (8001-35-2)			X												

APPLICATION FOR DISCHARGE PERMIT
Form 2 — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	013

1.3D If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X" a. TEST DOES OR IS EXPECTED	b. KNOWN OR BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	(2) MASS	4. UNITS d. NO. OF ANAL. YSES	a. CONCENTRATION	b. MASS	5. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANAL. YSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)			X												
2M Arsenic Total (7440-38-2)			X												
3M Beryllium Total (7440-41-7)			X												
4M Cadmium Total (7440-43-9)			X												
5M Chromium Total (7440-47-3)			X												
6M Copper Total (7550-50-8)		X		28						1	ug/l	lbs/d			
7M Lead Total (7439-92-1)		X		<66						1	ug/l	lbs/d			
8M Mercury Total (7439-97-6)			X												
9M Nickel Total (7440-02-0)		X		<19						1	ug/l	lbs/d			
10M Selenium Total (7782-49-2)			X												
11M Silver Total (7440-22-4)			X												
12M Thallium Total (7440-28-0)			X												
13M Zinc Total (7440-66-6)		X		<14						1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)			X												
15M Phenols Total		X		2.87						1	ug/l	lbs/d			
DIOXIN															
2,3,7,8 Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (Chloromethyl) Ether (542-88-1)				*											
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)				*											
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,2-Dichloropropylene (542-75-6) **			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

EPA Form 3510-2C (8-90)

CONTINUE ON PAGE 4

* These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D).

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

[redacted] (If assigned) MO-0098001 [redacted] 013

CONTINUED FROM PAGE 3

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST BOTH GRAB AND 24-HR COMP.	b. GRAB	c. 24-HR COMP.	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS *(continued)*															
22V METHYLENE Chloride (75-09-2)			X												
23V 1122 Tetrachloroethane (79-34-5)			X												
24V Tetrachloroethylene (127-18-4)			X												
25V Toluene (108-88-3)			X												
26V 12 Trans Dichloroethylene (156-60-5)			X												
27V 111 Trichloroethane (71-55-6)			X												
28V 112 Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V Trichlorofluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION — ACID COMPOUNDS															
1A 2 Chlorophenol (95-57-8)			X												
2A 24 Dichlorophenol (120-83-2)			X												
3A 2 4 Dimethylphenol (105-67-9)			X												
4A 4 6 Dinitro O Cresol (534-52-1)			X												
5A 2 4 Dinitrophenol (51-28-5)			X												
6A 2 Nitrophenol (88-75-5)			X												
7A 4 Nitrophenol (100-02-7)			X												
8A P Chloro M Cresol (59-50-7)			X												
9A Pentachlorophenol (87-86-5)			X												
10A Phenol (108-95-2)			X												
11A 246 Trichlorophenol (88-06-2)			X												

CONTINUE ON REVERSE

EPA Form 3510-2C (8-90)

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST ... REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM ... VALUE (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83 32 9)			X												
2B Acenaphtylene (208 96 8)			X												
3B Anthracene (120 12 7)			X												
4B Benzidine (92 87 5)			X												
5B Benzo (a) Anthracene (56 55 3)			X												
6B Benzo (a) Pyrene (50 32 8)			X												
7B 3,4 Benzo fluoranthene (205 99 2)			X												
8B Benzo (ghi) Perylene (191 24 2)			X												
9B Benzo (k) Fluoranthene (207 08 9)			X												
10B Bis (2 Chloro ethoxy) Methane (111 91 1)			X												
11B Bis (2 Chloro ethyl) Ether (111 44 4)			X												
12B Bis (2 Chloro isopropyl) Ether (39638 32 9)			X												
13B Bis (2 Ethyl hexyl) Phthalate (117 81 7)			X												
14B 4 Bromo phenyl Phenyl Ether (101 55 3)			X												
15B Butyl Benzyl Phthalate (85 68 7)			X												
16B 2 Chloro naphthalene (91 58 7)			X												
17B 4 Chloro phenyl Phenyl Ether (7005 72 3)			X												
18B Chrysene (218 01 9)			X												
19B Dibenzo (a,h) Anthracene (53 70 3)			X												
20B 1,2 Dichloro benzene (95 50 1)			X												
21B 1,3 Dichloro benzene (541 73 1)			X												

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CONTINUE ON PAGE 6

CONTINUED FROM PAGE 5

NPDES # (If Assigned)	OUTFALL NUMBER
MO-0098801	013

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK X a. TEST AND REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
279 1,4-Dichlorobenzene (106-46-7)			X												
280 3,3'-Dichlorobenzidine (91-94-1)			X												
281 Diethyl Phthalate (84-66-2)			X												
282 Dimethyl Phthalate (131-11-3)			X												
283 Di-N-Butyl Phthalate (84-74-2)			X												
284 2,4-Dinitrotoluene (121-14-2)			X												
285 2,6-Dinitrotoluene (606-20-2)			X												
286 Di-N-Octyl Phthalate (117-84-0)			X												
287 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
288 Fluoranthene (206-44-0)			X												
289 Fluorene (86-73-7)			X												
290 Hexachlorobenzene (118-74-1)			X												
291 Hexachlorobutadiene (87-68-3)			X												
292 Hexachlorocyclopentadiene (77-47-4)			X												
293 Hexachloroethane (67-72-1)			X												
294 Indeno (1,2,3-cd) Pyrene (193-39-5)			X												
295 Isophorone (78-59-1)			X												
296 Naphthalene (91-20-3)			X												
297 Nitrobenzene (98-95-3)			X												
298 N-Nitrosodimethylamine (62-75-9)			X												
299 N-Nitroso-di-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS (continued)															
43B N-Nitrosodiphenylamine (86-30-6)			X												
44B Phenanthrene (85-01-8)			X												
45B Pyrene (129-00-0)			X												
46B 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P Aldrin (309-00-2)			X												
2P α-BHC (319-84-6)			X												
3P β-BHC (319-85-7)			X												
4P γ-BHC (58-89-9)			X												
5P δ-BHC (319-86-8)			X												
6P Chlordane (57-74-9)			X												
7P 4,4'-DDT (50-29-3)			X												
8P 4,4'-DDE (72-55-9)			X												
9P 4,4'-DDD (72-54-8)			X												
10P Dieldrin (60-57-1)			X												
11P α-Endosulfan (115-29-7)			X												
12P β-Endosulfan (115-29-7)			X												
13P Endosulfan Sulfate (1031-07-8)			X												
14P Endrin (72-20-8)			X												
15P Endrin Aldehyde (7421-93-4)			X												
16P Heptachlor (76-44-8)			X												

CONTINUE ON PAGE 8

CONTINUED FROM PAGE 7

NPDES # (if assigned) MO-0098001 | OUTFALL NUMBER 013

1 POLLUTANT AND CAS NUMBER (if available)	2 MARK "X" a. TESTED REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3 EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION OR QUANTITY	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION OR QUANTITY	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION OR QUANTITY	(2) MASS	d. NO. OF ANAL. YSES	4 UNITS a. CONCEN TRATION	b. MASS	5 INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCEN TRATION	(2) MASS	b. NO. OF ANAL YSES
GC/MS FRACTION — PESTICIDES (continued)															
16. Heptachlor (76-44-8)			X												
17. PCB-1242 (53469-21-9)			X												
18. PCB-1254 (11097-69-1)			X												
19. PCB-1221 (11104-28-2)			X												
20. PCB-1232 (11141-16-5)			X												
21. PCB-1248 (12672-29-6)			X												
22. PCB-1260 (11096-82-5)			X												
23. PCB-1016 (12674-11-2)			X												
24. Toxaphene (8001-35-2)			X												

APPLICATION FOR DISCHARGE PERMIT
Form D — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	014

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"			3. EFFLUENT						4. UNITS			5. INTAKE *(optional)*		
	a. TEST DOES NOT REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE *(if available)* (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE *(if available)* (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)			X												
2M Arsenic Total (7440-38-2)			X												
3M Beryllium Total (7440-41-7)			X												
4M Cadmium Total (7440-43-9)			X												
5M Chromium Total (7440-47-3)			X												
6M Copper Total (7550-50-8)		X		25	.0003					1	ug/l	lbs/d			
7M Lead Total (7439-97-6)		X		<66	.0008					1	ug/l	lbs/d			
8M Mercury Total (7439-97-6)			X												
9M Nickel Total (7440-02-3)		X		<19	<.0002					1	ug/l	lbs/d			
10M Selenium Total (7782-49-2)			X												
11M Silver Total (7440-22-4)			X												
12M Thallium Total (7440-28-0)			X												
13M Zinc Total (7440-66-6)		X		<14	<.0002					1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)			X												
15M Phenols Total		X		1.7	.00002					1	ug/l	lbs/d			
DIOXIN															
2,3,7,8 Tetrachlorodibenzo P Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND C..S NUMBER (if available)	2. MARK "X" a. TEST ING BE QUIRED	b. BE LIEVED PRE SENT	c. BE LIEVED AB SENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO OF ANAL YSES	4. UNITS a. CONCEN TRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCEN TRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO OF ANAL YSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)			X												
2V Acrylonitrile (107-13-1)			X												
3V Benzene (71-43-2)			X												
4V Bis (Chloromethyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)			X												
6V Carbon Tetrachloride (56-23-5)			X												
7V Chlorobenzene (108-90-7)			X												
8V Chlorodibromomethane (124-48-1)			X												
9V Chloroethane (75-00-3)			X												
10V 2-Chloroethylvinyl Ether (110-75-8)			X												
11V Chloroform (67-66-3)			X												
12V Dichlorobromomethane (75-27-4)			X												
13V Dichlorodifluoromethane (75-71-8)				*											
14V 1,1-Dichloroethane (75-34-3)			X												
15V 1,2-Dichloroethane (107-06-2)			X												
16V 1,1-Dichloroethylene (75-35-4)			X												
17V 1,2-Dichloropropane (78-87-5)			X												
18V 1,2-Dichloropropylene (542-75-6) **			X												
19V Ethylbenzene (100-41-4)			X												
20V Methyl Bromide (74-83-9)			X												
21V Methyl Chloride (74-87-3)			X												

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

CONTINUED FROM PAGE 3

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK X a. TEST KNOWN OR BELIEVED PRESENT	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS *(continued)*															
22V METHYLENE Chloride (75-09-2)			X												
23V 1122 Tetrachloroethane (79-34-5)			X												
24V Tetrachloroethylene (127-18-4)			X												
25V Toluene (108-88-3)			X												
26V 12 Trans Dichloroethylene (156-60-5)			X												
27V 111 Trichloroethane (71-55-6)			X												
28V 112 Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V Trichlorofluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION — ACID COMPOUNDS															
1A 2 Chlorophenol (95-57-8)			X												
2A 24 Dichlorophenol (120-83-2)			X												
3A 24 Dimethylphenol (105-67-9)			X												
4A 46 Dinitro O Cresol (534-52-1)			X												
5A 24 Dinitrophenol (51-28-5)			X												
6A 2 Nitrophenol (88-75-5)			X												
7A 4 Nitrophenol (100-02-7)			X												
8A P Chloro M Cresol (59-50-7)			X												
9A Pentachlorophenol (87-86-5)			X												
10A Phenol (108-95-2)			X												
11A 246 Trichlorophenol (88-06-2)			X												

CONTINUE ON REVERSE

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* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST KNOWN OR BELIEVED PRESENT	b. BELIEVED ABSENT	c. BELIEVED ABSENT BASED ON DATA	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
18 Acenaphthene (83 32 9)			X												
28 Acenaphtylene (208 96 8)			X												
38 Anthracene (120 12 7)			X												
48 Benzidine (92 87 5)			X												
58 Benzo (a) Anthracene (56 55 3)			X												
68 Benzo (a) Pyrene (50 32 8)			X												
78 3,4 Benzo fluoranthene (205 99 2)			X												
88 Benzo (ghi) Perylene (191 24 2)			X												
98 Benzo (k) Fluoranthene (207 08 9)			X												
108 Bis (2 Chloro ethoxy) Methane (111 91 1)			X												
118 Bis (2 Chloro ethyl) Ether (111 44 4)			X												
128 Bis (2 Chloro isopropyl) Ether (39638 32 9)			X												
138 Bis (2 Ethyl hexyl) Phthalate (117 81 7)			X												
148 4 Bromo phenyl Phenyl Ether (101 55 3)			X												
158 Butyl Benzyl Phthalate (85 68 7)			X												
168 2 Chloro naphthalene (91 58 7)			X												
178 4 Chloro phenyl Phenyl Ether (7005 72 3)			X												
188 Chrysene (218 01 9)			X												
198 Dibenzo (a,h) Anthracene (53 70 3)			X												
208 1,2 Dichloro benzene (95 50 1)			X												
218 1,3 Dichloro benzene (541 73 1)			X												

CONTINUE ON PAGE 6

CONTINUED FROM PAGE 5

NPDES # (If Assigned) MO-0098001 | OUTFALL NUMBER 014

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B 1,4 Dichlorobenzene (106-46-7)			X												
23B 3,3 Dichlorobenzidine (91-94-1)			X												
24B Diethyl Phthalate (84-66-2)			X												
25B Dimethyl Phthalate (131-11-3)			X												
26B Di-N-Butyl Phthalate (84-74-2)			X												
27B 2,4 Dinitrotoluene (121-14-2)			X												
28B 2,6 Dinitrotoluene (606-20-2)			X												
29B Di-N-Octyl Phthalate (117-84-0)			X												
30B 1,2 Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
31B Fluoranthene (206-44-0)			X												
32B Fluorene (86-73-7)			X												
33B Hexachlorobenzene (118-74-1)			X												
34B Hexachlorobutadiene (87-68-3)			X												
35B Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B Indeno (1,2,3-c,d) Pyrene (193-39-5)			X												
38B Isophorone (78-59-1)			X												
39B Naphthalene (91-20-3)			X												
40B Nitrobenzene (98-95-3)			X												
41B N-Nitrosodimethylamine (62-75-9)			X												
42B N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST REQUIRED BY PERMIT	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
43B N-Nitrosodiphenylamine (86-30-6)			X												
60B Phenanthrene (85-01-8)			X												
45B Pyrene (129-00-0)			X												
46B 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P Aldrin (309-00-2)			X												
2P α-BHC (319-84-6)			X												
3P β-BHC (319-85-7)			X												
4P γ-BHC (58-89-9)			X												
5P δ-BHC (319-86-8)			X												
6P Chlordane (57-74-9)			X												
7P 4,4'-DDT (50-29-3)			X												
8P 4,4'-DDE (72-55-9)			X												
9P 4,4'-DDD (72-54-8)			X												
10P Dieldrin (60-57-1)			X												
11P α-Endosulfan (115-29-7)			X												
12P β-Endosulfan (115-29-7)			X												
13P Endosulfan Sulfate (1031-07-8)			X												
14P Endrin (72-20-8)			X												
15P Endrin Aldehyde (7421-93-4)			X												
16P Heptachlor (76-44-8)			X												

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CONTINUED FROM PAGE 7

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 014

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TEST(S) REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL YSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — PESTICIDES (continued)															
[illegible]heptachlor [illegible] 1024-57-3)			X												
16. PCB-1242 (53469-21-9)			X												
17. PCB-1254 (11097-69-1)			X												
18. PCB-1221 (11104-28-2)			X												
PCB-1232 (11141-16-5)			X												
PCB-1248 (12672-29-6)			X												
20. PCB-1260 (11096-82-5)			X												
21. PCB-1016 (12674-11-2)			X												
22. Toxaphene (8001-35-2)			X												

EPA Form 3510-2C

APPLICATION FOR DISCHARGE PERMIT
Form D — Primary Industries

TABLE II

NPDES # *(If Assigned)*	OUTFALL NUMBER
MO-0098001	015

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table *(all seven pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"			3. EFFLUENT						4. UNITS			5. INTAKE *(optional)*		
	a. TEST DOES NOT REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE *(if available)* (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE *(if available)* (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony Total (7440-36-0)			X												
2M Arsenic Total (7440-38-2)			X												
3M Beryllium Total (7440-41-7)			X												
4M Cadmium Total (7440-43-9)			X												
5M Chromium Total (7440-47-3)			X												
6M Copper Total (7550-50-8)		X		22						1	ug/l	lbs/d			
7M Lead Total (7439-97-6)		X		<66						1	ug/l	lbs/d			
8M Mercury Total (7439-97-6)			X												
9M Nickel Total (7440-02-0)		X		<19						1	ug/l	lbs/d			
10M Selenium Total (7782-49-2)			X												
11M Silver Total (7440-22-4)			X												
12M Thallium Total (7440-28-0)			X												
13M Zinc Total (7440-66-6)		X		<14						1	ug/l	lbs/d			
14M Cyanide Total (57-12-5)			X												
15M Phenols Total		X		1.7						1	ug/l	lbs/d			
DIOXIN															
2,3,7,8 Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANAL. YSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANAL. YSES
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)			X												
2V Acrylonitrile (107-13-1)			X												
3V Benzene (71-43-2)			X												
4V Bis (Chloromethyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)			X												
6V Carbon Tetrachloride (56-23-5)			X												
7V Chlorobenzene (108-90-7)			X												
8V Chlorodibromomethane (124-48-1)			X												
9V Chloroethane (75-00-3)			X												
10V 2-Chloroethylvinyl Ether (110-75-8)			X												
11V Chloroform (67-66-3)			X												
12V Dichlorobromomethane (75-27-4)			X												
13V Dichlorodifluoromethane (75-71-8)				*											
14V 1,1-Dichloroethane (75-34-3)			X												
15V 1,2-Dichloroethane (107-06-2)			X												
16V 1,1-Dichloroethylene (75-35-4)			X												
17V 1,2-Dichloropropane (78-87-5)			X												
18V 1,2-Dichloropropylene (542-75-6) **			X												
19V Ethylbenzene (100-41-4)			X												
20V Methyl Bromide (74-83-9)			X												
21V Methyl Chloride (74-87-3)			X												

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

** This parameter is 1,3 Dichloropropylene per 40 CFR 122, Appendix D.

PO-0098001

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TEST-ING REQUIRED BY PERMIT	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — VOLATILE COMPOUNDS *(continued)*															
22V METHYLENE Chloride (75-09-2)			X												
23V 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V Tetrachloroethylene (127-18-4)			X												
25V Toluene (108-88-3)			X												
26V 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V 1,1,1-Trichloroethane (71-55-6)			X												
28V 1,1,2-Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V Trichlorofluoromethane (75-69-4)				*											
31V Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION — ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)			X												
2A 2,4-Dichlorophenol (120-83-2)			X												
3A 2,4-Dimethylphenol (105-67-9)			X												
4A 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A 2,4-Dinitrophenol (51-28-5)			X												
6A 2-Nitrophenol (88-75-5)			X												
7A 4-Nitrophenol (100-02-7)			X												
8A P-Chloro-M-Cresol (59-50-7)			X												
9A Pentachlorophenol (87-86-5)															
10A Phenol (108-95-2)			X												
11A 2,4,6-Trichlorophenol (88-06-2)			X												

CONTINUE ON REVERSE

EPA 1510

* These parameters have been deleted from QC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	c. LONG TERM AVG. VALUE (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS															
48 Acenaphthene (83 32 9)			X												
78 Acenaphtylene (208 96 8)			X												
32 Anthracene (120 12 7)			X												
42 Benzidine (92 87 5)			X												
56 Benzo (a) Anthracene (56 55 3)			X												
88 Benzo (a) Pyrene (50 32 8)			X												
72 3 4 Benzo fluoranthene (205 99 2)			X												
89 Benzo (ghi) Perylene (191 24 2)			X												
55 Benzo (k) Fluoranthene (207 08 9)			X												
160 Bis (2 Chloro ethoxy) Methane (111 91 1)			X												
156 Bis (2 Chloro ethyl) Ether (111 44 4)			X												
158 Bis (2 Chloro isopropyl) Ether (39638 32 9)			X												
138 Bis (2 Ethyl hexyl) Phthalate (117 81 7)			X												
148 4 Bromo phenyl Phenyl Ether (101 55 3)			X												
150 Butyl Benzyl Phthalate (85 68 7)			X												
164 2 Chloro naphthalene (91 58 7)			X												
178 4 Chloro phenyl Phenyl Ether (7005 72 3)			X												
188 Chrysene (218 01 9)			X												
166 Dibenzo (a h) Anthracene (53 70 3)			X												
202 1 2 Dichloro benzene (95 50 1)			X												
210 1 3 Dichloro benzene (541 73 1)			X												

CONTINUE ON PAGE 6

CONTINUED FROM PAGE 5

NPDES # (If Assigned) MO-0098001

OUTFALL NUMBER 015

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS *(continued)*															
22B 1,4-Dichlorobenzene (106-46-7)			X												
23B 3,3-Dichlorobenzidine (91-94-1)			X												
24B Diethyl Phthalate (84-66-2)			X												
25B Dimethyl Phthalate (131-11-3)			X												
26B Di-N-Butyl Phthalate (84-74-2)			X												
27B 2,4-Dinitrotoluene (121-14-2)			X												
28B 2,6-Dinitrotoluene (606-20-2)			X												
29B Di-N-Octyl Phthalate (117-84-0)			X												
30B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
31B Fluoranthene (206-44-0)			X												
32B Fluorene (86-73-7)			X												
33B Hexachlorobenzene (118-74-1)			X												
34B Hexachlorobutadiene (87-68-3)			X												
35B Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B Indeno (1,2,3-c,d) Pyrene (193-39-5)			X												
38B Isophorone (78-59-1)			X												
39B Naphthalene (91-20-3)			X												
40B Nitrobenzene (98-95-3)			X												
41B N-Nitrosodimethylamine (62-75-9)			X												
42B N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TEST REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS (continued)															
43B 2-Nitrosodiphenylamine (86-30-6)			X												
44B Phenanthrene (85-01-8)			X												
45B Pyrene (129-00-0)			X												
46B 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION — PESTICIDES															
1P Aldrin (309-00-2)			X												
2P α-BHC (319-84-6)			X												
3P β-BHC (319-85-7)			X												
4P γ-BHC (58-89-9)			X												
5P δ-BHC (319-86-8)			X												
6P Chlordane (57-74-9)			X												
7P 4,4'-DDT (50-29-3)			X												
8P 4,4'-DDE (72-55-9)			X												
9P 4,4'-DDD (72-54-8)			X												
10P Dieldrin (60-57-1)			X												
11P α-Endosulfan (115-29-7)			X												
12P β-Endosulfan (115-29-7)			X												
13P Endosulfan Sulfate (1031-07-8)			X												
14P Endrin (72-20-8)			X												
15P Endrin Aldehyde (7421-93-4)			X												
16P Heptachlor (76-44-8)			X												

CONTINUED ON PAGE 8

CONTINUED FROM PAGE 7

NPDES # (If assigned) MO-0098001 | OUTFALL NUMBER 015

1. POLLUTANT AND CAS NUMBER (If available)	2. MARK "X" a. TEST(S) REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION — PESTICIDES (continued)															
[illegible]-Heptachlor Epoxide 1024-57-3			X												
PCB-1242 53469-21-9			X												
PCB-1254 11097-69-1			X												
PCB-1221 11104-28-2			X												
PCB-1232 11141-16-5			X												
PCB-1248 12672-29-6			X												
PCB-1260 11096-82-5			X												
PCB-1016 12674-11-2			X												
Toxaphene 8001-35-2			X												

EPA 1 (Rev. 3-73)

2.00 POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. Is any pollutant listed in Item 1.30 a substance or a component of a substance which you do or expect that you will over the next 5 years use or manufacture as an intermediate or final product or byproduct?

☒ **YES** *(list all such pollutants below)* ☐ **NO** *(go to B)*

The following substances are used in our chemical laboratories and might be present in trace quantities in our discharges (see Attachment E); Antimony, Chromium, Copper, Lead, Mercury, Nickel, Phenols and Silver.

The following solvents are used on the plant site but are not believed present in our discharges: Trichloroethane, Trichloroethene, Tetrachloroethene, Toluene, and Methylene Chloride.

The following metals are produced as a by-product of the fission process and trace quantities may be present as radioisotopes in Outfall 001: Antimony, Chromium, and Silver.

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharges of pollutants may during the next 5 years exceed two times the maximum values reported in Item 1.30?

☒ **YES** *(complete C below)* ☐ **NO** *(go to Section 3.00)*

C. If you answered "Yes" to Item B, explain below and describe in detail the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years, to the best of your ability at this time. Continue on additional sheets if you need more space.

Waste streams can be expected to exhibit variability as the result of varying influent water quality. Variability in intake water quality due to the effects of rainfall, runoff and upstream pollutant discharges might cause the discharge value on a gross basis to exceed two times the maximum values reported in Item 1.30.

3.00 CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in 1.30 performed by a contract laboratory or consulting firm?

☒ **YES** *(list the name, address, and telephone number of, and analyzed by, each such laboratory or firm below)* ☐ **NO** *(go to 4.00)*

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED
Envirodyne Engineers	1908 Innerbelt Business Center Drive St. Louis, MO 63114	314/426-0880	See Attachment F

4.00 CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. PHONE NO. *(area code & no.)*
D. F. Schnell Senior Vice President, Nuclear	314/554-2650
C. SIGNATURE Donald F. Schnell	**D. DATE SIGNED** 21 May 90

Attachment A
Description of Outfalls

001) Radwaste Treatment System

This system serves to collect, process, store, recycle and dispose of liquid radioactive waste generated at Callaway. Five general sub-systems can be defined as described below.

The Boron Recycle System receives reactor coolant for the purpose of recovering the boric acid for reuse in the plant. Boric acid is used as a neutron absorber/moderator in the primary loop.

The Liquid Radwaste System collects and processes floor and equipment drains from the containment, auxiliary building, fuel building and radwaste buildings during normal operation. However, during outages, non-radioactive drainage from equipment in these buildings may be treated by the Oily Waste System as described in Attachment C.

The Laundry and Hot Shower system collects waste generated from washing radioactively contaminated protective gear and clothing and personnel decontamination shower wastewater. These wastes are then transferred to the liquid Radwaste system for treatment.

The Secondary Liquid Waste system is used to process condensate demineralizer regeneration wastes and potentially radioactive liquid waste collected from the turbine building. The condensate demineralizer regeneration waste is divided into two wastestreams; High TDS waste from the acid and caustic rinses used when chemically regenerating spent resin, and low TDS waste which results from the initial backflushing of unregenerated resin and the final rinsing of the regenerated resin to remove acid and caustic.

Steam Generator Blowdown is normally demineralized and recycled to the main condenser for reuse in the secondary cycle. Provisions also exist to discharge the treated blowdown via 001.

It should be noted that the radwaste treatment system is specifically designed for flexibility to achieve Nuclear Regulatory Commission (NRC) limitations. Actual treatment for any given batch of wastewater is dictated by the following criteria.

1) The level of radiological contamination and the corresponding NRC mandated discharge criteria.

2) The NPDES permit discharge limitations.

3) The most effective waste treatment scheme that will give the smallest volume of solid radwaste.

4) Overall wastestream management - processing and holdup rates, volumes of other wastestreams requiring treatment or storage, etc.

5) The need, feasibility and economics of the recycle versus discharge options.

The following wastewater treatment systems are used as required to treat this wastestream for recycle or discharge in compliance with NRC requirements and are also available as auxiliary or backup treatment systems to treat this discharge for compliance with NPDES permit limitations: Evaporation and/or Mixing and/or Filtration and/or Carbon Adsorption and/or Ion Exchange and/or Neutralization and/or Reuse/Recycle of Treated Effluent. All processing in the Radwaste Treatment System is done on a batch basis except steam generator blowdown. After monitoring for radioactive content, release rates are controlled administratively to ensure the "as low as practicable" radioactive discharge criteria are met.

002) Cooling Tower Blowdown

A cooling tower is utilized to dissipate excess heat to the atmosphere from the Circulating and Service Water Systems. Outfall 002 is designated as the cooling tower blowdown discharge. Blowdown from the cooling tower is necessary to maintain dissolved solids concentration in the recirculating water within acceptable operating limits.

003) Water Treatment Plant Wastes

The water treatment plant supplies clarified river water for cooling tower makeup and various other plant systems. The suspended material that is removed from the river water is drawn from the bottom of the clarifiers as sludge. This sludge is routed to a sedimentation lagoon for solids removal. The oil separator discharge, previously designated as Outfall 005, is also routed to this sedimentation lagoon. The supernatant from this sedimentation lagoon is designated as Outfall 003. Outfall 003 is normally recycled by routing it back to the head of the water treatment plant. Filter backwash from the sand and carbon filters are also a component of this outfall.

004) Demineralizer System Wastes

The demineralized water system (DWS) is used to produce the high quality makeup water required by some plant processes. A well on the plant site is used as the water source for the DWS. Outfall 004 consists of wastes generated from resin regeneration and miscellaneous wastes from floor drainage and wet well overflows. These waste streams are routed to a sedimentation pond prior to discharge.

005) Oil Separator Discharge

Outfall 005 has been eliminated by combining it with other waste streams that are recycled so that it can be reused in the plant. This modification was communicated to the DNR in a letter dated February 1, 1988.

007) Sanitary Treatment Plant (STP)

Outfall 007 is defined as the sanitary wastewater treatment system discharge. The existing system consists of two 25,000 gallon aerated surge tanks, two 20,000 gallon per day extended aeration treatment units and a 7,500 gallon sludge holding tank. The STP sludge is currently trucked to the city of Fulton treatment plant for further treatment and disposal.

This outfall has an optional flow path shown on the flow diagram, which may be used to temporarily eliminate the discharge. During emergency conditions the sanitary treatment plant (STP) effluent will be routed to the water treatment plant stilling basin, for recycle, using temporary pumps and piping. There are two potential conditions which would require the use of this option:

1) Any extended outage of the plant discharge line, as may be required for intermittent maintenance, would require isolation of discharges into the line. Diversion of STP effluent during these periods would allow continued processing of sanitary wastewater and minimize impacts due to flow fluctuations on the treatment plant.

2) In the event of an STP upset, the effluent may also be diverted. This would allow for identification and resolution of the cause of the upset, while preventing continued discharge of poor quality effluent.

008) Chemical Water Treatment Unit

Outfall 008 has been eliminated and it should be deleted from the permit.

009) Intake Heater Blowdown

The river intake structure contains two recirculating electric heaters which are used to prevent ice formation on the intake bar screens during the winter months. Outfall 009 consists of discharges from the infrequent blowdown or drainage of these boilers. Past usage of this outfall has been minimal since river conditions have not warranted their use. The boilers are currently kept in a dry lay up condition, but it is planned to put one boiler in a wet lay up standby condition during the winter months.

010- Storm Water Runoff (SWR)
015)

These six outfalls discharge storm water runoff from plant and associated areas. No process wastewater is intentionally released on site so these outfalls are not expected to contain process wastewater. Non-process discharges that will be discharged to SWR include three intermittent sources. Two sources are the quarterly testing of the fire protection drains and the infrequent draining of the demineralized water storage tank. The third source is the pumping of manholes, transformer and tank containments at the plant. See Attachment B for additional details.

Outfall Legal Descriptions

Outfall	1/4	1/4	Sec	T	R
001	NE	NE	14	46N	8W
002	NW	NW	13	46N	8W
003	SW	NW	13	46N	8W
004	SE	SW	13	46N	8W
007	NE	SE	14	46N	8W
009	NW	NW	5	45N	7W
010		SW	12	46N	8W
011		SW	12	46N	8W
012		E1/2	14	46N	8W
013		E1/2	14	46N	8W
014		SE	11	46N	8W
015		SE	11	46N	8W

Note that the legal descriptions for outfalls 001, 002, 003, 004, and 007 identify their point of connection to the plant discharge line. However, all effluent from these outfalls is discharged to the Missouri River, via the plant discharge line, adjacent to the plant intake (see legal description for outfall 009).

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Attachment B

Site Storm Water Runoff (SWR) Description

SWR from areas at the plant that are affected by plant activities is directed by ditches and other conveyances to sedimentation ponds prior to discharge. The main conveyances that leave plant areas are shown on the following diagram. The actual outfalls are the discharges from the sedimentation ponds, and they are designated as Outfalls 010-015. No process wastewater is intentionally released on site to SWR, however, there are three categories of point sources that contribute to SWR.

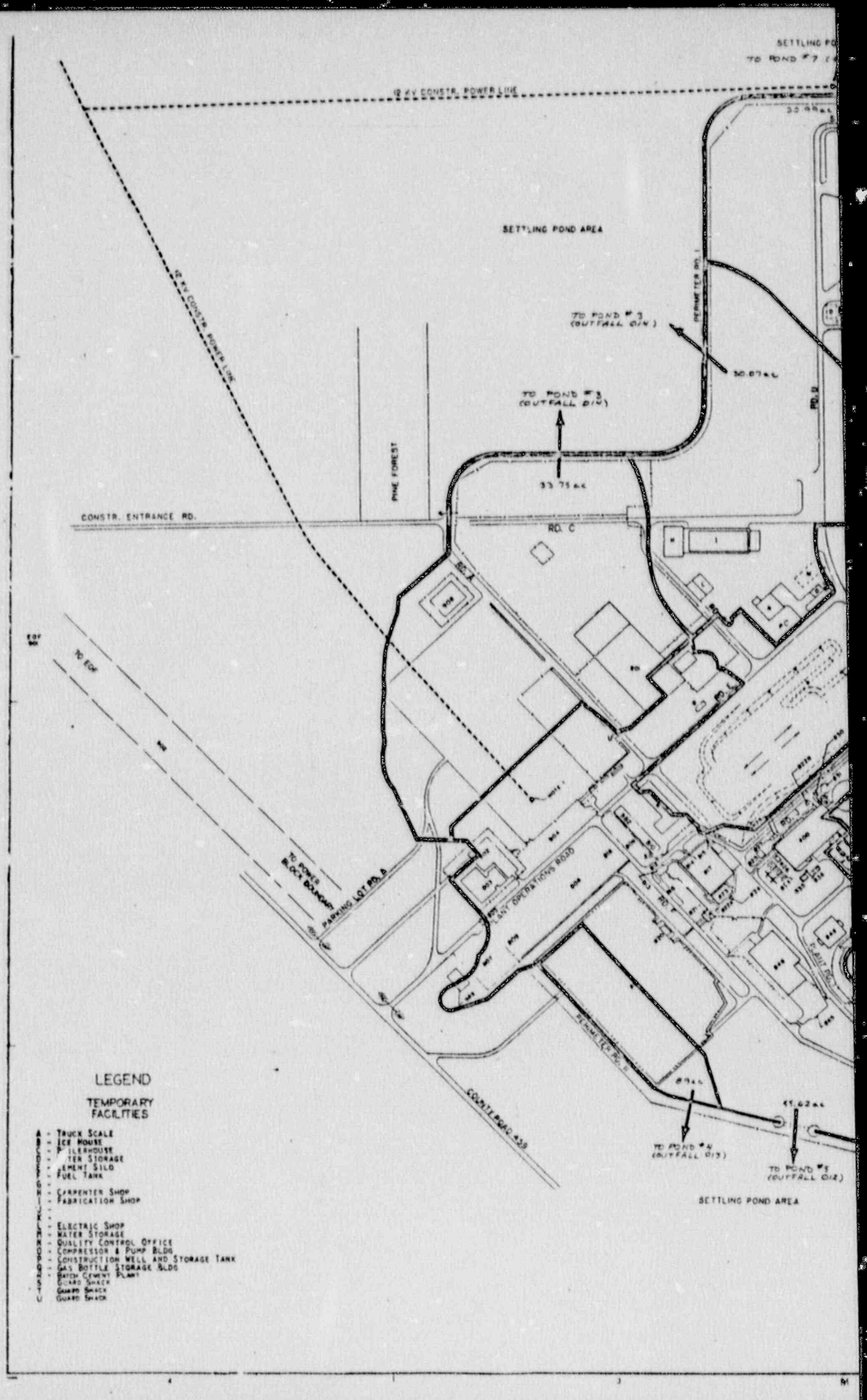
Transformer Sumps - Oil filled transformers at Callaway have sumps to catch oil in the event of transformer leakage or rupture. Periodically these sumps require pumping to remove accumulated stormwater. The sumps are pumped to SWR provided that there is no oil sheen and the pH at the start of pumping is between 6.0 and 9.0. Note that oil filled transformers at Callaway contain non-PCB oil.

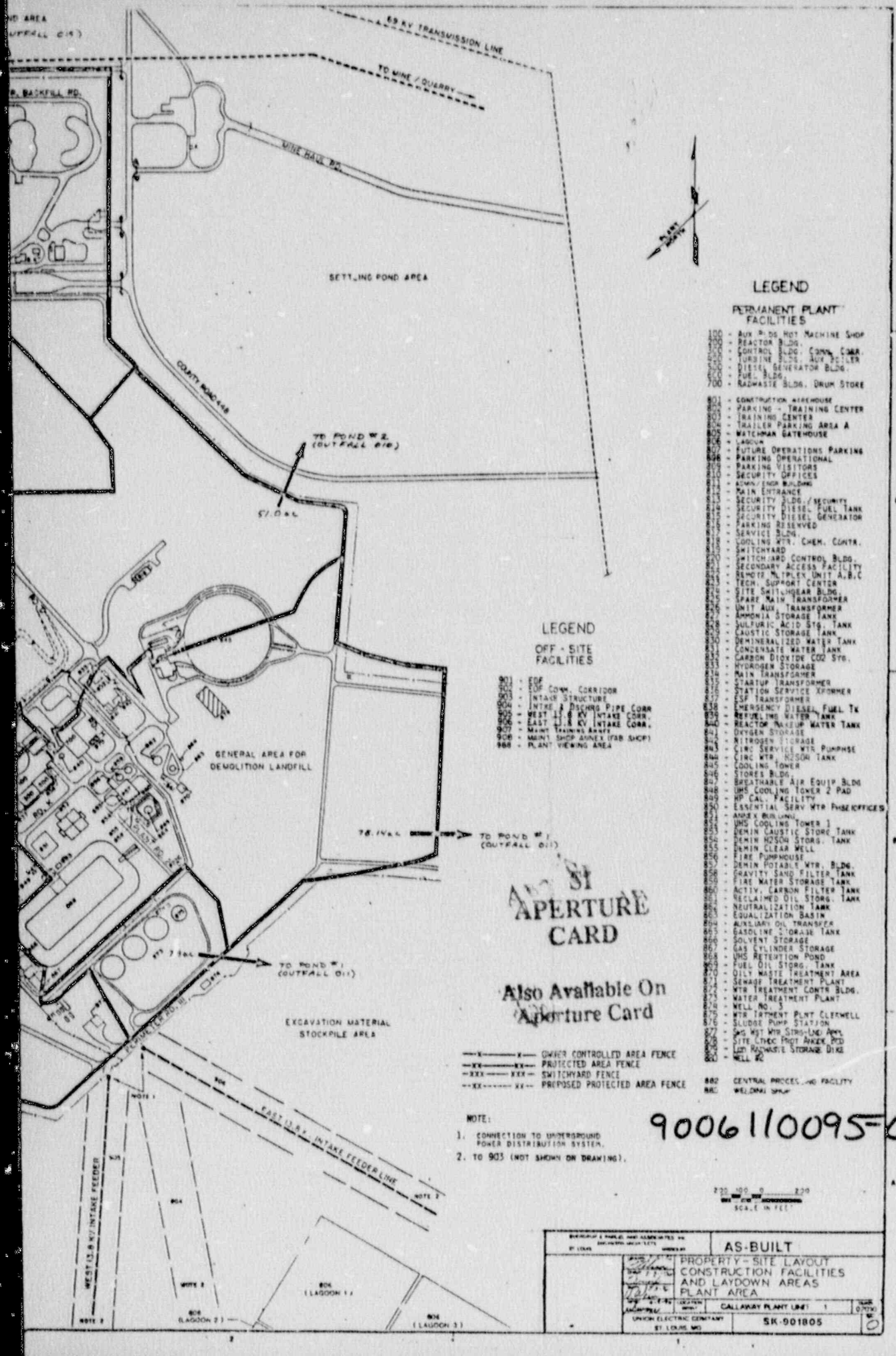
Tank Containments - There are containment structures around above ground tanks at the plant. These tanks generally contain oil or products that are acidic or basic. Storm water that collects in the containments is pumped to runoff ditches on site after verifying that there is no oil sheen on the water and the pH of the water is between 6.0 and 9.0.

Manholes - There are many manholes at the plant that need to be pumped periodically to remove accumulated storm water. To evaluate potential corrosion byproducts, these manhole discharges were sampled and analyzed for zinc during first quarter 1990, per our discussions with DNR staff. Results of this test program were submitted in letters dated February 2 and May 18, 1990. Elevated levels of zinc were detected in some samples and are attributed to corrosion of galvanized supports. The testing generally indicates that the zinc concentration may be reduced by maintaining water levels below the galvanized supports. We plan to continue routine pumping of some manholes to SWR which will maintain lower water levels. This approach will reduce the zinc releases associated with routine manhole discharges.

The required checks for the water pumped from transformer sumps and tank containments mentioned above are currently in plant procedures. We believe these procedures adequately control releases from these point sources.

One other source of water that is released to SWR is the infrequent pumping of storm water that collects in the Unit Two basin. Since no process waste is released to this basin, the stormwater that collects in this basin is not contaminated. Note that Attachment D also describes other noncontaminated sources of water that are released to SWR.


SETTLING POND AREA
TO POND #3 (OUTFALL 014)
TO POND #3 (OUTFALL 014)
50.67 ac
33.75 ac
PERIMETER RD. I
RD. D
PINE FOREST
CONSTR. ENTRANCE RD.
RD. C
RD. A
TO EOF
TO POWER BLOCK BUNKER
PARKING LOT RD. B
QUARRY OPERATIONS ROAD
PERIMETER RD. II
COUNTY ROAD 439
8.9 ac
11.62 ac
TO POND #4 (OUTFALL 013)
TO POND #5 (OUTFALL 012)
SETTLING POND AREA
LEGEND
TEMPORARY FACILITIES
A - TRUCK SCALE
B - ICE HOUSE
C - BOILERHOUSE
D - WATER STORAGE
E - CEMENT SILO
F - FUEL TANK
G -
H - CARPENTER SHOP
I - FABRICATION SHOP
J -
K -
L - ELECTRIC SHOP
M - WATER STORAGE
N - QUALITY CONTROL OFFICE
O - COMPRESSOR & PUMP BLDG.
P - CONSTRUCTION WELL AND STORAGE TANK
Q - GAS BOTTLE STORAGE BLDG
R - BATCH CEMENT PLANT
S - GUARD SHACK
T - GUARD SHACK
U - GUARD SHACK



Attachment C
Description of Intermittent Flows

Nine of the twelve outfalls defined in this application can be considered to include intermittent discharges since they process and/or release wastewater in discrete batches. Each is described below.

I. Routine Releases

001 - Radwaste Treatment - All of the subsystems described in Attachment A, except steam generator blowdown, process or release discrete batches of wastewater. The frequency and magnitude of each is highly variable. However, discharge flow rates are relatively constant. The current system typically produces discharge flows of approximately 400 gpm.

During recovery from major plant outages and other unusual transient conditions, it may be necessary to discharge steam generator blowdown. The discharge flow rate varies up to 360 gpm, resulting in a maximum daily discharge flow of up to 518,400 gallons. Past history has shown that discharge of steam generator blowdown occurs very infrequently. Since this discharge is used very infrequently, the steam generator blowdown flow was not included in the maximum flows shown in Form C, Item 2.40. Steam generator blowdown is typically treated by demineralization. Test data from a sample taken in February, 1990 (during recycle) represents the typical blowdown water quality:

- Form C, Table A Parameters -

TSS	<0.1 mg/l
Ammonia	0.13 mg/l
Flow	260,000 gpd
Temperature	113°F
pH	6.28

- Form C Table B Parameters

Sulfate	<0.001 mg/l
Iron	0.025 mg/l

- Form D Table 1.30 Believed Present Metals

Chromium	<0.01 mg/l
Nickel	<0.01 mg/l

003 - Water Treatment Plant Wastes - This outfall is normally recycled so expected discharge flow would be zero. However, conditions may warrant this outfall to be discharged instead of recycled. It is estimated that this would only happen once a year.

009 - Intake Heater Blowdown - Discharges from this outfall are seasonal and intermittent. During winter operational periods, it is estimated that blowdown will occur approximately once per week (less than 100 gallons). Anticipated annual drainage is approximately 6,000 gallons.

010-015 - Storm Water Runoff - These outfalls will only discharge for periods during and following storm events. Actual discharge will be dependent upon the amount of precipitation received during the storm, the runoff coefficient of the drainage area and the amount of freeboard in the sedimentation pond.

II. Discharges During Plant Outages

It is necessary to drain many systems during plant outages for inspections and maintenance. In order to ensure that this water is of the same quality as water that is discharged during operations, some additional/alternate monitoring is performed.

When the cooling tower basin, and/or associated lines (between the basin and the power block) are drained, a single grab sample will be obtained and analyzed to verify compliance with Outfall 002 permit limits prior to discharge. This alternate monitoring will be performed since continuous monitoring will not be possible at all times during the draining of these systems.

Various non-radioactive systems in the Auxiliary Building have been drained in the past to floor drains in the Auxiliary Building to allow for inspection and maintenance. The floor drains from the Auxiliary Building are normally routed to the Radwaste System for processing and treatment. Since it is not necessary to process these non-radioactive liquid wastes through the Radwaste System, it is planned to divert non-radioactive Auxiliary Building equipment drainage during outages that require systems to be drained. The wastewater drained from these non-radioactive systems during outages will be diverted to the Oily Waste Processing System for treatment prior to being recycled or discharged from Outfall 003.

Attachment D
Other Discharges

1. Intake Structure Stilling Basin - The stilling basin at the intake structure receives flow from the excess flow of intake pumps and the intake sump and returns this flow to the river. As this flow is not contaminated with process waste, it is our position that this flow is a return of river water back to the river.

2. Cooling Tower Bypass - As previously identified, there is a bypass valve between the cooling tower clarified water makeup line and the cooling tower blowdown line. This bypass supplies treated water to meet Nuclear Regulatory Commission (NRC) requirements for discharges from the radwaste treatment system when cooling tower blowdown by itself is insufficient to meet the NRC requirements. Flow through this bypass may vary from 0-10,000 gpm based on cooling tower blowdown flow and NRC limits.

   Seasonally we chlorinate the clarifiers to control algae growth. Plant procedures ensure isolation of the bypass line during these periods. Before resuming bypass flow, the makeup water is tested to confirm that there is no detectable chlorine residual.

   As this discharge is essentially the return of (clarified) river water back to river, it is our opinion that it does not meet the criteria necessary for permitting as an NPDES outfall.

   Note that the startup and maintenance of our three clarifiers sometimes requires that we discharge treated or partially treated water. The Cooling Tower Bypass valve, or other permanent or temporary drainage connections may be used intermittently to release this possibly off-specification (greater than 15 mg/l total suspended solids) river water. Since the quality of this water will be equivalent to or better than river water, we view such releases to be equivalent to those above.

3. Fire Protection Drain Test Connections - In accordance with the National Fire Protection Association's (NFPA) Standard, fire protection drain connections are tested on a quarterly basis. The test consists of opening valves and monitoring the water delivery rates. Approximately 40 such connections are located throughout the plant. A number of these cannot be discharged into the areas in which they are located as it would create a nuisance or hazard to the local equipment or personnel. Therefore, temporary or permanent pipes or hoses are used to divert this water outside various buildings into adjacent grounds. The water source is two fire protection tanks containing only filtered groundwater from the demineralized water

system. In addition, maintenance requirements for these tanks require draining and refilling approximately once every five years. Each of these tanks has a capacity of 300,000 gallons.

4. Demineralized Water Storage Tank - On infrequent occasions, this tank may become contaminated with low levels of silica or sulfate from the makeup demineralizers. If this occurs, this water cannot be used as makeup to the plant and, therefore, must be directed to waste. The tank is drained to the stormwater runoff system at a rate of approximately 50-100 gpm. The total volume is 50,000 gallons per tank. Overall water quality is high, with typical TSS of < 1 mg/l and pH in the range of 6 to 8.

5. Ultimate Heat Sink (UHS) Pond - Callaway Plant has a single water retention pond which serves as the ultimate heat sink (UHS) for the Essential Service Water System (ESWS). The ESWS provides water for cooling of safety related equipment and is utilized in the event the Service Water System becomes inoperable. When the ESWS is operating, water is pumped from the UHS pond through power block equipment, a dedicated mechanical draft cooling tower, and back to the pond. The UHS pond has a spillway which is connected to the plant stormwater runoff system. Makeup water for the UHS pond is supplied by the treated water plant and is added when the pond level drops below a 2 foot freeboard as measured from the UHS spillway. Makeup water to the pond ceases once an 18 inch freeboard level is reached. There is a high water level alarm on the pond which is set at a 12 inch freeboard. Freeboard is maintained to ensure containment of a 10 year 24 hour storm event. In a letter dated February 5, 1990, we informed your department of a change to the high level alarm so that it now alarms on the main control board. This higher level of visibility of the alarm will help ensure sufficient freeboard is maintained. In the event water levels were to increase in the pond, levels would be reduced by pumping water from the pond to the cooling tower basin through the ESWS. We do not anticipate any releases from the UHS pond.

Attachment E
Chemical Usage

The various chemical compounds that may occur in the discharges from Callaway Plant during normal operation fall into three usage categories.

Bulk Usage

This group of compounds describes chemicals which are added directly to specific water systems for treatment at some regular rate or interval. Table 1 lists these chemicals along with their predominant function and potential discharge points.

Laboratory Reagents

This category consists of a group of compounds stored and used in the plants four on-site laboratories. The predominant characteristic of this group is the relatively low usage which would result in negligible levels in the effluent. Laboratory reagents may be discharged through the radwaste treatment Outfall 001, and sanitary wastewater Outfall 007. At the request of the Department, Union Electric will provide an inventory of these chemical compounds.

Other Chemical Compounds

This grouping includes other chemical compounds which may be discharged and are not included in the previous lists. General housekeeping and maintenance chemicals, and erosion/corrosion products or byproducts from the Plant's infrastructure or fuel materials, are not individually assessed. However, the Form C and D analytical data should reflect any contributions from routine use of these compounds. Note that 12% sodium hypochlorite identified in Table 1 is also used to clean the intake well periodically. Less than 1,000 gallons of 12% sodium hypochlorite are used annually for intake well cleaning.

Table 1
Bulk Chemical Usage - Callaway

1) Ammonium hydroxide - used for pH control in recirculating water systems; Outfalls 001, 003 and 009.

2) Aquazine - an algae control chemical used seasonally in the ultimate heat sink.

3) Boric acid - used as a neutron moderator to provide reactivity control; Outfall 001.

4) Dispersants - (organic polymers - principally phosphate based) used to reduce solids deposition in the circulating and service (cooling tower) water systems; Outfall 002.

5) Ethylene Glycol - used as freeze protection in recirculating water systems; Outfalls 001, 003 and 007.

6) Hydrazine - used for dissolved oxygen control in recirculating water systems; Outfalls 001, 003 and 009.

7) Hydrogen Peroxide - used as a chemical shock and biocide treatment in water systems; Outfall 001.

8) Lithium hydroxide - used for pH control in the primary loop; Outfall 001.

9) Nitrite/borate products (solutions) - used as corrosion inhibitors in recirculating water systems: Outfalls 001 and 003.

10) Coagulants - proprietary compounds are used as a coagulant in the water treatment plant. While we are currently using NALCO products, we will begin using Western Water Management's Westo-Floc 222 P, 900 N and/or 260 P; Outfall 003.

11) Sodium hydroxide - used for regenerating demineralizer resins and for pH control in various wastewater systems; Outfalls 001, 004 and 009.

12) Sodium hypochlorite - used as a biocide in the circulating, service, water treatment, ultimate heat sink, and potable water systems; Outfall 002.

13) Sodium molybdate - used as a corrosion inhibitor in recirculating water systems; Outfall 001 and 003.

14) Sodium sulfite - used as an oxygen scavenger and for conductivity control in the intake structure heaters; Outfall 009.

15) Sodium tolytriazole - used as a copper corrosion inhibitor; Outfalls 001, 002 and 003.

16) Sulfuric acid - used for regenerating demineralizer resins and for pH control in various water and wastewater systems; Outfalls 001, 002, 004 and 009.

17) Zinc Based Corrosion Inhibitor - a proprietary zinc compound is used as a corrosion inhibitor in the circulating and service water systems. While we are currently using a NALCO product, we will soon begin using Western Water Management's Zinc 444 Plus; Outfall 002.

Attachment F
NPDES Sampling and Analysis

The chemical analysis of the various wastestreams reported in this application came from two principal sources: 1) discharge monitoring data as required by our existing NPDES permit, and 2) a special sampling and analytical project conducted late January and early February, 1990.

The reapplication sampling effort was conducted by plant personnel. Power generation at the plant averaged in excess of 90% of capacity during the sampling period.

Note that some special sampling techniques were used. The intermittent or batch discharge of some of the outfalls made it necessary to deviate from the reapplication sampling instructions. Each sample location is discussed below to clarify these details and to allow the data to be interpreted correctly.

For the sampling project, plant personnel performed analysis for those parameters requiring on-site analysis. Other analysis was performed by Envirodyne Engineers. All analyses were conducted in accordance with Standard Method and/or EPA methodology. Specific test methods or additional detail on other aspects of the sampling or analysis program is available at your request.

Outfall 001

As previously defined, routine discharges from this outfall are from one of five sources - the Boron Recycle System, the Liquid Radwaste System, Laundry and Hot Shower system, Secondary Liquid Waste system, and (less frequently) Steam Generator Blowdown. While processed separately, these wastestreams, except for Steam Generator Blowdown, are normally commingled and retained in various tanks prior to discharge. Thus, discrete samples of each subsystem were not obtained. Further, Steam Generator Blowdown was recycled without discharge during our sampling project schedule. (See Attachment C, concerning blowdown analysis).

In view of the above conditions and the necessity that plant operations not be constrained by the testing program, the following approach was utilized. One sample was taken from Discharge Monitor Tank B on January 30, 1990. The sample was a single sample taken from a well mixed tank (under recirculating conditions) prior to release. Discharge Monitor Tank B was the only discharge from Outfall 001 during this 24 hour period. The values shown in the following Maximum Daily Value columns reflect

the corresponding analytical data and total masses calculated from this data.

1) Form C, Table I, Item 3.00

   a) A, Heading 2a, and

   b) B, Heading 3 a, and

2) Form D, Item 1.30, Heading 3a,

The analyses in the above tables were performed by Envirodyne Engineers with the exception of the pH and beta analyses that were performed by plant personnel.

Data under "Maximum 30 Day" and "Long Term Average" values are based on DMR data from February, 1989 through January, 1990 inclusive. The maximum thirty day value for maximum and minimum pH values indicate the maximum monthly average for pH and the minimum monthly average for pH. These pH averages were reported since the minimum and maximum pH for the day is usually the same due to the fact that only one pH value is recorded for the day.

Outfall 002

Cooling tower blowdown was sampled over a 24 hour period on January 29 and 30, 1990. The discharge was maintained at a constant flow rate of 4200 gpm. Flow proportional composite and multiple grab samples were taken as appropriate.

The analyses for this outfall were performed by Envirodyne Engineers with the exception of the pH and chlorine analyses that were performed by plant personnel.

Data under "Maximum 30 Day" and "Long Term Average" values are based on DMR data from February, 1989 through January, 1990 inclusive.

Outfall 003

Water treatment plant wastes are routed to a sedimentation lagoon before being recycled or discharged. The sedimentation lagoon has a holdup time of greater than 24 hours for the waste water discharged to it. The long holdup time of this sedimentation lagoon allows one grab sample to be representative of this outfall. One grab sample for all analyses was taken from the discharge of this outfall on January 25, 1990 while this outfall was being recycled.

The 34 mg/l TSS value may have been due to limited settling volume in the sedimentation lagoon at the time of sampling. Lagoon depth has been increased (by use of a higher standpipe) to

ensure adequate settling. A follow-up sample resulted in 10 mg/l TSS.

The analyses for this outfall were performed by Envirodyne Engineers with the exception of the pH analysis that was performed by plant personnel.

No data were reported under "Maximum 30 Day" and "Long Term Average" values for this outfall since this outfall is normally recycled and thus there is not any historical monitoring data from the DMR's to report.

Outfall 004

Prior to being discharged, wastewater from the Demineralized Water System is treated in a sedimentation lagoon that is quite large in comparison to the discharge flow and thus the lagoon has a holdup time of greater than 24 hours. The long holdup time of this sedimentation lagoon allows one grab sample to be representative of this outfall. One grab sample for all analyses was taken from the discharge of this outfall on January 25, 1990.

The analyses for this outfall were performed by Envirodyne Engineers with the exception of the pH analysis that was performed by plant personnel.

Data under "Maximum 30 Day" and "Long Term Average" values are based on DMR data from February, 1989 through January, 1990 inclusive. The maximum thirty day value for maximum and minimum pH values indicate the maximum monthly average for pH and the minimum monthly average for pH. These pH averages were reported since the minimum and maximum pH for the day is usually the same due to the fact that only one pH value is recorded for the day.

Outfall 007

The Sanitary Treatment Plant was operated at a constant rate of approximately 5 gpm during the sampling period. Flow proportional composite and grab samples were taken during a 24 hour period on February 1 and 2, 1990.

The analyses for this outfall were performed by Envirodyne Engineers with the exception of the pH analysis that was performed by plant personnel.

Data under "Maximum 30 Day" and "Long Term Average" values are reported the same as discussed for outfall 004.

Outfall 009

The intake electric boilers are currently in a dry layup condition as they have been for many years and so it was not

possible to obtain a sample from them. The last discharge from this system occurred in early 1985, so recent past discharge data are not available. We desire to keep this outfall permitted because we plan on using the electric boilers should the weather conditions warrant their use.

Since no sample was possible, we have reported data from the sample taken for the 1985 permit reapplication. This data was obtained from a single grab sample taken on December 4, 1984. Although this data is old, it is still believed to be representative of the wastewater that would be discharged from this outfall if the boilers were presently operating.

This sample was analyzed by Controls for Environmental Pollution except for those parameters requiring on-site analysis.

Outfalls 010-015

These outfalls all discharge storm water runoff (SWR) and are treated in a sedimentation pond prior to discharge. These sedimentation ponds have a greater than 24 hour holdup time and thus one grab sample is representative of the outfall. Due to time constraints and not enough precipitation, it was necessary to sample the sedimentation ponds for outfalls 010, 011, 013, and 015 at a time when there was no discharge from these outfalls. For the outfalls that were not discharging, one single grab sample was taken in the vicinity of the discharge structure. For the two SWR outfalls that were discharging, a single grab sample was taken of the discharge.

The analyses for these outfalls were performed by Envirodyne Engineers with the exception of the pH analysis that was performed by plant personnel.

Data under "Maximum 30 Day" and "Long Term Average" values were not reported for these outfalls due to the small amount of historical data available from past DMR's.

Missouri River

A single grab sample was taken of Missouri River water being pumped to the head of the water treatment plant. It is believed that a single grab sample would be representative of the river over a normal 24 hour period. Data available on the Missouri River indicate substantial variability over longer periods.

The analyses for the river were performed by Envirodyne Engineers with the exception of the pH analysis that was performed by plant personnel. The data from these analyses are reported under the intake heading for outfall 003.

Well #3

A single grab sample was taken of well water that is used as the supply to the Demineralized Water System and the Potable Water System. It is believed that a single grab sample would be representative of the well water since there would not be much variation expected from a groundwater source.

The analyses for the well water were performed by Envirodyne Engineers with the exception of the pH analysis that was performed by plant personnel. The data from these analyses are reported under the intake heading for outfall 004.

General Notes

Total phosphate has been reported wherever total phosphorus was requested. We believe this to be adequate since materials used on site containing phosphorus are generally in the phosphate form and thus would show up in the total phosphate value.

Important notes on mass discharge calculations:

Where calculated, mass discharges under the Maximum Daily Value Heading, represent values calculated from the analytical data and the measured flows during the sampling event. Consequently, the values shown do not necessarily represent an actual maximum mass discharge value.

For Outfall 009, the estimated maximum flow was used to calculate mass values.

Attachment G
Section 311 and CERCLA Exemptions

The chemicals listed below are used in water treatment processes in amounts exceeding their "reportable quantities" under 40CFR 117 and 302 (1989).

Chemical	Usage (lbs/day)	Reportable Quantity (lbs/day)	Outfalls
Sodium hydroxide	1,160	1,000	001,004,009
Sodium hypochlorite	1,880	100	002, 007
Sulfuric acid	31,000	1,000	001,002,004, 009

Union Electric requests exclusion under the NPDES exemptions from Section 311 and Superfund reporting for these three compounds and all others that are, as reported in this application, present in continuous or anticipated intermittent discharges (see Attachment E). Appropriate monitoring will be performed. These and other discharges for which exclusion are requested are exempt from Section 311 liability by 40CFR 117.12(a)(1) if they are in compliance with the permit and by 117.12(a)(2) or (3) if they are not. Discharges that are excluded from 311 reporting are also excluded from Superfund reporting. Any discharges other than those resulting from on-site spills would either result from circumstances identified in this application and be subject to neutralization treatment (see 117.12(c)) or would be a continuous or anticipated intermittent discharge originating within the operating or treatment systems at the plant (see 117.12 (d)). These discharges are, therefore, excluded from Section 311 and Superfund reporting requirements.

Attachment H
General Comments on Standards Setting

In anticipation of conditions which may be set in this permit renewal, Union Electric requests the consideration of the following comments.

1) Mass Limits

On November 19, 1982, EPA published new regulation for 40 CFR Part 423, "Steam Electric Power Generating Point Source Category" (47 FR 52290). Section 423.13(g) specifically allows the permitting authority to express the quantity of pollutants allowed to be discharged as a concentration limitation instead of a mass-based limitation. Fixed numerical mass discharge limitations necessarily impose implicit flow restrictions at the allowable concentration levels. These flow restrictions are too inflexible to cope with the flow variability conditions and the electrical reliability imperatives placed on steam electric power plants. Unlike some industries in which wastestream flow variability is the result of a single factor, like production, Callaway Plant has no such single parameter indicative of flow. Further as a utility whose production is dictated by public consumption, the plant must be capable of attaining and maintaining full power production for as long as necessary.

Since we feel that the concentration based limits are sufficient and more appropriate for regulation of power plant discharges, we request that you do not impose any mass limitations when reissuing this permit.

2) Net Credits

In a situation whereby a limitation might be set on the discharge of a priority pollutant, Union Electric feels it should reflect an adjustment credit for pollutants in the intake water, because discharges are returned to the Missouri River. As complete removal of compounds in this category would not be achieved by the water treatment systems at the Callaway Power Plant, we hereby request an appropriate net limitation be applied as necessary. We anticipate no adverse water quality effects from net limitations.

3) Continuous Samplers

In the current permit under E. Other Requirements 5.a.IV, there is a requirement for an hourly composited sample of the river downstream of the discharge. During times when the automatic sampling equipment is not operational, it is not possible to obtain an hourly composited sample. The NRC

recognizes that there may be equipment problems and allows for an alternative sample schedule in this event. In the event that the radiological monitoring requirements remain the same as they are in our current permit, we request that you also allow alternative monitoring when the automatic sampler malfunctions. Due to the remote location of the downstream sample point, we requ st that the sample frequency be a daily grab to be composited when the sampler is out of service.

4) Continucus Monitors

The measurement frequencies that are continuous in the current permit have no alternative frequency in the event that the continuous monitor is out of service. The permit requires continuous monitoring of flow, temperature and pH on Outfall 002. To allow for short periods of time when continuous monitors are out of service due to equipment problems, we request that you allow an alternative measurement frequency for continuously monitored parameters. The alternative measurement frequency requested is one measurement every 8 hours and this would apply for a limited time only during periods of monitoring equipment malfunctions.

5) Change in Radwaste Processing

We are currently planning to use an alternative process to treat our liquid radwaste subsystem trains A and B and the laundry/hot shower. The only significant impact that this would have on the quality of the wastewater discharged from Outfall 001 is that it would increase the concentration of boron.

The current processing of this waste stream includes evaporation which is used to remove radioactive contaminants. However, this process also inadvertently removes boron. This creates a large volume of evaporator bottoms that must be solidified and sent to a low level radioactive waste disposal site. The alternate process would use selective ion exchange resin to remove radioactive contaminants. This process would not remove boron and would thus produce less than one-fifth of the current volume of low level solid radwaste. This alternative is presently being used at several nuclear power plants.

This change may result in discharges of up to 1000 ppm boron from Outfall 001. Calculations now that the worst case conditions would result in a concentration of boron at the edge of the mixing zone (in the river) of only approximately one-tenth of the irrigation water quality standard of 2 ppm. It is our position that this would not significantly degrade the water quality of the river.

Attachment I
Section 316(b) Demonstration Status

The Callaway 316(b) demonstration consists of two parts, an entrainment study and impingement study. Part one, the entrainment study was started during the spring of 1984 and was successfully completed fall of 1984. Part two, the impingement study was completed and submitted in June, 1986. Your letter dated April 15, 1987, approved the 316(b) study and agreed with the conclusions of the study that the impacts from the use of the intake structure at Callaway are minimal.

There have been no significant modifications or changes in the construction, design, location or capacity of the cooling water intake structure. Accordingly, UE hereby incorporates by reference the results and conclusions of these prior studies and requests renewal of the 316(b) approval at Callaway.

Attachment J

Request for Modification in Radiological Monitoring

Union Electric Company hereby requests modification, as detailed below, in the radiological environmental monitoring program (REMP) requirements in the renewal of NPDES Permit No. MO-0098001.

REMP requirements were first set in the original NPDES Permit for the Callaway Power Plant issued to Union Electric Co. on August 8, 1980. As a result of a citizens' appeal and hearings before the Clean Water Commission on March 18 and 19, 1981, the REMP requirements were expanded to their present form and scope. An informal survey of other nuclear power plant operators by Union Electric Company indicates that Callaway is the only nuclear plant in the country with REMP requirements in its NPDES permit beyond those imposed by the NRC. The primary justification for the REMP requirements in the Clean Water Commission's decision was to provide the citizens of Missouri with additional radiological data. Union Electric believes that the data collected to date has fulfilled this obligation.

Union Electric's REMP, pursuant to NPDES Permit No. MO-0098001, has generated a substantial data base on radioactivity in the Missouri River and in the vicinity of the Callaway Plant. That data base supplants the uncertainty that existed regarding the potential effects of releases from the Callaway Plant and fulfills the informational objectives the Department and the Commission deemed necessary. Together with the ongoing REMP required by the Nuclear Regulatory Commission and additional elements proposed by Union Electric, sufficient data will be available to protect and safeguard the health and safety of the citizens of Missouri. For these reasons and those stated below, Union Electric proposes the following specific changes in the existing REMP requirements.

INTRODUCTION

During normal operation, all nuclear power plants, including Callaway, release small amounts of radioactivity to the environment. However, because radioactivity levels in well and river water, sediment and fish are dominated by natural background radiation and weapons fallout, any predicted plant-related added activity from liquid effluents would be expected to be so low as to be very difficult to distinguish in comparison. Furthermore, as distance from the outfall increases, fluctuations in observed radioactivity effects become increasingly more difficult to connect unambiguously to plant operations.

These expectations have proven to be true for Callaway Plant. An analysis of previous data collected has indicated that no correlation between effluents from Callaway Plant and environmental concentrations can be established for the environmental data collected since the plant became operational in late 1984. In some instances, individual samples show unusual variations, but these cannot be correlated with plant discharges. In addition, no adverse trends have been noted in the data. A graphical analysis of the previous data collected is shown on pages J15-J134. Two sets of graphs are presented. The first plots plant releases vs. environmental concentrations. These plots show no correlation between parameters. The other set of graphs shows environmental concentrations vs. time. This set illustrates the significant variability in environmental radiological measurements and the difficulty in differentiating normal plant operational releases from natural background. All values measured at less than detectable limits are plotted as zero. Each contractor laboratory employed in the program is identified on the plots. Not all individual isotopes identified are presented in these graphs. Only those with a sufficient number of positive results to allow graphical analysis are included.

Unless plant-related releases become comparable to fallout levels, they most likely will remain undetected in the environment. Current regulations prevent plant discharges that would result in these levels in the environment. For this reason, greater credence is given to monitoring plant discharges directly. These measurements are more reliable than environmental sample measurements and are most directly correlated with plant operations. Natural background variation masks both the value and validity of many types of environmental samples, especially those collected at some distance from the plant.

Even though plant releases are normally undetectable in the environment, surveillance of certain environmental components may be valuable. If sample media, location and frequency are carefully chosen, even undetectable results can be meaningful. Measurement programs involving selective but systematic measurements can assure compliance with established standards on incremental environmental radiation. However, unless it is clear how the data are to be used, no benefits are realized and the excess data only serve to confuse conclusions drawn from relevant results.

Environmental radiological monitoring programs around nuclear power plants are required by the Code of Federal Regulations (CFR) Title 10, Section 20.201 and Criterion 64 of 10 CFR, Part 50, Appendix A. Suggested monitoring programs are contained in the Nuclear Regulatory Commission (NRC) Regulatory Guide 4.1 "Programs for Monitoring Radioactivity in the Environs of Nuclear Power Plants", NRC Branch Technical Position on the radiological portion of the environmental monitoring program,

Revision 1, 11/79, and the U.S. Environmental Protection Agency (EPA) publication ORP/SID 72-2 "Environmental Radioactivity Surveillance Guide".

Utilizing the above guidance, the REMP outlined in Table 1 was developed. Primary consideration was given to those measurements that represent a critical pathway to man as well as those necessary for the enforcement of legal ceiling levels. Secondary consideration was given to those measurements used in the identification of long-term trends in environmental concentrations of particular radionuclides.

Each of the proposed changes to the REMP is individually discussed below. Our existing permit requirements and the proposed changes are identified followed by a brief explanation of the reasons for the requested change.

RADWASTE BUILDING DISCHARGE

Our current permit requires that we take a representative grab sample of each batch discharge and a representative grab sample of Steam Generator Blowdown once per day when discharging. Current analysis requirements call for these samples to be measured for gross alpha, gross beta, tritium and be gamma-scanned for significant radionuclides.

Our proposed program calls for the elimination of the gross beta measurement and the addition of I-131 on a per sample basis. We propose to measure gross alpha in a monthly composite of samples. We also propose to add Sr-89, Sr-90 and Fe-55 in a quarterly composite of each batch and in a quarterly composite of daily samples for Steam Generator Blowdown. Tritium and gamma isotopic analyses remain the same as in the current permit.

Sample Analysis & Frequency

All changes proposed for effluent sampling deal with analysis and analysis frequency rather than sampling frequency or sample type. We propose that gross beta measurements be deleted since no information on the identity of the radionuclides is obtained. The lack of this information makes impossible any meaningful conclusions on the potential exposure significance of these gross measurements. There are very few pure beta emitters released from Callaway; those which are significant are proposed s additions to the program for individual analysis. Gross alpha measurements suffer from the same lack of specificity as gross beta. However, we do propose to measure gross alpha in a monthly composite sample as a trend check.

Gamma isotopic analysis frequency remains unchanged in the proposed program since almost all radionuclides released from Callaway are gamma emitters and can be detected by this method. In addition to performing gamma isotopic analysis on each batch released, in-line monitoring instrumentation sensitive to gamma

radiation automatically terminates the release should limits be approached. Monitoring gamma emitters directly detects those radionuclides which contribute 93% of the calculated potential exposure to humans from drinking water, and 99% of the calculated potential exposure from fish ingestion. By monitoring I-131 and tritium in each batch, we account for another 4% of the potential drinking water exposure.

Because of their relatively long half-lives (i.e. small loss in sample storage), small contribution to calculated exposure and difficulty in measurement, Sr-89, Sr-90 and Fe-55 will be analyzed in a quarterly composite. These radionuclides, in total, account for only 3% of the potential drinking water exposure. By analyzing these radionuclides in a composite sample of the batch releases, we continue to analyze all released radionuclides from Callaway. This method of sampling and analysis frequency has been approved by NRC and is specified in our Operating License.

SURFACE WATER

Currently, our permit requires monthly grab sampling upstream of the plant discharge and in the reach of the river containing the St. Louis area water supply intakes. In addition, hourly sampling with monthly composite analysis is required downstream of the plant discharge. Gross alpha, gross beta, tritium and gamma isotopic analyses are required for these samples.

Our suggested surface water sampling frequency has not changed with this submittal. However, we do propose that the sample in the reach of the river containing the water supply intakes be eliminated. In addition, we propose that gross alpha and gross beta measurements be eliminated for all samples. Tritium and gamma isotopic analyses remain the same as in our current permit for upstream and downstream samples.

As shown in the graphical presentation of our previously collected data base on pages J15-J38, surface water activity is dominated by natural background radiation and weapons fallout making it very difficult to observe any added activity from plant liquid effluents. No correlation was observed between plant discharges and surface water activity concentrations.

Sample Location

It is important to ensure that samples analyzed have some practical significance when they show either a positive or a negative indication. As distance from the plant increases, fluctuations in radioactivity effects make it impossible to relate these variations to plant operation.

Based on this fact and previous data collected, the sample in the reach of the river containing the water supply intakes is too far removed (78 miles) from the Callaway discharge to be of any practical significance. Since this location serves no meaningful purpose in assessing releases from Callaway, it should be eliminated from the program. Monitoring of the drinking water supply in the St. Louis area is covered in the section which follows.

Sample Analysis

Our proposal to eliminate gross alpha and gross beta analyses is based on the fact that such measurements cannot reliably be used for assessing radiation exposure resulting from the operation of Callaway Plant. Measurable amounts of alpha and beta emitting radionuclides are found in most environmental waters, including the Missouri River. These may be naturally occurring radionuclides such as uranium, radium, thorium and potassium-40, or they may be the result of man-made radionuclides. Naturally occurring elements (radium and thorium), through their daughter gases, cause an appreciable airborne particulate activity which contributes to the radioactivity of the Missouri River through fallout (carried by rain or snow). Natural activities exhibit large variations in the environment. Man-made radionuclides may be released through weapons fallout, medical wastes, or upstream nuclear plant discharges. The difficulties in distinguishing Callaway-produced activity from that due to natural background and weapons fallout are much increased if reliance is placed on non-specific determinations, such as those of gross alpha and gross beta activity. That no information on the identity of the radionuclides is obtained is the most serious weakness of gross activity measurements. The lack of this information makes impossible any meaningful conclusions on the environmental behavior and movement of the radionuclides in the sample. Instead, samples should be analyzed for the significant plant-contributed radionuclides released to the environment for dose assessment and pathway analysis. This is accomplished in our proposed program.

DRINKING WATER SUPPLY

Currently, our permit requires that a monthly grab sample of the drinking water well at Portland, Missouri be analyzed for gross alpha, gross beta and tritium, and be gamma-scanned for significant radionuclides.

Instead, we propose that a monthly tap water sample be obtained from the drinking water supply at St. Louis City and analyzed for gross beta and tritium, and be gamma-scanned for significant radionuclides.

Our previously collected data base for Portland drinking water shows no correlation with Callaway Plant as indicated in the graphical presentations on pages J39-J42.

Sample Location & Type

The drinking water sample specified in our current permit (Portland, MO) is a well water sample. Portland does not take drinking water from the Missouri River and Callaway Plant does not discharge to groundwater. Since the nearest withdrawal of munincipal drinking water from the Missouri River is St. Louis City, 78 miles downstream, we request that drinking water samples be obtained from this location and the Portland sample be included in the groundwater sampling program.

In assessing human radiation exposure via the drinking water pathway, it is important to measure the water actually consumed. Since water treatment plants can remove some radionuclides, measurements of radionuclide concentration in drinking water supplies should be carried out after such treatment. This is in accordance with recommendations of the National Council on Radiation Protection and Measurements in Report No. 50. We therefore request that a tap water sample taken from St. Louis City be allowed for analysis rather than river water samples.

In general, we believe such drinking water samples have no practical significance because of the distance downstream. The possibility of detecting an influence from Callaway at this distance is nil. This conclusion is supported by our past data base. However, by collecting and analyzing tap water samples, we believe we can help assure confidence in St. Louis area residents that their water supply remains free of contamination from Callaway Plant. It should be noted that the St. Louis County Water Company also monitors for radioactivity in drinking water.

Sample Analysis

As previously discussed for surface water samples, gross measurements are useless in predicting plant-produced activity. We therefore propose that gross alpha measurements be eliminated. We will continue to monitor gross beta in drinking water for screening purposes and as a trend check.

GROUNDWATER

Our existing permit requires monthly sampling of the groundwater from wells F5 and F15 which are located on site south and north of the plant respectively. Samples are analyzed for gross alpha, gross beta and tritium, and are gamma-scanned for significant radionuclides.

Instead, we propose the sampling frequency be changed to quarterly, gross alpha and gross beta be eliminated and the sampling station at Portland, MO be added to the groundwater monitoring program. Tritium and gamma isotopic analyses remain the same as in our current permit.

Our sampling program to date has detected no impact from Callaway as shown by the data presented on pages J43-J50.

Sample Analysis & Frequency

There is little possibility that groundwater will accumulate radioactivity from Callaway Plant discharges because all discharges are made to the Missouri River and underground water flow is toward the river. Furthermore, most soils have some ion exchange capacity. As a result, most radionuclides are chemically bonded to the soil near the source and travel only short distances. For these reasons, groundwater is not considered an exposure pathway at Callaway. This is supported by the lack of any observed influence from Callaway to date. We therefore believe that quarterly sampling is appropriate for the assurance of no impact. Elimination of gross alpha and gross beta is proposed since well water gross activities are typically dominated by radon daughters and K-40, making it impossible to distinguish plant-related impacts.

AQUATIC BIOTA

Currently, our permit requires monthly sampling of the edible flesh of the five most important/abundant species of fish upstream, downstream and in the reach of the river containing the St. Louis area water intakes. Analysis is required for gross alpha, beta, strontium 90, cesium-137 and gamma-emitting radionuclides.

Our proposed program suggests a semiannual sampling of the edible flesh of up to five commercial or recreationally important species in sufficient quantity to yield a sufficient sample for analysis. We also propose that gross alpha, gross beta and strontium-90 be eliminated from the analyses performed and that the sample location in the St. Louis area be eliminated. Gamma isotopic analysis would be retained which includes cesium-137.

The fish sampling data analyzed to date show no correlation with plant discharge activity as shown in the graphs on pages J51-J62.

Sample Type

As discussed previously, monitoring should be conducted on those environmental pathways which are most likely to result in human radiation exposure. Although the Missouri River near the site is not very productive from a fisheries standpoint because

of excessive turbidities, channelization and lack of planktonic and benthic productivity, a potential pathway does exist. Radionuclides that potentially accumulate in fish represent a direct route to the human population when the fish are consumed. However, only fish which are commercially or recreationally important contribute to this potential pathway. Because of the relative scarcity of theses species in this area of the Missouri River, and the fact that a sufficient quantity of a particular species must be obtained to meet a given radionuclide detection limit, we are proposing additional latitude on the number of species collected.

Sample Analysis

Only radionuclides of elements with known biological functions or their analogues accumulate to significant levels in fish tissue. Based on published bioaccumulation factors and actual measured releases from Callaway, 99% of the calculated potential exposure from fish consumption is expected to be contributed by only three radionuclides (Cs-134, Cs-137 and Nb-95). The cesium isotopes alone contribute 96%. All three nuclides are gamma emitters and therefore can be measured by gamma isotopic analysis. Because of this and for other reasons cited previously, we propose that analysis for gross alpha, gross beta and strontium-90 in fish be eliminated.

Sample Frequency

The time necessary to establish a nearly steady-state concentration in fish is a function of the biological half-life of that element in the fish and the radioactive half-life of the element. In general, sampling and analysis should be carried out at intervals no greater than two or three half-lives. Since the radioactive half-lives of these cesium isotopes are measured in years and the biological half-life of cesium in fish is on the order of 100 days, we propose that sampling frequency be changed to semiannual. This change in frequency is further supported by the complete lack of correlation between Callaway releases and activity in fish samples collected since Callaway operation began.

Sample Location

Our request that the location in the reach of the river containing the water supply intakes be eliminated from the fish sampling program is based on the fact that this location is too far removed from the discharge to serve any meaningful purpose in assessing releases from Callaway. In addition, there is difficulty in knowing whether a fish caught at a location had lived there for an extended period. Thus, the presence or absence of a radionuclide in a fish sample does not permit any definite conclusion concerning the presence of the radionuclide in water at that location.

SEDIMENT

Our current permit requires that quarterly samples be obtained of bottom, washload and bedload sediments upstream, downstream and in the reach of the river containing the St. Louis area water intakes. Required analyses include gross alpha, gross beta, strontium-90, cesium-137 and gamma isotopic analysis.

We propose that sampling frequency be changed to semiannual and that measurements of gross alpha, gross beta and strontium-90 be eliminated. Cesium-137 would be included in the gamma isotopic analysis as currently required in the permit. We also propose that the sample location in the St. Louis area be eliminated from the program and that washload and bedload samples be eliminated at all locations.

The results of our sediment sampling efforts to date are graphically shown on pages J63-J134. No correlation between sediment activity and plant discharge has been obtained nor has any radionuclide buildup over time been observed.

Sample Frequency

Some media are indicative of pathways to human exposure, either directly of indirectly, and some media may indicate long-term buildup phenomena for effluents with long half-lives. Sediment sampling falls into the latter category. Sampling sediment to assess the fish pathway is meaningless considering the enormous variation in sediment concentration and sources of environmental radioactivity and the fact that fish are sampled directly in our program. Therefore, long-term buildup of long-lived radionuclides is the only component categorized by sediment sampling. This buildup or lack thereof can be fully determined through semiannual sampling of bottom sediments since the radionuclides sought have half-lives in years.

Sample Analysis

Radioisotopes Co-58 and Co-60 are the two most important contributors to actual or predicted external radiation exposure received by man and aquatic biota from sediments, with Cs-134 and Cs-137 being of lesser significance. These isotopes are all gamma emitters and can therefore be fully characterized using gamma isotopic analysis. We therefore propose that gross alpha, gross beta and strontium-90 analysis be eliminated from the sediment sampling program.

Sample Location

As previously discussed, the sample location in the reach of the river containing the water intakes is too far from the discharge to provide any direct relationship between observed environmental changes and any given feature of plant operations. Since samples collected at this site would contribute no

meaningful data, we propose that this sampling location be removed from the sediment sampling program.

Sample Type

The same dominant radionuclides found in bottom sediment samples are also found associated with suspended sediments. Gamma emitters generally show lower levels in suspended sediment as compared to bottom sediments. In addition, radionuclides are found more often in bottom sediment samples. Bottom sediments are also a more reliable indicator of radionuclide buildup than washload or bedload sediments. Given this and the fact that we are looking for radionuclide buildup, we propose that sampling for washload and bedload sediments be eliminated from the program. It is difficult or impossible to obtain these samples during low water conditions; this, coupled with seasonal fluctuations and variability results in meaningless data collection.

REPORTING REQUIREMENTS

Our existing permit requires that radiological monitoring data be reported in the quarterly Discharge Monitoring Reports.

To maintain consistency in federal and state reporting requirements, we propose that the reporting requirement for the radiological environmental monitoring data be satisfied by submittal of our Annual Radiological Environmental Operating Report and our Semi-Annual Radioactive Effluent Release Report to the Department. These reports include the additional analysis data required by DNR. This would ensure that DNR and NRC are reviewing the same data base should questions arise concerning our program, and eliminate the burden of dual reporting requirements for the same data. We would still notify the Department of any unplanned or uncontrolled liquid radioactive release in accordance with 10 CFR 50.72(a) as per our existing permit.

Table 1
Suggested Radiological Monitoring Requirements

a. Liquid Radwaste discharge, surface water and drinking water supply:

LOCATION	FREQUENCY	SAMPLE TYPE
I. Radwaste building discharge		
a) Batch Releases	daily	a representative grab sample of each batch discharge
b) Steam Generator Blowdown	once per day when discharging	a representative grab sample
II. Drinking water supply St. Louis County	once/month	grab of processed tap water
III. Upstream of discharge line	once/month	grab
IV. Downstream of discharge line at Portland, MO	hourly, with monthly composite analysis	composite

Samples of Batch Releases are to be analyzed for tritium, I-131, and gamma isotopic for each batch; gross alpha in a monthly composite of each batch; and for Sr-89, Sr-90, and Fe-55 in a quarterly composite of each batch.

Samples of Steam Generator Blowdown are to be analyzed for tritium, I-131, and gamma isotopic in daily samples; gross alpha in a monthly composite of daily samples; and for Sr-89, Sr-90, and Fe-55 in a quarterly composite of daily samples.

Samples of Drinking Water are to be analyzed for tritium, gross beta and gamma isotopic in each sample.

Samples of Surface Water are to be analyzed for tritium and gamma isotopic in monthly samples.

b. Groundwater - quarterly sampling of the groundwater from test wells F5, F15, and Portland drinking water supply.

Grab samples are to be analyzed for tritium and gamma isotopic.

c. Aquatic biota - semiannual sampling of the edible flesh of up to five commercially or recreationally important species of fish of sufficient quantity to yield a sufficient sample. Samples are to be taken at the locations specified in III and IV. Samples are to be analyzed by gamma isotopic analysis.

Table 1
(continued)

d. Bottom Sediment - semiannual samples of bottom sediment from the locations specified in III and IV. Samples are to be analyzed by gamma isotopic analysis.

e. Results of the above monitoring programs shall be reported to the Department by supplying a copy of the Annual Radiological Environmental Operating Report per Technical Specification 6.9.1.6 and the Semi-Annual Radioactive Effluent Release Report per Technical Specification 6.9.1.7 at the same time they are supplied to NRC. All data information shall be available for inspection during normal working hours.

f. The Department of Natural Resources of the State of Missouri, and any other state agency or officer designated in the State's emergency response plan or any other plan to protect its citizens from radioactive liquid discharge from the Callaway Plant, shall receive within one hour of the event, notice of any unplanned or uncontrolled liquid radioactive release in accordance with 10 CFR 50.72(a) and prompt notification of off-site releases of liquid radioactive materials in excess of limits in 10 CFR 20, Appendix B, Table II, Column 2.

GRAPH TABLE OF CONTENTS

NOTES ON GRAPHICAL PRESENTATIONS

1. Initial plant criticality (October 2, 1984) is signified by a vertical line on the time trended graphs.

2. Sampling sites are defined as follows:

   Site A - Upstream of Plant Discharge
   Site C - Downstream of Plant Discharge
   Site D - Downstream of Plant Discharge at St. Louis
   D01 - Drinking well water source at Portland
   F5 - Onsite Well south of the Plant
   F15 - Onsite Well north of the Plant

3. Laboratory designations are identified as follows:

   D&M - Dames & Moore
   RMC - Radiation Management Corporation
   CIP - Controls for Environmental Pollution
   TIML- Teledyne Isotopes Midwest Laboratory

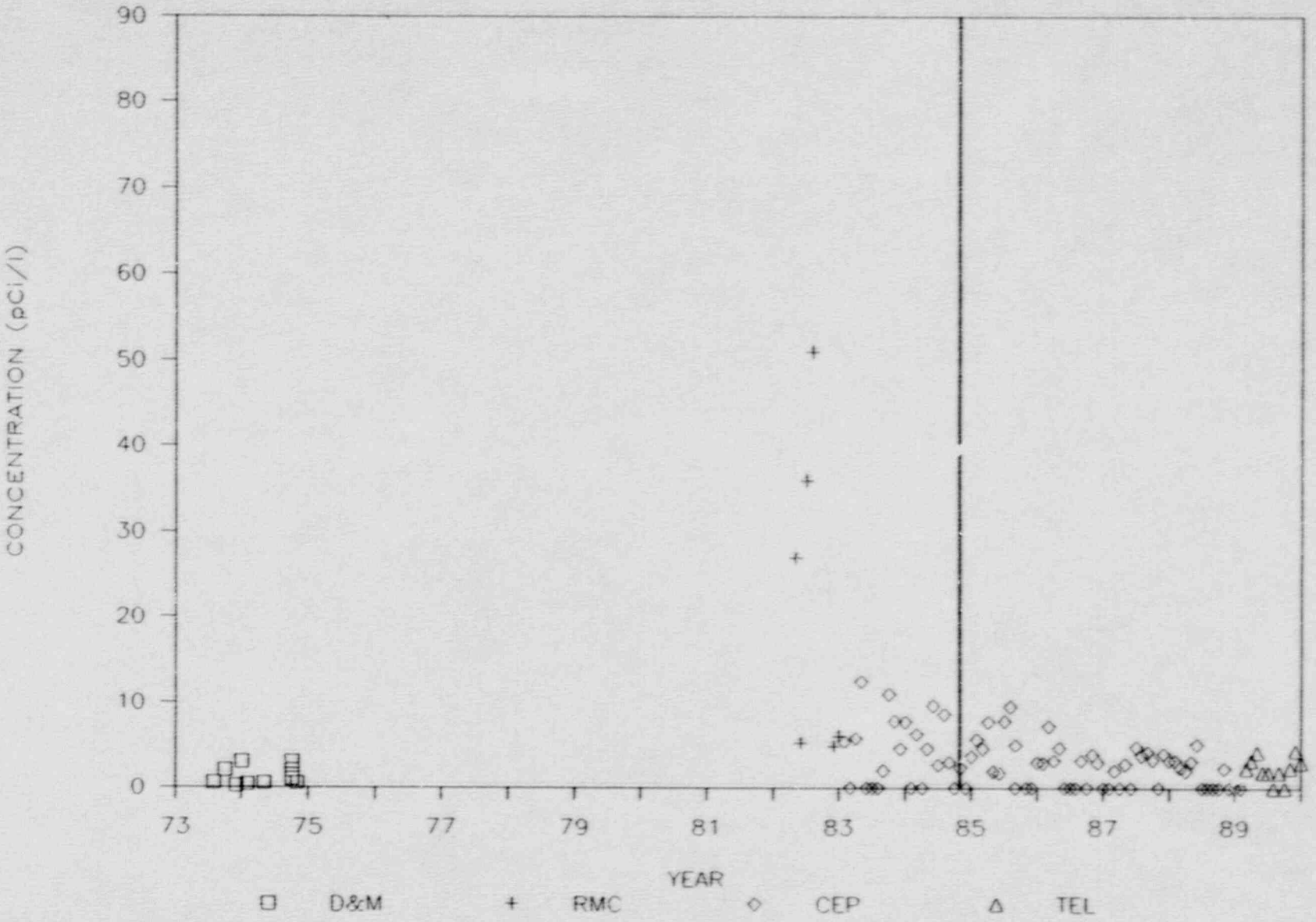
4. Not all individual isotopes identified are presented in the graphs. Only those with a sufficient number of positive results to allow graphical presentation are included.

5. The scales provided on each graph were computer selected and reflect the variation of the data. No other meaning is intended.

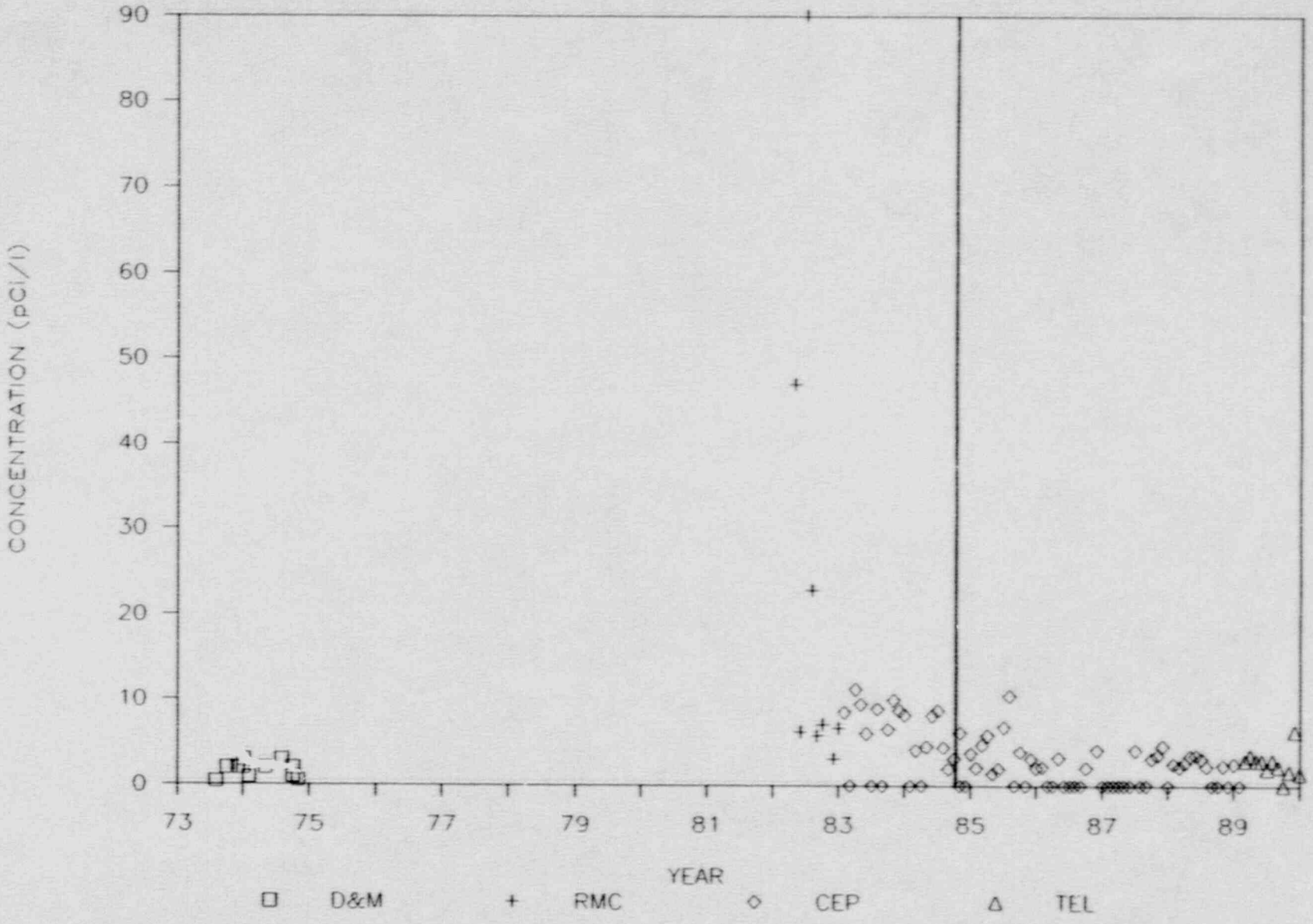
6. The plots of environmental radioactivity concentration vs time show the variability of the data over time. These graphs are presented to provide an understanding of the difficulty in detecting an influence from Callaway given the large variations in background radioactivity.

7. The plots of environmental radioactivity concentrations vs discharge radioactivity show the lack of correlation or degree of association between these two variables. These graphs show that changes in environmental radioactivity concentration observed to date cannot be reliably related to discharges from Callaway Plant.

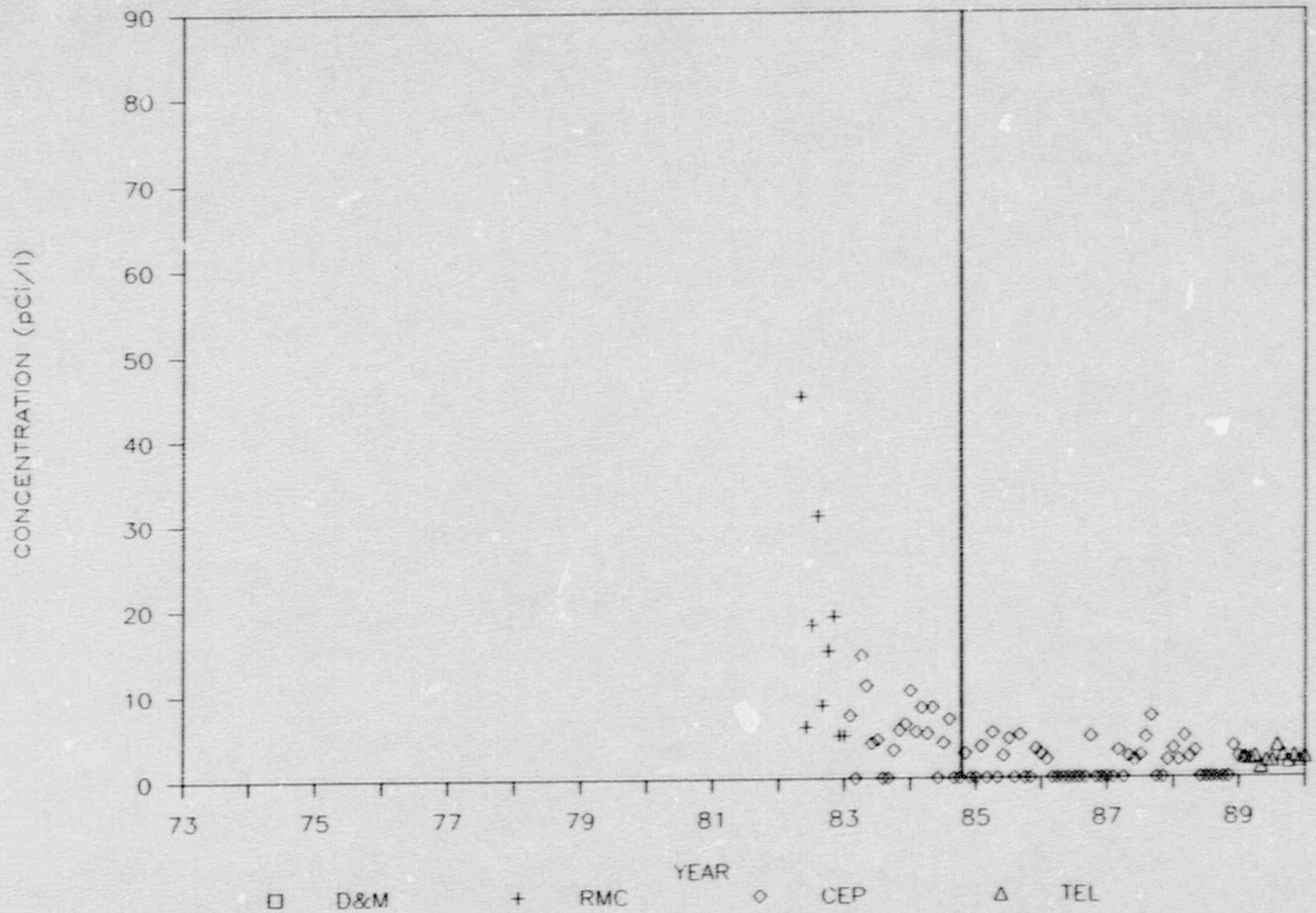
SURFACE WATER GROSS ALPHA, UPSTREAM



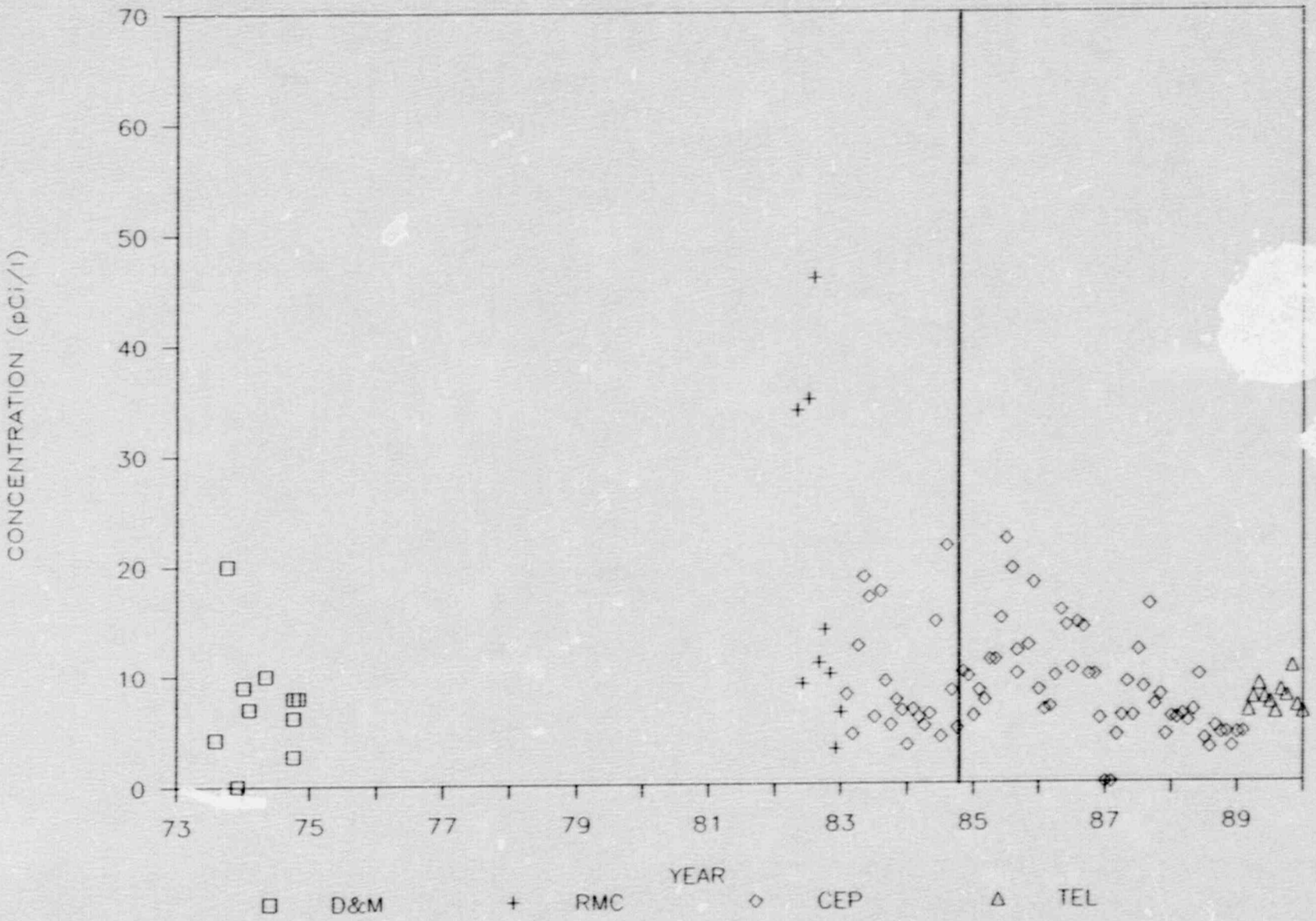
SURFACE WATER GROSS ALPHA, DOWNSTREAM



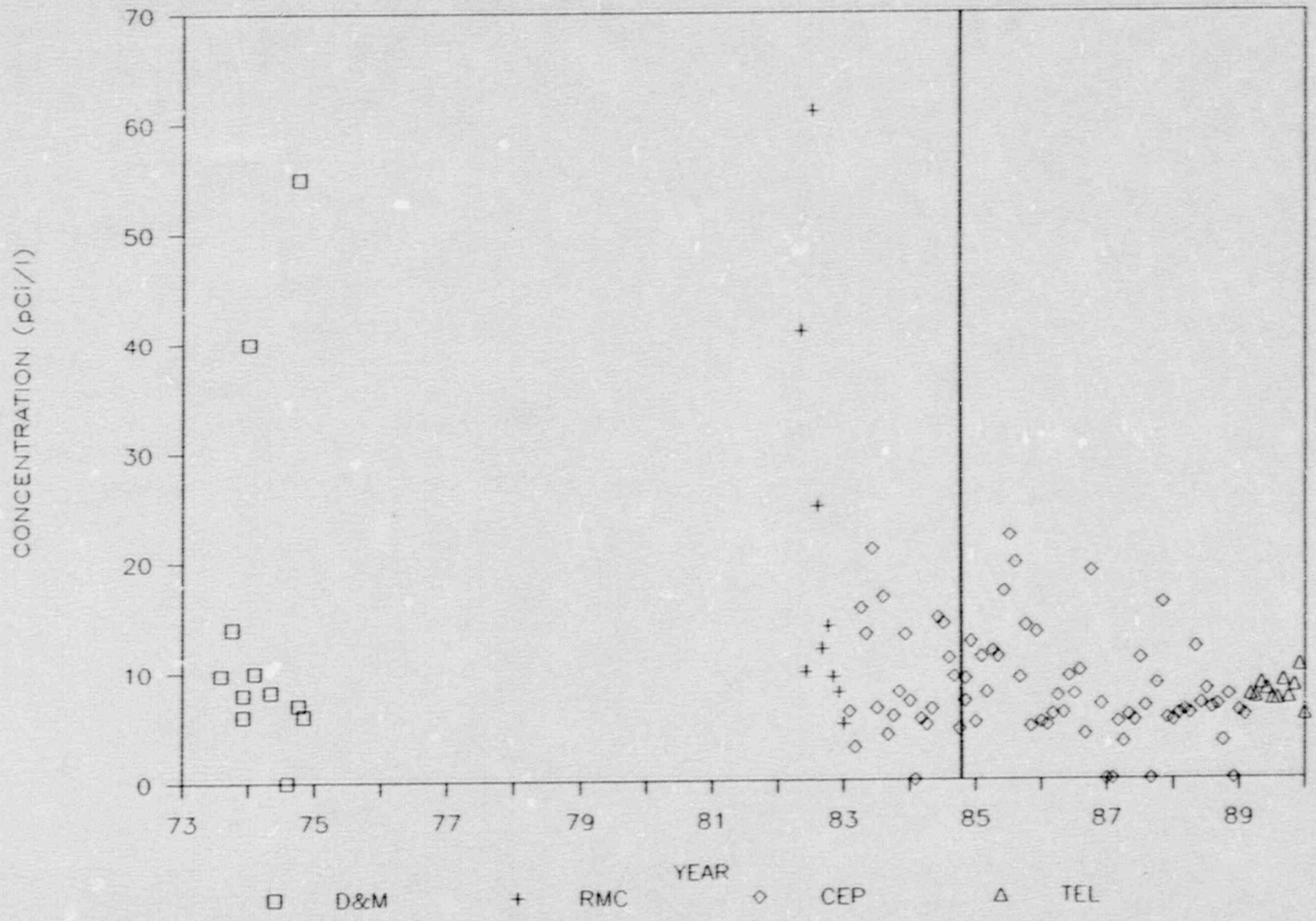
SURFACE WATER GROSS ALPHA, ST. LOUIS



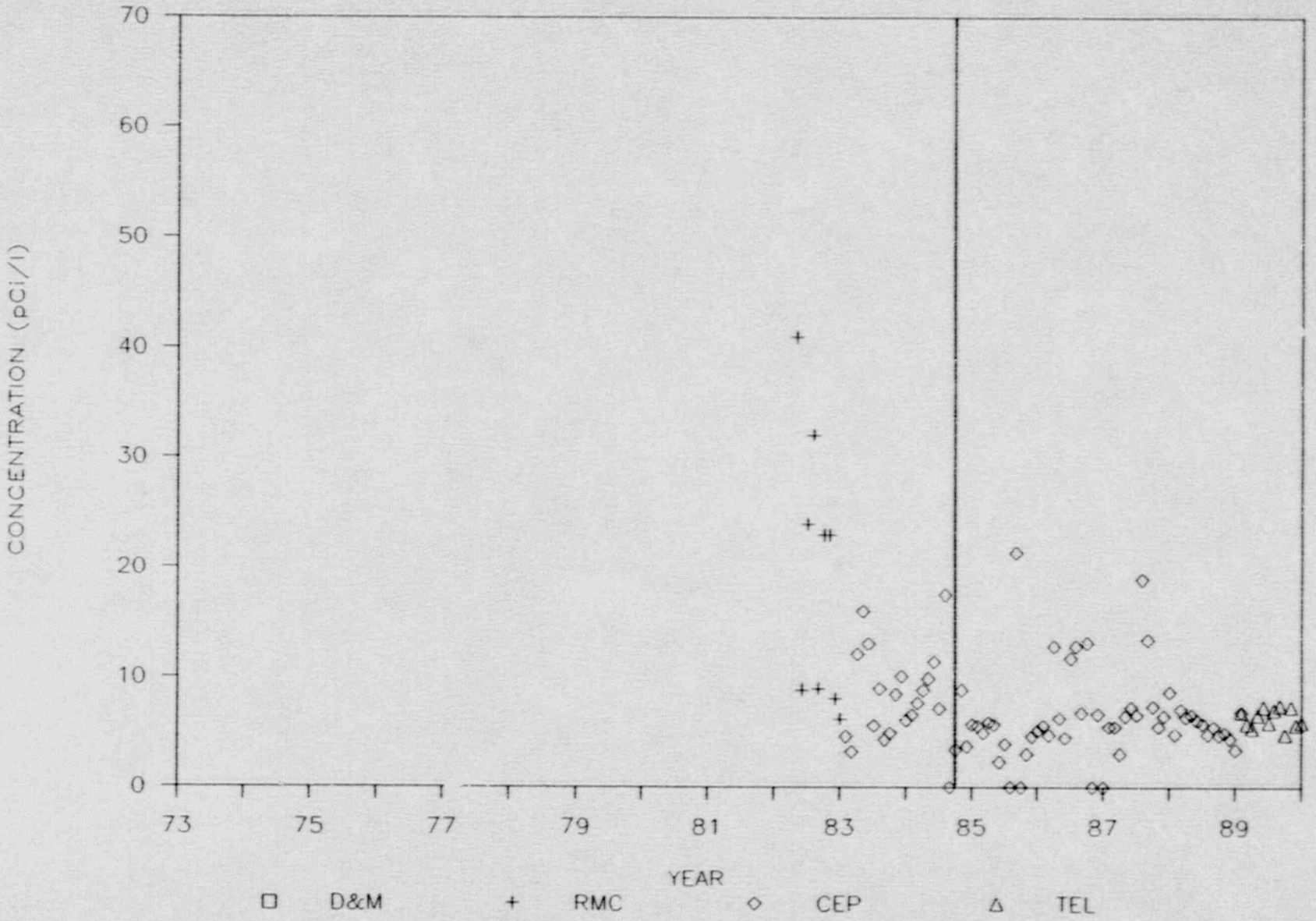
SURFACE WATER GROSS BETA, UPSTREAM



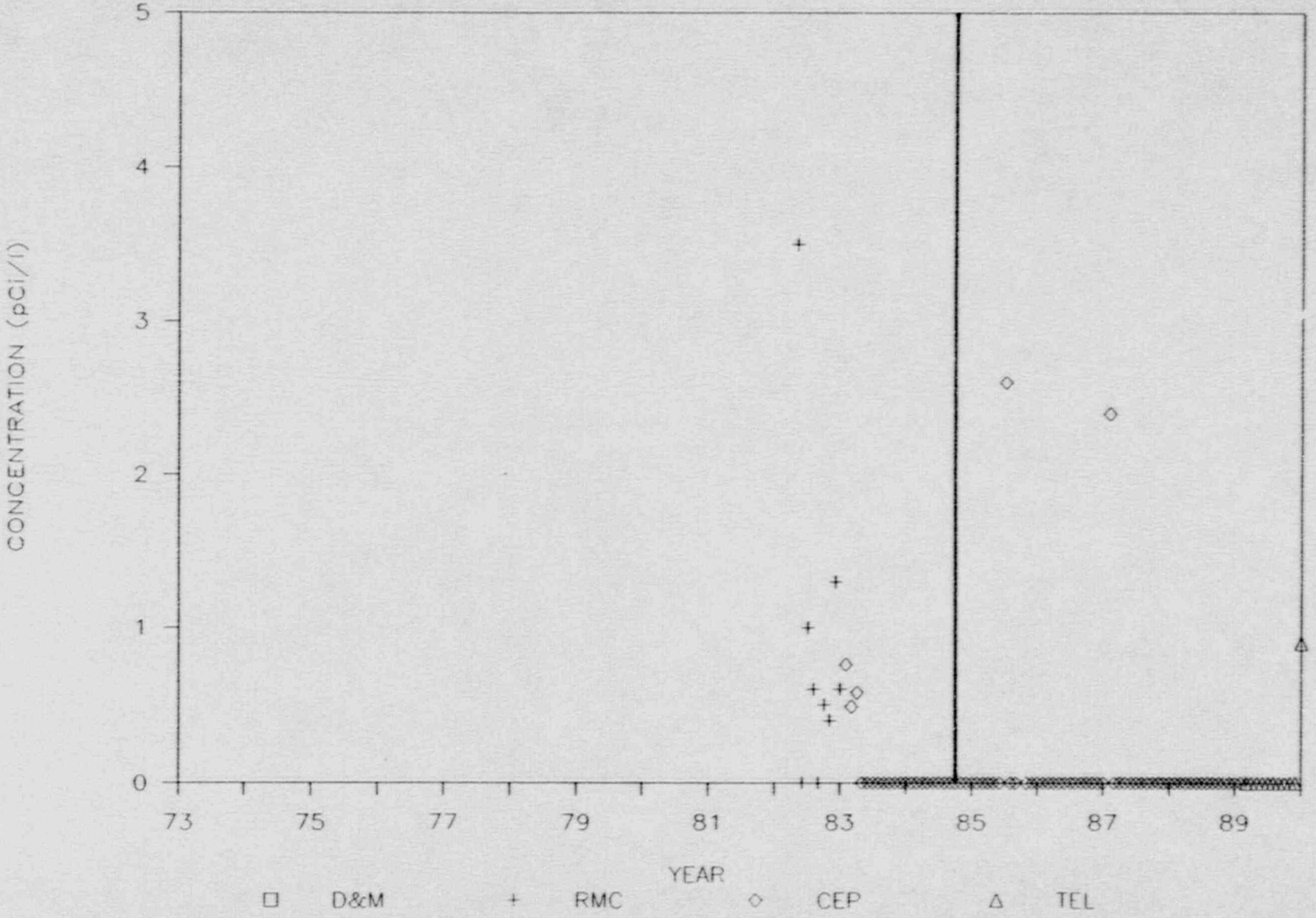
SURFACE WATER GROSS BETA, DOWNSTREAM



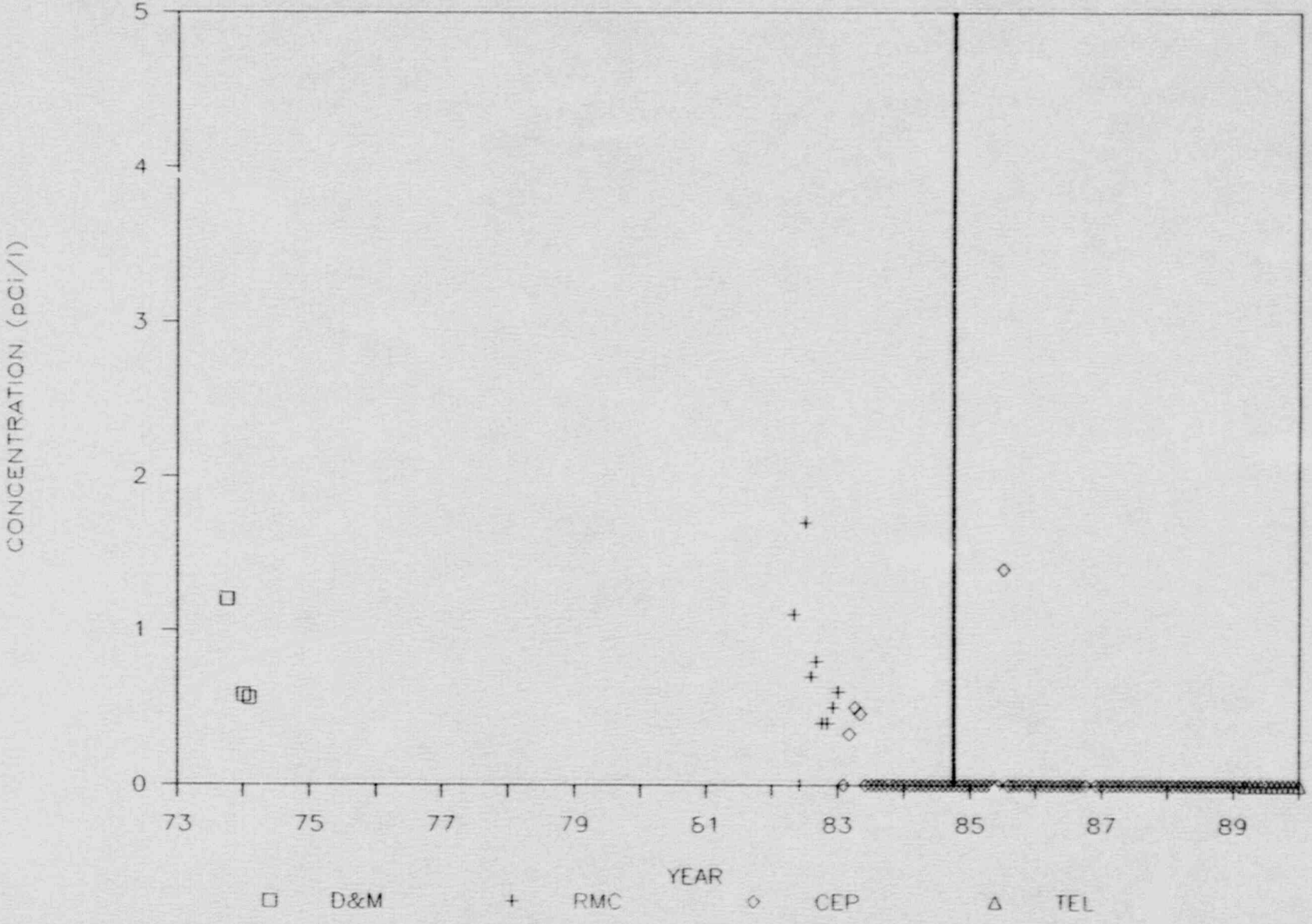
SURFACE WATER GROSS BETA, ST. LOUIS



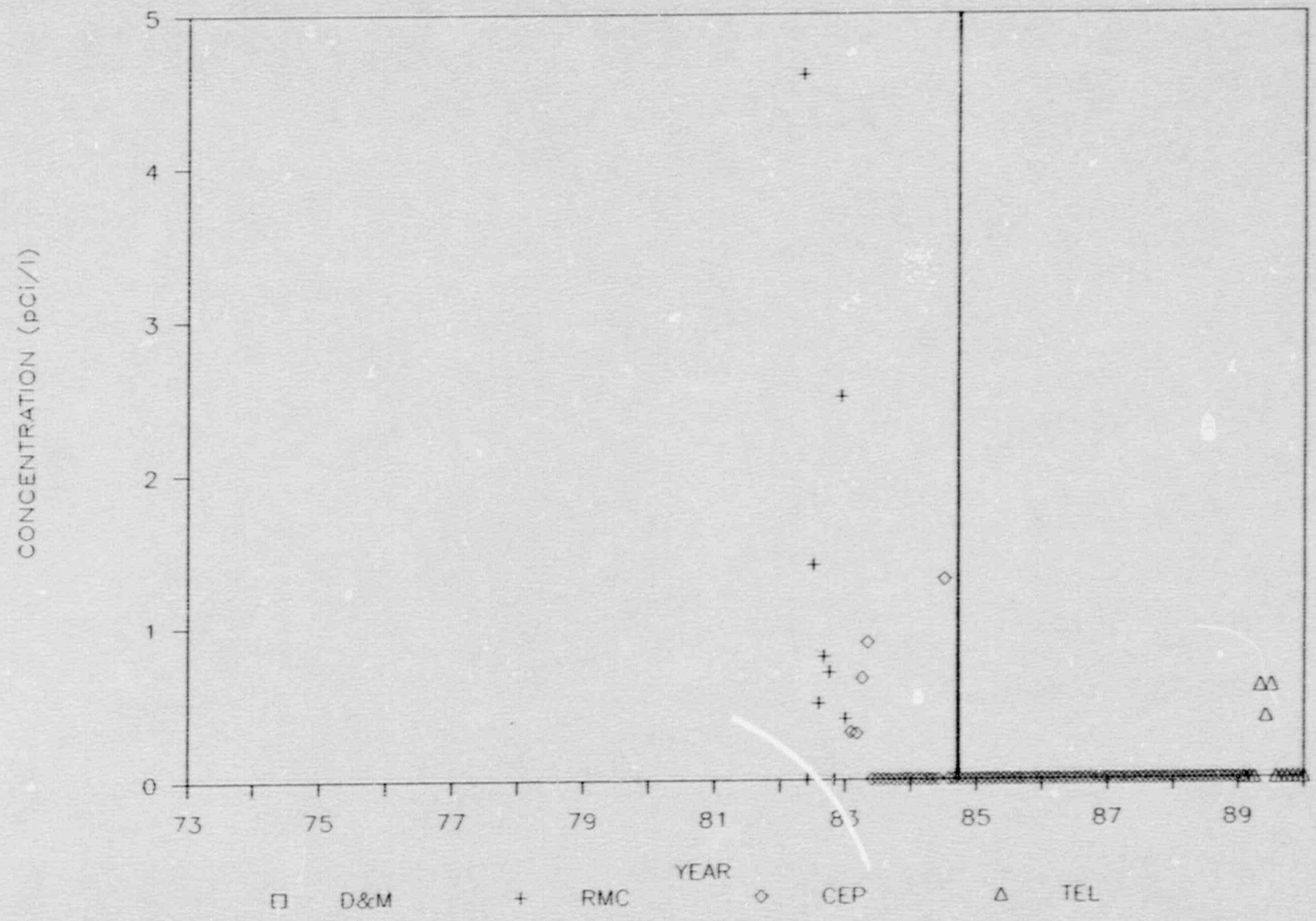
SURFACE WATER SR-90, UPSTREAM



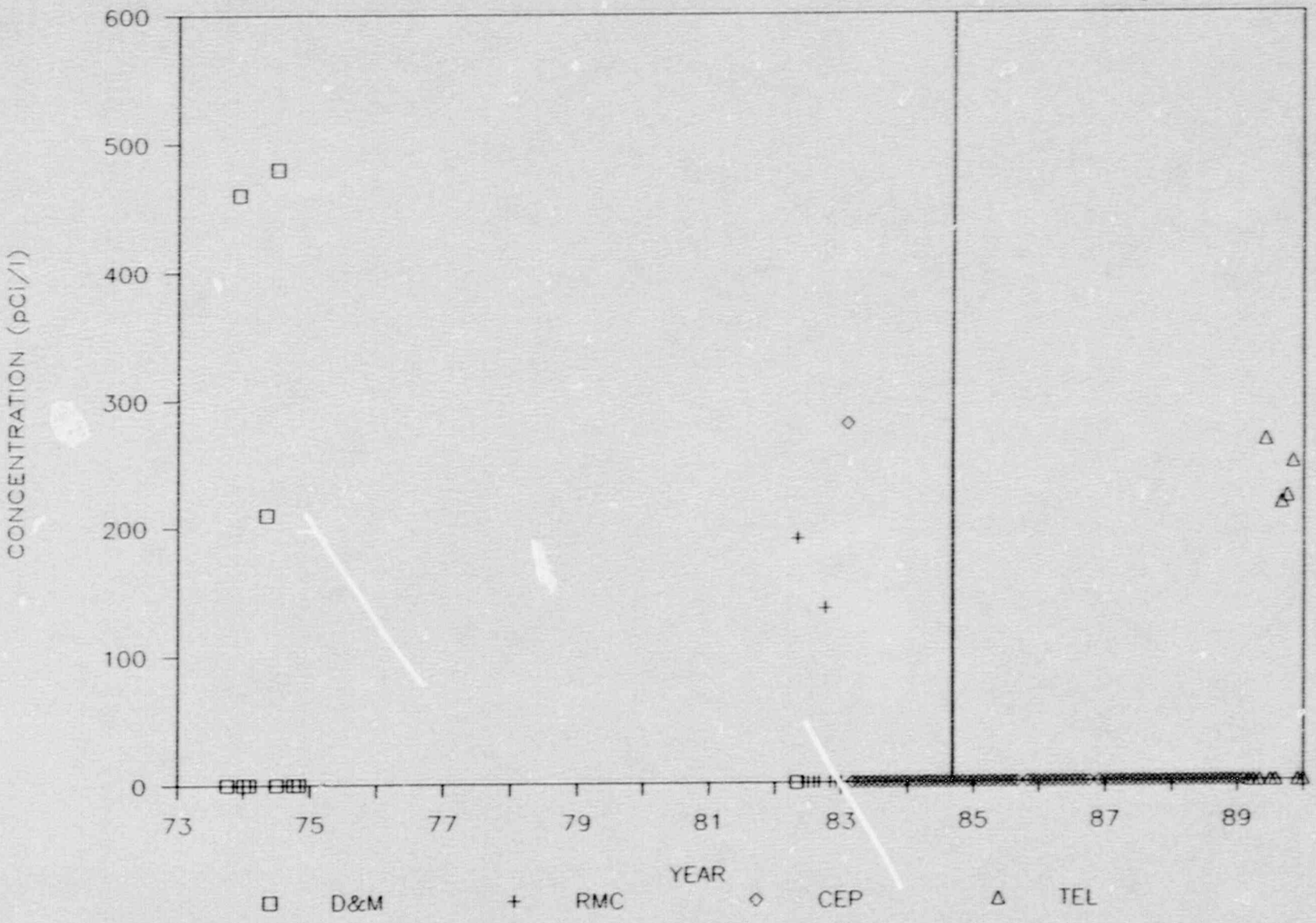
SURFACE WATER SR-90, DOWNSTREAM



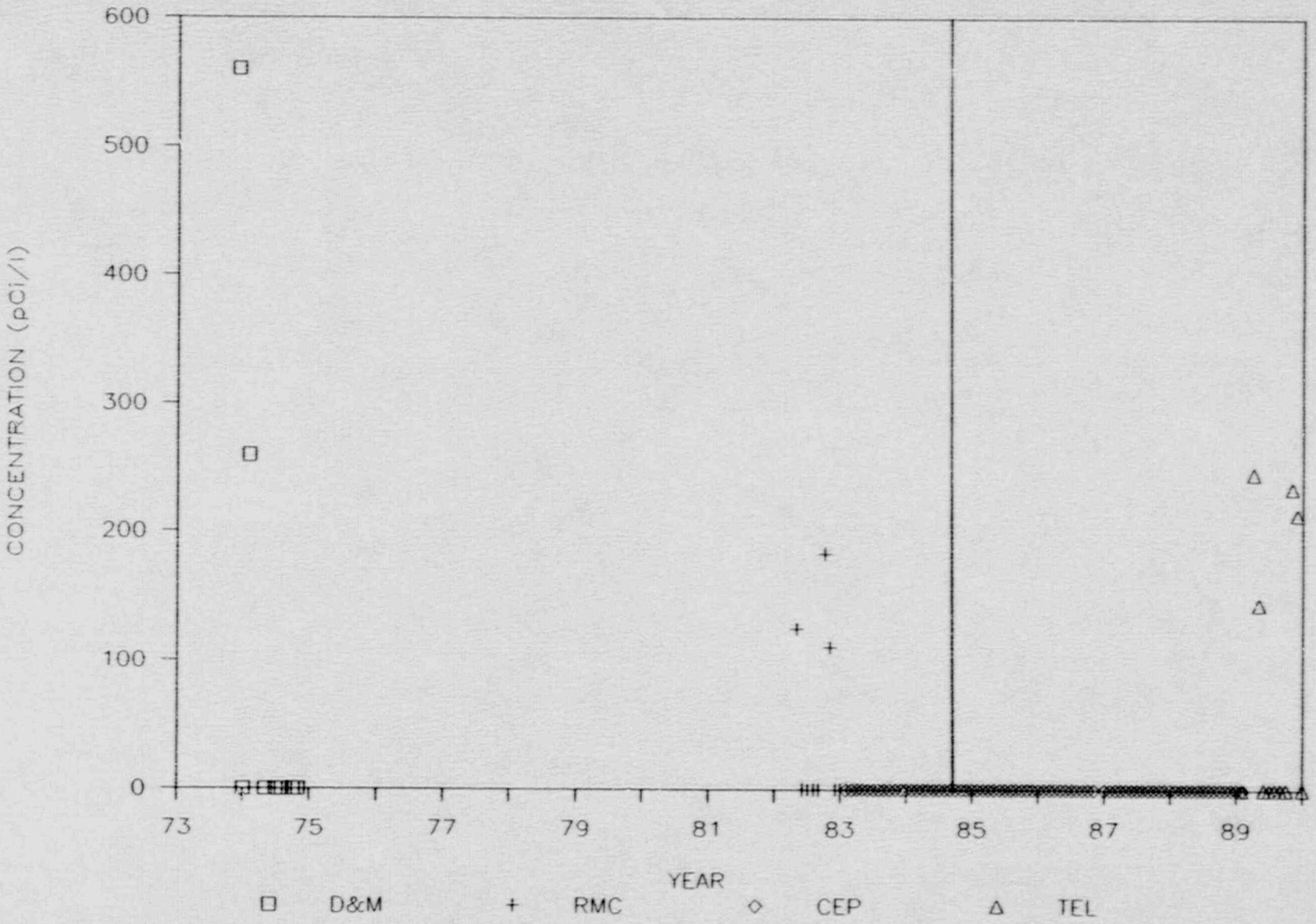
SURFACE WATER SR-90, ST. LOUIS



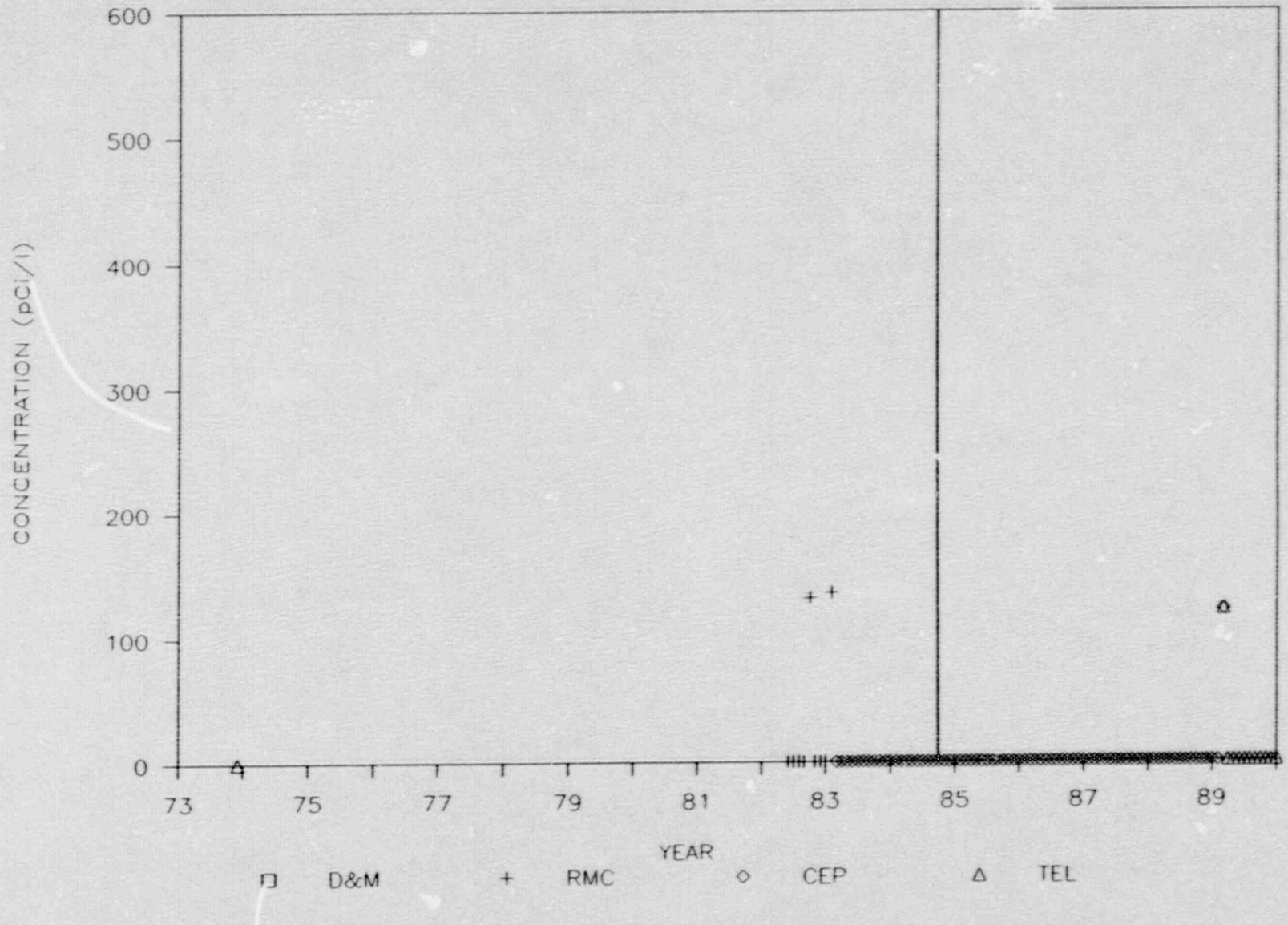
SURFACE WATER TRITIUM, UPSTREAM



SURFACE WATER TRITIUM, DOWNSTREAM

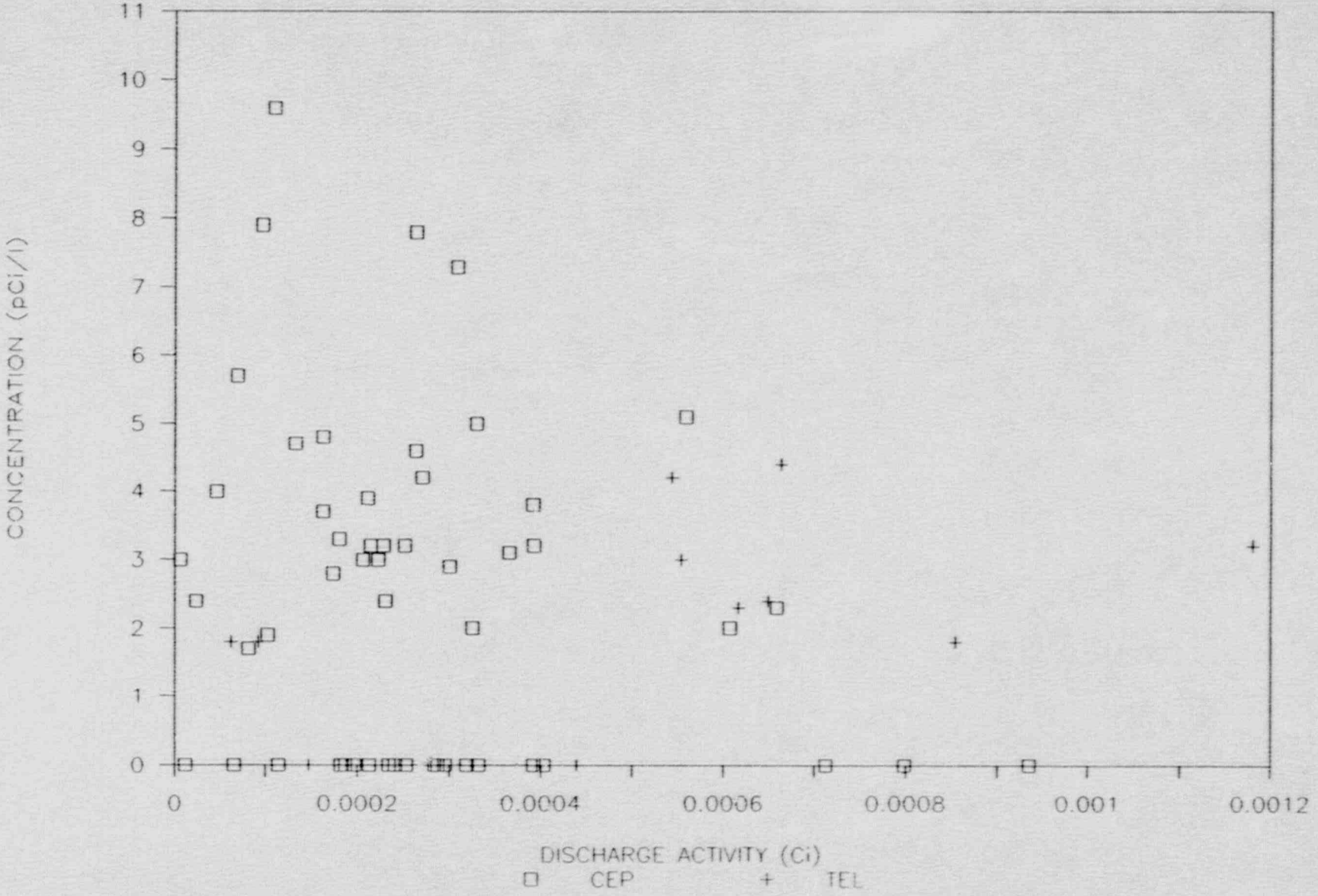


SURFACE WATER TRITIUM, ST. LOUIS



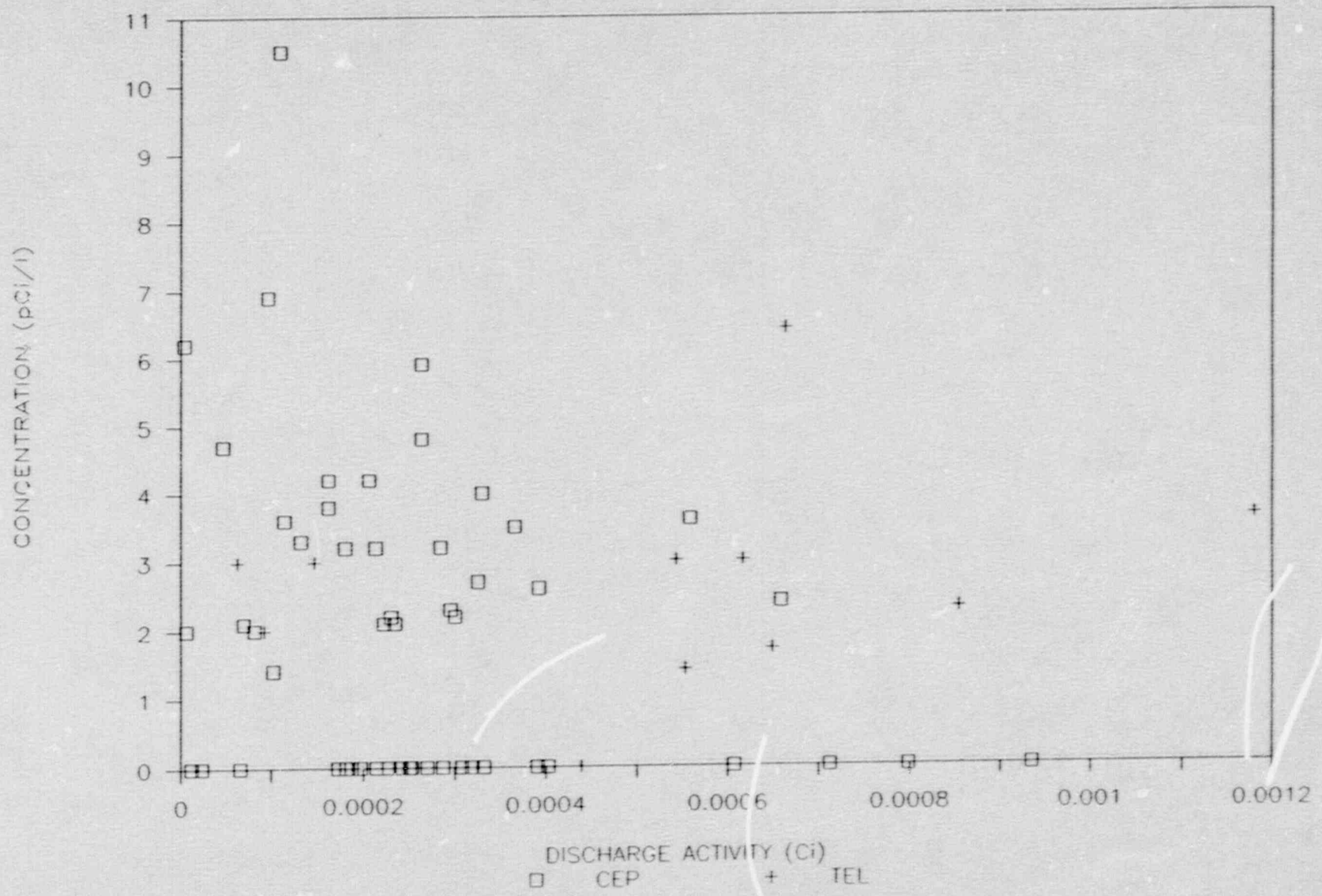
CALLAWAY DISCHARGE VS. SURFACE WATER

GROSS ALPHA UPSTREAM



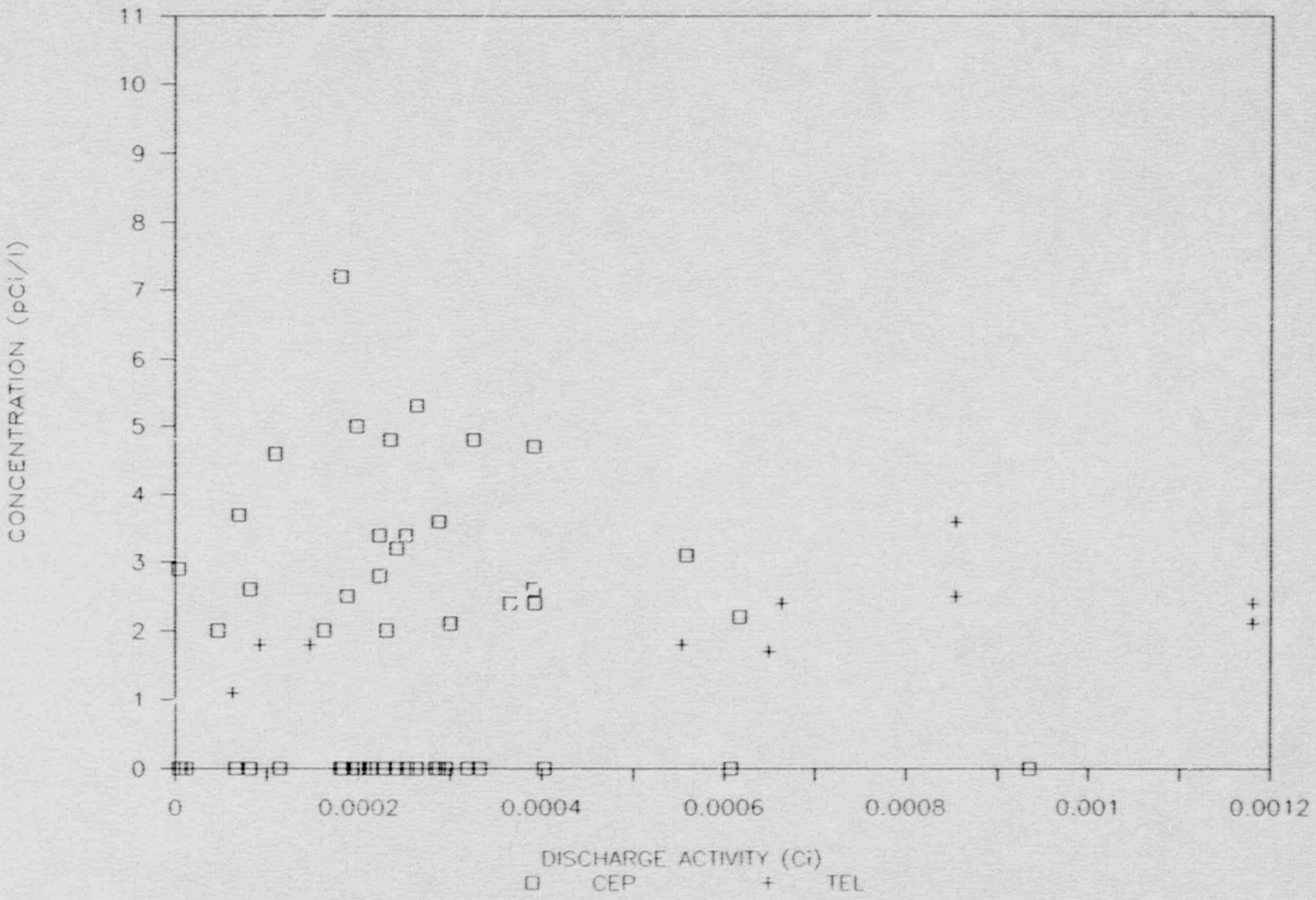
CALLAWAY DISCHARGE VS. SURFACE WATER

GROSS ALPHA DOWNSTREAM

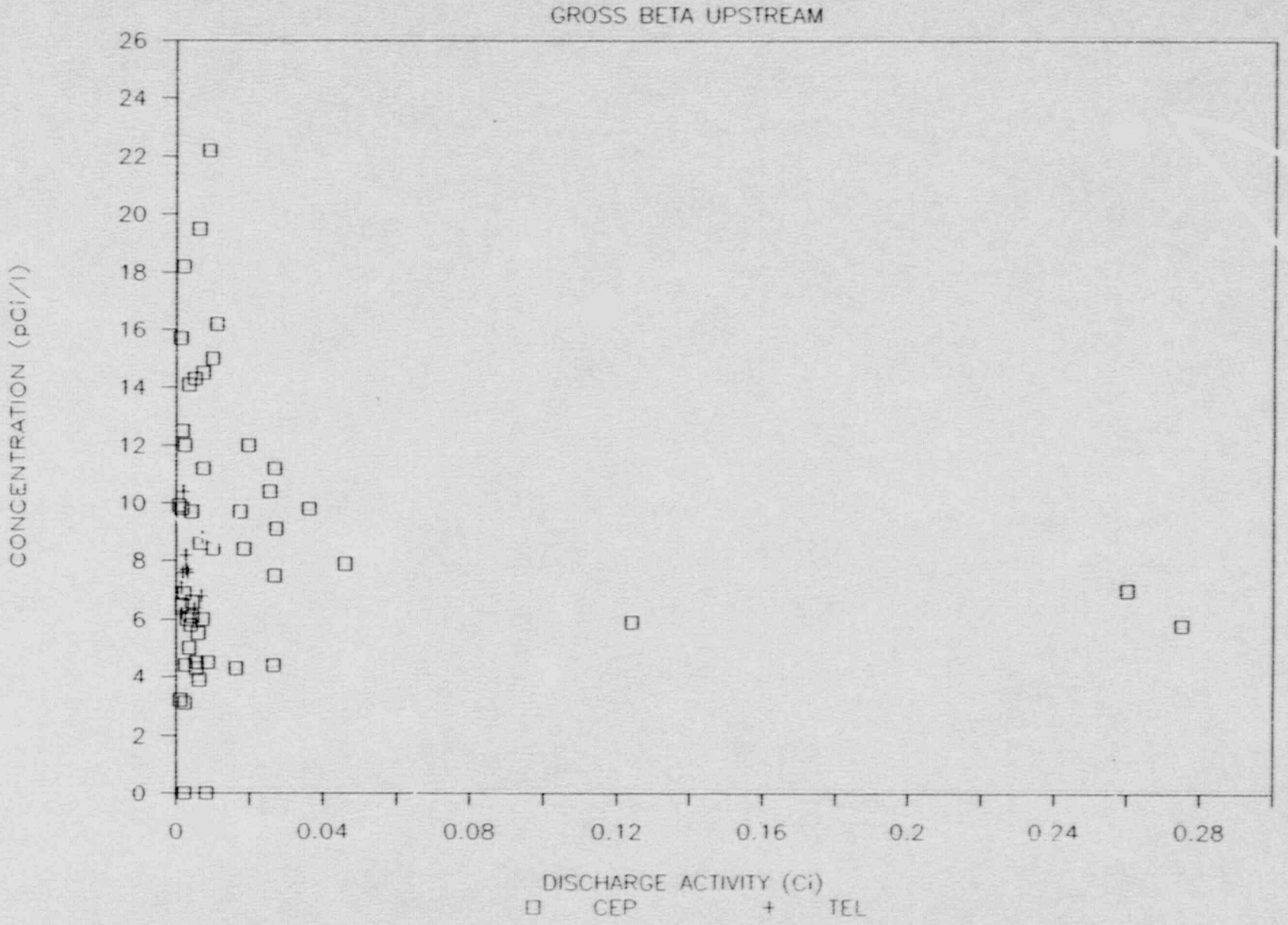


CALLAWAY DISCHARGE VS. SURFACE WATER

GROSS ALPHA AT ST. LOUIS

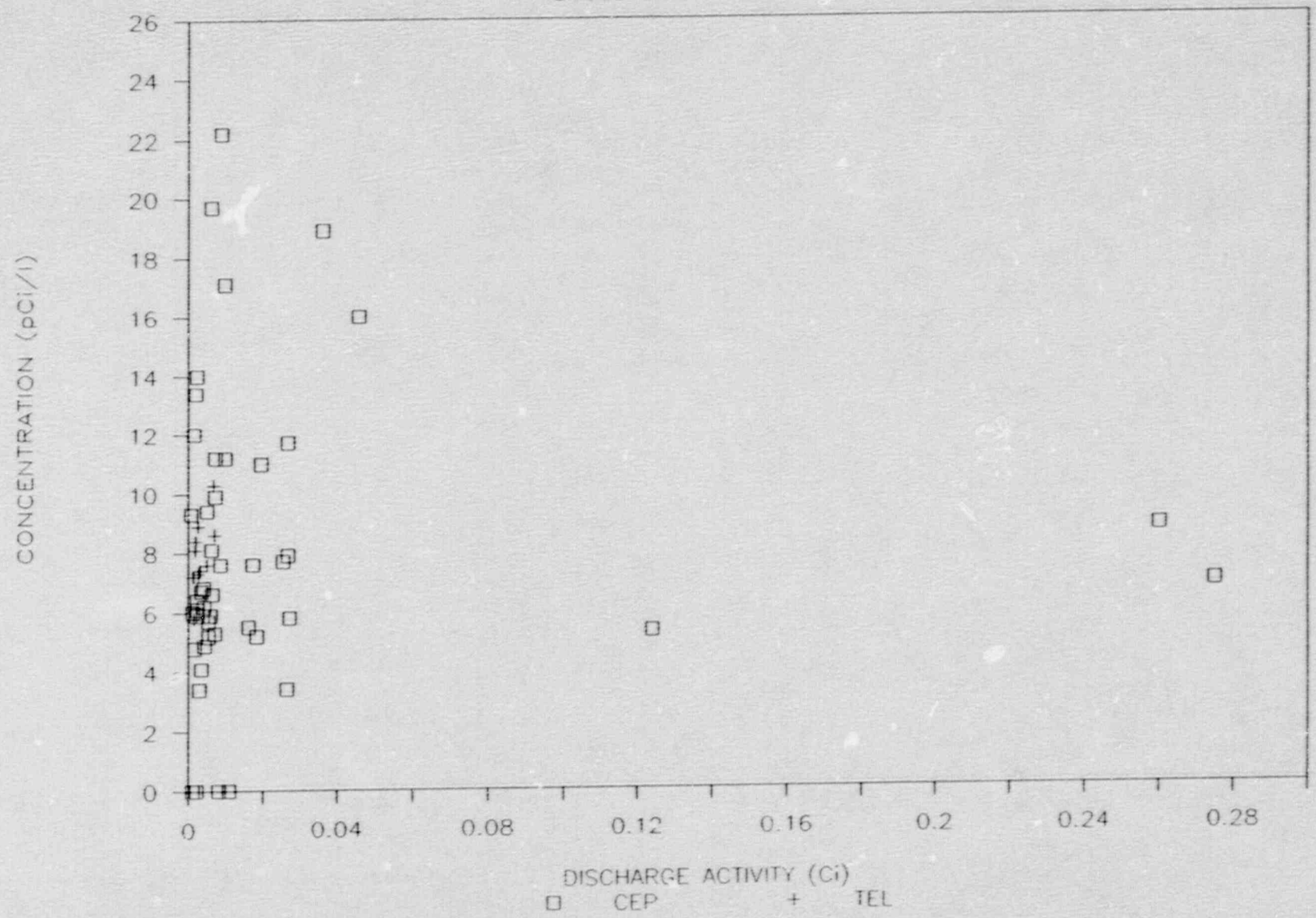


CALLAWAY DISCHARGE VS. SURFACE WATER



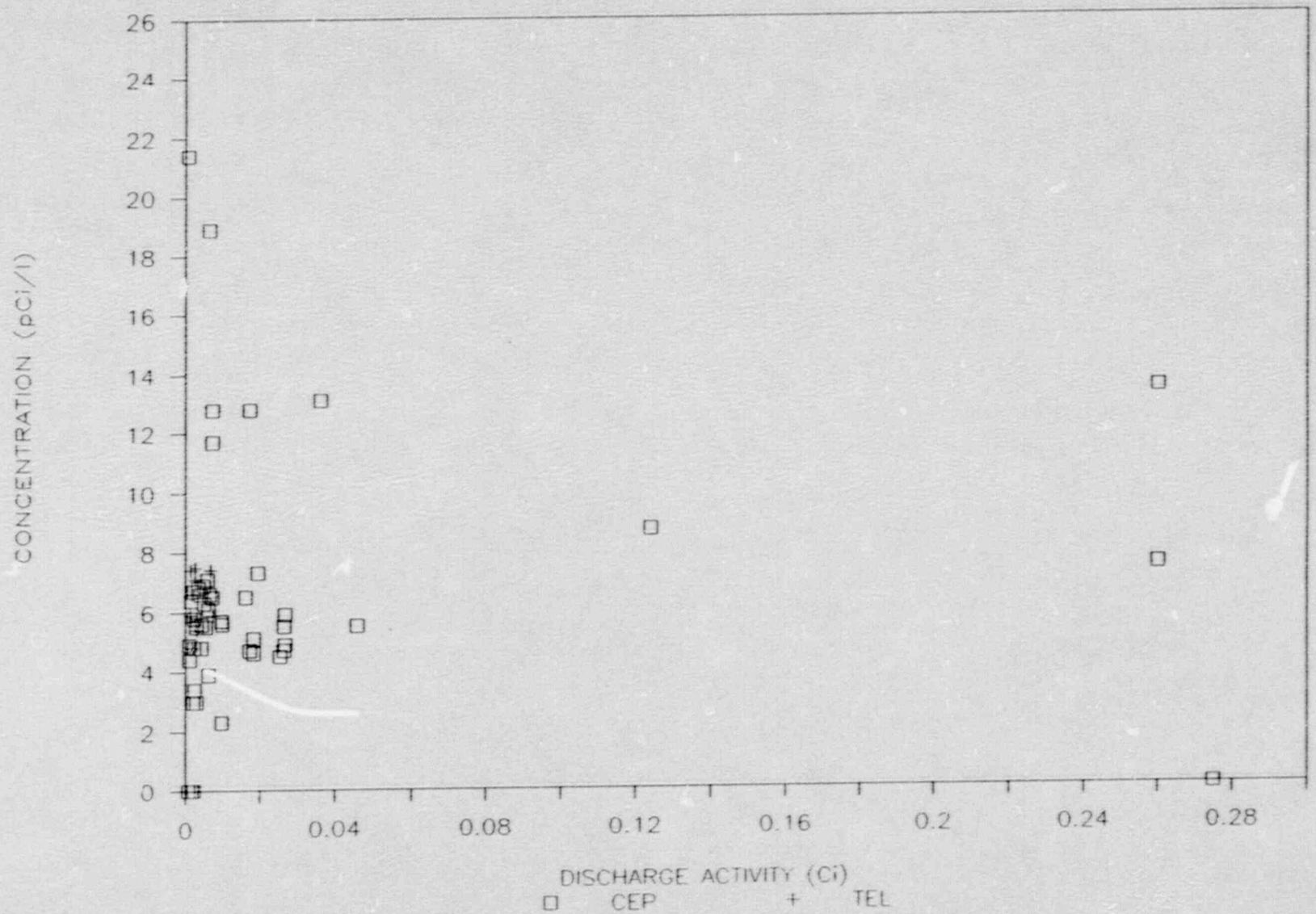
CALLAWAY DISCHARGE VS. SURFACE WATER

GROSS BETA DOWNSTREAM



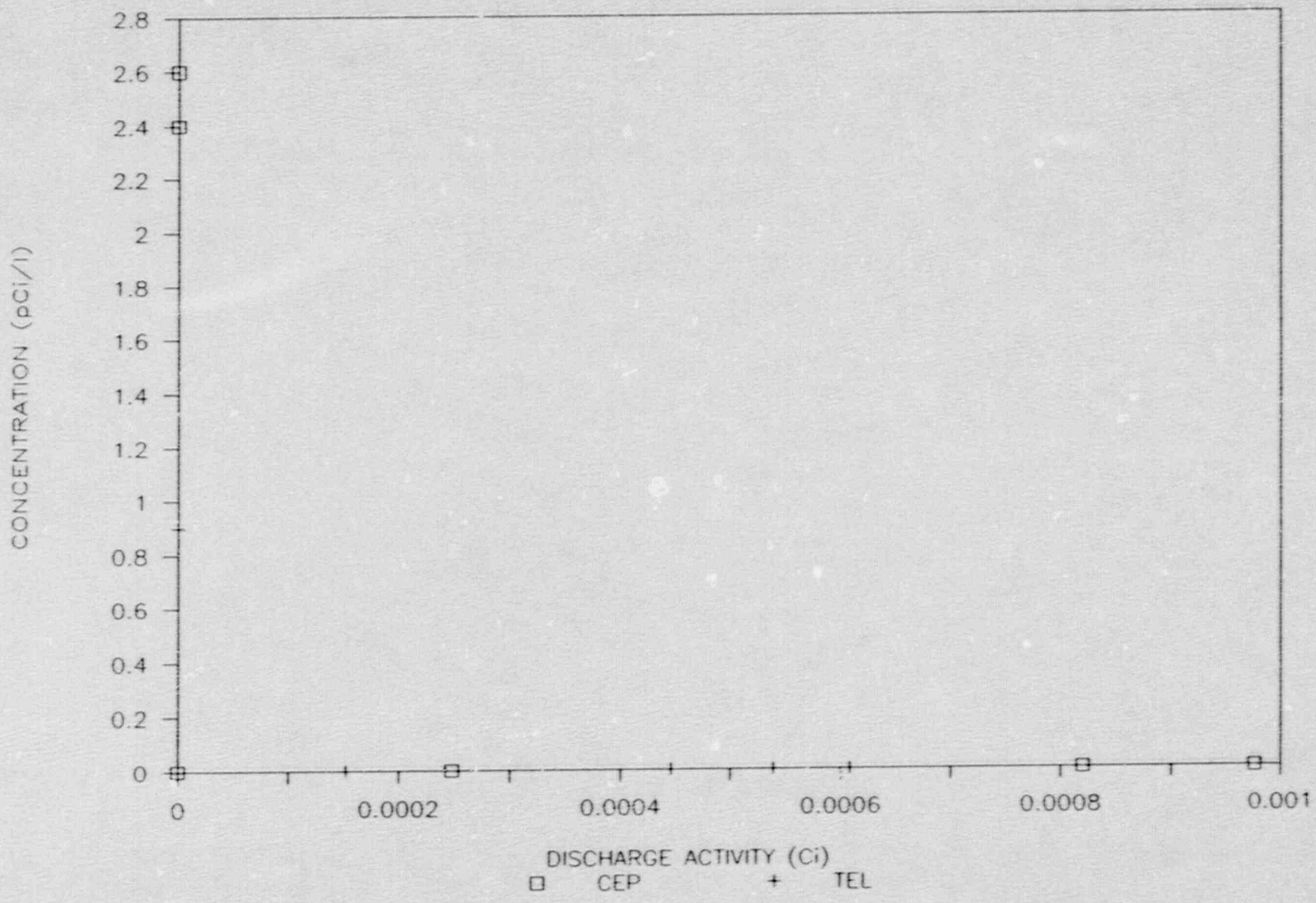
CALLAWAY DISCHARGE VS. SURFACE WATER

GROSS BETA AT ST. LOUIS

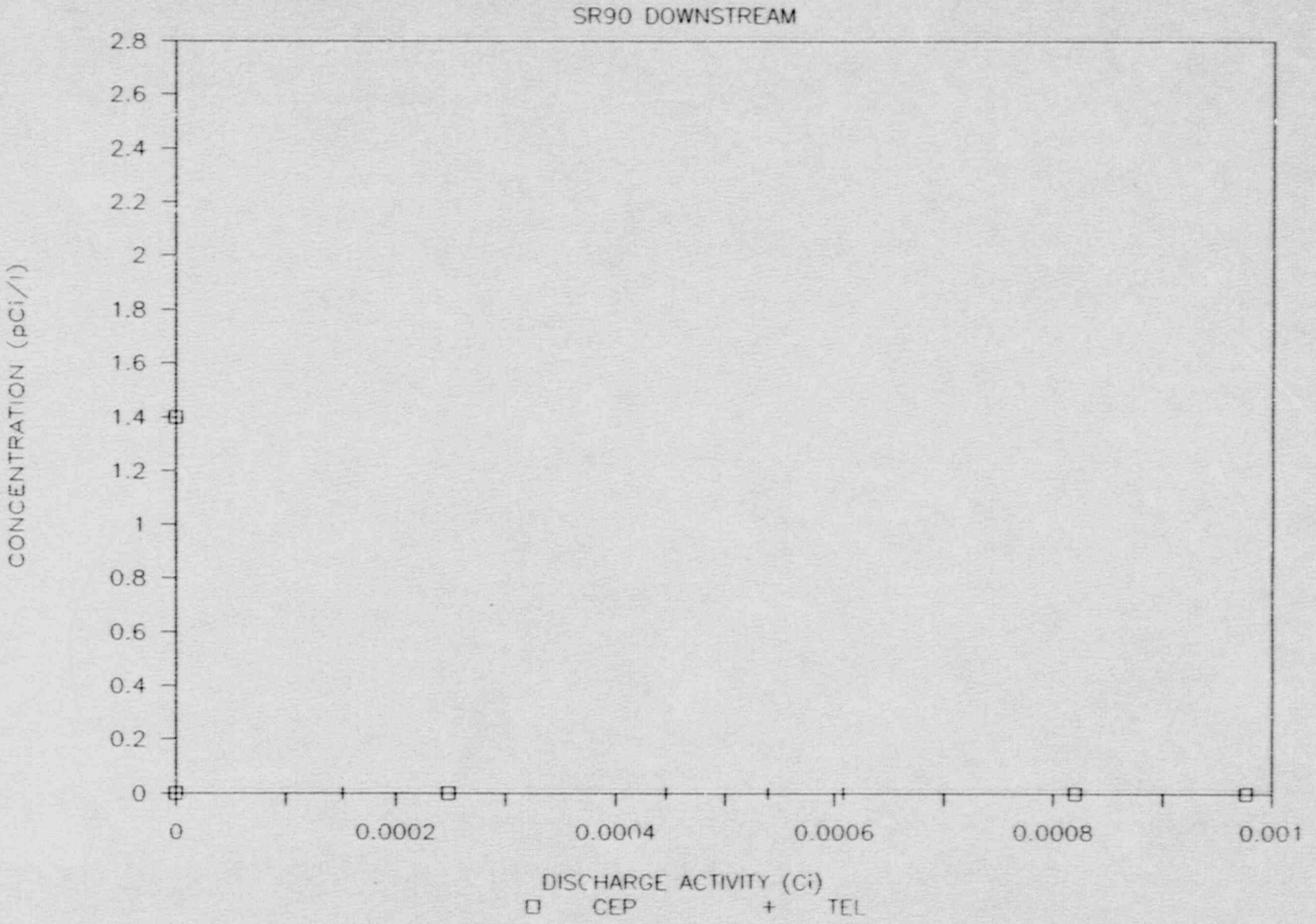


CALLAWAY DISCHARGE VS. SURFACE WATER

SR90 UPSTREAM

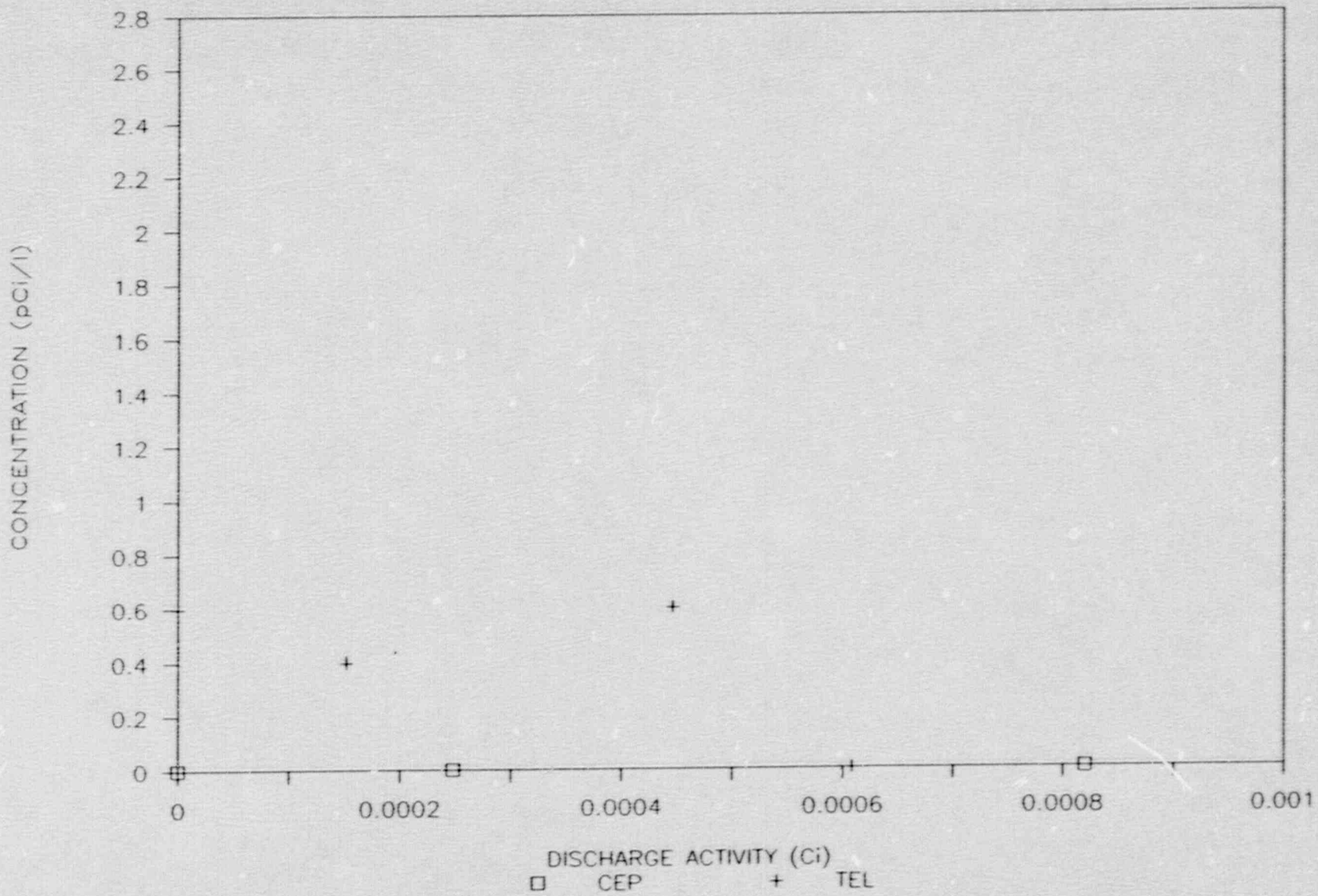


CALLAWAY DISCHARGE VS. SURFACE WATER

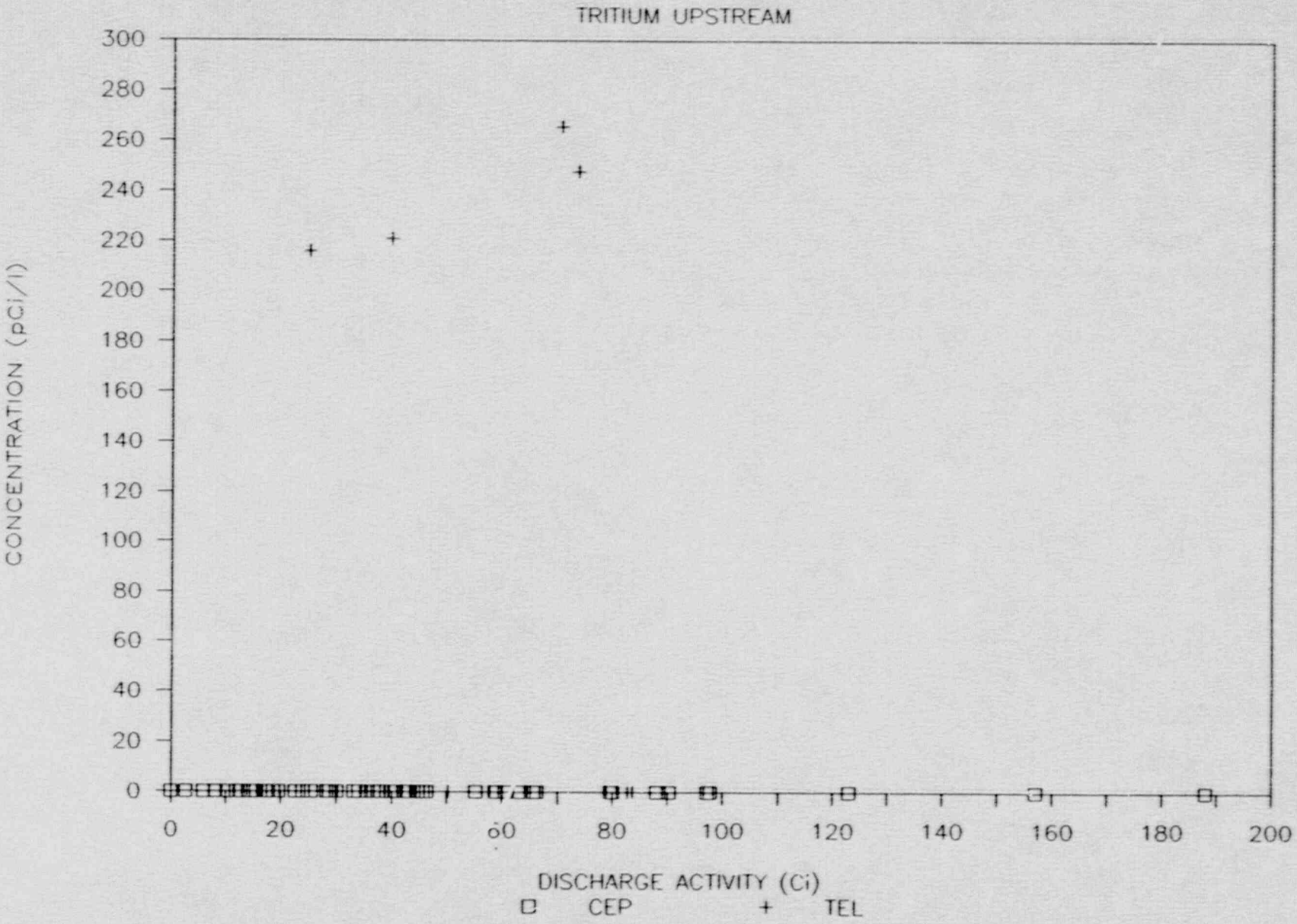


CALLAWAY DISCHARGE VS. SURFACE WATER

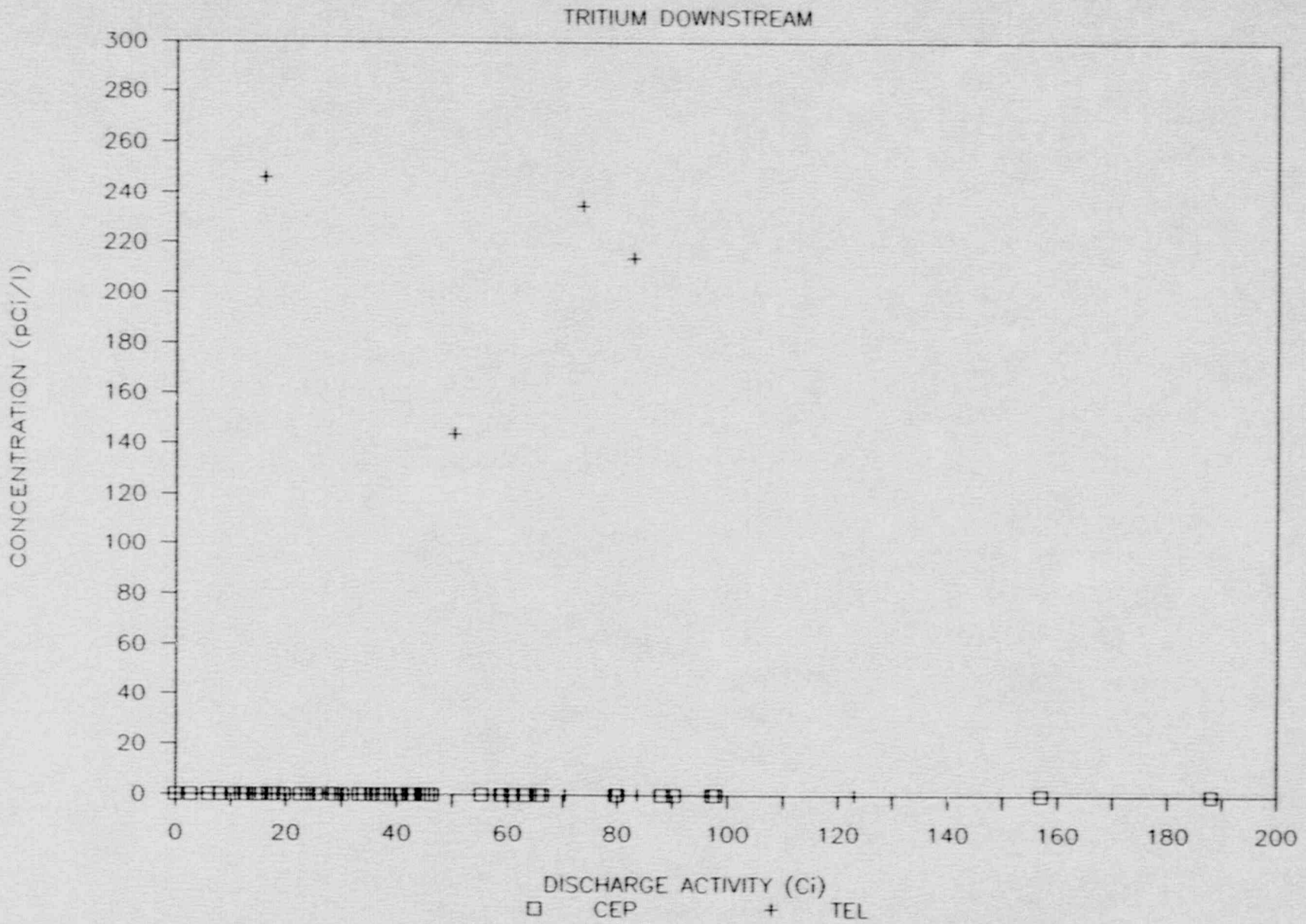
SR90 AT ST. LOUIS



CALLAWAY DISCHARGE VS. SURFACE WATER

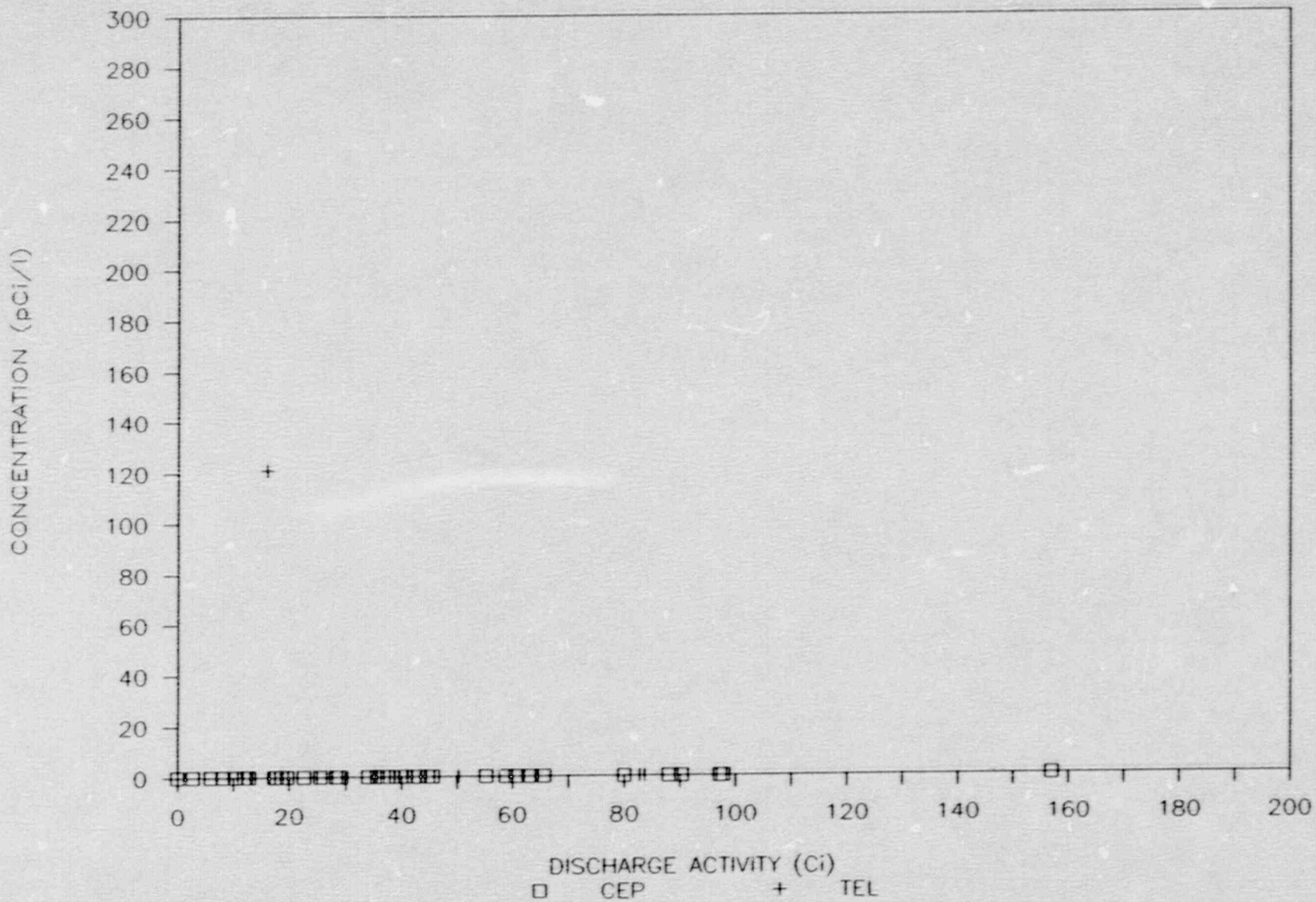


CALLAWAY DISCHARGE VS. SURFACE WATER

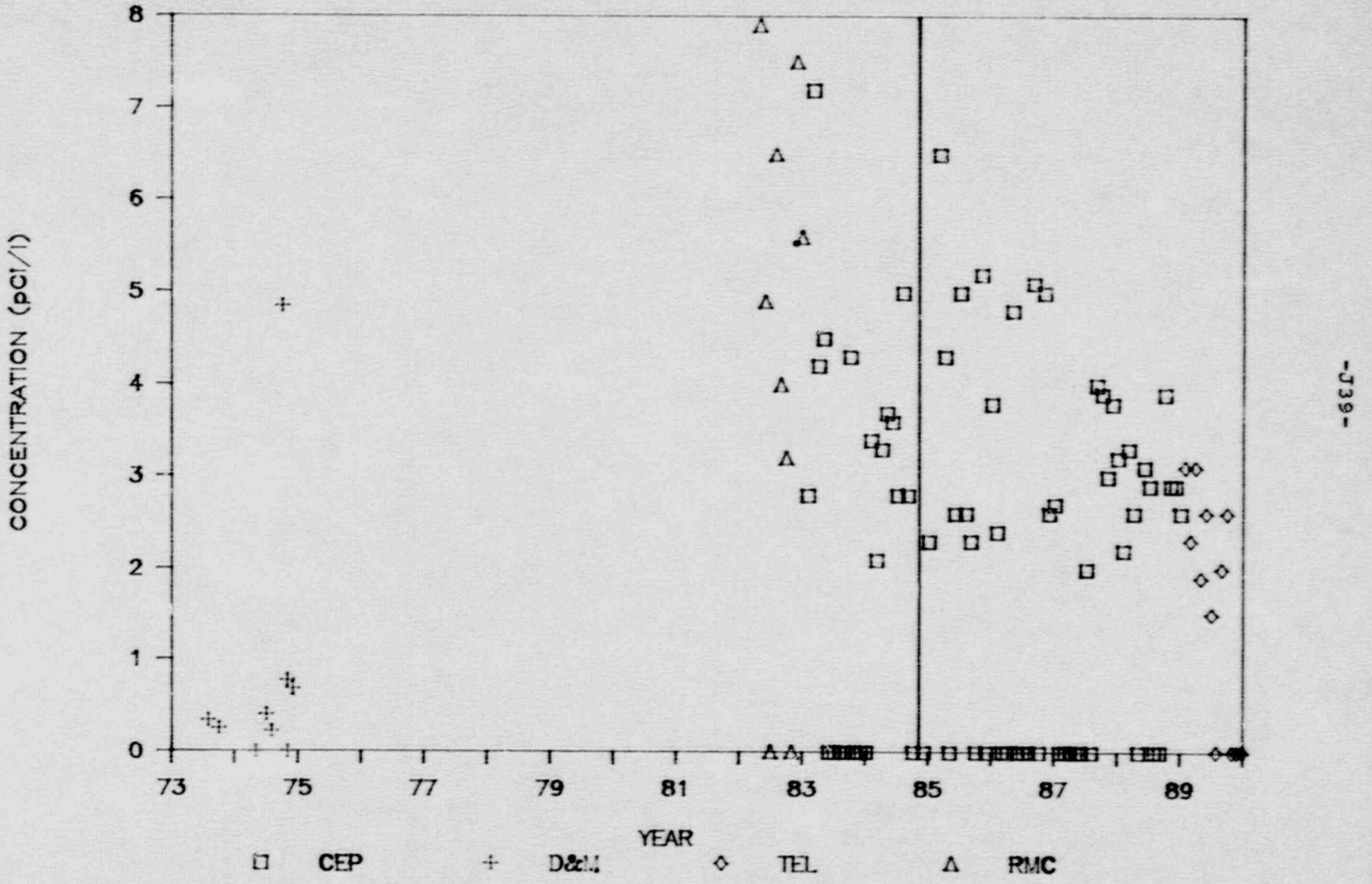


CALLAWAY DISCHARGE VS. SURFACE WATER

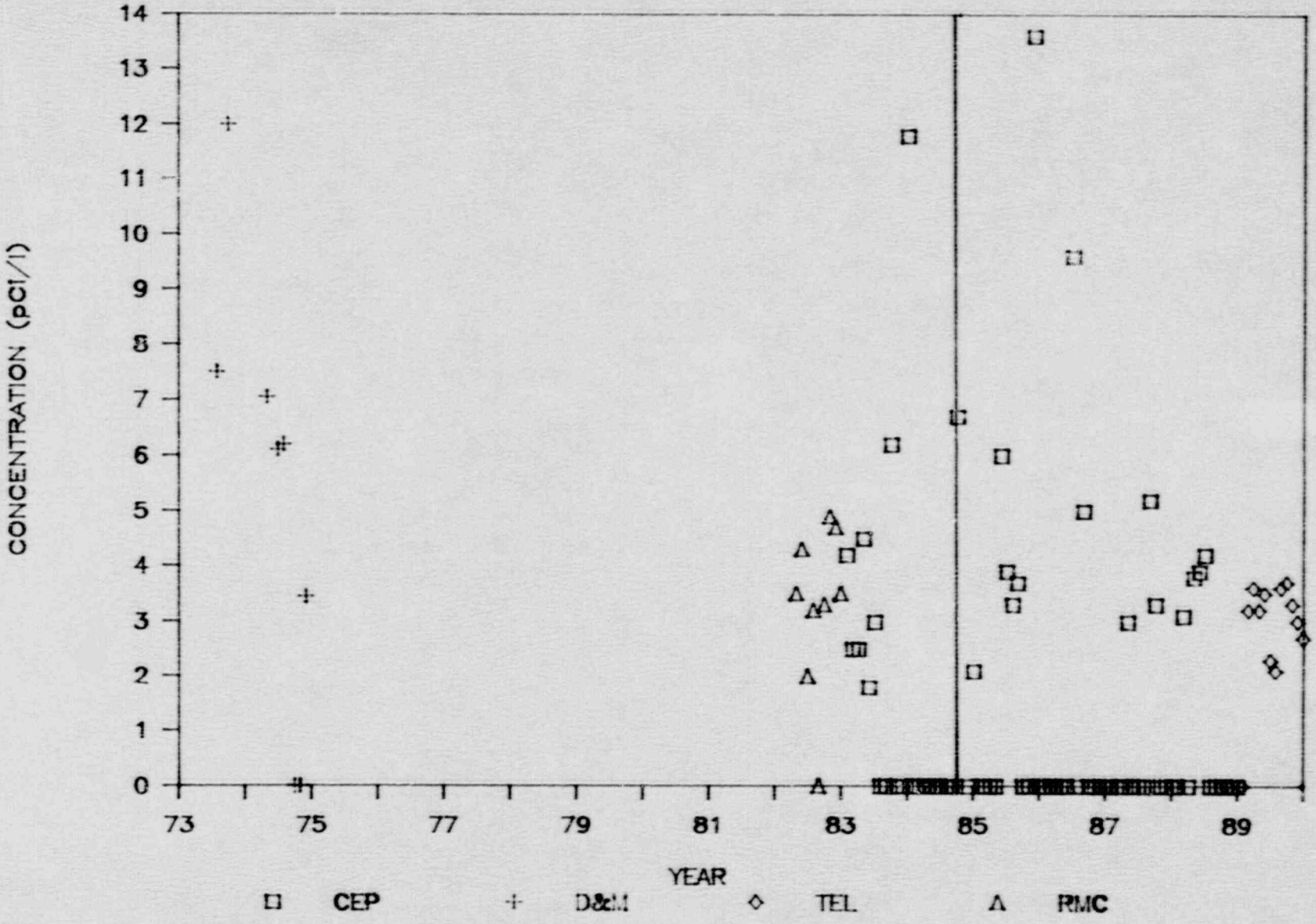
TRITIUM AT ST. LOUIS



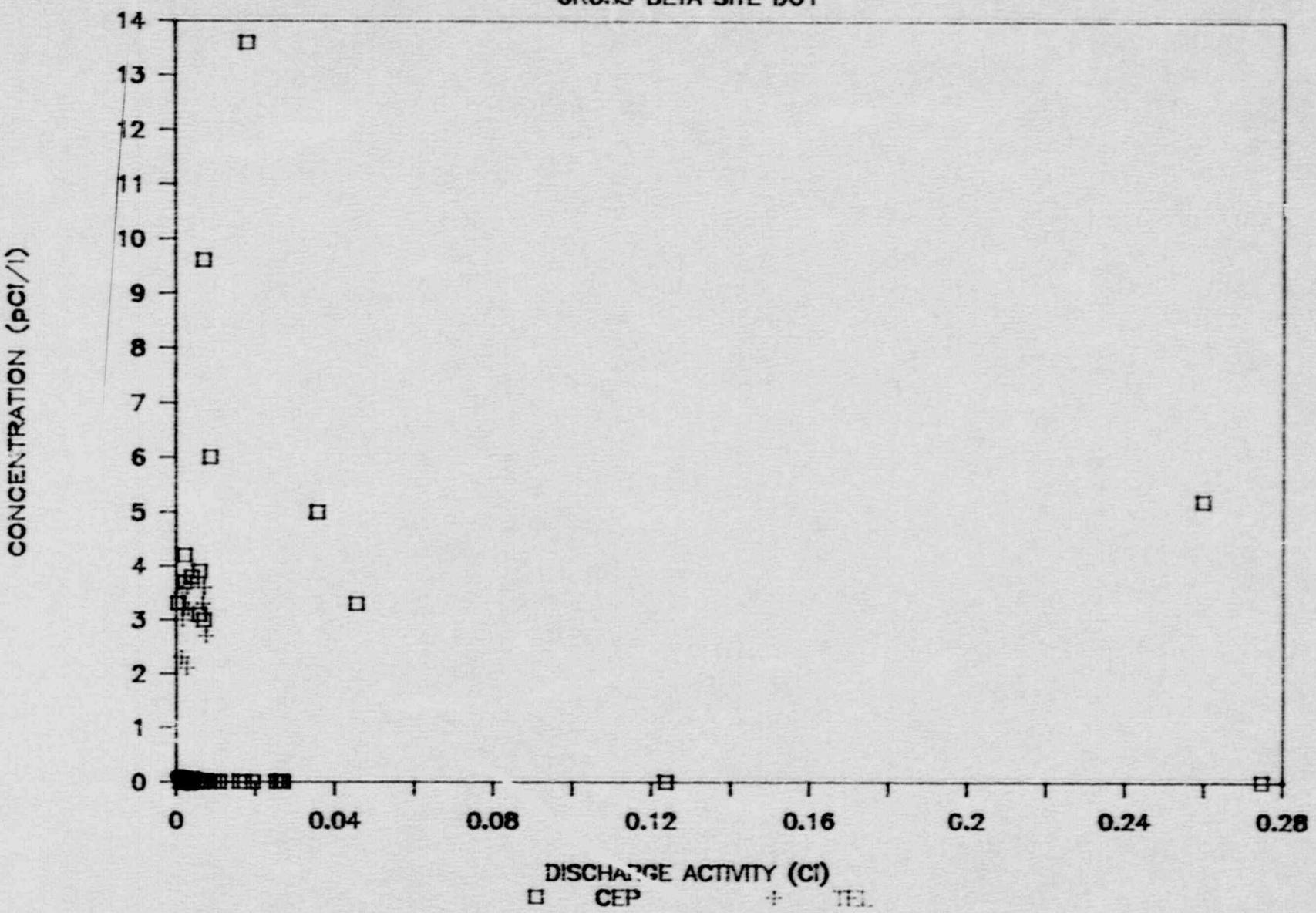
DRiNKING WATER GROSS ALPHA, SITE DO1



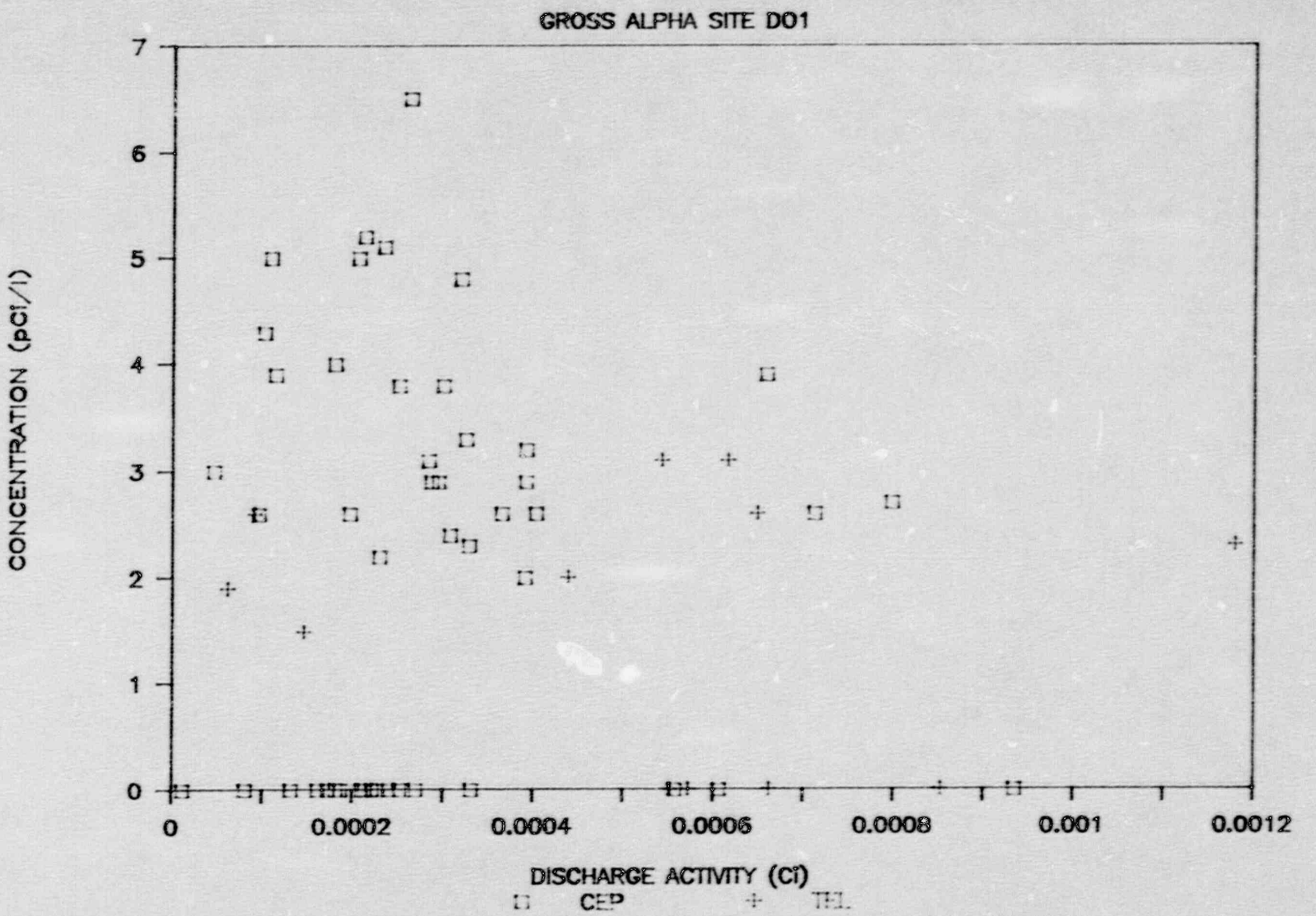
DRINKING WATER GROSS BETA, SITE DO1



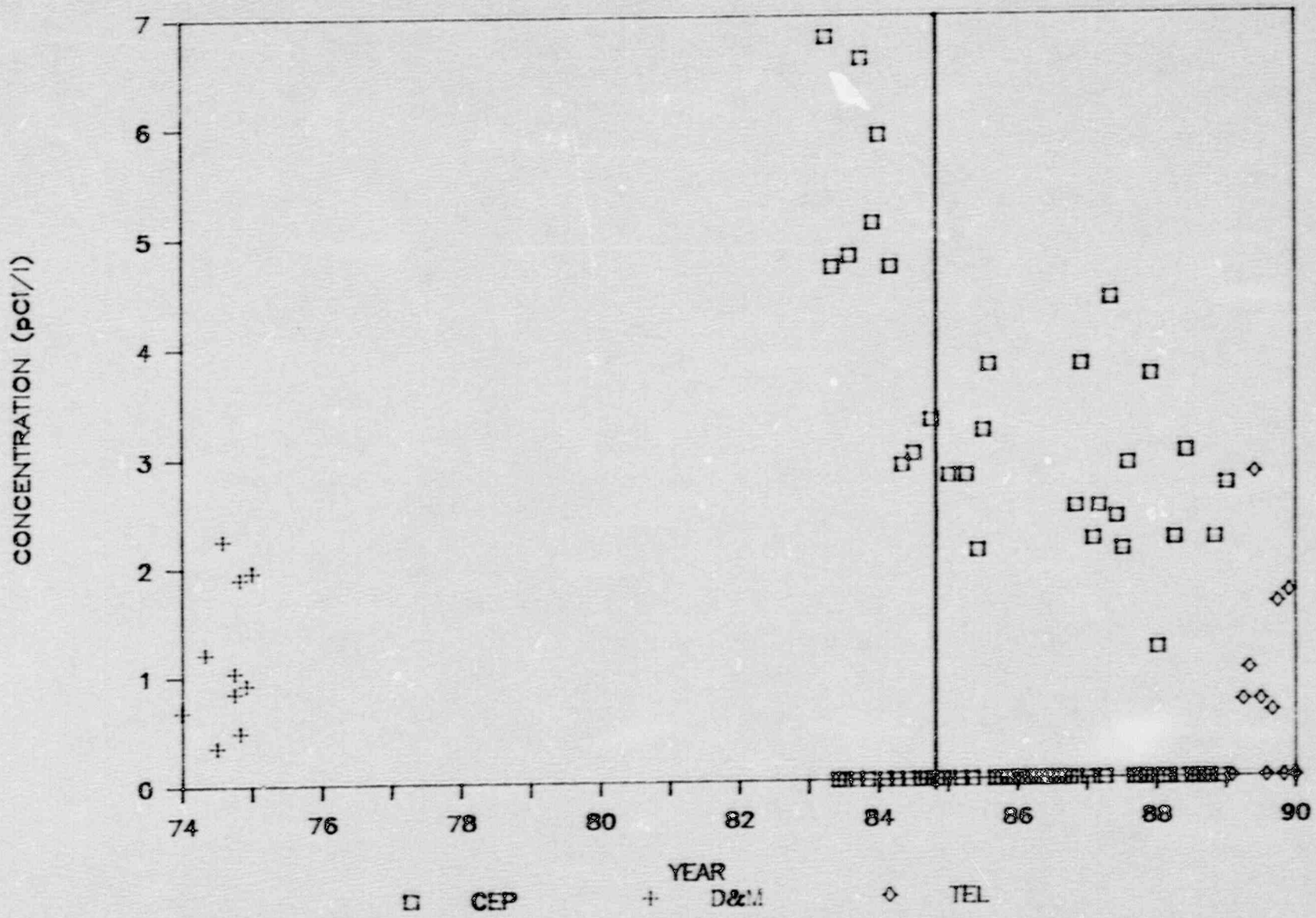
CALLAWAY DISCHARGE VS DRINKING WATER



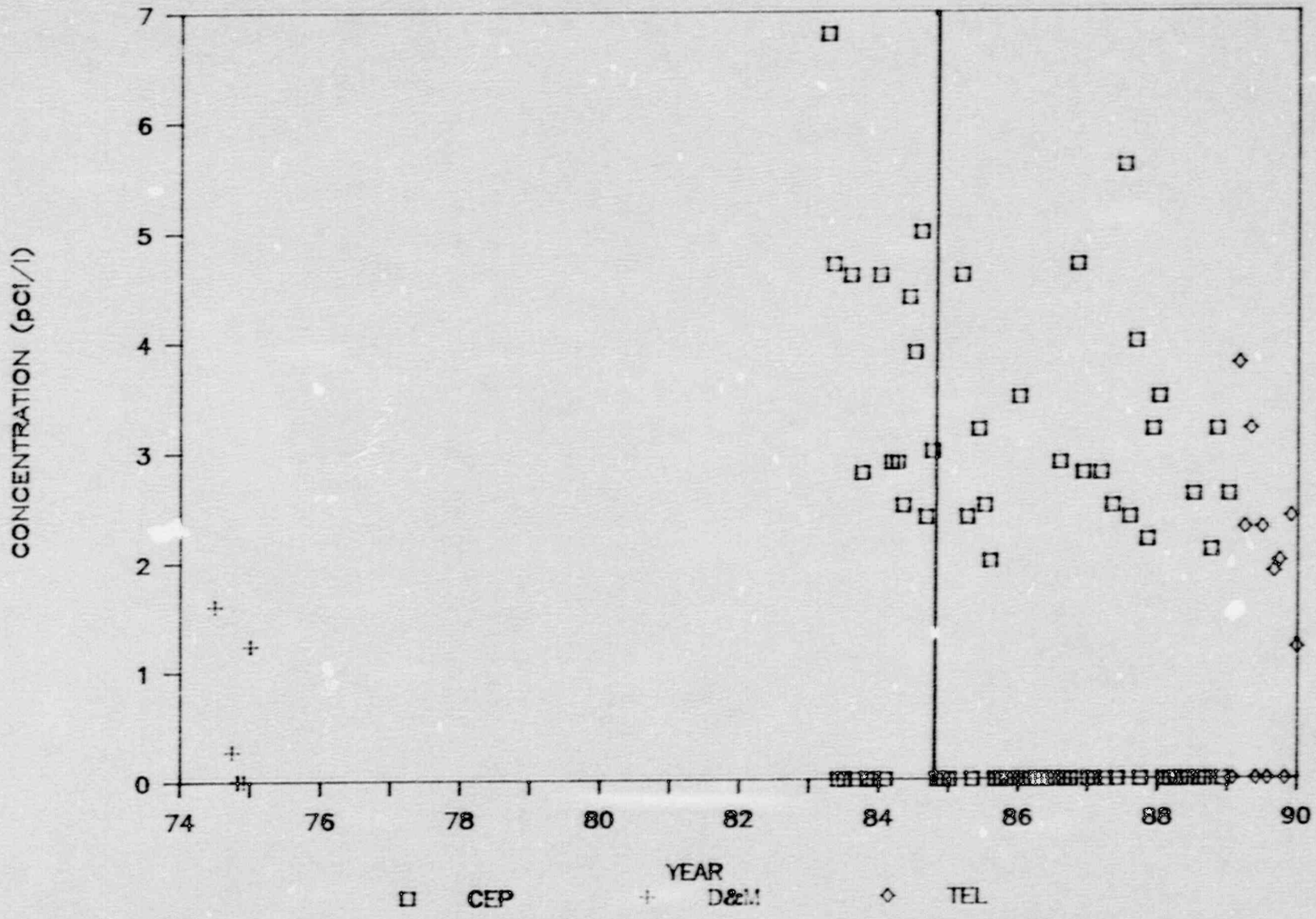
CALLAWAY DISCHARGE VS DRINKING WATER



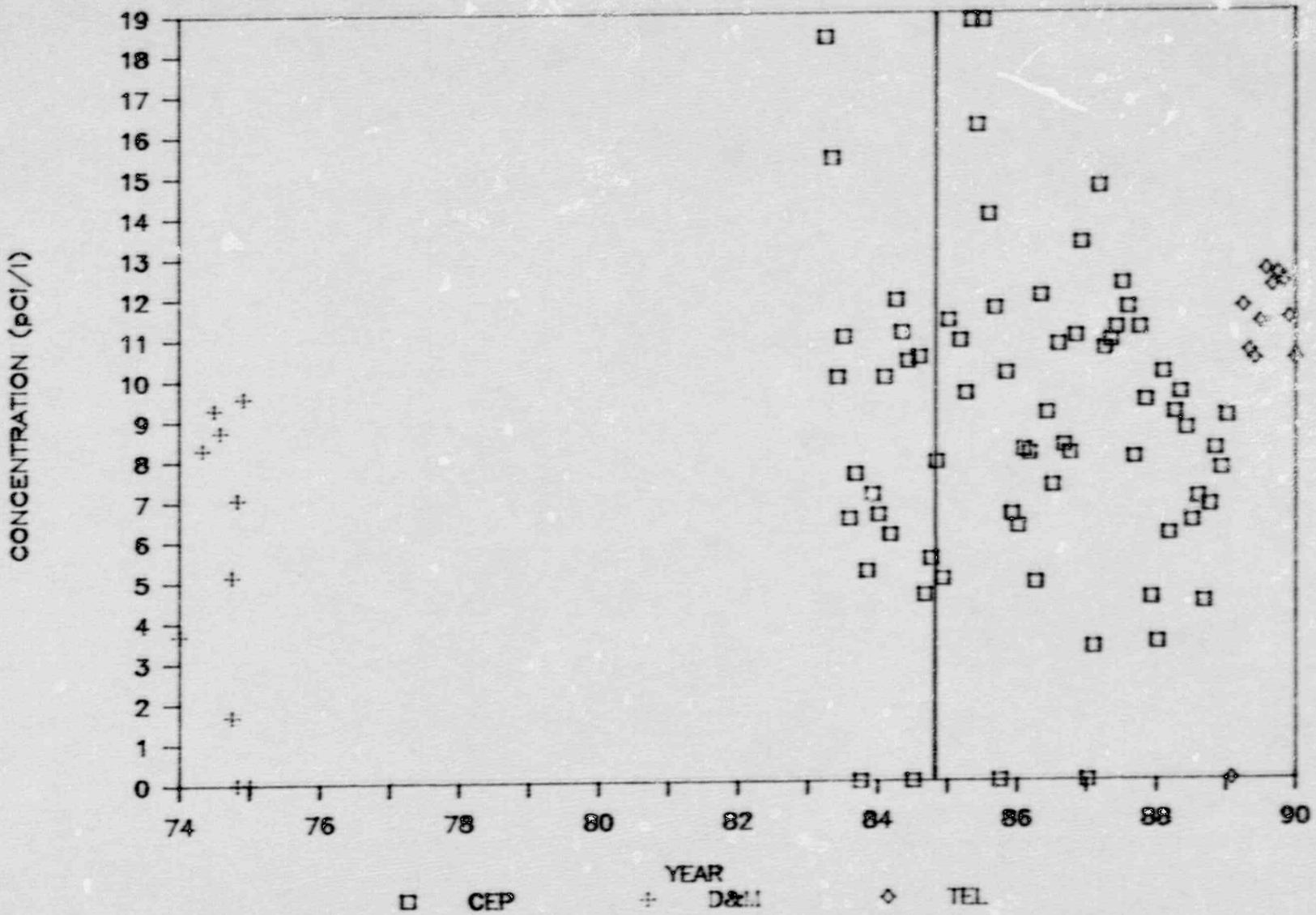
WELL WATER GROSS ALPHA, SITE F05



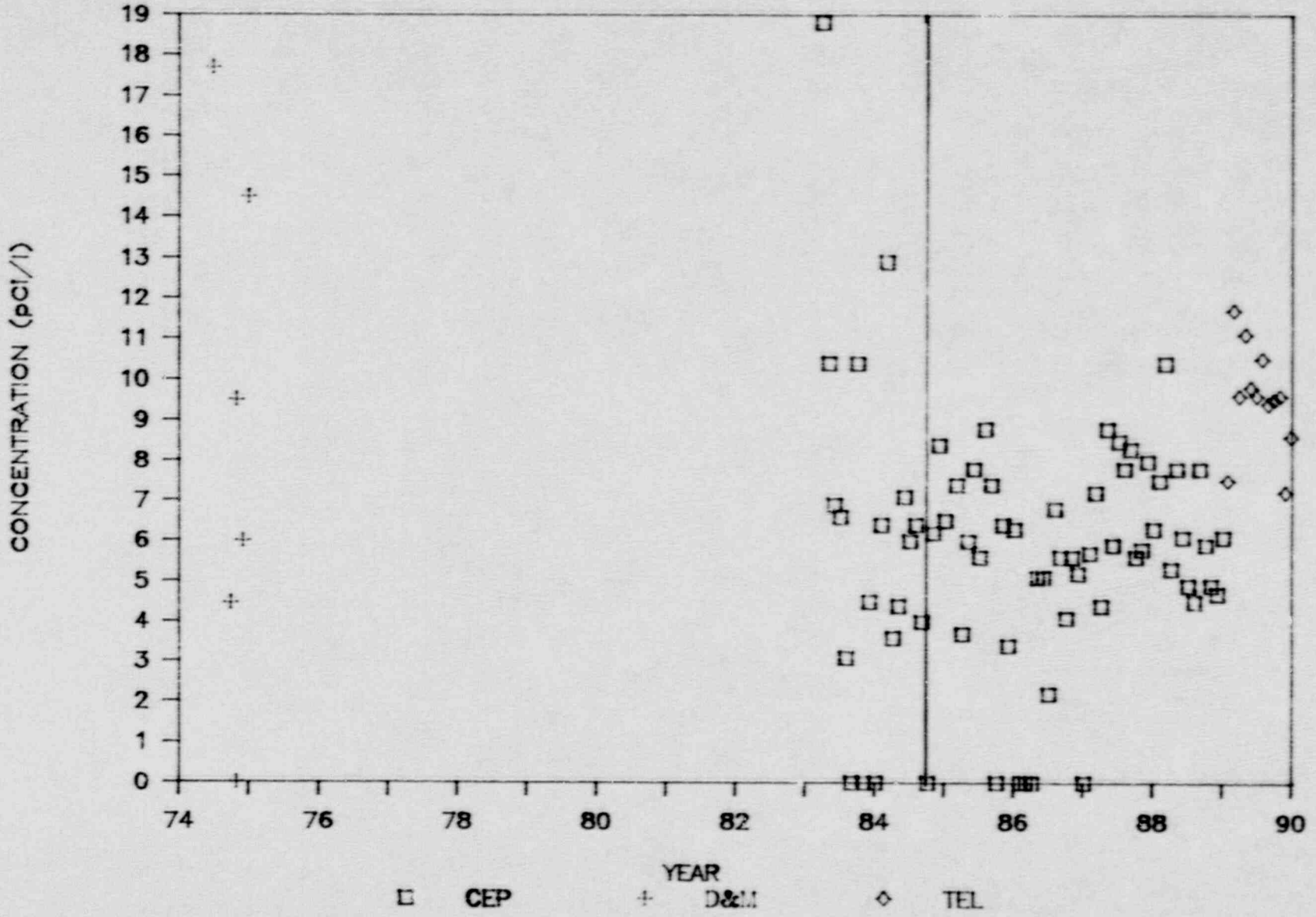
WELL WATER GROSS ALPHA, SITE F15



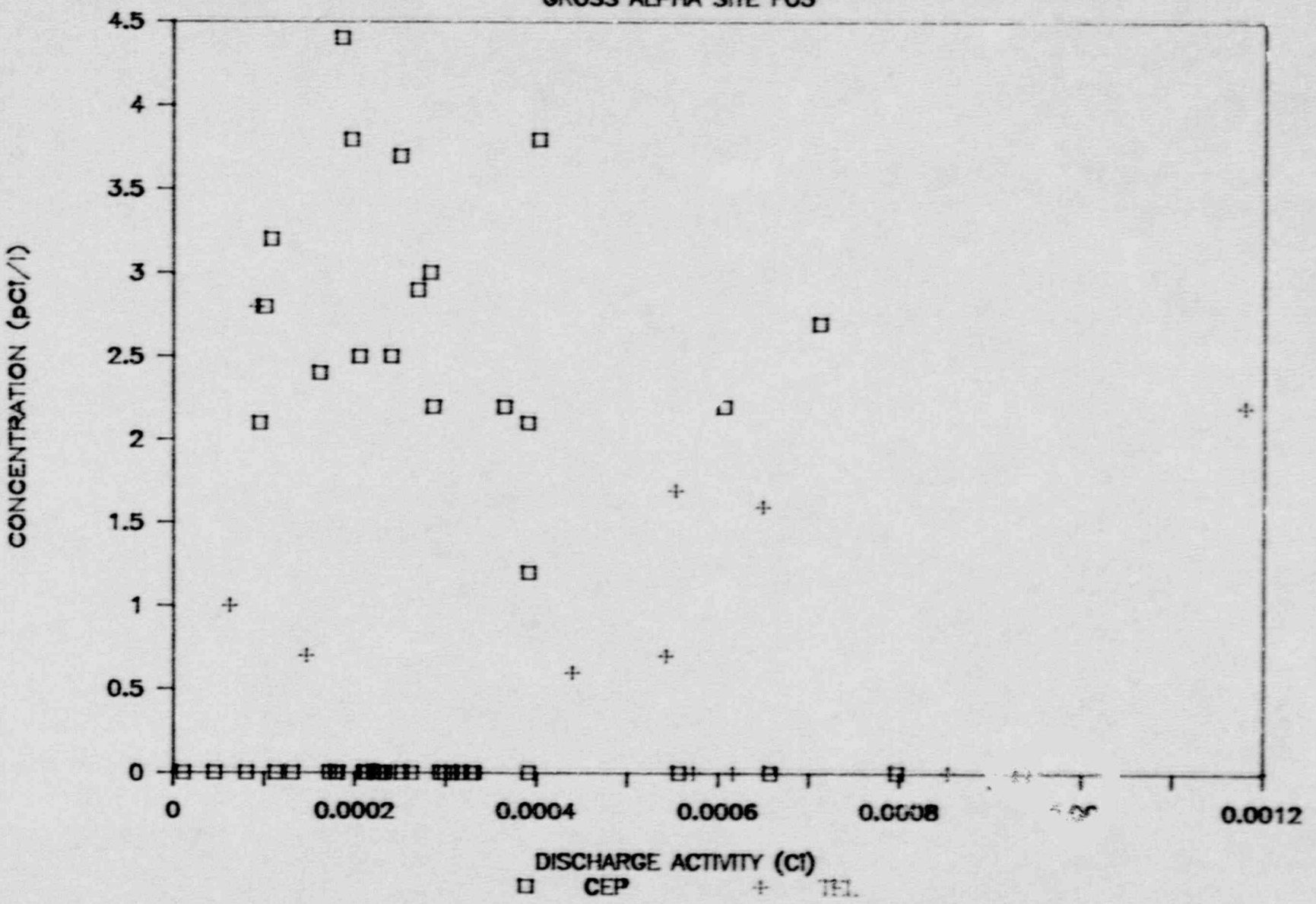
WELL WATER GROSS BETA, SITE F05



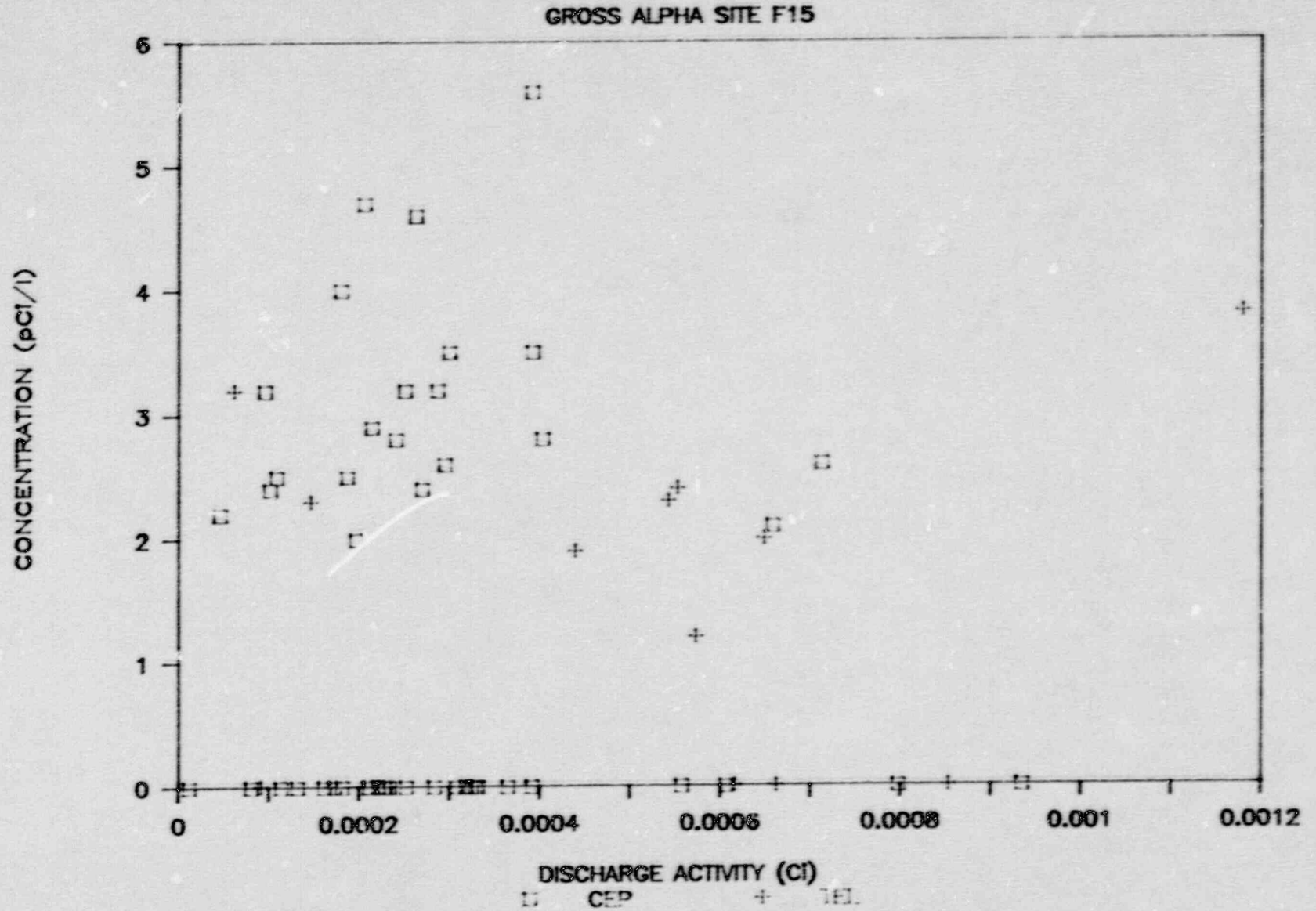
WELL WATER GROSS BETA, SITE F15



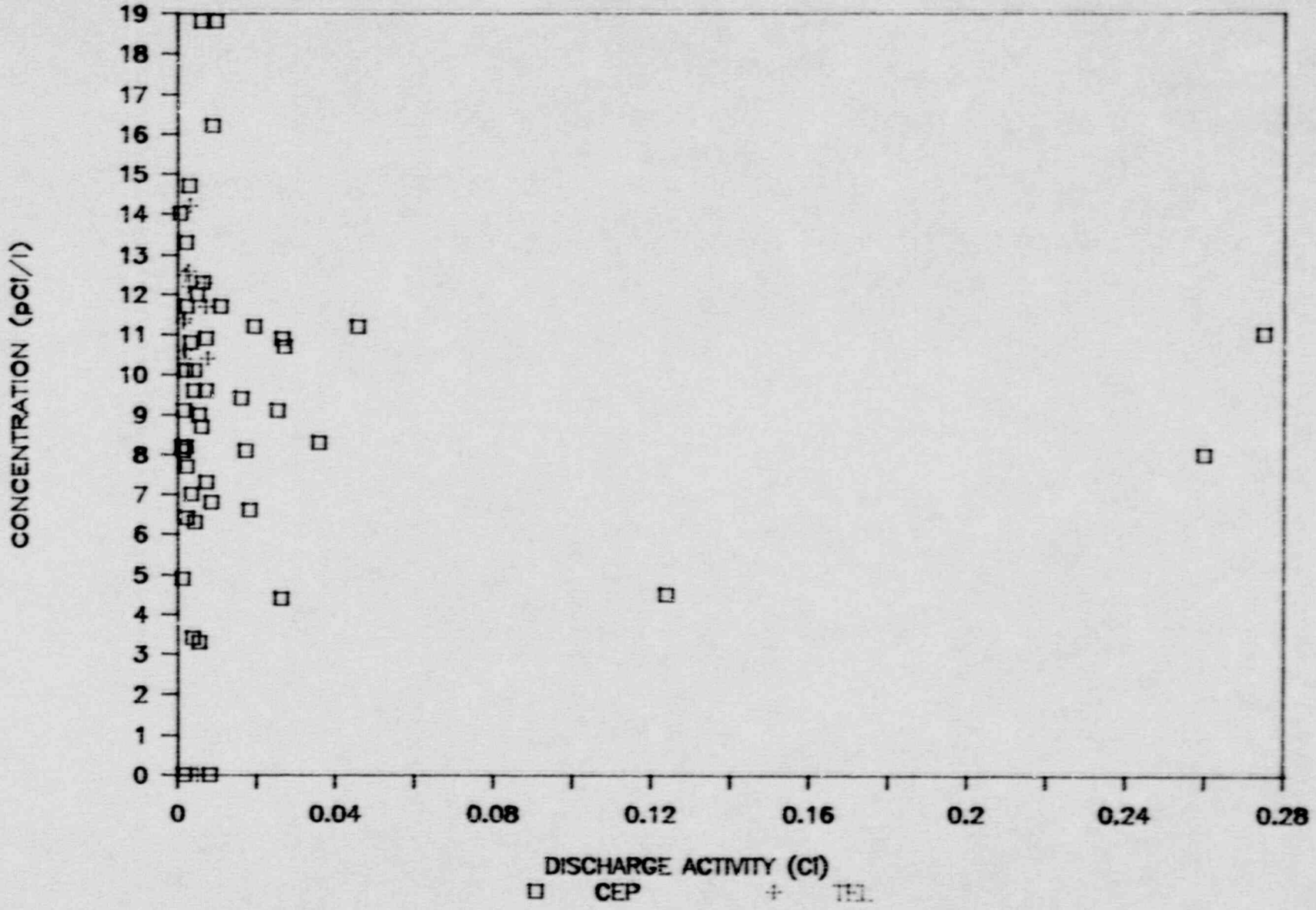
CALLAWAY DISCHARGE VS WELL WATER



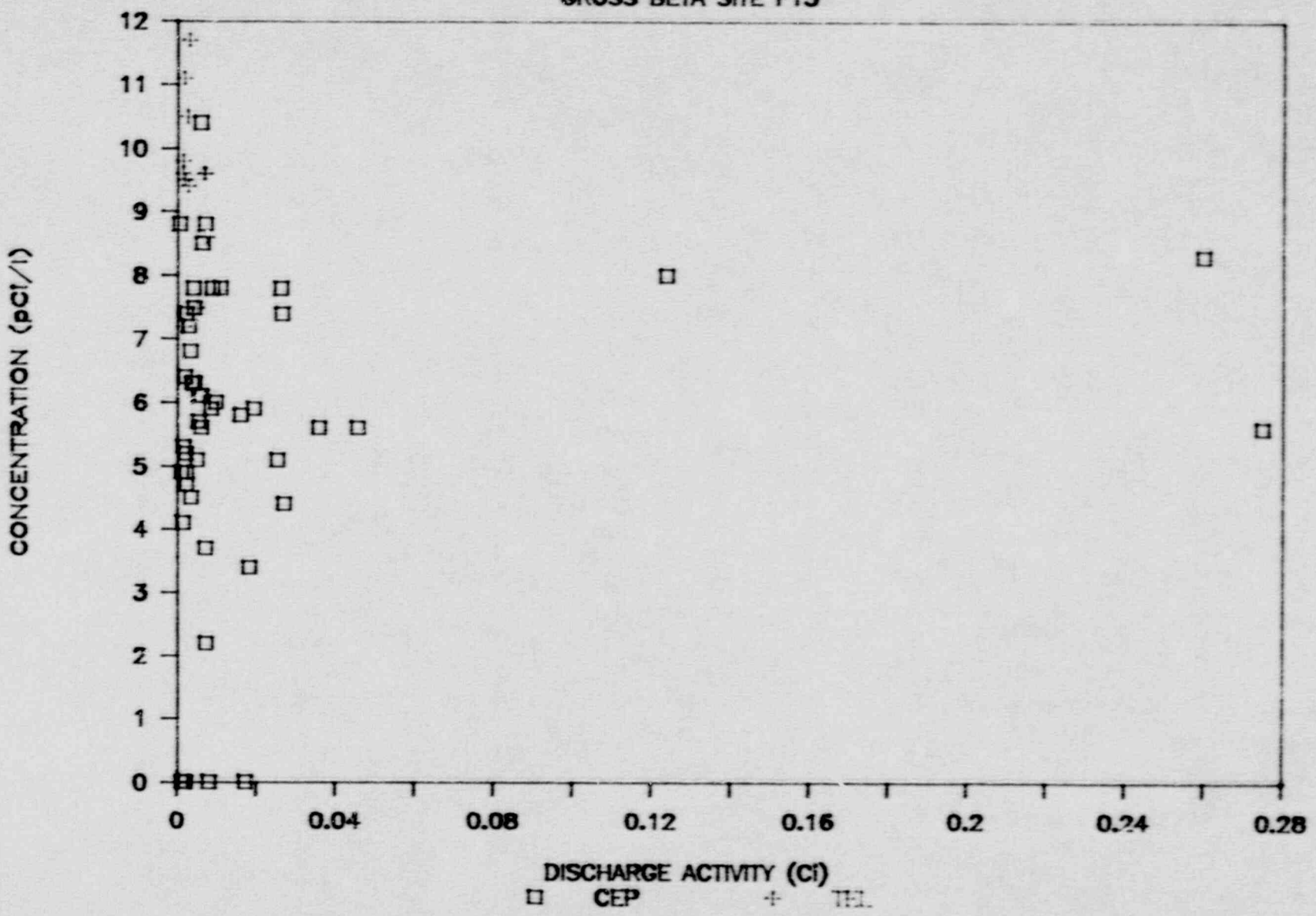
CALLAWAY DISCHARGE VS WELL WATER



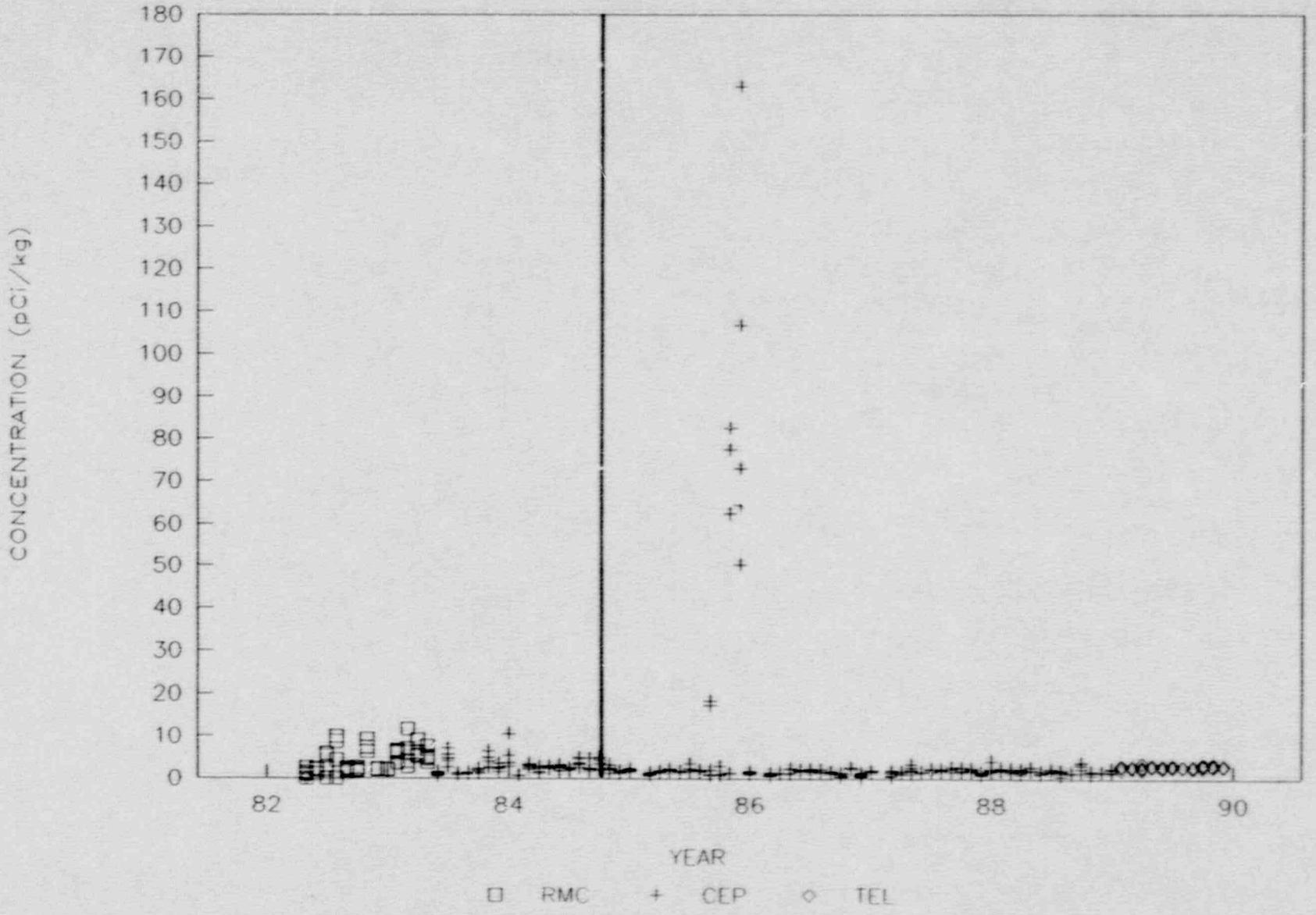
CALLAWAY DISCHARGE VS WELL WATER



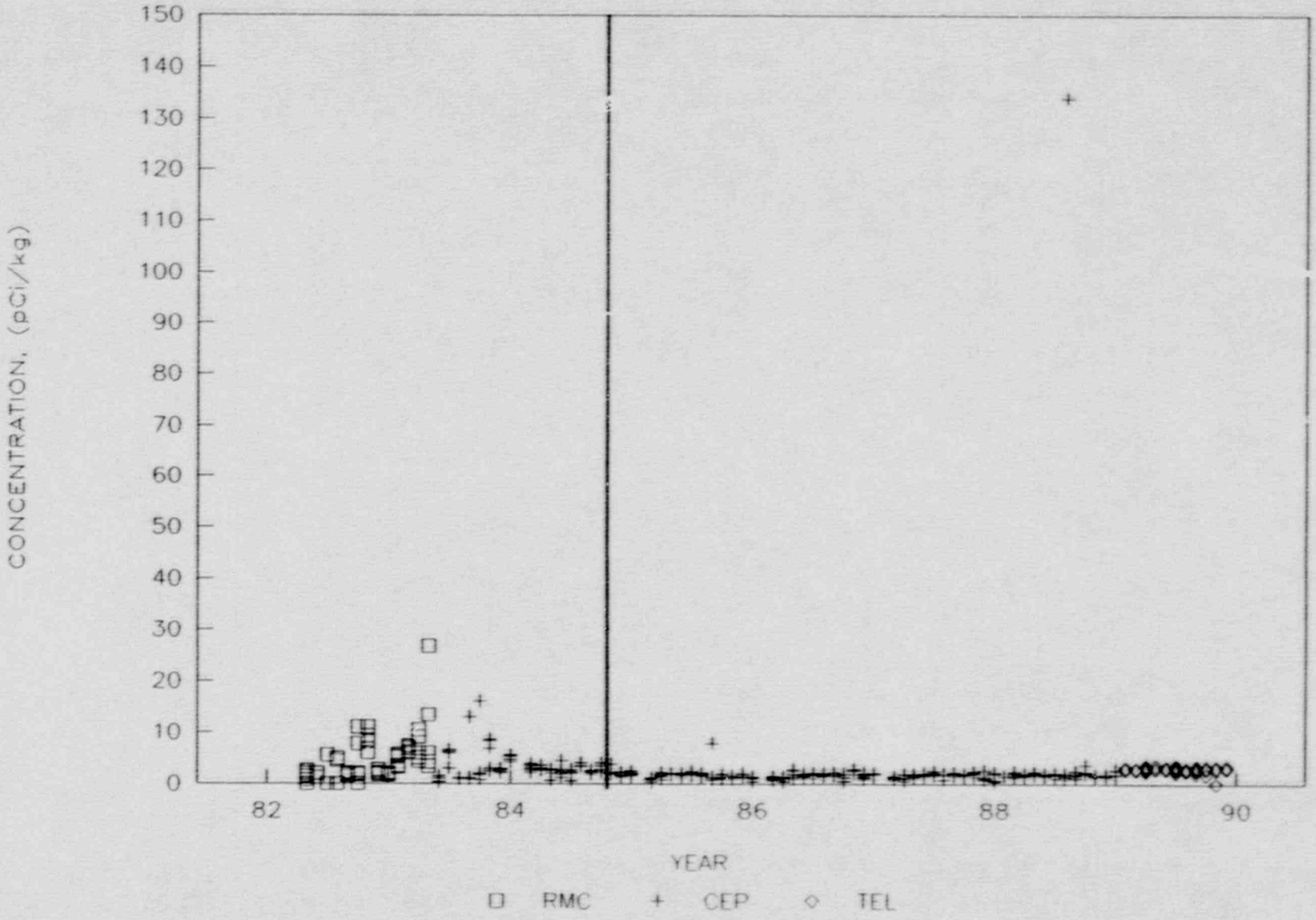
CALLAWAY DISCHARGE VS WELL WATER



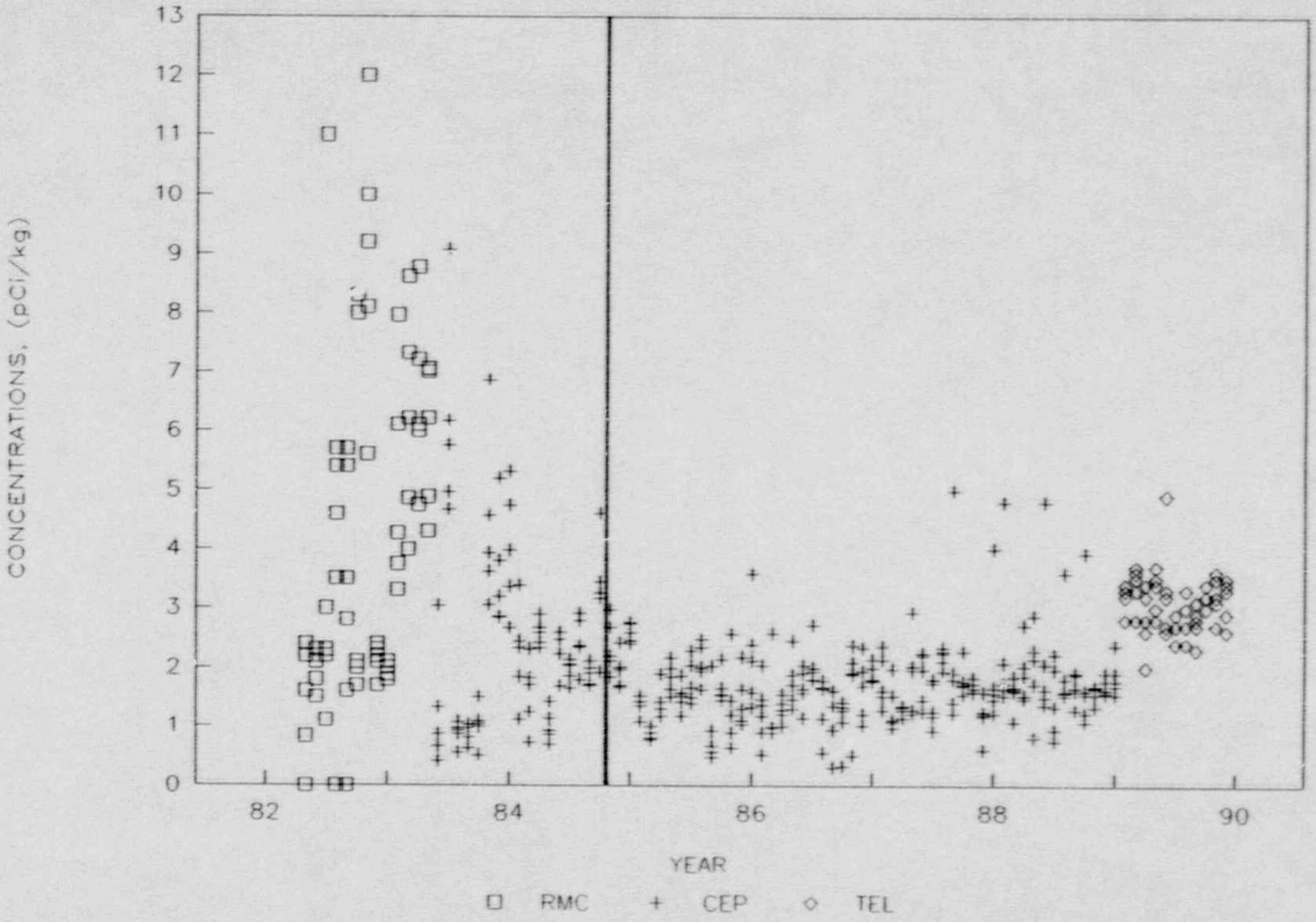
GROSS BETA IN FISH, SITE A



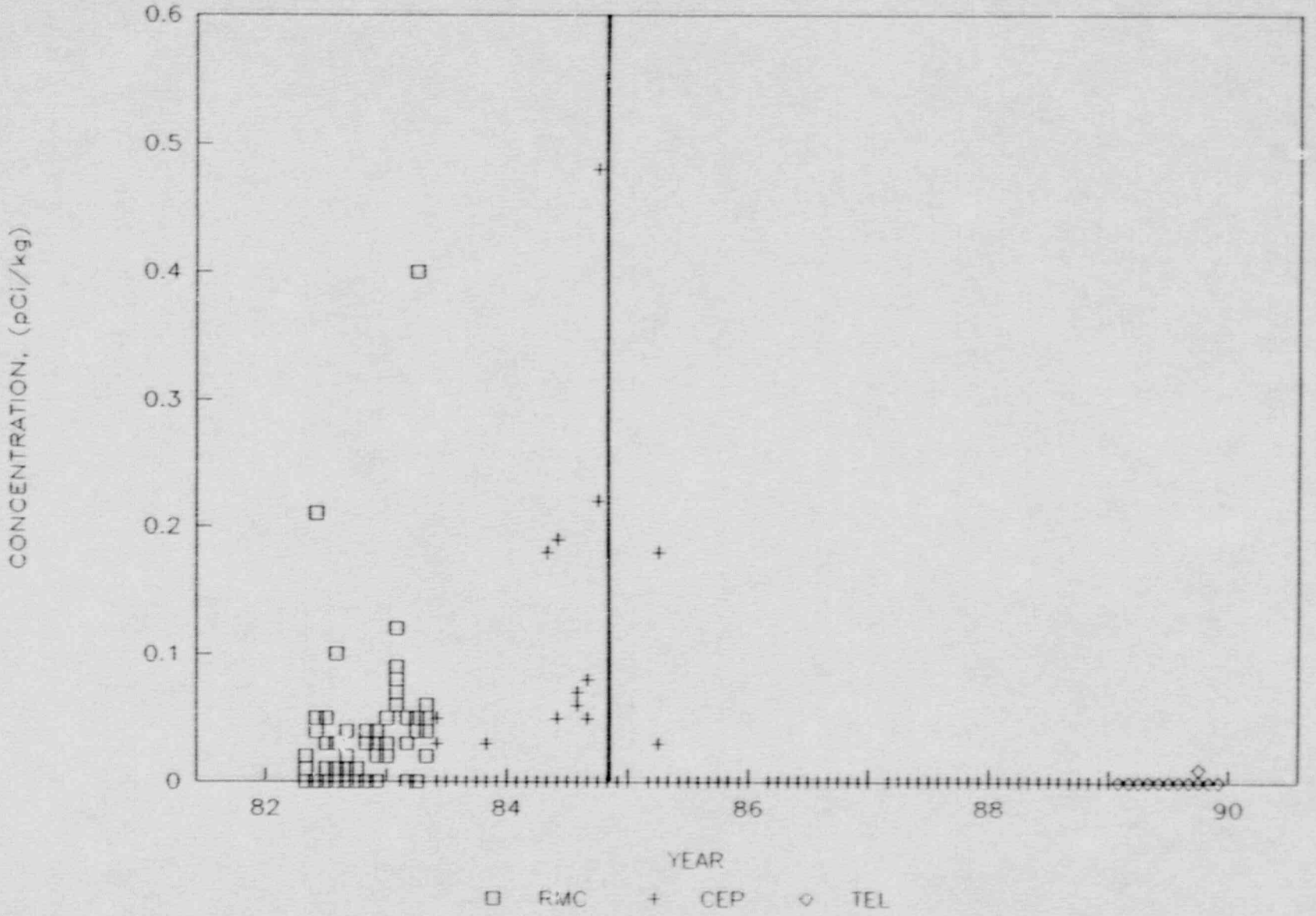
GROSS BETA IN FISH, SITE C



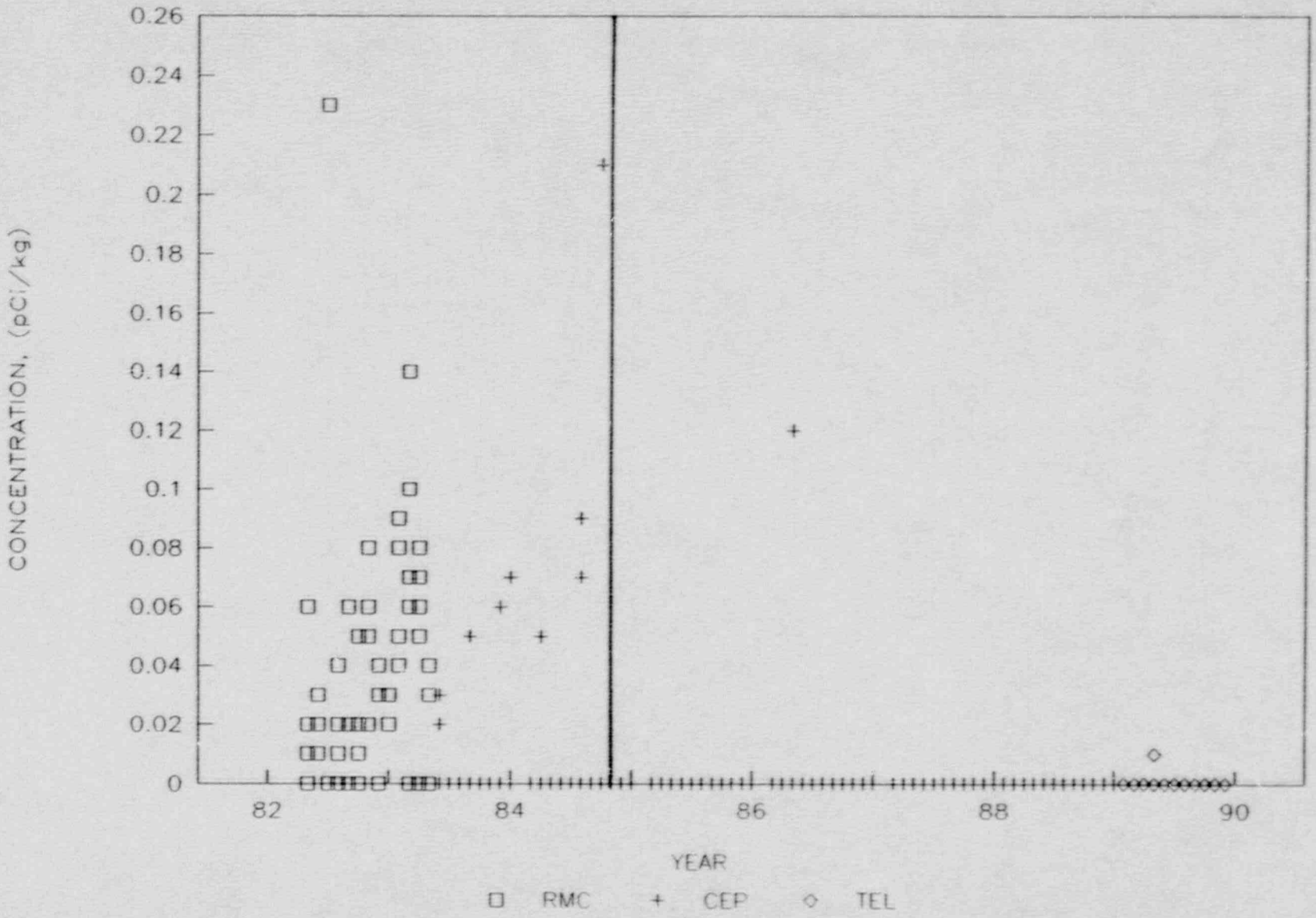
GROSS BETA IN FISH, SITE D



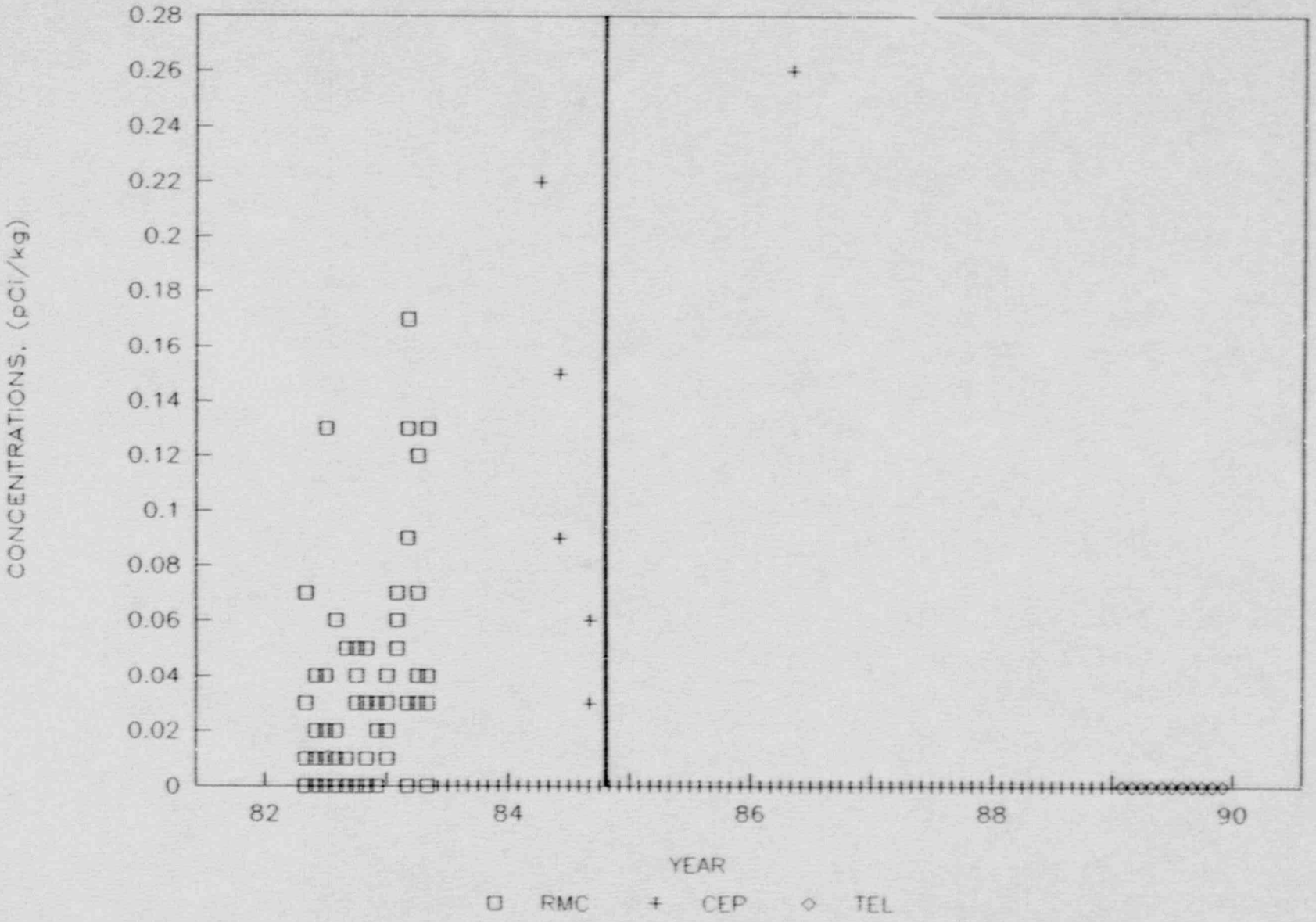
SR90 IN FISH, SITE A



SR90 IN FISH, SITE C

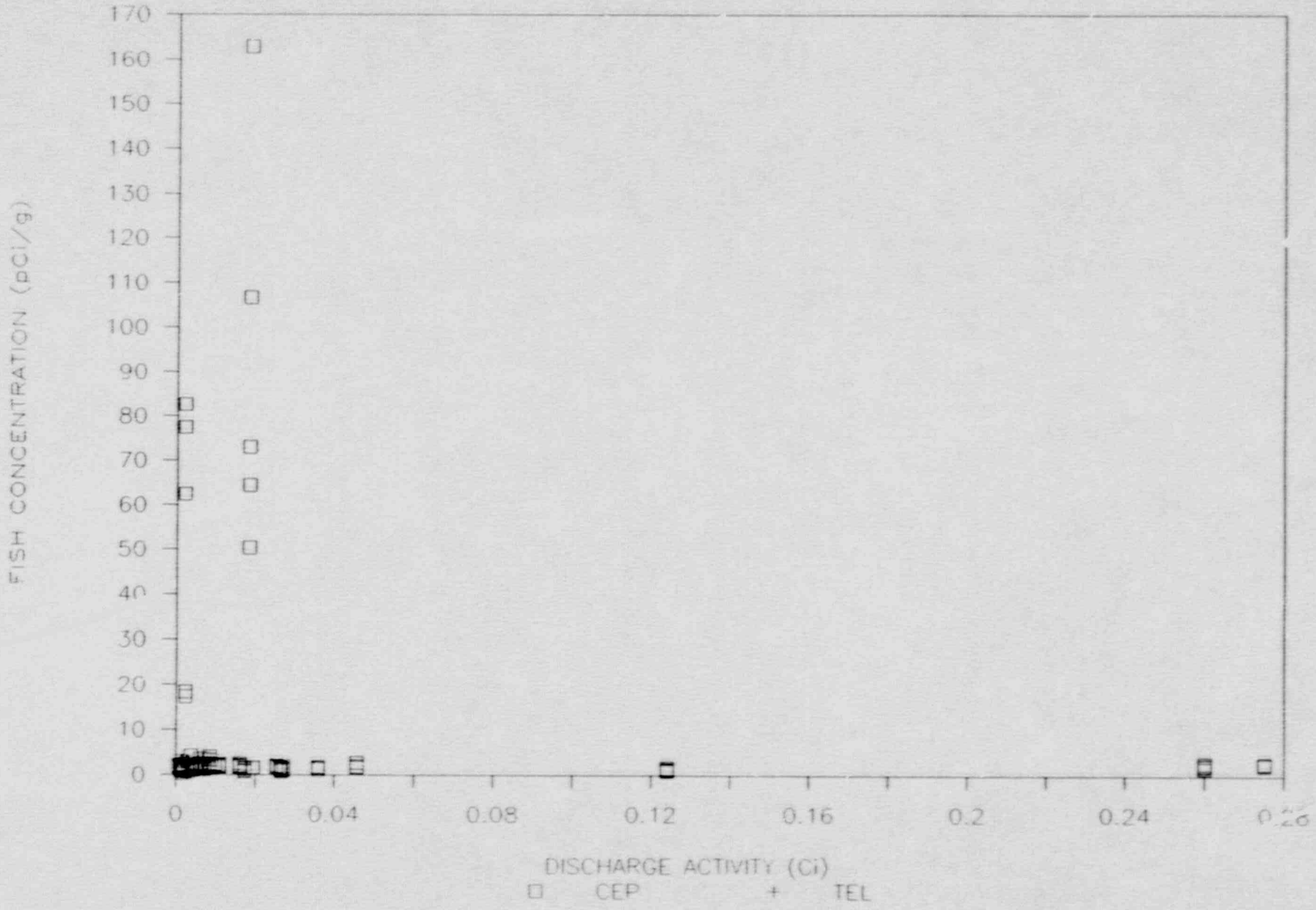


SR90 IN FISH, SITE D

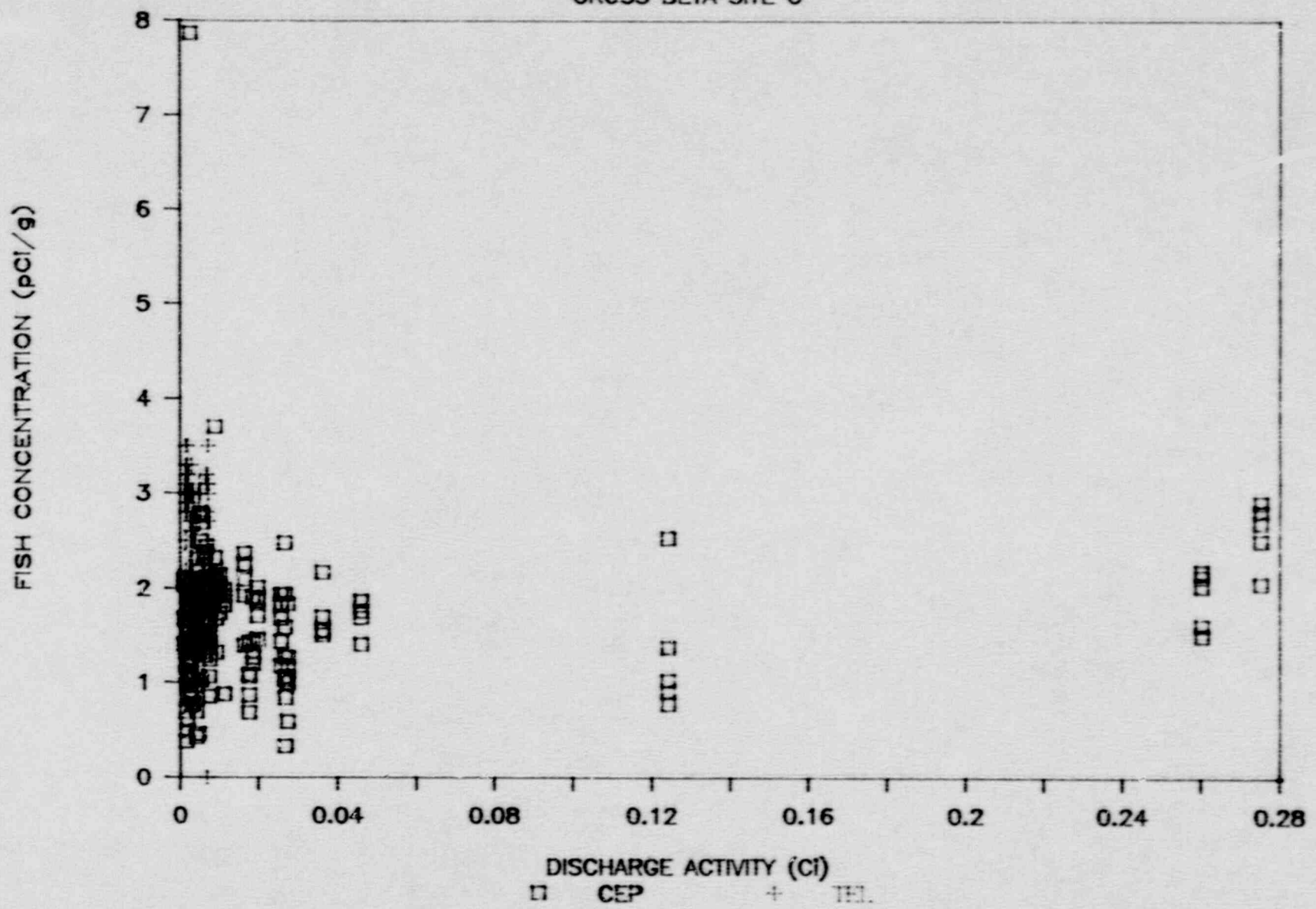


CALLAWAY DISCHARGE VS FISH

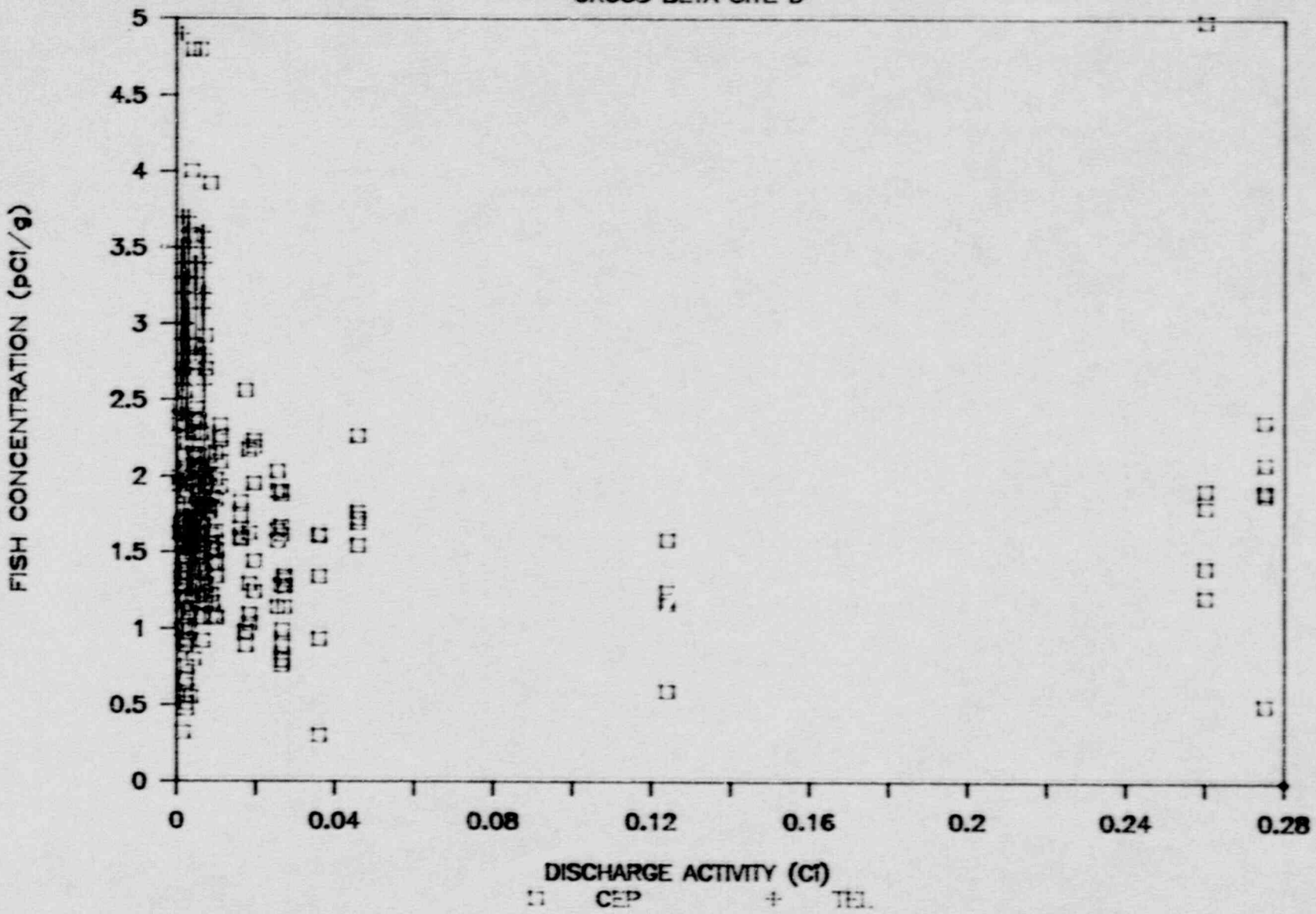
GROSS BETA SITE A



CALLAWAY DISCHARGE VS FISH

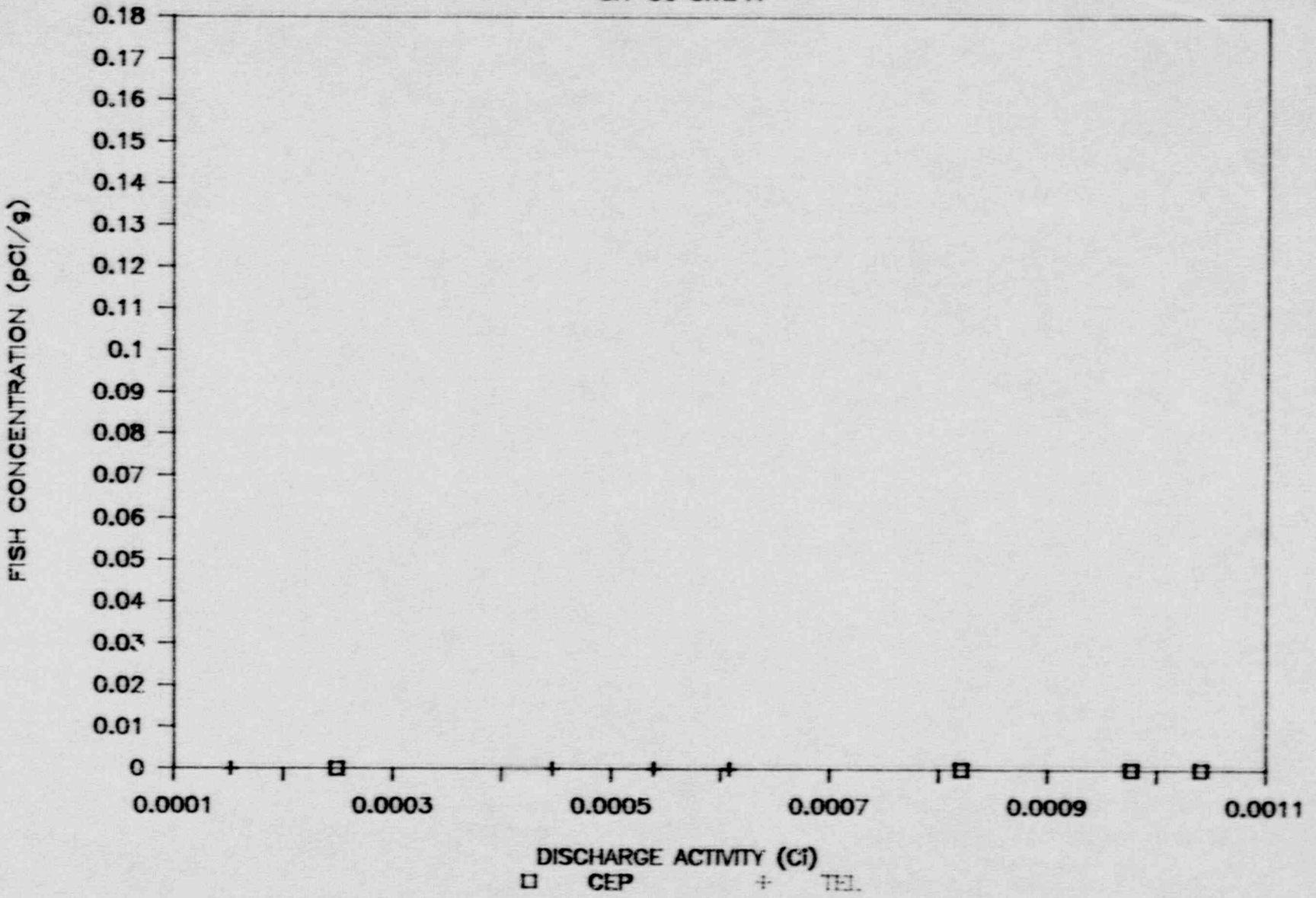


CALLAWAY DISCHARGE VS FISH



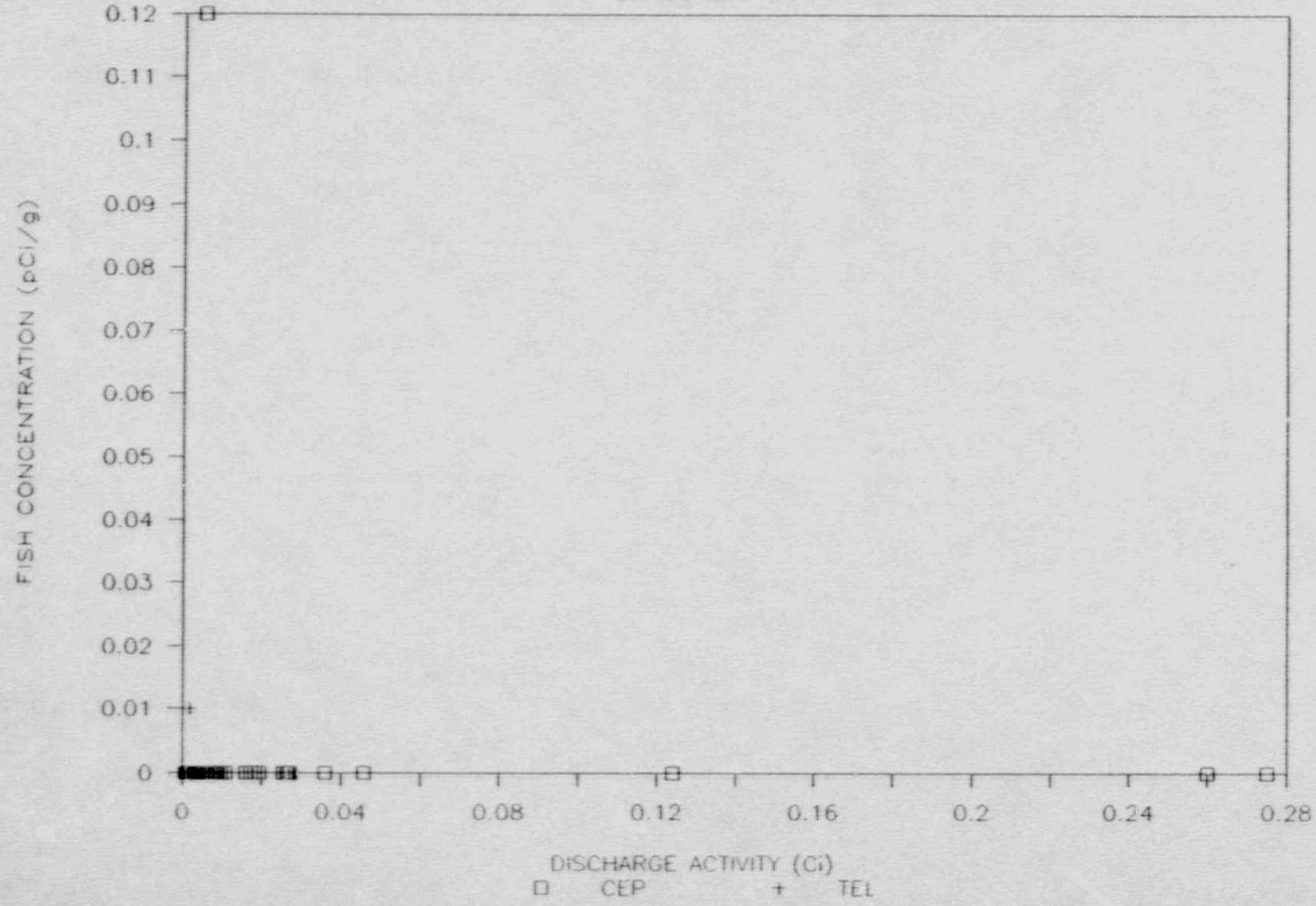
CALLAWAY DISCHARGE VS FISH

SR-90 SITE A

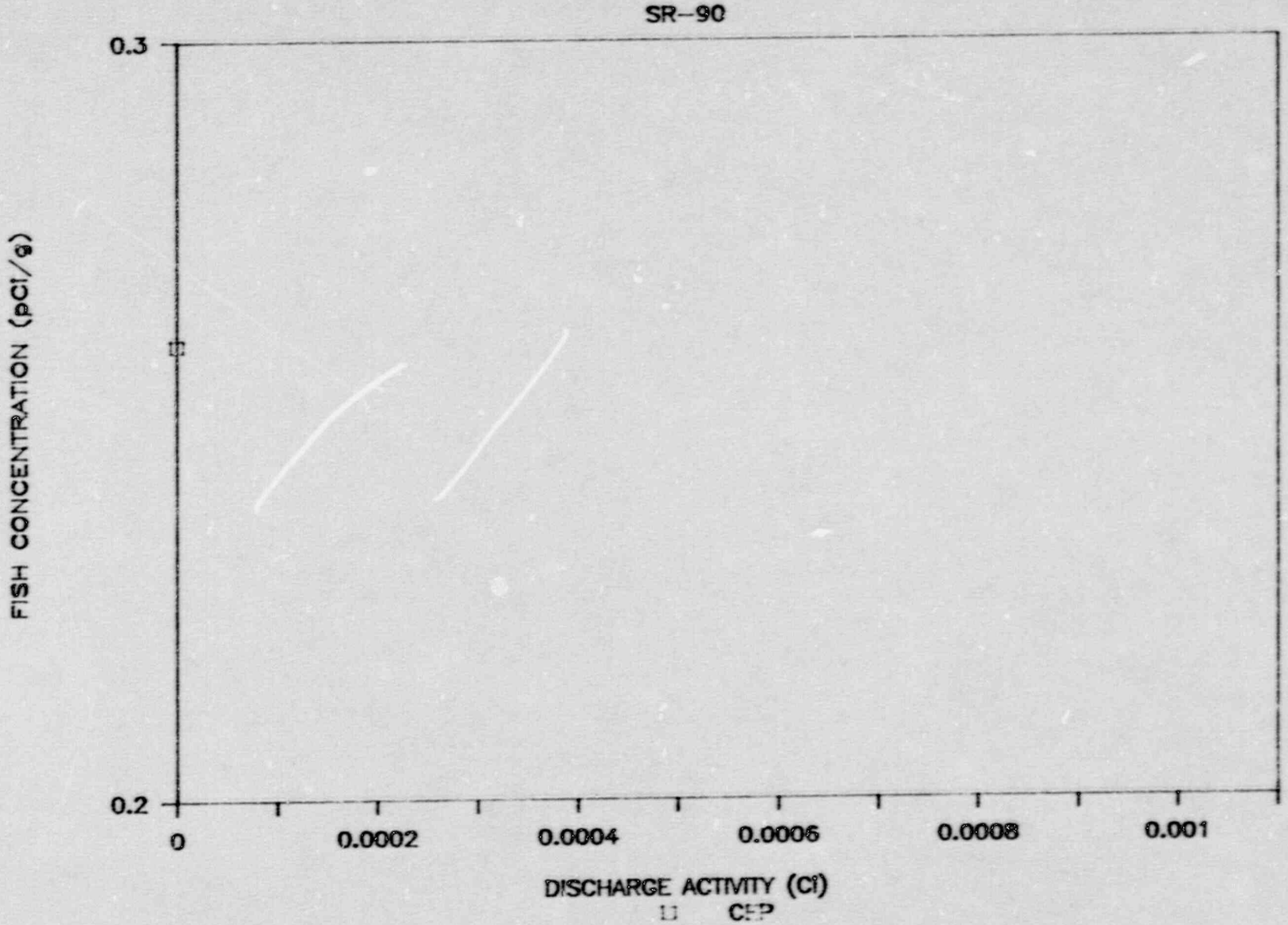


CALLAWAY DISCHARGE VS FISH

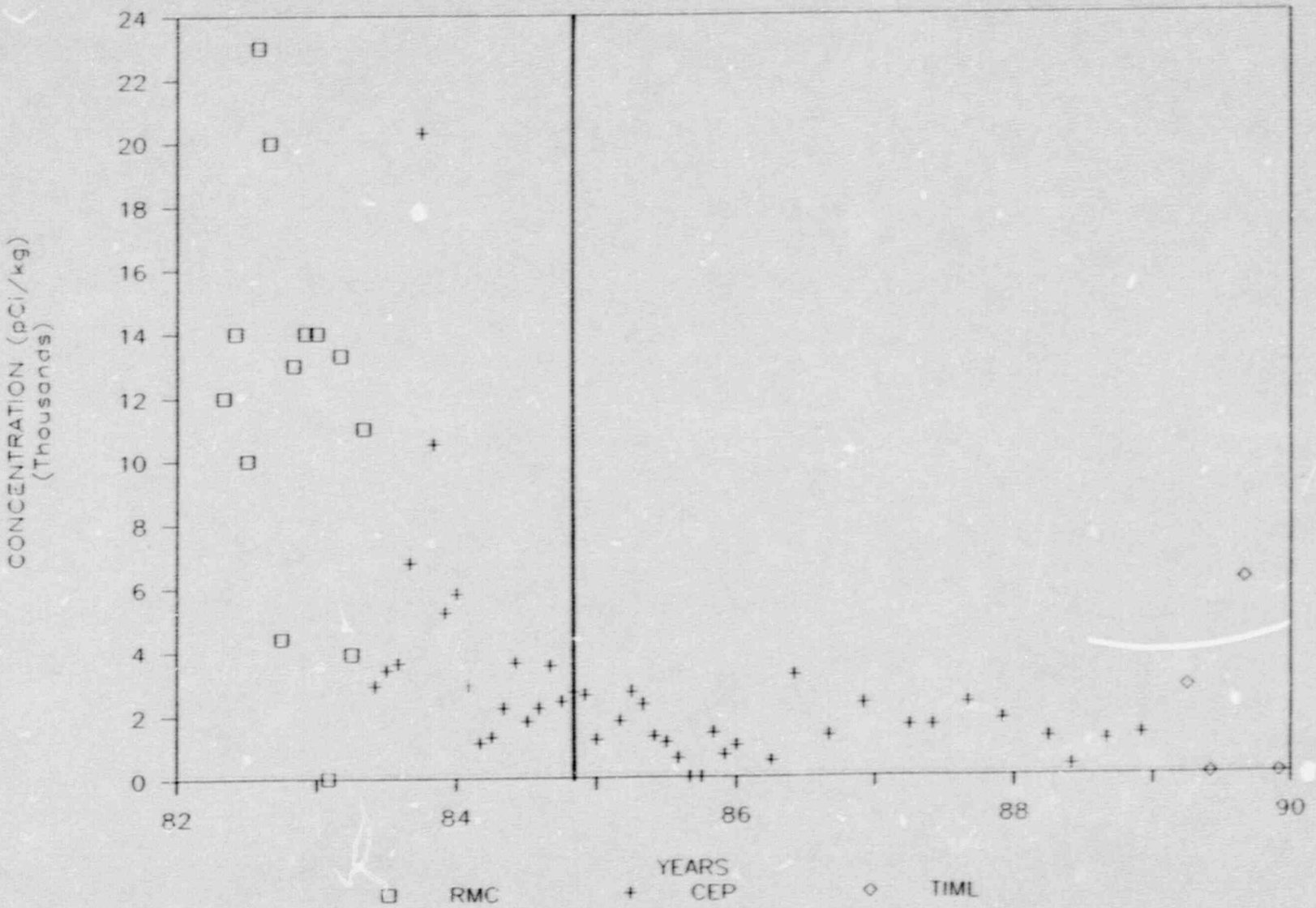
SR-90 SITE C



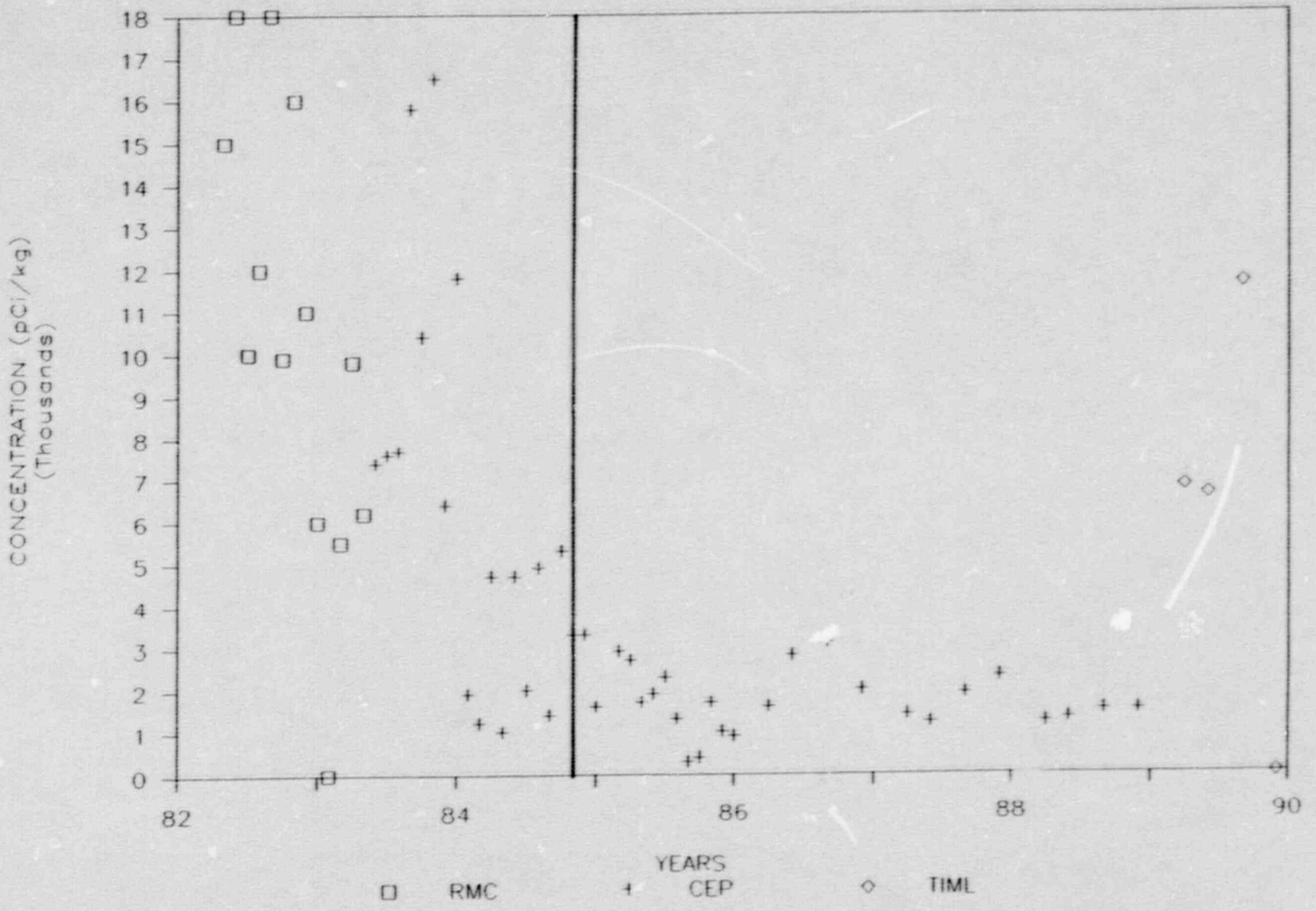
FISH SITE D VS CALLAWAY DISCHARGE



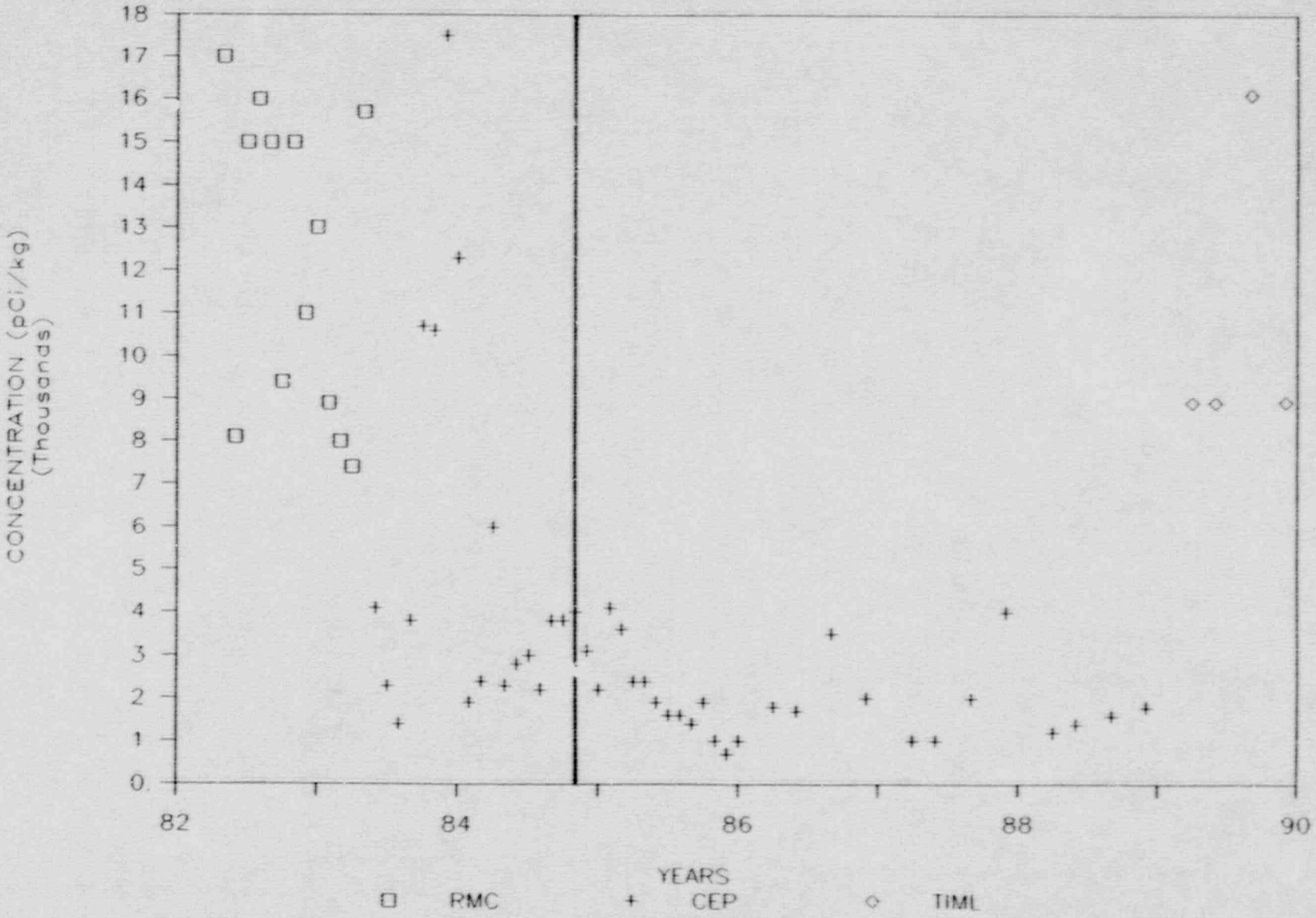
GROSS ALPHA IN BOTTOM SEDIMENT, SITE A



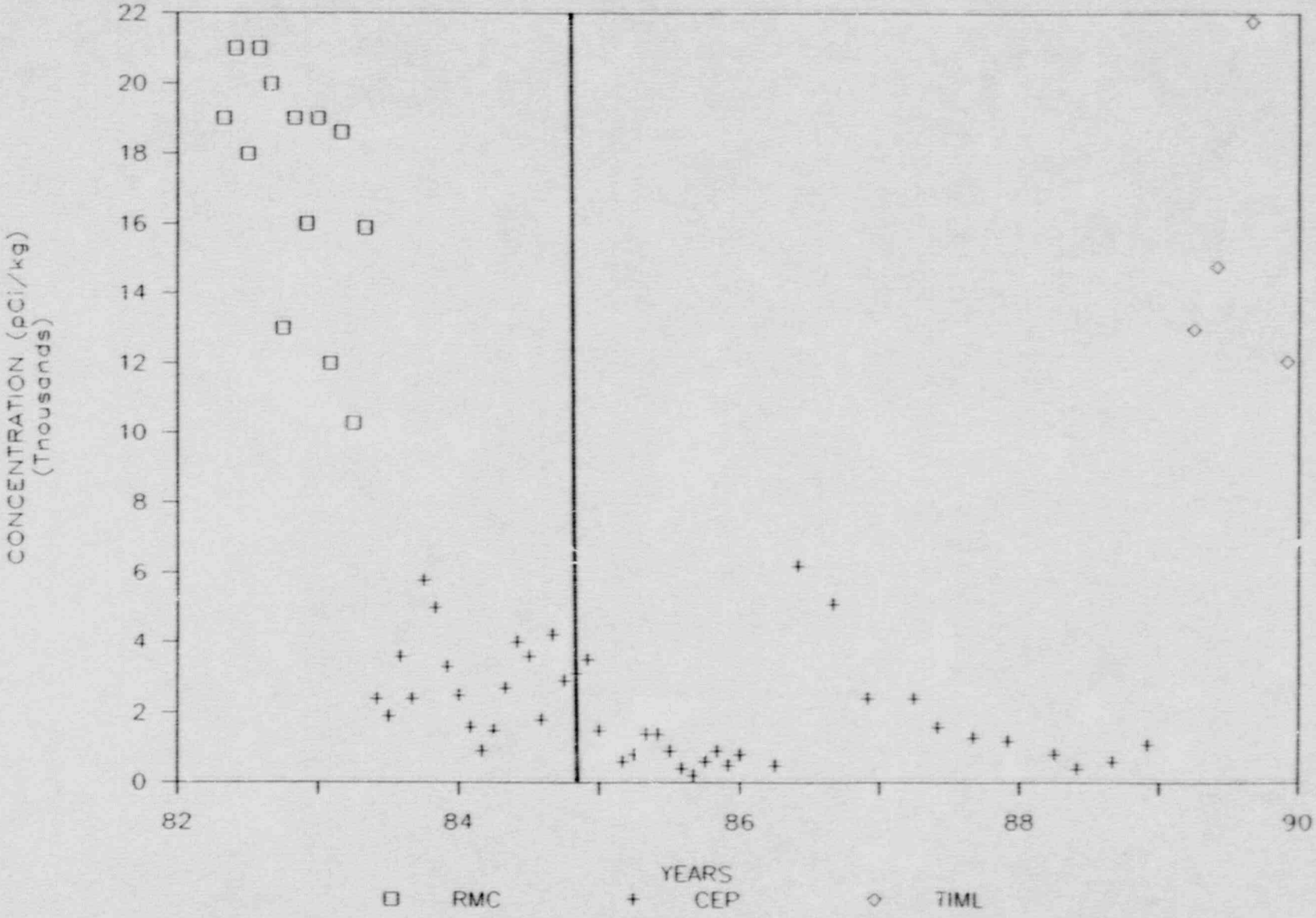
GROSS ALPHA IN BOTTOM SEDIMENT, SITE C



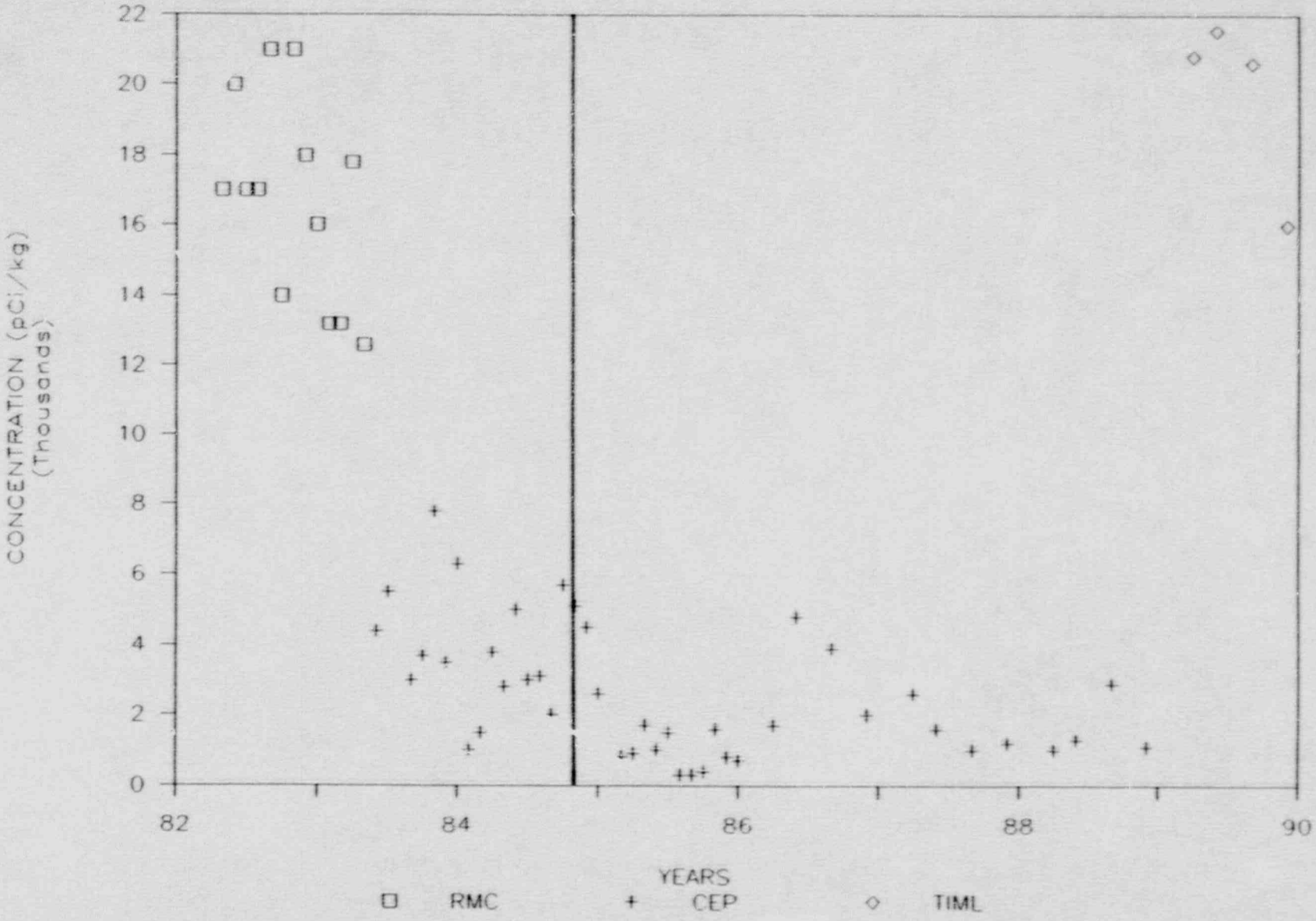
GROSS ALPHA IN BOTTOM SEDIMENT, SITE D



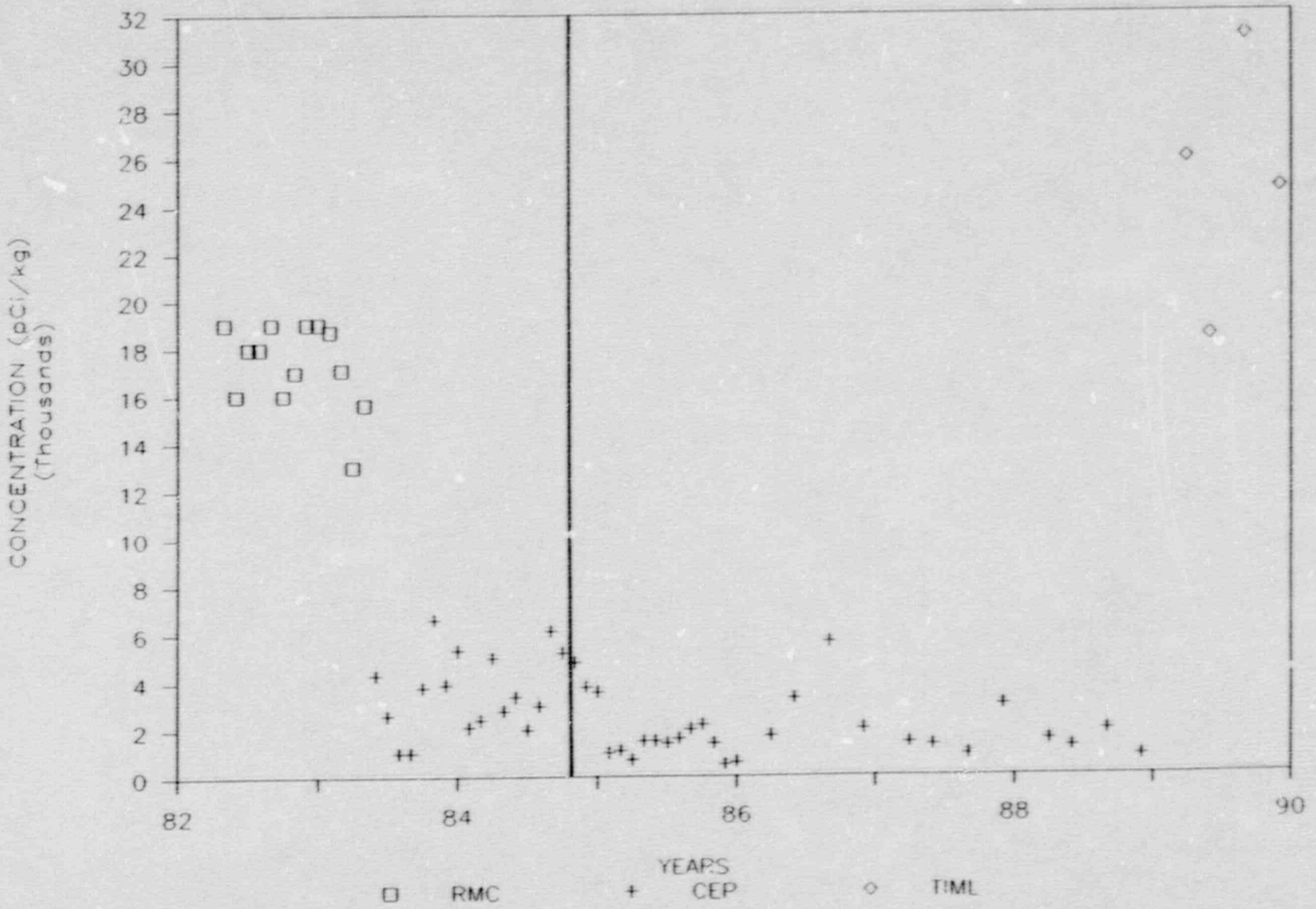
GROSS BETA IN BOTTOM SEDIMENT, SITE A



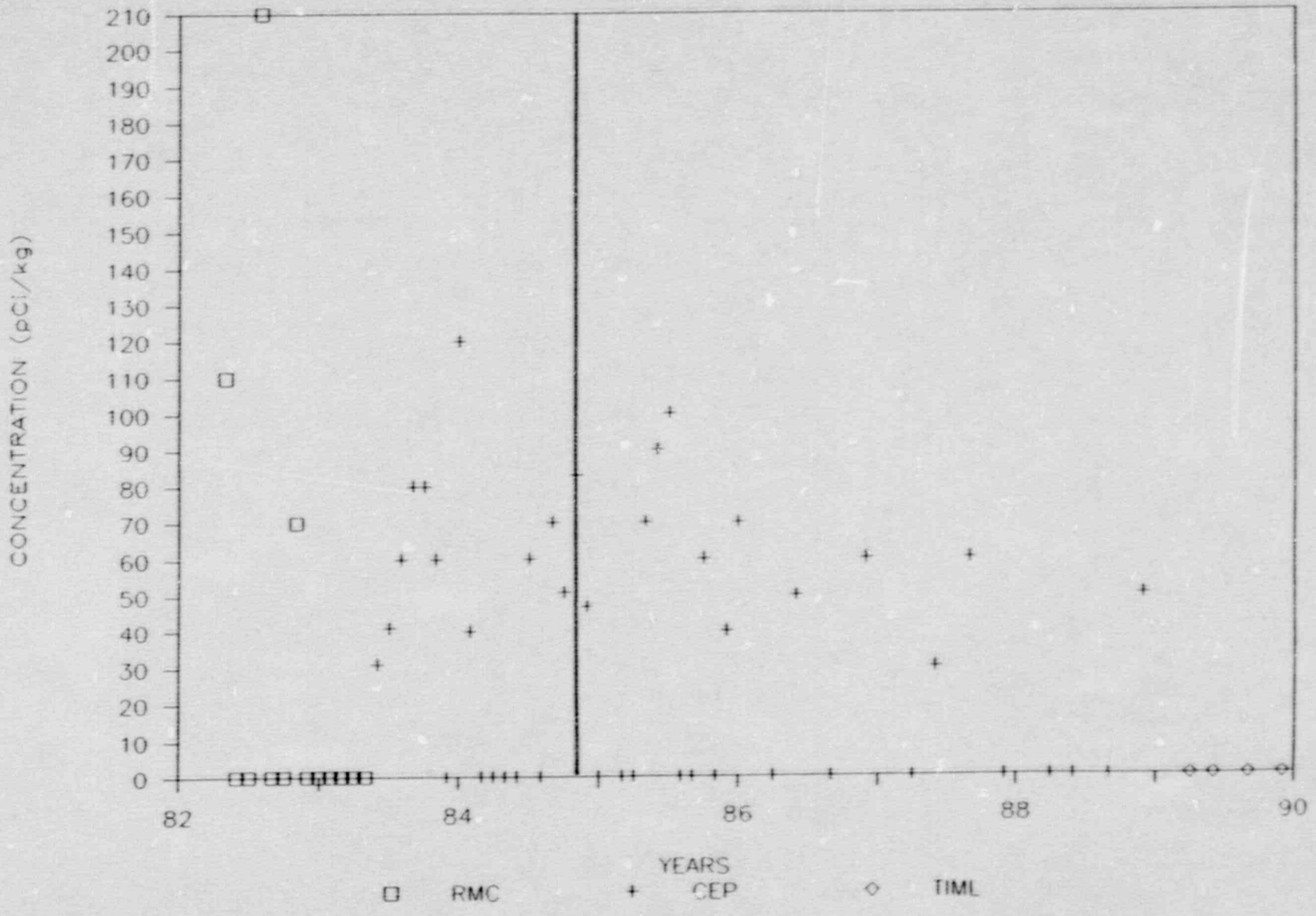
GROSS BETA IN BOTTOM SEDIMENT, SITE C



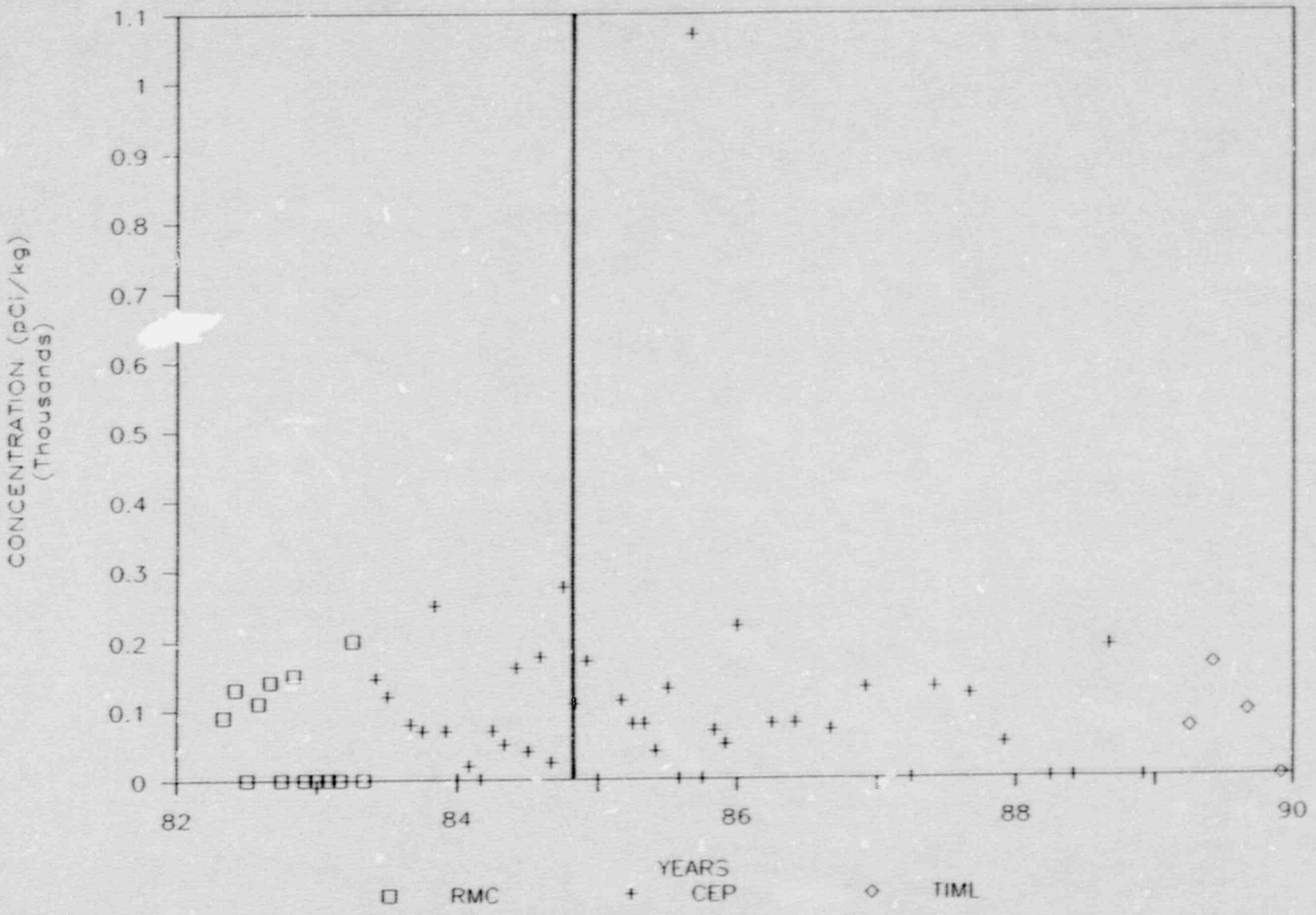
GROSS BETA IN BOTTOM SEDIMENT, SITE D



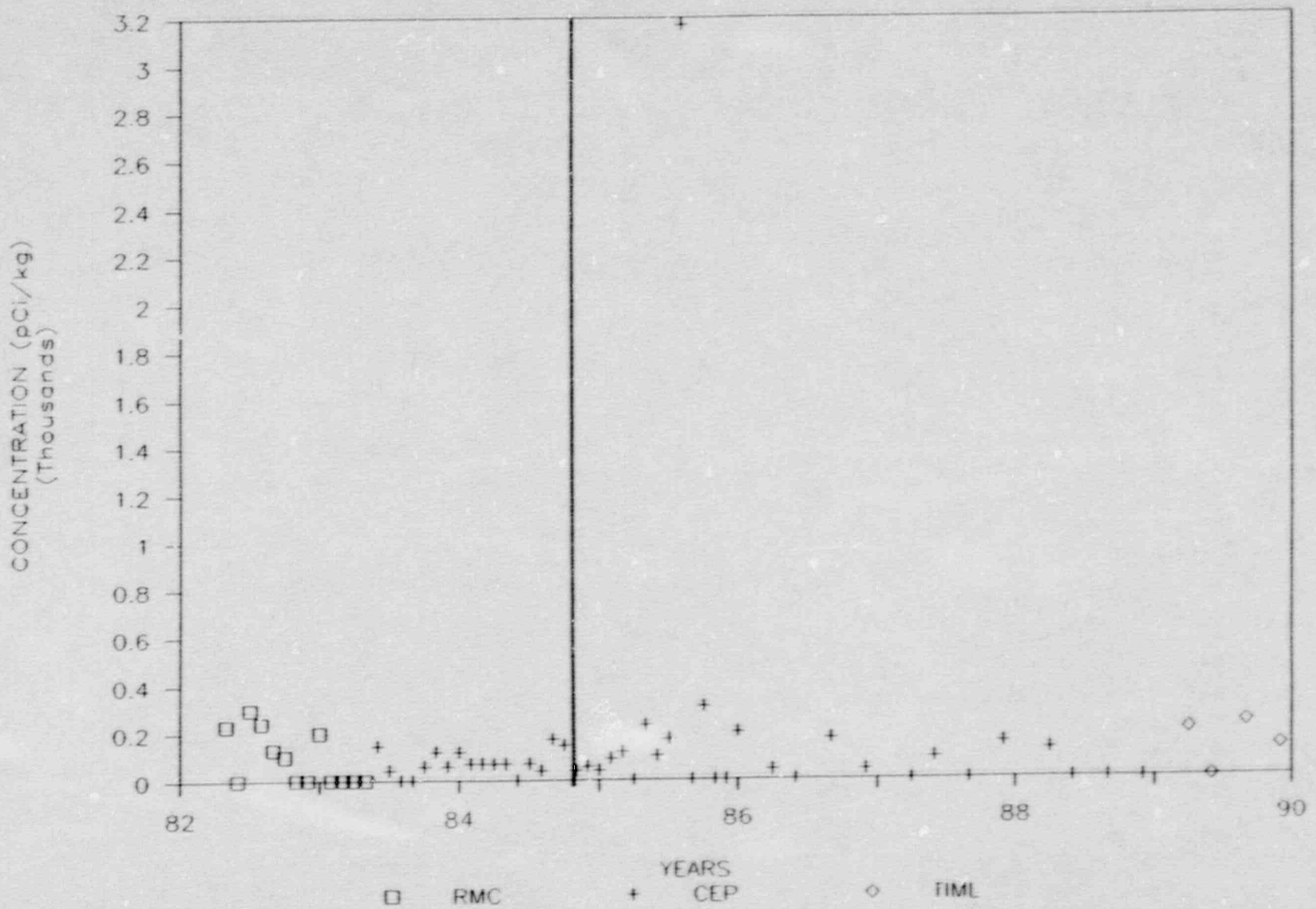
CS-137 IN BOTTOM SEDIMENT, SITE A



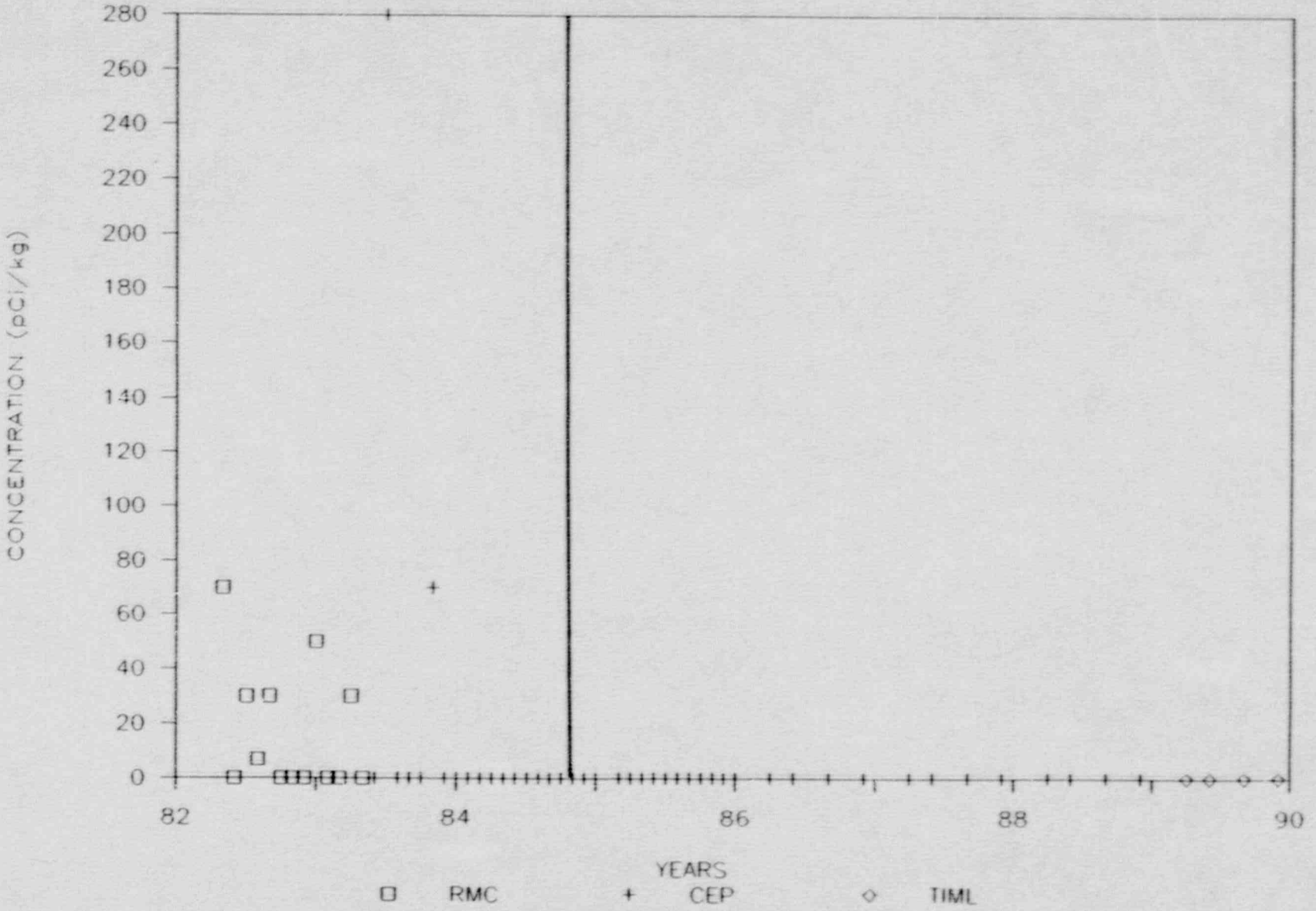
CS-137 IN BOTTOM SEDIMENT, SITE C



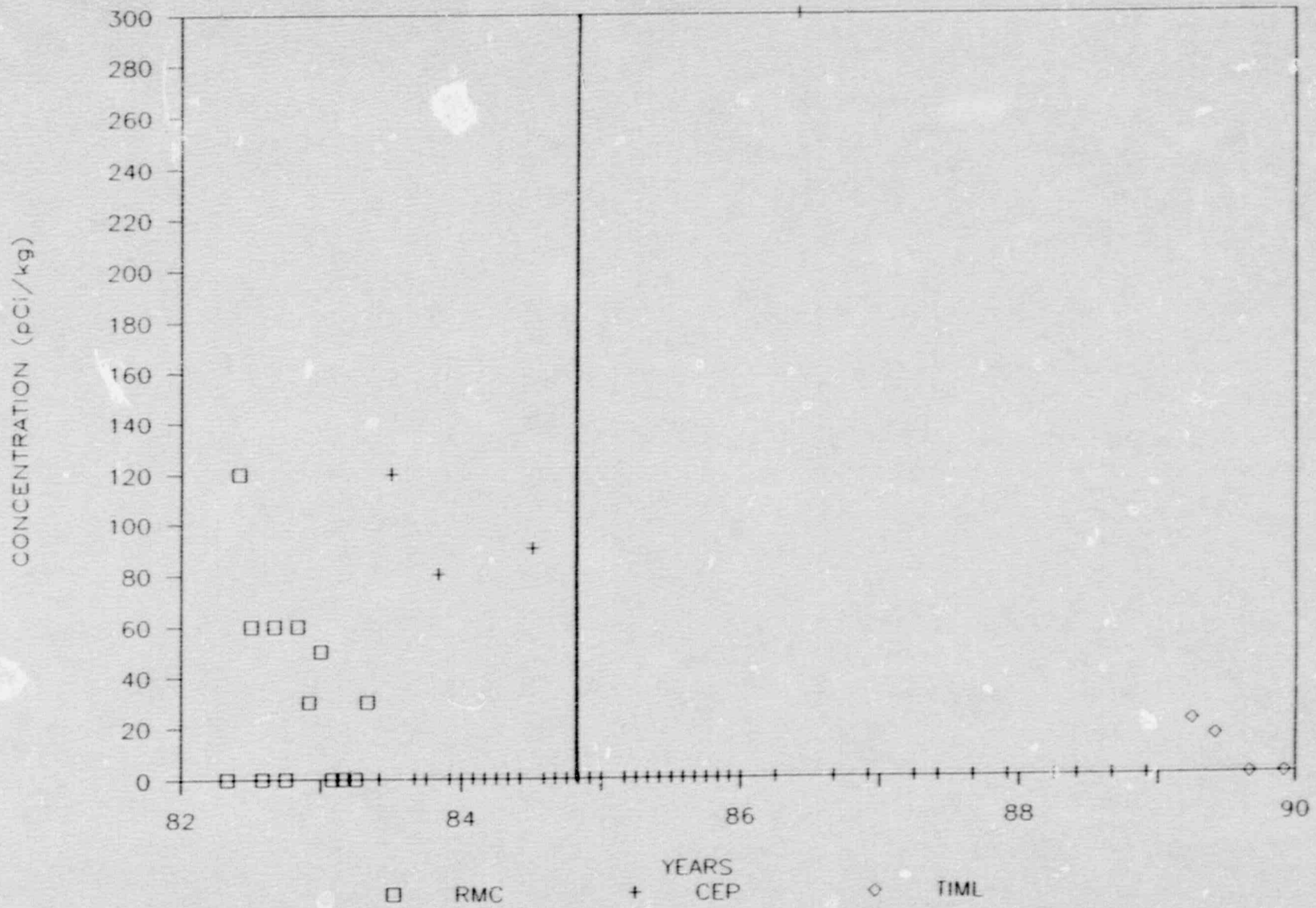
CS-137 IN BOTTOM SEDIMENT, SITE D



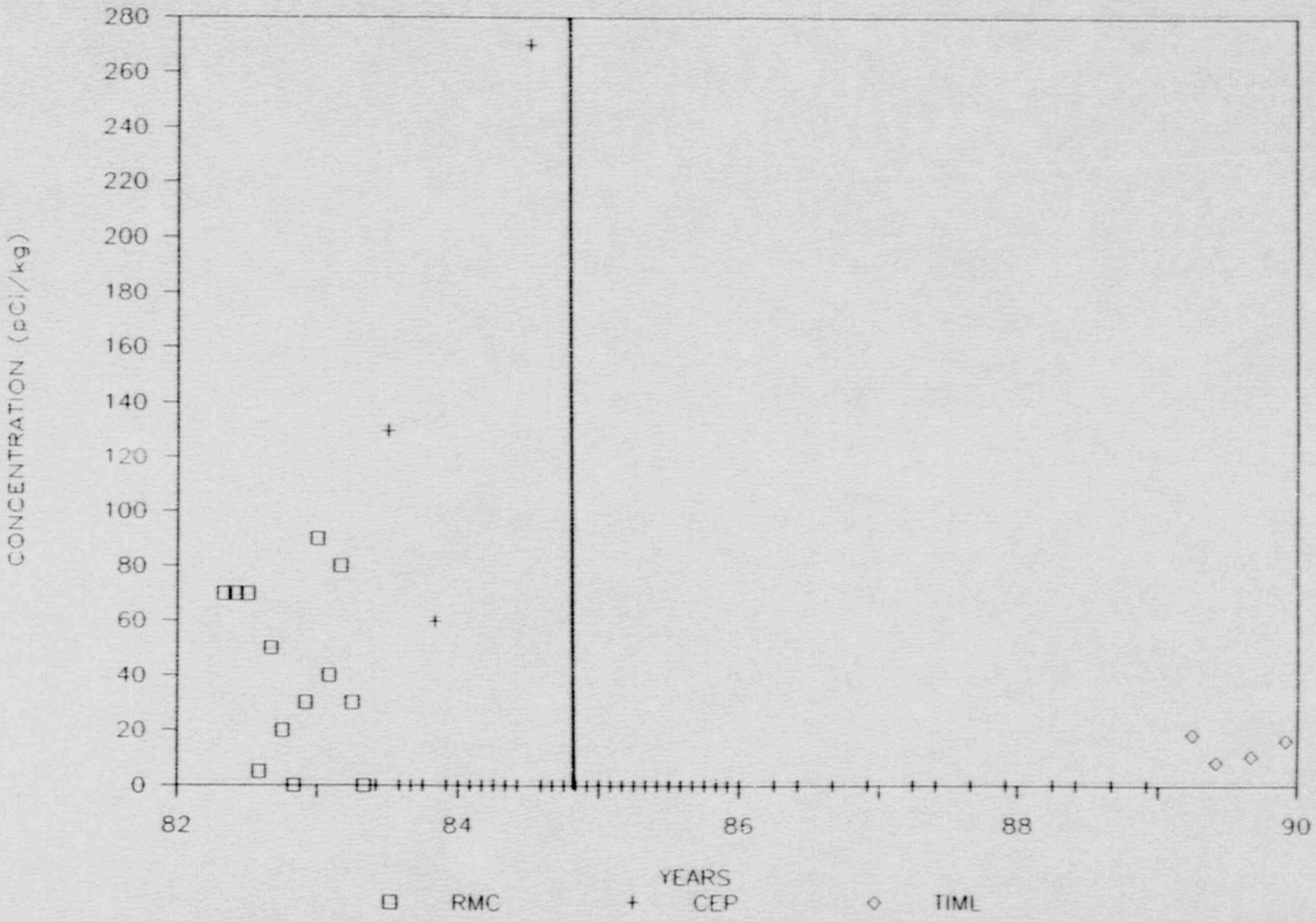
SR-90 IN BOTTOM SEDIMENT, SITE A



SR-90 IN BOTTOM SEDIMENT, SITE C

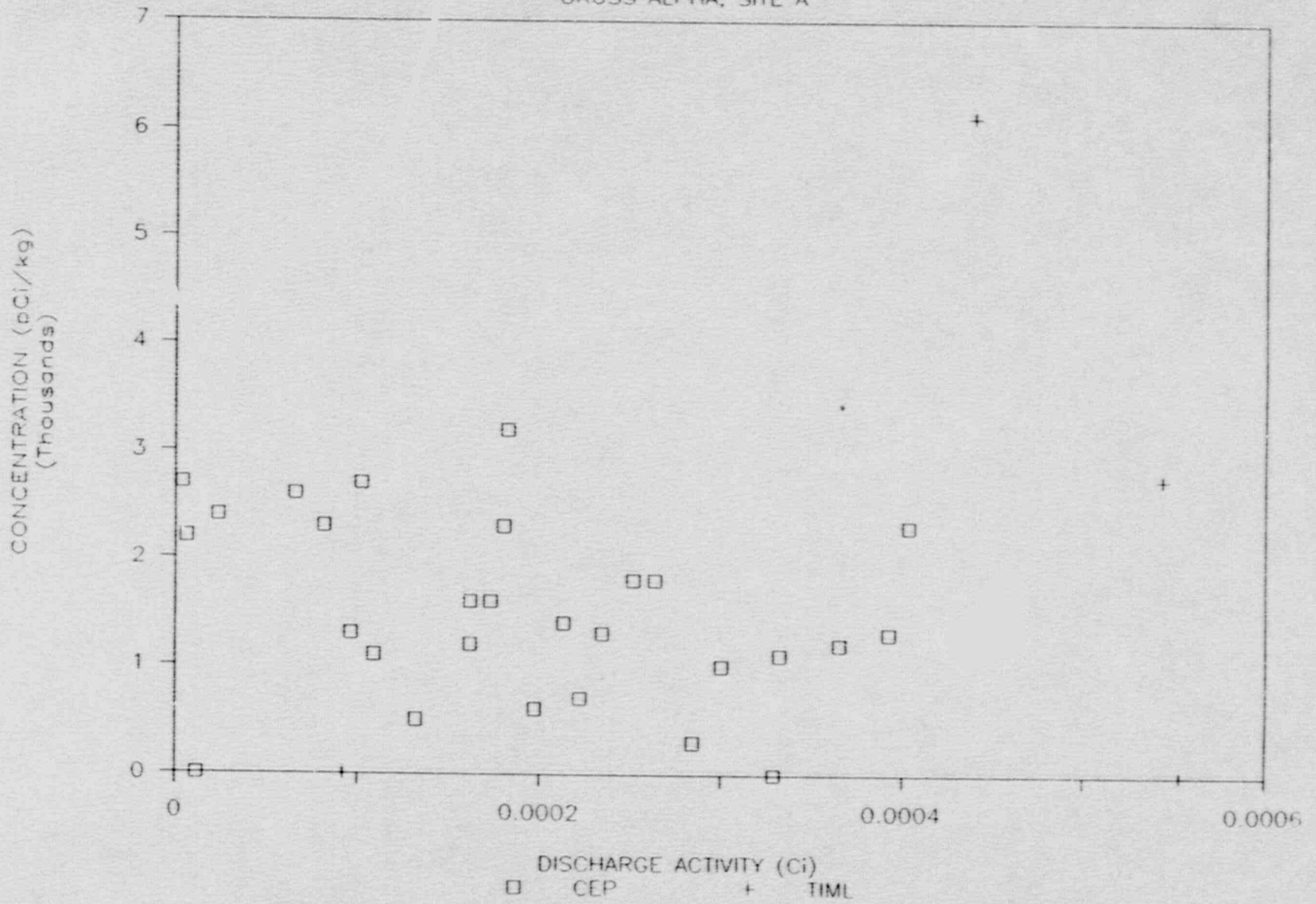


SR-90 IN BOTTOM SEDIMENT, SITE D



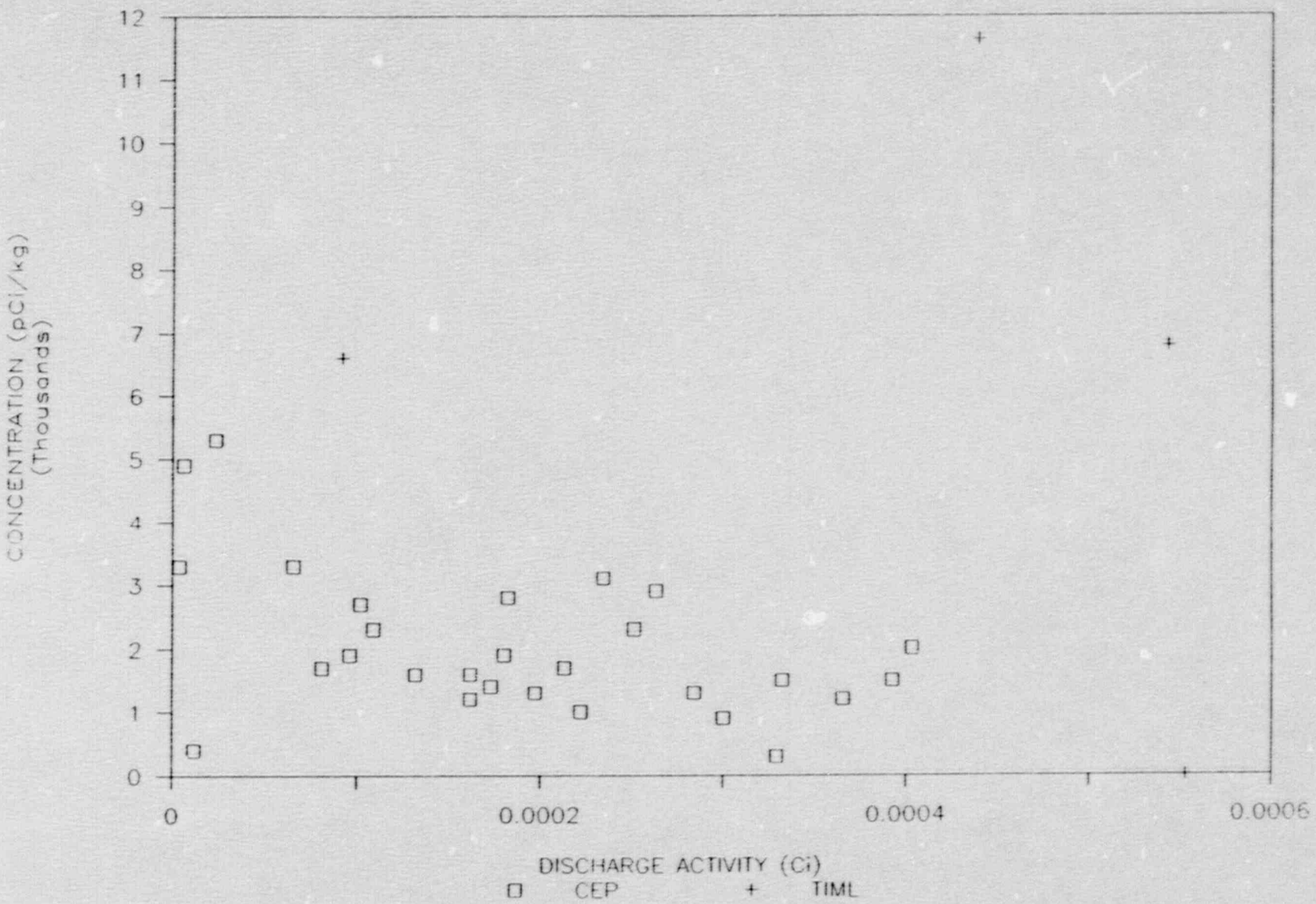
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

GROSS ALPHA, SITE A

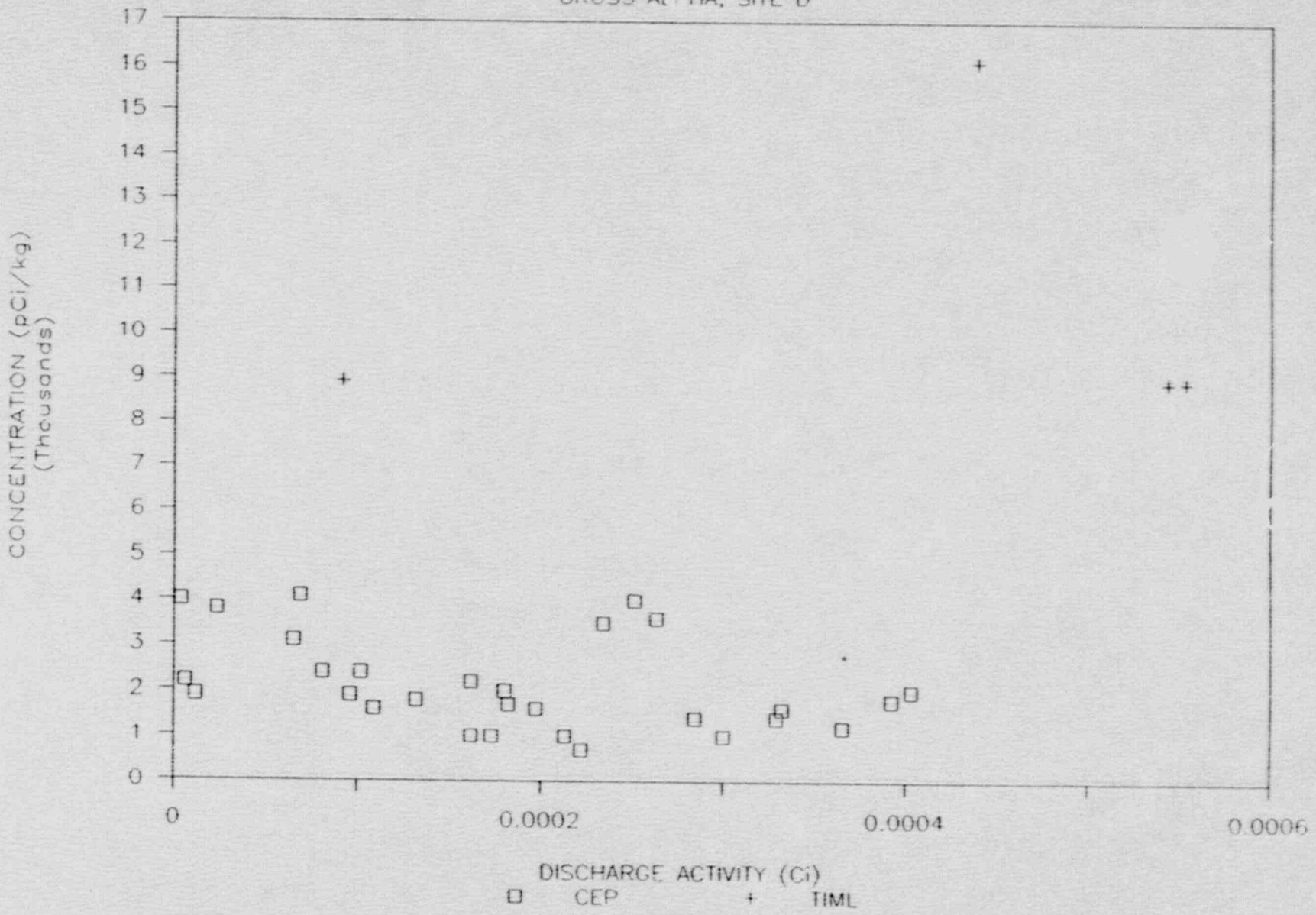


CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

GROSS ALPHA, SITE C

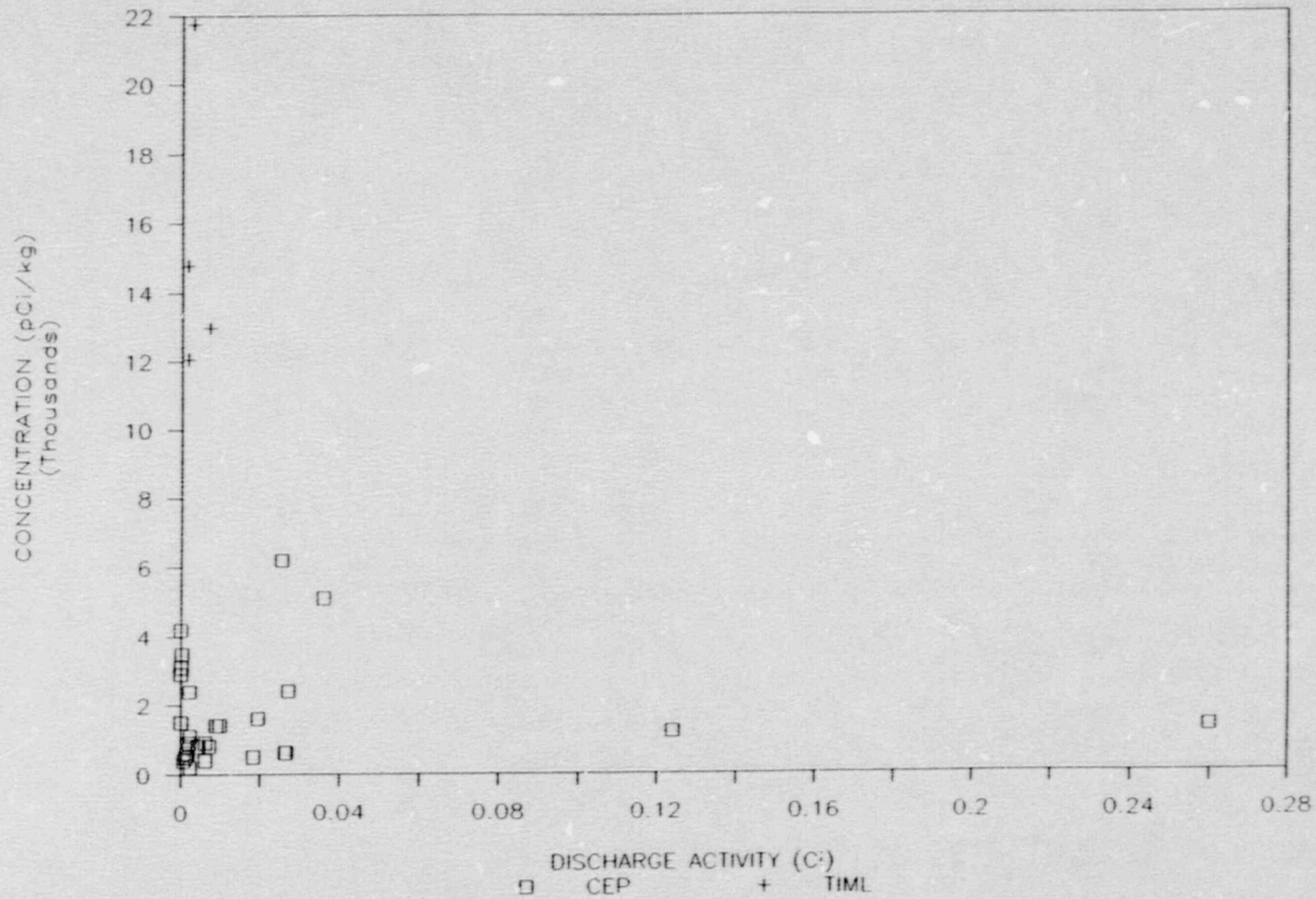


CALLAWAY DISCHARGE VS BOTTOM SEDIMENT



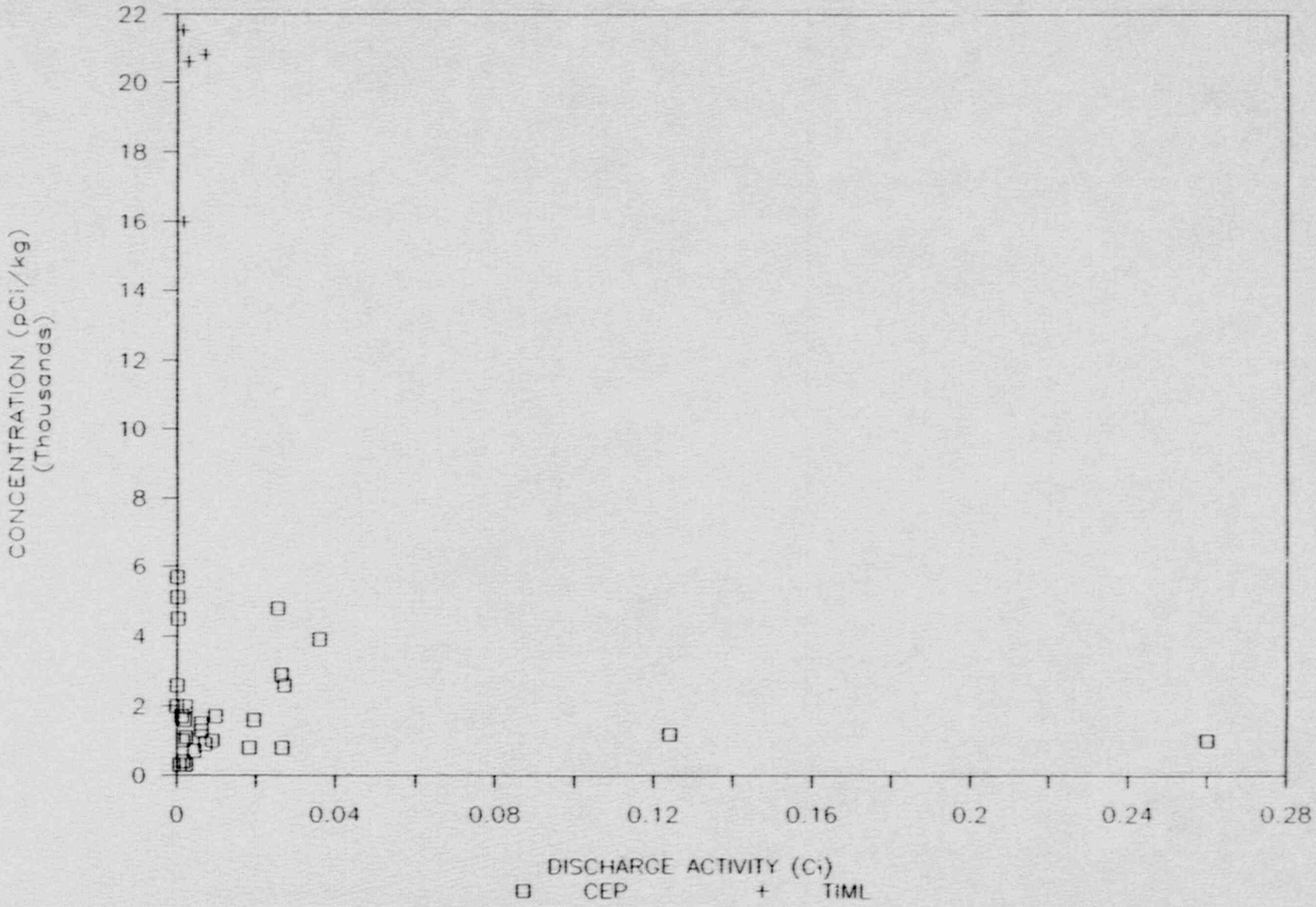
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

GROSS BETA, SITE A



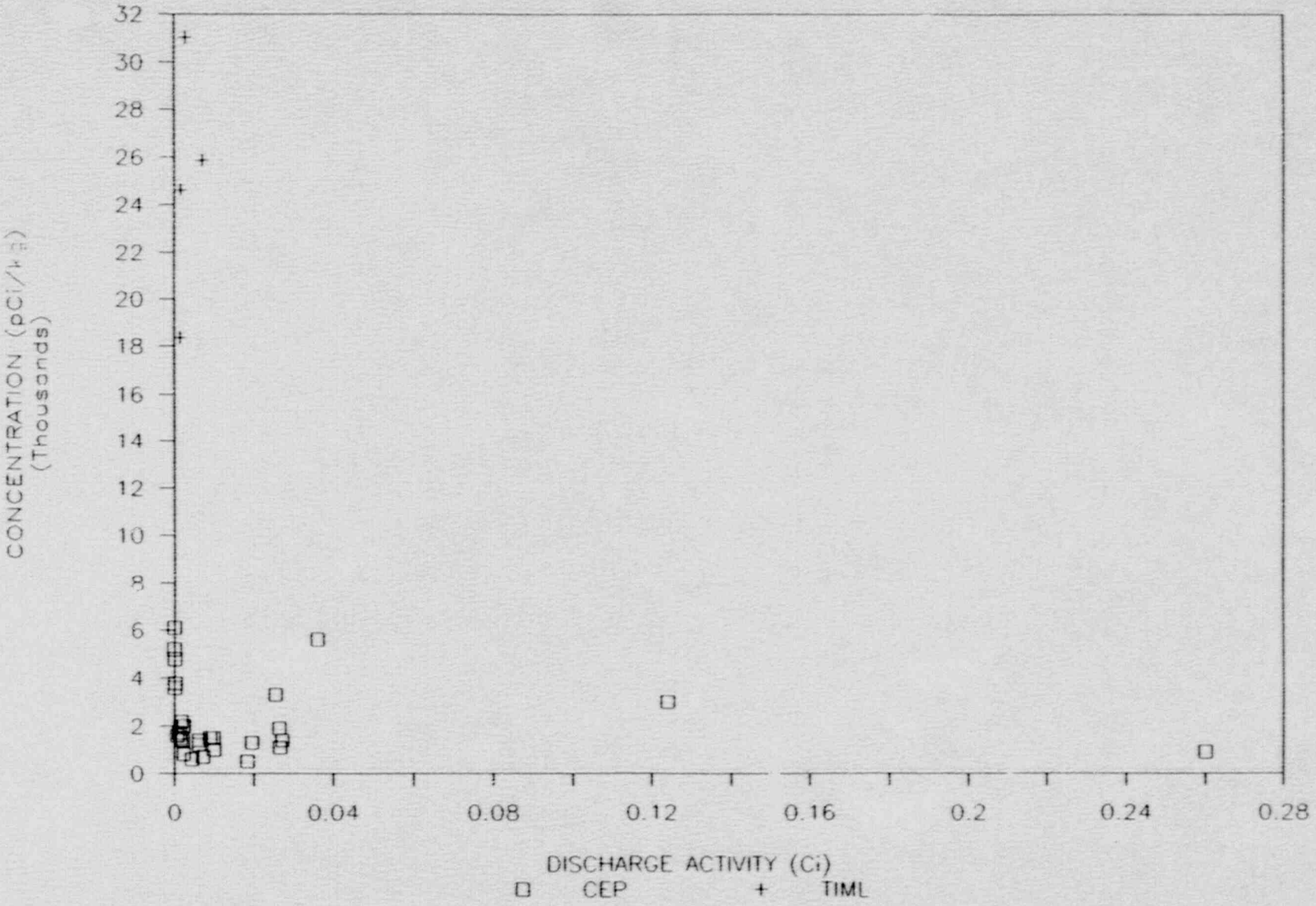
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

GROSS BETA, SITE C

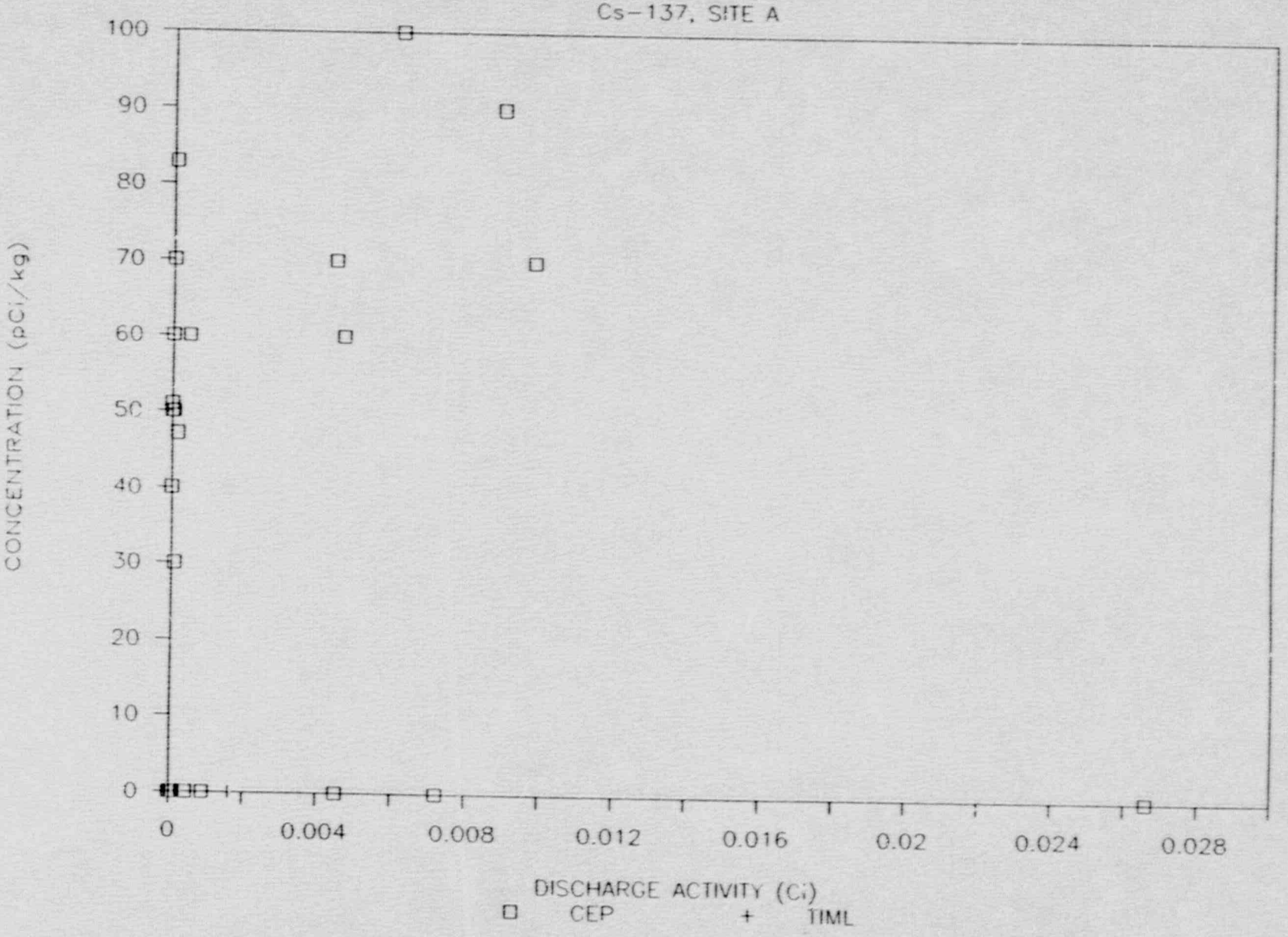


CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

GROSS BETA, SITE D

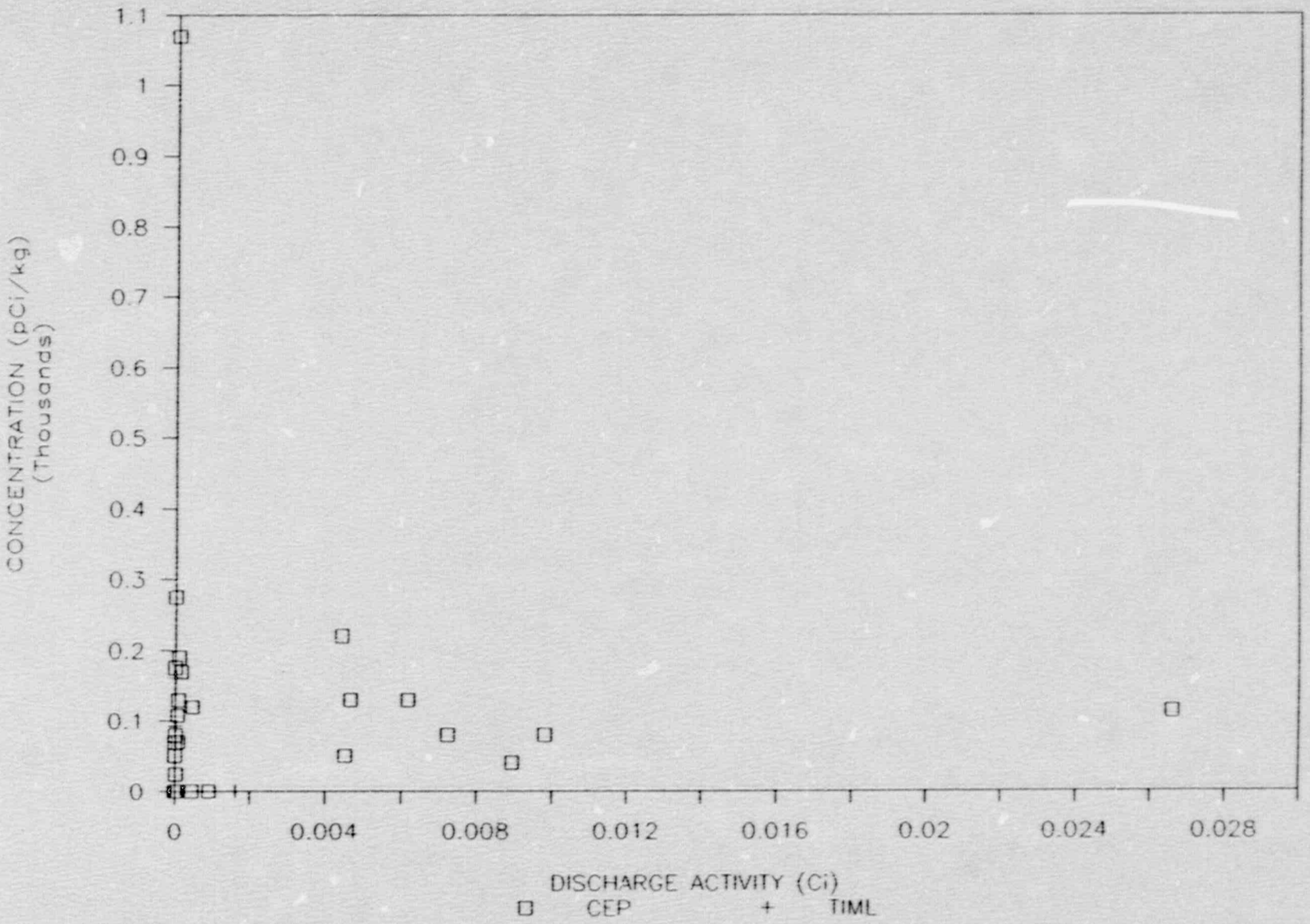


CALLAWAY DISCHARGE VS BOTTOM SEDIMENT



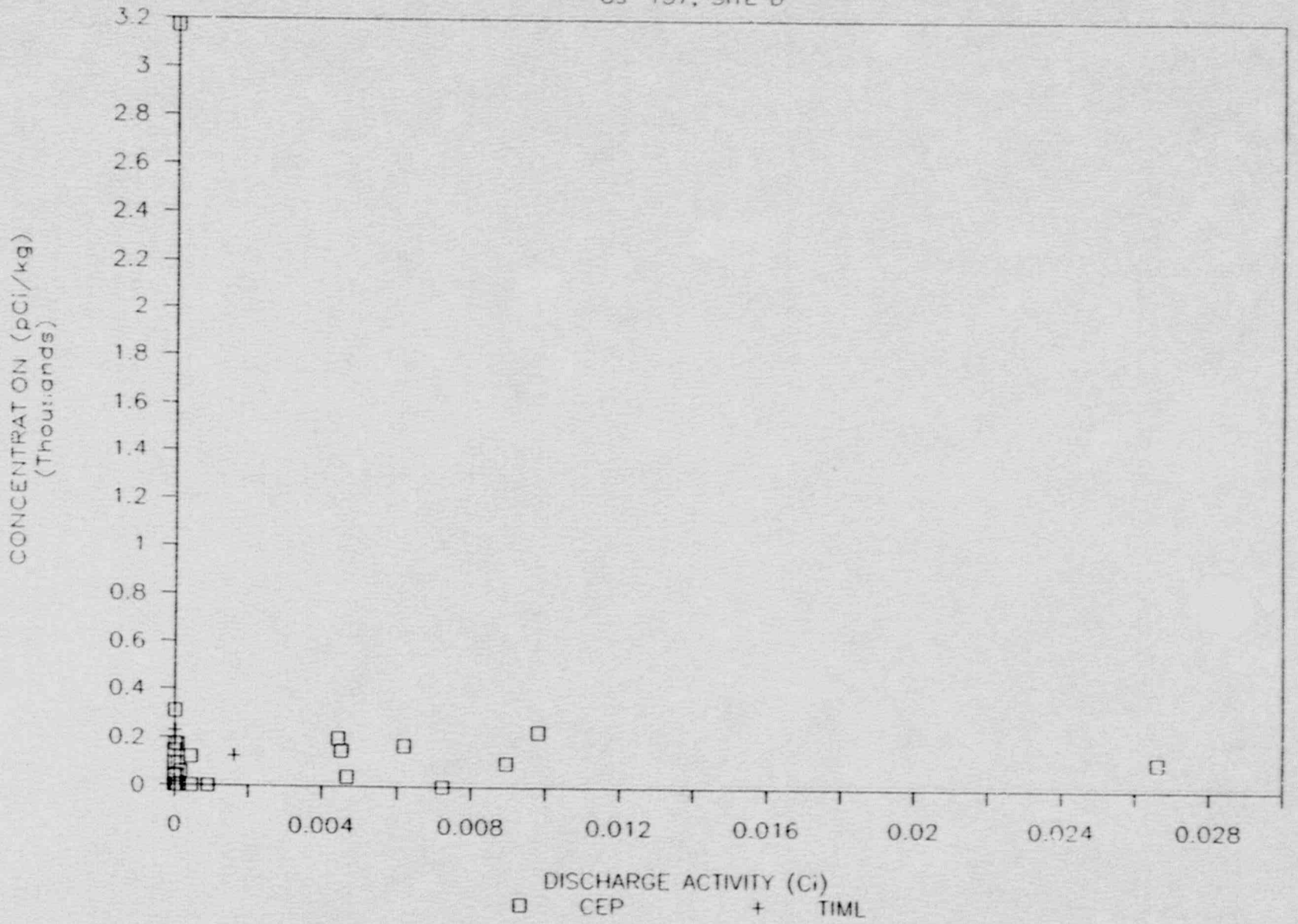
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

Cs-137, SITE C



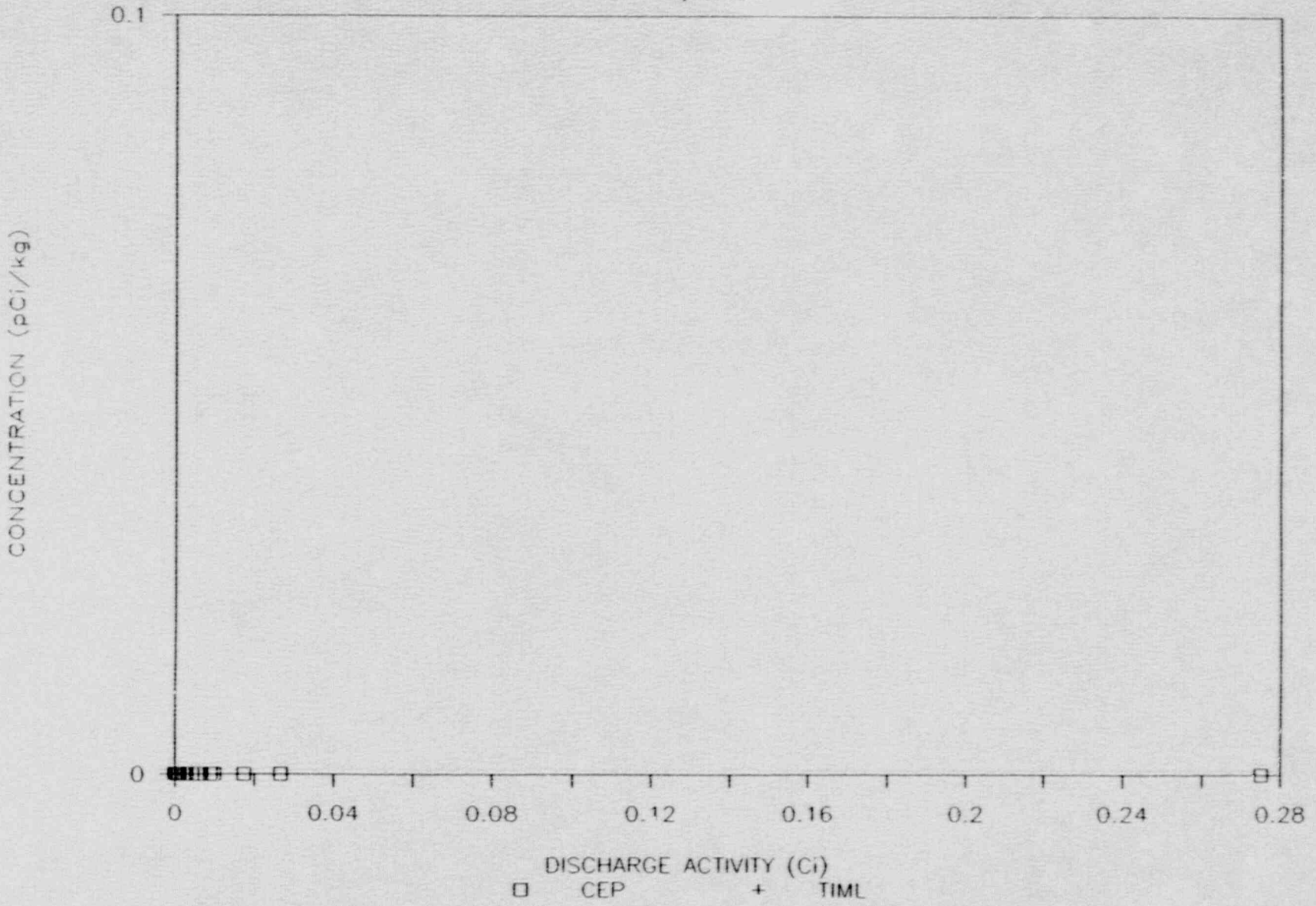
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

Cs-137, SITE D



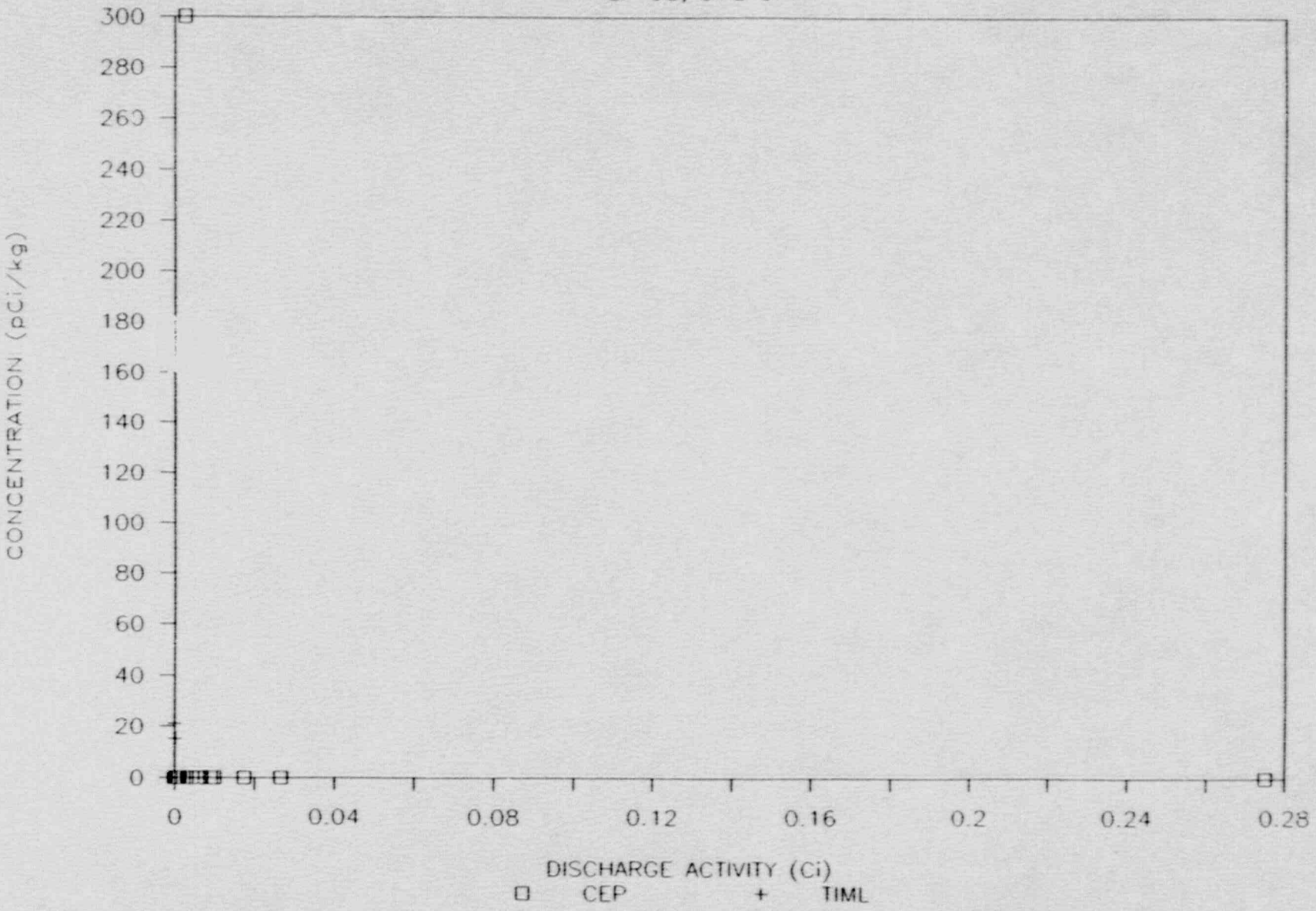
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

Sr-90, SITE A



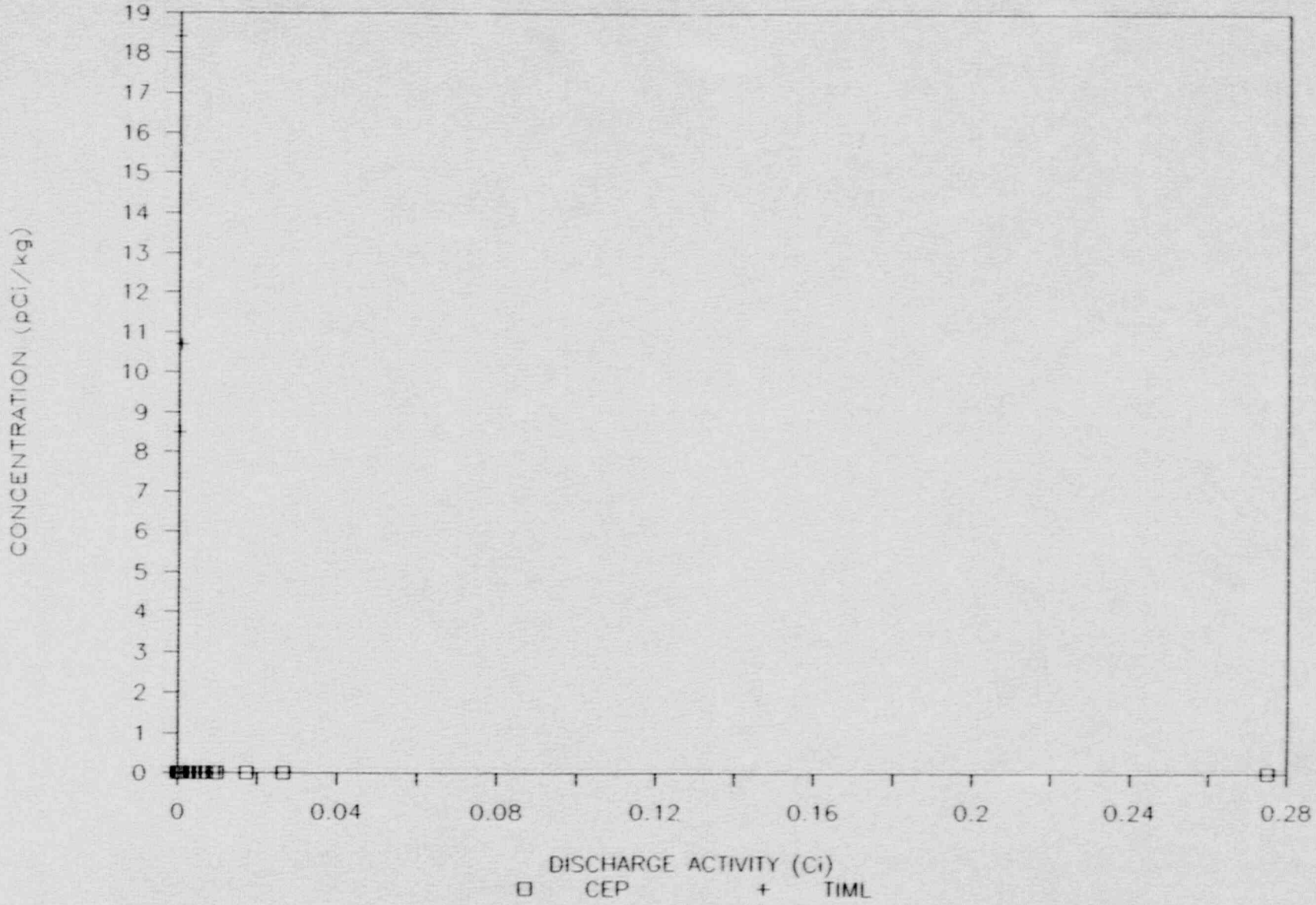
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

Sr-90, SITE C

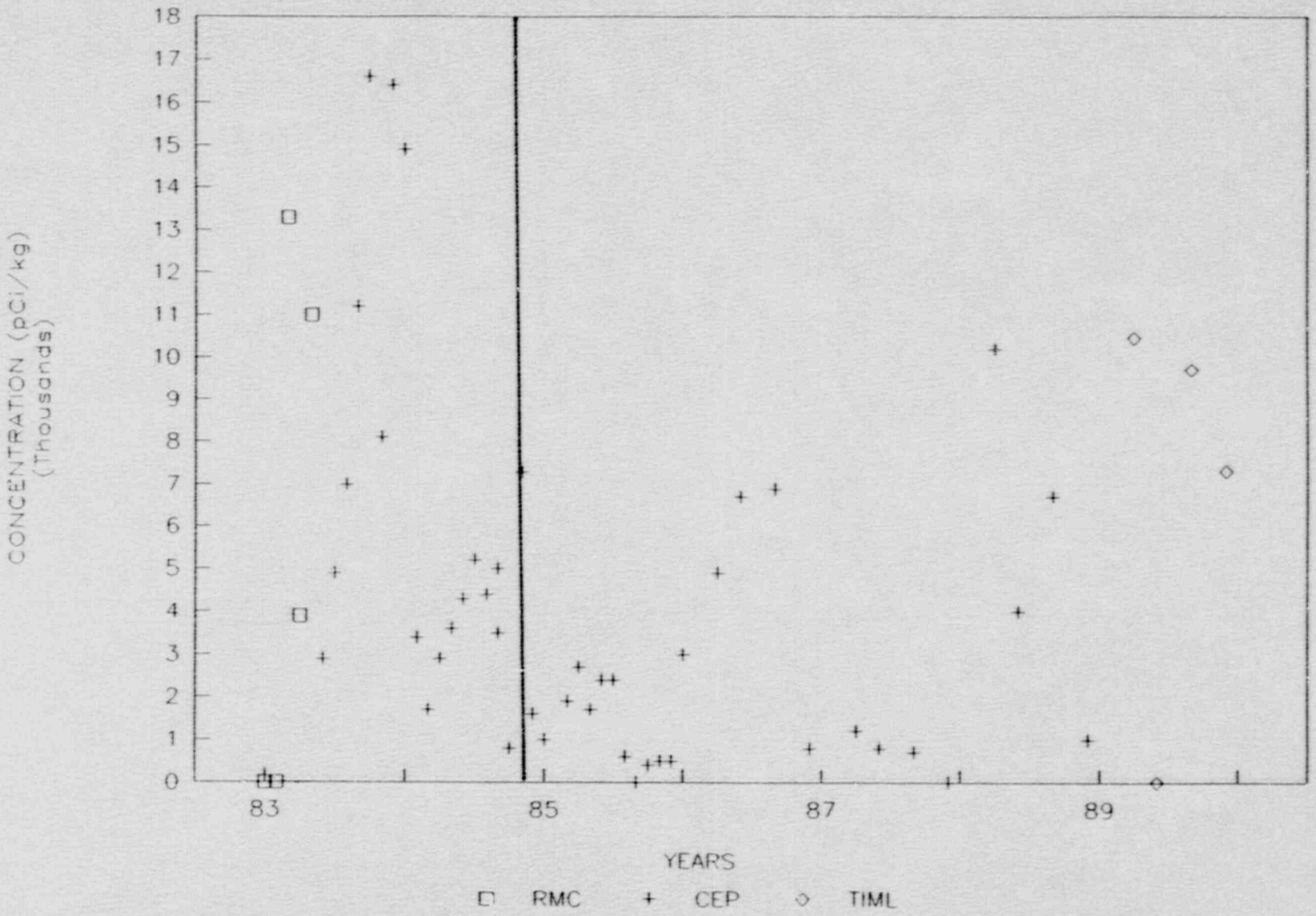


CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

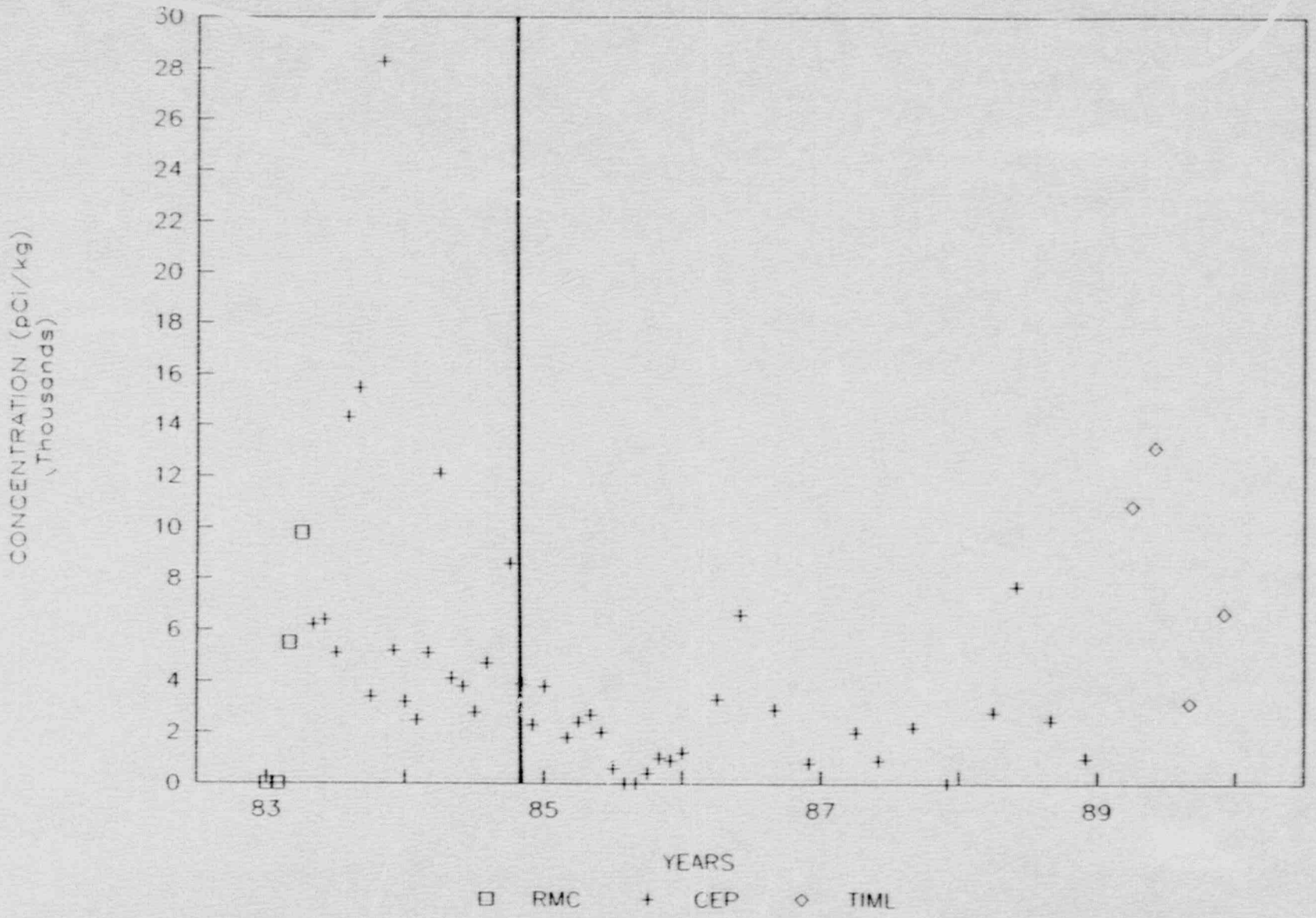
Sr-90, SITE D



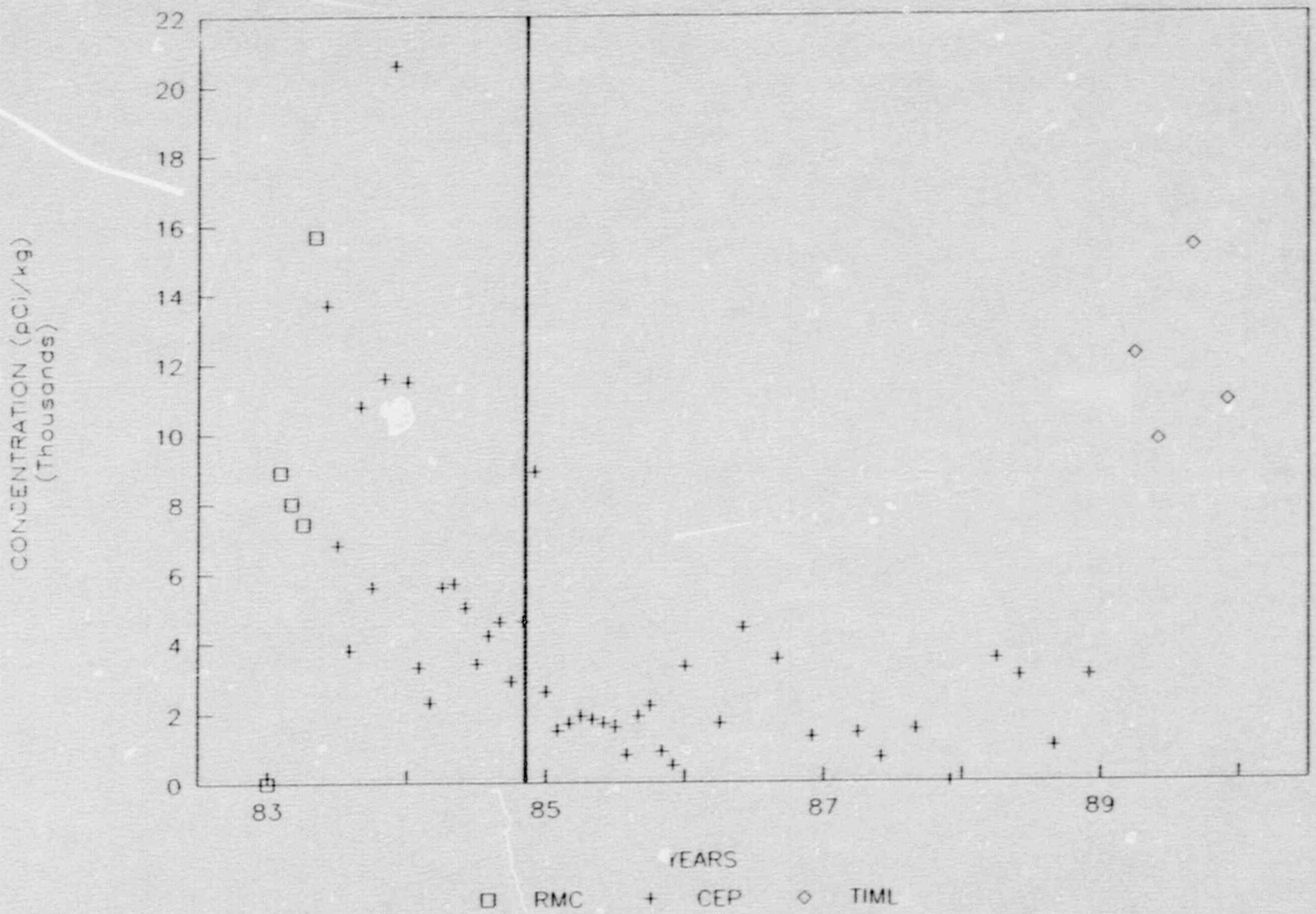
GROSS ALPHA IN BEDLOAD SEDIMENT, SITE A



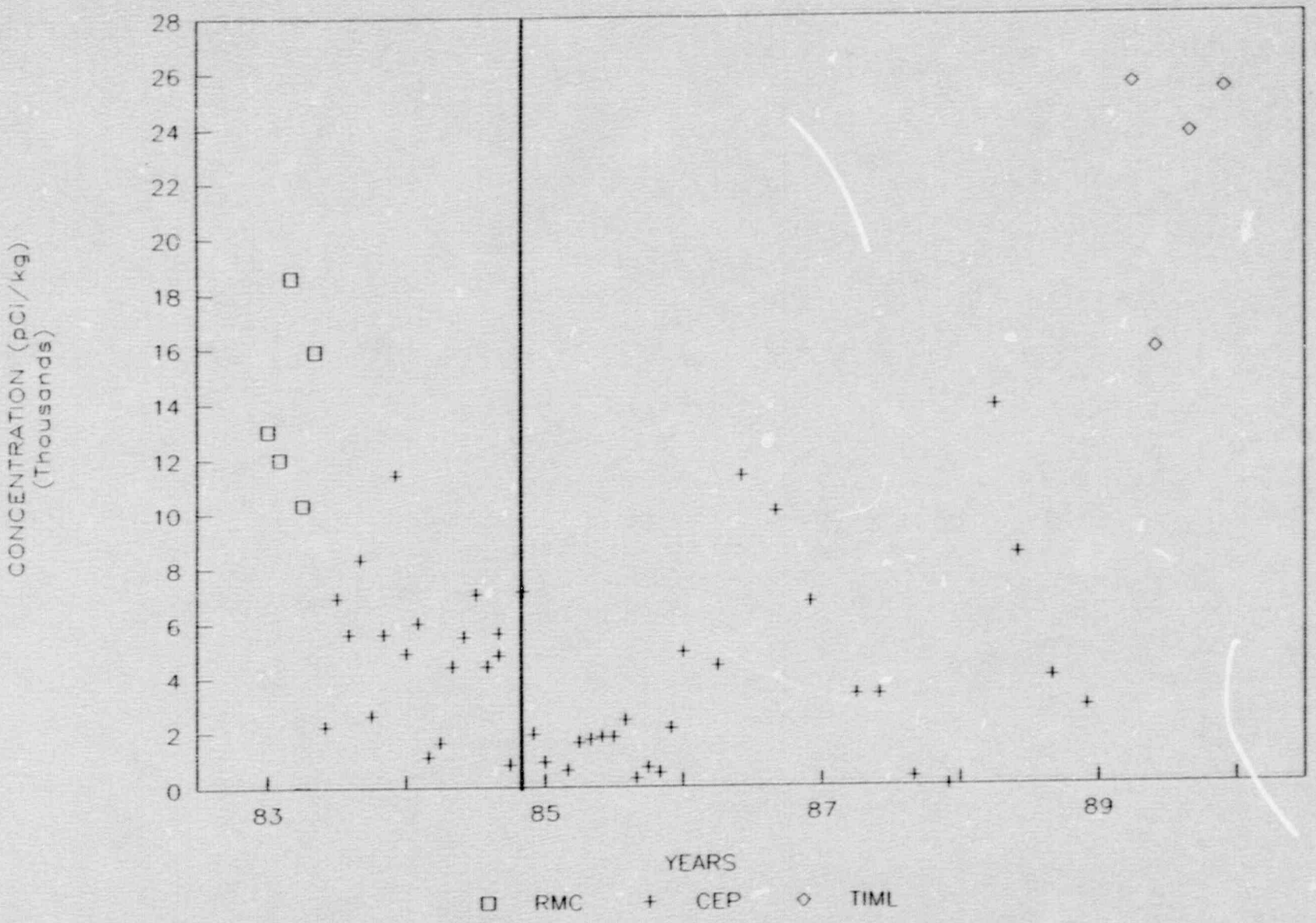
GROSS ALPHA IN BEDLOAD SEDIMENT, SITE C



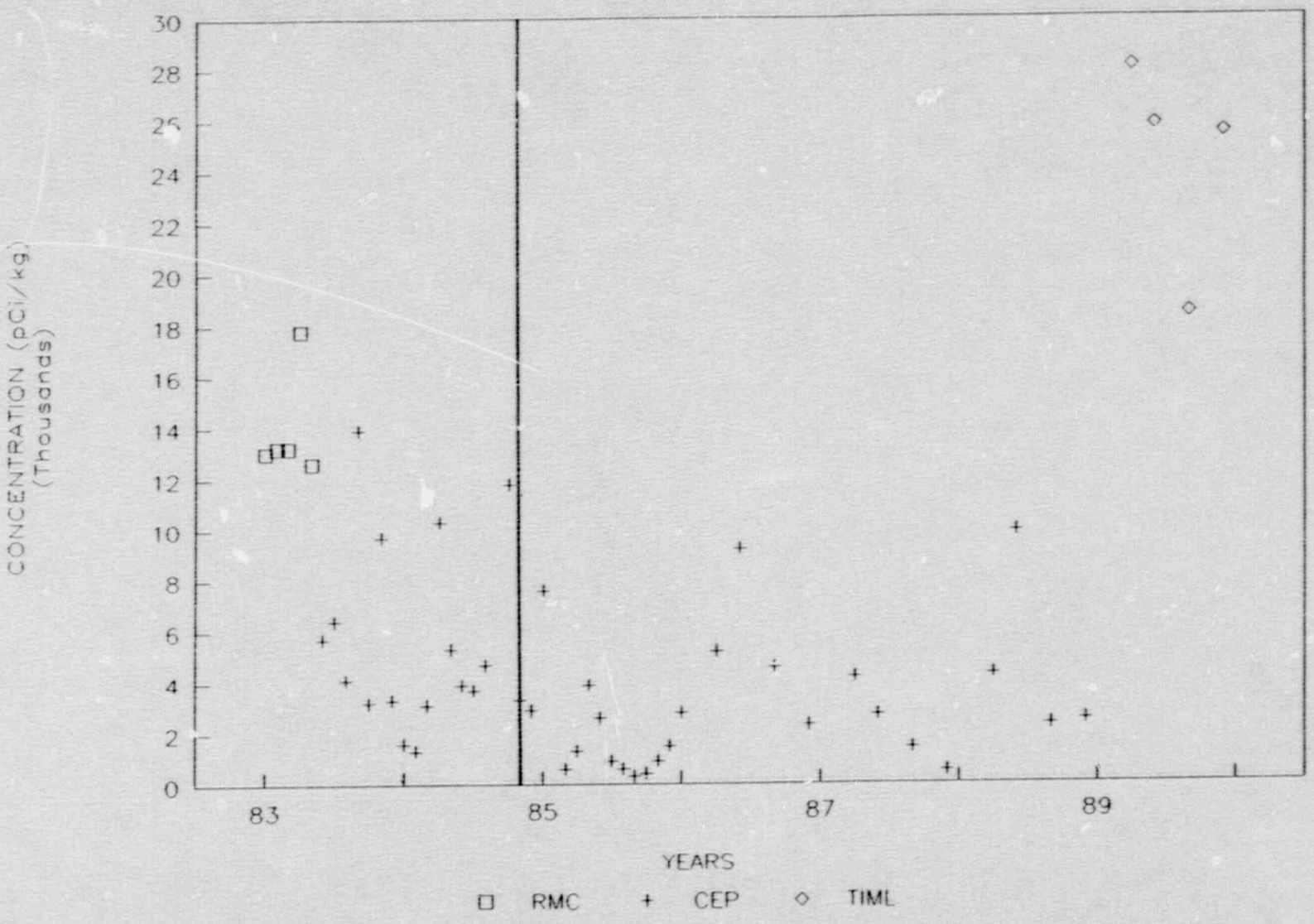
GROSS ALPHA IN BEDLOAD SEDIMENT, SITE D



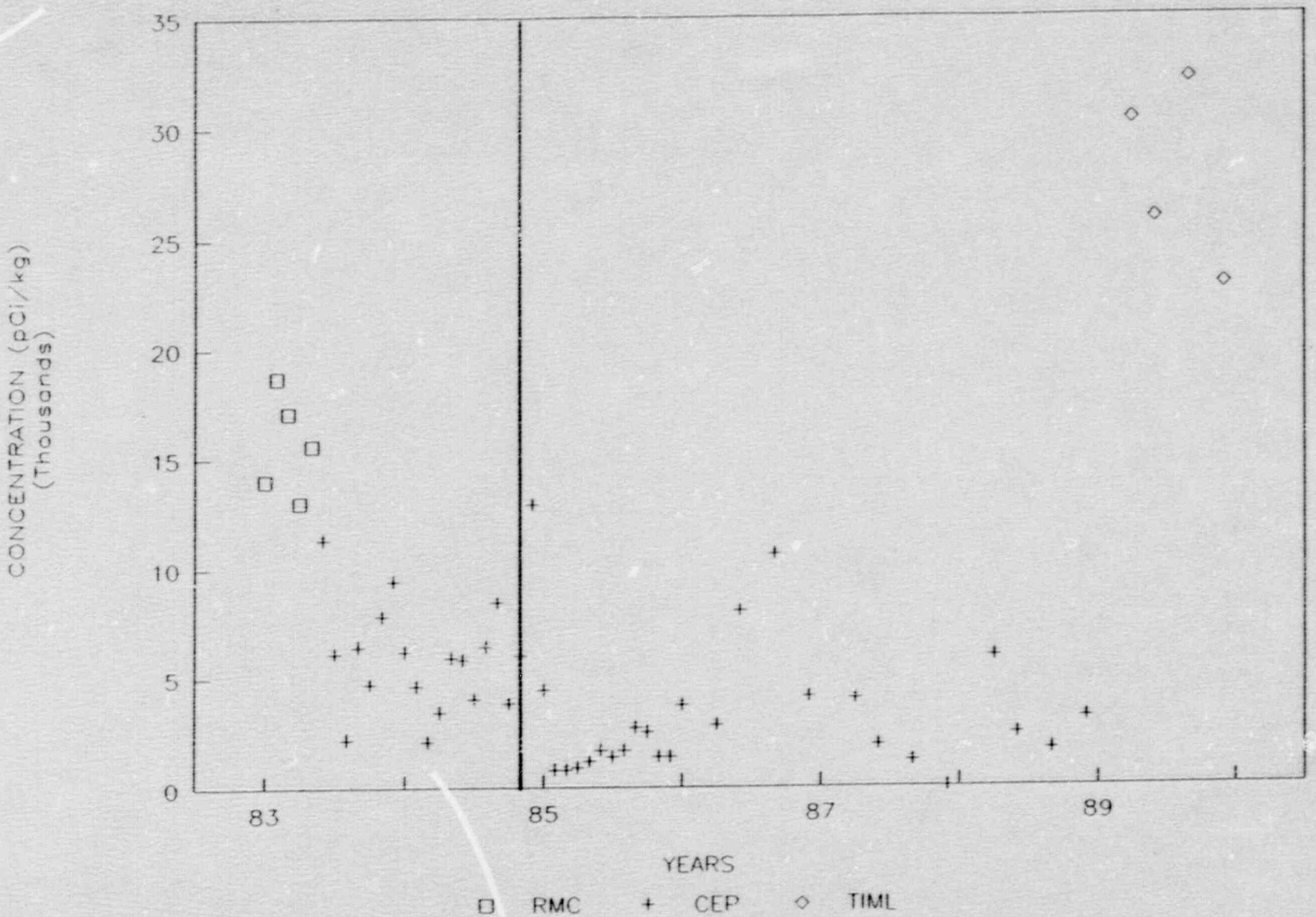
GROSS BETA IN BEDLOAD SEDIMENT, SITE A



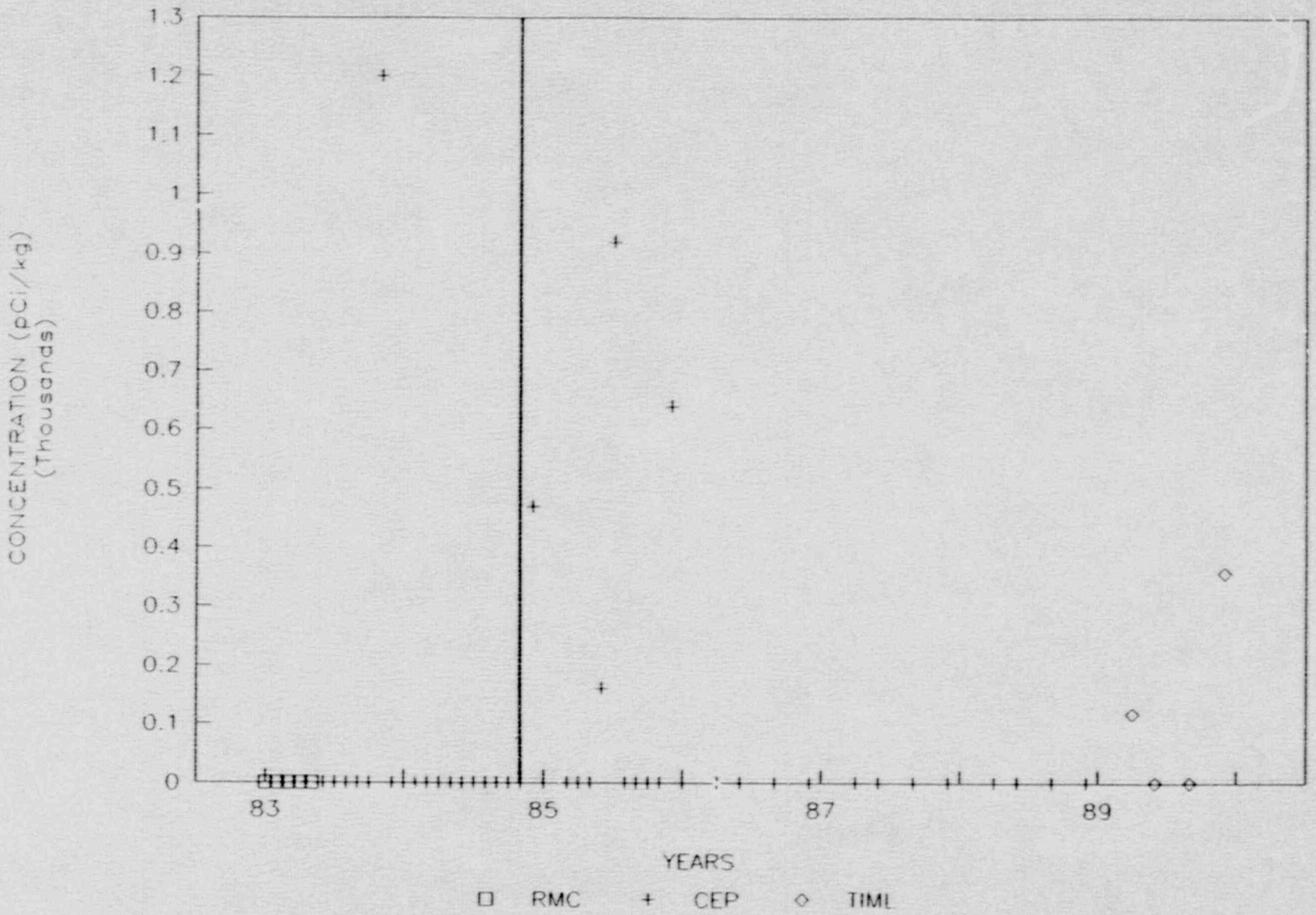
GROSS BETA IN BEDLOAD SEDIMENT, SITE C



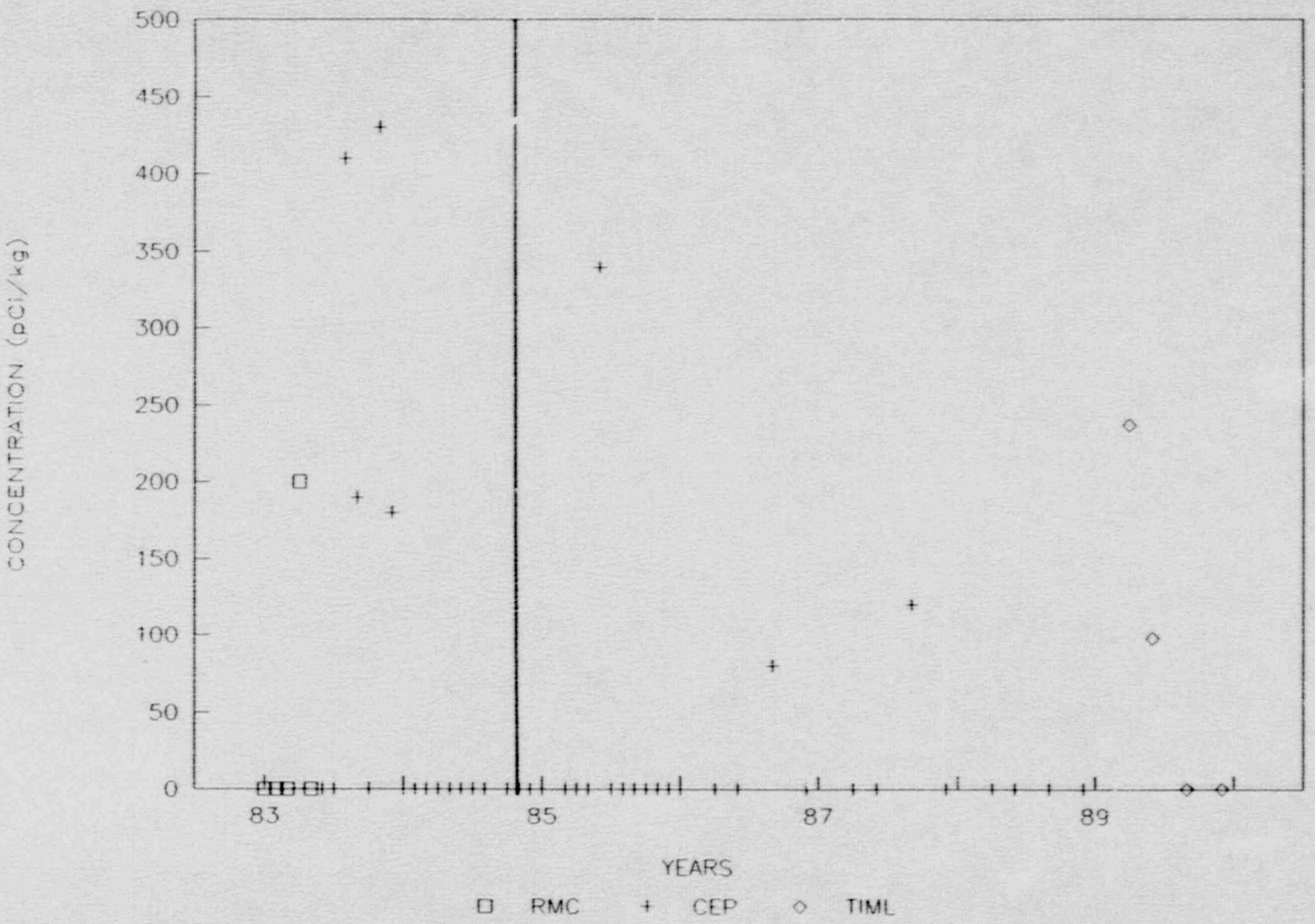
GROSS BETA IN BEDLOAD SEDIMENT, SITE D



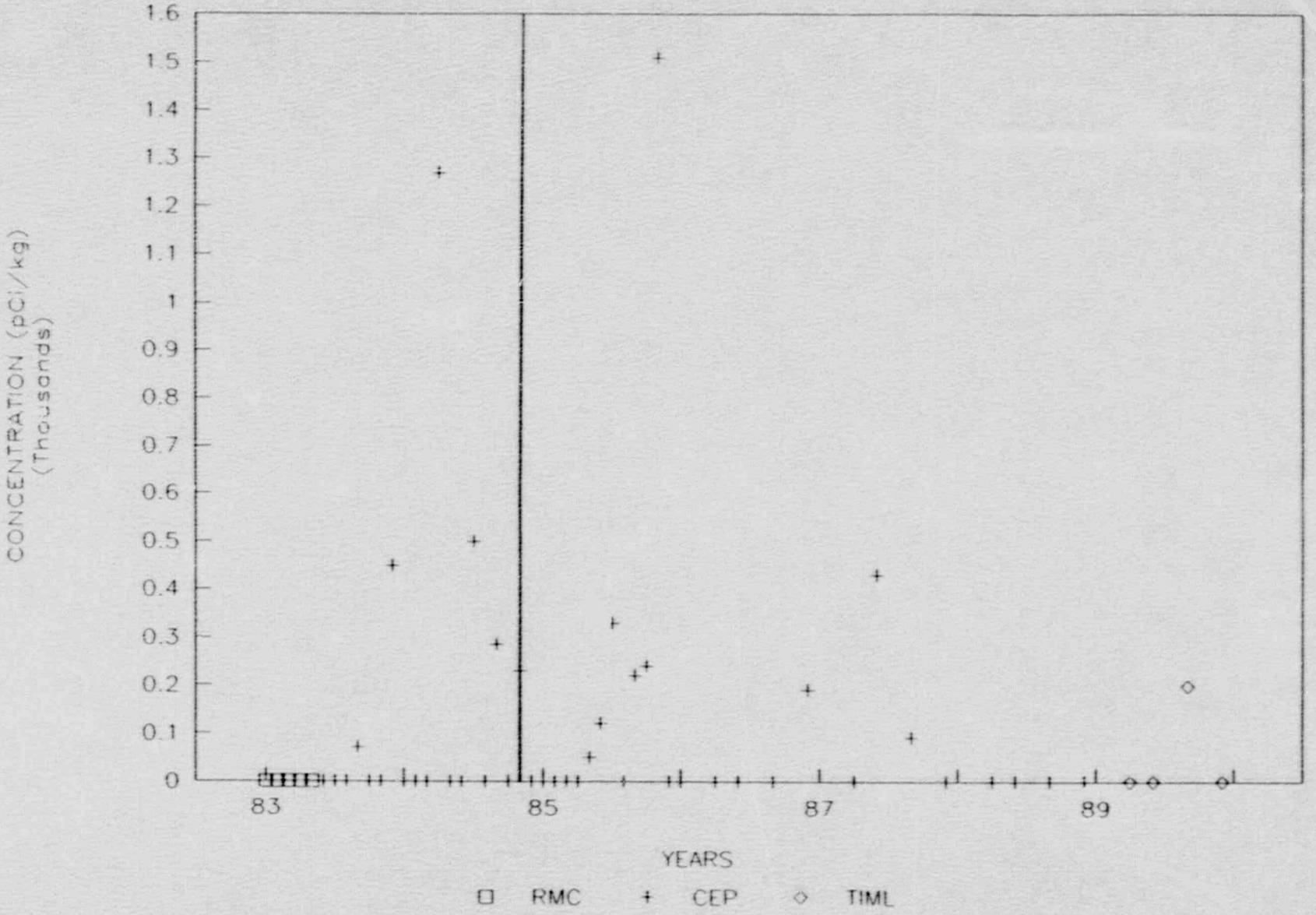
CS-137 IN BEDLOAD SEDIMENT, SITE A



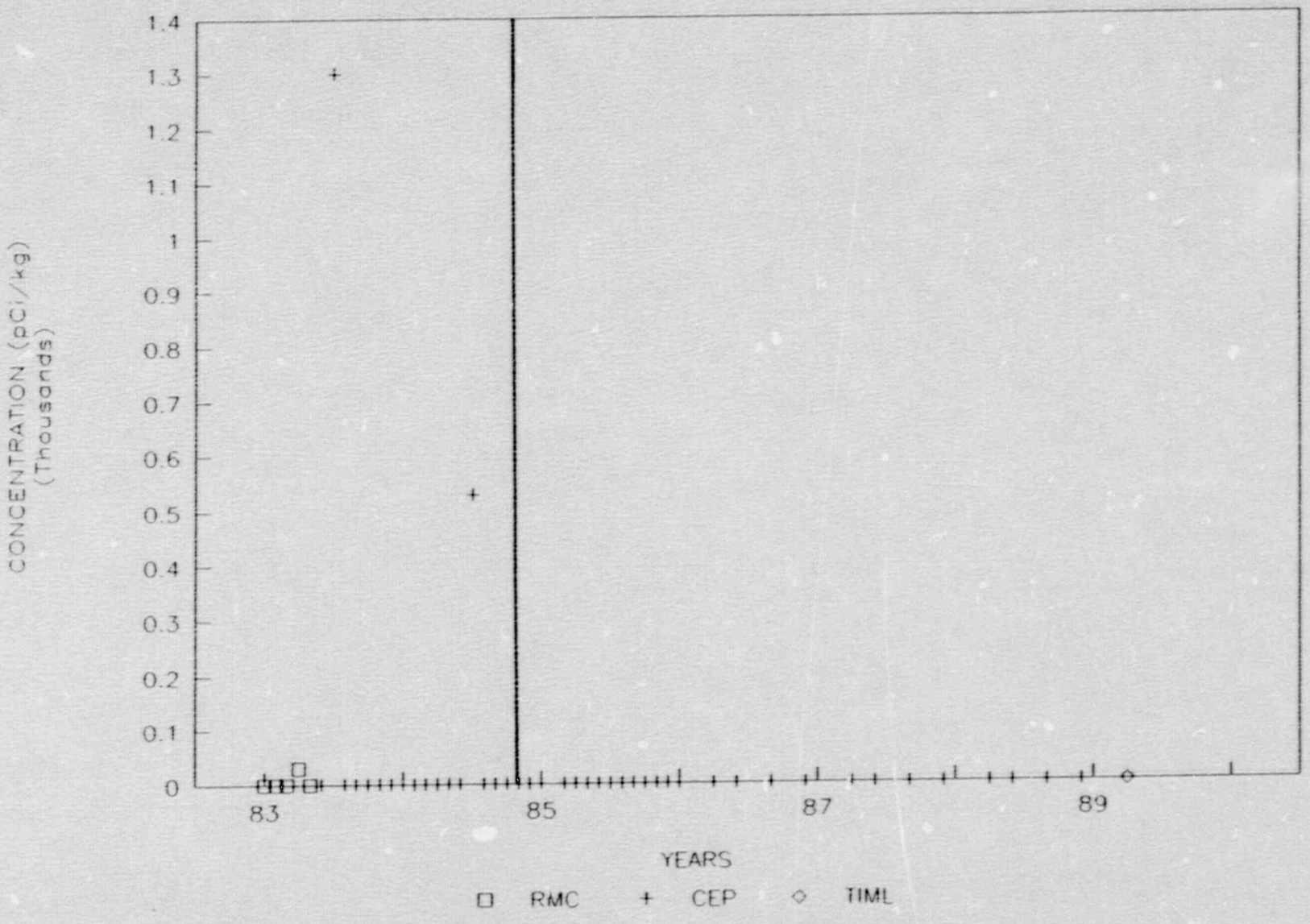
CS-137 IN BEDLOAD SEDIMENT, SITE C



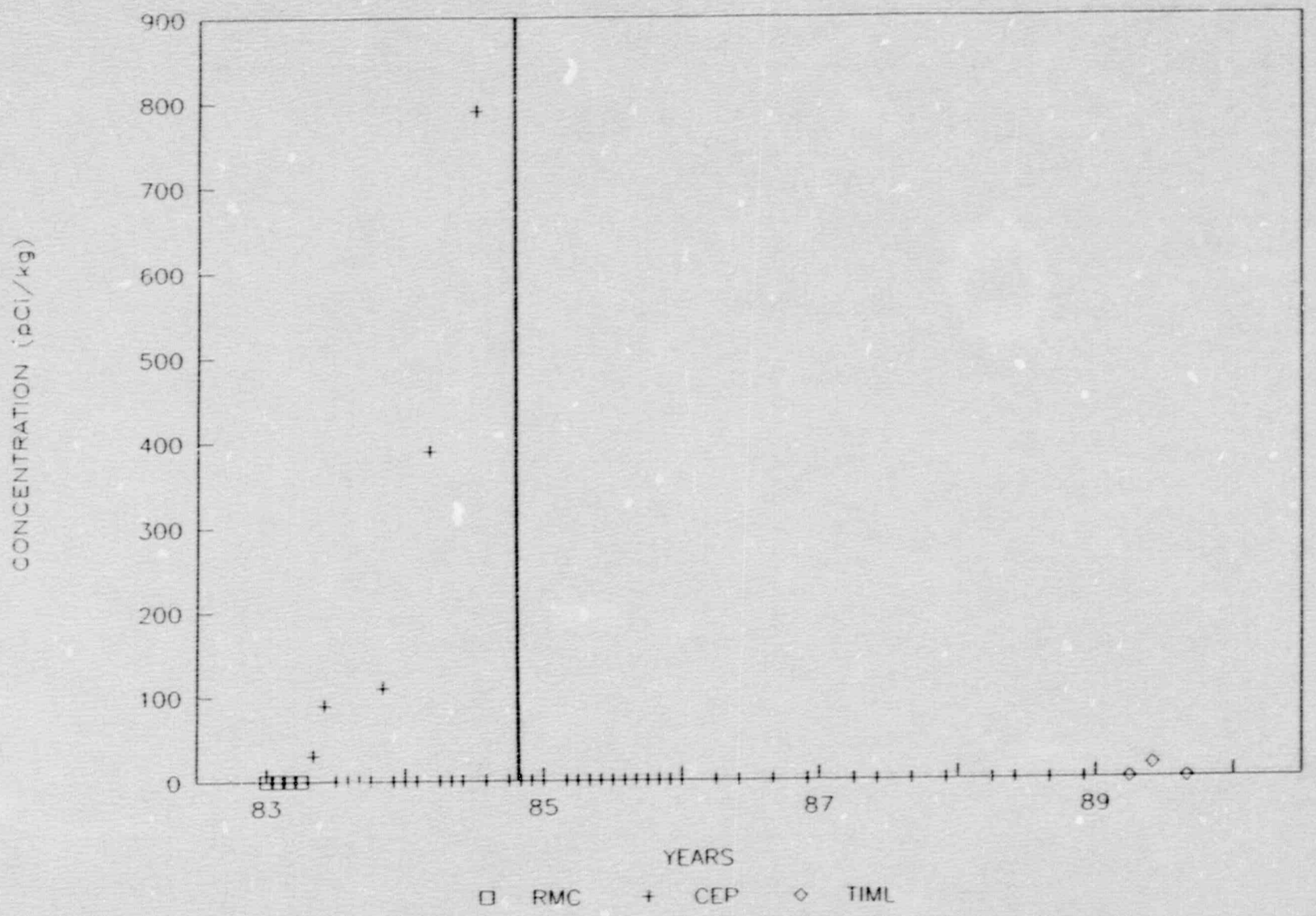
CS-137 IN BEDLOAD SEDIMENT, SITE D



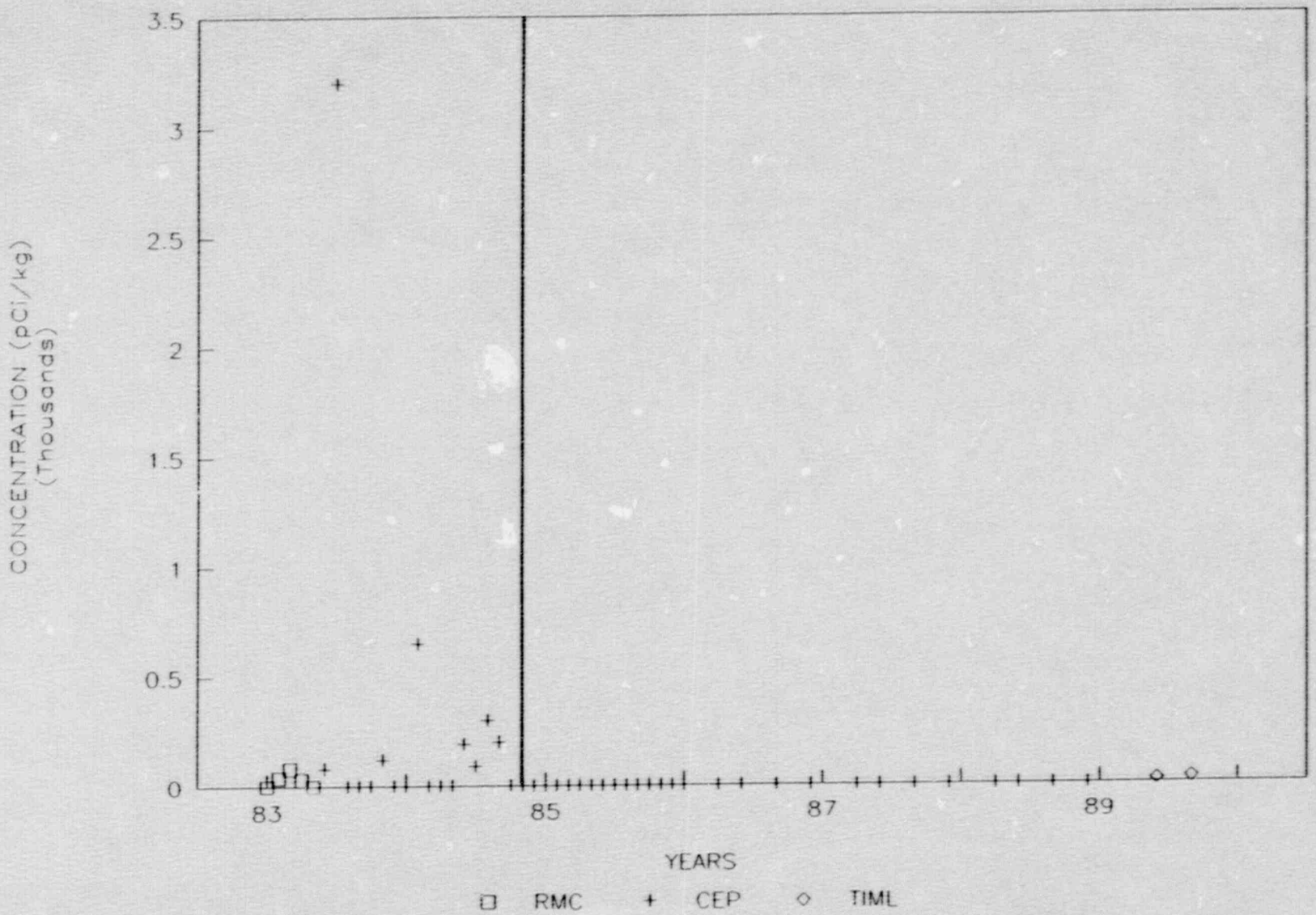
SR-90 IN BEDLOAD SEDIMENT, SITE A



SR-90 IN BEDLOAD SEDIMENT, SITE C

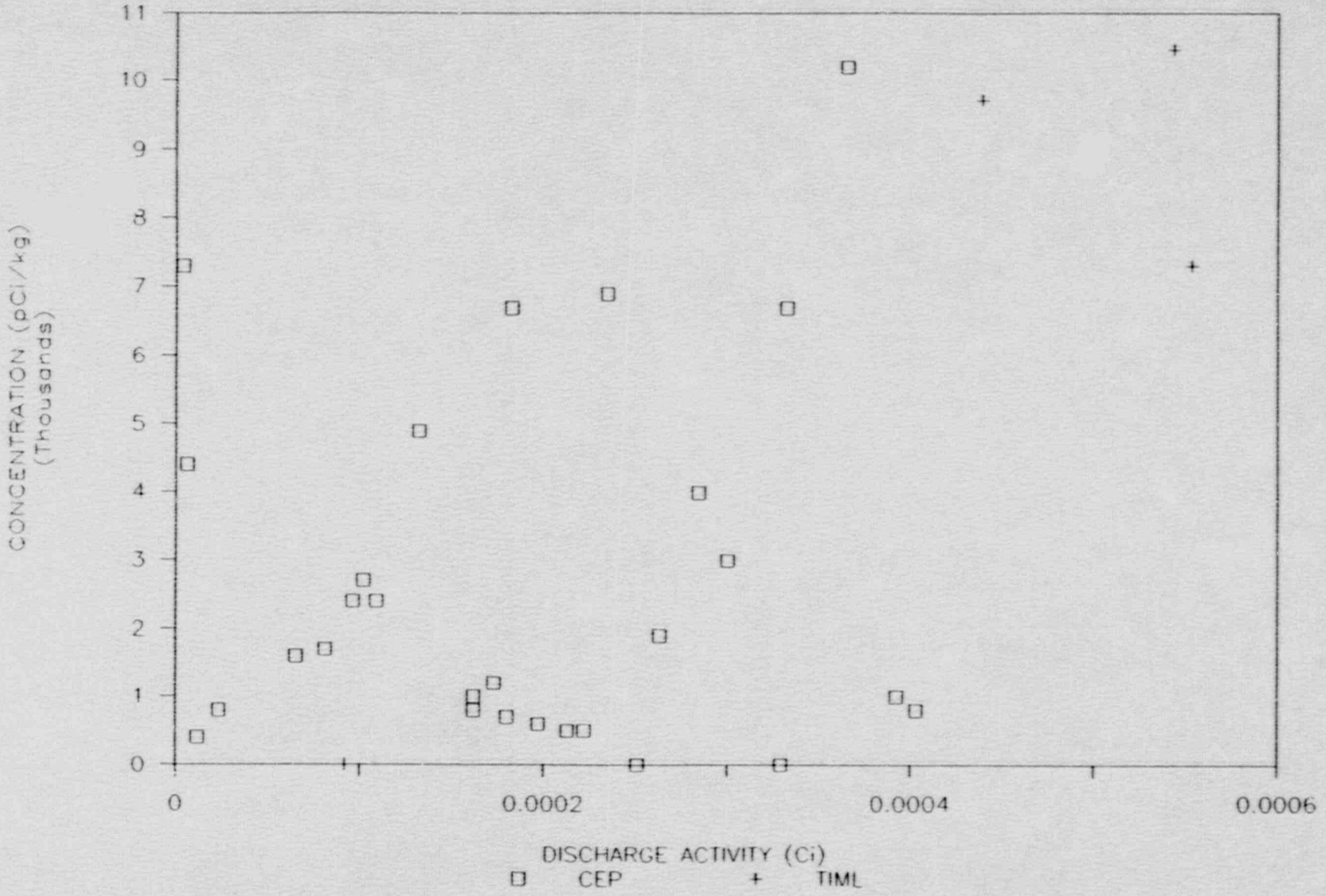


SR-90 IN BEDLOAD SEDIMENT, SITE D



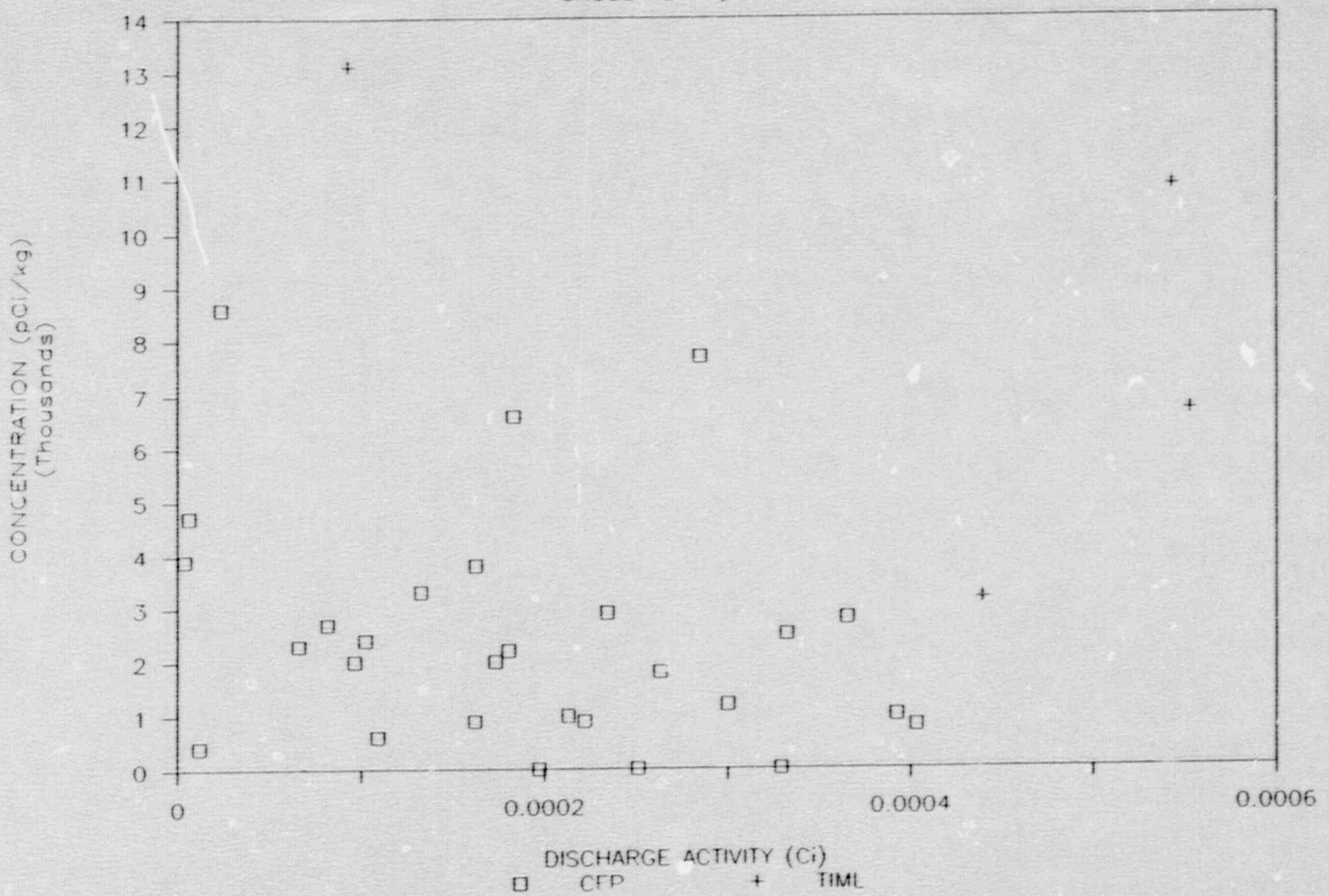
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

GROSS ALPHA, SITE A



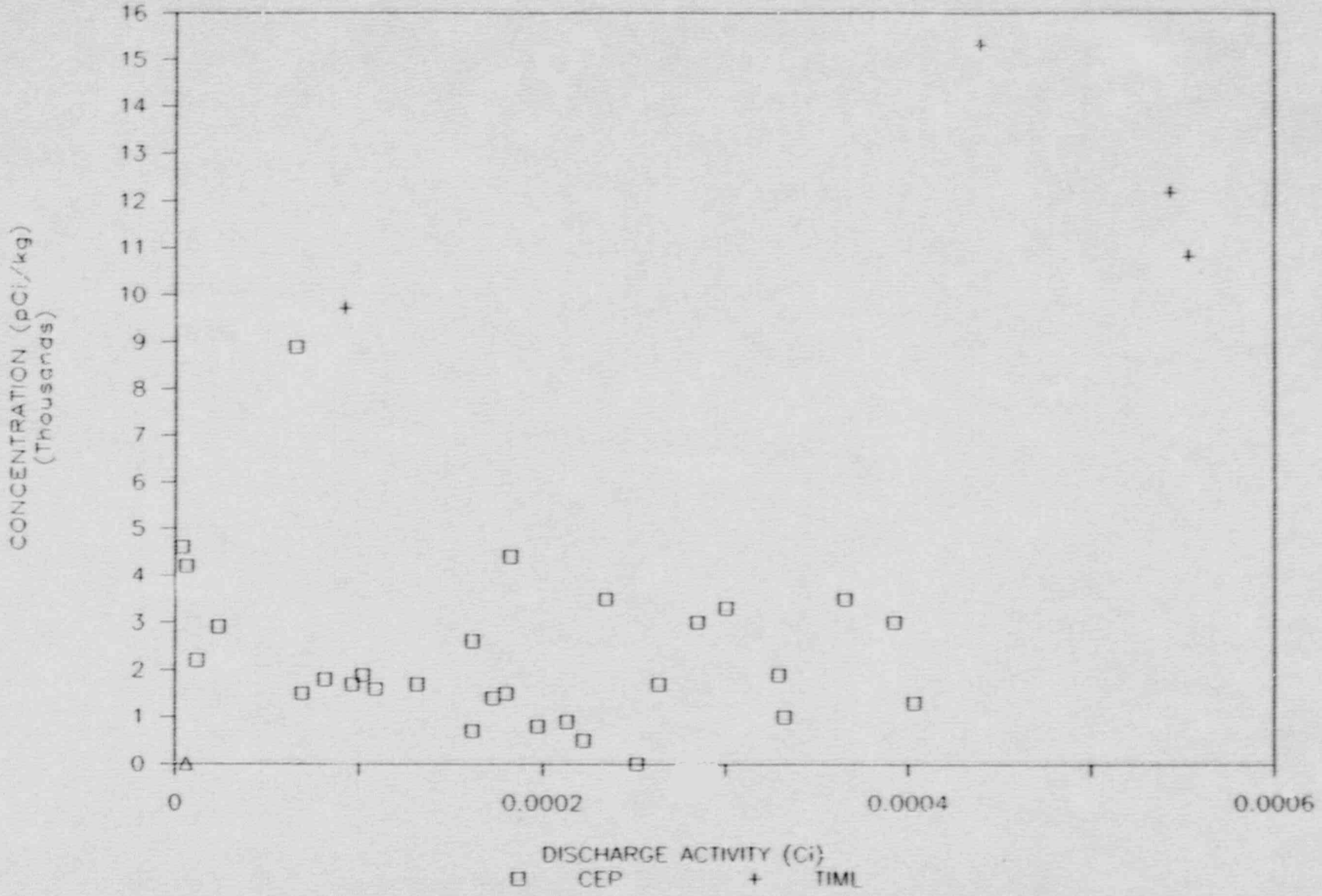
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

GROSS ALPHA, SITE C

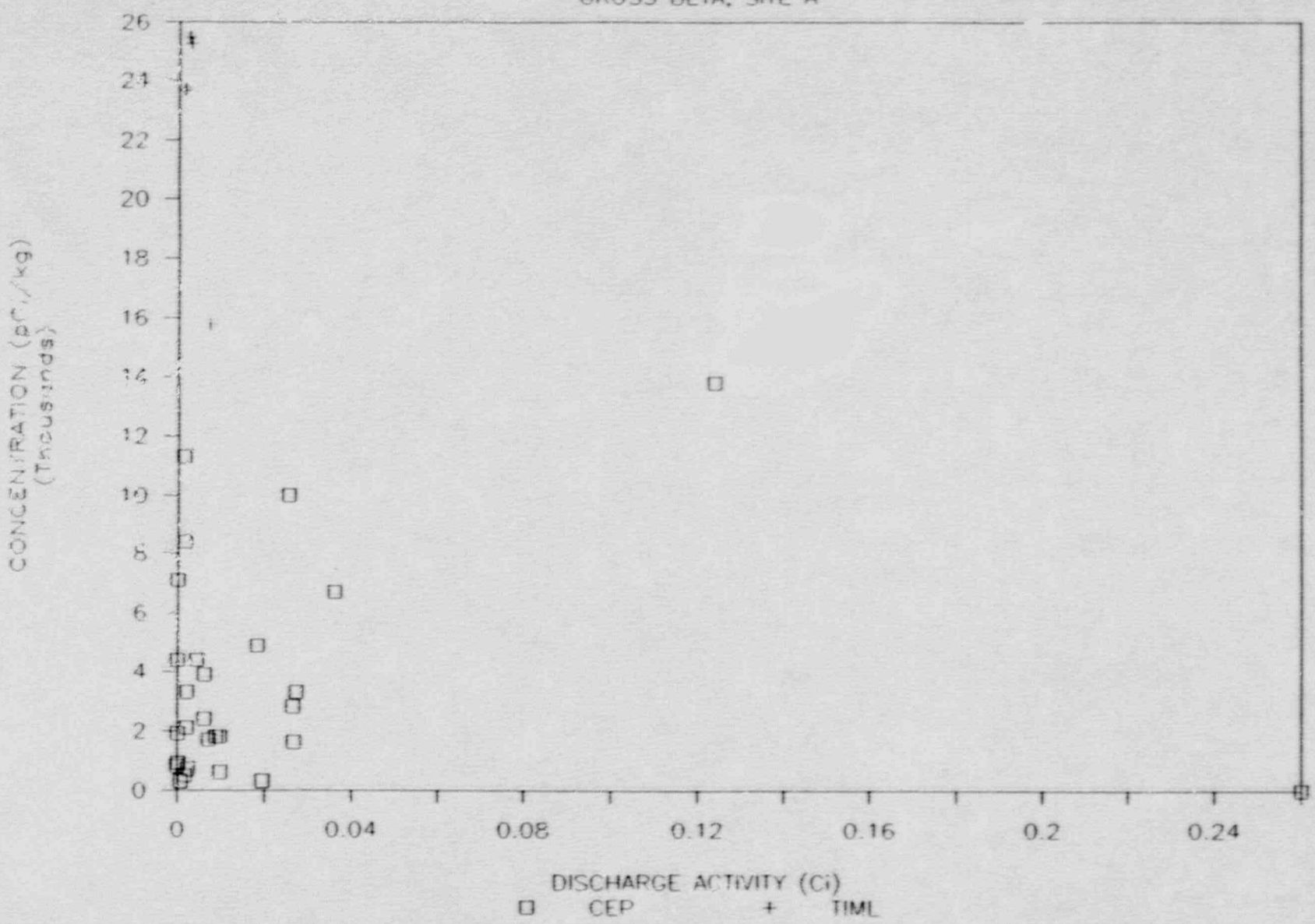


CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

GROSS ALPHA, SITE D

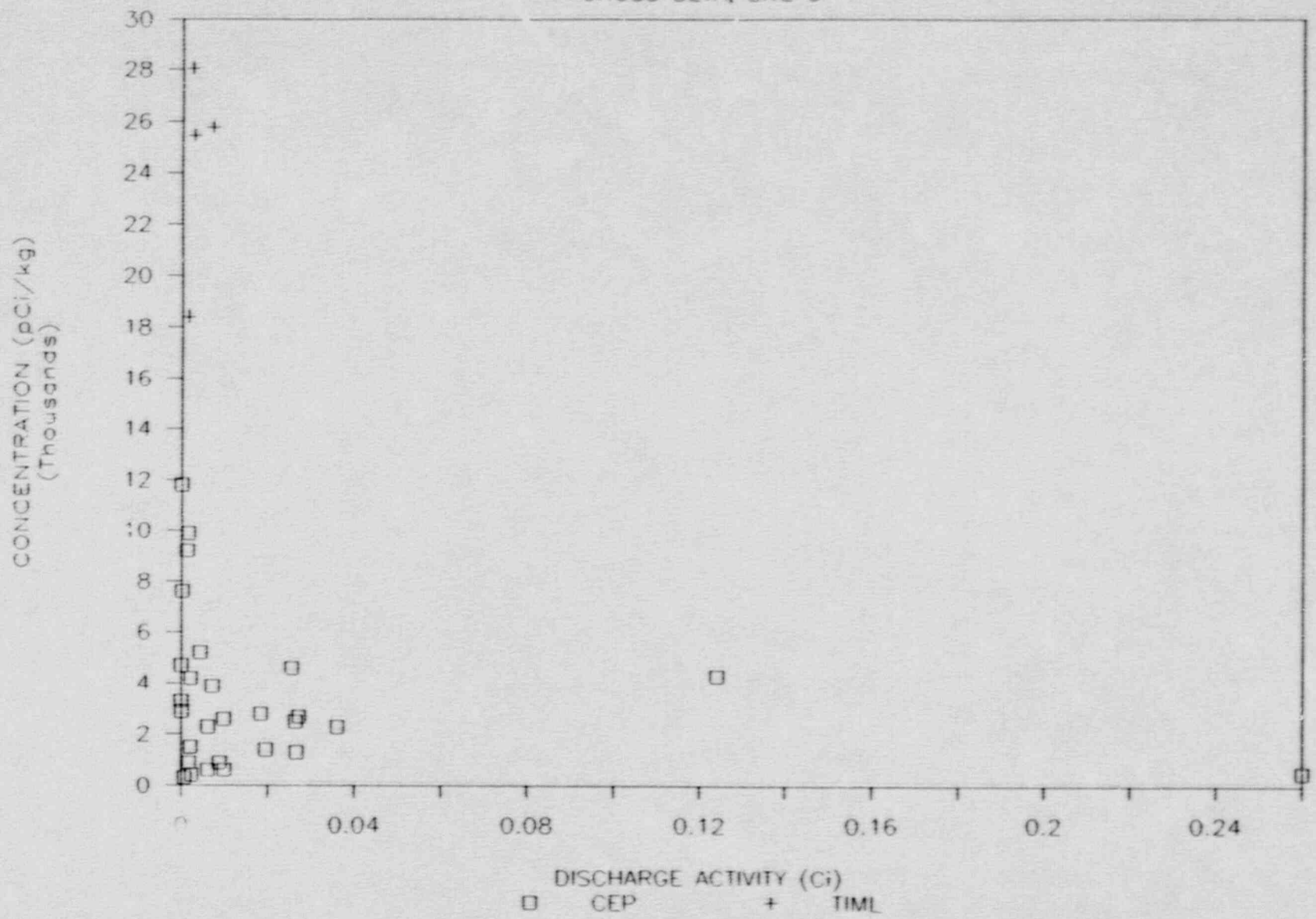


CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT



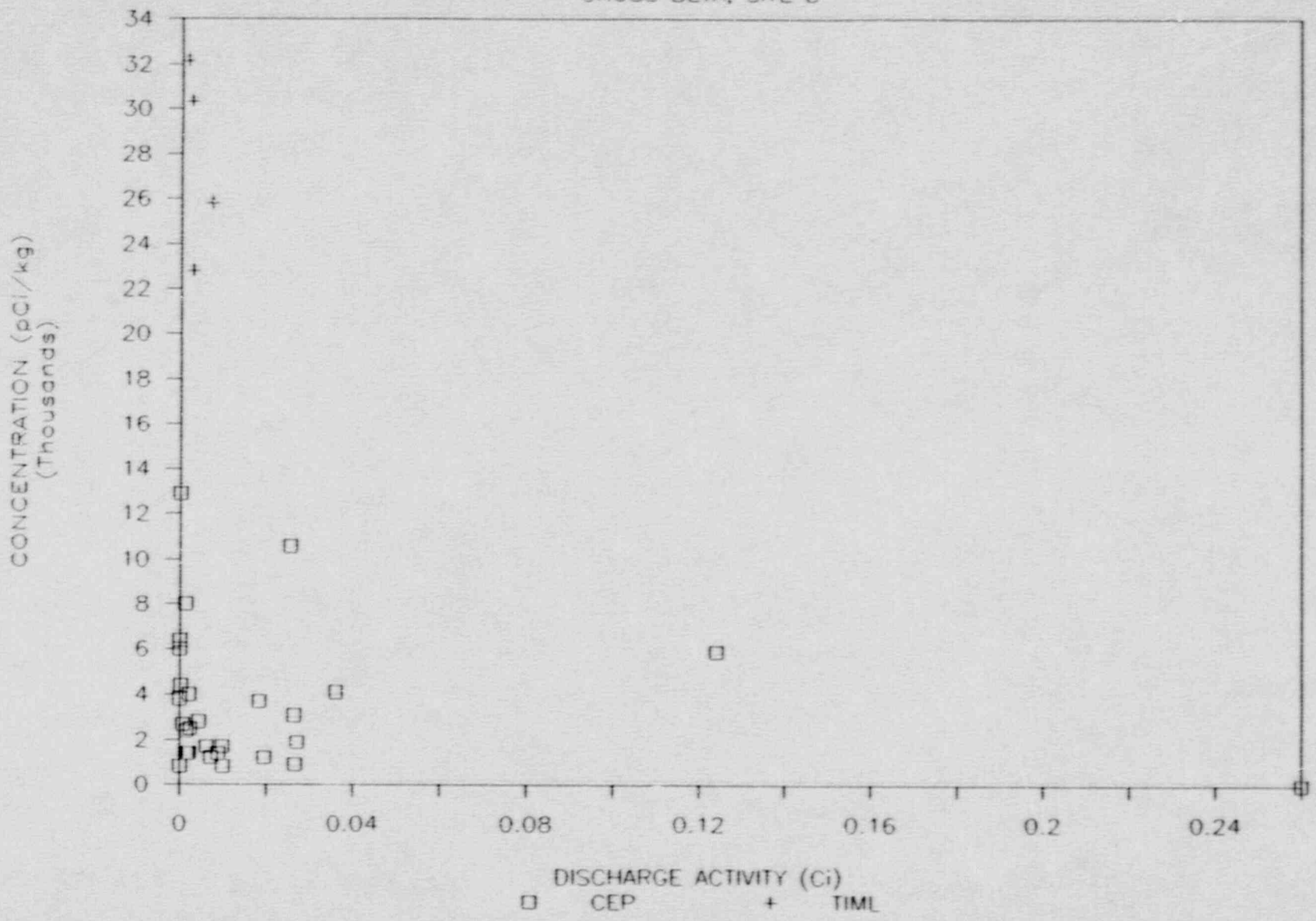
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

GROSS BETA, SITE C



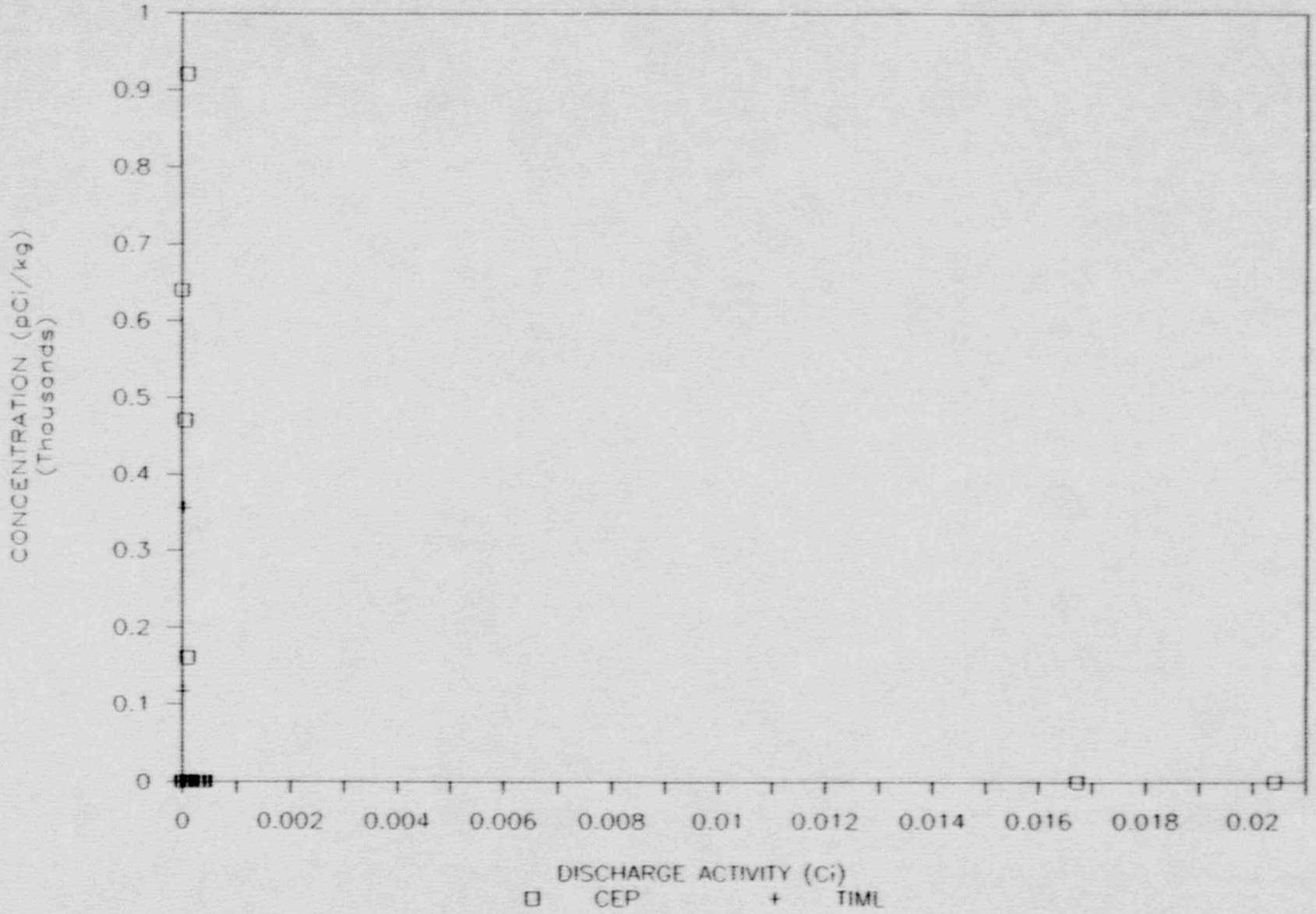
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

GROSS BETA, SITE D



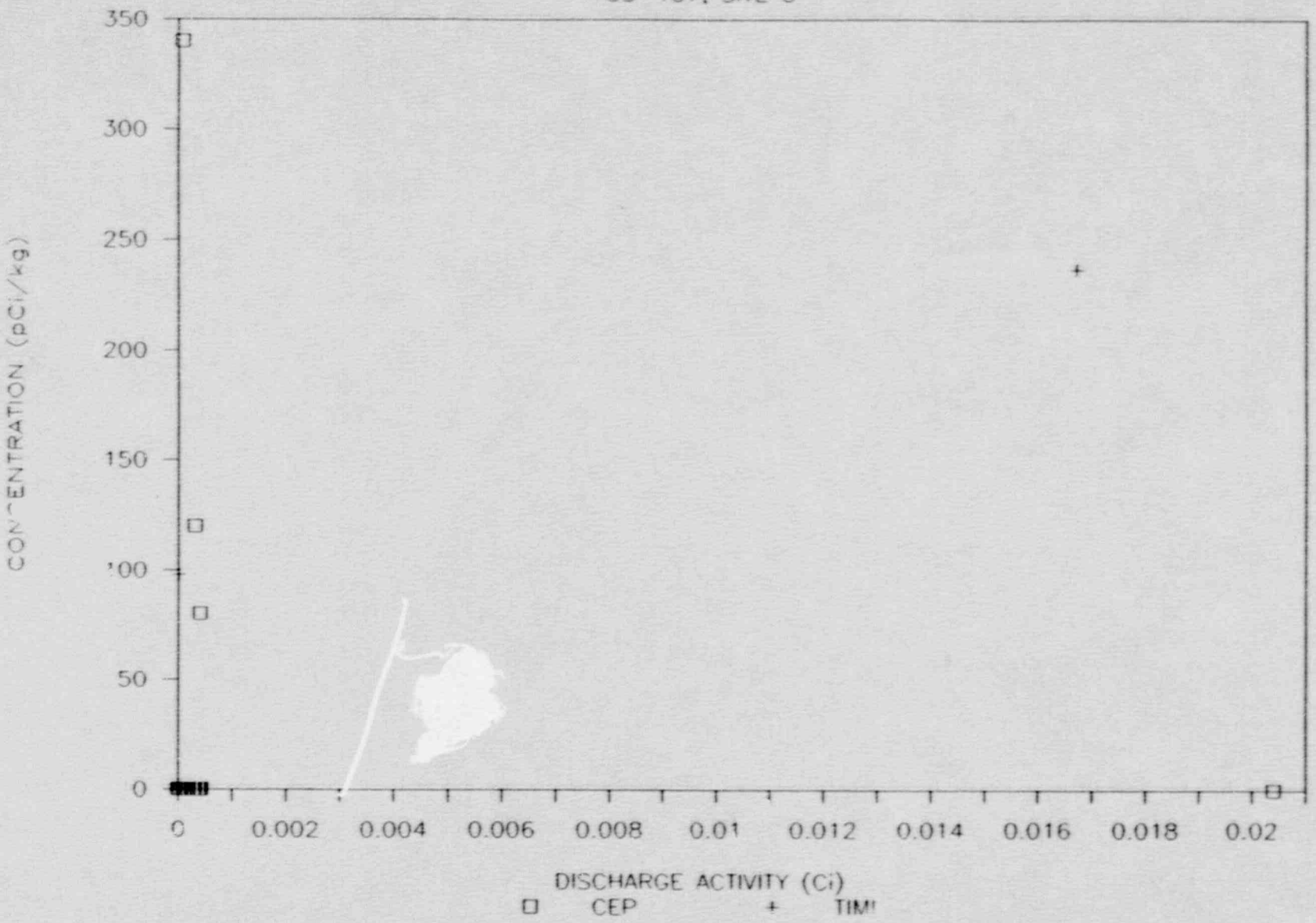
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

CS-137, SITE A



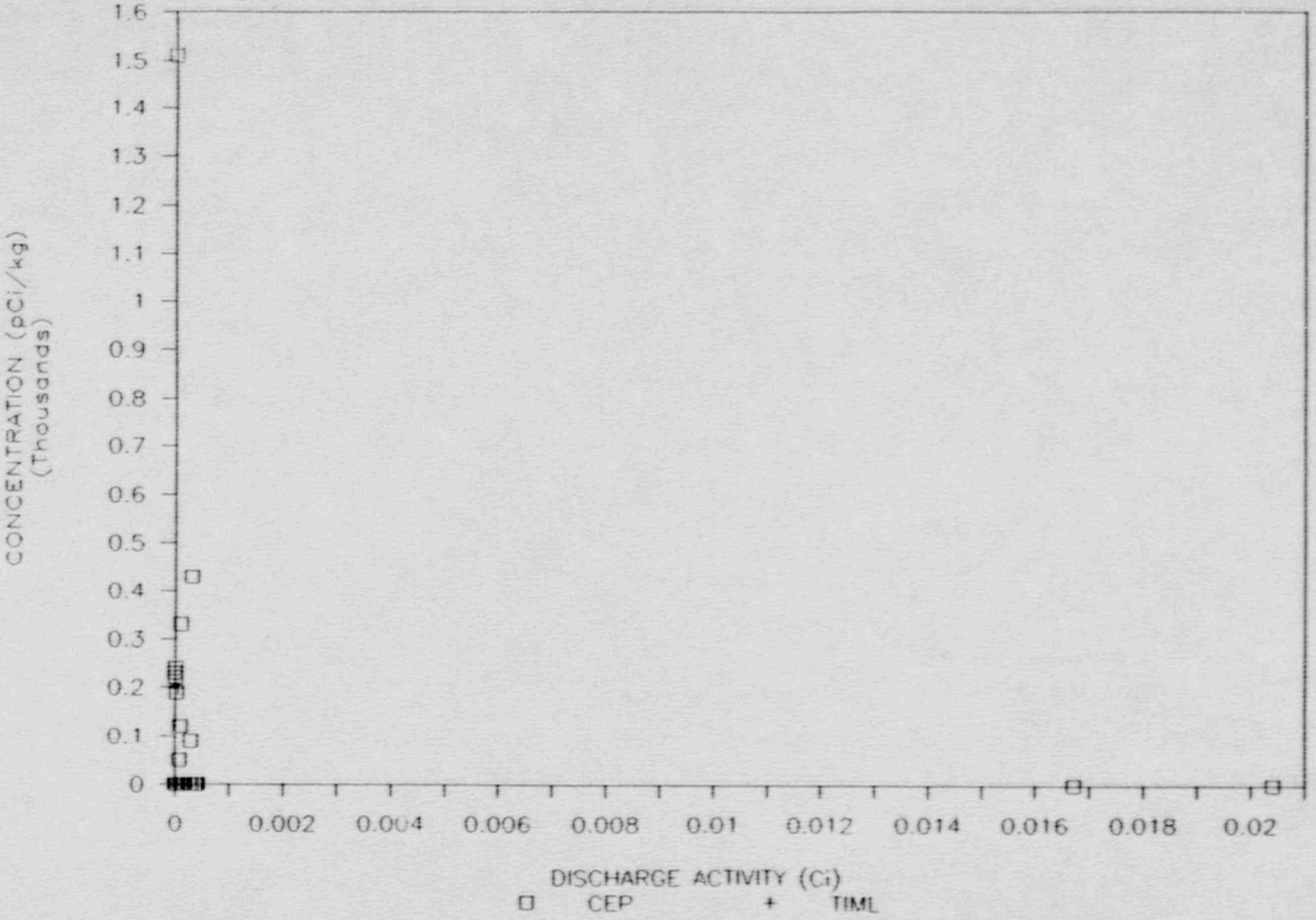
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

CS-137, SITE C



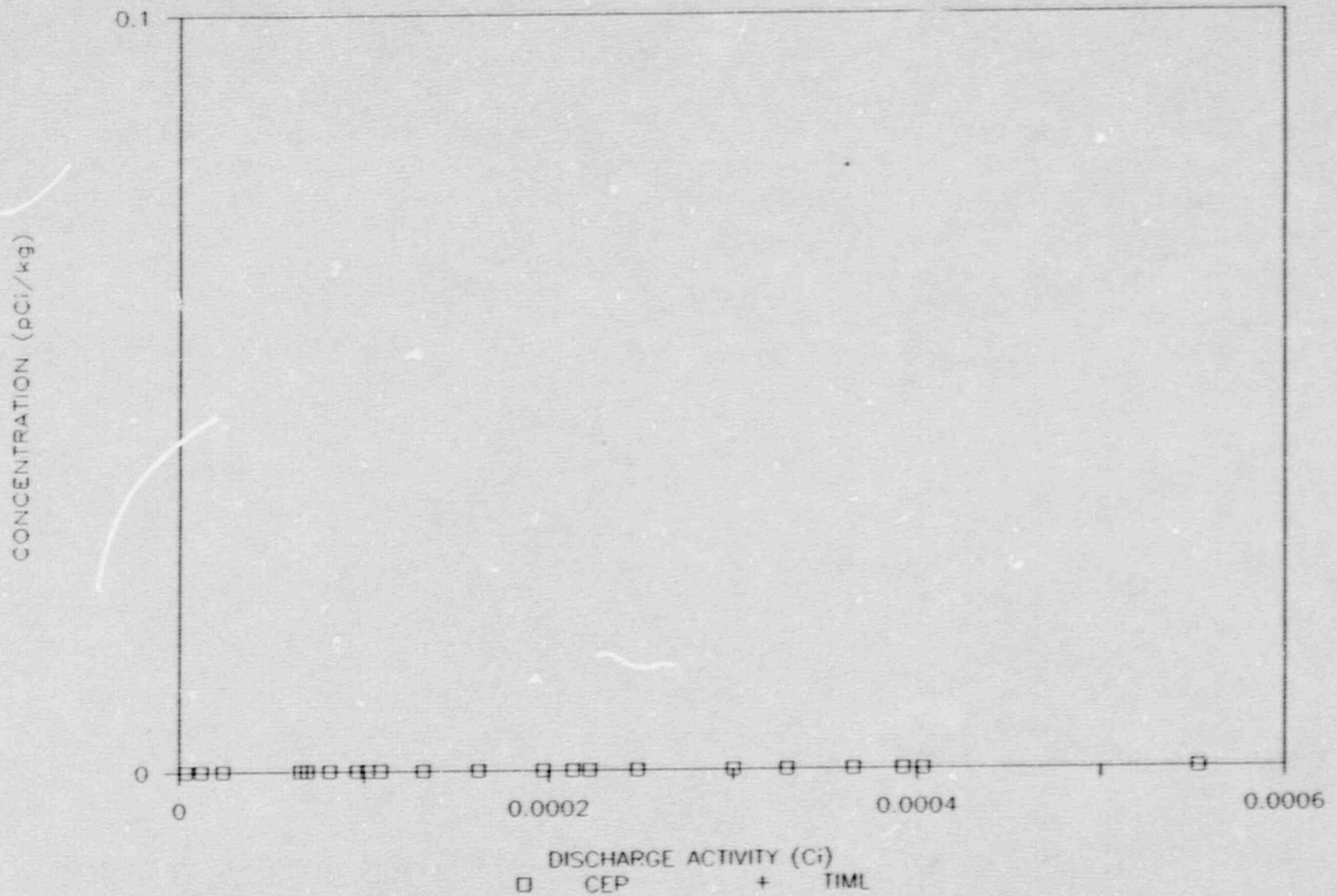
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

CS-137, SITE D



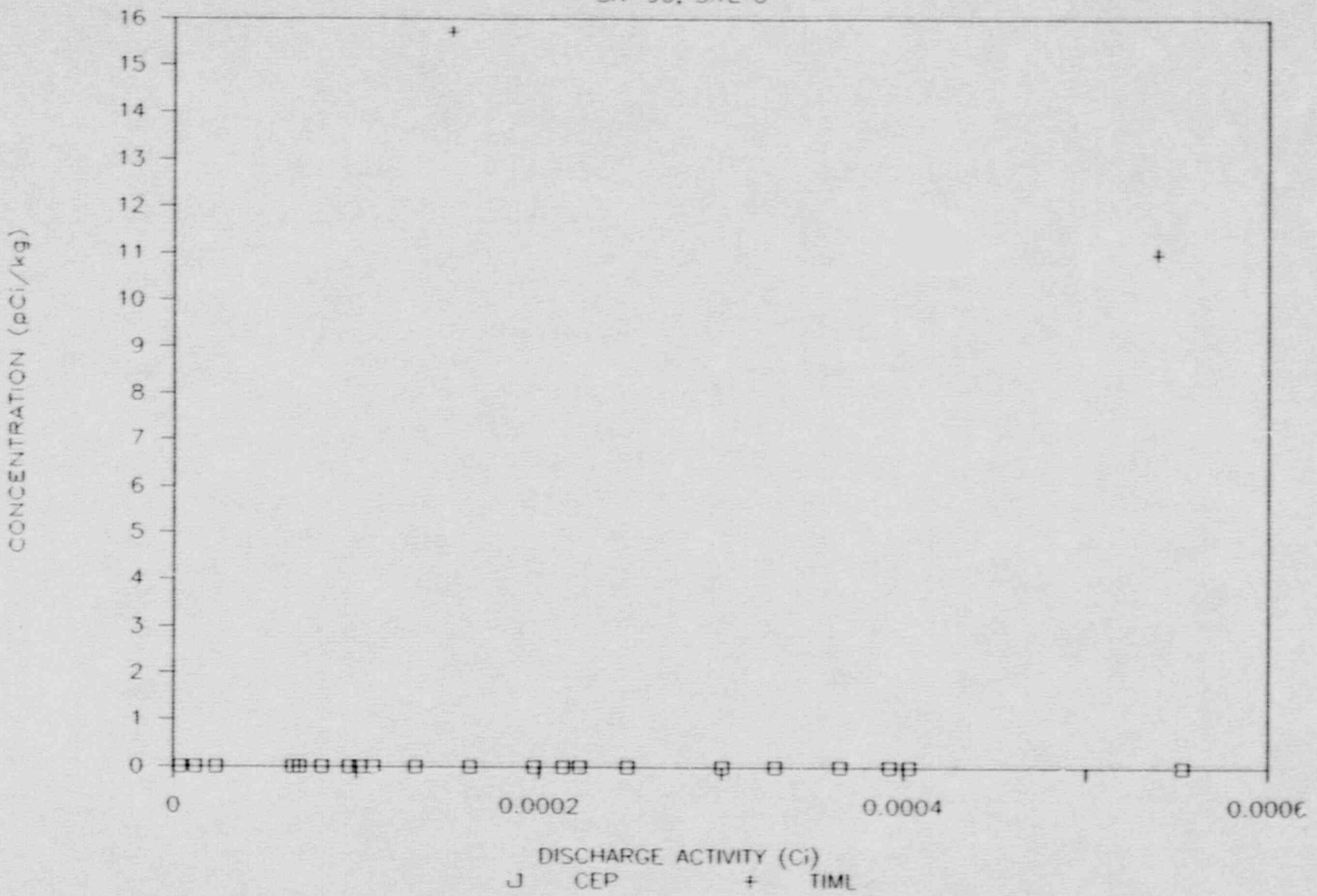
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

SR-90, SITE A



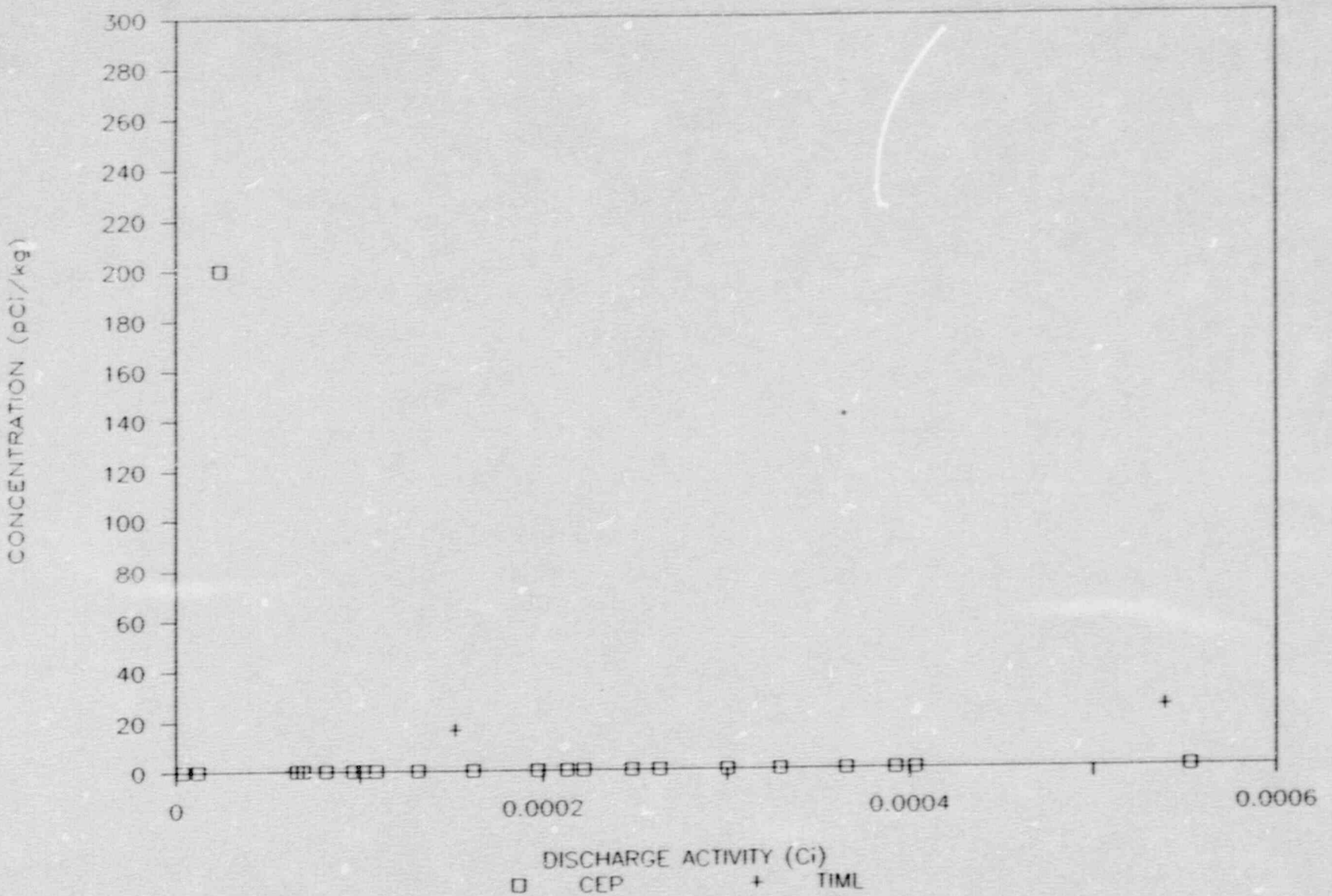
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

SR-90, SITE C

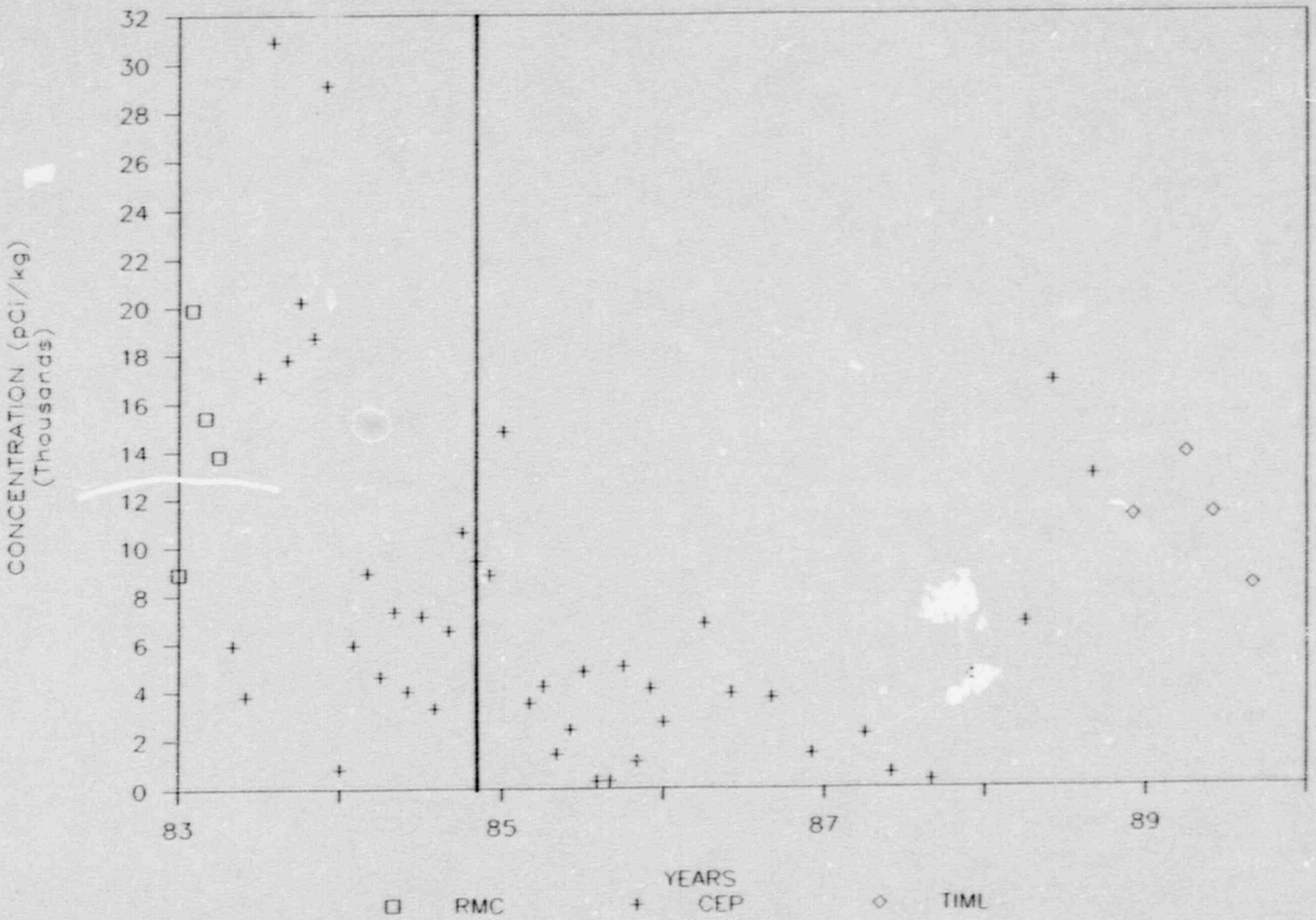


CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

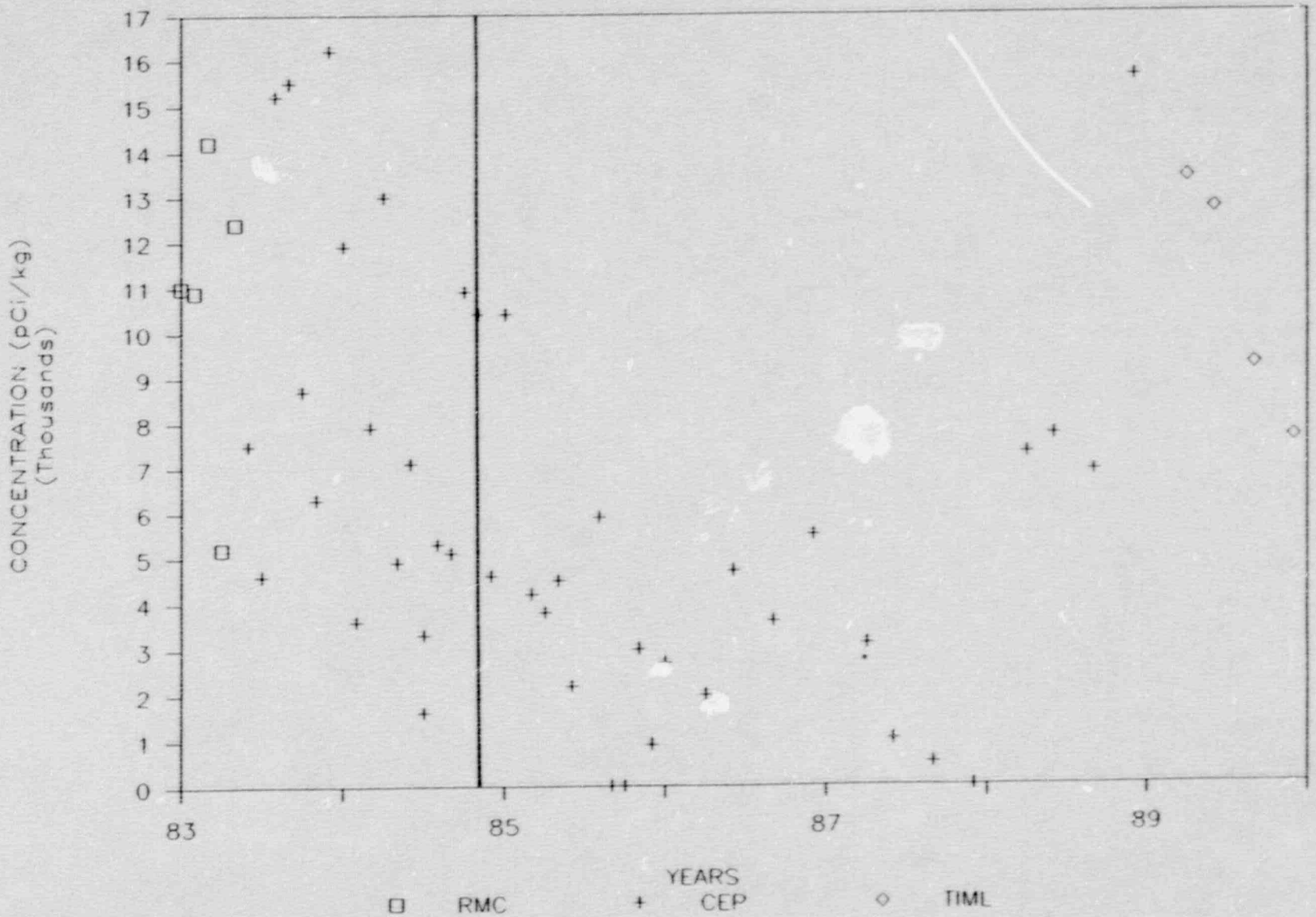
SR-90, SITE D



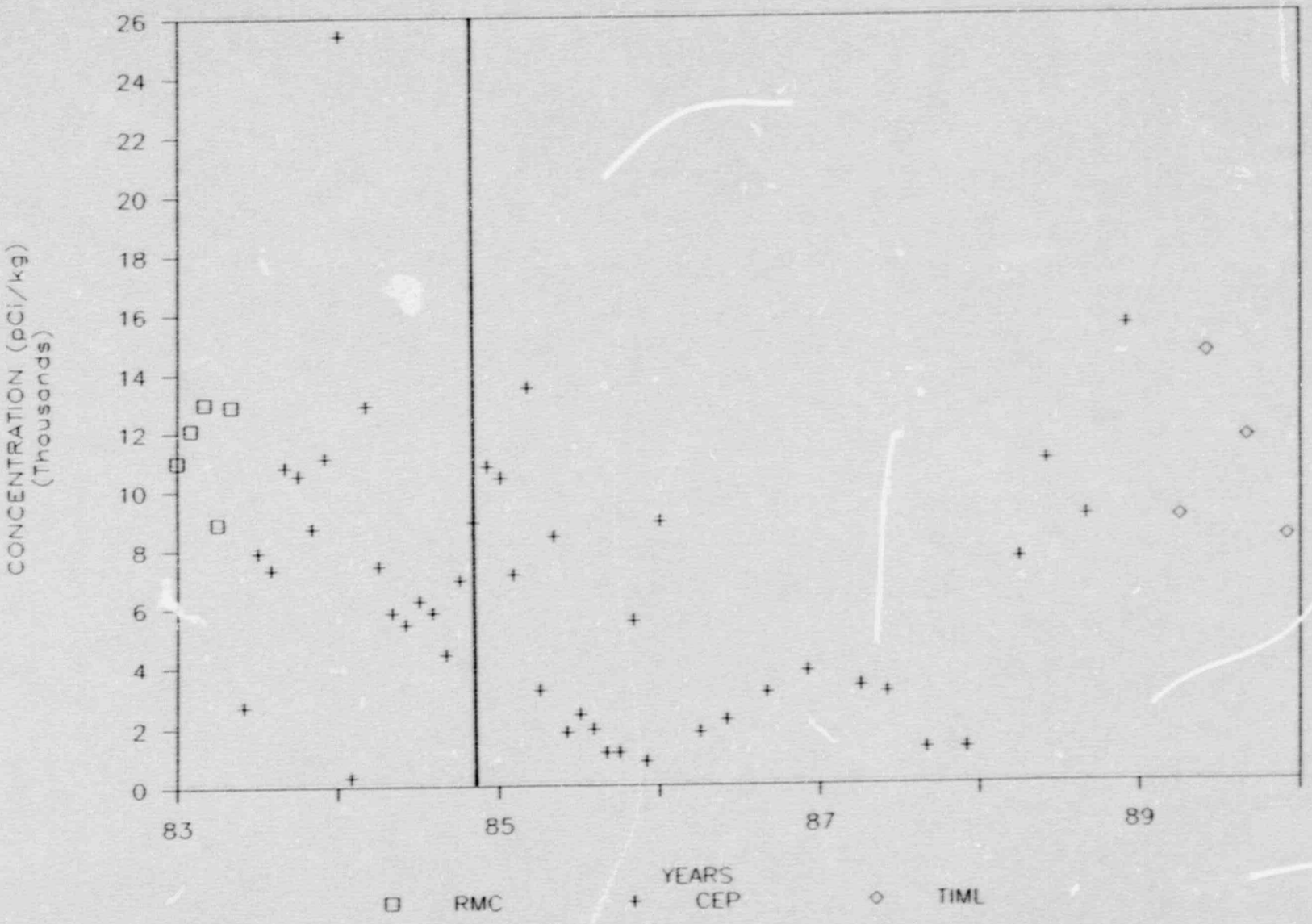
GROSS ALPHA IN WASHLOAD SEDIMENT, SITE A



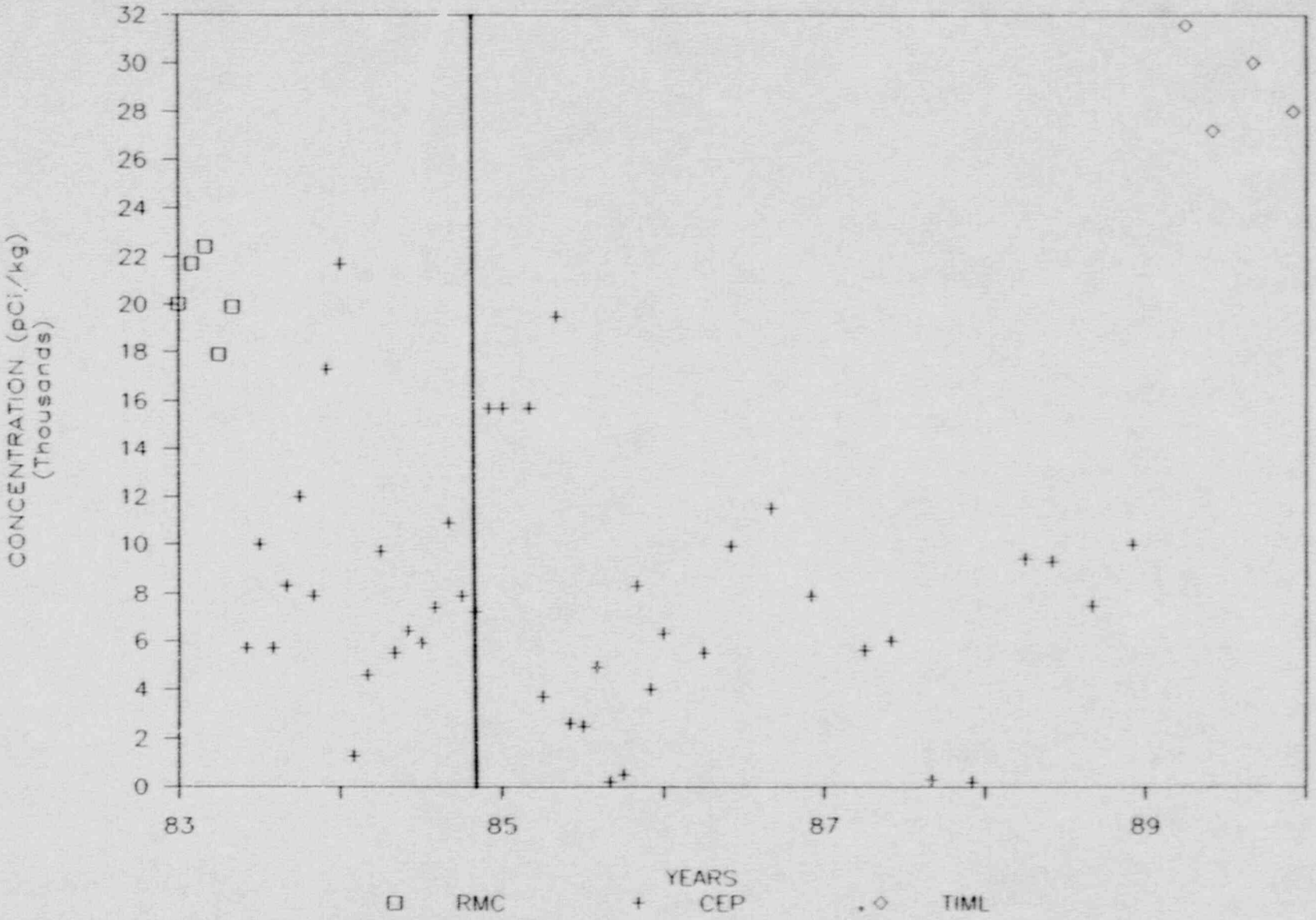
GROSS ALPHA IN WASHLOAD SEDIMENT, SITE C



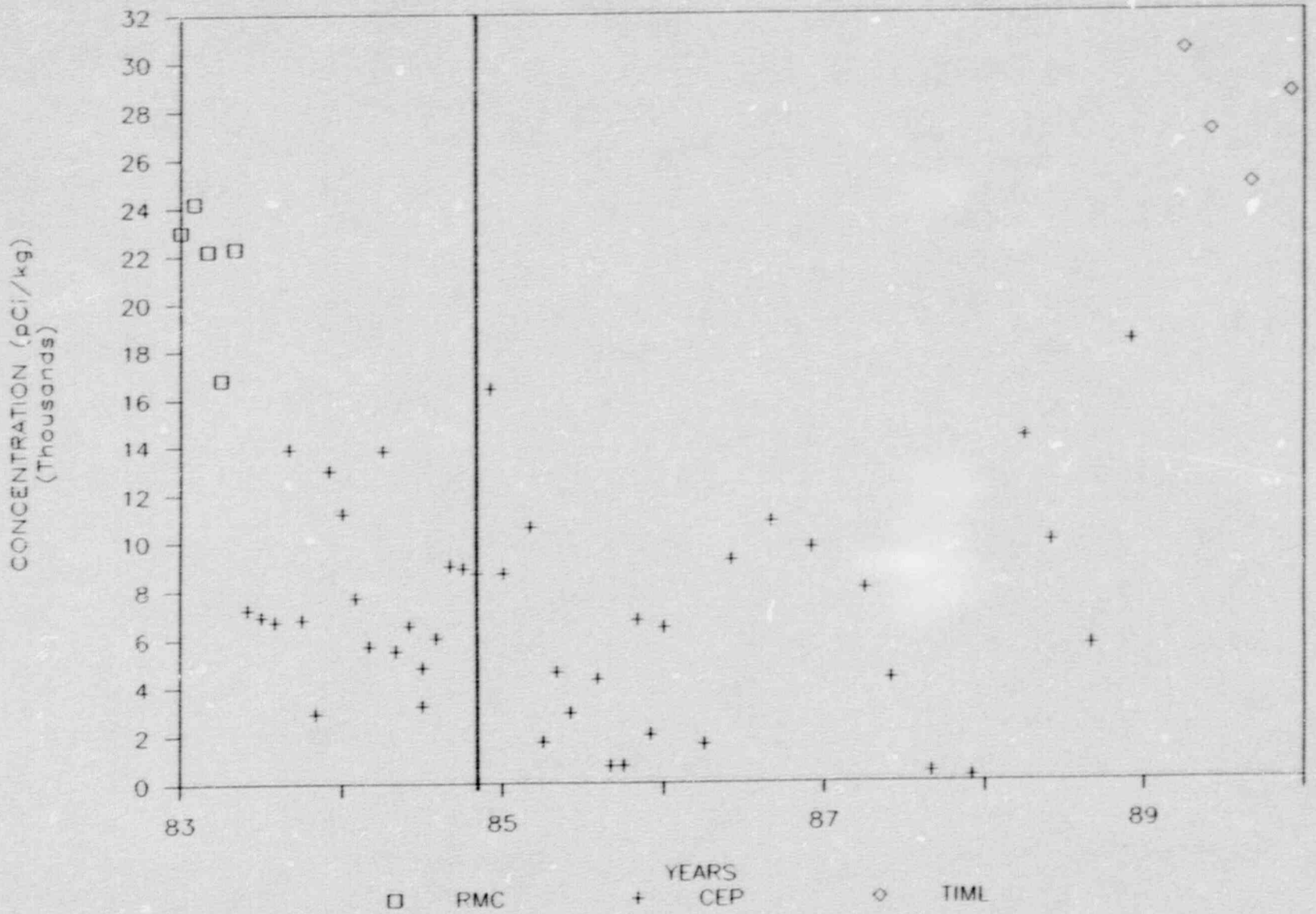
GROSS ALPHA IN WASHLOAD SEDIMENT, SITE D



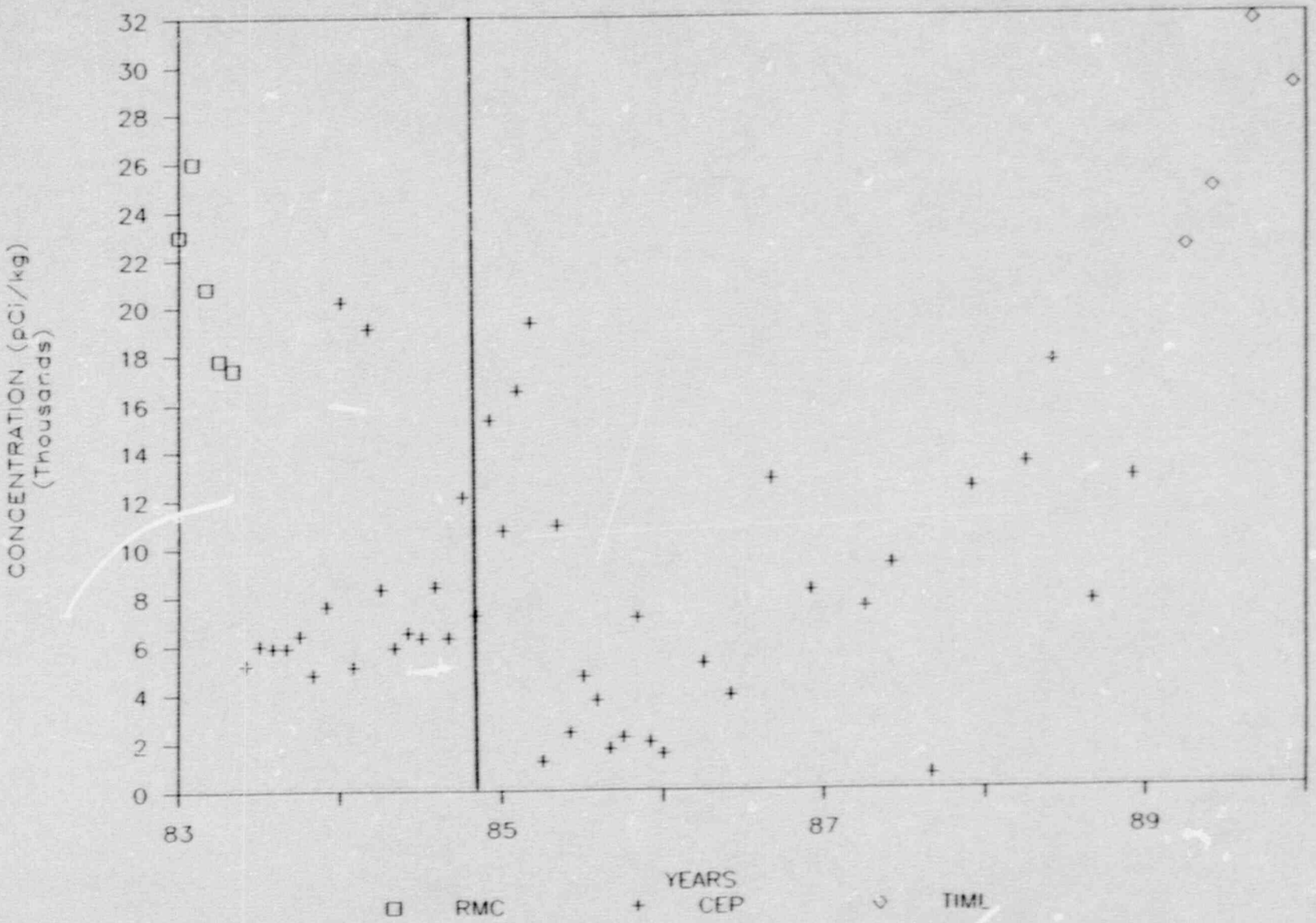
GROSS BETA IN WASHLOAD SEDIMENT, SITE A



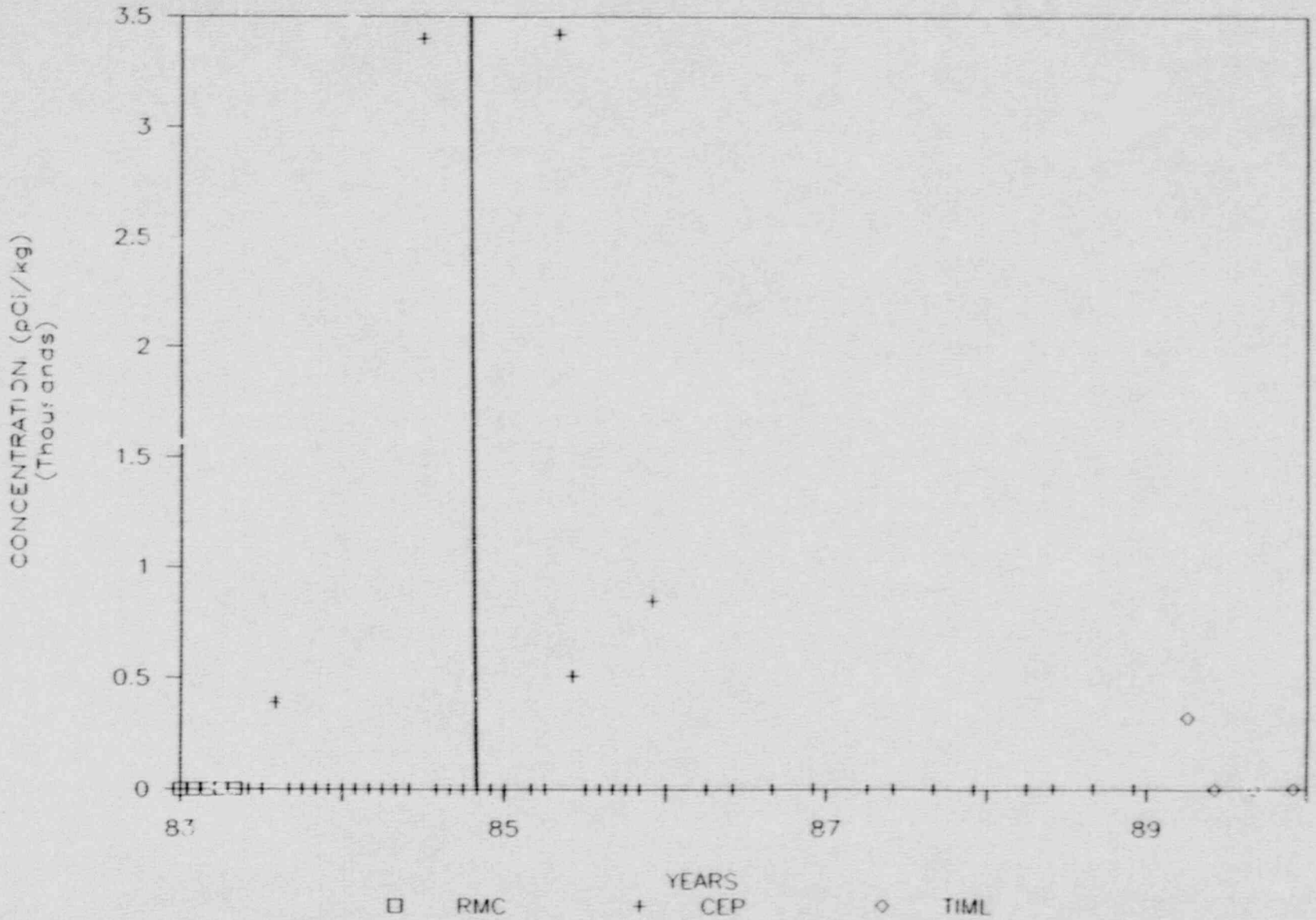
GROSS BETA IN WASHLOAD SEDIMENT, SITE C



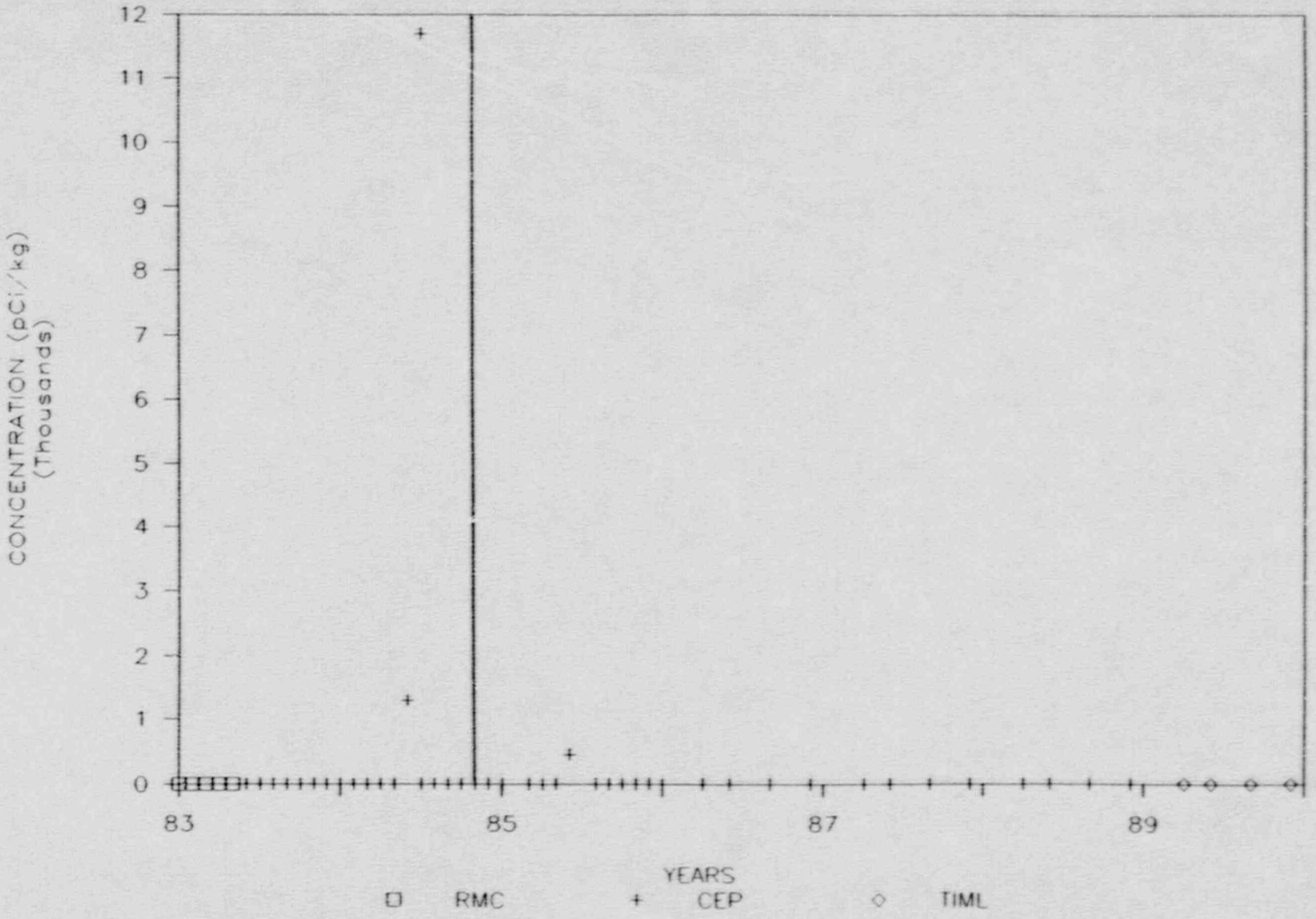
GROSS BETA IN WASHLOAD SEDIMENT, SITE D



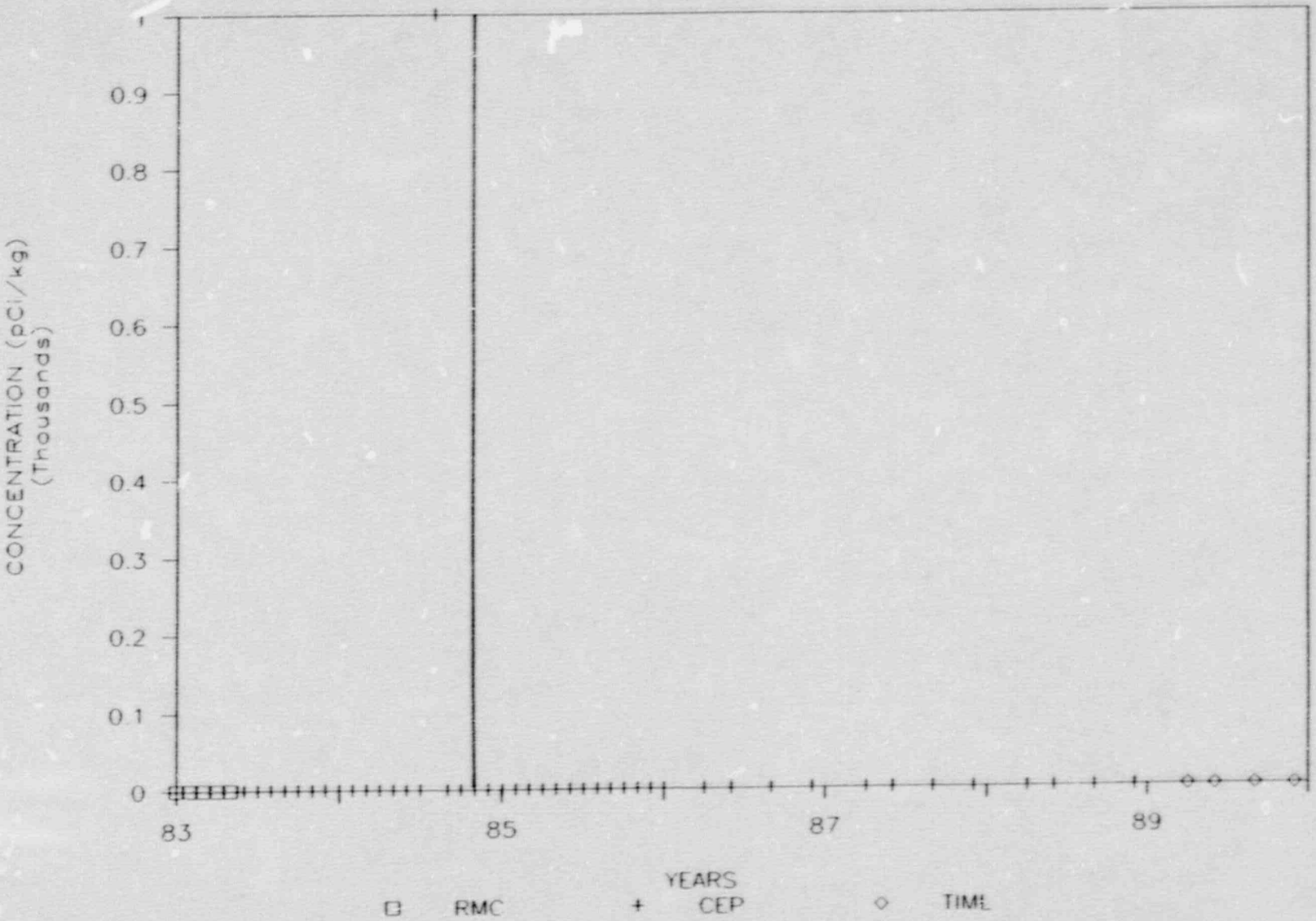
CS-137 IN WASHLOAD SEDIMENT, SITE A



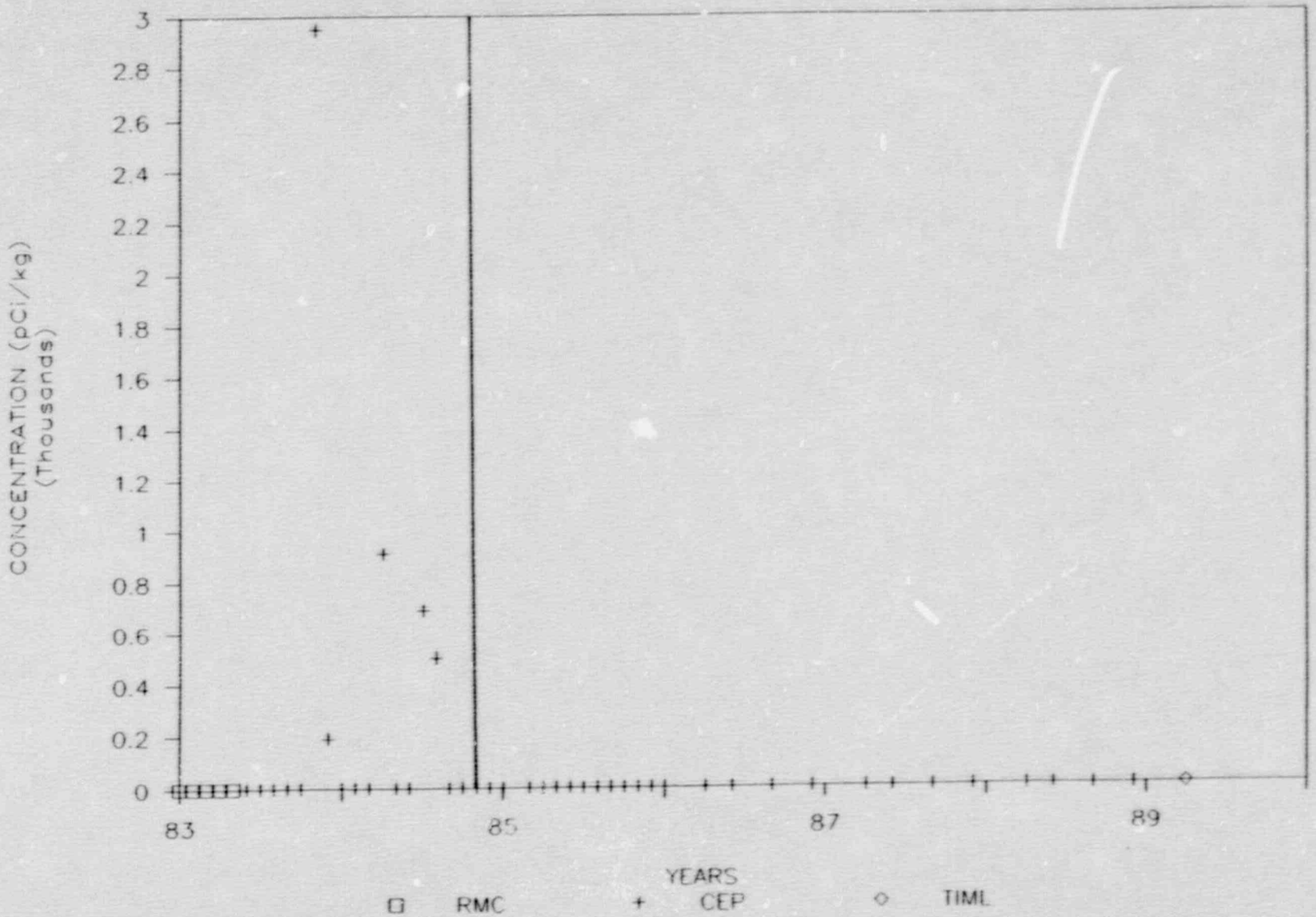
CS-137 IN WASHLOAD SEDIMENT, SITE C



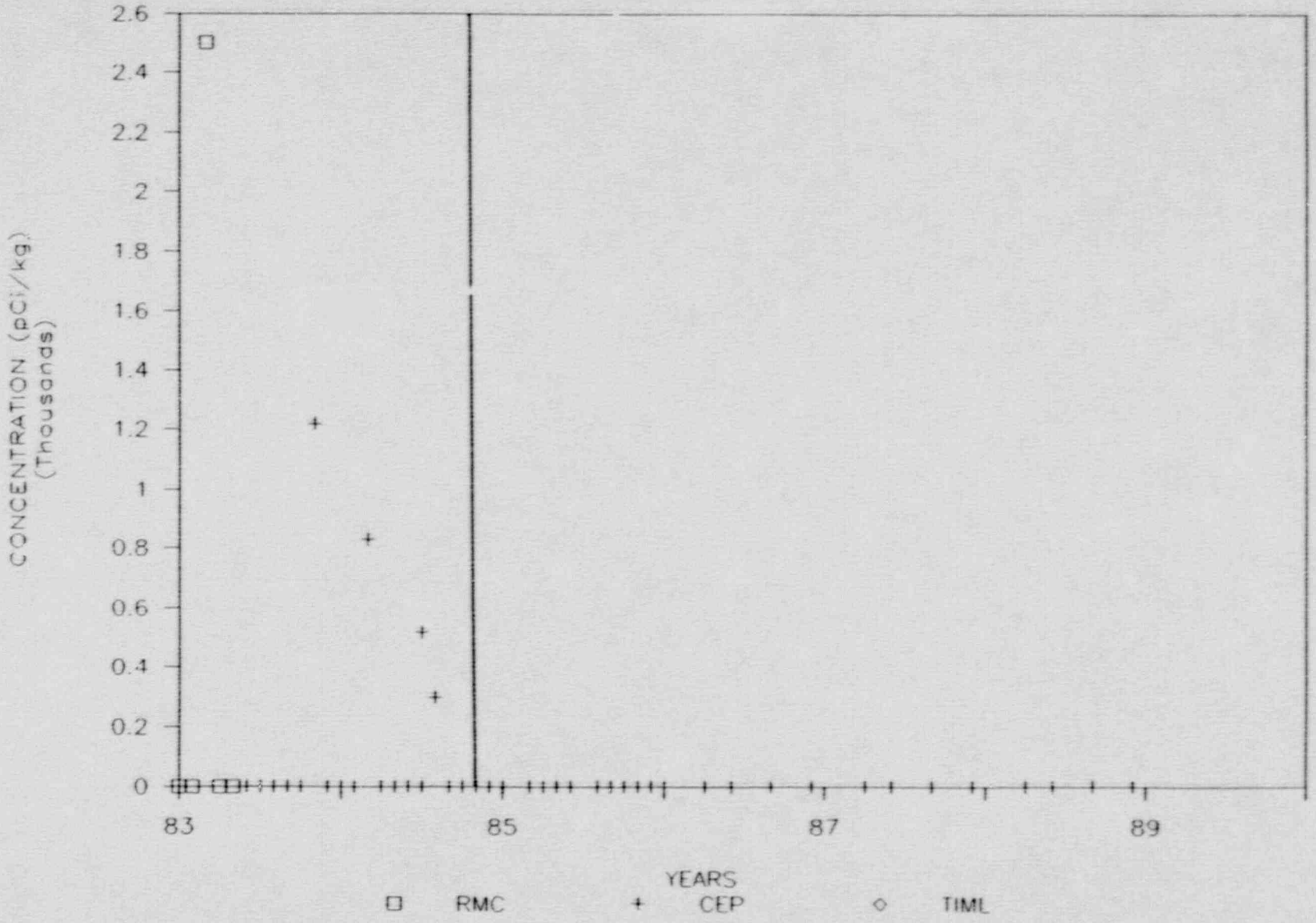
CS-137 IN WASHLOAD SEDIMENT, SITE D



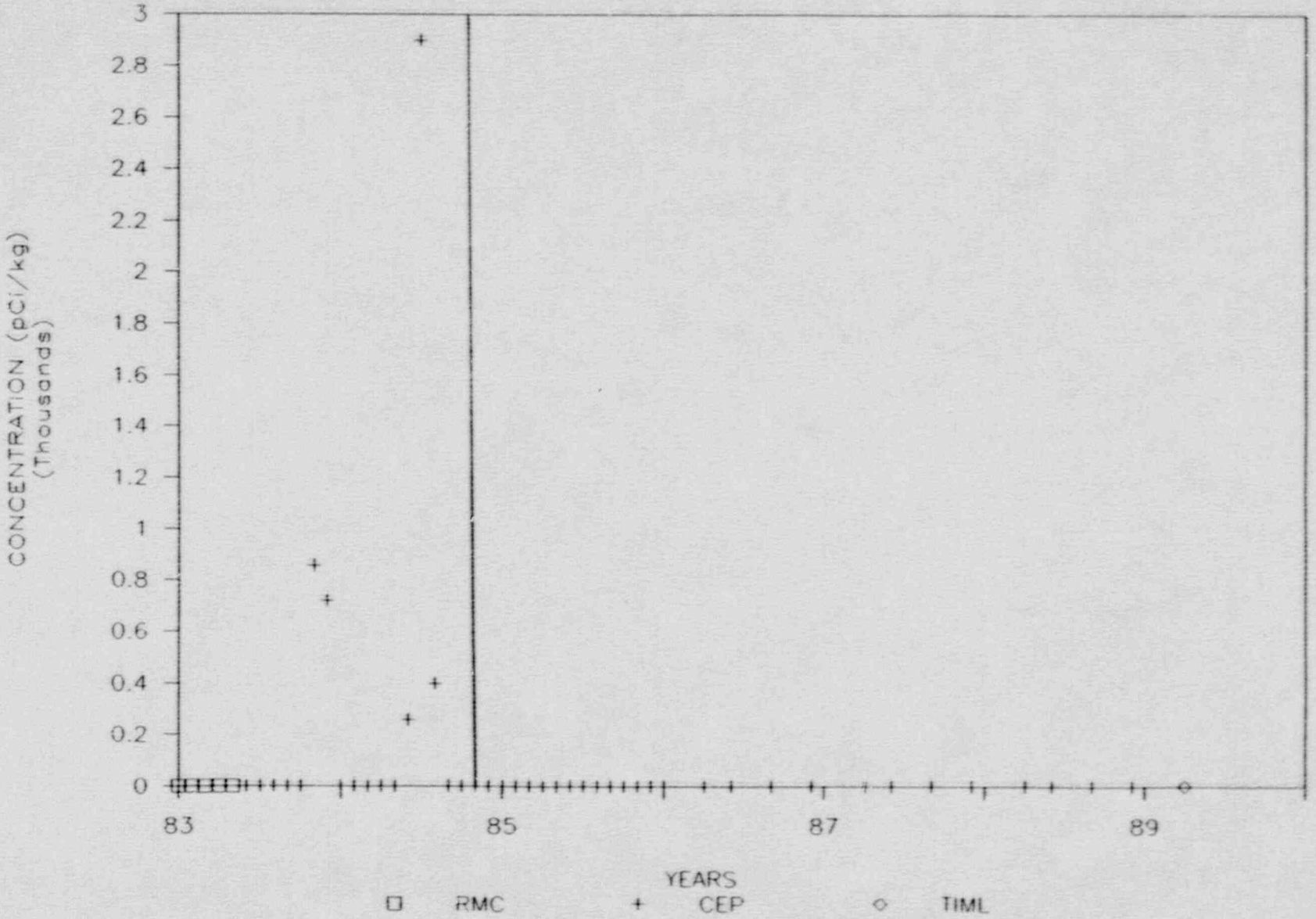
SR-90 IN WASHLOAD SEDIMENT, SITE A



SR-90 IN WASHLOAD SEDIMENT, SITE C

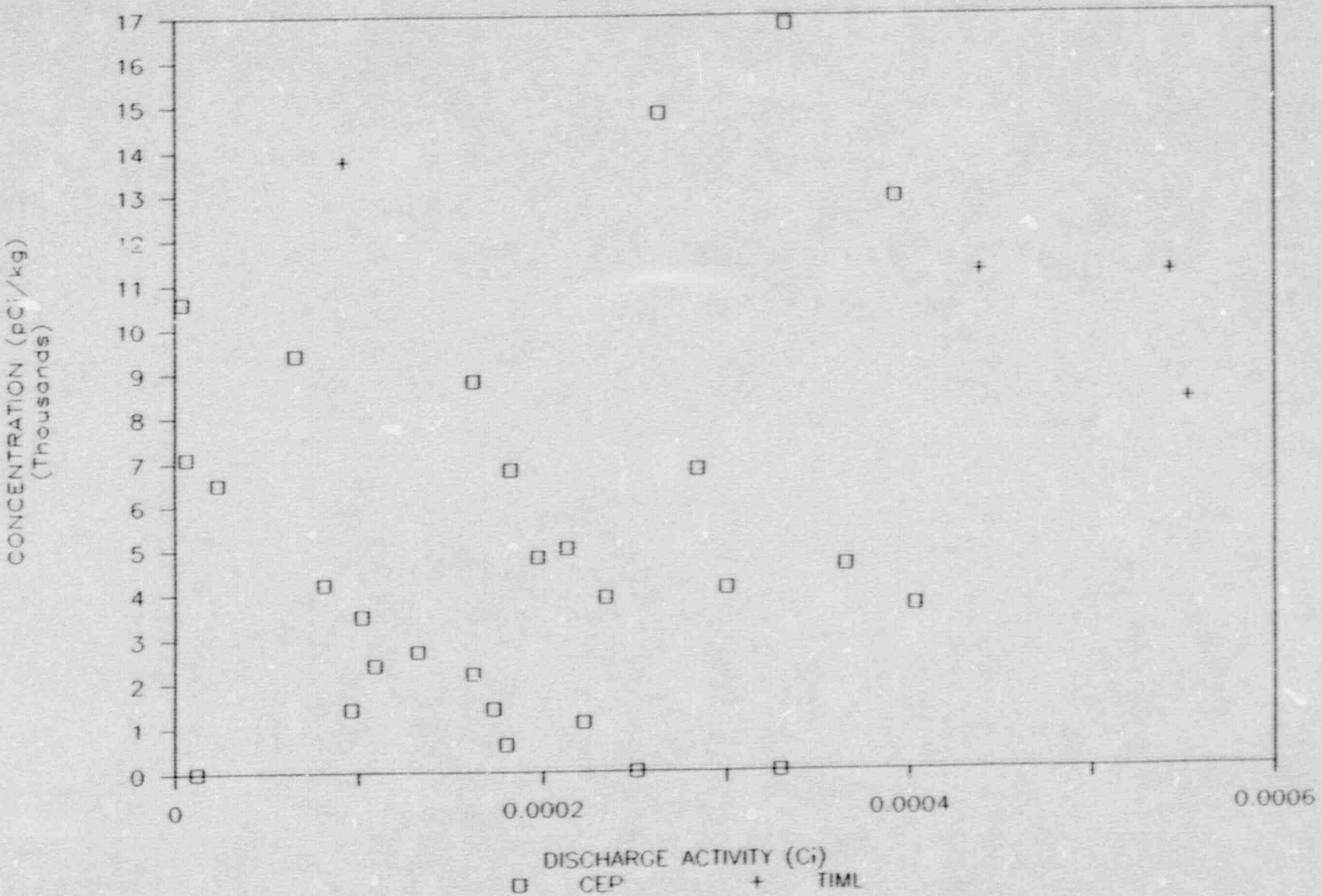


SR-90 IN WASHLOAD SEDIMENT, SITE D



CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

GROSS ALPHA, SITE A



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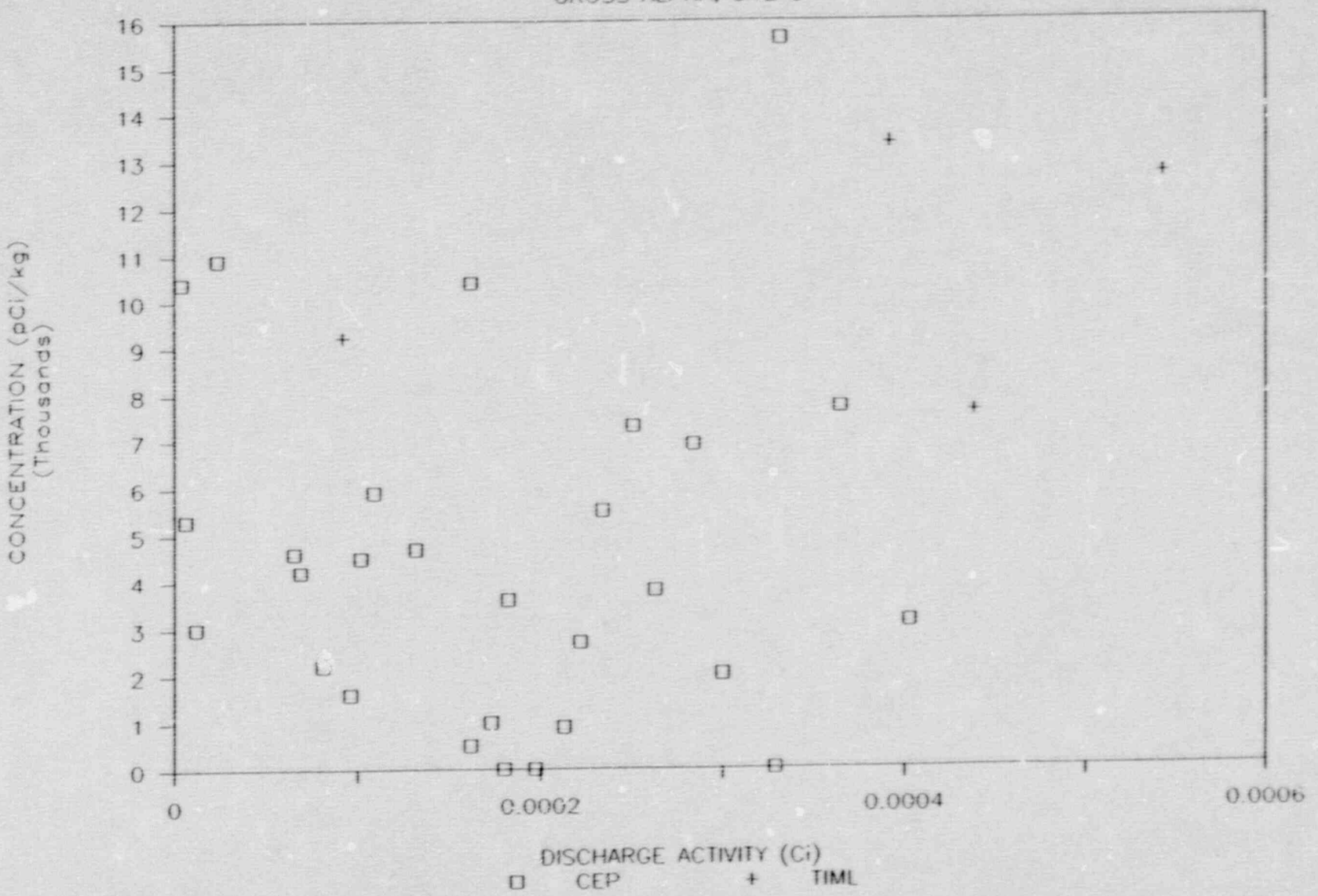
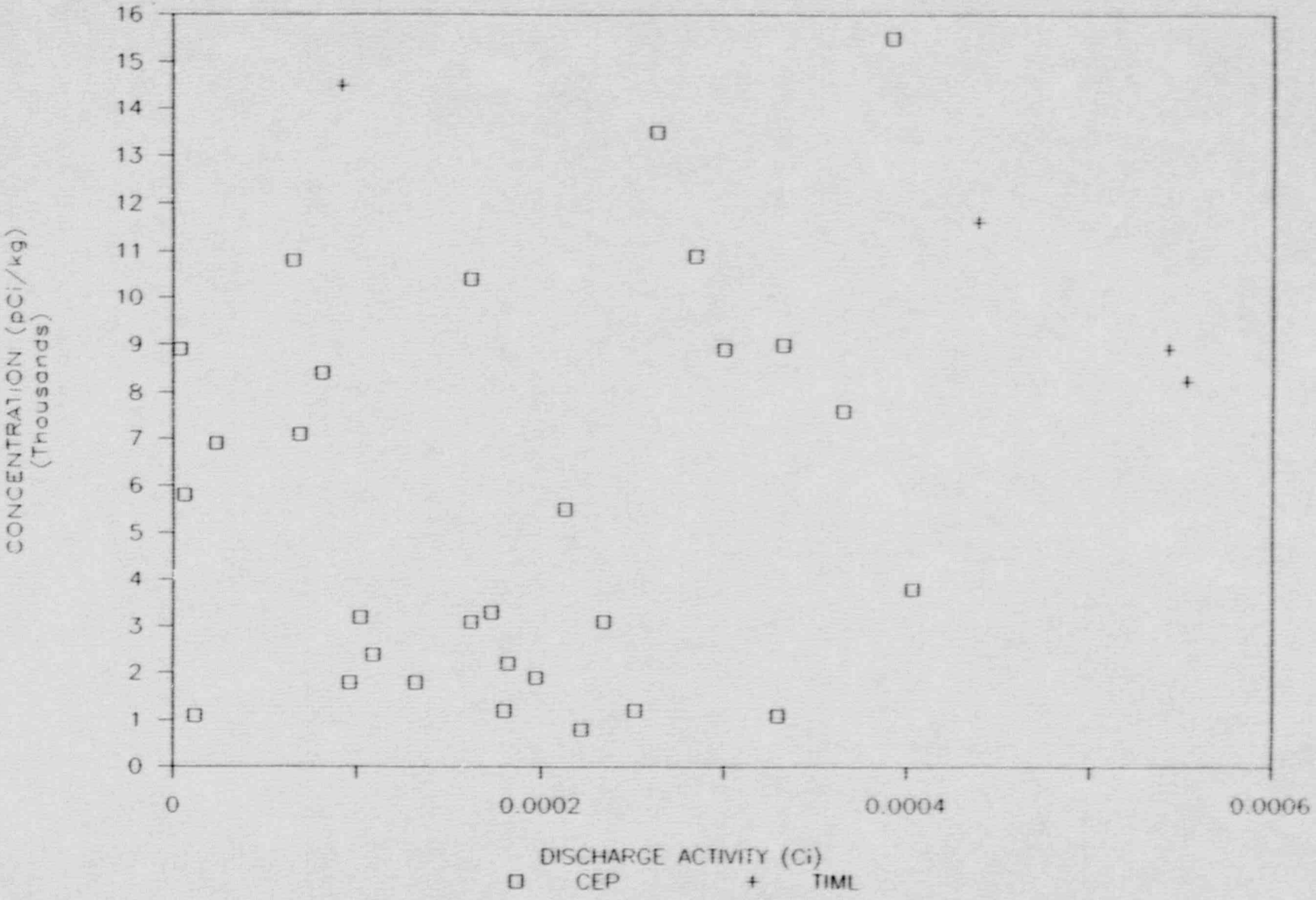
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

GROSS ALPHA, SITE C



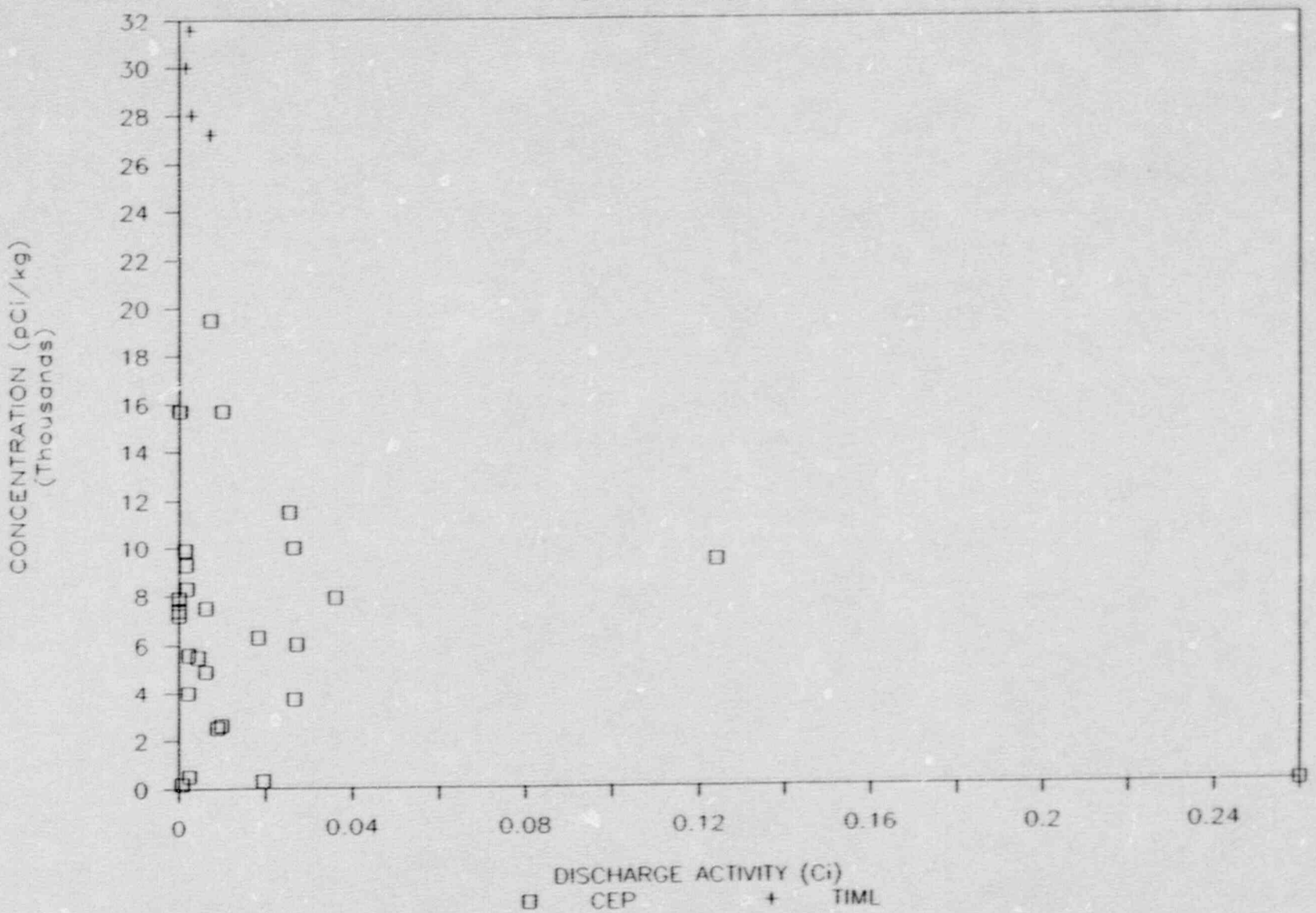
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

GROSS ALPHA, SITE D



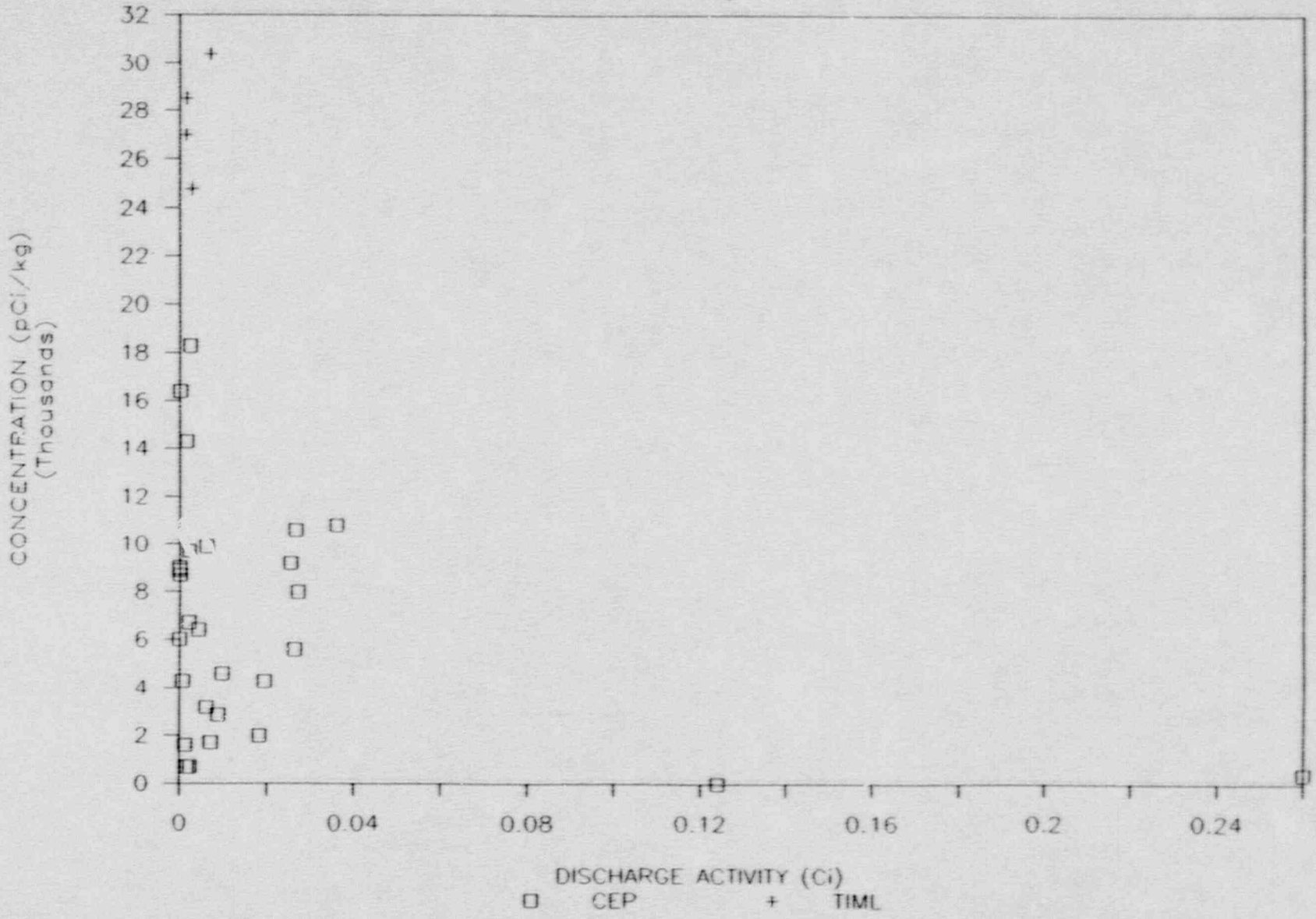
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

GROSS BETA, SITE A



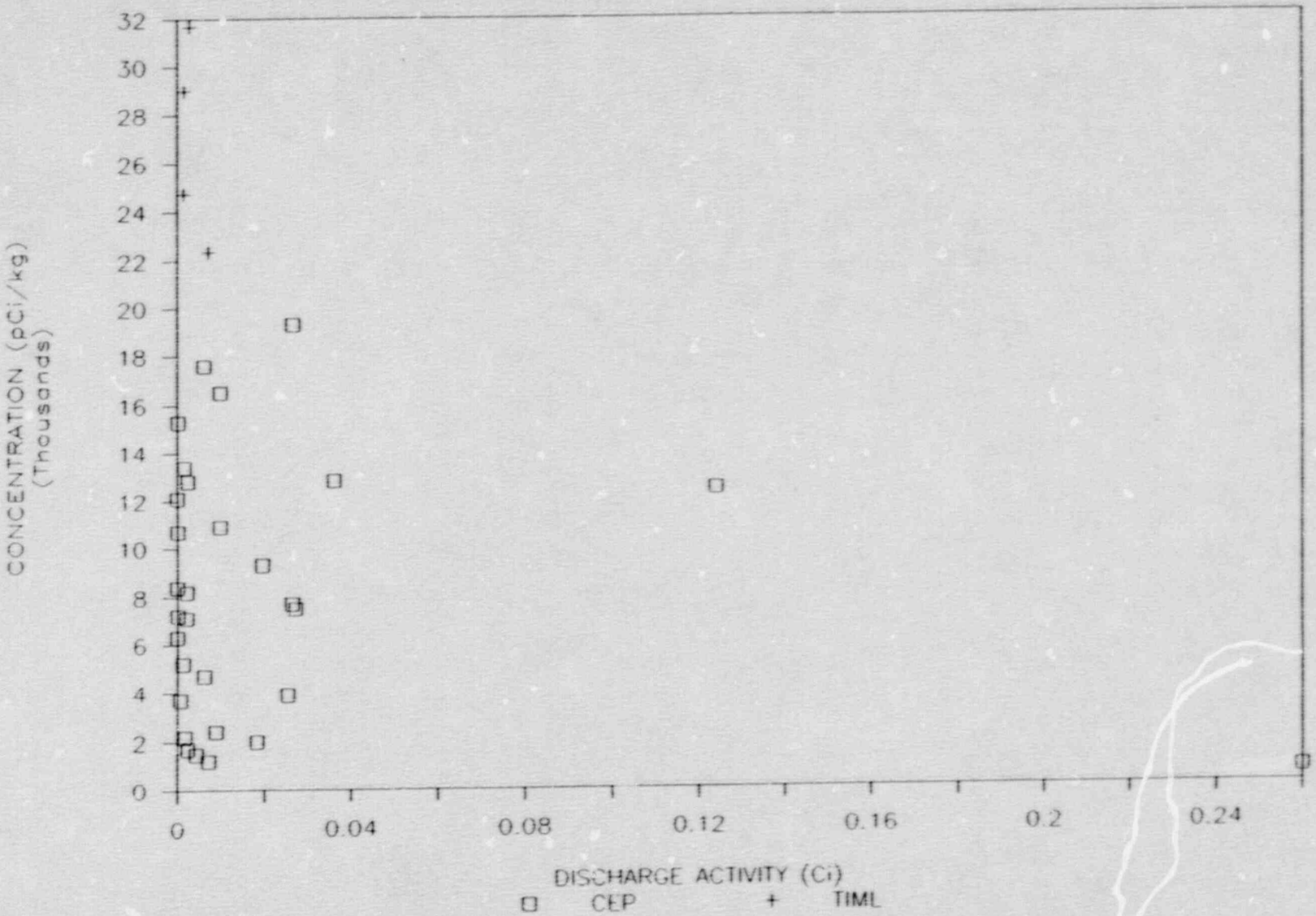
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

GROSS BETA, SITE C



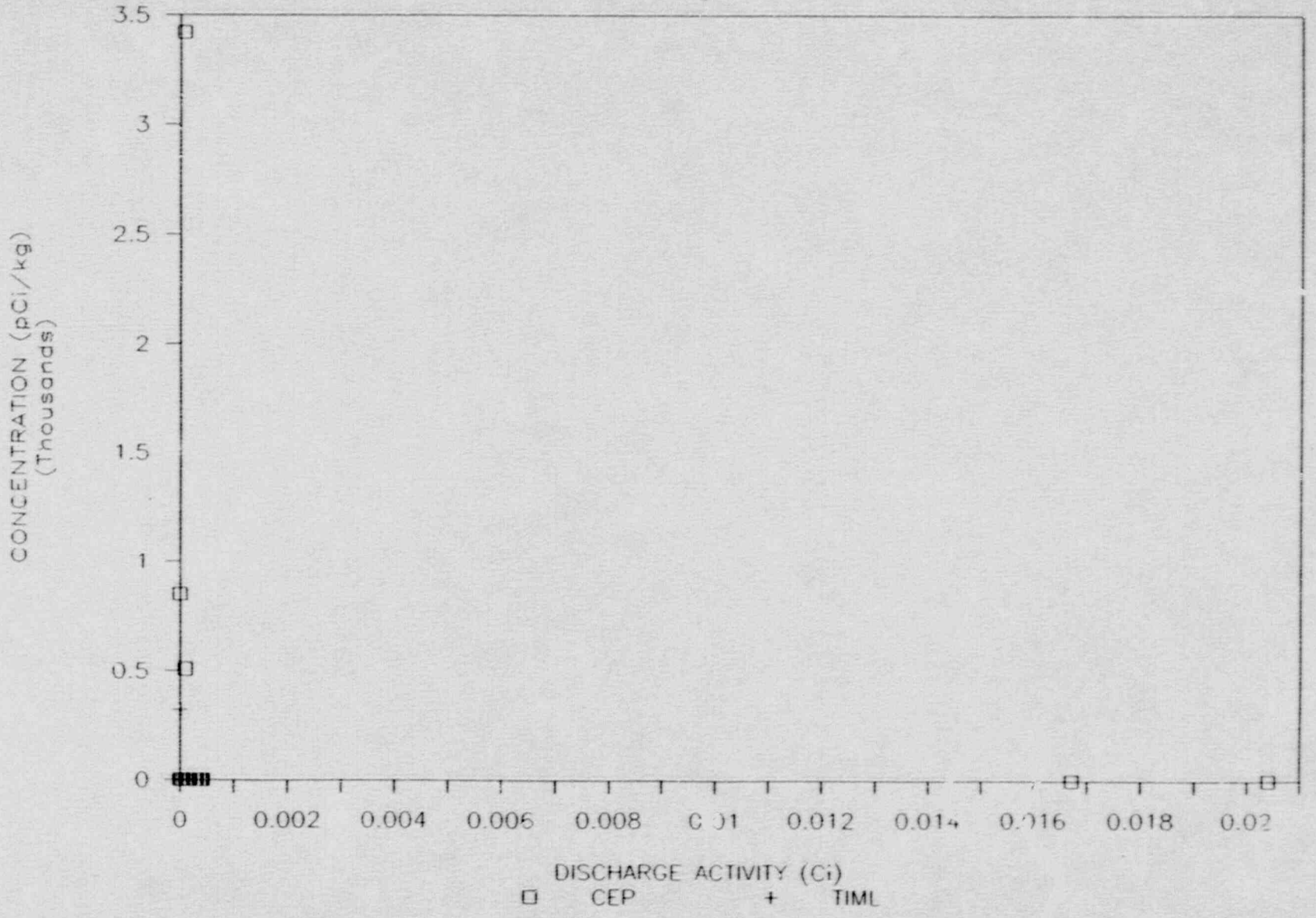
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

GROSS BETA, SITE D



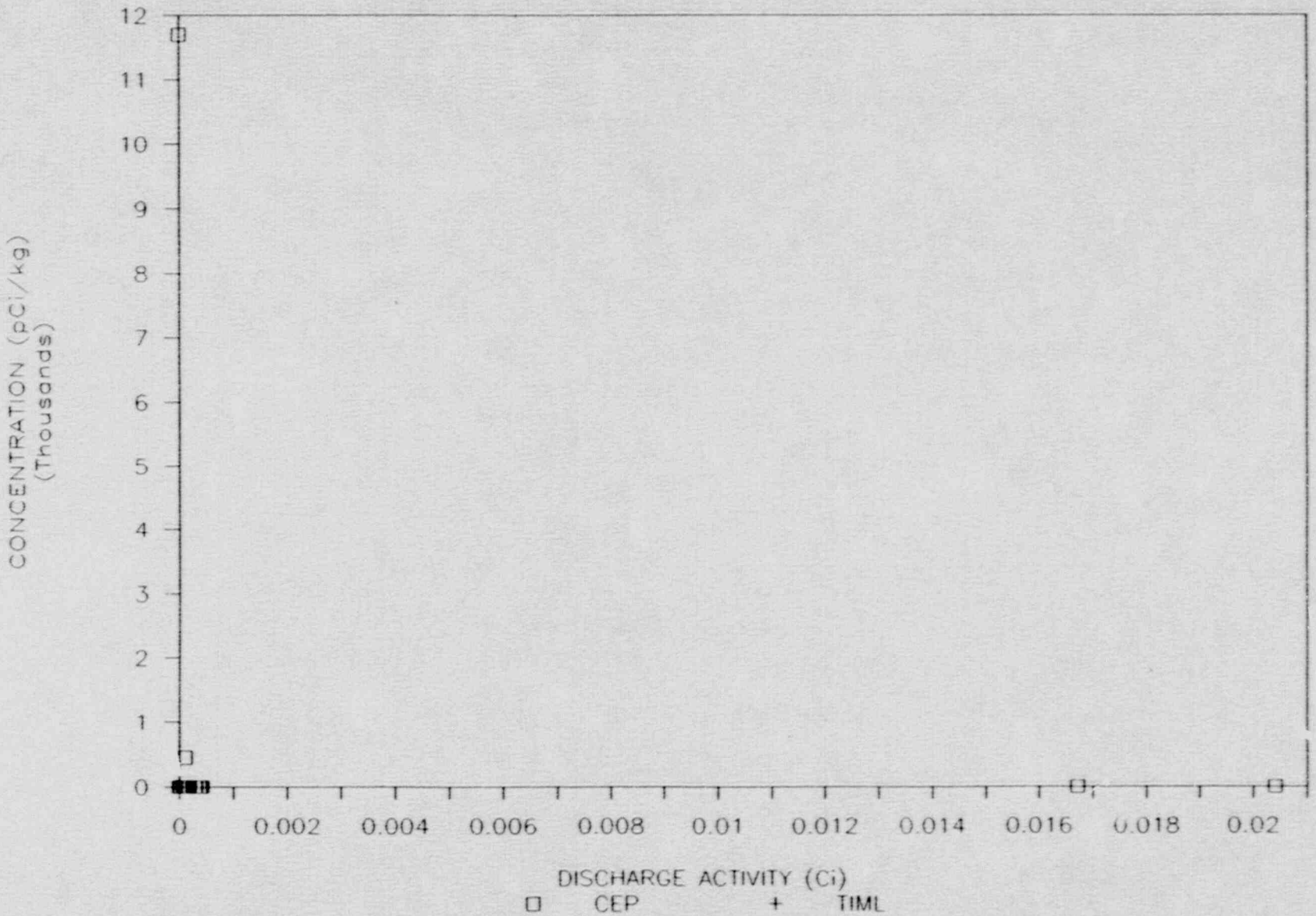
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

CS-137, SITE A



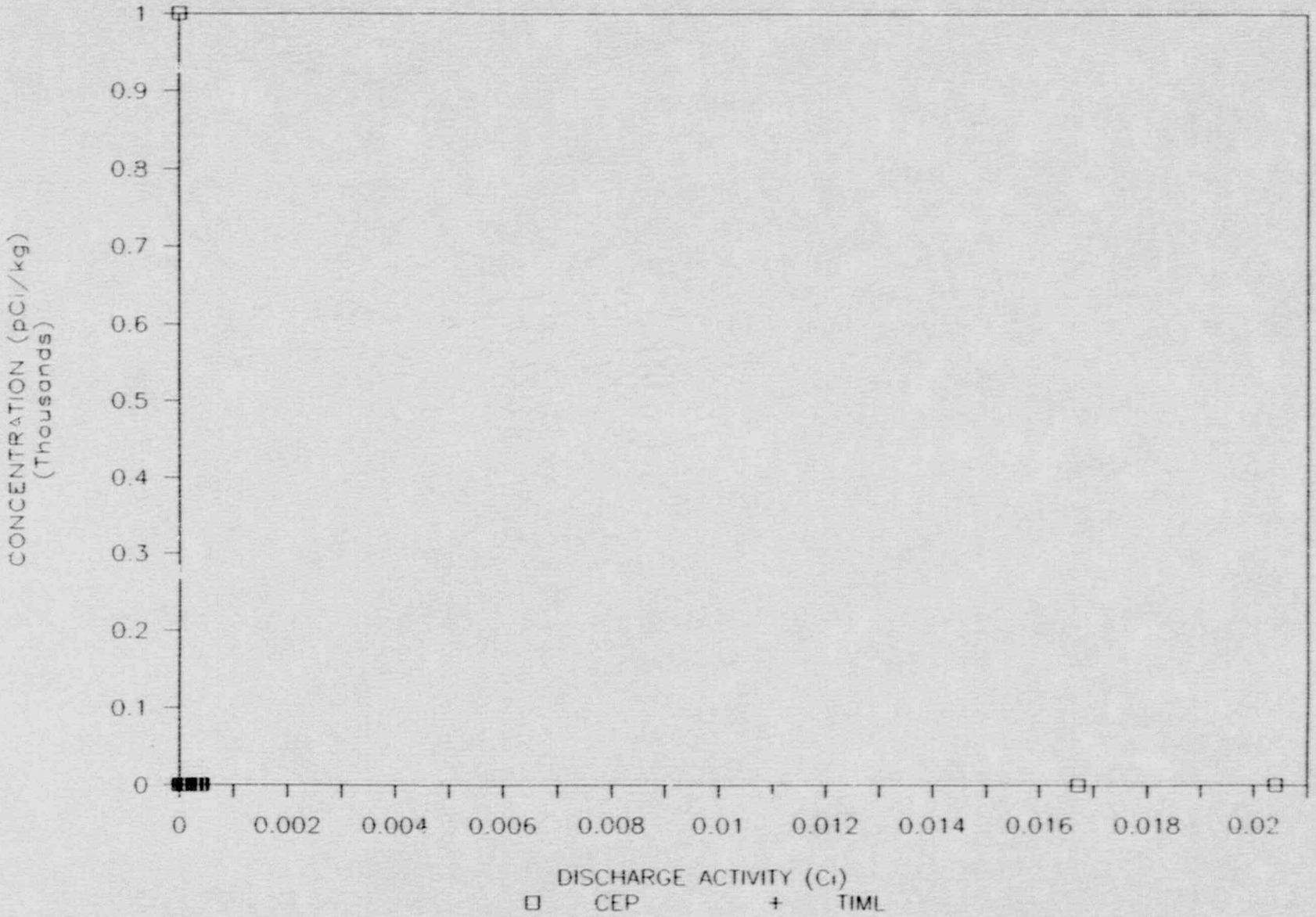
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

CS-137, SITE C



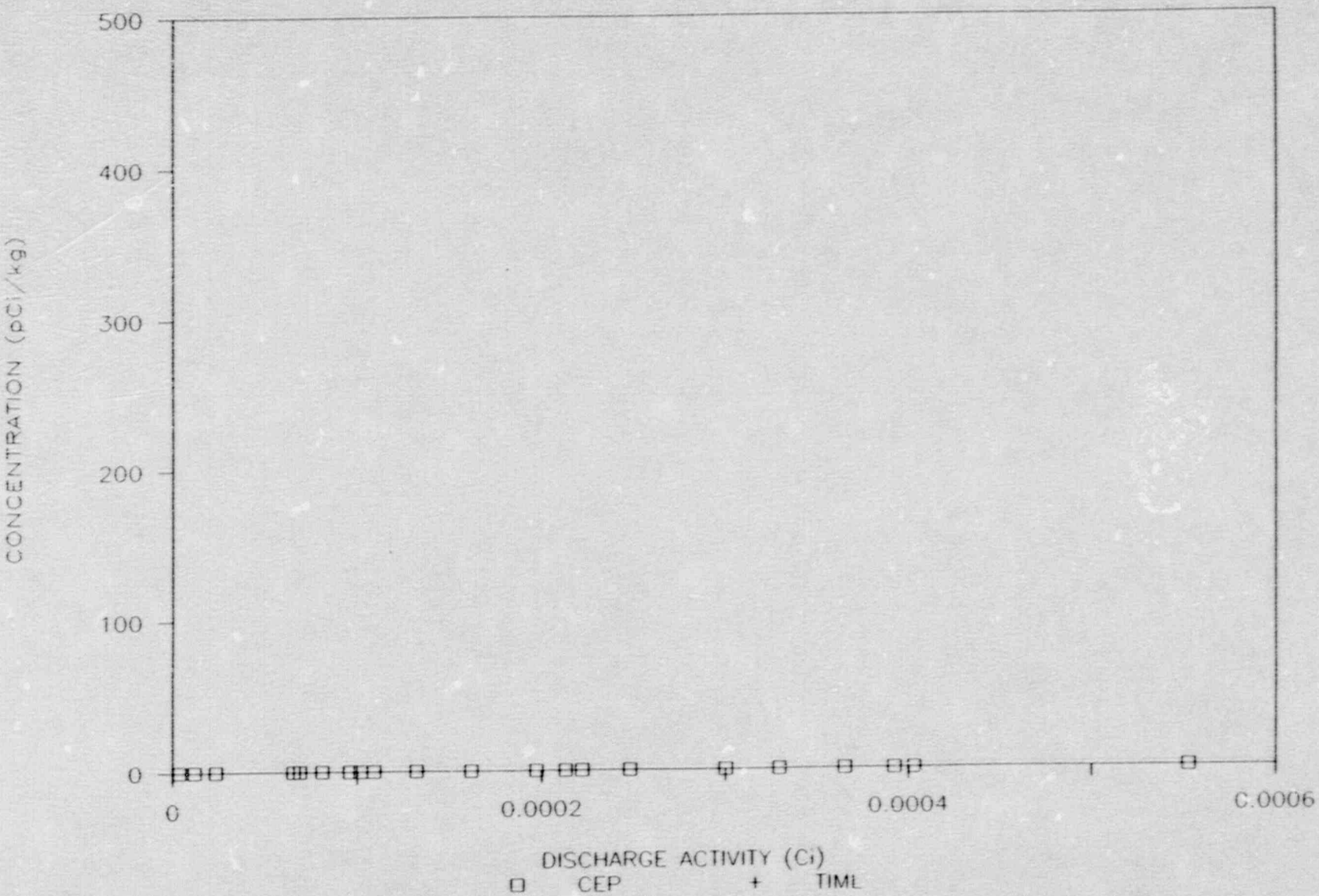
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

CS-137, SITE D



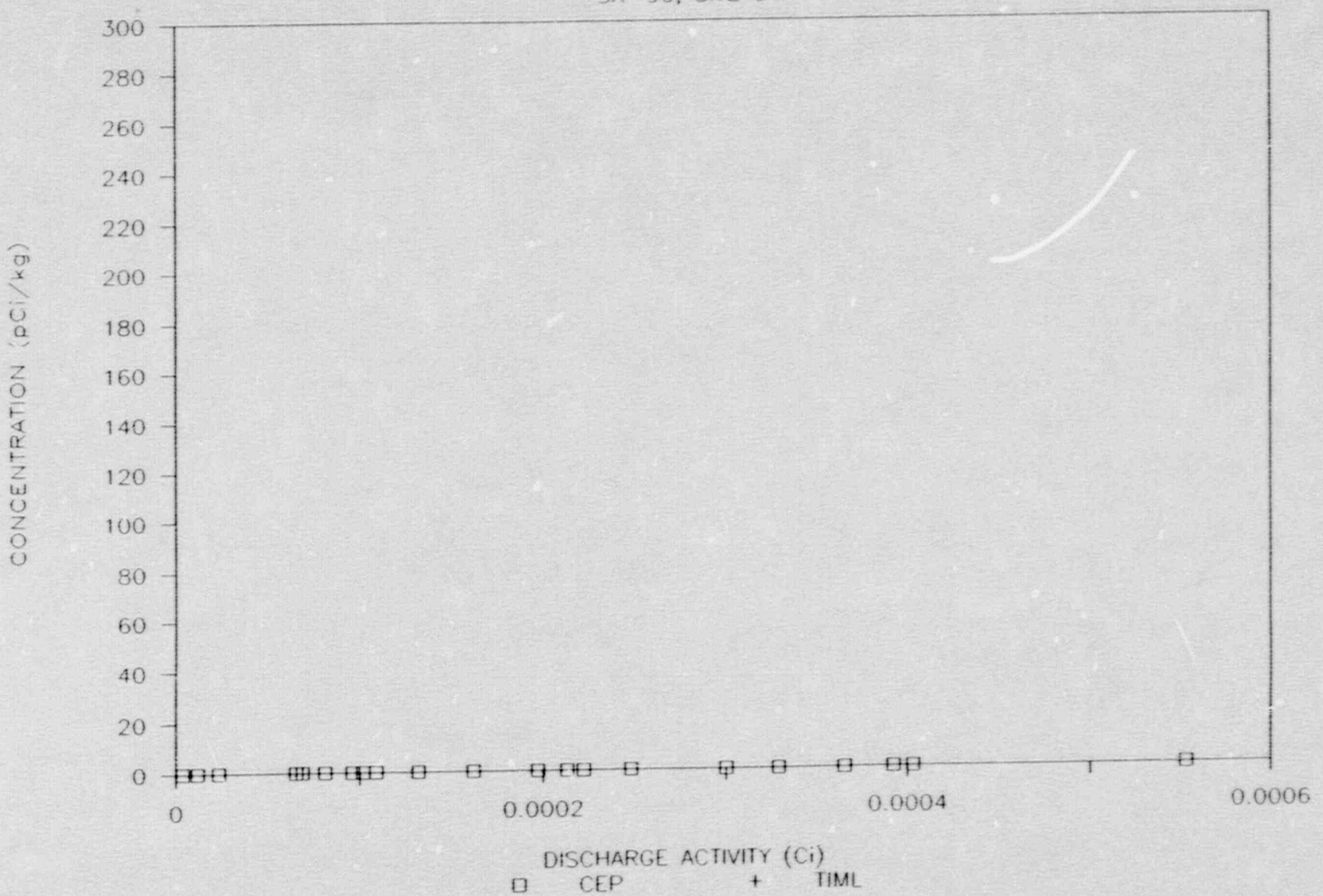
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

SR-90, SITE A



CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

SR-90, SITE C



CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

SR-90, SITE D