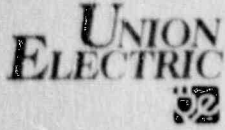


1901 Chateau Avenue
Post Office Box 149
St. Louis, Missouri 63166
314-621-3222



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 allow for reproduction of the renewal application.

Very truly yours,

David Hofer
for A. C. Passwater
Manager, Licensing & Fuels

DS/sla

Attachment

9006110095 900531
PDR ADOCK 05000483
P FDC

Pool
11

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

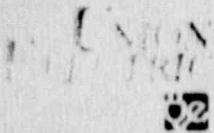
Bruce Little
Callaway Resident Office
U.S. Nuclear Regulatory Commission
RR#1
Steedman, Missouri 65077

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

Union Electric Company
Callaway Power Plant
NPDES Permit Reapplication
May, 1990

Contents

1. Form A
2. Form C data
3. Form D data
4. Attachment A, Description of Outfalls
5. Attachment B, Callaway Storm Water Runoff (SWR) Description
6. Attachment C, Description of Intermittent Flows
7. Attachment D, Other Discharges
8. Attachment E, Chemical Usage
9. Attachment F, NPDES Sampling and Analysis
10. Attachment G, Section 311 and CERCLA Exemptions
11. Attachment H, General Comments on Standards Setting
12. Attachment I, Section 316(b) Demonstration Status
13. Attachment J, Request for Modification in Radiological Monitoring



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.	FOR AGENCY USE ONLY APPLICATION NUMBER MO - DATE RECEIVED
1.20 OPERATING PERMIT APPLICATION <u> X </u> . A \$75.00 FILING FEE MUST ACCOMPANY EACH APPLICATION FOR A OPERATING PERMIT.	

2.10 NAME OF FACILITY
 Callaway Power Plant

2.20 FACILITY ADDRESS P.O. Box 620	CITY Fulton	STATE MO	ZIP CODE 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 Union Electric Company	TELEPHONE 314/554-2637
---	---------------------------

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

2.60 OPERATING AUTHORITY NAME
 same

ADDRESS	CITY	STATE	ZIP CODE
---------	------	-------	----------

2.70 FACILITY CONTACT NAME John D. Blosser	TITLE Plant Manager	TELEPHONE 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) <i>Donald F. Schnell</i>	DATE 21 May 90
--	-------------------

D. F. Schnell, Senior Vice President, Nuclear

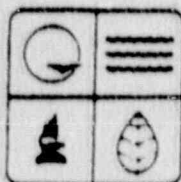
Rule 10 CSR 20-6.020 sets forth the procedures which the department will follow in providing opportunity for the participation by the public and other governmental agencies during the permit issuing process. Further, it is the department's policy to notify the person(s) immediately downstream of the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

- A. Attach a line drawing showing the water flow through the facility. Indicate the location 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) (MGD) (maximum flow)	a. Description	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.

- 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 (MCD)	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		
CWC 105C	Building Sumps	.006		

- 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.

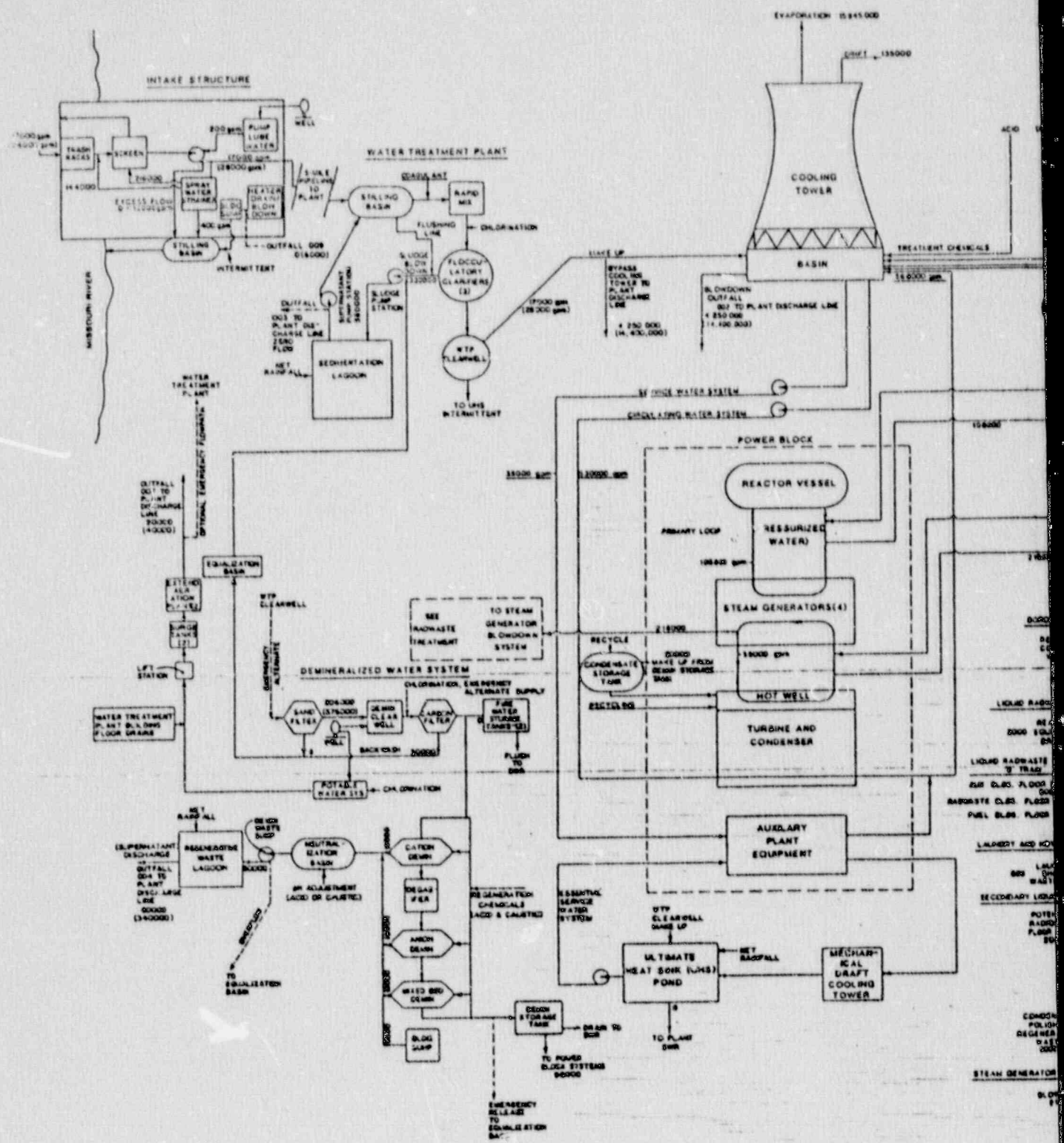
1. Outfall No. (list)	2. Operation(s) contributing flow		3. Treatment	
	a. Operation (list)	b. Average flow (include units) (maximum flow)	a. Description (MGD)	b. List codes from Table A
007	Sanitary Treatment Plant	.020 (.040)	Activated Sludge	3-A
			Sedimentation	1-U
			Discharge	4-A
009	Intake Electric 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.

- 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.

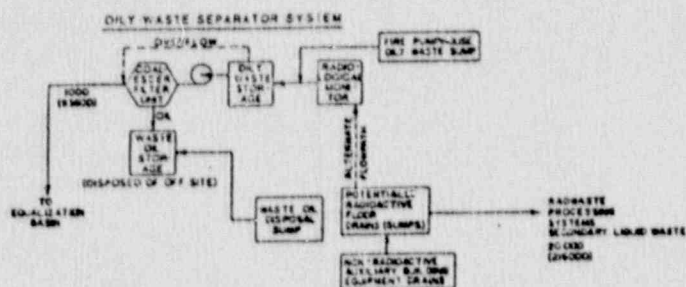
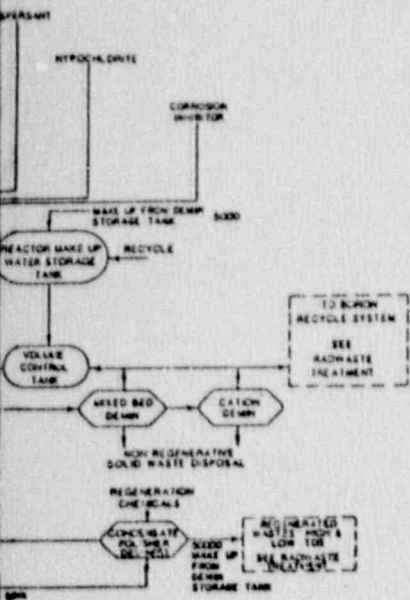
1. Outfall No. (list)	2. Operation(s) contributing flow		3. Treatment	
	a. Operation (list)	b. Average flow (include units) (maximum flow)	a. Description (MGD)	b. List codes from Table A
011	Storm Water Runoff (SWR)	.023 (12.01)	Discharge	4-A
012	Storm Water Runoff (SWR)	.015 (7.79)	Discharge	4-A
013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



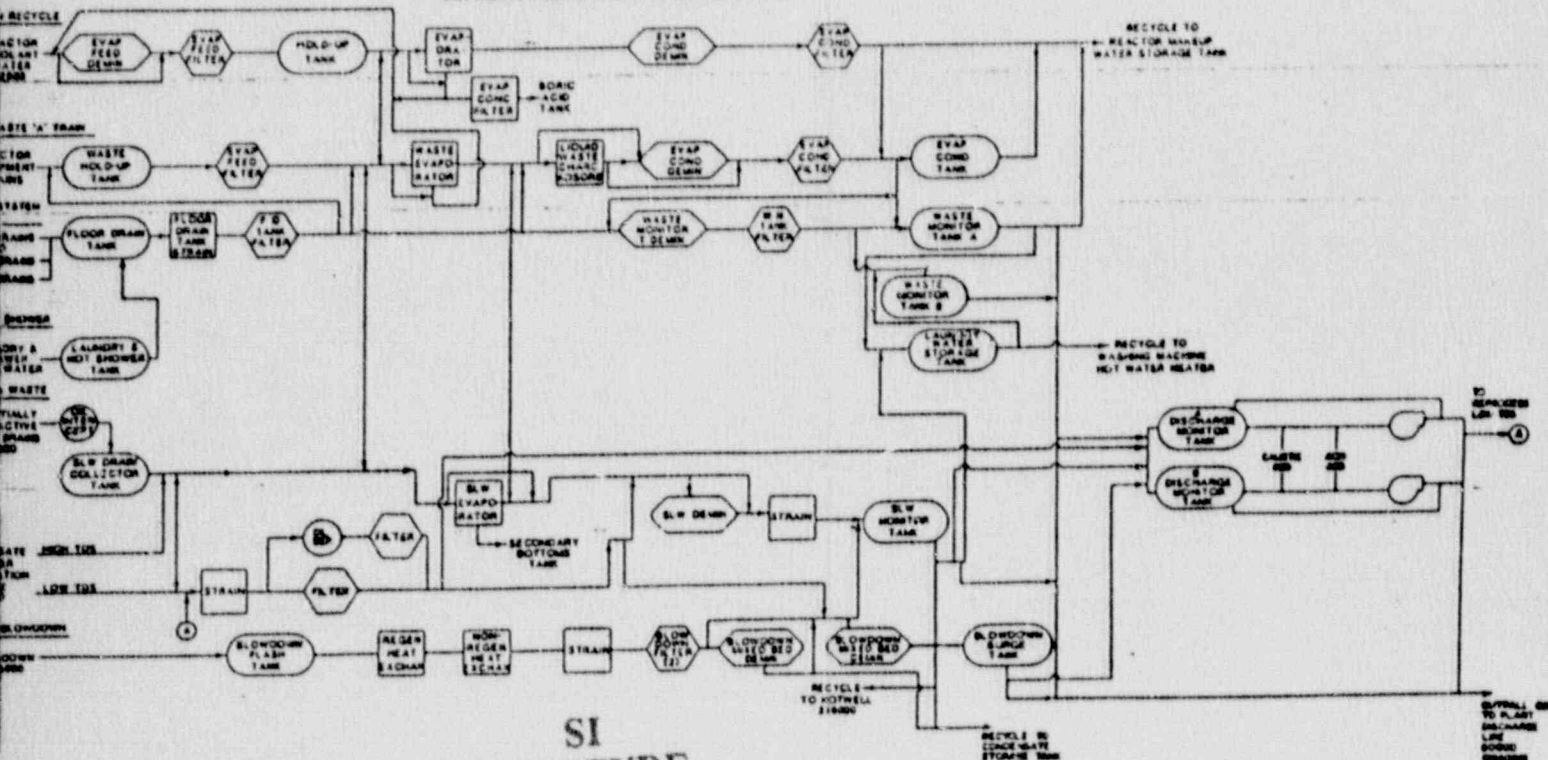
CALLAWAY NPDES FLOW DIAGRAM

NOTES

1. ALL PLANT OUTFALLS EXCEPT ONE TO BE INTO A SINGLE PIPELINE WHICH DISCHARGES TO THE WASHOON RIVER JUST DOWN STREAM OF THE INTAKE STRUCTURE.
2. ALL SYSTEMS HAVE BEEN SHOWN FOR CLARITY.
3. ALL SYSTEMS AND MOST SIGNIFICANTLY, WASTEWATER TREATMENT, ARE DESIGNED FOR FLEXIBILITY. IN WASTEWATER THE TREATMENT LEVEL IS DICTATED BY AT-PAL BIOLOGICAL CONTAMINATION, AND NRC MANDATED DISCHARGE CRITERIA AND BY THE NEED, FEASIBILITY, AND ECONOMICS OF RECYCLE VS. DISCHARGE.
4. ALL FLOWS IN LPM UNLESS OTHERWISE SPECIFIED.
5. INTERNAL DETAILS OF THE WASTEWATER TREATMENT SYSTEM ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.



WASTEWATER TREATMENT SYSTEM
(ALL WASTEWATER DEIONALIZERS ARE NON-REGENERATIVE)



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CARD

9006110095-01

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Aperture Card

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	2. OPERATION'S CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				5. DURATION (in days)
		a. DAYS PER WEEK (Specify)	b. MONTHS PER YEAR (Specify)	a. FLOW RATE (in mgd)		b. TOTAL VOLUME (Specify with units)		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	
	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		1. REQUIRED	2. 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.**

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) No (go to 3.20)

3.20 CONTRACT ANALYSIS INFORMATION

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

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) 420-0880	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
C. Signature (see instructions)

21 May 90
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.

OUTFALL #1
 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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG 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	
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 (NH ₃ -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	X		1/13/20	STANDARD UNITS		X		

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'		3. EFFLUENT				d. NO OF ANALYSES	4. UNITS		5. INTAKE (optional)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)			c. LONG TERM AVG VALUE (if available)	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION				(2) MASS	(1) CONCENTRATION
a. Bromide (24959-67-9)		X										
b. Chlorine Total Residual		X										
c. Color		X										
d. Fecal Coliform		X										
e. Fluoride (14694-26-1)	X		<1.0	<0.8				1	mg/l	lbs/d		
f. Nitrate-Nitrite (54-83-3)	X		0.007	0.005				1	mg/l	lbs/d		

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LISHED PPE SENT	b. BE LISHED AS UNIT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANAL YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANAL YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g Nitrogen Total Organic (as N)		X												
b 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		<0.036	<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												

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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG 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	
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 (NH ₃)	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			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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. RECEIVED PER SENT	b. BELIEVED AS SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG 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	
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 (16984-48-1)	X		1.6	80.6					1	mg/l	lbs/d			
f. Nitrate-Nitrite (as N)	X											X		

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

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LISTED PRL SENT	b. BE LISTED AB SENT	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	
g. Nitrogen Total Organic (as N)	X											X		
b. Oil and Grease	X		<5	<252	2.8	67	1.4	50.4	4/4/50	mg/l	lbs/d			
i. Phosphorus (as P _i 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								1	mg/l	lbs/d			
r. Cobalt Total (7440-48-1)	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								1	mg/l	lbs/d			
v. Manganese Total (7439-96-5)	X		0.11	5.5					1	mg/l	lbs/d		X	
w. Tin Total (7440-31-5)	X		<0.1	5					1	mg/l	lbs/d			
x. Titanium Total (7440-32-6)	X													X

*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.

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						3. UNITS (specify if blank)	4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)			d. NO. OF ANALYSES	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	
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-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		VALUE		VALUE			C		VALUE	
i. pH	CONCENTRATION 8.2	MASS 8.2	CONCENTRATION	MASS	X		1	STANDARD UNITS		X	

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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. 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	
a. Bromide (24959-67-9)	X											X		
b. Chlorine Total Residual		X												
c. Color	X											X		
d. Fecal Coliform	X											X		
e. Fluoride (14694-48-1)	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

*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'		3. EFFLUENT				4. UNITS		5. INTAKE (optional)					
	a BELIEVED PRESENT	b 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	e LONG TERM AVERAGE VALUE		d NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
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 (7440-48-1)	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 (7439-98-2)	X											X		
v Manganese Total (7439-96-5)	X		.497	1.5				1	mg/l	lbs/d	0.08			1
w Van Total (7440-31-5)	X		<0.1	<0.3				1	mg/l	lbs/d	0.10			1
x Titanium Total (7440-31-6)	X											X		

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

** 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.
004

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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVG. VALUE <i>(if available)</i>		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	
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 (NH ₃)	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	X		1/1/1	STANDARD UNITS		X		

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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LISTED PRESENT	b. BE LISTED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVG. VALUE <i>(if available)</i>		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	
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (146984-49-7)	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	

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LISTED PWS SENT	b. BE LISTED AS SENT	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	
g. Nitrogen Total Organic (as N)		X												
b. 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 (7439-96-7)		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												

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.
007

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						3. UNITS (specify if blank)	4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG VALUE (if available)			d. NO OF ANALYSES	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	
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 Nitrogen	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	X		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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LISTED PRESENT	b. BE LISTED 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	
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color		X												
d. Fecal Coliform	X		863	NA					4	#/100ml				
e. Fluoride (14604-48-1)	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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LIEVED PRE SENT	b. BE LIEVED AS SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG VALUE (if available)		d. NO OF ANAL YSES	a. CONCEN TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO OF ANAL YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g Nitrogen Total Organic (as N)	X		1.09	0.07					1					
b 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) (14765-45-3)		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 (7439-96-7)		X												
y 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												

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 form if instead of completing these pages.
SEE INSTRUCTIONS.

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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG 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	
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-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	MINIMUM	MAXIMUM	X		STANDARD UNITS		X			
		9.74**										

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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. RELEVANT PESTICIDE	b. OTHER PESTICIDE	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG 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	
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 (146984-49-1)	X		0.13	0.0011					1	mg/l	lbs/d			
f. Nitrate-Nitrite as N		X												

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LISTED PWSI SERI	b. BE LISTED AS SERI	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. 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	
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) (14765-45-3)	X		54.5	2.72					1	mg/l	lbs/d			
n Surfactants														
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	0.0068					1	mg/l	lbs/d			
x Titanium Total (7440-32-6)		X												

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
010

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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO OF ANALYSES	a. CONCENTRATION	b. MASS	x. LONG TERM AVERAGE VALUE		b. NO OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
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 (NH ₃)	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	MAXIMUM	MINIMUM	MAXIMUM	X		1	STANDARD UNITS		X		
	8.22	8.22										

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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LISTED PRESENT	b. BE LISTED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO OF ANALYSES	a. CONCENTRATION	b. MASS	x. LONG TERM AVERAGE VALUE		b. NO OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromine (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (136984-49-7)		X												
f. Nitrate-Nitrite as N	X												X	

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LIEVED PRE SENT	b. BE LIEVED AS SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN TRATION	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	
g Nitrogen Total Organic (as N)	X											X		
b Oil and Grease	X		<5						1	mg/l	lbs/d			
i Phosphorus (as P _i 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 (7440-31-6)		X												

* 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
011

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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. 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	
a. Biochemical Oxygen Demand (BOD)	4.6						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 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	MAXIMUM	MINIMUM	MAXIMUM	X		1	STANDARD UNITS		X		
	8.33	8.33										

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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LISTED PRESENT	b. BE LISTED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. 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	
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (10084-48-1)		X												
f. Nitrate-Nitrite as N	X											X		

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK X		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. IN PER CENT	b. IN AS PER CENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO OF ANAL YSES	a. CONCEN TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO OF ANAL YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g Nitrogen Total Organic (as N)	X											X		
b Oil and Grease	X		5						1	mg/l	lbs/d			
r Phosphorus (as P- Total (7722-14-0))	X		0.055*						1	mg/l	lbs/d			
i 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 ⁻² (14008-79-8))	X											X		
l Sulfite (as S ₂ O ₃ ⁻²)		X												
m Sulfite (as SO ₃ ⁻² (14765-45-3))		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 (7440-48-1)		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												

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.

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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <small>(if available)</small>		c. LONG TERM AVG VALUE <small>(if available)</small>		d. NO OF ANALYSES	a. CONCEN TRATION	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	
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-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			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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <small>(if available)</small>		c. LONG TERM AVG VALUE <small>(if available)</small>		d. NO OF ANALYSES	a. CONCEN TRATION	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	
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (14804-41-1)		X												
f. Nitrate-Nitrite as N	X											X		

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	* # LIQUID P/L SENT	* # LIQUID S/L SENT	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	e. LONG TERM AVERAGE VALUE		f. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(3) CONCENTRATION	(4) MASS	(5) CONCENTRATION	(6) MASS				(7) CONCENTRATION	(8) MASS	
g. Nitrogen Total Organic (as N)	X											X		
h. 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) (14806 79-8)	X											X		
l. Sulfide (as S)		X												
m. Sulfite (as SO ₃) (14265 45-3)		X												
n. Surfactant		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													
t. Magnesium Total (7439 95-4)	X											X		
u. Molybdenum total (7439 98-7)		X										X		
v. Manganese Total (7439 96-5)		X												
w. Tin Total (7440 31-5)		X												
x. Titanium Total (7440 32-6)		X												

* 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						3. UNITS (specify if blank)	4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)			x. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS	
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 (NH ₃)	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	8.55	8.55						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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. DE LIVERED FOR SENT	b. DE LIVERED AS SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	x. CONCENTRATION	b. MASS	x. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chloride Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (14604-82-1)		X												
f. Nitrate Nitrite (as N)	X											X		

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK X		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE LIEVED FOR SENT	b. BE LIEVED AS SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
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) (14285-45-3)		X												
n. Surfactants		X												
o. Aluminum Total (7429-90-5)		X												
p. Barium Total (7440-39-9)		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												

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
014

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						3. UNITS (specify if blank)		4. INTAKE (optional)			
	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	x. LONG TERM AVERAGE VALUE		b. NO OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
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 (NH ₃)	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	MAXIMUM	MINIMUM	MAXIMUM	X		1	STANDARD UNITS		X		
	8.11	8.11										

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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. DE LISTED PCB SERV	b. DE LISTED AS SERV	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	x. LONG TERM AVERAGE VALUE		b. NO OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (14664-48-1)		X												
f. Nitrate-Nitrite as N	X											X		

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BY LIQUID PBI SENT	b. BY LIQUID SB SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g Nitrogen Total Organic (as N)	X											X		
b 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 SO ₄) (14808-79-3)	X											X		
l Sulfide (as S)		X												
m Sulfite (as SO ₃) (14765-45-3)		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 (7440-48-2)		X												
s Iron Total (7439-89-6)	X													
t Magnesium Total (7439-95-4)	X											X		
u Molybdenum total (7439-98-7)		X										X		
v Manganese Total (7439-96-5)		X												
w Tin Total (7440-31-5)		X												
x Titanium Total (7440-32-6)		X												

* 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
015

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.

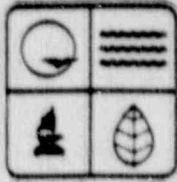
1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG VALUE (if available)		d. NO OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
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	X		1	STANDARD UNITS		X		

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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE KEPT FOR SENT	b. BE KEPT FOR SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG 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	
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-49-1)		X												
f. Nitrate-Nitrite as N	X											X		

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK X		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. RE LIEVED PPE SENT	b. RE LIEVED AD SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANA- LYSES	a. CONCEN- TRATION	b. MASS	x. LONG TERM AVERAGE VALUE		b. NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
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 95-8)	X											X		
u Molybdenum total (7439 98-7)		X												
v Manganese Total (7439 96-5)		X												
w Van Total (7440 31-5)		X												
x Titanium Total (7440 32-6)		X												



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

**APPLICATION FOR DISCHARGE PERMIT
Form D - Primary Industries**

NPDES # (If Assigned) MO-0098001	TABLE H	OUTFALL NUMBER 001
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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 <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT				4. UNITS			5. INTAKE <i>(optional)</i>				
	a TEST GC/MS REQUIRED	b NO OF LIEVED PMS SENT	c NO OF LIEVED AD SENT	a MAXIMUM DAILY VALUE		b MAXIMUM 30 DAY VALUE <i>(if available)</i>		c LONG TERM AVG. VALUE <i>(if available)</i>		d NO OF ANAL YSES	a CONCENTRATION	b MASS	e LONG TERM AVERAGE VALUE		f NO OF ANAL YSES
				(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 (7440-39-2)	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'			3. EFFLUENT						4. UNITS			5. INTAKE (optional)		
	* TEST NO. OF CODE	* NO. OF LUBES PER SECT	* NO. OF LUBES PER SECT	* MAXIMUM DAILY VALUE		* MAXIMUM 30 DAY VALUE (if available)		* LONG TERM AVG. VALUE (if available)		# NO. OF ANAL YSES	* CONCENTRATION	# MASS	* LONG TERM AVERAGE VALUE		# NO. OF ANAL YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V Acetone (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 (Chloro methyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)	X			< 5	< .004					1	ug/l	lbs/d			
6V Carbon Tetrachloride (76-23-5)	X			< 5	< .004					1	ug/l	lbs/d			
7V Chlorobenzene (108-90-7)	X			< 10	< .008					1	ug/l	lbs/d			
8V Chloro bromomethane (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 Chloro ethylmethyl 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 Dichloro bromomethane (75-27-4)	X			< 5	< .004					1	ug/l	lbs/d			
13V Dichloro difluoromethane (75-71-8)				*											
14V 1,1 Dichloro ethane (75-34-3)	X			< 5	< .004					1	ug/l	lbs/d			
15V 1,2 Dichloro ethane (107-06-2)	X			< 5	< .004					1	ug/l	lbs/d			
16V 1,1 Dichloro ethylene (75-35-4)	X			< 5	< .004					1	ug/l	lbs/d			
17V 1,2 Dichloro propane (78-07-5)	X			< 5	< .004					1	ug/l	lbs/d			
18V 1,2 Dichloro propylene (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			

* 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. MONITORING			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST CODE	b. NO. OF SAMPLES	c. BY APPOINTMENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE		c. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V Methylene 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 Trichloroethylene (127-18-4)	X			<5	<.004					1	ug/l	lbs/d			
27V Toluene (108-88-3)	X			<5	<.004					1	ug/l	lbs/d			
28V 1,2-Dichloroethylene (150-80-0)	X			<5	<.004					1	ug/l	lbs/d			
27V 1,1,1-Trichloroethane (71-85-0)	X			<5	<.004					1	ug/l	lbs/d			
28V 1,1,2-Trichloroethane (79-09-0)	X			<5	<.004					1	ug/l	lbs/d			
28V Trichloroethylene (79-01-0)	X			<5	<.004					1	ug/l	lbs/d			
28V Trichloroethylene (75-09-0)				*											
31V Vinyl Chloride (75-01-4)	X			<10	<.008					1	ug/l	lbs/d			
GC/MS FRACTION - ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-0)	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 (95-67-9)	X			<10	<.008					1	ug/l	lbs/d			
4A 4,6-Dinitro-0-Cresol (534-52-1)	X			<50	<.04					1	ug/l	lbs/d			
5A 2,4-Dinitrophenol (81-20-4)	X			<50	<.04					1	ug/l	lbs/d			
6A 7-Dibromophenol (80-75-0)	X			<10	<.008					1	ug/l	lbs/d			
7A 4-Dibromophenol (100-07-7)	X			<50	<.04					1	ug/l	lbs/d			
8A P-Chloro-0-Cresol (95-69-7)	X			<50	<.04					1	ug/l	lbs/d			
9A Penta-chlorophenol (87-82-5)	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			

CWC 100

PAGE 4

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 GAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INYAKE (optional)	
	A TEST NO. (if available)	B TEST NO. (if available)	MAXIMUM DAILY VALUE (1) CONC. (2) MASS	MAXIMUM 30 DAY VALUE (1) CONC. (2) MASS	CONCEN. (1) (2) MASS	CONCEN. (1) (2) MASS	LONG TERM AVERAGE VALUE (1) CONCEN. (2) MASS	LONG TERM AVERAGE VALUE (1) CONCEN. (2) MASS
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS								
10 Acenaphthene (83 37 9)		X						
26 Acenaphthylene (709 96 8)		X						
30 Anthracene (120 12 7)		X						
48 Benzofluorene (87 87 5)		X						
50 Benzofuran Anthracene (56 55 3)		X						
68 Benzofuran Pyrene (56 57 8)		X						
79 3,4-Benzofluoranthene (205 99 7)		X						
86 Benzofuran Pyrene (51 24 2)		X						
95 Benzofuran Fluoranthene (207 08 9)		X						
100 Bis (2-Chloroethyl) Methane (111 91 1)		X						
110 Bis (2-Chloroethyl) Ether (111 44 4)		X						
128 Bis (2-Chloro-n-propyl) Ether (195 08 37 9)		X						
130 Bis (2-Ethylhexyl) Phthalate (111 81 7)		X						
140 4-Bromo-phenyl Phenyl Ether (101 55 3)		X						
150 Butyl Benzyl Phthalate (85 08 7)		X						
165 2-Chloro-naphthalene (91 38 7)		X						
178 4-Chloro-phenyl Phenyl Ether (100 72 3)		X						
188 Chrysene (218 01 6)		X						
199 Dibenzofuran Anthracene (53 10 3)		X						
200 1,2-Dichlorobenzene (95 36 1)		X						
218 1,3-Dichlorobenzene (541 73 1)		X						

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

CONTINUED FROM PAGE 5

1. POLLUTANT AND CAS NUMBER (If available)	2. MARK 'X'		3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
	1121 1122 1123 1124 1125	1126 1127 1128 1129 1130	a MAXIMUM 30 DAY VALUE (1) (2) (3)	b LONG TERM AVERAGE VALUE (1) (2) (3)	c NO. OF ANAL YSES	a CONCENTRATION	b MASS	c NO. OF ANAL YSES	a LONG TERM AVERAGE VALUE (1) (2) (3)	b MASS	c NO. OF ANAL YSES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)											
278 1,4 Dioxin, benzene (106-46-7)		X									
278 3,3 Dichloro Benzidine (91-94-1)		X									
240 Diethyl Phthalate (84-66-7)		X									
258 Dimethyl Phthalate (133-11-3)		X									
268 Di-N-Butyl Phthalate (64-18-2)		X									
278 2,4 Dinitro toluene (121-14-2)		X									
288 2,6 Dinitro toluene (608-20-2)		X									
298 Di-N-Octyl Phthalate (117-84-0)		X									
308 1,2 Dinitro-4-hydroxy (as 4,2)-benzene (122-66-7)		X									
318 Fluoranthene (206-44-0)		X									
328 Fluorene (86-73-7)		X									
338 Hexa chlorobenzene (118-74-1)		X									
348 Hexa chlorobutadiene (87-60-3)		X									
358 Hex Nitro Cyclopentadiene (177-47-4)		X									
368 Hexachloro ethane (67-72-1)		X									
378 Indeno (1,2,3-cd) Pyrene (183-35-5)		X									
388 Isophthalic (78-58-1)		X									
398 Naphthalene (91-20-3)		X									
408 Nitrobenzene (98-95-3)		X									
418 N-Nitro-sulfonmethylaniline (62-75-9)		X									
428 N-Nitrosodipropylamine (621-64-7)		X									

CONTINUED FROM THE FRONT

1. POLLUTANT ADD CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. WITARE (optional)		
	101 102 103	104 105 106	a. MAXIMUM DAILY VALUE CONCENTRATION	b. MAXIMUM 30 DAY VALUE CONCENTRATION	c. LONG TERM AVERAGE VALUE CONCENTRATION	d. CONCENTRATION	e. MASS	f. LONG TERM AVERAGE VALUE CONCENTRATION	g. NO. OF ADJ. YRS.
GC/MS FRACTION — BASE/NEUTRAL COMPOUNDS (continued)									
438 N Nitro sodibenzenamine (86-31-6)		X							
448 Phenanthrene (85-01-6)		X							
458 Pyrene (129-00-6)		X							
468 1,2,4-Tris chlorobenzene (120-82-1)		X							
GC/MS FRACTION — PESTICIDES									
1P Atrium (309-00-7)		X							
2P D-BHC (119-84-6)		X							
3P D-BHC (119-85-7)		X							
4P γ-BHC (58-05-9)		X							
5P δ-BHC (119-86-8)		X							
6P Chlordane (57-74-9)		X							
7P 4,4'-DDE (50-29-3)		X							
8P 4,4'-DDE (112-55-9)		X							
9P 4,4'-DDB (112-54-8)		X							
10P Dieldrin (86-57-1)		X							
11P α-Endosulfan (115-29-7)		X							
12P β-Endosulfan (115-29-7)		X							
13P Endosulfan Sulfate (1031-07-6)		X							
14P Endosul (112-29-8)		X							
15P Endosul Monohydrate (12871-53-4)		X							
16P Heptachlor (176-44-0)		X							

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CONTINUED FROM PAGE 7

MPBES # (if assigned) MO-0098001

OUTFALL NUMBER 001

1. POLLUTANT AND CAS NUMBER (see table)	2. MARK 'X'		3. EFFLUENT		4. URBITS		5. SHYARE (optional)	
	IS IT A PCB?	IS IT A PESTICIDE?	MAXIMUM 30 DAY VALUE (1) CONC. (2) MASS	LONG TERM AVG. VALUE (1) CONC. (2) MASS	CONC. FRACTION	MASS	LONG TERM AVERAGE VALUE (1) CONC. (2) MASS	NO OF ABAL YSES
GC/MS FRACTION - PESTICIDES (continued)								
177 heptachlor E, cis 1457-33-3	X							
187 PCB 1242 5409-21-9	X							
188 PCB 1254 7917-99-1	X							
189 PCB 1271 134-78-2	X							
190 PCB 1272 111-16-5	X							
191 PCB 1248 7672-29-6	X							
192 PCB 1260 786-82-5	X							
193 PCB 1016 76-411-2	X							
194 Toxaphene 8001-35-2	X							

**APPLICATION FOR DISCHARGE PERMIT
Form D — Primary Industries**

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

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)		b NO OF ANAL YSES		
	a TEST GC/MS (if applicable)	b NO LINES FOR SENT	c NO LINES FOR SENT	a MAXIMUM DAILY VALUE		b MAXIMUM 30 DAY VALUE (if available)		c LONG TERM AVG VALUE (if available)		d NO OF ANAL YSES	a CONCENTRATION	b MASS		a LONG TERM AVERAGE VALUE	
				(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											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	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	ug/l	lbs/d				
10M Selenium Total (7782 49 2)		X											X		
11M Silver Total (7440 22 4)		X											X		
12M Thallium Total (7440 29 0)		X											X		
13M Zinc Total (7440 66 6)		X		774	39.0	1760	42.2	905	32.5	ug/l	lbs/d				
14M Cyanide Total (57 12 5)		X											X		
15M Phenols Total		X											X		

DIOXIN
2,3,7,8 Tetra chlorodibenzo P Dioxin (1784 01 6)

DESCRIBE RESULTS
X

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT/						4. UNITS			5. ORTARE (optional)		
	* TEST NO. OR QUOTE	* DE LIVED FOR SECT	* DE LIVED AD SECT	* MAXIMUM DAILY VALUE		* MAXIMUM 30 DAY VALUE (if available)		* LONG TERM AVG. VALUE (if available)		# NO. OF ANAL YSES	* CONCENTRATION	* MASS	* LONG TERM AVERAGE VALUE		# NO. OF ANAL YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)		X												^	
2V Acrylonitrile (107-12-1)		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 (124-48-7)		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												^	
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 (78-07-5)		X												X	
18V 1,2-Dichloropropylene **		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	

* 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.

1. POLLUTANT AND CAS NUMBER (if available)	2. MASS %		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	101-108	109-110	111-112	113-114	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)								
279 Methylene Chloride (75-09-2)	X							X
239 1,1,2,2-Tetra chloroethane (79-34-5)	X							X
249 1,1,1,2-Tetra chloroethane (127-18-4)	X							X
259 Toluene (108-90-3)	X							X
269 1,2-Dichloroethane (107-06-2)	X							X
279 1,1,1-Trichloroethane (79-06-6)	X							X
289 1,1,2,2-Tetra chloroethane (127-18-4)	X							X
299 1,1,2,2-Tetra chloroethane (127-18-4)	X							X
309 1,1,1-Trichloroethane (79-06-6)	X							X
319 Vinyl Chloride (75-01-4)	X							X
GC/MS FRACTION - ACS COMPOUNDS								
1A 2-Chlorophenol (105-57-0)	X							X
2A 2,4-Dichlorophenol (129-53-2)	X							X
3A 2,4-Dimethylphenol (105-67-9)	X							X
4A 4,6-Dinitro-2-Cresol (53-57-1)	X							X
5A 2,4-Dichlorophenol (105-57-0)	X							X
7A 4,6-Dinitrophenol (105-57-1)	X							X
8A 2,4-Dichlorophenol (105-57-0)	X							X
9A 2,4,6-Trinitrophenol (87-06-5)	X							X
10A Phenol (108-95-2)	X							X
11A 2,4,6-Trinitrophenol (87-06-5)	X							X

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'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	A 151 mg per cubic ft	B 151 mg per cubic ft	A WATERBORN DAILY VALUE (% MASS)	B WATERBORN 30 DAY VALUE (% MASS)	A LONG TERM AVERAGE VALUE (% MASS)	B LONG TERM AVERAGE VALUE (% MASS)	A CONCENTRATION (% MASS)	B CONCENTRATION (% MASS)
GC/MS FRACTION - GASE/NEUTRAL COMPOUNDS								
16 Acenaphthene (83 32 9)	X							X
20 Acenaphthylene (100 96 8)	X							X
30 Acetylene (170 12 7)	X							X
40 Benzidine (62 67 5)	X							X
50 Benzofuran (191 24 2)	X							X
60 Benzofuran (191 24 2)	X							X
70 Benzofuran (191 24 2)	X							X
80 Benzofuran (191 24 2)	X							X
90 Benzofuran (191 24 2)	X							X
100 Bis (2-Chloro- ethoxy) Methane (111 61 1)	X							X
110 Bis (2-Chloro- ethyl) Ether (111 61 1)	X							X
120 Bis (2-Chloro- propoxy) Ether (100 32 9)	X							X
130 Bis (2-Ethyl- hexyl) Phthalate (117 61 2)	X							X
140 4-Bromo- phenyl Phenyl Ether (101 55 3)	X							X
150 Butyl Benzyl Phthalate (85 08 7)	X							X
160 7-Chloro- naphthalene (91 36 7)	X							X
170 4-Chloro- phenyl Phenyl Ether (100 52 3)	X							X
180 Chrysene (128 01 9)	X							X
190 Dibenzofuran (153 70 3)	X							X
200 1,2-Dichloro- benzene (106 50 1)	X							X
210 1,3-Dichloro- benzene (101 73 1)	X							X

CONTINUED FROM PAGE 5

MPDES # (If Assigned) MD-0098001
 OUTFALL NUMBER 002

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK X		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	1121 MAY 1970 MAY 1971	1122 MAY 1970 MAY 1971	1123 MAXIMUM 30 DAY VALUE (1) CONCENTRATION (2) MASS	1124 LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	1125 CONCENTRATION	1126 MASS	1127 CONCENTRATION	1128 MASS
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)								
276 1,4 Dioxin, benzene (108-46-2)	X						X	
278 3,3 Dichloro benzene (91-94-1)	X						X	
280 Dimethyl Phthalate (84-66-2)	X						X	
290 Dimethyl Phthalate (131-11-3)	X						X	
288 Di-N Butyl Phthalate (84-74-2)	X						X	
279 2,4 Dinitro toluene (121-14-2)	X						X	
286 7,6 Dinitro toluene (686-26-7)	X						X	
296 Di-N Octyl Phthalate (117-84-0)	X						X	
303 1,2 Diphenoxy- benzene (85-42-2) benzene (127-06-7)	X						X	
318 Fluoranthene (206-44-0)	X						X	
326 Fluorene (86-73-7)	X						X	
338 Hexa chlorobenzene (118-73-1)	X						X	
340 Hexa chlorobutadiene (87-58-3)	X						X	
350 Hexachloro cyclopentadiene (17-87-8)	X						X	
360 Hexachloro- ethane (67-72-2)	X						X	
370 Indeno (1,2,3-c,d)Pyrene (193-19-5)	X						X	
380 Isophthalic (18-58-1)	X						X	
390 Naphthalene (81-20-3)	X						X	
400 Nicotinic (98-95-3)	X						X	
410 N Nitro sulfonethylenimine (82-75-9)	X						X	
420 N Nitro-2,6 N Propylamino-4 Benzimidazole (671-64-7)	X						X	

CONTINUED FROM THE PREVIOUS PAGE

1. PESTICIDE CAS NO. (if available)	2. CAS#		3. EVALUATION		4. STATUS		5. USES (optional)			
	113 1200 1201	1202 1203 1204	a. RATED DAILY VALUE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	b. RATED IN DAY VALUE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	c. LONG TERM DSS VALUE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	d. OF OF CLASS TYPE	e. OF OF CLASS TYPE	f. OF OF CLASS TYPE		
430 N Nitro compounds (60-30-6)		X							X	
608 Phenanthrene (83-01-0)		X							X	
628 Pyrene (129-07-0)		X							X	
629 1,2,4,5-Tetra- chlorobenzene (120-82-1)		X							X	
OC/OS FRACTIONS - PESTICIDES										
1P Ailan (389-09-2)		X							X	
2P - BHC (139-84-6)		X							X	
3P - BHC (139-85-7)		X							X	
4P - BHC (56-89-5)		X							X	
5P - BHC (139-85-8)		X							X	
6P Chlorane (53-74-9)		X							X	
7P 4,4-DDT (50-29-3)		X							X	
8P 4,4-DDE (72-50-8)		X							X	
9P 4,4-DDB (72-54-8)		X							X	
10P Dieldrin (60-57-1)		X							X	
11P - Endosulfan (115-29-7)		X							X	
12P - Endosulfan (115-29-7)		X							X	
13P Endosulfan Sulfate (1031-07-8)		X							X	
14P Endrin (72-70-8)		X							X	
15P Endrin Aldehyde (7421-93-4)		X							X	
16P Heptachlor (78-04-0)		X							X	

CONTINUED FROM PAGE 7

NPDES # (if assigned) MD-0098001

OUTFALL NUMBER 002

1. POLLUTANT AND CAS NUMBER (available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	USE TO BE REPORTED	USE TO BE REPORTED	a. MAXIMUM DAILY VALUE (1) CONCENTRATION (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION (2) MASS	a. CONCEN TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCEN TRATION (2) MASS	b. NO. OF ANAL YSES
6C/MS FRACTION -- PESTICIDES (continued)								
17 Neglathion								
18 DBC								
19 PCB 1242	X						X	
20 PCB 1248	X						X	
21 PCB 1254	X						X	
22 PCB 1271	X						X	
23 PCB 1272	X						X	
24 PCB 1249	X						X	
25 PCB 1248	X						X	
26 PCB 1260	X						X	
27 PCB 1016	X						X	
28 Toxaphene	X						X	

**APPLICATION FOR DISCHARGE PERMIT
Form D - Primary Industries**

NPDES # (If Assigned) MO-0098001	TABLE #	OUTFALL NUMBER 003
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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 GAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT				4. UNITS			5. INTAKE <i>(optional)</i>				
	a. TEST FOR GC/MS FRACTIONS	b. BE LIKELY PRESENT	c. BE LIKELY ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVG. VALUE <i>(if available)</i>		d. NO. OF ANALYSES	e. CONCENTRATION	f. 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	< .05					1	ug/l	lbs/d	< 18		1
2M Arsenic Total (7440 36 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 27 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 5)	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'			3. EFFLUENT				4. UNITS			5. INTAKE (optional)				
	a. TEST USE OR NUMBER	b. DE LISTED PDB SECT	c. DE LISTED AD SECT	d. MAXIMUM DAILY VALUE		e. MAXIMUM 30 DAY VALUE (if available)		f. LONG TERM AVERAGE VALUE (if available)		g. NO OF ANAL YSES	h. CONCN TRATION	i. MASS	j. LONG TERM AVERAGE VALUE		k. NO OF ANAL YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCN TRATION	(2) MASS	
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 Chlorobromomethane (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 (78-07-5)	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

* 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 003

1. POLLUTANT AND CAS NUMBER (if available)	2. MEDIA			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST CODE NUMBER	b. DEPTH IN FEET	c. DEPTH IN FEET	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANAL YSES	e. CONCEN TRATION	f. MASS	g. LONG TERM AVERAGE VALUE (if available)		h. NO. OF ANAL YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V Methylene Chloride (75-08-2)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
23V 1,1,2,2-Tetra-chloroethane (79-34-5)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
24V Tetrachloro-ethylene (127-18-4)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
25V Toluene (108-98-3)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
26V 1,2-Trans-Dichloroethylene (156-60-6)	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 (79-09-6)	X			< 5	< .02					1	ug/l	lbs/d	< 5		1
29V Trichloro-ethylene (79-01-0)	X			< 10	< .03					1	ug/l	lbs/d	< 5		1
30V Trichloro-fluoroethylene (75-09-0)				*											
31V Vinyl Chloride (75-01-4)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
GC/MS FRACTION - ACID COMPOUNDS															
1A 2-Chlorophenol (85-57-8)	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-0-Cresol (534-52-1)	X			< 50	< .2					1	ug/l	lbs/d	< 50		1
5A 2,4-Dinitrophenol (81-29-4)	X			< 50	< .2					1	ug/l	lbs/d	< 10		1
6A 2-Nitrophenol (89-73-0)	X			< 10	< .03					1	ug/l	lbs/d	< 10		1
7A 4-Nitrophenol (110-02-7)	X			< 50	< .2					1	ug/l	lbs/d	< 50		1
8A 7-Chloro-0-Cresol (99-59-7)	X			< 50	< .2					1	ug/l	lbs/d	< 10		1
9A Pentachlorophenol (87-00-5)	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

CWC 1000

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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'		3. EFFLUENT		4. UNITS		5. WYAKE (optional)	
	a. test in mg/l or ug/l	b. in ug/l or ug/l	a. MAXIMUM DAILY VALUE (1) CONCENTRATION (2) MASS	b. LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	b. NO. OF ANAL YSES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS								
16 Acenaphthene (83 32 9)	X							X
26 Acenaphthylene (208 96 8)	X							X
36 Anthracene (120 12 7)	X							X
46 Benzidine (82 87 5)	X							X
56 Benz[a]Anthracene (56 55 3)	X							X
66 Benz[e]Pyrene (58 32 8)	X							X
76 1,4-Benzofluoranthene (205 99 2)	X							X
86 Benzofluoranthene (193 24 2)	X							X
96 Benzofluoranthene (207 08 9)	X							X
106 Bis (2-Chloro-ethyl) Methane (111 81 1)	X							X
116 Bis (2-Chloro-ethyl) Ether (111 84 4)	X							X
126 Bis (2-Chloro-isopropyl) Ether (106 38 3 9)	X							X
136 Bis (2-Ethylhexyl) Phthalate (117 81 7)	X							X
146 4-Bromo-phenyl Phenyl Ether (101 55 3)	X							X
156 Bis(4-Benzyl-Phenyl) Phthalate (85 68 7)	X							X
166 2,4-Dinitro-naphthalene (81 58 7)	X							X
176 4-Chloro-phenyl Phenyl Ether (1005 7 1)	X							X
186 Crystalline (218 01 9)	X							X
196 Fluoranthene (51 70 3)	X							X
206 1,2-Dichloro-benzene (95 58 1)	X							X
216 1,3-Dichloro-benzene (541 73 1)	X							X

INPOLES # (If Assigned) MO-0098001 BUFFALO NUMBER 003

CONTINUED FROM PAGE 5

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'E'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	• HCS organic E3	• M LHVS PM SBI SBI	a. MAXIMUM DAILY VALUE (1) Concentration (2) MASS	b. MAXIMUM 30 DAY VALUE (1) Concentration (2) MASS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	b. NO. OF ABAL YSES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)								
276 1,4-Dichloro benzene (106-46)		X					X	
276 1,3-Dichloro benzene (91-94-1)		X					X	
245 Dimethyl Phthalate (84-66-2)		X					X	
295 Dimethyl Phthalate (131-11-3)		X					X	
295 Di-N Butyl Phthalate (84-74-2)		X					X	
2, 9, 7, 4-Dinitro toluene (121-14-2)		X					X	
296 2,6-Dinitro toluene (658-70-3)		X					X	
295 Di-N Octyl Phthalate (117-84-0)		X					X	
305 1,2-Diphenylhydrazine (93-82-1)		X					X	
315 Fluoranthene (206-44-0)		X					X	
326 Fluorene (86-73-7)		X					X	
335 Hexachlorobenzene (118-71-1)		X					X	
345 Hexachlorobenzene (87-61-3)		X					X	
355 Hexachlorocyclopentadiene (17-47-4)		X					X	
365 Hexachloroethane (67-72-3)		X					X	
375 Indene (112-31-0) Pyrene (193-39-5)		X					X	
385 Isophthalic acid (106-10-0)		X					X	
395 Naphthalene (91-20-3)		X					X	
405 Nitrobenzene (98-95-3)		X					X	
415 N-Nitrosodimethylamine (62-75-9)		X					X	
425 N-Nitrosodimethylamine (62-75-9)		X					X	

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	a. LISTED UNDER FEDERAL AIR ACT	b. ORIGINALLY LISTED UNDER STATE AIR ACT	a. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION (2) MASS	b. LONG TERM AVERAGE VALUE (if available) (1) CONCENTRATION (2) MASS	a. CONCENTRATION	b. MASS	a. NO. OF ANALYSES	b. ORIGINALLY LISTED UNDER STATE AIR ACT
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)								
435 N-HALO SODIUM/AMINE (85-30-8)	X							X
448 Phenanthrene (85-01-8)	X							X
458 Pyrene (129-06-0)	X							X
458 1,2,4,5-tetra chlorobenzene (120-82-1)	X							X
GC/MS FRACTION - PESTICIDES								
1P Aldicarb (309-05-2)	X							X
2P D-BHC (319-84-6)	X							X
3P D-BHC (319-85-7)	X							X
4P Y-BHC (26-89-9)	X							X
5P D-BHC (319-86-8)	X							X
6P Chlordane (57-74-8)	X							X
7P 4,4'-DDE (56-28-3)	X							X
8P 4,4'-DDE (72-55-8)	X							X
9P 4,4'-DDB (72-54-8)	X							X
10P Dieldrin (80-57-1)	X							X
11P D-Endosulfan (115-79-7)	X							X
12P S-Endosulfan (115-79-7)	X							X
13P Endosulfan Sulfate (1031-07-8)	X							X
14P Endosulfan (17-70-8)	X							X
15P Endosulfan Aldehyde (7421-53-4)	X							X
16P Heptachlor (76-64-8)	X							X

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CONTINUED FROM PAGE 7

RIPDES # (if assigned) MO-0098001 OUTFALL NUMBER 003

1. POLLUTANT AND CAS NUMBER (available)	2. RISK INDEX		3. REFERENCE		4. UNITS	5. STATABLE (optional)		
	111 112 113 114 115 116 117 118 119 120	121 122 123 124 125 126 127 128 129 130	a. BENCHMARK DATA VALUE (if mass)	b. BENCHMARK DATA VALUE (if mass)		a. CONCEN LOCATION	b. MASS	a. LOGS TO BE AVOIDED VALUE (if mass)
GC/MS FRACTION - PESTICIDES (continued)								
111 Negotiable 112 113 B	X							X
114 PCB 1242 115 409 21 51	X							X
116 PCB 1054 117 187 65 11	X							X
118 PCB 1271 119 14 38 21	X							X
120 PCB 1272 121 11 16 21	X							X
122 PCB 1240 123 172 29 51	X							X
124 PCB 1260 125 100 42 21	X							X
126 PCB 1016 127 26 4 11 21	X							X
128 Toxaphene 129 801 35 21	X							X

**APPLICATION FOR DISCHARGE PERMIT
Form D - Primary Industries**

TABLE W	OUTFALL NUMBER
RPDES # (If Assigned) MO-0098001	004

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. TABLE (optional)		6. NO OF ANAL YSES		
	a. TEST FRACTION REQUIRED	b. BE LIEVED FOR	c. BE LIEVED AD SERI	d. MAXIMUM DAILY VALUE		e. MAXIMUM 30 DAY VALUE (if available)		f. LONG TERM AVG VALUE (if available)		a. CONCENTRATION	b. MASS	g. LONG TERM AVERAGE VALUE			
				(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	< .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 9)	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 29 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 Tetra chlorodibenzo P Dioxin (1764 01 6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT				4. UNITS		5. INTAKE (optional)					
	a. TEST NO. OR CODE	b. OF LIMITS PER SLOT	c. OF LIMITS AD SLOT	d. MAXIMUM DAY VALUE		e. MAXIMUM 30 DAY VALUE (if available)		f. LONG TERM AVRS VALUE (if available)		g. NO OF ANAL YSES	h. CONCENTRATION	i. MASS	j. LONG TERM AVERAGE VALUE		k. NO OF ANAL YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
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 Chloro- bromomethane (124 48 1)	X			< 5	< .0003					1	ug/l	lbs/d	< 5		1
9V Chloroethane (75 05 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 07 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

* 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.

1. POLLUTANT AND CAS NUMBER (if available)	2. MAX I		3. EFFLUENT		4. NO OF ANAL YSES	4. UNITS		5. INTAKE (optional)	
	1. USE	2. USE	a. MAXIMUM DAILY VALUE (if available)	b. MAXIMUM 30 DAY VALUE (if available)		a. CONC IN EFFLUENT	b. MASS	a. LONG TERM AVERAGE VALUE (if none)	b. NO OF ANAL YSES
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)									
29 Methylene Chloride (75-09-2)	X		<5	<.0003		ug/l	lbs/d	<5	1
29V 1,1,2,2 Tetra Chloroethane (78-34-5)	X		<5	<.0003		ug/l	lbs/d	<5	1
29V 1,1,1,2,2,2 Hexachloroethane (127-18-4)	X		<5	<.0003		ug/l	lbs/d	<5	1
29V Toluene (108-88-3)	X		<5	<.0003		ug/l	lbs/d	<5	1
29V 1,2-Dichloroethane (107-06-2)	X		<5	<.0003		ug/l	lbs/d	<5	1
29V 1,1,1,1-Tetrafluoroethane (196-05-0)	X		<5	<.0003		ug/l	lbs/d	<5	1
29V Trichloroethylene (79-06-6)	X		<10	<.0006		ug/l	lbs/d	<5	1
29V 1,1,1-Trifluoroethane (75-91-9)	X		*						
31V 1,1,1-Trichloroethane (75-01-4)	X		<10	<.0006		ug/l	lbs/d	<10	1
GC/MS FRACTION - ACID COMPOUNDS									
3A 2-Chlorophenol (105-57-8)	X		<10	<.0006		ug/l	lbs/d	<10	1
2A 2,4-Dichlorophenol (120-83-2)	X		<10	<.0006		ug/l	lbs/d	<10	1
3A 2,4-Dimethylphenol (105-67-9)	X		<10	<.0006		ug/l	lbs/d	<10	1
4A 4-Bromophenol (108-85-1)	X		<50	<.003		ug/l	lbs/d	<50	1
5A 2,4-Dichlorophenol (105-67-9)	X		<50	<.003		ug/l	lbs/d	<10	1
5A 2,4-Dichlorophenol (105-67-9)	X		<10	<.0006		ug/l	lbs/d	<10	1
7A 4-Chlorophenol (105-85-7)	X		<50	<.003		ug/l	lbs/d	<50	1
8A 7-Chloro-2-naphthol (108-85-7)	X		<50	<.003		ug/l	lbs/d	<10	1
9A 2-Naphthol (108-85-2)	X		<10	<.0006		ug/l	lbs/d	<50	1
11A 2,4,6-Trichlorophenol (108-85-2)	X		<10	<.0006		ug/l	lbs/d	<10	1

* 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'	3. EFFLUENT		4. UNITS		5. INTAKE (approx.)
		a. MAXIMUM 30 DAY VALUE (1) CONCEN (2) MASS	b. LONG TERM AVRG VALUE (1) CONCEN (2) MASS	a. CONCEN (1) UNIT (2) MASS	b. MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS	a. TEST BY (1) GC (2) MS (3) BOTH (4) OTHER (5) N/A	a. MAXIMUM DAILY VALUE (1) CONCEN (2) MASS	c. LONG TERM AVRG VALUE (1) CONCEN (2) MASS	a. NO OF ABAL YSES	b. MASS	d. NO OF ABAL YSES
16 Acetophenone (83 32 9)	X					
26 Acenaphthylene (208 36 8)	X					
38 Anthracene (152 12 7)	X					
48 Benzidine (82 87 5)	X					
58 Benzol (a) Anthracene (58 55 1)	X					
68 Benzol (a) Pyrene (58 52 8)	X					
78 3,4 Benzofluoranthene (205 99 2)	X					
88 Benzol (b) Fluorene (191 24 2)	X					
98 Benzol (k) Fluoranthene (207 08 9)	X					
106 Bis (2 Chloroethoxy) Methane (111 81 1)	X					
118 Bis (2 Chloroethyl) Ether (111 44 4)	X					
128 Bis (2 Chloroisopropyl) Ether (285 38 32 9)	X					
138 Bis (2 Ethylhexyl) Phthalate (117 81 7)	X					
148 4 Bromophenyl Phenyl Ether (101 25 3)	X					
158 Butyl Benzyl Phthalate (85 58 7)	X					
168 2 Chloroacophthalene (91 58 7)	X					
178 4 Chlorophenyl Phenyl Ether (105 7 3)	X					
188 Chrysene (218 01 9)	X					
198 Dibenzol (a h) Anthracene (53 76 3)	X					
208 1,2 Dichlorobenzene (85 58 1)	X					
218 1,3 Dichlorobenzene (1 1 73 1)	X					

RIPDES # (If Assigned) MO-0098001 DUTYALL NUMBER 004

CONTINUE FROM PAGE 5

1. POLLUTANT AND CAS NUMBER (if available)	2. RISK #		3. EFFLUENT		4. MONITORS		5. MUTANE (optional)	
	• LIST NUMBER	• M. M. (1000)	• MAXIMUM DAILY VALUE (1000)	• MAXIMUM 30 DAY VALUE (1000)	• LONG TERM AVERAGE VALUE (1000)	• CONCENTRATION	• CONCENTRATION	• LONG TERM AVERAGE VALUE (1000)
GC/MS FRACTION -- GASE/NEUTRAL COMPOUNDS (continued)	10	1000	(1000)	(1000)	(1000)	(1000)	(1000)	(1000)
278 1,4 Dioxin Benzene (106 96)			X					
285 3,3 Dc Biso Benzodiox (81 94 1)			X					
285 Diethyl Phthalate (84 86 2)			X					
286 Dimethyl Phthalate (133 11 3)			X					
288 Di-N Butyl Phthalate (84 74 2)			X					
278 2,4 Dinitro Toluene (21 14 2)			X					
288 2,6 Dinitro Toluene (68 20 2)			X					
298 Di-N Octyl Phthalate (117 84 0)			X					
305 1,2 Diphenoxy Hydrazine (43 420 Benzene) (322 88 1)			X					
318 Fluoranthene (206 44 0)			X					
325 Fluorene (86 23 1)			X					
330 Hexa chlorobenzene (118 71 1)			X					
345 Hexa chlorobutadiene (87 88 3)			X					
358 Hexachloro cyclopentadiene (77 47 4)			X					
368 Hexachloro ethane (87 72 1)			X					
378 Indeno [1,2,3-cd] Pyrene (143 19 5)			X					
388 Isophthalic (78 99 1)			X					
398 Naphthalene (91 20 3)			X					
408 Naphthalene (98 95 3)			X					
418 N Nitro succinimide (82 75 9)			X					
428 N Nitro- N Propylamine (82 64 7)			X					

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	TEST METHOD (EPA, STATE, OTHER)	IN (mg/L)	MAXIMUM DAILY VALUE (mg/kg)	CONCENTRATION (mg/L)	LONG TERM AVG VALUE (mg/kg)	CONCENTRATION (mg/L)	LONG TERM AVERAGE VALUE (mg/kg)	NO. OF ANAL YSES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)								
435 N Nilo Sulfolene (86-30-5)		X						
448 Phenanthrene (83-01-8)		X						
628 Pyrene (129-07-8)		X						
665 1,2,4- triazole (123-82-1)		X						
GC/MS FRACTION - PESTICIDES								
1P Aloxin (300-00-2)		X						
2P " BHC (319-84-6)		X						
3P " SHC (319-85-7)		X						
4P " BHC (58-09-9)		X						
5P " BHC (319-86-8)		X						
6P Chlor dani (57-74-9)		X						
7P 4,4 DDT (50-29-3)		X						
8P 4,4 DDE (72-56-9)		X						
9P 4,4 DDD (72-54-8)		X						
10P Dieldrin (80-57-1)		X						
11P " Endosulfan (115-29-7)		X						
12P " Endosulfan (115-29-7)		X						
13P Endosulfan Sulfate (1031-01-8)		X						
14P Endrin (72-70-8)		X						
15P Endrin Aldehyde (7421-53-4)		X						
16P Heptachlor (76-44-8)		X						

CONTINUED FROM PAGE 7

NPDES # (If assigned) MO-0098001

OUTFALL NUMBER 004

1. POLLUTANT AND CAS NUMBER (variable)	2. MARK 'X'		3. EFFLUENT		4. NO OF ANAL YSES	4. UNITS		5. INTAKE (optional)	
	USE TOXICITY INDEX (USE TOXICITY INDEX)	USE TOXICITY INDEX (USE TOXICITY INDEX)	a. MAXIMUM 30 DAY VALUE (if available) (1) (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) (2) MASS		a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) (2) MASS	b. NO OF ANAL YSES
6C/MS FRACTION - PESTICIDES (continued)									
17. Dieldrin E-4-31-31		X							
18. PCB 1242 5-40-21-36		X							
19. PCB 1254 1-27-69-31		X							
20. PCB 1271 1-14-76-21		X							
21. PCB 1272 1-14-76-31		X							
22. PCB 1240 2-72-79-61		X							
23. PCB 1260 2-66-82-21		X							
24. PCB 1016 26-4-11-21		X							
25. Toxaphene 801-35-21		X							

**APPLICATION FOR DISCHARGE PERMIT
Form D - Primary Industries**

NPDES # (if Assigned)
MO-0098001

TABLE H

OUTFALL NUMBER
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. TEST REQ. REQUIRED	b. BE LISTED PDI SENT	c. BE LISTED AD SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANAL YSES	a. CONCEN TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANAL YSES
				(1) CONCEN TRATION	(2) MASS	(1) CONCEN TRATION	(2) MASS	(1) CONCEN TRATION	(2) MASS				(1) CONCEN TRATION	(2) MASS	
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 Tetra chlorodibenzo P Dioxin (1764 01 6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST NO. OF PURES	b. DE LOVED FOR SECT	c. DE LOVED AD SECT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANAL YSES
				(1) CONCEN TRATION	(2) MASS	(1) CONCEN TRATION	(2) MASS	(1) CONCEN TRATION	(2) MASS				(1) CONCEN TRATION	(2) MASS	
GC/MS FRACTION -- VOLATILE COMPOUNDS															
1V Acetone (107-02-8)			X												
2V Acrylonitrile (107-13-1)			X												
3V Benzene (71-43-2)			X												
4Z Bis (Chloro methyl) Ether (542-88-1)				*											
5V Bromoform (75-25-2)			X												
6V Carbon Tetrachloride (56-23-5)			X												
7V Chlorobenzene (108-90-7)			X												
8V Chloro-bromomethane (124-48-1)			X												
9V Chloroethane (75-00-3)			X												
10V 2-Chloro ethylvinyl Ether (116-75-8)			X												
11V Chloroform (67-66-3)			X												
12V Dichloro bromomethane (75-27-4)			X												
13V Dichloro difluoromethane (75-71-8)				*											
14V 1,1-Dichloro ethane (75-34-3)			X												
15V 1,2-Dichloro ethane (107-06-2)			X												
16V 1,1-Dichloro ethylene (75-35-4)			X												
17V 1,2-Dichloro propane (78-67-5)			X												
18V 1,2-Dichloro propylene (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.

CONTINUED FROM PAGE 3

NPDES # (if assigned) MO-0098001

OUTFALL NUMBER 007

1. POLLUTANT AND CAS NUMBER (if available)	2. MAXIMUM DAILY VALUE (if available)		3. EFFLUENT		4. UNITS		5. MITIGATE (optional)	
	CONCENTRATION (M)	CONCENTRATION (M)	CONCENTRATION (M)	CONCENTRATION (M)	CONCENTRATION (M)	CONCENTRATION (M)	CONCENTRATION (M)	CONCENTRATION (M)
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)								
27V Methylene Chloride (15-00-2)	X							
23V 1,1,2,2-Tetra Chloroethane (78-37-5)	X							
24V Tetrachloro ethylene (127-18-4)	X							
25V Toluene (100-00-0)	X							
26V 1,2-Dichloro Ethane (107-06-2)	X							
27V 1,1,1-Trichloroethane (71-90-0)	X							
28V 1,1,2-Trichloroethane (78-07-6)	X							
29V Trichloroethylene (79-06-0)	X							
31V Vinyl Chloride (75-01-4)	X							
GC/MS FRACTION - ACID COMPOUNDS								
1A 2-Chlorophenol (85-57-8)	X							
2A 2,4-Dichlorophenol (120-83-2)	X							
3A 2,4-Dinitrophenol (85-67-8)	X							
4A 4-Nitrophenol (93-52-1)	X							
5A 2,6-Dinitrophenol (81-20-4)	X							
6A 2-Nitrophenol (89-79-4)	X							
7A 4-Aminophenol (105-07-7)	X							
8A 2-Chlorophenol (105-85-2)	X							
9A 2-Nitrophenol (87-00-5)	X							
10A Phenol (105-85-2)	X							
11A 2,4,6-Trichlorophenol (88-06-2)	X							

* 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. PARAMETER a. METALS b. PCBs c. Pesticides	3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
		a. MAXIMUM 30 DAY VALUE (1) CONCEN (2) MASS	b. MATHEM DAILY VALUE (1) CONCEN (2) MASS	a. LONG TERM AVG VALUE (1) CONCEN (2) MASS	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCEN (2) MASS	b. NO OF ANAL YSES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS							
18 Acetophenone (83 32 9)	X						
26 Acenaphthylene (208 96 8)	X						
38 Anthracene (120 12 7)	X						
48 Benzidine (82 87 5)	X						
58 Benz[a]Anthracene (15 55 1)	X						
68 Benz[e]Pyrene (50 32 8)	X						
78 3,4-Benzofluoranthene (105 96 2)	X						
88 Benzofluoranthene (151 24 2)	X						
98 Benzofluoranthene (151 24 2)	X						
108 Bis(2-Chloroethyl) Methane (111 81 1)	X						
118 Bis(2-Chloroethyl) Ether (111 44 4)	X						
128 Bis(2-Chloroisopropyl) Ether (106 38 2 9)	X						
138 Bis(2-Ethylhexyl) Phthalate (117 81 7)	X						
148 4-Bromo-bis(2-Phenyl Ethyl) Ether (101 55 3)	X						
158 n-Butyl Benzyl Phthalate (85 66 7)	X						
168 7-Chloro-naphthalene (81 28 7)	X						
178 4-Chloro-Phenyl Phenyl Ether (1005 7 1)	X						
188 Chrysene (218 01 9)	X						
198 Dibenz[a,h]Anthracene (53 76 3)	X						
208 1,2-Dibenzobenzene (85 30 1)	X						
218 1,3-Dichlorobenzene (541 73 1)	X						

CONTINUED FROM PAGE 5

WPDGS # (If Assigned) MO-0098001

OUTFALL NUMBER 007

1. POLLUTANT AND CAS NUMBER (If Available)	2. MARK 'X' IN THE APPROPRIATE BOX	3. EFFLUENT		4. UNITS		5. INTAKE (Optional)	
		a MAXIMUM 30 DAY VALUE (If Available)	b LONG TERM AVERAGE VALUE (If Available)	a CONCENTRATION	b MASS	a LONG TERM AVERAGE VALUE (If Available)	b NO OF ADJL YSES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)							
228 1,4 Dichloro benzene (106 46 7)	X						
238 3,3 Dichloro benzidine (91 94 1)	X						
248 Diethyl Phthalate (84 66 7)	X						
258 Dimethyl Phthalate (131 11 2)	X						
268 Di-N Butyl Phthalate (84 74 2)	X						
278 2,4 Dinitro toluene (121 14 2)	X						
288 2,6 Dinitro toluene (606 26 2)	X						
298 Di-N Octyl Phthalate (117 84 0)	X						
308 1,2 Diphenoxythane (as Azo Benzene) (127 66 7)	X						
318 Fluoranthene (208 44 1)	X						
328 Fluorene (86 73 7)	X						
328 Hexa chlorobenzene (118 71 1)	X						
348 Hexa chlorobutadiene (87 68 3)	X						
358 Hexachloro Cyclopentadiene (77 47 4)	X						
368 Hexachloro ethane (87 72 1)	X						
378 Indeno (1,2,3-cd) Pyrene (193 39 2)	X						
388 Isophthalate (18 58 1)	X						
398 Naphthalene (91 20 3)	X						
408 Naphthalene (98 95 3)	X						
418 N Nitro Sudanethylaniline (82 75 9)	X						
428 N Nitro-N Propylamine (62 74 7)	X						

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)		
	4. HSP CODE (if available)	5. HSP CODE (if available)	a. MAXIMUM DAILY VALUE (CONCENTRATION)	b. MEASUREMENT 30 DAY VALUE (CONCENTRATION)	c. LONG TERM AVG VALUE (if available) (CONCENTRATION)	d. CONCENTRATION	e. MASS	f. LONG TERM AVERAGE VALUE (if available) (CONCENTRATION)	g. MASS
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)									
430 N Nito Sodiumcyanate (80-30-6)		X							
440 Phenacetone (85-01-8)		X							
650 Pyrene (129-00-0)		X							
660 1,2,4-Trichlorobenzene (120-82-3)		X							
GC/MS FRACTION - PESTICIDES									
1P Aldrin (50-00-7)		X							
2P D DHC (319-84-6)		X							
3P B BHC (319-85-7)		X							
4P Y BHC (50-00-3)		X							
5P D BHC (319-86-8)		X							
6P Chlordane (57-74-6)		X							
7P 4,4'-DDE (50-20-3)		X							
8P 4,4'-DDE (72-55-8)		X							
9P 4,4'-DDB (77-54-6)		X							
10P Dieldrin (60-57-1)		X							
11P D Endosulfan (145-29-7)		X							
12P B Endosulfan (115-29-7)		X							
13P Endosulfan Sulfate (1031-07-8)		X							
14P Endrin (77-20-8)		X							
15P Endrin Aldehyde (7427-93-4)		X							
16P Heptachlor (78-44-8)		X							

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OUTFALL NUMBER 007

PIPES # (If assigned) MO-0098001

CONTINUED FROM PAGE 7

1. POLYETHYLENE AND GAS PIPE (Inches)	2. RANGE #		3. ESTIMATED		4. UNITS	5. DETAILED (optional)		
	a. 1151 1998 1999 2000 2001 2002	b. 1152 1998 1999 2000 2001 2002	a. MAXIMUM DAILY VALUE (1) MASS (2) CONCENTRATION	b. ESTIMATED 30 DAY VALUE (1) MASS (2) CONCENTRATION		a. LONG TERM DIVE VALUE (1) MASS (2) CONCENTRATION	a. LONG TERM AVERAGE VALUE (1) MASS (2) CONCENTRATION	b. NO. OF ADJ. YRS
SC/PS FACTORY - PESTICIDES (continued)								
1. 4.36								
2. 1.57 2)								
18. PCB 124C 5-409 21 3)								
19. PCB 125A 7-87 69 1)								
20. PCB 1271 1-34 20 2)								
21. PCB 1272 11 16 5)								
22. PCB 1278 16 2 25 6)								
23. PCB 1280 100 0 7 5)								
24. PCB 1016 58 4 11 7)								
25. Toxaphene 001 15 2)								

**APPLICATION FOR DISCHARGE PERMIT
Form D - Primary Industries**

NPDES # (If Assigned) MO-0098001	TABLE #	OUTFALL NUMBER 009
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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 A-1 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 <small>(if available)</small>	2. MARK 'X'			3. EFFLUENT				4. UNITS			5. INTAKE <small>(optional)</small>				
	a TEST NO. OR QUIDO	b DE LIVER PM SENT	c DE LIVER AD SENT	d MAXIMUM DAILY VALUE		e MAXIMUM 30 DAY VALUE <small>(if available)</small>		f LONG TERM AVG. VALUE <small>(if available)</small>		g NO OF ANAL YSES	h CONCENTRATION	i MASS	j LONG TERM AVERAGE VALUE		k NO OF ANAL YSES
				(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			<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 5)	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															
2378 Tetra chlorodibenzo P Dioxin (1764 01 6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT				4. UNITS	5. INTAKE (optional)						
	a. TEST USE OR NUMBER	b. OF 10000 PPM TEST	c. OF 100000 PPM TEST	d. MAXIMUM DAILY VALUE		e. MAXIMUM 30 DAY VALUE (if available)			f. LONG TERM AVG. VALUE (if available)		g. NO. OF ANALYSES	h. LONG TERM AVERAGE VALUE		i. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS		
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V Acetone (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 (Chloro methyl) 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 Chloro-bromomethane (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 Chloro ethylvinyl 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 Dichloro bromomethane (75 27 4)	X			<2.2	<1.1E-4					1	ug/l	lbs/d			
13V Dichloro difluoromethane (75 71 8)				*											
14V 1,1 Dichloro ethane (75 34 3)	X			<4.7	<2.4E-4					1	ug/l	lbs/d			
15V 1,2 Dichloro ethane (107 06 2)	X			<2.8	<1.4E-4					1	ug/l	lbs/d			
16V 1,1 Dichloro ethylene (75 35 4)	X			<2.8	<1.4E-4					1	ug/l	lbs/d			
17V 1,2 Dichloro propane (78 87 5)	X			<6.0	<3.0E-4					1	ug/l	lbs/d			
18V 1,2 Dichloro propylene **	X			<4.0	<2.0E-4					1	ug/l	lbs/d			
19V 1-Hydrobenzene (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			

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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

SPODES # (If assigned) MO-0098001

OUTFALL NUMBER
009

1. POLLUTANT AND CAS NUMBER (if available)	2. MASS #			3. EFFLUENT				4. UNITS		5. INTAKE (optional)				
	a TEST YES NO	b OF 1000 YES NO	c OF 1000 YES NO	a MAXIMUM DAILY VALUE		b MAXIMUM 30 DAY VALUE (if available)	c LONG TERM AVERAGE VALUE (if available)		d NO. OF ANAL YSES	e ENGINE FRACTION	f MASS	g LONG TERM AVERAGE VALUE		h NO. OF ANAL YSES
				(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)														
270 60 Trifluorethylene (75-03-2)	X			<2.8	<1.4E-4				1	ug/l	lbs/d			
234 1,1,2,2-Tetrachloroethane (78-07-5)	X			<6.9	<3.5E-4				1	ug/l	lbs/d			
240 1,1,1,2-Tetrachloroethane (127-18-0)	X			<4.1	<2.1E-4				1	ug/l	lbs/d			
250 Toluene (108-88-3)	X			<6.0	<3.0E-4				1	ug/l	lbs/d			
267 1,2-Dichlorobenzene (95-49-6)	X			<1.6	<8.0E-5				1	ug/l	lbs/d			
270 1,1,1-Trichloroethane (71-03-3)	X			<3.8	<1.9E-4				1	ug/l	lbs/d			
280 1,1,2-Trichloroethane (78-06-2)	X			<5.0	<2.5E-4				1	ug/l	lbs/d			
280 Trichloroethylene (79-06-2)	X			<1.9	<9.5E-5				1	ug/l	lbs/d			
280 Trichloroethylene (79-06-2)				*										
314 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 4,0-Dinitro-Cresol (53-52-1)	X			<24	<.0012				1	ug/l	lbs/d			
50 2,6-Dinitrophenol (81-59-6)	X			<42	<.0021				1	ug/l	lbs/d			
5A 2,6-Dinitrophenol (81-59-6)	X			<3.6	<1.8E-4				1	ug/l	lbs/d			
7A 4-Chlorophenol (106-47-1)	X			<2.4	<1.2E-4				1	ug/l	lbs/d			
81,7-Dinitro-Cresol (88-05-1)	X			<3.0	<1.5E-4				1	ug/l	lbs/d			
8A 2,4-Dichlorophenol (87-62-5)	X			<3.6	<1.8E-4				1	ug/l	lbs/d			
10A Picric Acid (108-85-2)	X			<1.5	<7.5E-5				1	ug/l	lbs/d			
11A 2,4,6-Trichlorophenol (88-05-2)	X			<2.7	<1.4E-4				1	ug/l	lbs/d			

* 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'	3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
		a MAXIMUM 30 DAY VALUE (1) CONC./FRAC/TON	b MASS (2) MASS	a COEFFICIENT (1) FRAC/TON	b MASS (2) MASS	a LONG TERM AVERAGE VALUE (1) CONC./FRAC/TON	b NO OF ANAL YSES
GC/BQS FRACTION - BASE/NEUTRAL COMPOUNDS							
15 Acenaphthene (83-32-9)	X						
26 Acenaphthylene (200-98-6)	X						
38 Anthracene (120-12-7)	X						
48 Benzidine (95-87-5)	X						
58 Benzofuran (130-55-1)	X						
58 Benzofuran (130-55-1)	X						
78 3,4-Benzofuran (205-99-7)	X						
88 9,10-Dibenzofuran (191-24-2)	X						
98 Benzofuran (130-55-1)	X						
108 Bis(2-Chloroethyl) Methane (111-81-1)	X						
118 Bis(2-Chloroethyl) Ether (111-44-4)	X						
128 Bis(2-Chloroisopropyl) Ether (36638-32-9)	X						
138 Bis(2-Ethylhexyl) Phthalate (117-81-7)	X						
148 4-Bromo-phenyl Phenyl Ether (181-55-3)	X						
158 Butyl Benzyl Phthalate (85-68-7)	X						
168 7-Ethoxycarbonylhexane (91-95-1)	X						
178 4-Cyano-2-ethylphenyl Ether (1825-77-3)	X						
188 Chloroacetic Acid (78-01-9)	X						
198 Dibenz(a,h)Anthracene (53-70-3)	X						
208 1,2-Dichlorobenzene (95-50-1)	X						
218 1,3-Dichlorobenzene (541-73-1)	X						

WPDEN # (If Assigned) **MC-0098001** OUTFALL NUMBER **009**

CONTINUED FROM PAGE 5

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. UNITARE (optional)	
	• 1121 • 1122 • 1123 • 1124 • 1125 • 1126 • 1127 • 1128 • 1129 • 1130	• 1131 • 1132 • 1133 • 1134 • 1135 • 1136 • 1137 • 1138 • 1139 • 1140	a. MAXIMUM DAILY VALUE (1) CONC (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONC (2) MASS	c. LONG TERM AVE. VALUE (1) CONC (2) MASS	d. LONG TERM AVE. VALUE (1) CONC (2) MASS	e. NO. OF ANAL. YRS	f. NO. OF ANAL. YRS
228 1,4 Dinitrobenzene (108-46-7)		X						
238 2,3 Dinitrobenzene (91-94-3)		X						
240 Diethyl Phthalate (84-66-7)		X						
258 Dimethyl Phthalate (131-11-3)		X						
268 Di-N Butyl Phthalate (84-74-2)		X						
278 2,4 Dinitrotoluene (121-14-2)		X						
288 2,6 Dinitrotoluene (88-20-2)		X						
298 Di-N Octyl Phthalate (117-84-0)		X						
308 1,2 Dinitrobenzene (91-89-7)		X						
318 Fluoranthene (208-44-0)		X						
328 Fluorene (86-73-7)		X						
338 Hexachlorobenzene (116-71-3)		X						
348 Hexachlorocyclopentadiene (177-47-4)		X						
358 Hexachloroethane (67-72-3)		X						
378 Indeno (1,2,3-cd) Pyrene (151-25-2)		X						
388 Isophthalic acid (178-58-1)		X						
398 Naphthalene (91-20-3)		X						
408 Nisobutene (58-30-3)		X						
418 N-Nitrosodimethylamine (62-75-9)		X						
428 N-Nitrosodipropylamine (62-76-1)		X						

CONTINUED FROM THE FRONT

1. POLYMER AND CAS NUMBER (if available)	2. MARK 'X'		3. MATHEM DAILY VALUE		3. EFFICIENCY		3. GRAVITY (optional)	
	EST. LEAD TIME PER 1000	EST. LEAD TIME PER 1000	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION
66/088 FRACTION - BASE/NEO-RAI COMPOUNDS (continued)								
408 80 Nitro sulphate-Janner (65 50 6)		X						
448 Phenanthrene (65 01 8)		X						
458 Pyrene (170 03 0)		X						
468 1,2,4,5- -Naphthene (170 82 3)		X						
66/089 FRACTION - PESTICIDES								
1P Aldrin (100 09 2)		X						
2P D DHC (119 04 6)		X						
3P D DHC (119 05 7)		X						
4P D DHC (158 04 3)		X						
5P D DHC (119 06 8)		X						
6P Chlordane (57 74 0)		X						
7P 4,0 DDT (58 29 3)		X						
8P 4,0 DDE (72 56 0)		X						
9P 4,0 DDD (72 54 8)		X						
10P Dieldrin (60 57 1)		X						
11P Endosulfan (115 29 7)		X						
12P Endosulfan (115 29 7)		X						
13P Endosulfan Sulfate (1031 07 8)		X						
14P Endrin (72 20 8)		X						
15P Endrin Alcohol (7021 53 4)		X						
16P Kepone (79 40 8)		X						

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HPDES # (if assigned) MD-0098001

OUTFALL NUMBER 009

1. POLLUTANT AND CAS NUMBERS (available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. SHIFTS (optional)	
	ISST USE IN TO	IN 1970 1971 1972	a. MAXIMUM DAILY VALUE (in mass concentration)	b. LONG TERM AVG. VALUE (in mass concentration)	a. CONC./M FRACTION	b. MASS	a. LONG TERM AVG. VALUE (in mass fraction)	b. NO. OF ADJ. YRS
66/68 FRACTION - PESTICIDES (continued)								
17. Dieldrin 13-00-00		X						
18. PCB 1242 5-00-21-36		X						
19. PCB 1254 1-07-00-11		X						
20. PCB 1271 1-14-20-21		X						
21. PCB 1232 1-11-16-51		X						
22. PCB 1248 1-12-29-61		X						
23. PCB 1260 1-06-02-51		X						
24. PCB 1016 1-04-11-21		X						
25. Toxaphene 0-01-25-21		X						

**APPLICATION FOR DISCHARGE PERMIT
Form B - Primary Industries**

NPDES # (If Assigned) MO-0098001	TABLE B	OUTFALL NUMBER 010
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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. GC/MS FRACTIONS	b. OTHER POLLUTANTS	c. DELETED	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. 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												
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 65 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															
227B Tetra-chlorodibenzo-P-Dioxin (1784 01 6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST NO. OR QUANT	b. DI. (IN) OR PPG SENT	c. DI. (IN) OR AS SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANAL YSES	e. CONCEN TRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. NO. OF ANAL YSES
				(1) CONCEN TRATION	(2) MASS	(1) CONCEN TRATION	(2) MASS	(1) CONCEN TRATION	(2) MASS				(1) CONCEN TRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V Acetone (107-02-6)			X												
2V Acrylonitrile (107-13-1)			X												
3V Benzene (71-43-2)			X												
4V Bis (Chloro methyl) Ether (542-86-1)				*											
5V Bromoform (75-25-2)			X												
6V Carbon Tetrachloride (56-23-5)			X												
7V Chlorobenzene (108-90-7)			X												
8V Chlorobromomethane (124-48-1)			X												
9V Chloroethane (75-00-3)			X												
10V 2-Chloro ethylvinyl Ether (110-75-8)			X												
11V Chloroform (67-66-3)			X												
12V Dichloro bromomethane (75-27-4)			X												
13V Dichloro difluoromethane (75-71-8)				*											
14V 1,1-Dichloro ethane (75-34-3)			X												
15V 1,2-Dichloro ethane (107-06-2)			X												
16V 1,1-Dichloro ethylene (75-35-4)			X												
17V 1,2-Dichloro propane (78-97-5)			X												
18V 1,2-Dichloro propylene (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.

CONTINUED FROM PAGE 3

IMPRES B (if assigned) MO-0098001

OUTFALL NUMBER 010

1. POLLUTANT AND CAS NUMBER (if available)	2. MONITORING		3. EFFLUENT		4. UNITS		5. INTAKE (if applicable)	
	1971	1972	MAXIMUM 30 DAY VALUE (in mass concentration)	IN MASS	CONCENTRATION	CONCENTRATION	LONG TERM AVERAGE VALUE (in mass)	IN MASS
GC/MS FRACTION - VOLATILE COMPOUNDS (Continued)								
274 Methylene Chloride (75-08-2)	X							
226 1,1,2,2-Tetra Chloroethane (79-34-3)	X							
249 Trichloroethylene (127-18-4)	X							
274 Toluene (108-03-3)	X							
209 1,3-Dioxane (132-66-4)	X							
178 1,1,1-Trichloroethane (71-91-0)	X							
206 1,1,2-Trichloroethane (78-07-6)	X							
209 Toluene (108-03-3)	X							
219 Xylene (106-42-3)	X							
GC/MS FRACTION - AROMATIC COMPOUNDS								
16 2-Chlorophenol (105-57-0)	X							
26 2,4-Dichlorophenol (120-83-2)	X							
34 2,4-Dimethylphenol (105-67-8)	X							
44 4,6-Dinitro-2-Cresol (239-52-1)	X							
54 2,4-Dinitrophenol (51-28-4)	X							
54 1-Nitrophenol (89-79-4)	X							
76 4-Nitrophenol (100-02-7)	X							
84 P-Chloro-2-Cresol (95-50-1)	X							
84 p-Nitrochlorophenol (87-83-5)	X							
104 Phenol (108-95-2)	X							
114 2,4,6-Trichlorophenol (88-06-2)	X							

CONTINUE ON REVERSE

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

CONTINUED FROM THE FRONT

1. POLYMER AND GAS NUMBER (if available)	2. COLOR		3. EFFLUENT		4. UNITS		5. VALUE (optional)	
	111 OR 112	113 OR 114	115 OR 116	117 OR 118	119 OR 120	121 OR 122	123 OR 124	125 OR 126
GC/MS DETECTION - BASE/NEUTRAL COMPOUNDS	OR 127	OR 128	OR 129	OR 130	OR 131	OR 132	OR 133	OR 134
OR 135	OR 136	OR 137	OR 138	OR 139	OR 140	OR 141	OR 142	OR 143
10 Acetylphenone (83 37 9)			X					
76 Acetylphenone (76 95 0)			X					
30 Acetic acid (129 12 7)			X					
43 Benzidine (82 07 5)			X					
56 Benzoin (4)			X					
58 Benzoin (4)			X					
65 Benzoin (4)			X					
75 3,4-Benzothiazole (76 95 2)			X					
82 Benzoin (4)			X					
85 Benzoin (4)			X					
95 Benzoin (4)			X					
103 Diethyl Chloroacrylate (111 61 1)			X					
110 Diethyl Chloroacrylate (111 61 4)			X					
120 Diethyl Chloroacrylate (111 61 7)			X					
130 Diethyl Chloroacrylate (111 61 7)			X					
140 Diethyl Chloroacrylate (111 61 7)			X					
150 Diethyl Chloroacrylate (111 61 7)			X					
160 Diethyl Chloroacrylate (111 61 7)			X					
170 Diethyl Chloroacrylate (111 61 7)			X					
180 Diethyl Chloroacrylate (111 61 7)			X					
190 Diethyl Chloroacrylate (111 61 7)			X					
200 Diethyl Chloroacrylate (111 61 7)			X					
210 Diethyl Chloroacrylate (111 61 7)			X					
220 Diethyl Chloroacrylate (111 61 7)			X					
230 Diethyl Chloroacrylate (111 61 7)			X					
240 Diethyl Chloroacrylate (111 61 7)			X					
250 Diethyl Chloroacrylate (111 61 7)			X					
260 Diethyl Chloroacrylate (111 61 7)			X					
270 Diethyl Chloroacrylate (111 61 7)			X					
280 Diethyl Chloroacrylate (111 61 7)			X					
290 Diethyl Chloroacrylate (111 61 7)			X					
300 Diethyl Chloroacrylate (111 61 7)			X					
310 Diethyl Chloroacrylate (111 61 7)			X					
320 Diethyl Chloroacrylate (111 61 7)			X					
330 Diethyl Chloroacrylate (111 61 7)			X					
340 Diethyl Chloroacrylate (111 61 7)			X					
350 Diethyl Chloroacrylate (111 61 7)			X					
360 Diethyl Chloroacrylate (111 61 7)			X					
370 Diethyl Chloroacrylate (111 61 7)			X					
380 Diethyl Chloroacrylate (111 61 7)			X					
390 Diethyl Chloroacrylate (111 61 7)			X					
400 Diethyl Chloroacrylate (111 61 7)			X					
410 Diethyl Chloroacrylate (111 61 7)			X					
420 Diethyl Chloroacrylate (111 61 7)			X					
430 Diethyl Chloroacrylate (111 61 7)			X					
440 Diethyl Chloroacrylate (111 61 7)			X					
450 Diethyl Chloroacrylate (111 61 7)			X					
460 Diethyl Chloroacrylate (111 61 7)			X					
470 Diethyl Chloroacrylate (111 61 7)			X					
480 Diethyl Chloroacrylate (111 61 7)			X					
490 Diethyl Chloroacrylate (111 61 7)			X					
500 Diethyl Chloroacrylate (111 61 7)			X					
510 Diethyl Chloroacrylate (111 61 7)			X					
520 Diethyl Chloroacrylate (111 61 7)			X					
530 Diethyl Chloroacrylate (111 61 7)			X					
540 Diethyl Chloroacrylate (111 61 7)			X					
550 Diethyl Chloroacrylate (111 61 7)			X					
560 Diethyl Chloroacrylate (111 61 7)			X					
570 Diethyl Chloroacrylate (111 61 7)			X					
580 Diethyl Chloroacrylate (111 61 7)			X					
590 Diethyl Chloroacrylate (111 61 7)			X					
600 Diethyl Chloroacrylate (111 61 7)			X					
610 Diethyl Chloroacrylate (111 61 7)			X					
620 Diethyl Chloroacrylate (111 61 7)			X					
630 Diethyl Chloroacrylate (111 61 7)			X					
640 Diethyl Chloroacrylate (111 61 7)			X					
650 Diethyl Chloroacrylate (111 61 7)			X					
660 Diethyl Chloroacrylate (111 61 7)			X					
670 Diethyl Chloroacrylate (111 61 7)			X					
680 Diethyl Chloroacrylate (111 61 7)			X					
690 Diethyl Chloroacrylate (111 61 7)			X					
700 Diethyl Chloroacrylate (111 61 7)			X					
710 Diethyl Chloroacrylate (111 61 7)			X					
720 Diethyl Chloroacrylate (111 61 7)			X					
730 Diethyl Chloroacrylate (111 61 7)			X					
740 Diethyl Chloroacrylate (111 61 7)			X					
750 Diethyl Chloroacrylate (111 61 7)			X					
760 Diethyl Chloroacrylate (111 61 7)			X					
770 Diethyl Chloroacrylate (111 61 7)			X					
780 Diethyl Chloroacrylate (111 61 7)			X					
790 Diethyl Chloroacrylate (111 61 7)			X					
800 Diethyl Chloroacrylate (111 61 7)			X					
810 Diethyl Chloroacrylate (111 61 7)			X					
820 Diethyl Chloroacrylate (111 61 7)			X					
830 Diethyl Chloroacrylate (111 61 7)			X					
840 Diethyl Chloroacrylate (111 61 7)			X					
850 Diethyl Chloroacrylate (111 61 7)			X					
860 Diethyl Chloroacrylate (111 61 7)			X					
870 Diethyl Chloroacrylate (111 61 7)			X					
880 Diethyl Chloroacrylate (111 61 7)			X					
890 Diethyl Chloroacrylate (111 61 7)			X					
900 Diethyl Chloroacrylate (111 61 7)			X					
910 Diethyl Chloroacrylate (111 61 7)			X					
920 Diethyl Chloroacrylate (111 61 7)			X					
930 Diethyl Chloroacrylate (111 61 7)			X					
940 Diethyl Chloroacrylate (111 61 7)			X					
950 Diethyl Chloroacrylate (111 61 7)			X					
960 Diethyl Chloroacrylate (111 61 7)			X					
970 Diethyl Chloroacrylate (111 61 7)			X					
980 Diethyl Chloroacrylate (111 61 7)			X					
990 Diethyl Chloroacrylate (111 61 7)			X					
1000 Diethyl Chloroacrylate (111 61 7)			X					

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NPDES # (If Assigned) MO-0098001

OUTFALL NUMBER 010

1. POLLUTANT AND CAS NUMBER (If available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	1131 NO. OF SAMPLES IN	1132 NO. OF SAMPLES OUT	1133 MAXIMUM DAILY VALUE (LBS) CONCENTRATION	1134 MAXIMUM 30 DAY VALUE (LBS) CONCENTRATION	1135 LONG TERM AVG. VALUE (LBS) CONCENTRATION	1136 LONG TERM AVERAGE VALUE (LBS) CONCENTRATION	1137 NO. OF ANAL TESTS	1138 NO. OF ANAL TESTS
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)								
270 1,4-Dichloro benzene (106-46-7)		X						
276 3,3-Dichloro benzidine (81-94-1)		X						
240 Diethyl Phthalate (84-66-7)		X						
256 Dimethyl Phthalate (131-11-3)		X						
268 Di-N-Butyl Phthalate (84-74-2)		X						
278 7,4-Dinitro toluene (121-14-2)		X						
286 2,6-Dinitro toluene (68-26-7)		X						
298 Di-N-Butyl Phthalate (117-84-0)		X						
308 1,2-Diphenyl- hydrazine (as Azo benzene) (127-08-7)		X						
318 Fluoranthene (206-84-0)		X						
326 Fluorene (86-73-7)		X						
336 Hexa- chlorobenzene (118-75-1)		X						
346 Hexa- chlorobiphenyl (87-68-3)		X						
356 Hexachloro- cyclopentadiene (77-47-4)		X						
366 Hexachloro- ethane (67-72-1)		X						
376 Indeno (1,2,3-c,d) Pyrene (183-39-5)		X						
386 Isophorone (178-99-1)		X						
396 Naphthalene (91-20-3)		X						
406 Naphthalene (83-85-3)		X						
416 N-Nitro- submethylamine (87-75-9)		X						
426 N-Nitrosodimethyl- amine (67-16-7)		X						

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	TEST PERIOD	IN TEST	MAXIMUM 30 DAY VALUE (if available)	1-YEAR TERM AVERAGE VALUE (if available)	LOWER LIMITATION	MASS	1-YEAR TERM AVERAGE VALUE (if mass)	NO. OF AREA TESTS
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)	GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)	GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)	GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)	GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)	GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)	GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)	GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)	GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)
4181 N Nis... Sulphathiazole (86-30-6)		X						
648 Phenanthrene (85-01-6)		X						
658 Pyrene (129-00-9)		X						
660 1,2,4,5-tetra... Chlorobenzene (120-82-1)		X						
GC/MS FRACTION - PESTICIDES								
1P Aldrin (100-00-2)		X						
2P D DHC (119-84-6)		X						
3P D DHC (119-85-1)		X						
4P Y DHC (58-89-9)		X						
5P D DHC (119-85-6)		X						
6P Chlordane (57-74-9)		X						
7P 4,4'-DDE (50-20-3)		X						
8P 4,4'-DDE (52-55-9)		X						
9P 4,4'-DDE (77-54-6)		X						
10P Dieldrin (60-57-1)		X						
11P Dieldrin (145-29-7)		X						
12P Dieldrin (145-29-7)		X						
13P Endosulfan Sulfate (6031-07-8)		X						
14P Endosulfan (77-20-8)		X						
15P Endosulfan Monophosphate (7421-93-4)		X						
16P Heptachlor (76-44-8)		X						

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1. POLLUTANT AND CAS NUMBER (See table)	2. MARK 'X'		3. EFFLUENT a. MAXIMUM 30 DAY VALUE (% MASS) CONCENTRATION	4. NO OF ANAL YSES	4. UNITS a. CONCENTRATION	5. STATE (optional) a. LONG TERM AVERAGE VALUE (% MASS) CONCENTRATION	b. NO OF ANAL YSES
	a. TEST CODE (See table)	b. IN USE (See table)					
GC/MS FRACTION - PESTICIDES (continued)							
1. Dieldrin 50-51-5		X					
16. PCB 1242 5009-71-9		X					
19. PCB 1254 7907-09-3		X					
23. PCB 1271 144-20-2		X					
27. PCB 1282 81-86-5		X					
31. PCB 1298 62-29-6		X					
32. PCB 1299 80-82-5		X					
33. PCB 1016 76-411-2		X					
34. Toxaphene 8001-35-2		X					

**APPLICATION FOR DISCHARGE PERMIT
Form B - Primary Industries**

NPDES # (If Assigned) MO-0098001	TABLE #	OUTFALL NUMBER 011
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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 GC/MS FRACTION	b. DE LEVED FOR SENT	c. DE LEVED FOR SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVERAGE VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. 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												
2M Arsenic Total (7440-39-2)			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 (7439-92-6)		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 (7440-29-0)			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			
DIKIN															
2378 Tetra-chlorodibenzo-P-Dioxin (1754-01-6)			X	DESCRIBE RESULTS											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	TEST METHOD	NO. OF TESTS	MAXIMUM DAILY VALUE (1) CONC. (2) MASS	MAXIMUM 30 DAY VALUE (1) CONC. (2) MASS	LONG TERM AVERAGE VALUE (1) CONC. (2) MASS	CONC. FRACTION	MASS	LONG TERM AVERAGE VALUE (1) CONC. (2) MASS
GC/MS FRACTION -- VOLATILE COMPOUNDS								
1W Acetone (107-62-8)		X						
2V Acrylonitrile (107-13-3)		X						
3V Benzene (71-43-2)		X						
4V Bis (Chloro methyl) Ether (542-86-1)			*					
5V Bromethane (75-25-2)		X						
6V Carbon tetrachloride (56-23-5)		X						
7V Chlorobenzene (100-90-7)		X						
8V Chloro-bromomethane (524-48-1)		X						
9V Chloroethane (75-00-3)		X						
10V 2 Chloro ethylmethyl Ether (110-75-8)		X						
11V Chloroform (67-66-3)		X						
12V Dichloro-bromomethane (75-27-4)		X						
13V Dichloro-difluoromethane (75-71-8)			*					
14V 1,1-Dichloro ethane (75-34-3)		X						
15V 1,2-Dichloro ethane (107-06-7)		X						
16V 1,1-Dichloro ethylene (75-35-4)		X						
17V 1,2-Dichloro propane (78-07-5)		X						
18V 1,2-Dichloro propylene (547-75-6) **		X						
19V Ethylbenzene (100-41-4)		X						
20V Methyl Bromide (74-83-8)		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.

1. POLLUTANT AND CAS NUMBER (if available)	2. MONITORING PERIOD		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	1987 MONITORING PERIOD	1988 MONITORING PERIOD	30 DAY VALUE IN MASS concentration	LONG TERM AVERAGE VALUE IN MASS concentration	CONCENTRATION	MASS FRACTION	10 YEAR AVERAGE VALUE IN MASS	NO. OF ANALYSES
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)								
27V Methylene Chloride (75-09-2)		X						
27W 1,1,2,2-Tetra-chloroethane (79-34-5)		X						
28U 1,1,1,2-tetrahydro-ethylene (127-18-4)		X						
29V Toluene (108-88-3)		X						
29W 1,2-Dichloroethane (107-06-2)		X						
29X 1,1,1-Trichloroethane (71-91-2)		X						
29Y 1,1,2,2-Tetrachloroethane (101-01-1)		X						
29Z 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30A 1,1,1-Trichloroethane (71-91-2)		X						
30B 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30C 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30D 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30E 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30F 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30G 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30H 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30I 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30J 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30K 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30L 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30M 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30N 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30O 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30P 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30Q 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30R 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30S 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30T 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30U 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30V 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30W 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30X 1,1,2,2-Tetrachloroethane (101-01-1)		X						
30Y 1,1,1,2-Tetrachloroethane (101-01-1)		X						
30Z 1,1,2,2-Tetrachloroethane (101-01-1)		X						
31V Vinyl Chloride (75-01-4)		X						
GC/MS FRACTION - ACID COMPOUNDS								
31A 2-Chlorophenol (95-57-8)		X						
31B 2,4-Dichlorophenol (120-83-2)		X						
31C 2,4-Dimethylphenol (105-67-9)		X						
31D 4-Chlorophenol (106-47-8)		X						
31E 2,4-Dichlorophenol (120-83-2)		X						
31F 2,4-Dimethylphenol (105-67-9)		X						
31G 4-Chlorophenol (106-47-8)		X						
31H 2-Chlorophenol (95-57-8)		X						
31I 2,4-Dichlorophenol (120-83-2)		X						
31J 2,4-Dimethylphenol (105-67-9)		X						
31K 4-Chlorophenol (106-47-8)		X						
31L 2-Chlorophenol (95-57-8)		X						
31M 2,4-Dichlorophenol (120-83-2)		X						
31N 2,4-Dimethylphenol (105-67-9)		X						
31O 4-Chlorophenol (106-47-8)		X						
31P 2-Chlorophenol (95-57-8)		X						
31Q 2,4-Dichlorophenol (120-83-2)		X						
31R 2,4-Dimethylphenol (105-67-9)		X						
31S 4-Chlorophenol (106-47-8)		X						
31T 2-Chlorophenol (95-57-8)		X						
31U 2,4-Dichlorophenol (120-83-2)		X						
31V 2,4-Dimethylphenol (105-67-9)		X						
31W 4-Chlorophenol (106-47-8)		X						
31X 2-Chlorophenol (95-57-8)		X						
31Y 2,4-Dichlorophenol (120-83-2)		X						
31Z 2,4-Dimethylphenol (105-67-9)		X						
32A 2-Chlorophenol (95-57-8)		X						
32B 2,4-Dichlorophenol (120-83-2)		X						
32C 2,4-Dimethylphenol (105-67-9)		X						
32D 4-Chlorophenol (106-47-8)		X						
32E 2-Chlorophenol (95-57-8)		X						
32F 2,4-Dichlorophenol (120-83-2)		X						
32G 2,4-Dimethylphenol (105-67-9)		X						
32H 4-Chlorophenol (106-47-8)		X						
32I 2-Chlorophenol (95-57-8)		X						
32J 2,4-Dichlorophenol (120-83-2)		X						
32K 2,4-Dimethylphenol (105-67-9)		X						
32L 4-Chlorophenol (106-47-8)		X						
32M 2-Chlorophenol (95-57-8)		X						
32N 2,4-Dichlorophenol (120-83-2)		X						
32O 2,4-Dimethylphenol (105-67-9)		X						
32P 4-Chlorophenol (106-47-8)		X						
32Q 2-Chlorophenol (95-57-8)		X						
32R 2,4-Dichlorophenol (120-83-2)		X						
32S 2,4-Dimethylphenol (105-67-9)		X						
32T 4-Chlorophenol (106-47-8)		X						
32U 2-Chlorophenol (95-57-8)		X						
32V 2,4-Dichlorophenol (120-83-2)		X						
32W 2,4-Dimethylphenol (105-67-9)		X						
32X 4-Chlorophenol (106-47-8)		X						
32Y 2-Chlorophenol (95-57-8)		X						
32Z 2,4-Dichlorophenol (120-83-2)		X						

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1. POLLUTANT AND GAS NUMBER (if available)	2. MAXIM. 'X'		3. EFFLUENT		4. UNITS		5. WYANE (optional)		
	1111 NO. OF SAMPLES ANALYZED	NO. OF EXCEEDING VALUES	a. MAXIMUM DAILY VALUE (% MASS)	b. MAXIMUM 30 DAY VALUE (% MASS)	c. LONG TERM AVG. VALUE (% MASS)	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (% MASS)	b. NO. OF ANALYSES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS									
10 Acetophenone (83-32-9)		X							
26 Acenaphthylene (209-96-9)		X							
30 Anthracene (150-14-2)		X							
40 Benzofuran (202-87-5)		X							
50 Benzofuran Anthracene (56-55-7)		X							
60 Benzofuran Furan (50-37-8)		X							
70 3,4-Benzofurananthracene (205-99-7)		X							
80 Benzofuran Phenanthrene (191-24-7)		X							
90 Benzofuran Fluoranthene (207-08-9)		X							
100 Bis (2-Chloroethoxy) Methane (111-81-1)		X							
110 Bis (2-Chloroethyl) Ether (111-64-4)		X							
120 Bis (2-Chloroisopropyl) Ether (195-9-9)		X							
130 Bis (2-Ethylhexyl) Phthalate (117-81-7)		X							
140 4-Bromo phenyl Phenyl Ether (101-55-3)		X							
150 Butyl Benzyl Phthalate (85-68-7)		X							
160 7-Chloro isophthalate (91-58-7)		X							
170 4-Chloro phenyl Phenyl Ether (1005-72-3)		X							
180 Chrysene (218-01-9)		X							
190 Dibenzofuran Anthracene (53-70-3)		X							
200 1,2-Dichlorobenzene (105-50-1)		X							
210 1,3-Dichlorobenzene (541-73-1)		X							

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NPDES # (If Assigned) MO-0098001

OUTFALL NUMBER 611

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK X		3. EFFLUENT		4. UNITS		5. INTAKE (optional)		
	1131 USE TO REPORT IN SRT	1132 USE TO REPORT IN SRT	a. MAXIMUM DAILY VALUE (1) concentration	b. MAXIMUM 30 DAY VALUE (2) concentration	c. LONG TERM AVERAGE VALUE (3) concentration	d. CONCENTRATION	e. MASS	f. LONG TERM AVERAGE VALUE (1) concentration (2) mass	g. NO. OF ANALYSES YES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)									
278 1,4 Dichloro benzene (106-46-7)		X							
278 3,3 Dichloro benzidine (91-94-1)		X							
290 Diethyl Phthalate (84-66-7)		X							
298 Dimethyl Phthalate (131-11-3)		X							
298 Di-N-Butyl Phthalate (84-74-7)		X							
278 2,4 Dinitro toluene (121-14-2)		X							
298 2,6 Dinitro toluene (88-26-2)		X							
298 Di-N-Octyl Phthalate (117-84-0)		X							
300 2,2-Diglyoxy- hydrazine (45-82-0) benzene (127-98-7)		X							
318 Fluoranthene (178-09-6)		X							
328 Fluorene (86-73-7)		X							
338 Hexa chlorobenzene (118-71-1)		X							
348 Hexa chlorobutadiene (47-68-3)		X							
358 Hexachloro cyclopentadiene (17-47-4)		X							
368 Hexachloro ethane (67-72-1)		X							
378 Indeno (1,2,3-c,d) Pyrene (183-39-5)		X							
388 Isophthalene (128-56-1)		X							
398 Naphthalene (91-20-3)		X							
408 Nitrobenzene (98-95-3)		X							
418 N-Nitro sulfonmethylaniline (62-75-9)		X							
428 N-Nitro-N-Propylaniline (621-64-7)		X							

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USE 1008

CONTAMINANTS FROM THE PESTICIDE

1. PESTICIDE NAME CAS NO. (if available)	2. CONTAMINANTS			3. CONTRIBUTION TO MAX VALUE OF CONTAMINANT			4. SOURCE			5. OTHER (optional)			
	CHLOROCYCLOPROPANE	CHLOROCYCLOPROPYLENE	CHLOROCYCLOPROPYLENE	CONCENTRATION	IN CASE	CONCENTRATION	IN CASE	CONCENTRATION	IN CASE	CONCENTRATION	IN CASE	CONCENTRATION	IN CASE
418 9-Butyl Chlorocyclopropylamine (85-30-5)	X												
440 Phenanthrene (85-81-5)	X												
458 Pyrene (123-65-0)	X												
528 1,2,4,5-Tetrachlorocyclohexane (155-87-3)	X												
EC/MS PRACTICES - PESTICIDES													
1P Aldrin (100-66-7)	X												
2P - DHC (170-80-6)	X												
3P - BHC (119-65-7)	X												
4P - BHC (156-89-9)	X												
5P - BHC (1319-85-8)	X												
6P Chlorobenzene (65-70-0)	X												
7P - O.E.D.M. (50-59-3)	X												
8P - 4,4'-DDE (171-59-0)	X												
9P - 4,4'-DDE (171-59-0)	X												
10P Dieldrin (105-57-1)	X												
11P - Endosulfan (115-79-7)	X												
12P - Endosulfan (115-79-7)	X												
13P Endosulfan Sulfate (1031-07-8)	X												
14P Endosulfan (171-59-0)	X												
15P Endosulfan (171-59-0)	X												
16P Heptachlor (176-44-8)	X												

CONTINUED ON PAGE 6

NPDES # (if assigned) MO-0098001

OUTFALL NUMBER 011

CONTINUED FROM PAGE 7

1. POLLUTANT AND CAS NUMBER (if available)	2. MAXIMUM		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	1551 MAY 1970 MAY 1971	1552 MAY 1970 MAY 1971	a. MAXIMUM 30 DAY VALUE (% MASS) concentration	b. MAXIMUM 30 DAY VALUE (% MASS) concentration	a. LONG TERM AVERAGE VALUE (% MASS) concentration	b. LONG TERM AVERAGE VALUE (% MASS)	a. NO. OF AREA YSES	b. NO. OF AREA YSES
GC/MS FRACTION - PESTICIDES (continued)								
1* Negraactive EPA # 352-9	X							
16* PCB 042 5-09-71-9	X							
19* PCB 054 1-02-09-11	X							
25* PCB 0271 1-14-28-21	X							
27* PCB 0222 1-11-96-51	X							
28* PCB 0240 6-22-29-61	X							
29* PCB 0260 1-05-02-51	X							
30* PCB 0016 10-4-11-21	X							
32* Toxaphene 9-01-35-21	X							

**APPLICATION FOR DISCHARGE PERMIT
Form B - Primary Industries**

TABLE B	
NPDES # (If Assigned) MO-0098001	OUTFALL NUMBER 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 GC/MS REQUIRED	b BE LIEVED PRESENT	c BE LIEVED ABSENT	a MAXIMUM DAILY VALUE		b MAXIMUM 30 DAY VALUE (if available)		c LONG TERM AVERAGE VALUE (if available)		d NO OF ANALYSES	e CONCENTRATION	f 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															
100 Antimony Total (7440-36-0)			X												
200 Arsenic Total (7440-39-2)			X												
300 Beryllium Total (7440-41-7)			X												
400 Cadmium Total (7440-43-9)			X												
500 Chromium Total (7440-47-3)			X												
600 Copper Total (7550-50-8)		X		37	.002					1	ug/l	lbs/d			
700 Lead Total (7439-97-6)		X		<66	<.004					1	ug/l	lbs/d			
800 Mercury Total (7439-97-6)			X												
900 Nickel Total (7440-02-0)		X		<19	<.001					1	ug/l	lbs/d			
1000 Selenium Total (7782-49-2)			X												
1100 Silver Total (7440-22-4)			X												
1200 Thallium Total (7440-28-0)			X												
1300 Zinc Total (7440-06-6)		X		32	<.002					1	ug/l	lbs/d			
1400 Cyanide Total (57-12-5)			X												
1500 Phenols Total		X		2.87	.0002					1	ug/l	lbs/d			
DIOXIN															
2,3,7,8 Tetra-chlorodibenzo-P-Dioxin (1784-01-5)			X	DESCRIBE RESULTS											

1. POLLUTANT AND CAS NUMBER (if available)	2. HAZARDOUS		3. EFFLUENT		4. UNITS		5. INTAKE (optional)		
	• LISTED OR NOT	• OR NOT	• MAXIMUM DAILY VALUE (lb mass) (1)	• MAXIMUM 30 DAY VALUE (lb mass) (2)	• LONG TERM AVERAGE VALUE (lb mass) (3)	• NO. OF ANNUAL TESTS	• CONCENTRATION	• MASS	• NO. OF ANNUAL TESTS
GC/MS FRACTION - VOLATILE COMPOUNDS									
1V Acetone (107-92-6)	X								
7V Acrylonitrile (107-13-3)	X								
7W Benzene (71-43-7)	X								
4V Bis (Chloromethyl) Ether (542-86-1)			*						
5V Bromoform (75-25-7)	X								
6V Carbon Tetrachloride (56-23-5)	X								
7V Chlorobenzene (108-90-7)	X								
8V Chlorobromomethane (124-48-1)	X								
9V Chloroethane (75-00-3)	X								
09V 2 Chloroethanol Ether (110-75-6)	X								
11V Chloroform (67-66-3)	X								
12V Dichlorodimethylmethane (75-27-4)	X								
13V Dichlorodifluoromethane (75-71-8)									
14V 1,1 Dichloroethane (75-34-3)	X								
15V 1,2 Dichloroethane (107-58-7)	X								
16V 1,1 Dichloroethylene (75-35-4)	X								
17V 1,2 Dichloropropane (78-07-5)	X								
18V 1,2 Dichloropropane (78-07-5)	X								
19V 1,1,1 Trichloroethane (70-14-7)	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.

1. POLLUTANT AND CAS NUMBER (if available)	2. CASE #		3. EFFLUENT		4. UNITS		5. INTAKE (approximate)	
	1971-72	1973-74	1975-76	1977-78	1979-80	1981-82	1983-84	1985-86
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)								
274 44 Toluene Chloride (75-05-2)			X					
279 1127 Toluene chloroethane (79-34-5)			X					
284 1-methyl-2-ethylbenzene (107-10-4)			X					
290 Toluene (108-90-3)			X					
291 1,2-Dichloroethane (107-06-2)			X					
319 1111 Toluene (71-08-2)			X					
320 1127 Toluene chloroethane (79-34-5)			X					
324 Toluene chloroethane (79-34-5)			X					
325 Toluene chloroethane (79-34-5)			X					
326 Toluene chloroethane (79-34-5)			X					
327 Toluene chloroethane (79-34-5)			X					
328 Toluene chloroethane (79-34-5)			X					
329 Toluene chloroethane (79-34-5)			X					
330 Toluene chloroethane (79-34-5)			X					
331 Vinyl Chloride (75-01-4)			X					
GC/MS FRACTION - ACID COMPOUNDS								
14 2-Chlorophenol (95-57-2)			X					
78 2,4-Dichlorophenol (107-05-2)			X					
34 2,4-Dichlorophenol (107-05-2)			X					
44 4,6-Dichlorophenol (107-05-2)			X					
54 2,4-Dichlorophenol (107-05-2)			X					
74 4-Chlorophenol (107-05-2)			X					
84 2,4-Dichlorophenol (107-05-2)			X					
94 2,4-Dichlorophenol (107-05-2)			X					
104 2,4-Dichlorophenol (107-05-2)			X					
114 2,4-Dichlorophenol (107-05-2)			X					

* 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. WASH X		3. EFFLUENT		4. UNITS		5. WYAKE (approx.)		
	1151 (1000) (1000) (1000)	1151 (1000) (1000) (1000)	WASHING 30 DAY VALUE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	WASHING 30 DAY VALUE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	CONCEN TRATION	CONCEN TRATION	LONG TERM AVERAGE VALUE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	LONG TERM AVERAGE VALUE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	
15 Acenaphthene (83 37 5)		X							
78 Acenaphthylene (205 58 8)		X							
30 Anthracene (126 12 7)		X							
48 Benzidine (62 87 5)		X							
58 Benzol (a) Anthracene (56 50 3)		X							
68 Benzol (a) Pyrene (50 37 8)		X							
79 3,4-Benzofluoranthene (205 99 2)		X							
85 Benzol (g) Fluoranthene (121 24 7)		X							
98 Benzol (h) Fluoranthene (207 08 5)		X							
108 Bis (2-Chloroethyl) Sulfane (111 61 1)		X							
118 Bis (2-Chloroethyl) Ether (111 68 4)		X							
128 Bis (2-Chloroethyl) Ether (205 08 3)		X							
138 Bis (2-Ethylhexyl) Phthalate (117 81 7)		X							
148 4-Bromo-Phenyl Phenyl Ether (101 25 3)		X							
158 Butyl Benzyl Phthalate (85 68 7)		X							
168 7-Chloro-naphthalene (91 58 7)		X							
178 4-Chloro-Phenyl Phenyl Ether (205 71 3)		X							
188 Chrysene (218 01 9)		X							
198 Dibenzol (a) Anthracene (53 78 3)		X							
208 1,7-Dichlorobenzene (105 58 1)		X							
218 1,1-Dichlorobenzene (541 73 1)		X							

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MPDES # (If Assigned) MO-009B001

OUTFALL NUMBER 012

1. POLLUTANT AND CAS NUMBER (if available)	2. MAIN X		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	• 1121 CAS NO.	• 1122 CAS NO.	• MAXIMUM DAILY VALUE (M) MASS CONCENTRATION	• MAXIMUM 30 DAY VALUE (M) MASS CONCENTRATION	• COMPLET PERCENT	• MASS	• LONG TERM AVERAGE VALUE (M) MASS CONCENTRATION	• LONG TERM AVERAGE VALUE (M) MASS CONCENTRATION
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (continued)								
276 1,4 Dioxin benzene (86-46-7)	X							
296 3,3 Dichloro benzene (95-94-1)	X							
208 Dimethyl Phthalate (84-66-7)	X							
256 Dimethyl Phthalate (133-11-3)	X							
268 Di-N Butyl Phthalate (84-74-7)	X							
278 2,4 Dinitro toluene (127-18-7)	X							
288 2,6 Dinitro toluene (686-70-7)	X							
298 Di-N Octyl Phthalate (117-84-0)	X							
308 1,2 Dipheno- lyl ether (127-08-1)	X							
318 Fluoranthene (206-44-0)	X							
328 Fluorene (86-73-1)	X							
338 Hexa chlorobenzene (118-71-1)	X							
348 Hexa chlorobutadiene (87-68-3)	X							
358 Hexachloro cyclopentadiene (1747-4)	X							
368 Hexachloro ethane (67-72-1)	X							
378 Indeno 1,2,3-c(1 Pyrene (193-39-5)	X							
388 Isophthalone (18-58-1)	X							
398 Naphthalene (91-20-3)	X							
408 Nitrobenzene (98-95-3)	X							
418 N Nitro sulfonamide (82-75-9)	X							
428 N Nitro-2,6- N Propylamino (82164-7)	X							

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1. POLLUTANT NUMBER (if available)	2. MARK 'X'	3. EFFLUENT		4. UNITS		5. OUTSIDE (optional)	
		a MAXIMUM DAILY VALUE (ppm)	b MAXIMUM 30 DAY VALUE (ppm)	a SPECIFIC LIMITATION	b MASS	a LONG TERM AVERAGE VALUE (ppm)	b OR OF (ppm)
GC/MS FRACTION - BASE/NEU. BAL COMPOUNDS (continued)							
439 4-Ethyl-1-methylpiperazine (129-01-5)	X						
440 Permethrin (50-01-5)	X						
450 Pyrene (129-00-9)	X						
460 1,2,4-Trichlorobenzene (120-82-1)	X						
GC/MS FRACTION - PESTICIDES							
1P Aldrin (309-00-2)	X						
2P D-DTC (319-04-0)	X						
3P D-DTC (319-05-7)	X						
4P D-DTC (319-05-8)	X						
5P D-DTC (319-05-9)	X						
6P Chlorfenvinphos (57-74-9)	X						
7P D-DTC (319-05-7)	X						
8P D-DTC (319-05-8)	X						
9P D-DTC (319-05-9)	X						
10P D-DTC (319-06-0)	X						
11P D-DTC (319-06-1)	X						
12P D-DTC (319-06-2)	X						
13P D-DTC (319-06-3)	X						
14P D-DTC (319-06-4)	X						
15P D-DTC (319-06-5)	X						
16P D-DTC (319-06-6)	X						
17P D-DTC (319-06-7)	X						
18P D-DTC (319-06-8)	X						
19P D-DTC (319-06-9)	X						
20P D-DTC (319-07-0)	X						
21P D-DTC (319-07-1)	X						
22P D-DTC (319-07-2)	X						
23P D-DTC (319-07-3)	X						
24P D-DTC (319-07-4)	X						
25P D-DTC (319-07-5)	X						
26P D-DTC (319-07-6)	X						
27P D-DTC (319-07-7)	X						
28P D-DTC (319-07-8)	X						
29P D-DTC (319-07-9)	X						
30P D-DTC (319-08-0)	X						
31P D-DTC (319-08-1)	X						
32P D-DTC (319-08-2)	X						
33P D-DTC (319-08-3)	X						
34P D-DTC (319-08-4)	X						
35P D-DTC (319-08-5)	X						
36P D-DTC (319-08-6)	X						
37P D-DTC (319-08-7)	X						
38P D-DTC (319-08-8)	X						
39P D-DTC (319-08-9)	X						
40P D-DTC (319-09-0)	X						
41P D-DTC (319-09-1)	X						
42P D-DTC (319-09-2)	X						
43P D-DTC (319-09-3)	X						
44P D-DTC (319-09-4)	X						
45P D-DTC (319-09-5)	X						
46P D-DTC (319-09-6)	X						
47P D-DTC (319-09-7)	X						
48P D-DTC (319-09-8)	X						
49P D-DTC (319-09-9)	X						
50P D-DTC (319-10-0)	X						

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NPDES # (if assigned) MD-0098001

OUTFALL NUMBER
012

1. POLLUTANT AND CAS NUMBER (see Appendix 1)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. MITTAGE (optional)	
	USE TO REPORT TO STATE	USE TO REPORT TO EPA	30 DAY VALUE (if concentration)	DAILY VALUE (if mass)	CONCENTRATION	MASS	CONCENTRATION	MASS
GC/MS FRACTION - PESTICIDES (continued)								
17 heptachlor E, 4-ep 352-8	X							
18 PCB 1047 3,4,5,7,8	X							
19 PCB 1054 1,2,3,6,7,8	X							
20 PCB 1271 1,2,3,6,7,8	X							
21 PCB 1272 1,2,3,6,7,8	X							
22 PCB 1248 1,2,3,6,7,8	X							
23 PCB 1260 1,2,3,6,7,8	X							
24 PCB 1016 2,3,4,6,7,8	X							
25 Endrin 5001-35-2	X							

APPLICATION FOR DISCHARGE PERMIT
Form D - Primary Industries

RPDES # (If Assigned) NO-0098001
OUTFALL NUMBER 013

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. SOURCE 'X'			3. EFFLUENT			4. UNITS			5. TABLE (optional)	
	a. 101 (1000 mg/l)	b. 102 (1000 mg/l)	c. 103 (1000 mg/l)	a. MAXIMUM 30 DAY VALUE (IN CONCENTRATION)	b. LONG TERM AVERAGE VALUE (IN CONCENTRATION)	c. 90 DAY AVERAGE VALUE (IN CONCENTRATION)	d. NO OF ANALYSES	e. GROSS TOXICITY	f. GROSS	g. NO OF ANALYSES	h. NO OF ANALYSES
NETALS, CYANIDE, AND TOTAL PHENOLS											
101 Arsenic Total (7440 38 2)			X								
201 Boron Total (7440 41 7)			X								
401 Cadmium Total (7440 43 9)			X								
501 Chromium Total (7440 47 3)			X								
601 Copper Total (7540 50 9)	X			28					ug/l	1	lbs/d
701 Lead Total (7429 97 6)	X			<66					ug/l	1	lbs/d
801 Mercury Total (7429 97 6)	X			<19					ug/l	1	lbs/d
901 Nickel Total (7440 02 0)											
1001 Selenium Total (7782 49 2)			X								
1101 Silver Total (7440 27 4)			X								
1201 Thallium Total (7440 28 0)			X								
1301 Zinc Total (7440 05 6)	X			<14					ug/l	1	lbs/d
1401 Cyanide Total (57 12 5)			X								
1501 Phenols Total	X			2.87					ug/l	1	lbs/d

DISCHARGE RESULTS	DESCRIPTION
2.2.7.8 Tetra chlorobenzene P Dioxin (1734 01 6)	X

1. POLLUTANT AND CAS NUMBER (if available)	2. RISK X		3. EFFLUENT		4. UNITS		5. RISK (optional)	
	• YES (100)	• NO (0)	• WASTEWATER CONCENTRATION (% MASS)	• WASTEWATER CONCENTRATION (% MASS)	• CONCENTRATION (% MASS)	• MASS	• LONG TERM AVERAGE VALUE (% MASS)	• NO OF ADJ. YRS.
GC/MS FRACTION - VOLATILE COMPOUNDS								
1V Acetone (107 02 6)		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 (58 23 5)		X						
7V Chlorobenzene (108 90 7)		X						
8V Chlorodibromomethane (128 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 6)		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 07 5)		X						
18V 1,2 Dichloropropane (542 75 8) **		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.

1. POLYMER AND GAS NUMBER (if available)	2. NAME		3. EFFLUENT		4. EFFLUENT		5. EFFLUENT (continued)	
	TYPE	NO. OF CRYSTALLITES	MAXIMUM DRY WEIGHT CONCENTRATION	MAXIMUM WET WEIGHT CONCENTRATION	MAXIMUM WET WEIGHT CONCENTRATION	MAXIMUM WET WEIGHT CONCENTRATION	MAXIMUM WET WEIGHT CONCENTRATION	MAXIMUM WET WEIGHT CONCENTRATION
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)								
274	1,2-Dichloroethane (175-08-2)		X					
274	1,1,2,2-Tetra (175-08-2)		X					
274	1,1,1,1-Tetra (175-08-2)		X					
274	1,1,2,2-Tetra (175-08-2)		X					
274	1,1,1,1-Tetra (175-08-2)		X					
274	1,1,2,2-Tetra (175-08-2)		X					
274	1,1,1,1-Tetra (175-08-2)		X					
274	1,1,2,2-Tetra (175-08-2)		X					
274	1,1,1,1-Tetra (175-08-2)		X					
GC/MS FRACTION - ACID COMPOUNDS								
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					
274	1,1-Dichloroethane (175-08-2)		X					

CONTINUE ON REVERSE

* 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) GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS	2. MINK '1		3. EFFLUENT		4. UNITS		5. INTAKE (optimum, d)	
	11/17/1970 mg/m ³	12/10/1970 mg/m ³	MAXIMUM 30 DAY VALUE (% MASS)	LONG TERM VALUE (% MASS)	CONCENTRATION	CONCENTRATION	LONG TERM AVERAGE VALUE (% MASS)	CONCENTRATION
16 Acenaphthene (83-32-9)		X						
76 Acenaphthylene (208-96-8)		X						
30 Anthracene (120-12-7)		X						
49 Benzofuran (82-87-5)		X						
58 Benzofuran Anthracene (58-33-4)		X						
60 Benzofuran Pyrene (58-32-8)		X						
78 1,4-Benzofuran Anthracene (205-99-7)		X						
88 Benzofuran Fluoranthene (193-28-7)		X						
98 Benzofuran Fluoranthene (193-28-7)		X						
108 Benzo (2-Chloro-ethyl) Methane (111-81-1)		X						
118 Benzo (2-Chloro-ethyl) Ethane (111-81-1)		X						
128 Benzo (2-Chloro-ethyl) Ethane (111-81-1)		X						
138 Benzo (2-Ethyl-ethyl) Methane (111-81-1)		X						
148 4-Bromo-Phenyl Phenyl Ether (101-55-3)		X						
158 Nonyl Benzyl Phthalate (83-68-7)		X						
168 2,4-Dinitro-naphthalene (51-58-7)		X						
178 4-Chloro-Phenyl Phenyl Ether (105-77-3)		X						
188 1,3-Dichloro-benzene (53-69-3)		X						
198 1,2-Dichloro-benzene (53-69-3)		X						
218 1,3-Dichloro-benzene (541-73-1)		X						

CONTINUE ON PAGE 6

PAGE 5

1-78 100

MPGS # (If Assigned) MO-0098801

CONTINUED FROM PAGE 5

OUTLET NUMBER 013

1. POLLUTANT AND GAS NUMBER (If available)	2. GRADE #		3. EFFLUENT		3. EFFLUENT		3. EFFLUENT		4. WQTS		5. WQTS (approx)	
	#1ST	#2ND	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT	CONC IN EFFLUENT
278 1,4 Dioxin benzene (88-96-7)		X										
280 3,3 Dinitro benzene (98-96-7)		X										
281 Dinitro phenol (88-96-7)		X										
282 Dimethyl phthalate (131-11-3)		X										
283 Di-n-Nitro phthalate (88-74-7)		X										
279 2,4 Dinitro toluene (127-18-2)		X										
284 2,6 Dinitro toluene (88-26-7)		X										
285 Di-n-Di-n phthalate (137-84-8)		X										
305 1,2 Dinitro- hydrozene (88-96-7)		X										
310 Fluoranthene (208-98-8)		X										
306 Fluorene (88-73-7)		X										
307 Hexa chlorobenzene (118-74-3)		X										
308 Hexa chlorobenzene (87-83-3)		X										
309 Hexachloro cyclopentadiene (17-47-4)		X										
300 Hexachloro ethane (87-72-1)		X										
318 Indene (127-14-6) Pyrene (193-39-5)		X										
304 Isophthalic acid (106-10-1)		X										
303 Methylcyclohexane (98-96-3)		X										
410 N Nitro succinylamine (87-75-9)		X										
411 N Nitro- succinylamine (87-75-9)		X										

CONTINUE ON REVERSE

PAGE 6

EXP. 1000

1. SOLVENT AND GAS NUMBER (if available)	2. MARK X		3. EFFLUENT b. DAILY VALUE OF EFFLUENT (in mass)	4. WASTE a. LONG TERM AVERAGE VALUE OF WASTE (in mass)	5. UNIT a. LONG TERM AVERAGE VALUE OF UNIT (in mass)
	a. 15% test	b. 5% test			
	a. DAILY VALUE OF WASTE (in mass)				
OC/RS FRACTION - BASE/RS-BAL COMPOUNDS (continued)					
430 Ethyl Sulphate (15-015)	X				
440 Phenanthrene (05-019)	X				
620 Pyrene (120-016)	X				
620 1,2,4 Trisubenzene (120-021)	X				
OC/RS FRACTION - PESTICIDES					
6P Aldrin (100-032)		X			
7P D DHC (319-040)		X			
8P 2,4-DHC (319-051)		X			
9P Y DHC (158-039)		X			
9P 6 DHC (319-050)		X			
9P Chlor丹 (51-140)		X			
9P 4,4 DDT (100-029)		X			
9P 4,4 DDE (12-060)		X			
9P 4,4 DDD (12-046)		X			
10P Dieldrin (05-021)		X			
11P Endosulfan (115-291)		X			
12P Endosulfan (115-292)		X			
13P Endosulfan Sulfate (103-018)		X			
14P Endrin (12-056)		X			
15P Endrin Aldehyde (1421-034)		X			
16P Heptachlor (15-040)		X			

CONTINUED FROM PAGE 7

OPDS B (if assigned) MO-0098001 OUTFALL NUMBER 013

1. PRIMARY AND GAS NUMBER (available)	2. GRADE X		a. BARRIER COPY VALUE (in cases)	3. EFFLUENT		4. NO OF ABOL YSES	4. DEBITS		5. SARTAGE (optional)	
	1151 1200 1205 1210	1215 1220 1225 1230		b. CONTRIBUTION TO BAY VOLUME (in cases)	1235 1240 1245 1250		1255 1260 1265 1270	1275 1280 1285 1290	1295 1300 1305 1310	1315 1320 1325 1330
GC/MS FRACTION - PESTICIDES (continued)										
1. PCB 1254 1.46 1.37 B										
16. PCB 1242 3,409.71 96										
17. PCB 1254 1,767.08 11										
20. PCB 1271 1,147.20 21										
2. PCB 1237 11.86 51										
22. PCB 1248 672.79 61										
23. PCB 1260 160.62 36										
24. PCB 1016 76.411 21										
25. Total PCBs 9301.35 23										

**APPLICATION FOR DISCHARGE PERMIT
Form D - Primary Industries**

NPDES # (If Assigned)
MO-0098001

TABLE #

OUTFALL NUMBER
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 GC/MS FRACTION	b GC/MS FRACTIONS	c GC/MS FRACTIONS	a MAXIMUM DAILY VALUE		b MAXIMUM 30 DAY VALUE (if available)		c LONG TERM AVG. VALUE (if available)		d NO. OF ANALYSES	e CONC. TRATION	f MASS	g LONG TERM AVERAGE VALUE		h 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												
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 (7782-45-2)			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 Tetra-chlorodibenzo P Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

1. POLLUTANT AND C.S. NUMBER (if available)	2. MARK 'X'		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	TEST METHOD	IN THE AIR	MAXIMUM 30 DAY VALUE (1) CONC. (2) MASS	LONG TERM AVERAGE VALUE (3) CONC. (4) MASS	CONC. (1) TRATION (2) MASS	CONC. (1) TRATION (2) MASS	DO OF AIR (1) YES (2) NO	DO OF AIR (1) YES (2) NO
GC/MS FRACTION - VOLATILE COMPOUNDS								
1W Acrylonitrile (107.02.8)		X						
2W Acrylonitrile (107.13.1)		X						
3V Benzene (71.43.2)		X						
4V Bis (Chloro methyl) Ether (542.86.1)			*					
5V Bromoform (75.25.2)		X						
6V Carbon Tetrachloride (56.23.5)		X						
7V Chlorobenzene (108.90.7)		X						
8V Chloro-bromomethane (524.48.1)		X						
9V Chloroethane (75.06.3)		X						
10V 2 Chloro ethylvinyl Ether (110.75.6)		X						
11V Chloroform (67.56.3)		X						
12V Dichloro bromomethane (75.27.4)		X						
13V Dichloro dibromomethane (75.71.8)			*					
14V 1,1 Dichloro ethane (75.34.3)		X						
15V 1,2 Dichloro ethane (107.06.2)		X						
16V 1,1 Dichloro ethylene (75.35.4)		X						
17V 1,2 Dichloro propane (79.87.5)		X						
18V 1,2 Dichloro propane (542.75.6) **		X						
19V Ethylbenzene (100.41.4)		X						
20V Methyl Bromide (74.83.9)		X						
21V Methyl Chloride (74.87.3)		X						

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	7. WASTE #		8. WASTE TYPE		3. EFFLUENT		4. UNIT'S		5. INTAKE (optional)	
	a. 1181 USE	b. 1182 USE	a. WASTEWATER	b. AIR	a. MAXIMUM DAILY VALUE	b. MAXIMUM 30 DAY VALUE	a. LONG TERM AVERAGE VALUE	b. LONG TERM AVERAGE VALUE	a. LONG TERM AVERAGE VALUE	b. NO OF
	(1)	(2)	(1) concentration	(2) concentration	(1) mass	(2) concentration	(1) mass	(2) mass	(1) mass	ANNUAL USES
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)										
27V 2,4-Dinitrophenol (15-02-2)	X									
27W 1,1,2,2-TetraChloroethane (17-04-5)	X									
28V 1,1,2,2-TetraChloroethane (127-18-4)	X									
29V Toluene (108-08-3)	X									
30V 1,3-Dinitrobenzene (123-55-9)	X									
31V 1,1,1-Trichloroethane (71-03-3)	X									
32V 1,1,2-Trichloroethane (78-07-6)	X									
33V Trichloroethylene (79-01-6)	X									
34V Trichloroethylene (79-01-6)										
35V Very Chloride (15-01-4)	X									
GC/MS FRACTION - ACID COMPOUNDS										
36A 2-Chlorophenol (85-57-8)	X									
37A 2,4-Dichlorophenol (106-83-7)	X									
38A 2,4-Dinitrophenol (85-57-9)	X									
39A 4,5-Dinitro-2-Cresol (534-52-1)	X									
40A 2,4-Dinitrophenol (81-26-4)	X									
41A 2,6-Dinitrophenol (88-75-8)	X									
42A 4-Nitrophenol (105-07-7)	X									
43A 2-Nitrophenol (88-59-7)	X									
44A Picric acid (87-53-5)	X									
45A Picric acid (87-53-5)	X									
46A Picric acid (87-53-5)	X									
47A Picric acid (87-53-5)	X									
48A Picric acid (87-53-5)	X									
49A Picric acid (87-53-5)	X									
50A Picric acid (87-53-5)	X									

EX-103 * These parameters have been deleted from GC/MS volatile fraction (40 CFR 122, Appendix D).

CONTINUED FROM THE FRONT

1. POLYMER AND CAS NUMBER (if available)	2. GRADE #		3. BLENDED DRY VALUE		3. EFFICIENCY		LONG TERM AVERAGE VALUE		4. UNITS		5. DRYING (optional)	
	101	102	103	104	105	106	107	108	109	110	111	112
66/68 FRACTION - BASE MATERIAL COMPOUND	101	102	103	104	105	106	107	108	109	110	111	112
18 Alenaphthene (83 32 9)												
22 Acenaphthylene (103 00 8)												
38 Anthracene (100 12 7)												
43 Benzidine (82 07 5)												
50 Benzol (a) Anthracene (55 55 4)												
68 Benzol (a) Pyrene (50 32 8)												
79 1,4-Benzol Naphthalene (705 99 2)												
88 Benzol (phi) Phenylene (101 24 2)												
98 Benzol (a) anthracene (8 9)												
105 Bis (2 Chloro ethyl) Ether (111 01 1)												
110 Bis (2 Chloro ethyl) Ether (111 44 4)												
128 Bis (2 Chloro propyl) Ether (105 32 9)												
130 Bis (2 Ethyl hexyl) Phthalate (117 81 7)												
148 4-Bromo Phenyl Phenyl Ether (102 55 3)												
158 Butyl Benzyl Phthalate (85 68 7)												
168 2,2-Dimethyl propane (94 58 7)												
178 4-Chloro Phenyl Phenyl Ether (105 71 5)												
188 Crystalline (118 01 9)												
198 Dibenzol (a) Anthracene (51 79 3)												
208 1,2-Dichloro benzene (55 50 1)												
218 1,3-Dichloro benzene (541 73 1)												

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INPOES # (If Assigned) MO-0098001 OUTFALL NUMBER 014

CONTINUED FROM PAGE 5

1. POLLUTANT AND GAS NUMBER (if available)	2. MARCH 81		3. EFFLUENT		4. UNITS		5. INTAKE (optional)		
	LISTED TOXIC SUBS	LISTED TOXIC SUBS	MAXIMUM 30 DAY VALUE (1) CONCENTRATION (2) MASS	LONG TERM AVG. VALUE (1) CONCENTRATION (2) MASS	NO. OF ANAL YSES	CONCENTRATION	MASS	LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	NO. OF ANAL YSES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)									
278 1,4-Dichloro benzene (105 46)		X							
286 3,3-Diethyl benzidine (91 94 3)		X							
288 Diethyl Phthalate (54 66 7)		X							
296 Dimethyl Phthalate (131 11 3)		X							
298 Di-N-Butyl Phthalate (84 74 7)		X							
278 2,4-Dinitro toluene (121 14 2)		X							
288 2,6-Dinitro toluene (68 76 2)		X							
298 Di-N-Octyl Phthalate (117 84 0)		X							
308 1,2-Diethyl-hydro-arise (45 47) benzene (127 6 7)		X							
198 Fluoranthene (205 44 0)		X							
328 Fluorene (85 73 7)		X							
338 Hexa chlorobenzene (118 71 1)		X							
348 Hexa chlorobutadiene (87 68 3)		X							
358 Hexachloro cyclopentadiene (17 47 4)		X							
368 Hexachloro ethane (67 72 3)		X							
378 Indeno (1,2,3-cd) Pyrene (193 39 5)		X							
388 Isopropylone (78 58 1)		X							
398 Naphthalene (91 20 3)		X							
408 Naphthalene (98 30 3)		X							
418 N-Methyl-sulfonmethylaniline (62 75 9)		X							
428 N-Nitro-N-Propylamine (61 64 7)		X							

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. IDENTIFY CAS NO. NAME (if available)	2. ESTER #				3. ESTER # MATERIALS TO BE VALUED (if available)	4. ESTER # MATERIALS TO BE VALUED (if available)	5. ESTER # MATERIALS TO BE VALUED (if available)	6. ESTER # MATERIALS TO BE VALUED (if available)
	0181	0182	0183	0184				
430 8 Nitro subphosphoramide (E 30 B)								
438 Phenanthrene (E 31 B)								
438 Pyrene (E 32 B)								
438 1,2,4,5- tetrahydro- (E 33 B)								
OC/NBO FRACTIONS - PESTICIDES								
17 170-09 (E 34 B)								
17 170-10 (E 35 B)								
17 170-11 (E 36 B)								
17 170-12 (E 37 B)								
17 170-13 (E 38 B)								
17 170-14 (E 39 B)								
17 170-15 (E 40 B)								
17 170-16 (E 41 B)								
17 170-17 (E 42 B)								
17 170-18 (E 43 B)								
17 170-19 (E 44 B)								
17 170-20 (E 45 B)								
17 170-21 (E 46 B)								
17 170-22 (E 47 B)								
17 170-23 (E 48 B)								
17 170-24 (E 49 B)								
17 170-25 (E 50 B)								
17 170-26 (E 51 B)								
17 170-27 (E 52 B)								
17 170-28 (E 53 B)								
17 170-29 (E 54 B)								
17 170-30 (E 55 B)								
17 170-31 (E 56 B)								
17 170-32 (E 57 B)								
17 170-33 (E 58 B)								
17 170-34 (E 59 B)								
17 170-35 (E 60 B)								
17 170-36 (E 61 B)								
17 170-37 (E 62 B)								
17 170-38 (E 63 B)								
17 170-39 (E 64 B)								
17 170-40 (E 65 B)								
17 170-41 (E 66 B)								
17 170-42 (E 67 B)								
17 170-43 (E 68 B)								
17 170-44 (E 69 B)								
17 170-45 (E 70 B)								
17 170-46 (E 71 B)								
17 170-47 (E 72 B)								
17 170-48 (E 73 B)								
17 170-49 (E 74 B)								
17 170-50 (E 75 B)								
17 170-51 (E 76 B)								
17 170-52 (E 77 B)								
17 170-53 (E 78 B)								
17 170-54 (E 79 B)								
17 170-55 (E 80 B)								
17 170-56 (E 81 B)								
17 170-57 (E 82 B)								
17 170-58 (E 83 B)								
17 170-59 (E 84 B)								
17 170-60 (E 85 B)								
17 170-61 (E 86 B)								
17 170-62 (E 87 B)								
17 170-63 (E 88 B)								
17 170-64 (E 89 B)								
17 170-65 (E 90 B)								
17 170-66 (E 91 B)								
17 170-67 (E 92 B)								
17 170-68 (E 93 B)								
17 170-69 (E 94 B)								
17 170-70 (E 95 B)								
17 170-71 (E 96 B)								
17 170-72 (E 97 B)								
17 170-73 (E 98 B)								
17 170-74 (E 99 B)								
17 170-75 (E 100 B)								

CONTINUE ON PAGE 8

MPDES # (if assigned) MO-0098001 OUTFALL NUMBER 014

CONTINUED FROM PAGE 7

1 POLLUTANT AND CAS NUMBER (available)	2 MARK 'X'		3 EFFLUENT		4 UNITS		5 INTAKE (optional)	
	a TEST OR USE ON THIS DATE	b IN USE	a MAXIMUM 30 DAY VALUE (if available) (lb MASS)	b LONG TERM AVERAGE VALUE (if available) (lb MASS)	a CONCENTRATION	b MASS	a LONG TERM AVERAGE VALUE (if available) (lb MASS)	b NO OF ARIAL YSES
GC/MS FRACTION — PESTICIDES (continued)								
17 Heptachlor E 400 333		X						
18 PCB 1242 5-69-21-96		X						
19 PCB 1254 3-87-68-3		X						
20 PCB 1271 3-84-78-2		X						
21 PCB 1232 3-86-51		X						
22 PCB 1248 6-12-79-6		X						
23 PCB 1260 5-80-25		X						
24 PCB 1016 7-4-11-2		X						
25 Toxaphene 8-01-35-2		X						

**APPLICATION FOR DISCHARGE PERMIT
Form D - Primary Industries**

TABLE #	OUTFALL NUMBER
NPDES # (If Assigned) 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 <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS			5. INTAKE <i>(optional)</i>		
	a. TEST OR REQUIRED	b. DE LIVERED PNE SENT	c. DE LIVERED AD SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVG. VALUE <i>(if available)</i>		d. NO OF ANAL YSES	a. CONCN TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO OF ANAL YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCN TRATION	(2) MASS	
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 Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING METHOD USED	b. DELETED FOR SENT	c. DELETED AS SENT	d. MAXIMUM DAILY VALUE		e. MAXIMUM 30 DAY VALUE (if available)		f. LONG TERM AVERAGE VALUE (if available)		g. NO. OF ANALYSES	h. CONCENTRATION	i. MASS	j. LONG TERM AVERAGE VALUE		k. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION — VOLATILE COMPOUNDS															
1V Acroten (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 Chlorobromomethane (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.

1 POLLUTANT AND CAS NUMBER (if applicable)	2 INDEX		3 EFFLUENT		4 UNITS		5 OUTLINE (optional)	
	101 M M M M	102 M M M M	103 M M M M	104 M M M M	105 M M M M	106 M M M M	107 M M M M	108 M M M M
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)								
276 METHYLENE Chloride (75-09-2)			X					
278 1,1,2,2-Tetra Chloroethane (79-34-5)			X					
280 1,1,1,1-Tetra Fluoroethane (127-18-4)			X					
279 Toluene (108-88-3)			X					
279 1,3-Toluene Dithiolene (155-89-0)			X					
279 1,1,1-Trichloroethane (71-91-6)			X					
280 1,1,2-Trichloroethane (79-06-6)			X					
280 Toluene (108-88-3)			X					
280 Toluene (108-88-3)								*
279 1,1,1-Trichloroethane (71-91-6)			X					
GC/MS FRACTION - ACID COMPOUNDS								
1A 2-Chloroacetaldehyde (105-57-6)			X					
2A 2,4-Dichloroacetaldehyde (120-83-2)			X					
3A 2,6-Dimethylphenol (105-67-8)			X					
4A 4-tert-Butylphenol (95-49-7)			X					
5A 2,4-Dichlorophenol (95-73-4)			X					
6A 2,6-Dichlorophenol (95-73-4)			X					
7A 4-Chlorophenol (106-89-7)			X					
8A 2,4-Dichlorophenol (95-73-4)			X					
9A 2,6-Dichlorophenol (95-73-4)			X					
10A Phenol (108-95-2)			X					
11A 2,4,6-Trichlorophenol (108-85-2)			X					

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

CONTINUED FROM THE FRONT

9. POLYMER CAS NUMBER (if available)	2. MARK #		3. REPORT #		4. UNITS		5. STATE (optional)	
	a. 151 CS Region 15	b. 10 1000 POI MST	a. MAXIMUM 30 DAY VALUE IN CONCENTRATIONS	b. MAXIMUM 30 DAY VALUE IN CONCENTRATIONS	a. LONG TERM AVG. VALUE IN CONCENTRATIONS	b. LONG TERM AVG. VALUE IN CONCENTRATIONS	a. NO OF ANAL YES	b. NO OF ANAL YES
GC/MS FRACTION - GASE/NEUTRAL COMPONENTS								
10 Acenaphthene (63 37 9)		X						
70 Acetylphenylene (50 58 6)		X						
50 Anthracene (120 12 7)		X						
40 Benzidine (62 67 5)		X						
50 Benzol (a) Anthracene (56 55 1)		X						
60 Benzol (a) Pyrene (56 37 8)		X						
70 3,4-Benzol fluoranthene (50 59 7)		X						
80 Benzol (g) Perylene (101 24 7)		X						
90 Benzol (a) Fluoranthene (50 59 7)		X						
100 Bis (2-Chloro- ethyl) Methane (111 61 1)		X						
110 Bis (2-Chloro- ethyl) Ether (111 60 4)		X						
120 Bis (2-Chloro- propyl) Ether (105 37 5)		X						
130 Bis (2-Ethyl- hexyl) Phthalate (117 81 7)		X						
140 4-Bromo- phenyl Phenyl Ether (101 55 3)		X						
150 Butyl Benzyl Phthalate (85 68 7)		X						
160 2-Chloro- naphthalene (91 58 7)		X						
170 4-Chloro- phenyl Phenyl Ether (100 77 1)		X						
180 Chloro- Benzene (218 01 9)		X						
190 Dibenzyl (a) Anthracene (53 76 3)		X						
200 1,2-Dichloro- Benzene (65 58 1)		X						
210 1,3-Dichloro- Benzene (561 75 1)		X						

INPDES # (if Assigned) **MO-0098001** OUTFALL NUMBER **015**

CONTINUED FROM PAGE 5

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK II		3. EFFLUENT		4. QUARTS		5. INTAKE (optional)				
	1. HSTI	2. IN	3. MAXIMUM DAILY VALUE	4. LONG TERM AVG. VALUE	5. CORRECTION	6. MASS	7. LONG TERM AVERAGE VALUE	8. NO. OF ANAL YSES			
(if available)	CONCENTRATION	CONCENTRATION	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100) (101) (102) (103) (104) (105) (106) (107) (108) (109) (110) (111) (112) (113) (114) (115) (116) (117) (118) (119) (120) (121) (122) (123) (124) (125) (126) (127) (128) (129) (130) (131) (132) (133) (134) (135) (136) (137) (138) (139) (140) (141) (142) (143) (144) (145) (146) (147) (148) (149) (150) (151) (152) (153) (154) (155) (156) (157) (158) (159) (160) (161) (162) (163) (164) (165) (166) (167) (168) (169) (170) (171) (172) (173) (174) (175) (176) (177) 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(1000)	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION
278 1,4 Dioxin benzene (108 46 2)		X									
280 3,3 Dithio benzidine (91 94 1)		X									
285 Diethyl Phthalate (84 66 7)		X									
286 Dimethyl Phthalate (131 11 3)		X									
288 Di-N-Butyl Phthalate (84 74 2)		X									
275 2,4 Dinitro toluene (121 14 2)		X									
289 2,6 Dinitro toluene (605 26 7)		X									
290 Di-N-Butyl Phthalate (117 84 6)		X									
305 1,2 Diphenoxy Hydrazine (45 47) benzene (122 46 7)		X									
318 Fluoranthene (705 44 6)		X									
328 Fluorene (86 73 7)		X									
339 Hexa chlorobenzene (118 71 1)		X									
345 Hexa chlorobutadiene (87 68 3)		X									
355 Hexachloro cyclopentadiene (7 47 4)		X									
365 Hexachloro ethane (67 72 1)		X									
316 Indeno (123 3 6) Pyrene (193 39 5)		X									
368 Isophthalic (18 58 1)		X									
369 Naphthalene (81 20 3)		X									
405 Nitrubenzene (91 95 3)		X									
419 N-Nitro naphthalene (62 75 8)		X									
429 N-Nitro-N,N Propylamine (161 64 7)		X									

CONTINUE ON REVERSE

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1. PESTICIDE AND CAS NO. (if available)	2. GRAIN #		3. EFFICIENCY	4. GRAIN #	5. DETAILED INFORMATION
	# OF 1000 SIBS	# OF 1000 SIBS			
6. CAS NO. (if available)	7. GRAIN #	8. GRAIN #	9. GRAIN #	10. GRAIN #	11. GRAIN #
430 B Nitro Indipropylamine (65-30-6)	X				
648 Phenanthrene (85-01-0)	X				
650 Pyrene (125-65-0)	X				
648 1,2,4,5-Tetrahydroquinoline (120-82-1)	X				
66/68 FRACTIONS - BASE/SEMI-BASE COMPOUNDS (continued)					
16 Nitro (130-08-7)	X				
37 Nitro (119-84-6)	X				
37 Nitro (119-85-1)	X				
47 Nitro (150-85-9)	X				
57 Nitro (119-80-8)	X				
67 Chloride (51-74-0)	X				
77 4,4-Di (55-35-3)	X				
87 4,4-Di (172-50-0)	X				
97 4,4-Di (172-54-8)	X				
107 Endrin (60-57-1)	X				
117 Endosulfan (115-29-1)	X				
127 Endosulfan (115-29-1)	X				
137 Endosulfan Sulfate (1031-01-8)	X				
147 Endrin (172-10-8)	X				
157 Endrin Aldehyde (1421-51-4)	X				
167 Endosulfan (172-40-0)	X				

CONTINUED FROM PAGE 7

WPODES # (if assigned) MO-0098001

OUTFALL NUMBER 015

1 POLLUTANT AND CAS NUMBER (if available)	2 MARK 'X'				3 EFFLUENT		4 NO OF ANAL YSES	4 UNITS		5 SHOTARE (approximate)	
	1151	1152	1153	1154	a MAXIMUM 30 DAY VALUE (if concentration)	b LONG TERM AVG VALUE (if concentration)		a CONCENTRATION	b MASS	a LONG TERM AVERAGE VALUE (if concentration)	b NO OF ANAL YSES
SC/MS FRACTION - PESTICIDES (continued)											
1-1 Dieldrin					X						
1-2 DDT					X						
1-3 PCB 1242					X						
1-4 PCB 1254					X						
2-1 PCB 1271					X						
1-5 PCB 1282					X						
1-6 PCB 1248					X						
2-2 PCB 1260					X						
1-7 DDT					X						
1-8 DDT					X						
1-9 DDT					X						
1-10 DDT					X						
1-11 DDT					X						
1-12 DDT					X						
1-13 DDT					X						
1-14 DDT					X						
1-15 DDT					X						
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1-96 DDT					X						
1-97 DDT					X						
1-98 DDT					X						
1-99 DDT					X						
1-100 DDT					X						

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 in manufacture as an intermediate or final product or byproduct?

YES (list all such pollutants below)

NO go to 8

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	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) D. F. Schnell Senior Vice President, Nuclear	B. PHONE NO. (area code & no) 314/554-2650
C. SIGNATURE <i>Donald F. Schnell</i>	D. DATE SIGNED <i>21 May 90</i>

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

<u>Outfall</u>	<u>1/4</u>	<u>1/4</u>	<u>Sec</u>	<u>T</u>	<u>R</u>
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).

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.

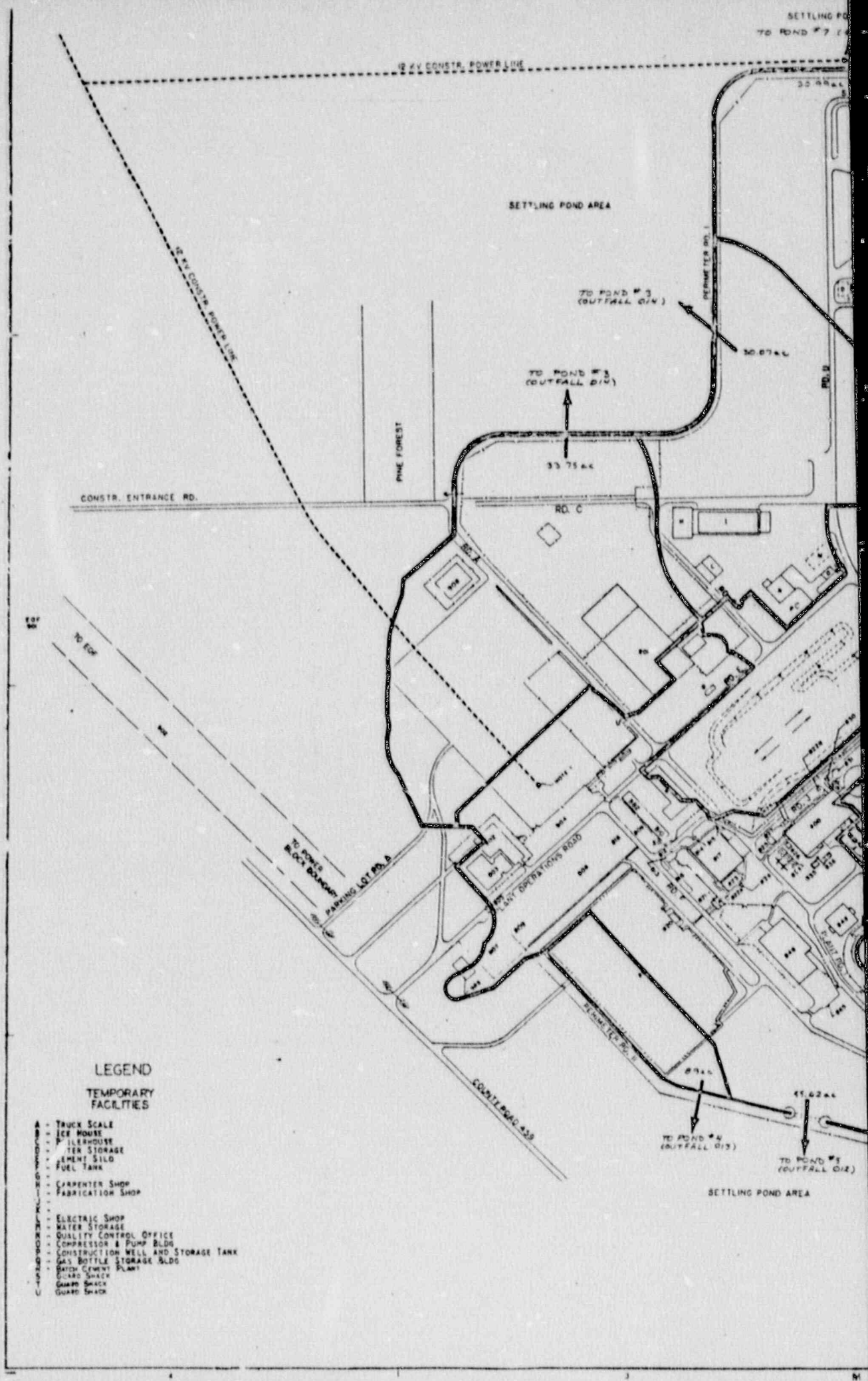
Transformer Sumps - Oil filled transformers at Callaway have sumps to catch oil in the event of transformer leakage or rupture. Periodically these sumps require pumping to remove accumulated stormwater. The sumps are pumped to SWR provided that there is no oil sheen and the pH at the start of pumping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

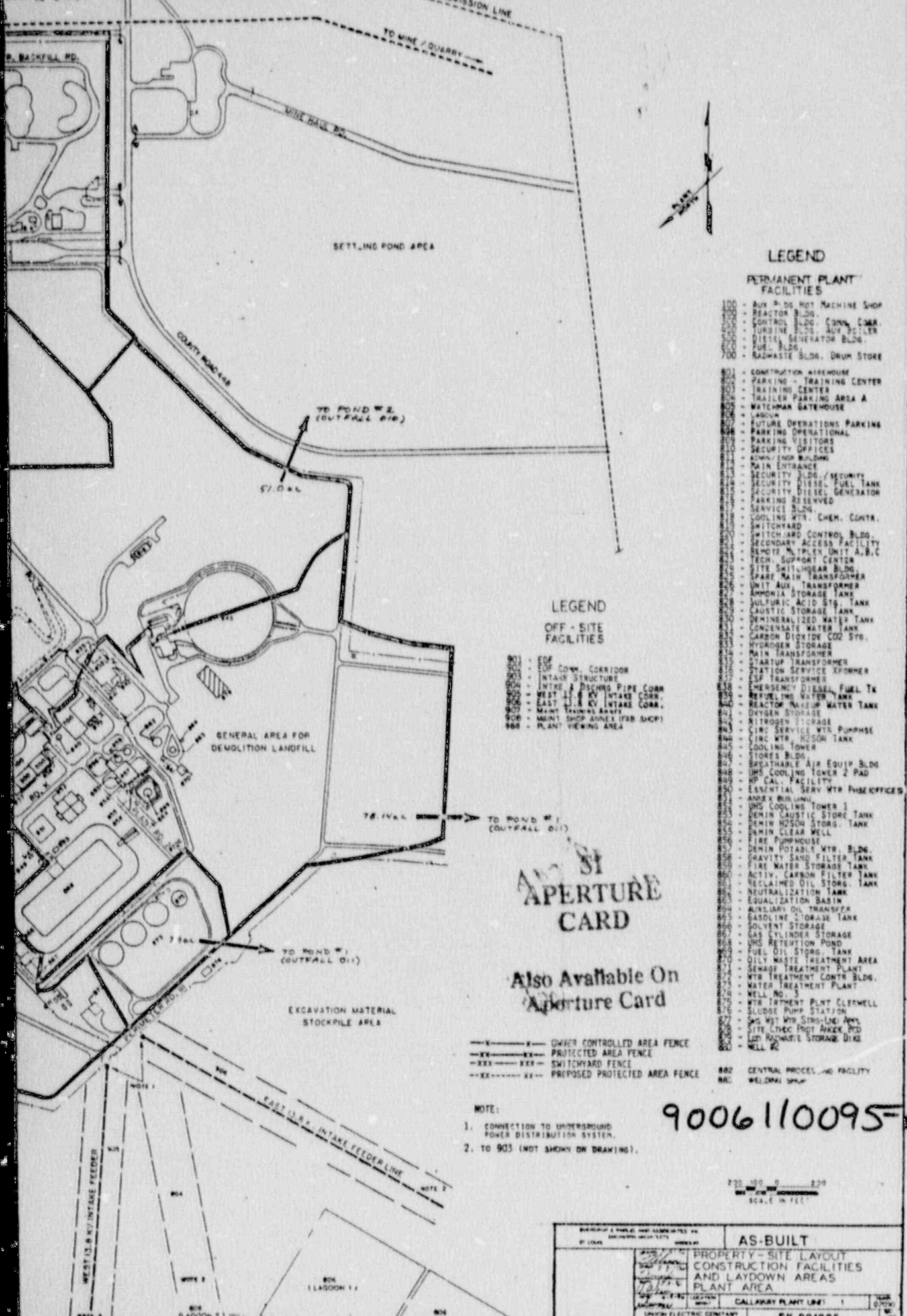


LEGEND

TEMPORARY FACILITIES

- A - TRUCK SCALE
- B - ICE HOUSE
- C - MILLHOUSE
- D - WREN 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

AD AREA
UPPER FALL (19)



LEGEND

PERMANENT PLANT FACILITIES

- 100 - AUX P. DS HOT MACHINE SHOP
- 101 - REACTOR BLDG.
- 102 - CONTROL BLDG. COMM. CORR.
- 103 - TURBINE BLDG. AUX DCLTR
- 104 - DIESEL GENERATOR BLDG.
- 105 - FUEL BLDG.
- 106 - RADWASTE BLDG. DRUM STORE

- 801 - CONSTRUCTION WAREHOUSE
- 802 - PARKING - TRAINING CENTER
- 803 - TRAINING CENTER
- 804 - TRAILER PARKING AREA A
- 805 - WATERMAN GATEHOUSE
- 806 - LAGOON
- 807 - FUTURE OPERATIONS PARKING
- 808 - PARKING OPERATIONAL
- 809 - PARKING VISITORS
- 810 - SECURITY OFFICES
- 811 - ADMIN/ENG BUILDING
- 812 - MAIN ENTRANCE
- 813 - SECURITY BLDG./SECURITY
- 814 - SECURITY DIESEL FUEL TANK
- 815 - SECURITY DIESEL GENERATOR
- 816 - PARKING RESERVED
- 817 - SERVICE BLDG.
- 818 - COOLING WTR. CHEM. CONTR.
- 819 - SWITCHYARD
- 820 - SWITCH AND CONTROL BLDG.
- 821 - SECONDARY ACCESS FACILITY
- 822 - REMOTE MULTIPLEX UNIT A,B,C
- 823 - TECH. SUPPORT CENTER
- 824 - SITE SWITCHYARD BLDG.
- 825 - SPARE MAIN TRANSFORMER
- 826 - UNIT AUX. TRANSFORMER
- 827 - AMMONIA STORAGE TANK
- 828 - SULFURIC ACID STG. TANK
- 829 - CAUSTIC STORAGE TANK
- 830 - DEMINERALIZED WATER TANK
- 831 - CONDENSATE WATER TANK
- 832 - CARBON DIOXIDE CO2 STG.
- 833 - HYDROGEN STORAGE
- 834 - MAIN TRANSFORMER
- 835 - STARTUP TRANSFORMER
- 836 - STATION SERVICE KITCHEN
- 837 - ESP TRANSFORMER
- 838 - EMERGENCY DIESEL FUEL TX
- 839 - REFUELING WATER TANK
- 840 - REACTOR MAKEUP WATER TANK
- 841 - DYER'S STORAGE
- 842 - NITROGEN STORAGE
- 843 - CIRC SERVICE WTR PUMP/SH
- 844 - CIRC WTR. H2SO4 TANK
- 845 - COOLING TOWER
- 846 - STORES BLDG.
- 847 - BREATHABLE AIR EQUIP BLDG.
- 848 - UMS COOLING TOWER 2 PAD
- 849 - HP CAL. FACILITY
- 850 - ESSENTIAL SERV WTR PHYS/OFFICES
- 851 - ANNEX BUILDING
- 852 - UMS COOLING TOWER 1
- 853 - DEMIN CAUSTIC STORG. TANK
- 854 - DEMIN H2SO4 STORG. TANK
- 855 - DEMIN CLEAR WELL
- 856 - FIRE PUMPHOUSE
- 857 - DEMIN POTABLE WTR. BLDG.
- 858 - GRAVITY SAND FILTER TANK
- 859 - FIRE WATER STORAGE TANK
- 860 - ACTIV. CARBON FILTER TANK
- 861 - RECLAIMED OIL STORG. TANK
- 862 - NEUTRALIZATION TANK
- 863 - EQUALIZATION BASIN
- 864 - AUXILIARY OIL TRANSFER
- 865 - GASOLINE STORAGE TANK
- 866 - SOLVENT STORAGE
- 867 - GAS CYLINDER STORAGE
- 868 - UMS RETENTION POND
- 869 - FUEL OIL STORG. TANK
- 870 - OILY WASTE TREATMENT AREA
- 871 - SEWAGE TREATMENT PLANT
- 872 - WTR TREATMENT CONTR. BLDG.
- 873 - WATER TREATMENT PLANT
- 874 - WELL NO. 3
- 875 - WTR TREATMENT PLANT CLEMWELL
- 876 - SLUDGE PUMP STATION
- 877 - SW. WTR. WTR. STORING. ANN.
- 878 - SITE CHECK POINT ARKEX. PAD
- 879 - LOW RADWASTE STORAGE DIKE
- 880 - WELL #2

LEGEND
OFF-SITE FACILITIES

- 901 - EOP
- 902 - EOP COMM. CORRIDOR
- 903 - INTAKE STRUCTURE
- 904 - INTAKE & DISCHRG PIPE CORR.
- 905 - WEST 11.8 KV INTAKE CORR.
- 906 - EAST 11.8 KV INTAKE CORR.
- 907 - MAINT TRAINING ANNEX
- 908 - MAINT SHOP ANNEX (TAB SHOP)
- 909 - PLANT VIEWING AREA

AS-APERTURE CARD

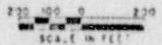
Also Available On
Aperture Card

- X---X--- OUIER CONTROLLED AREA FENCE
- XX---XX--- PROTECTED AREA FENCE
- XXX---XXX--- SWITCHYARD FENCE
- XX---XX--- PROPOSED PROTECTED AREA FENCE

NOTE:

1. CONNECTION TO UNDERGROUND POWER DISTRIBUTION SYSTEM.
2. TO 903 (NOT SHOWN ON DRAWING).

9006110095-02



PROPERTY & TITLE ARE ASSOCIATED BY 51 LOCAL 51 LOCAL 51 LOCAL	AS-BUILT PROPERTY - SITE LAYOUT CONSTRUCTION FACILITIES AND LAYDOWN AREAS PLANT AREA CALLAWAY PLANT UNIT 1 5K-901805
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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).

<u>Chemical</u>	<u>Usage (lbs/day)</u>	<u>Reportable Quantity (lbs/day)</u>	<u>Outfalls</u>
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 request that the sample frequency be a daily grab to be composited when the sampler is out of service.

4) Continuous 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 show 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 JRequest 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 as 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 municipal 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 these 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 or 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:

<u>LOCATION</u>	<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
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.

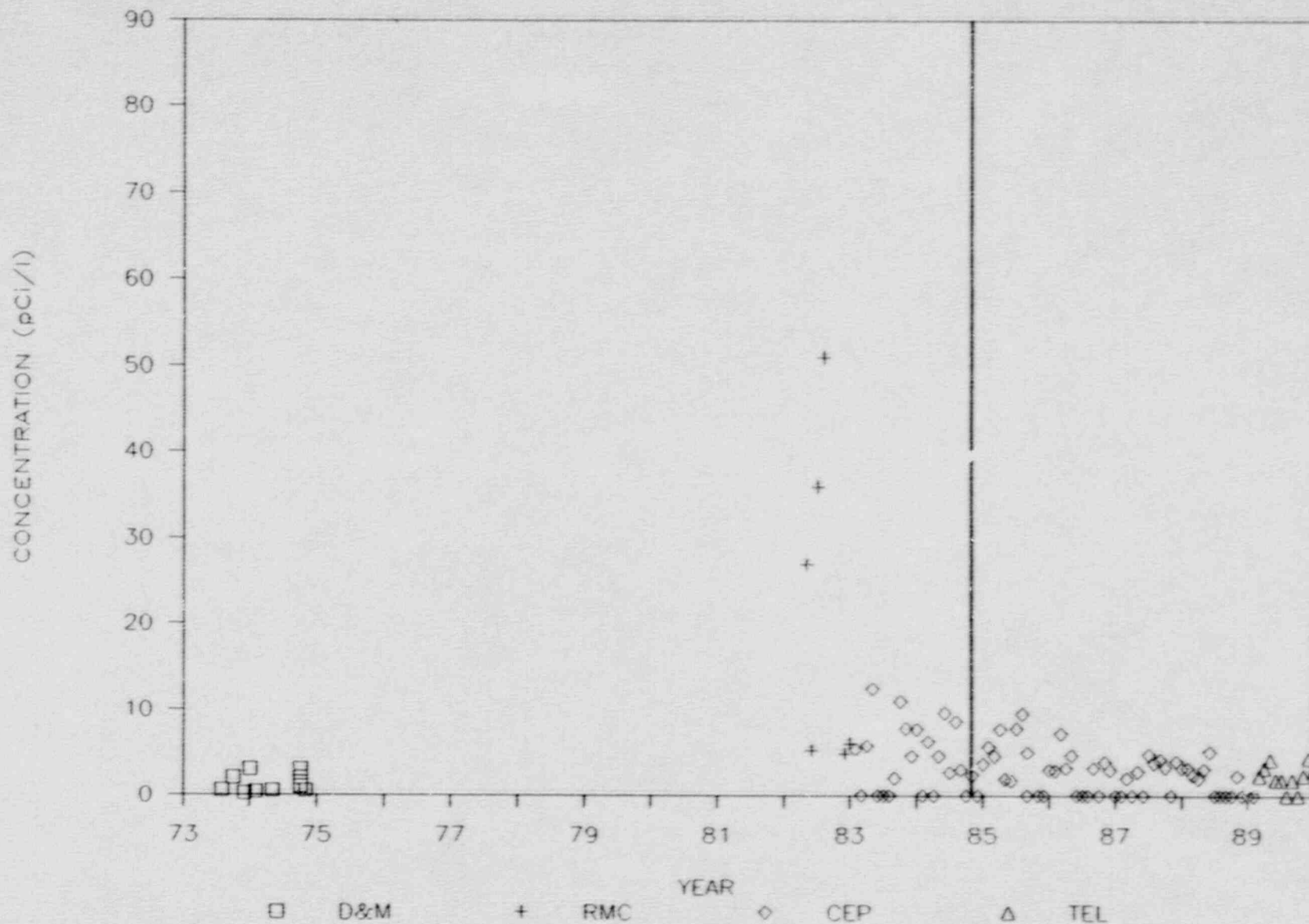
GRAPH TABLE OF CONTENTS

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Bedload Sediment Samples vs Discharge	J99-J110
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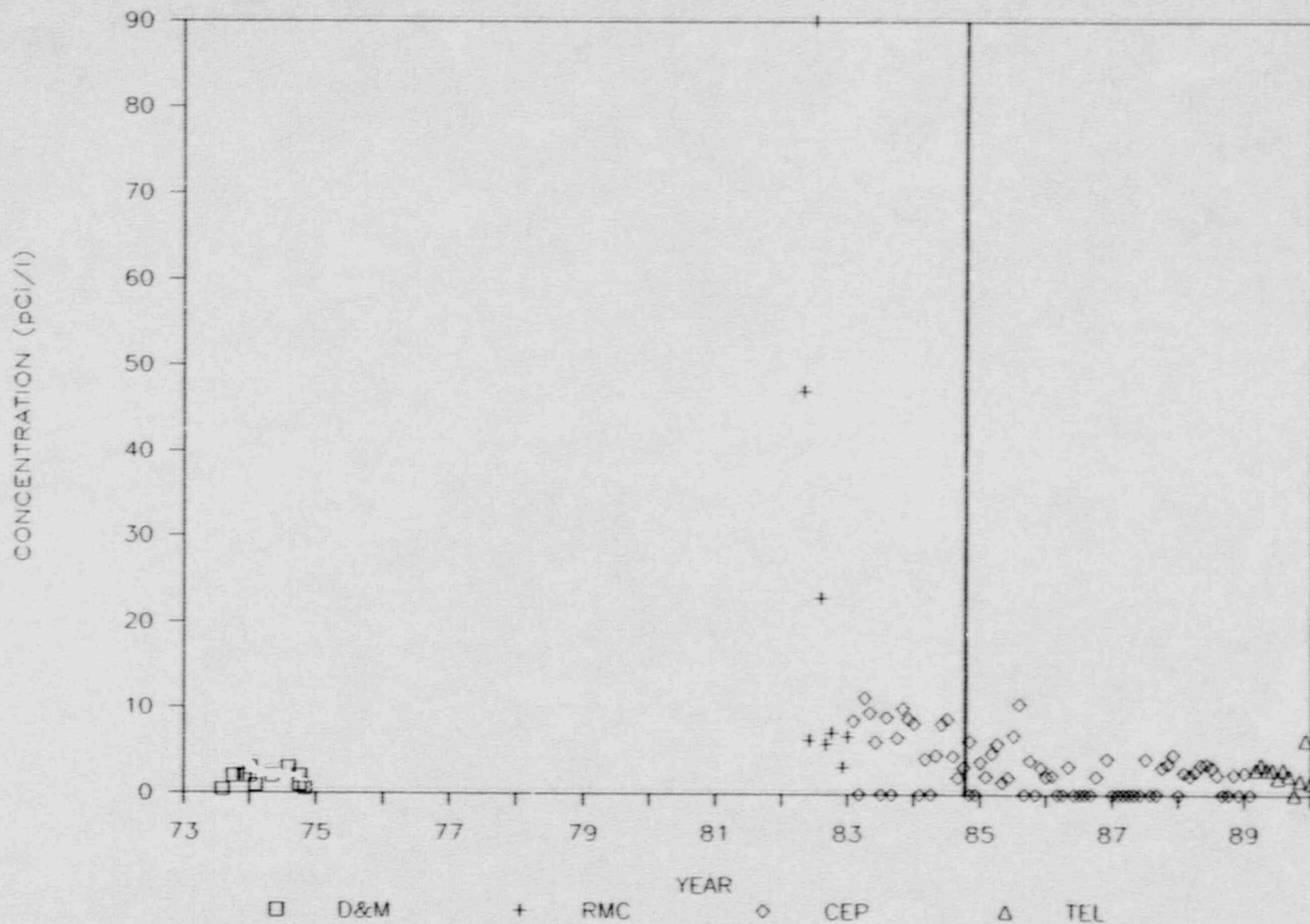
NOTES ON GRAPHICAL PRESENTATIONS

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.

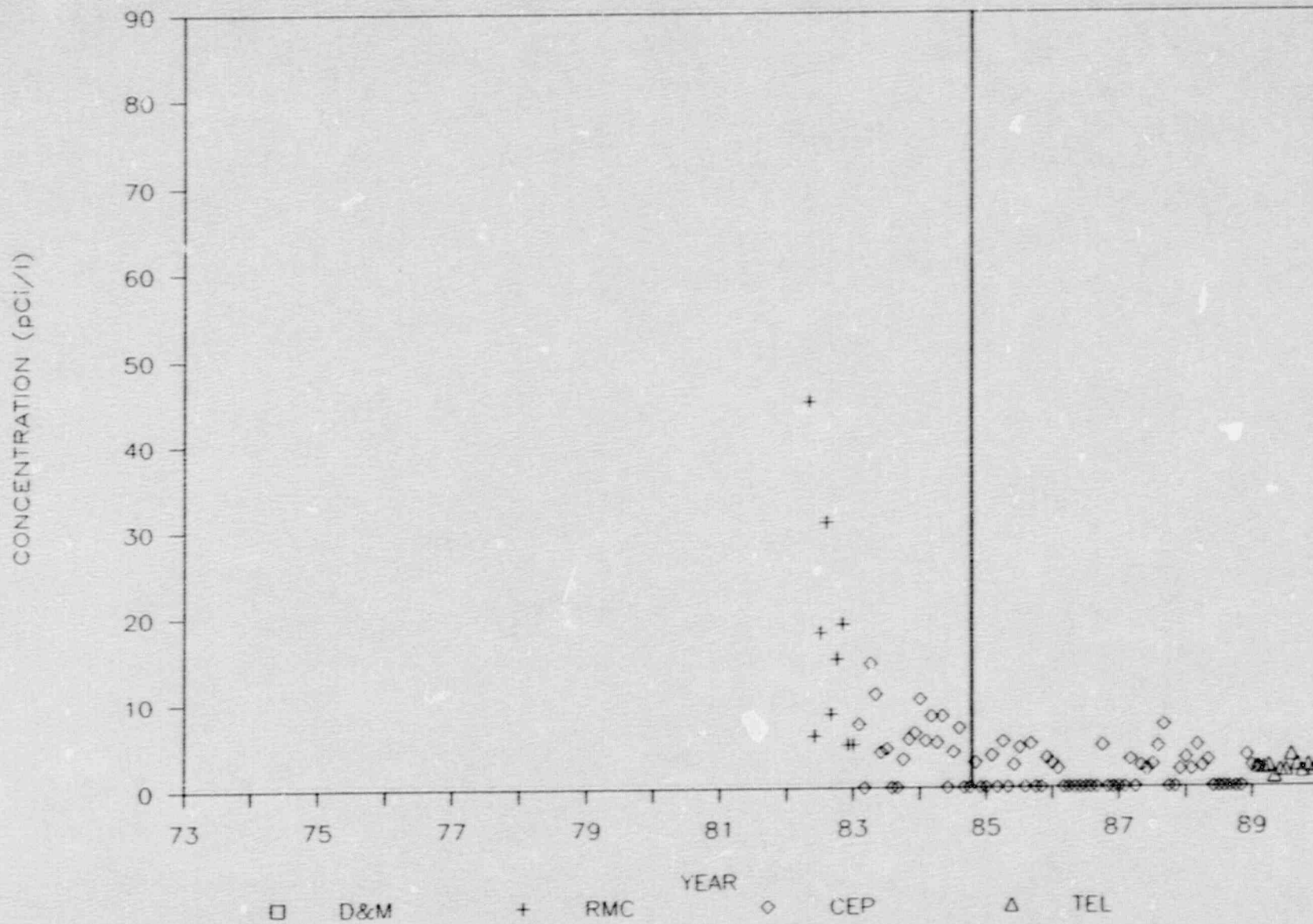
SURFACE WATER GROSS ALPHA, UPSTREAM



SURFACE WATER GROSS ALPHA, DOWNSTREAM

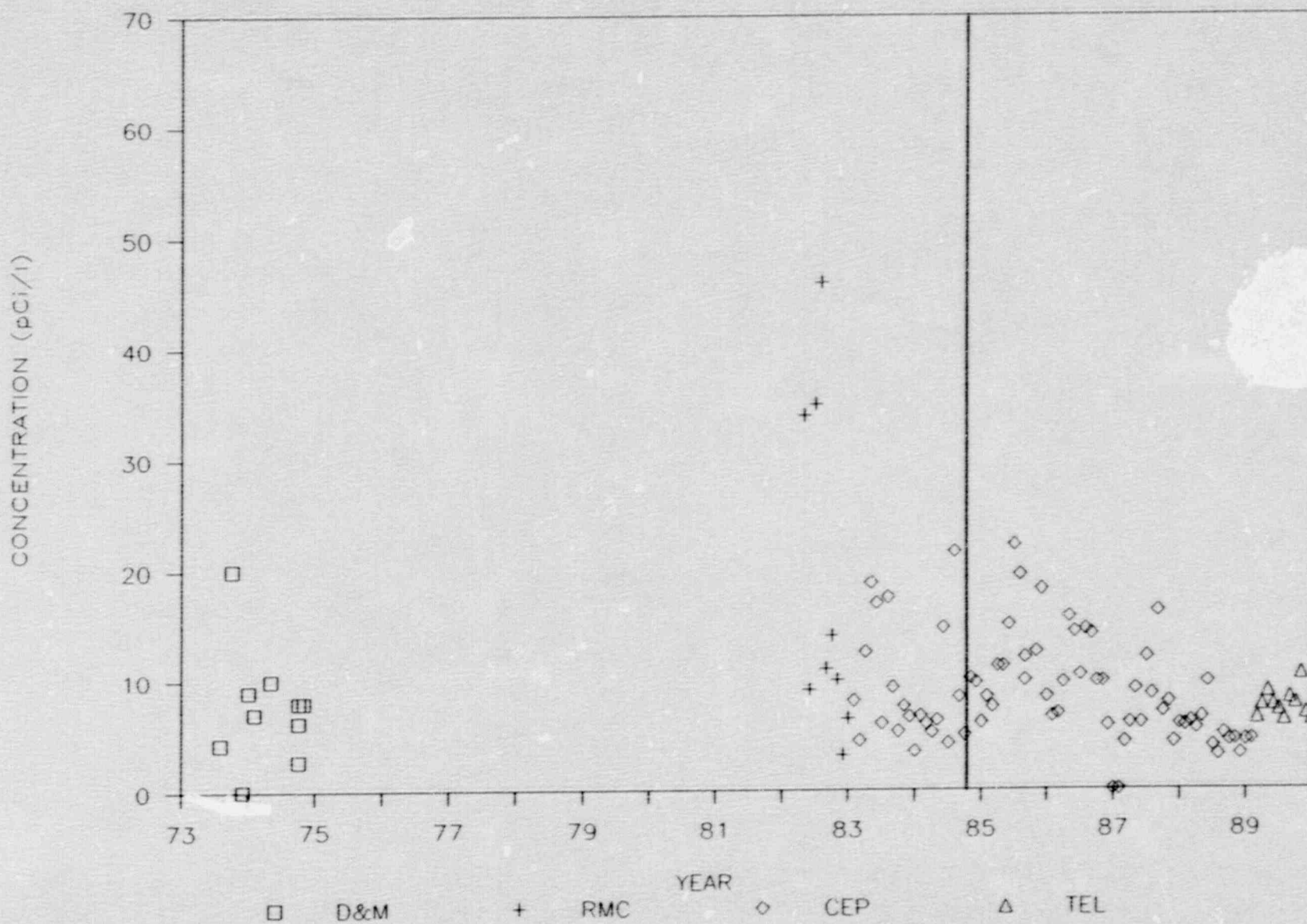


SURFACE WATER GROSS ALPHA, ST. LOUIS



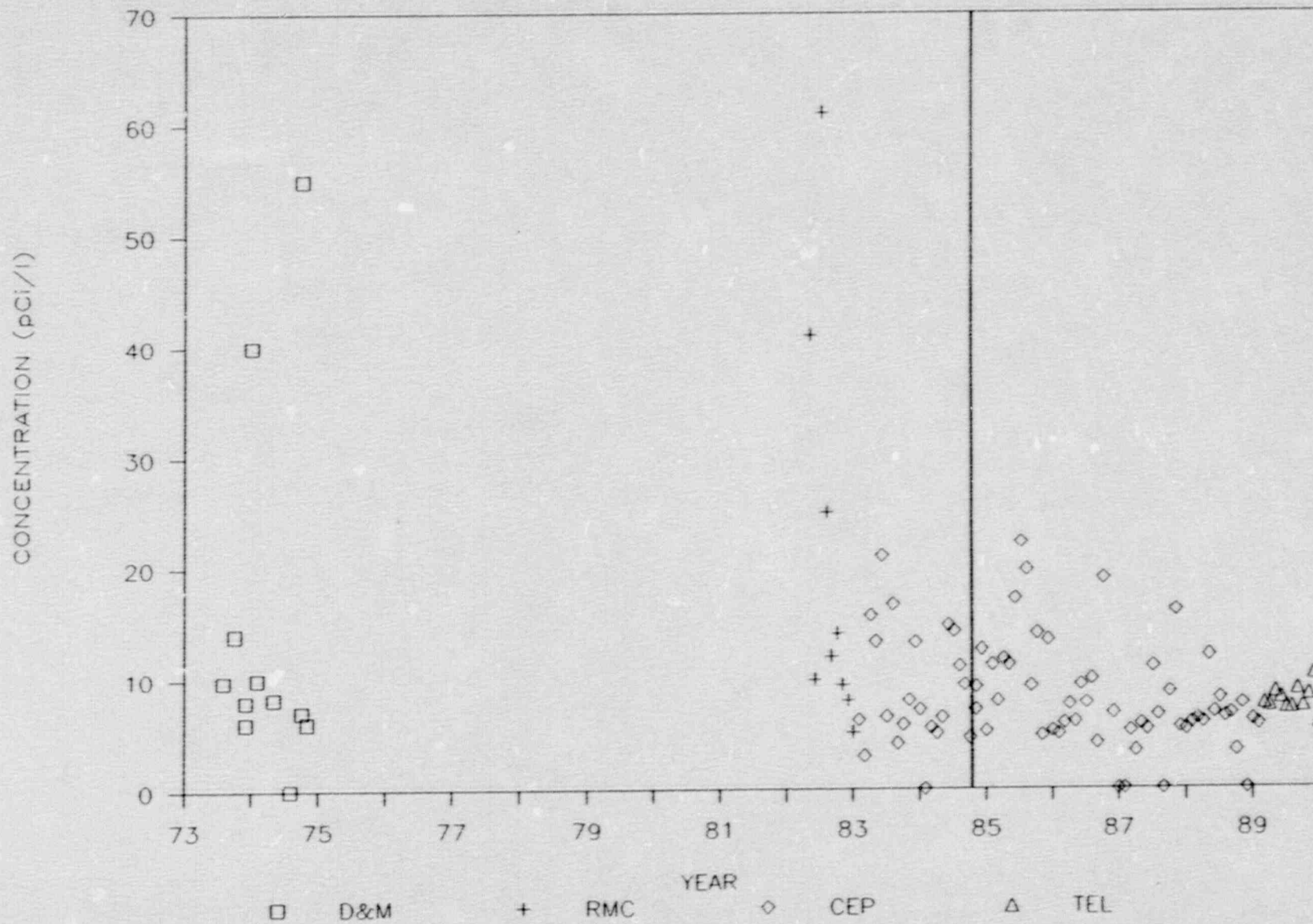
-J17-

SURFACE WATER GROSS BETA, UPSTREAM

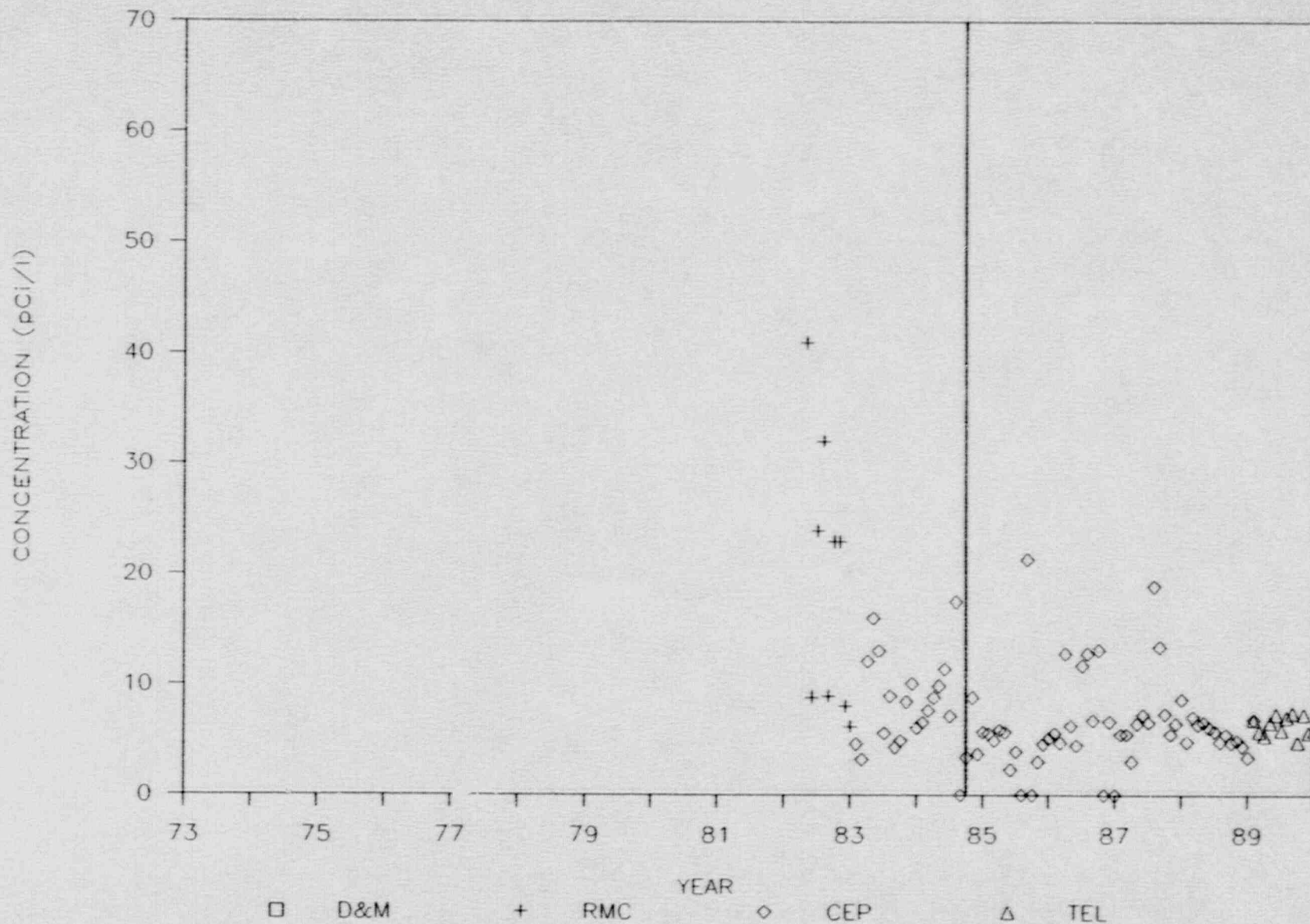


-J18-

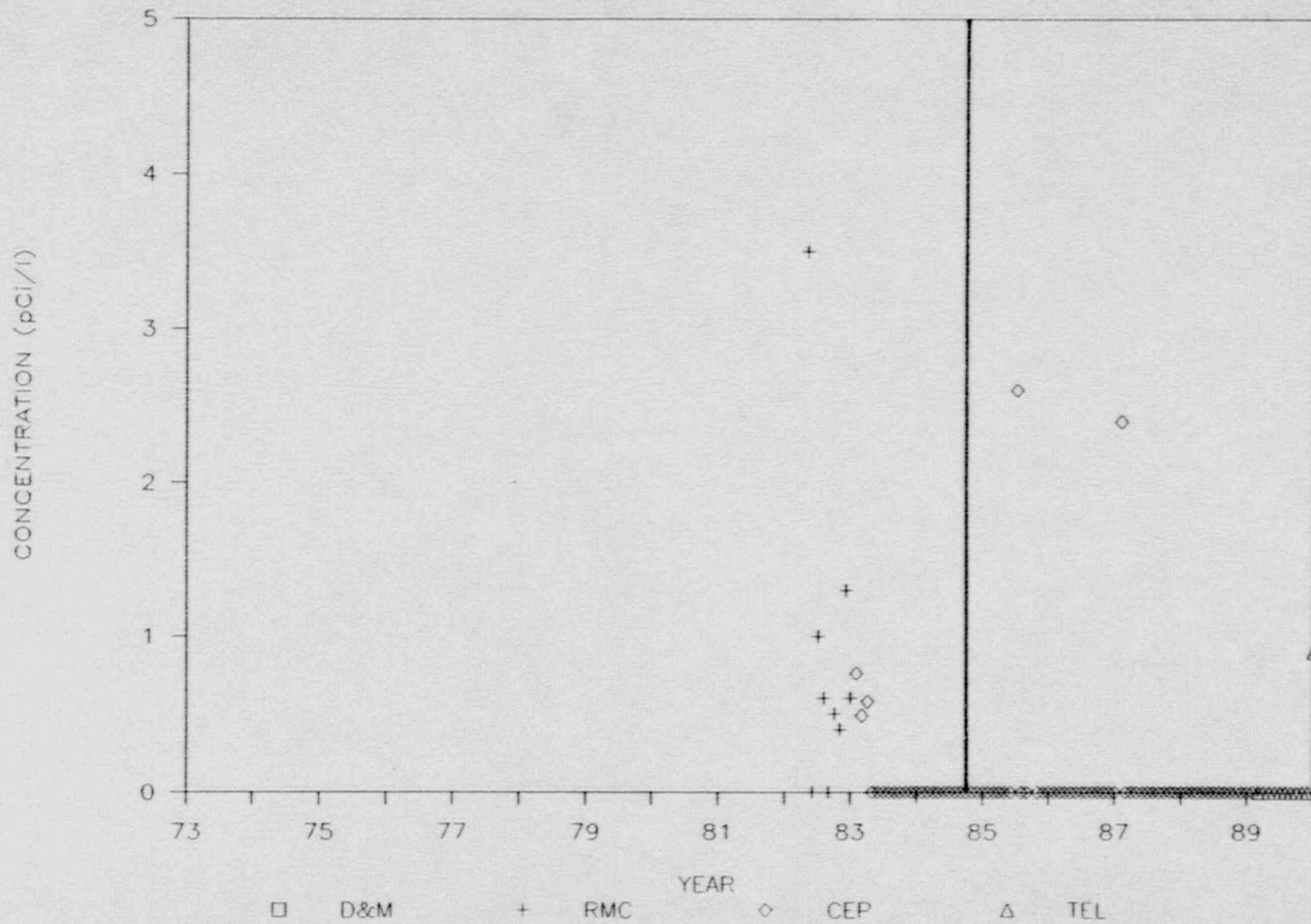
SURFACE WATER GROSS BETA, DOWNSTREAM



SURFACE WATER GROSS BETA, ST. LOUIS



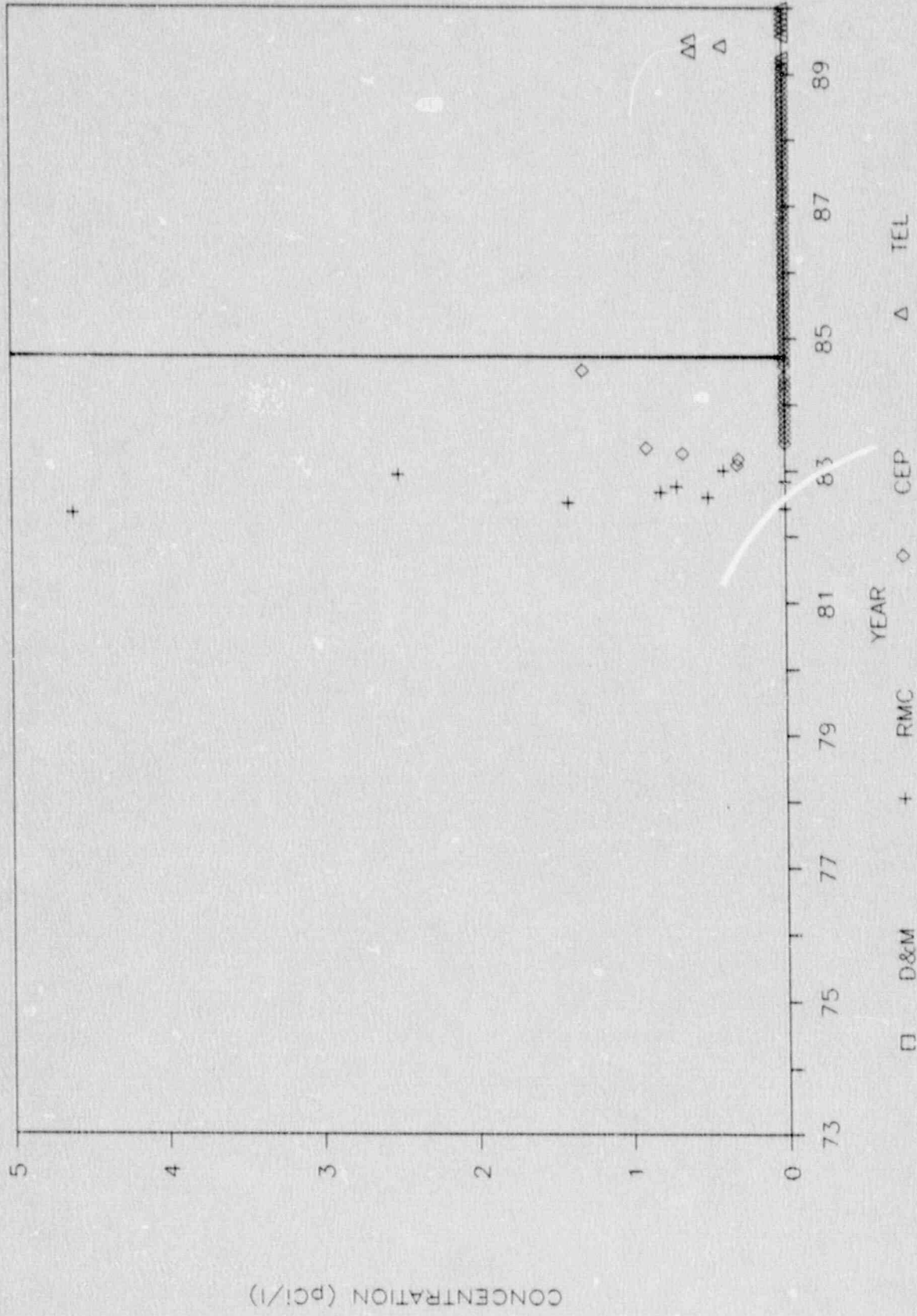
SURFACE WATER SR-90, UPSTREAM



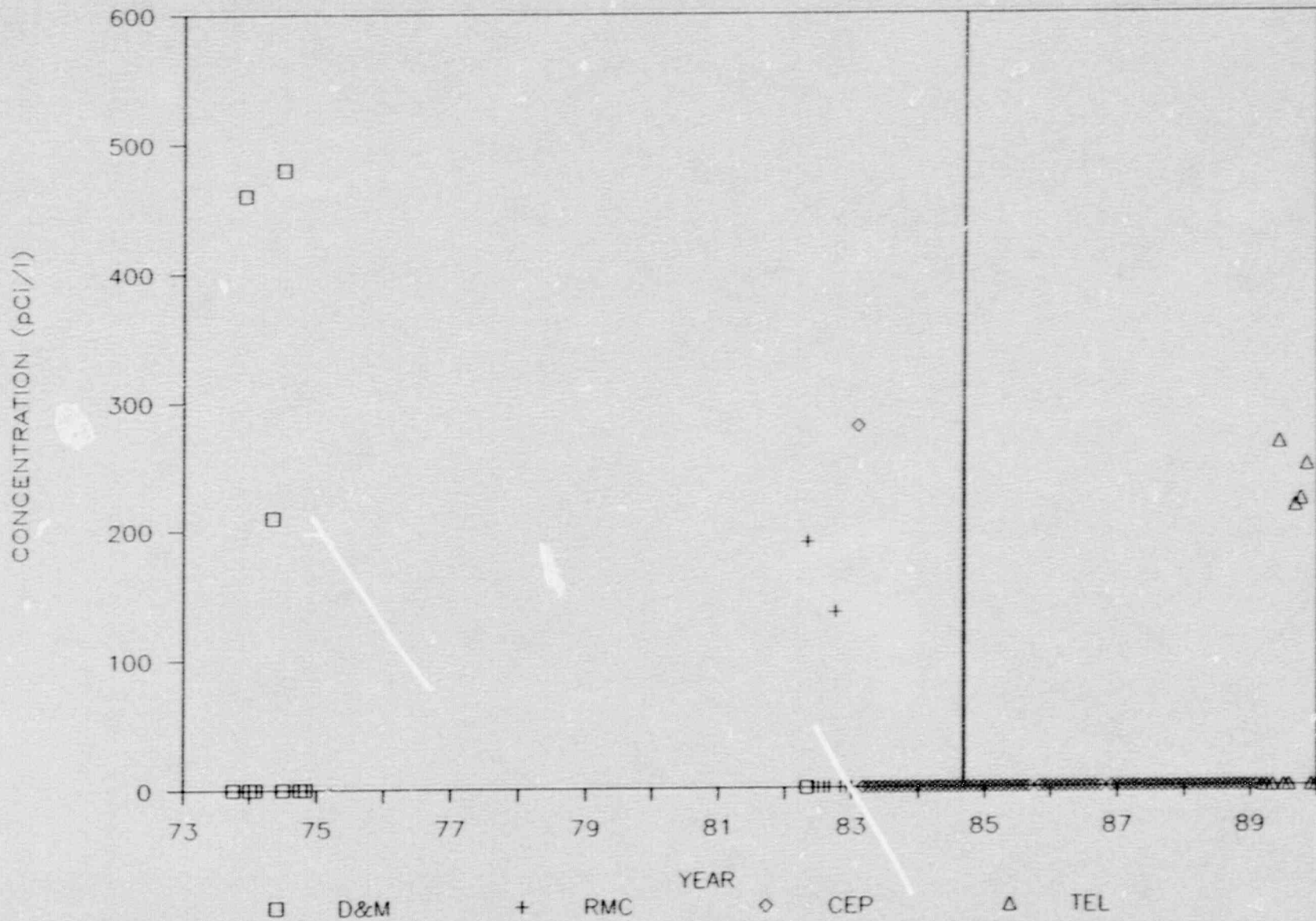
-J21-

SURFACE WATER SR-90, ST. LOUIS

-J23-

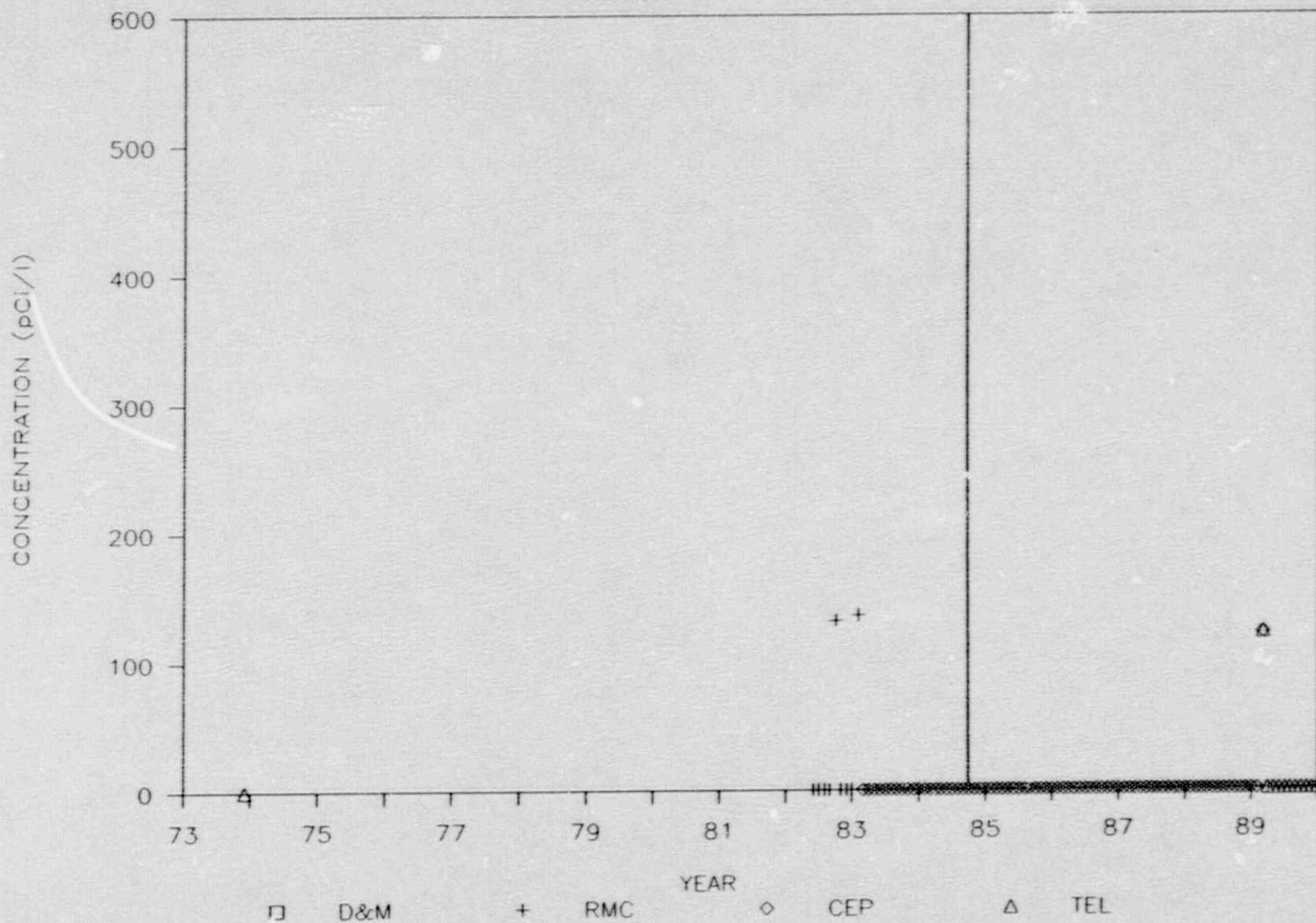


SURFACE WATER TRITIUM, UPSTREAM



-J24-

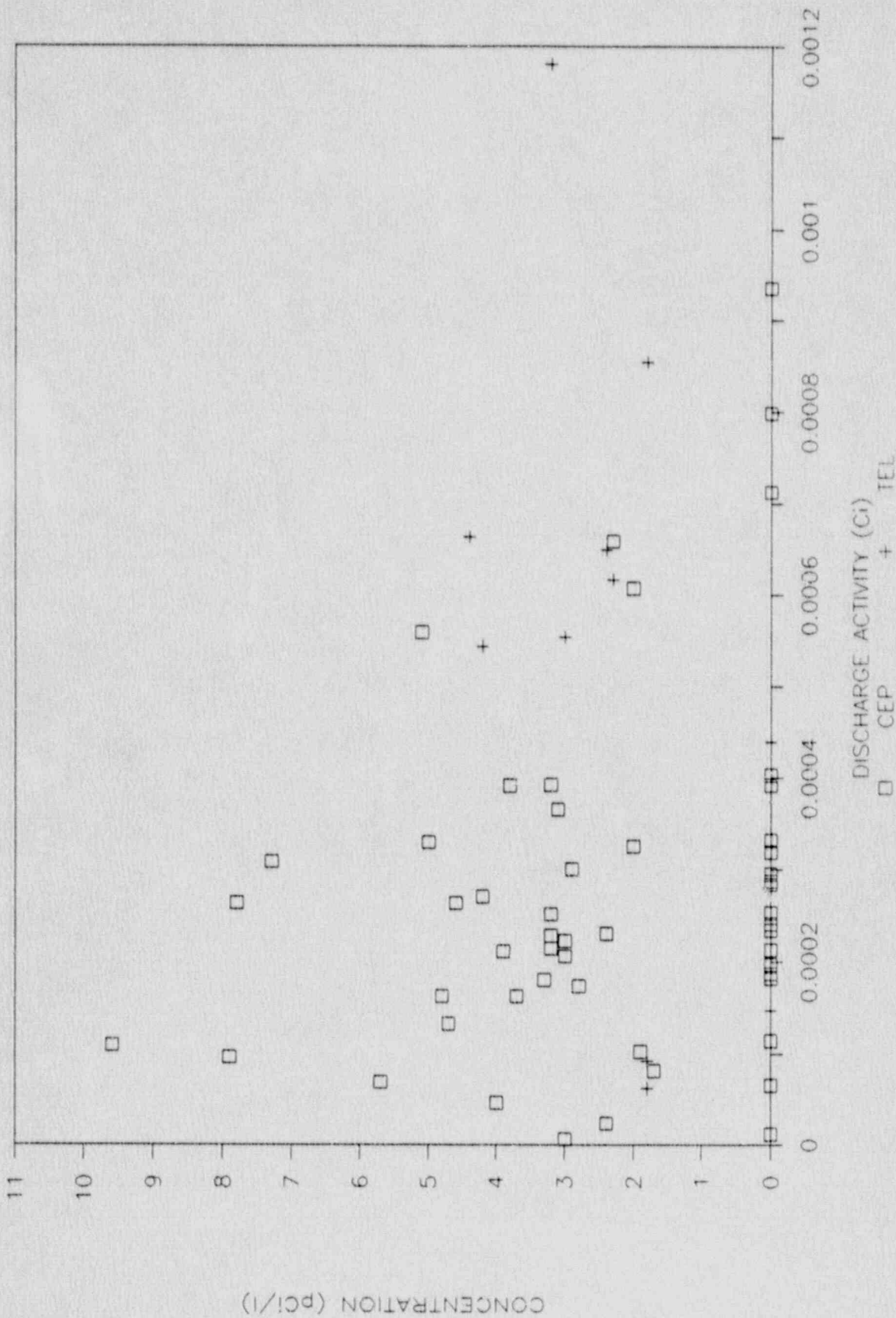
SURFACE WATER TRITIUM, ST. LOUIS



-J26-

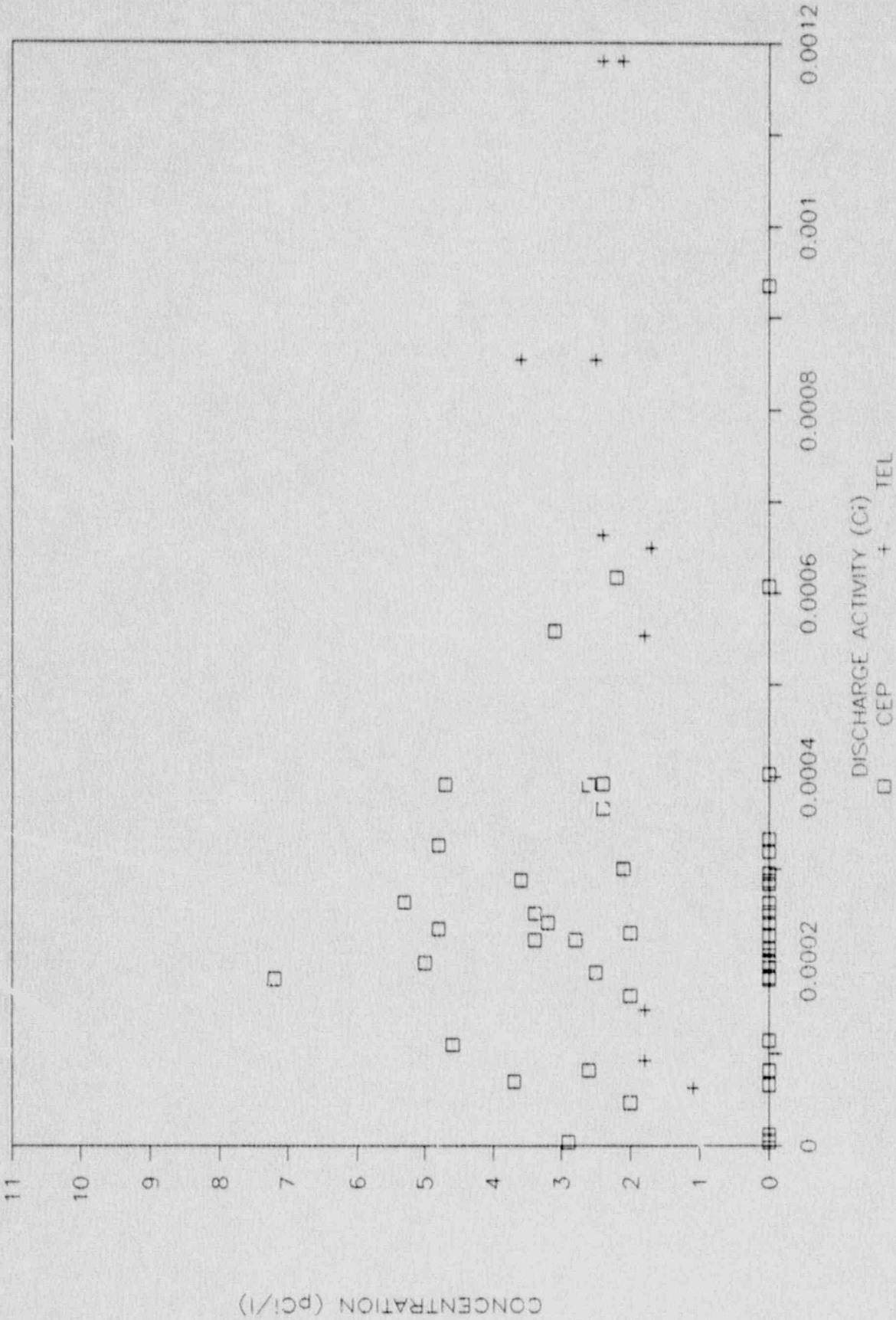
CALLAWAY DISCHARGE VS. SURFACE WATER

GROSS ALPHA UPSTREAM



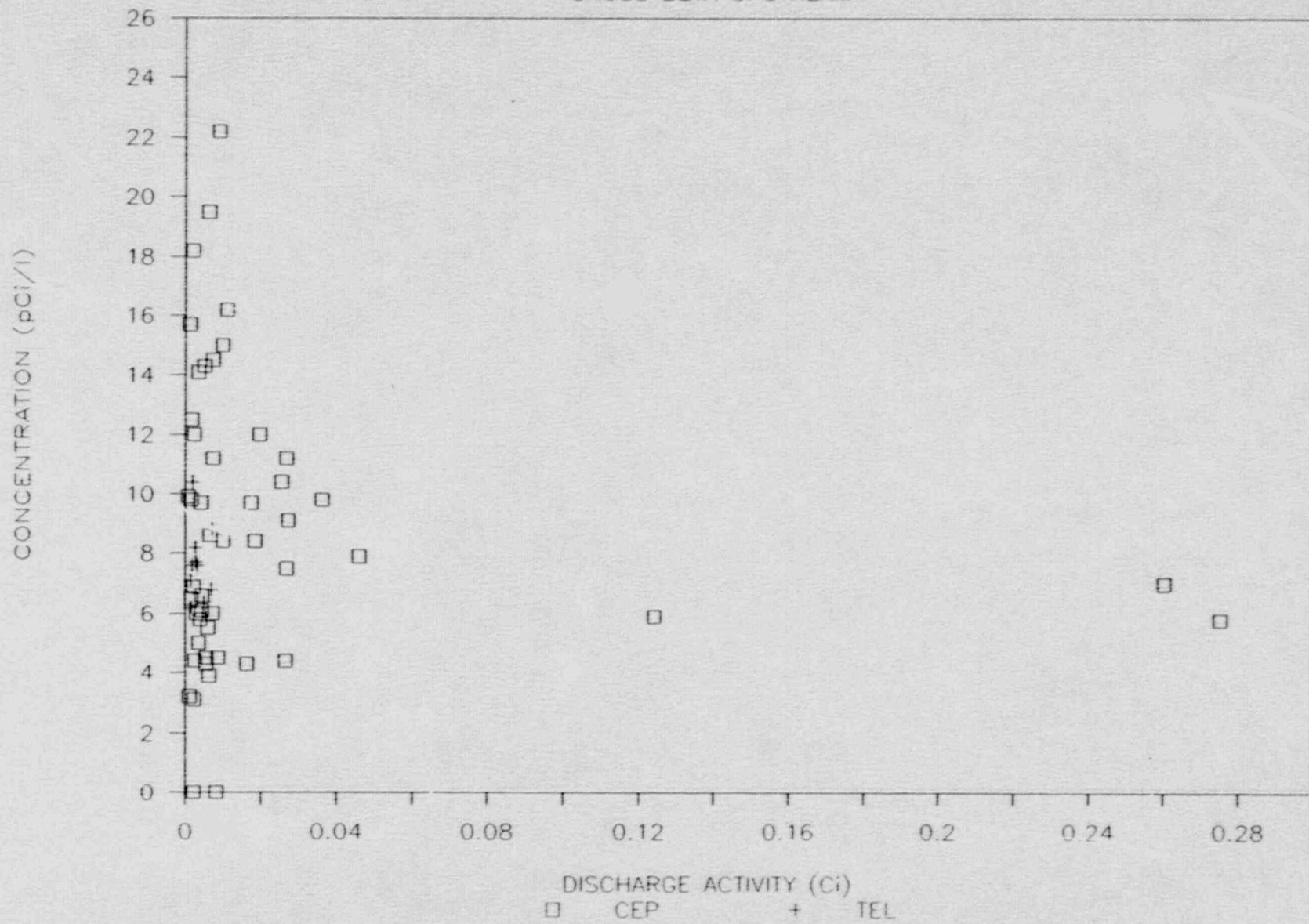
CALLAWAY DISCHARGE VS. SURFACE WATER

GROSS ALPHA AT ST. LOUIS



CALLAWAY DISCHARGE VS. SURFACE WATER

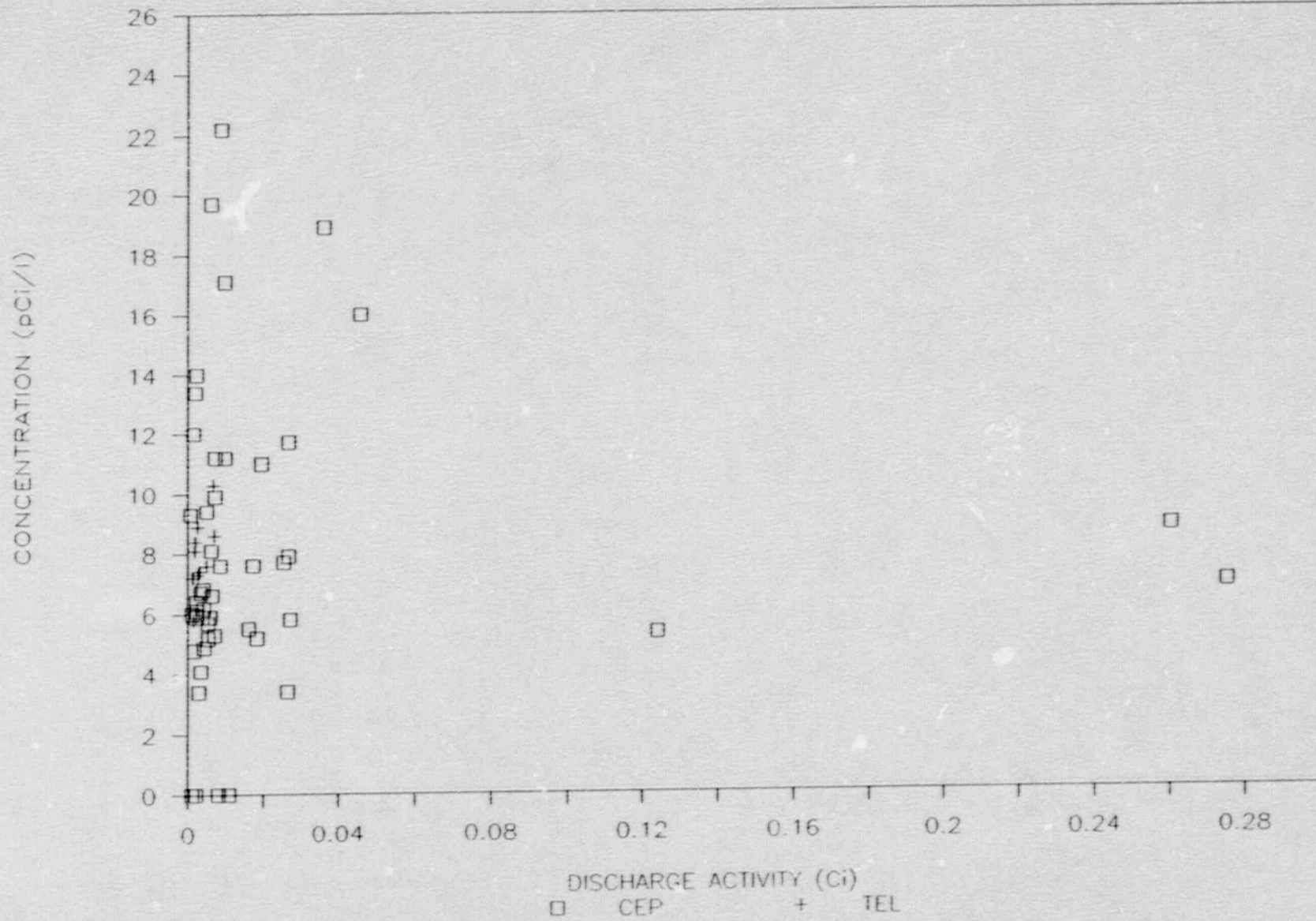
GROSS BETA UPSTREAM



-530-

CALLAWAY DISCHARGE VS. SURFACE WATER

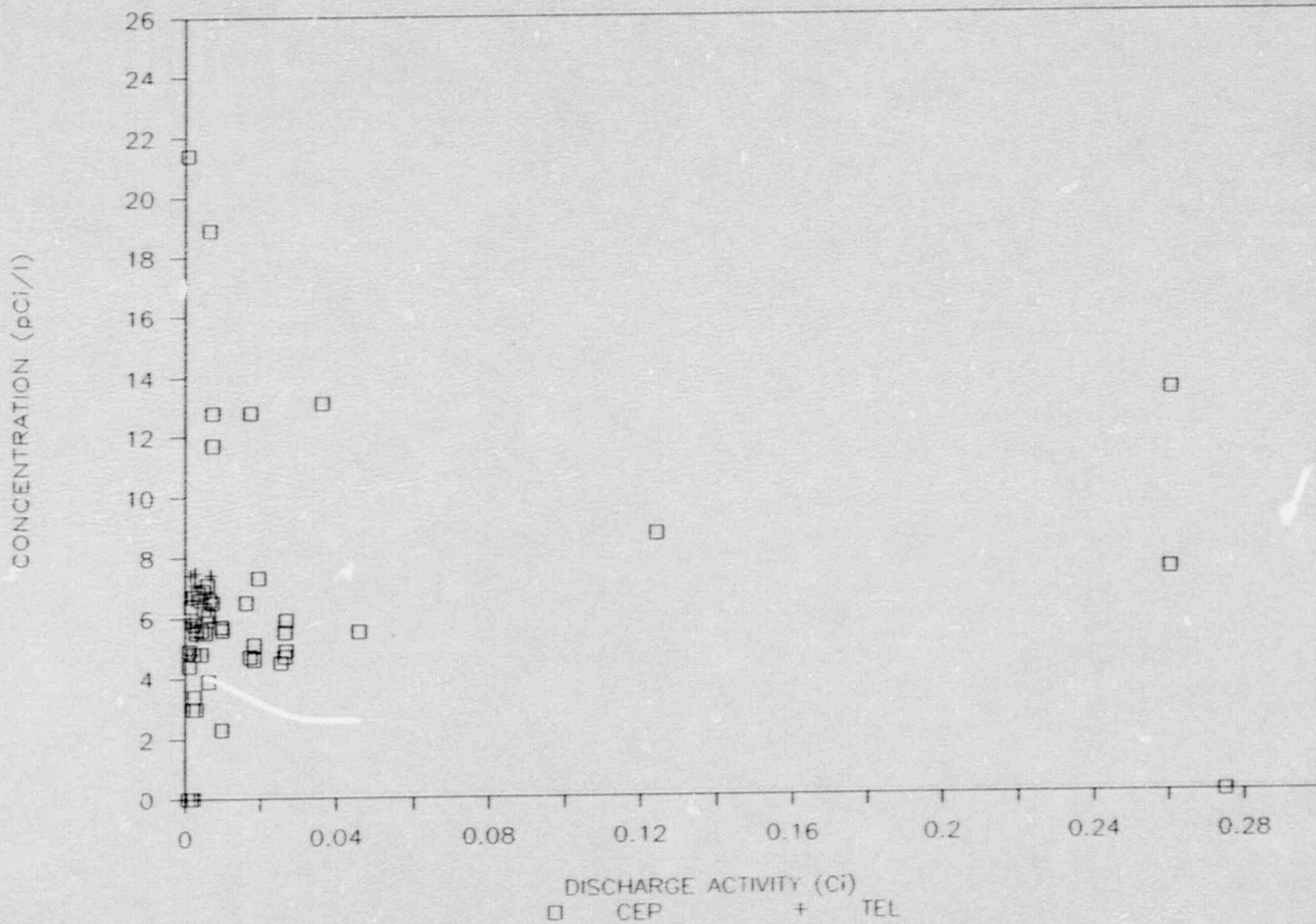
GROSS BETA DOWNSTREAM



-J31-

CALLAWAY DISCHARGE VS. SURFACE WATER

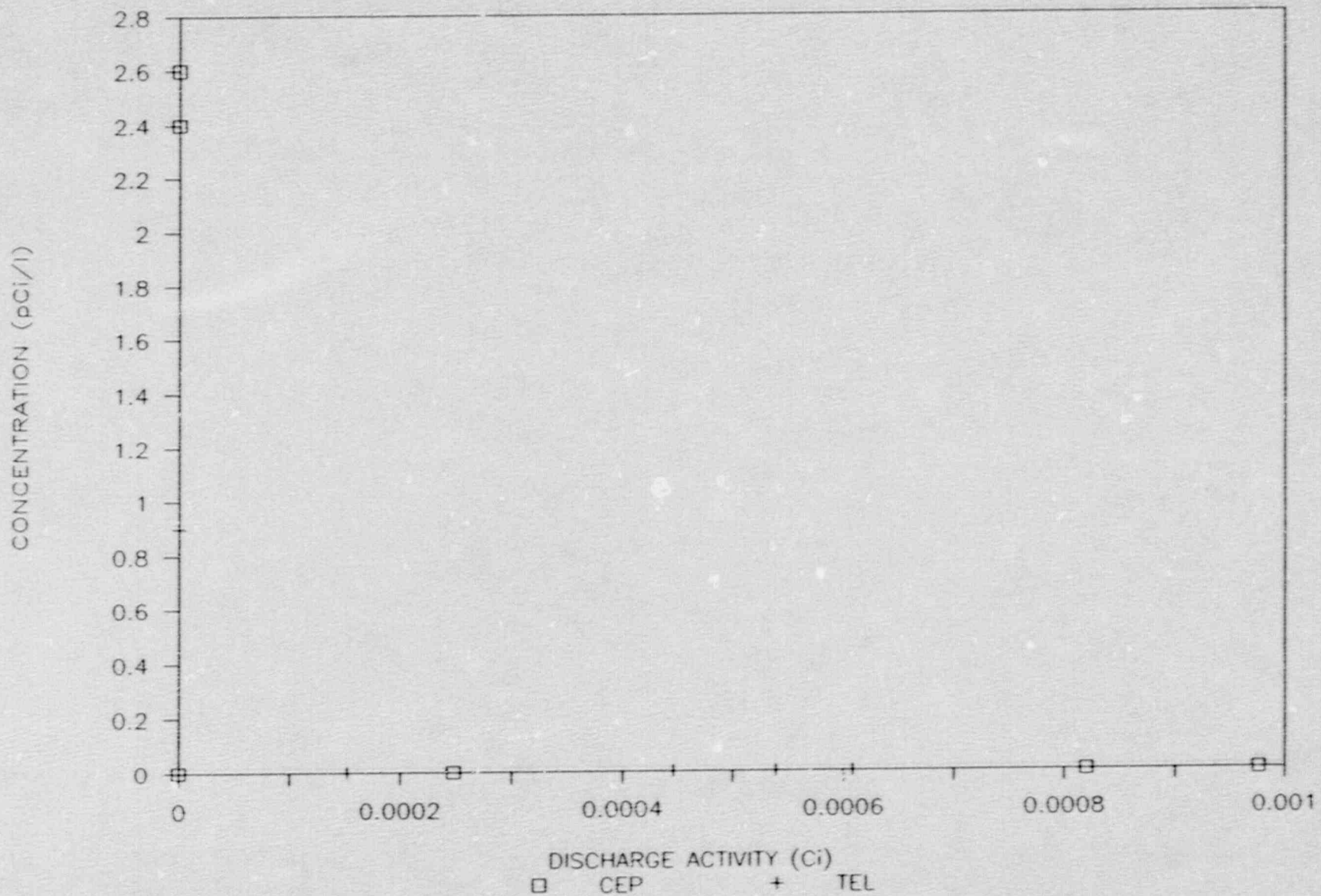
GROSS BETA AT ST. LOUIS



-J32-

CALLAWAY DISCHARGE VS. SURFACE WATER

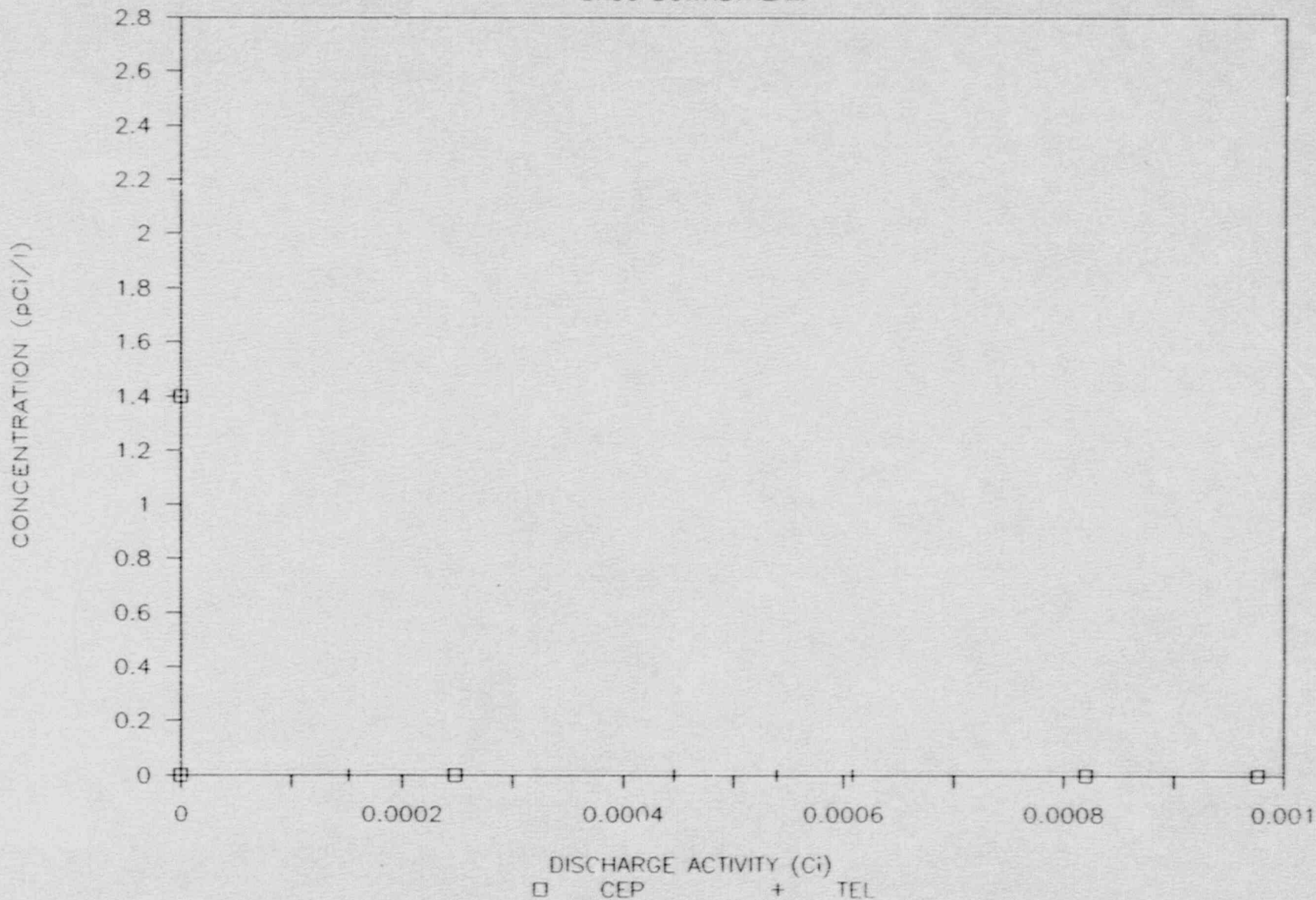
SR90 UPSTREAM



-J33-

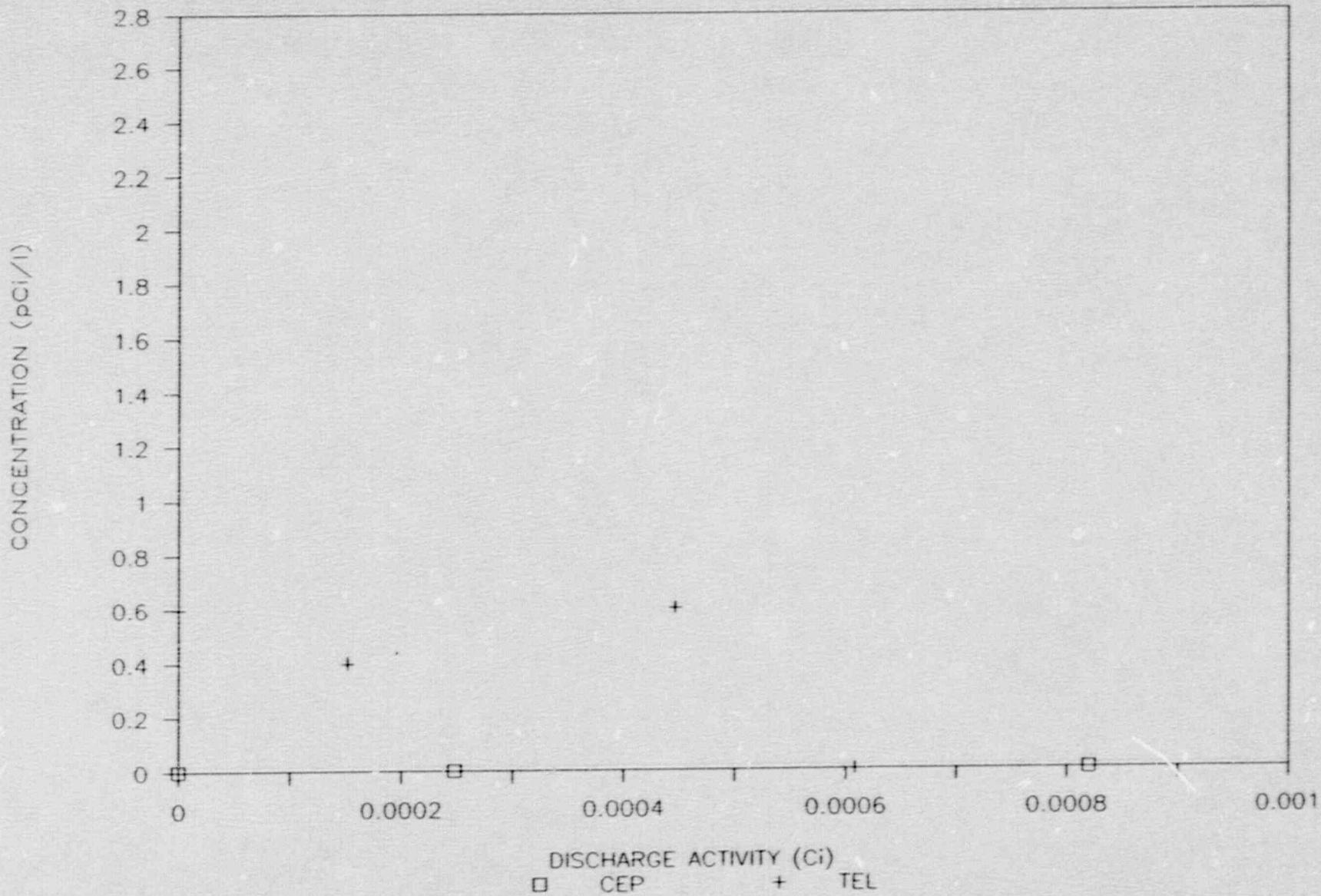
CALLAWAY DISCHARGE VS. SURFACE WATER

SR90 DOWNSTREAM



CALLAWAY DISCHARGE VS. SURFACE WATER

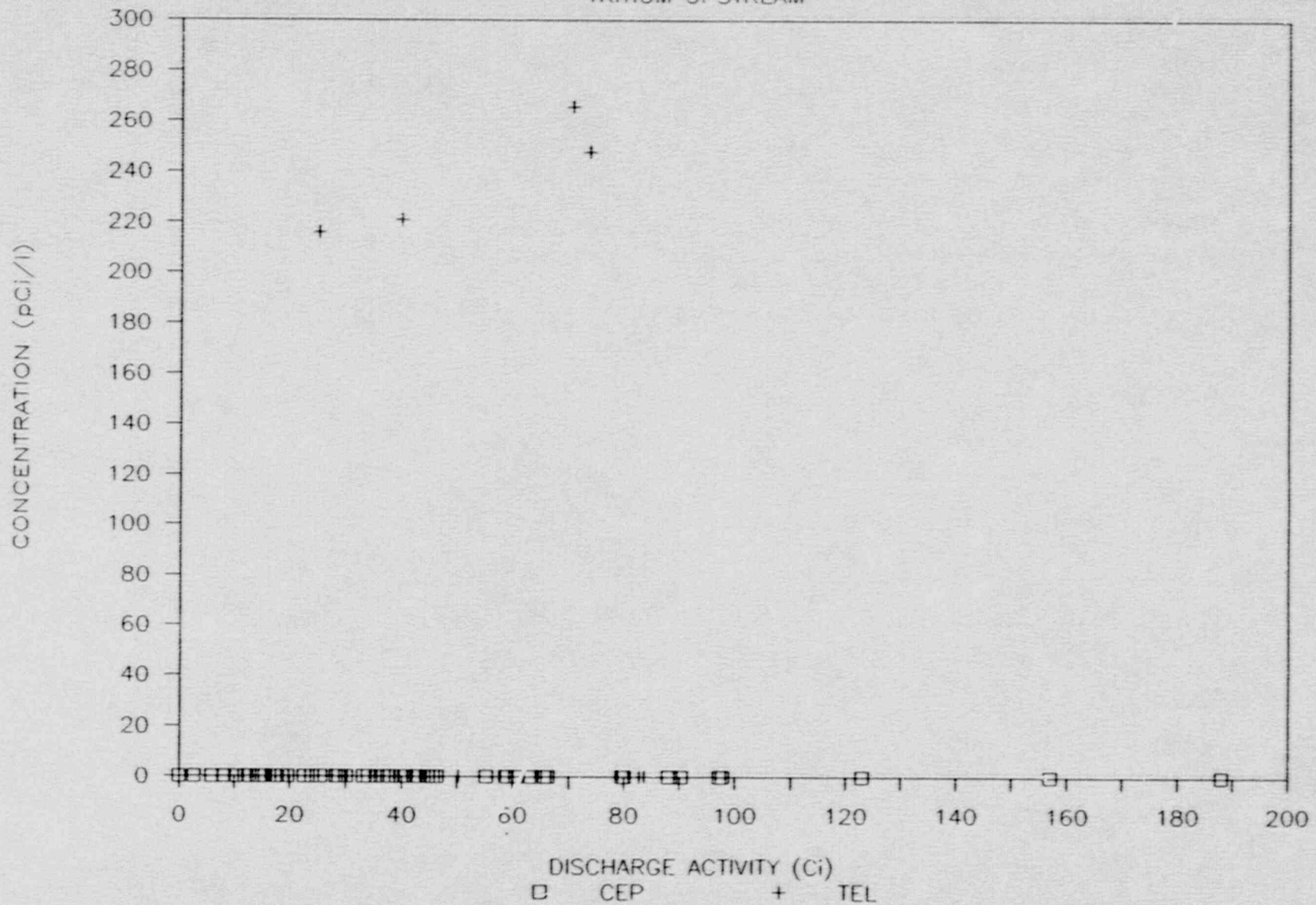
SR90 AT ST. LOUIS



-035-

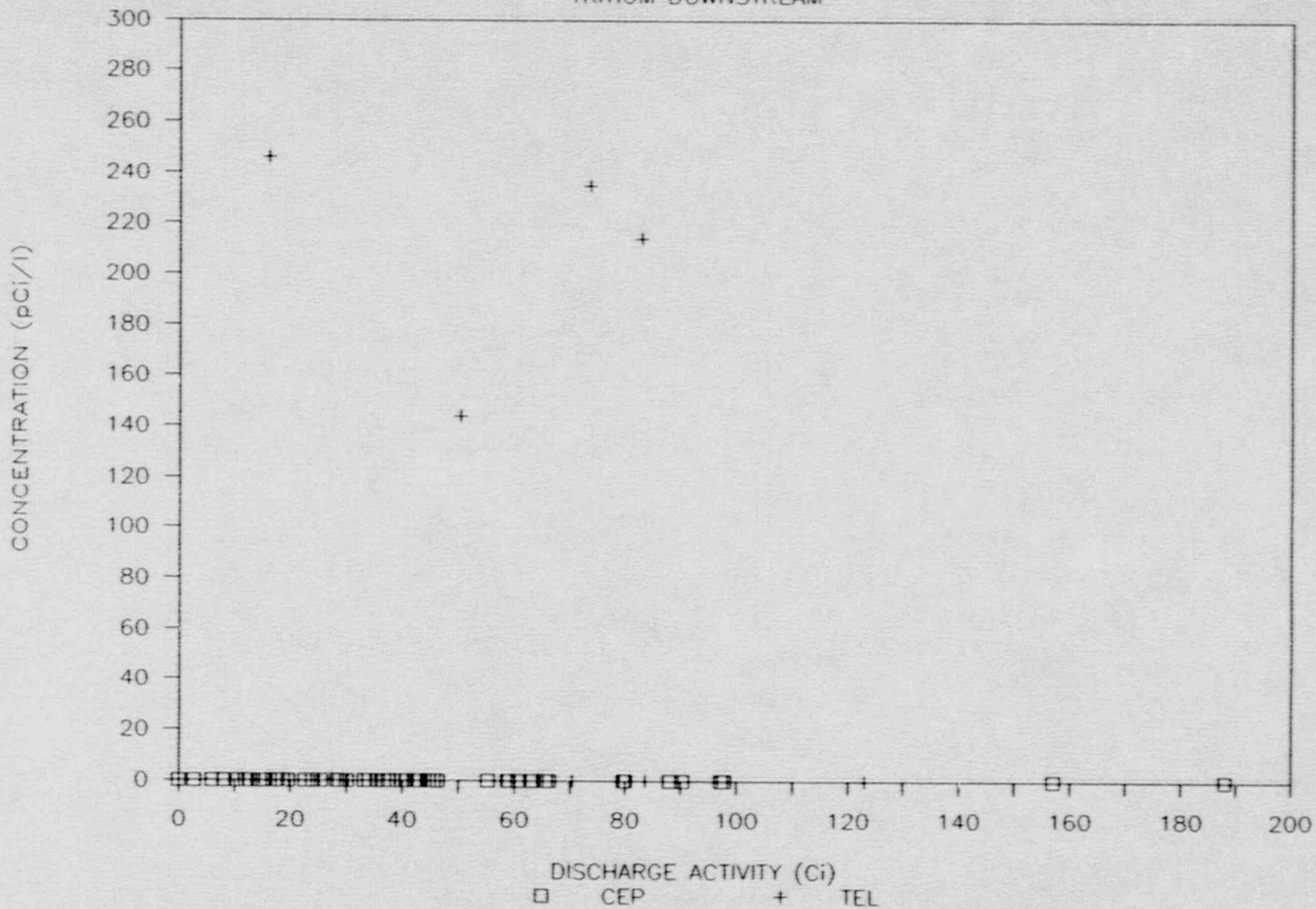
CALLAWAY DISCHARGE VS. SURFACE WATER

TRITIUM UPSTREAM



CALLAWAY DISCHARGE VS. SURFACE WATER

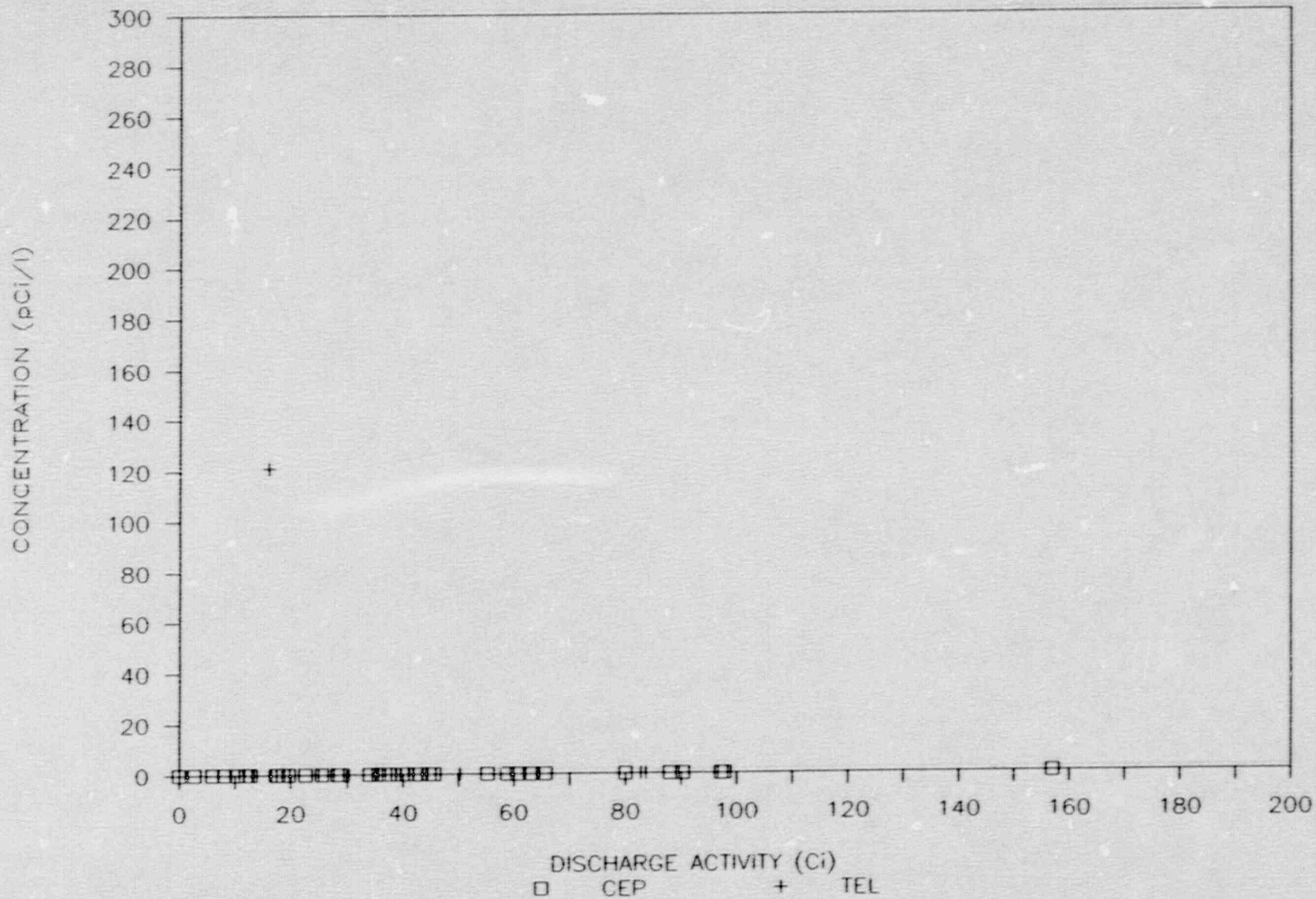
TRITIUM DOWNSTREAM



-537-

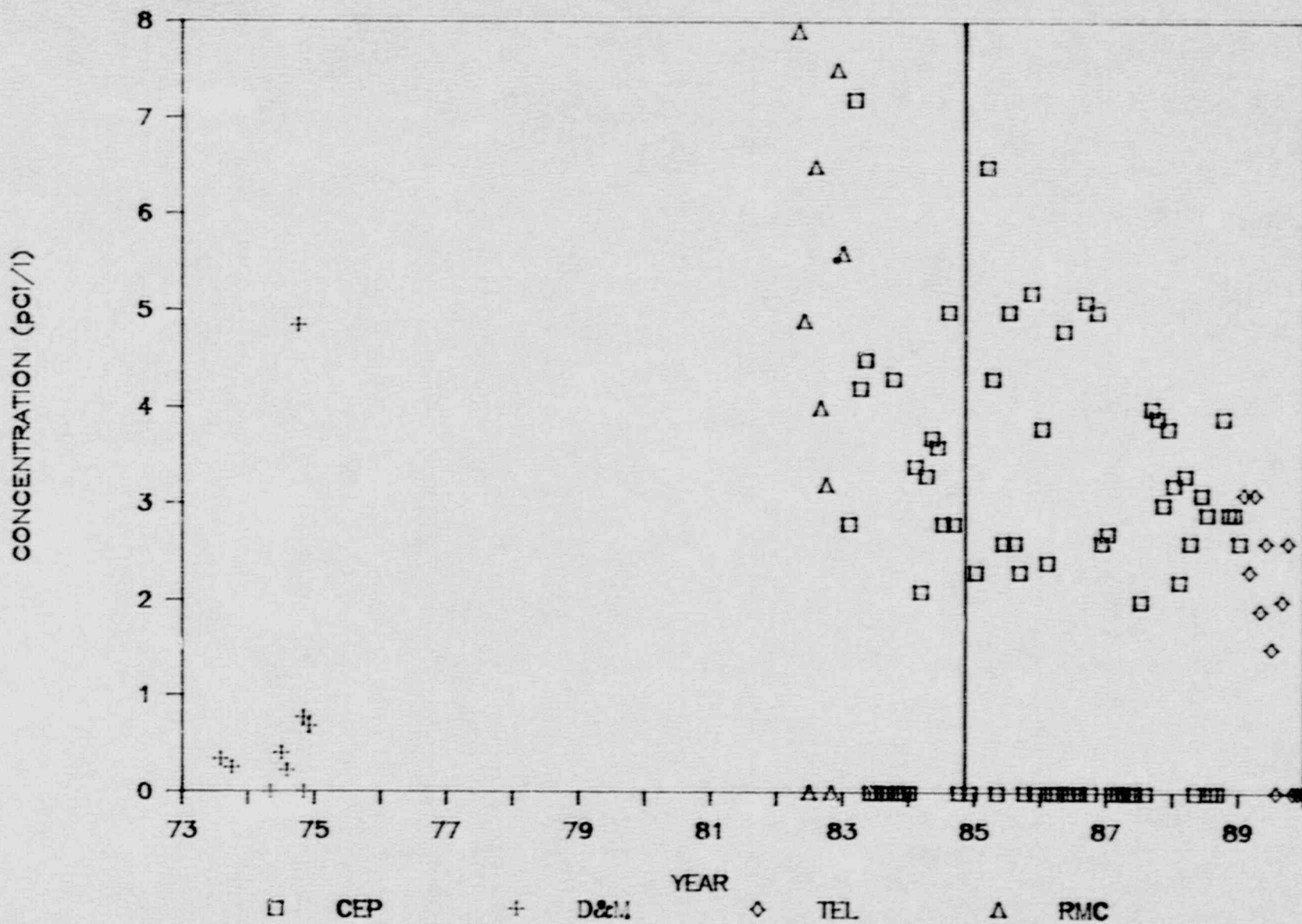
CALLAWAY DISCHARGE VS. SURFACE WATER

TRITIUM AT ST. LOUIS

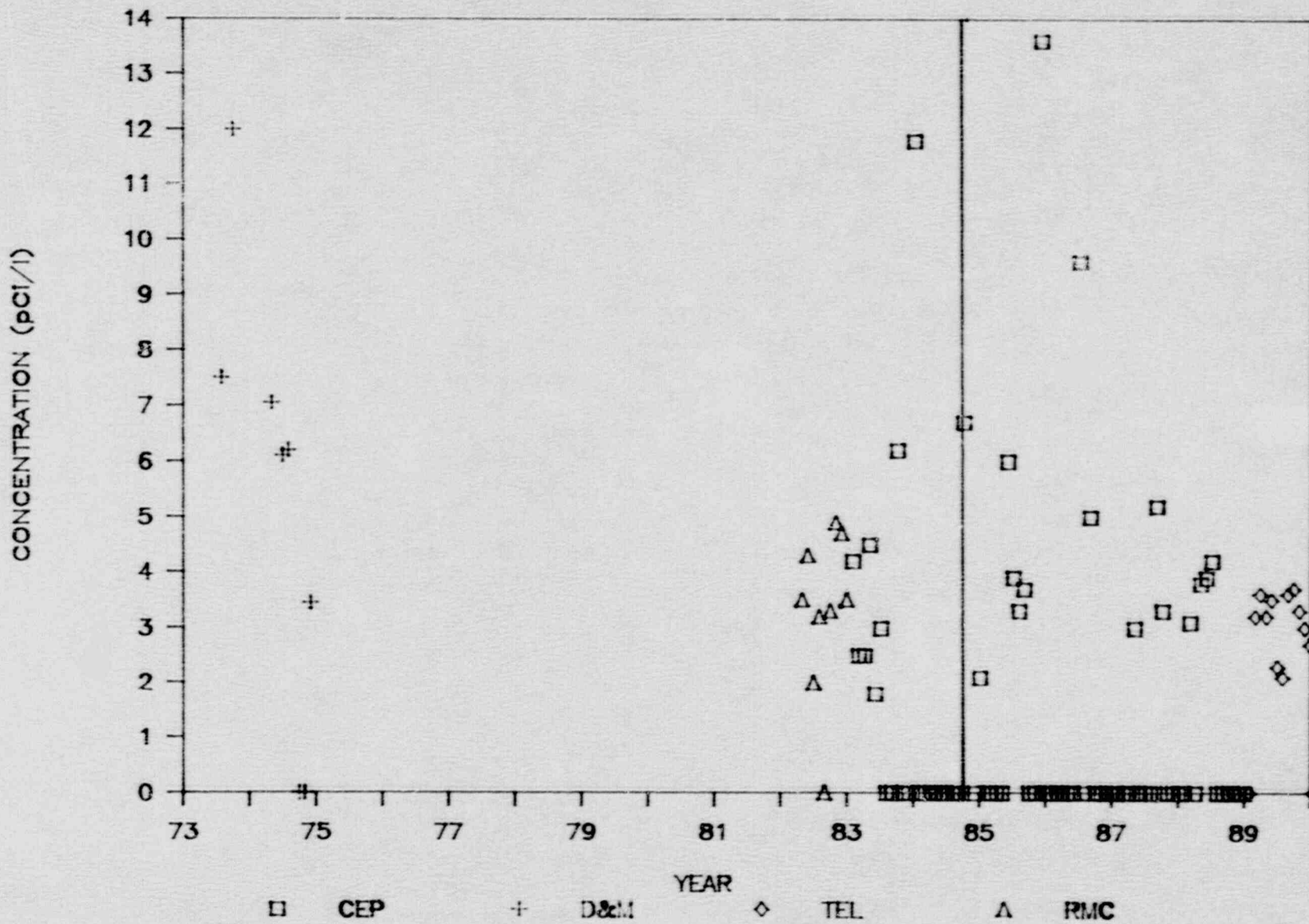


-338-

DRINKING WATER GROSS ALPHA, SITE D01



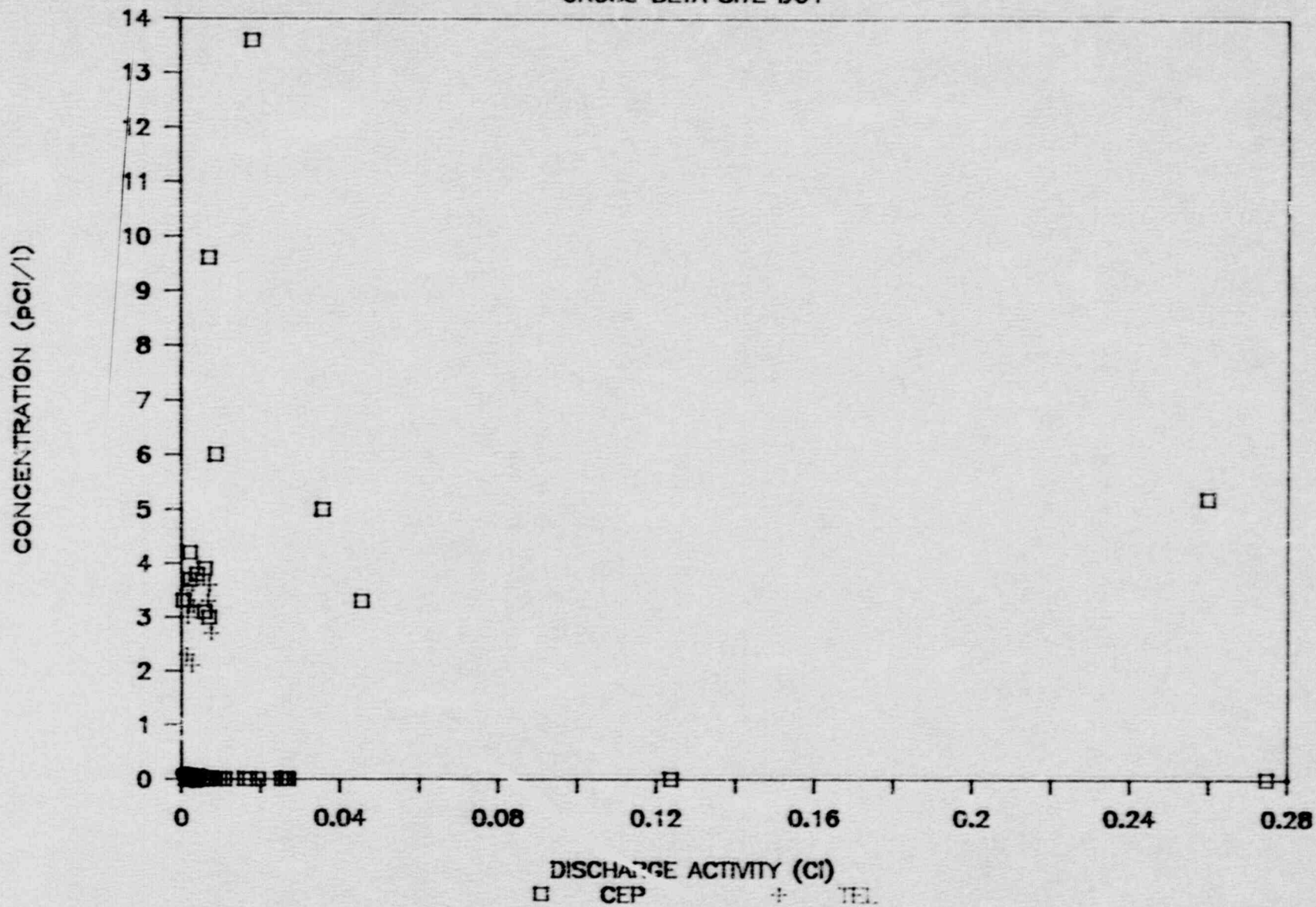
DRINKING WATER GROSS BETA, SITE D01



-740-

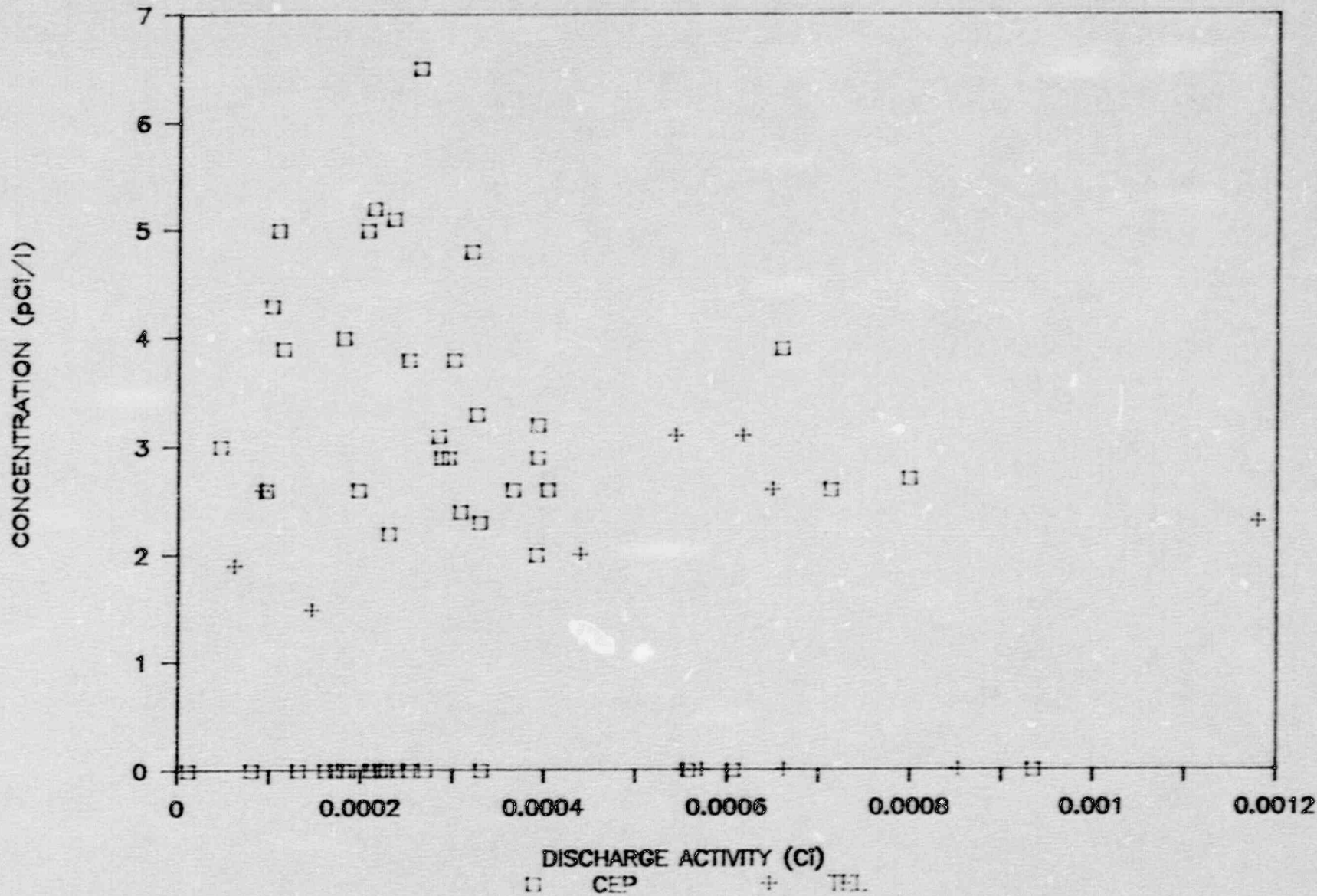
CALLAWAY DISCHARGE VS DRINKING WATER

GROSS BETA SITE D01

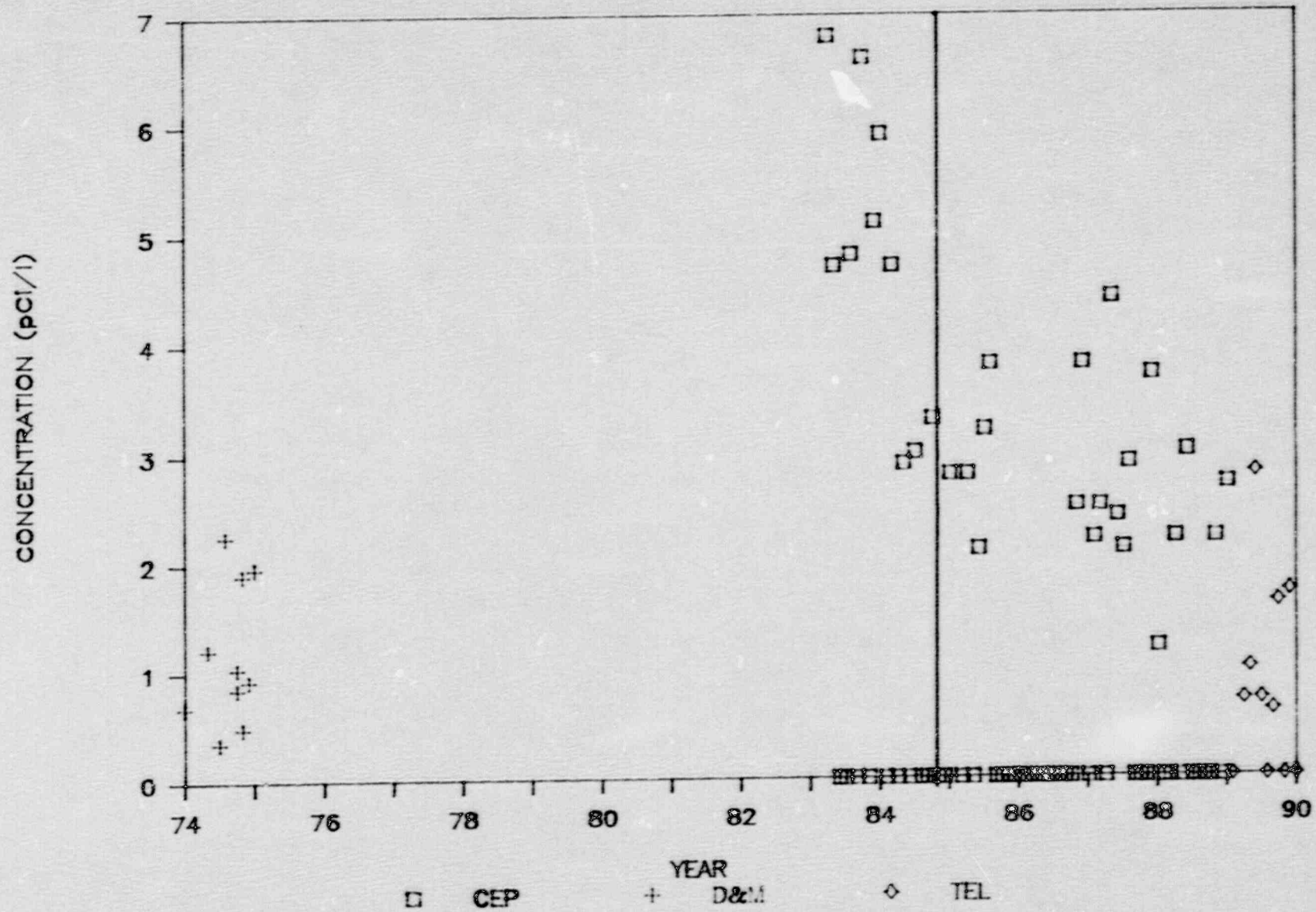


CALLAWAY DISCHARGE VS DRINKING WATER

GROSS ALPHA SITE D01

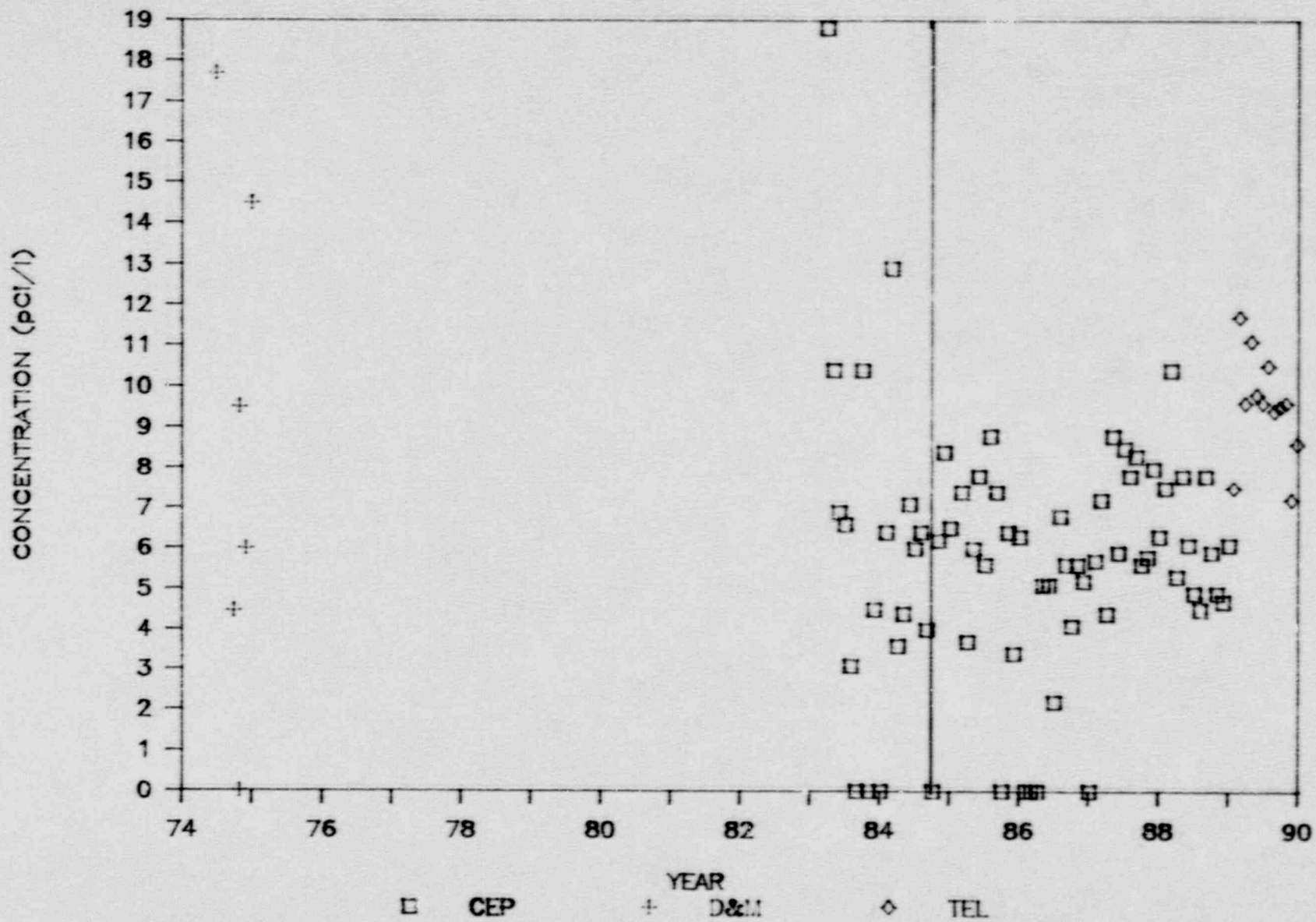


WELL WATER GROSS ALPHA, SITE F05



-J43-

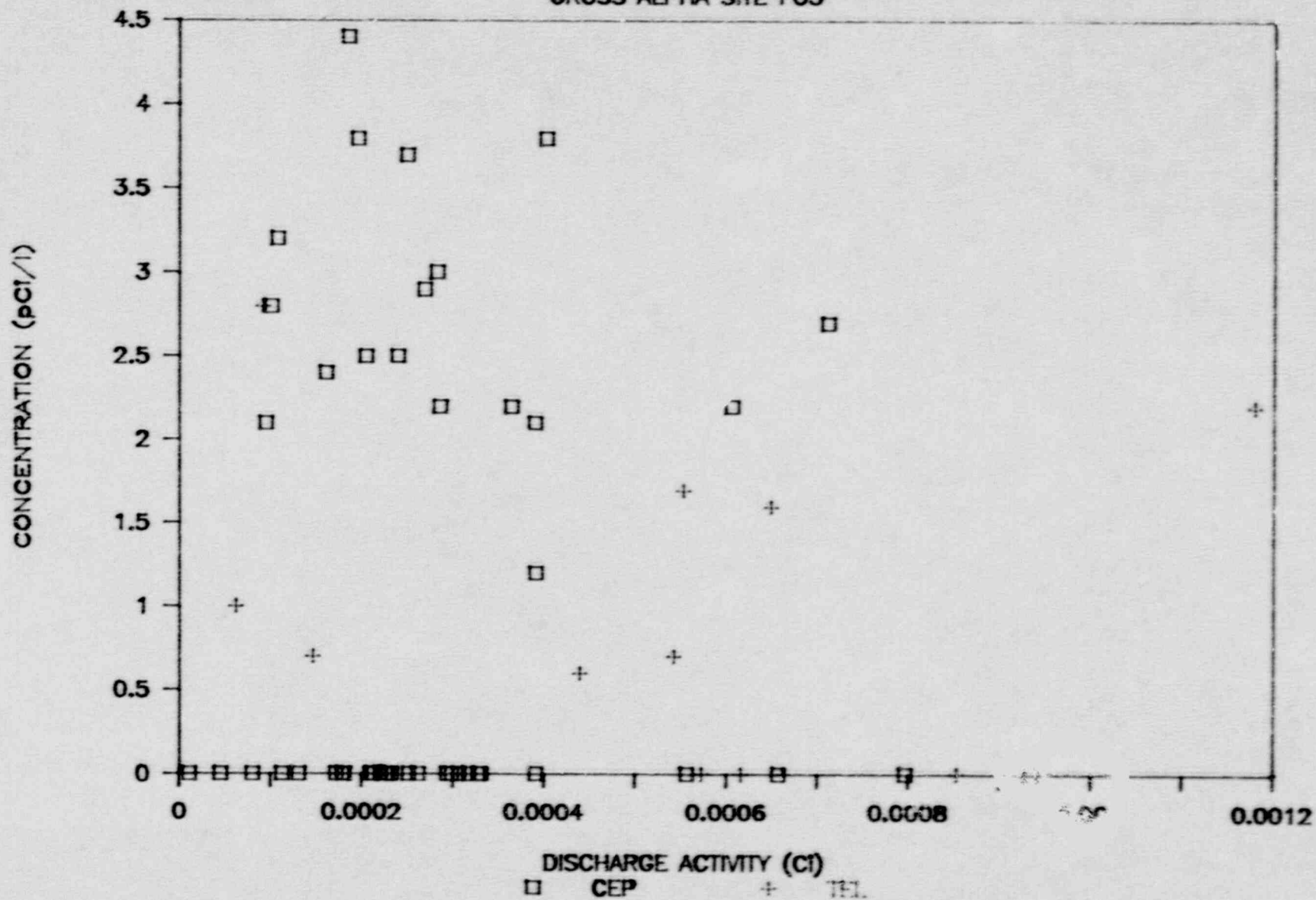
WELL WATER GROSS BETA, SITE F15



-J46-

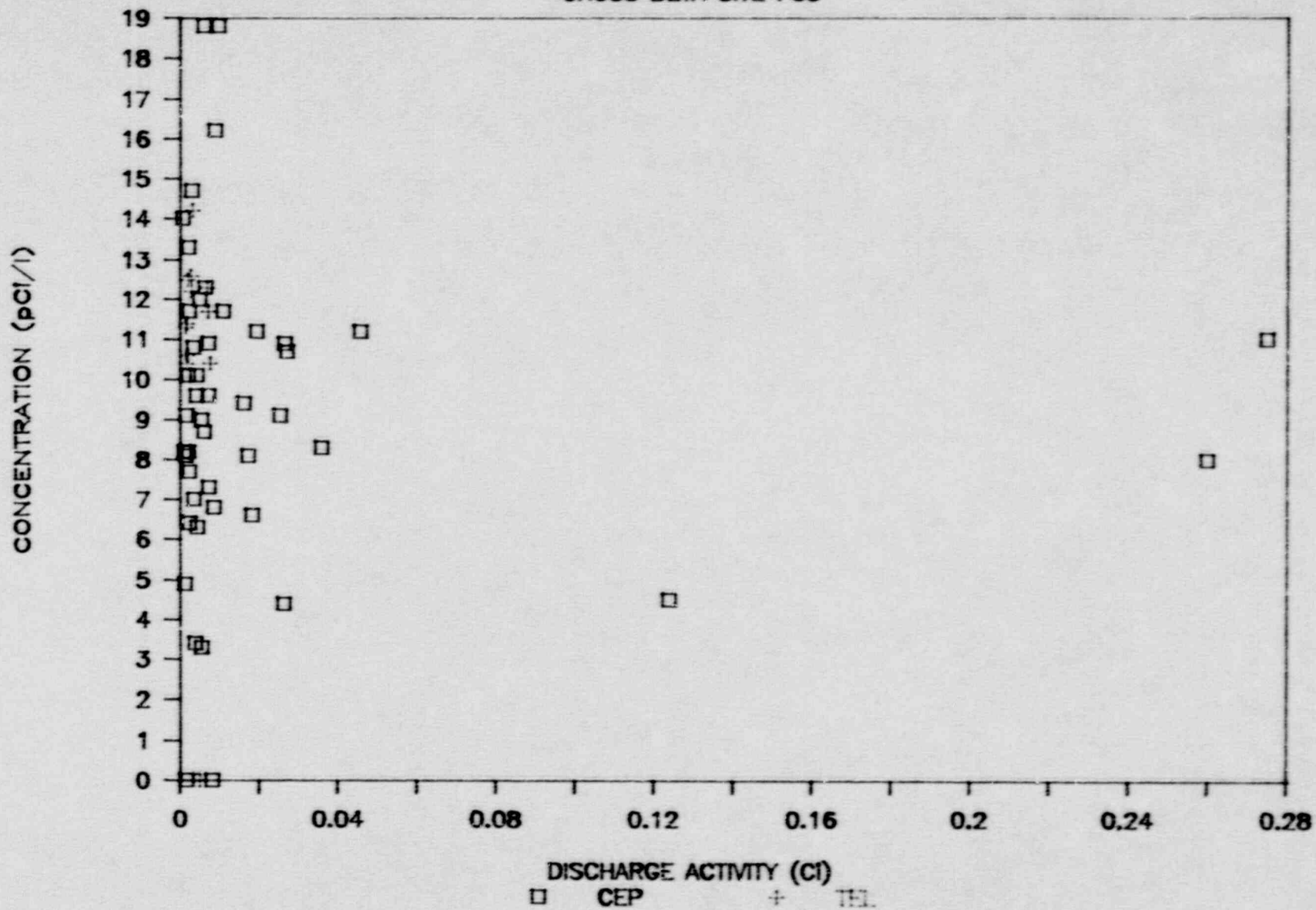
CALLAWAY DISCHARGE VS WELL WATER

GROSS ALPHA SITE F05



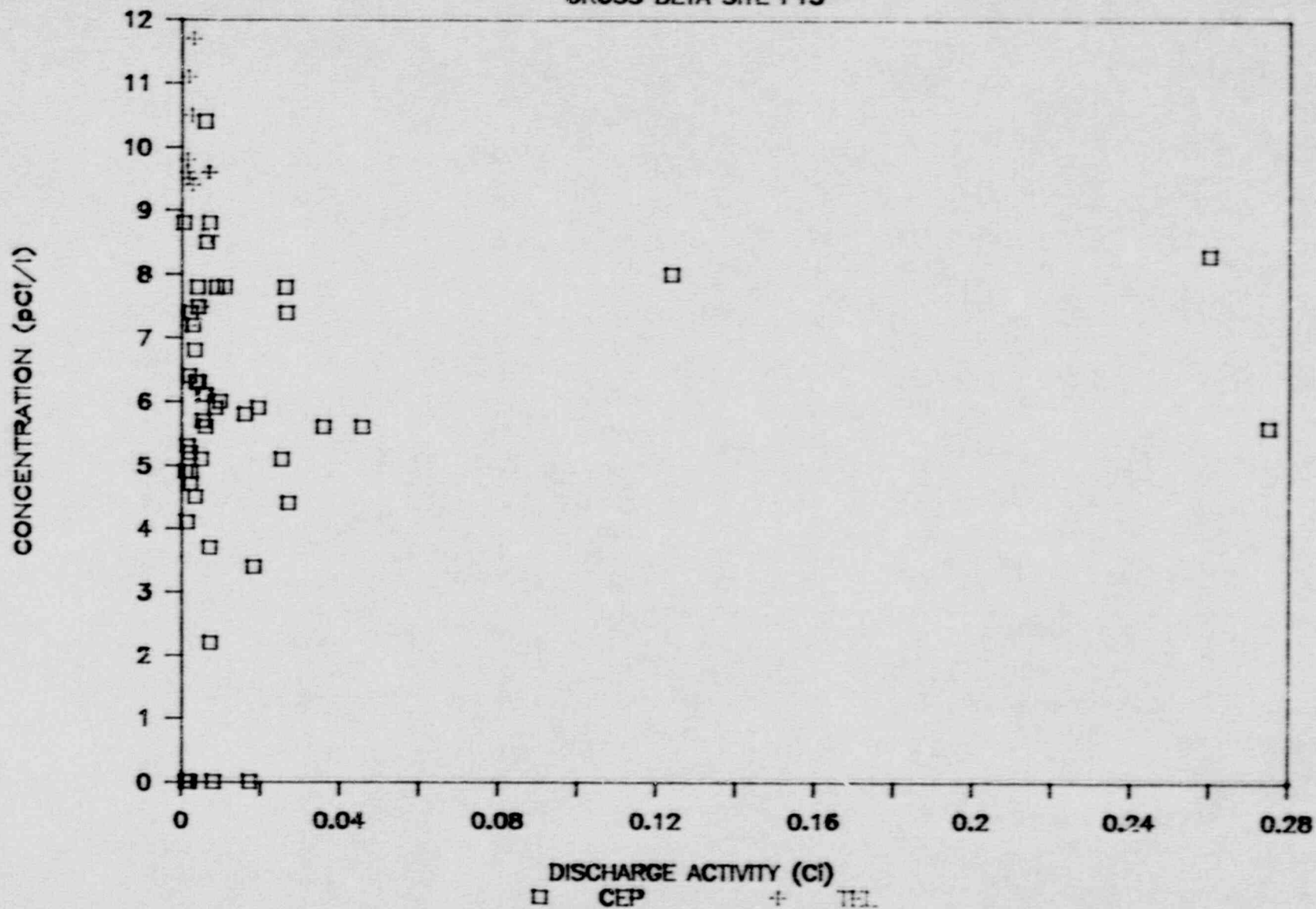
CALLAWAY DISCHARGE VS WELL WATER

GROSS BETA SITE F05



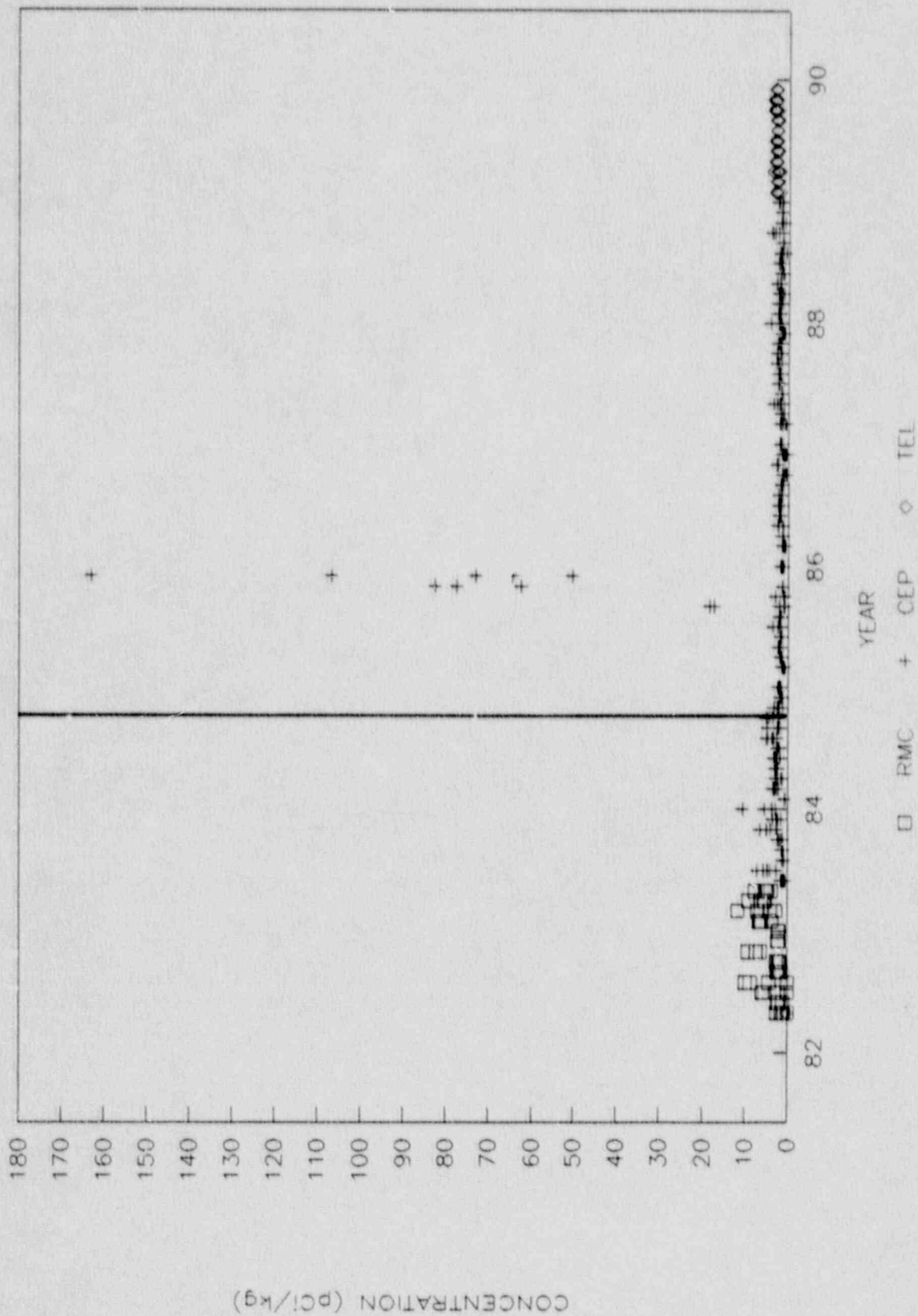
CALLAWAY DISCHARGE VS WELL WATER

GROSS BETA SITE F15

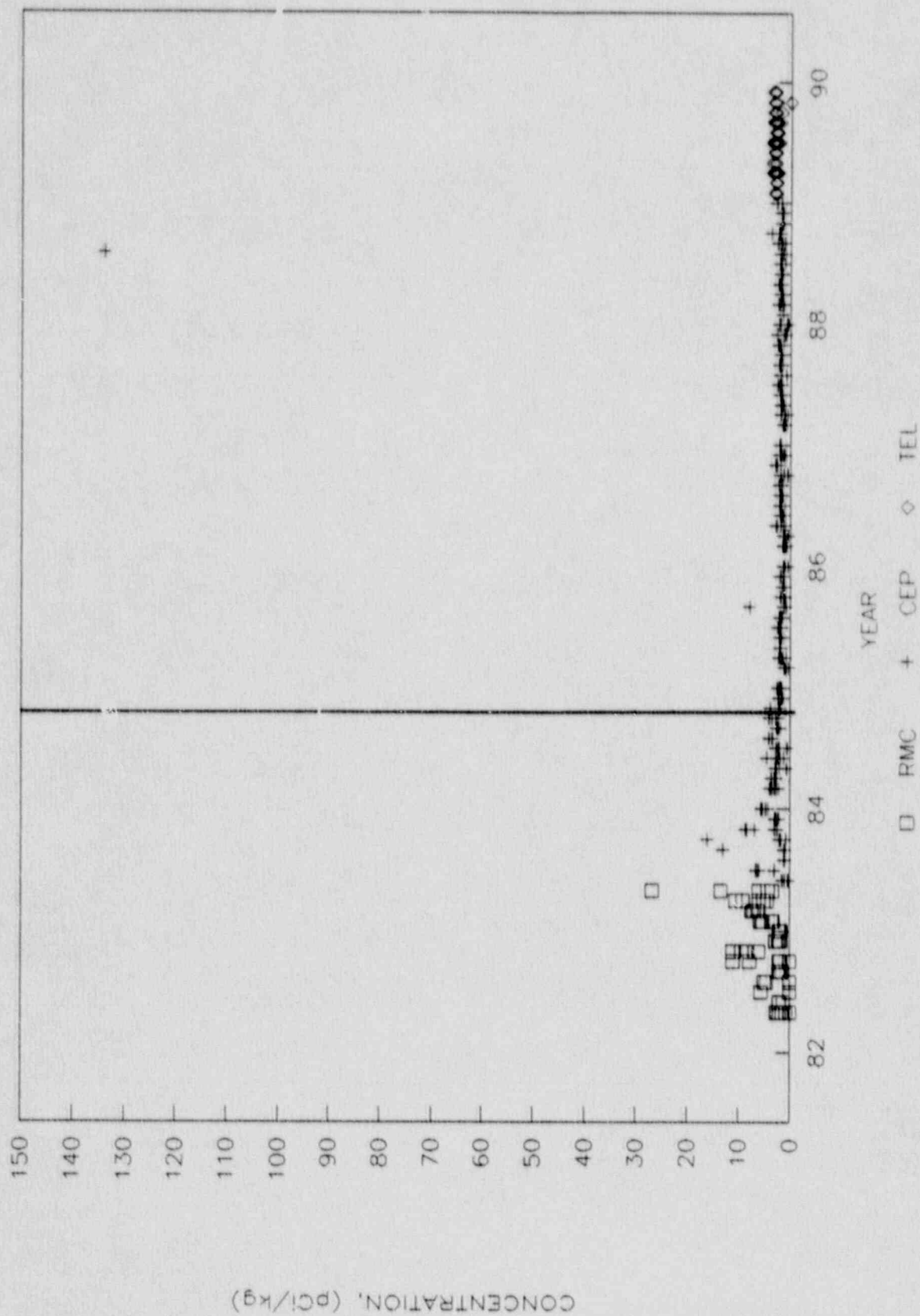


-J50-

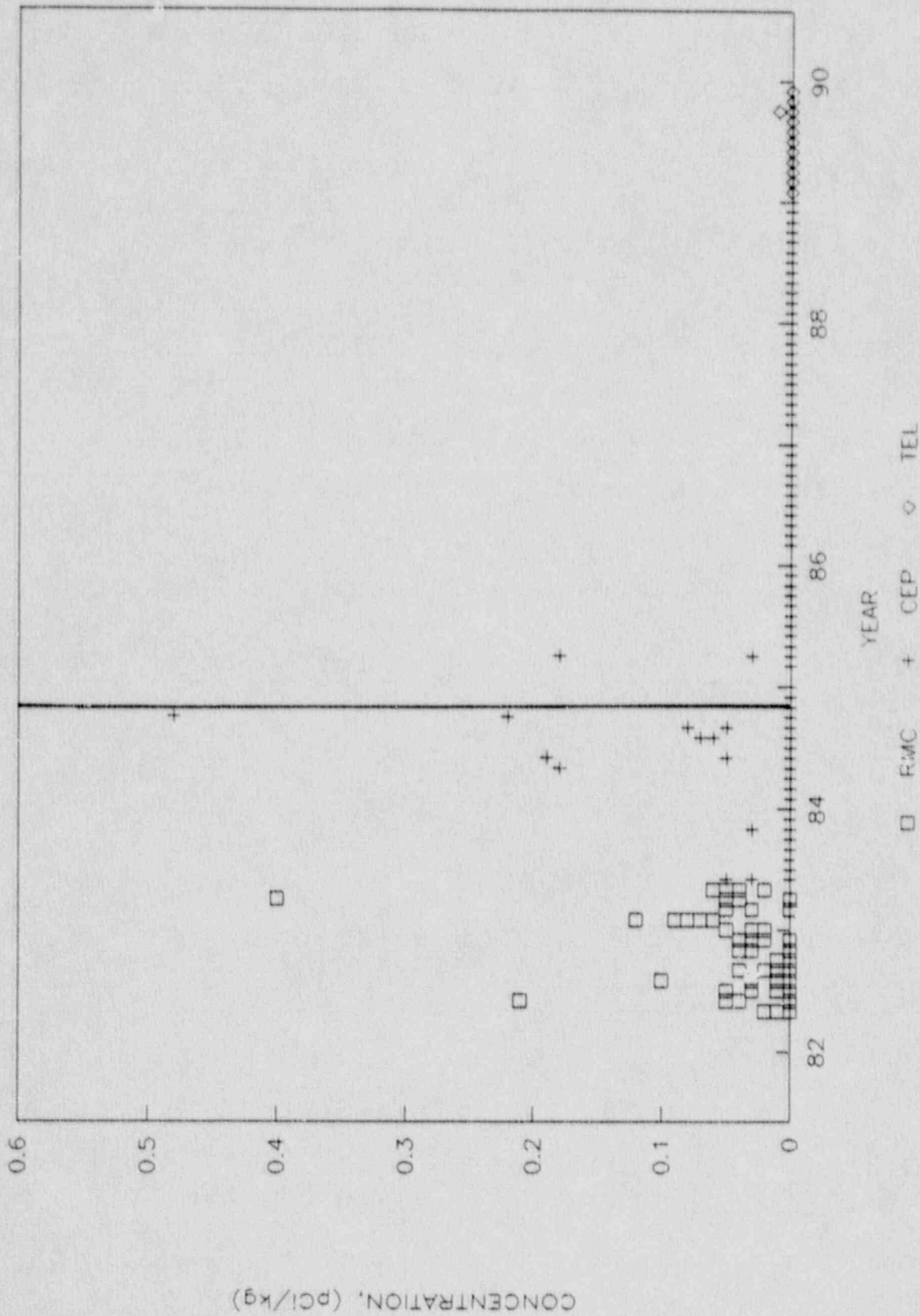
GROSS BETA IN FISH, SITE A



GROSS BETA IN FISH, SITE C

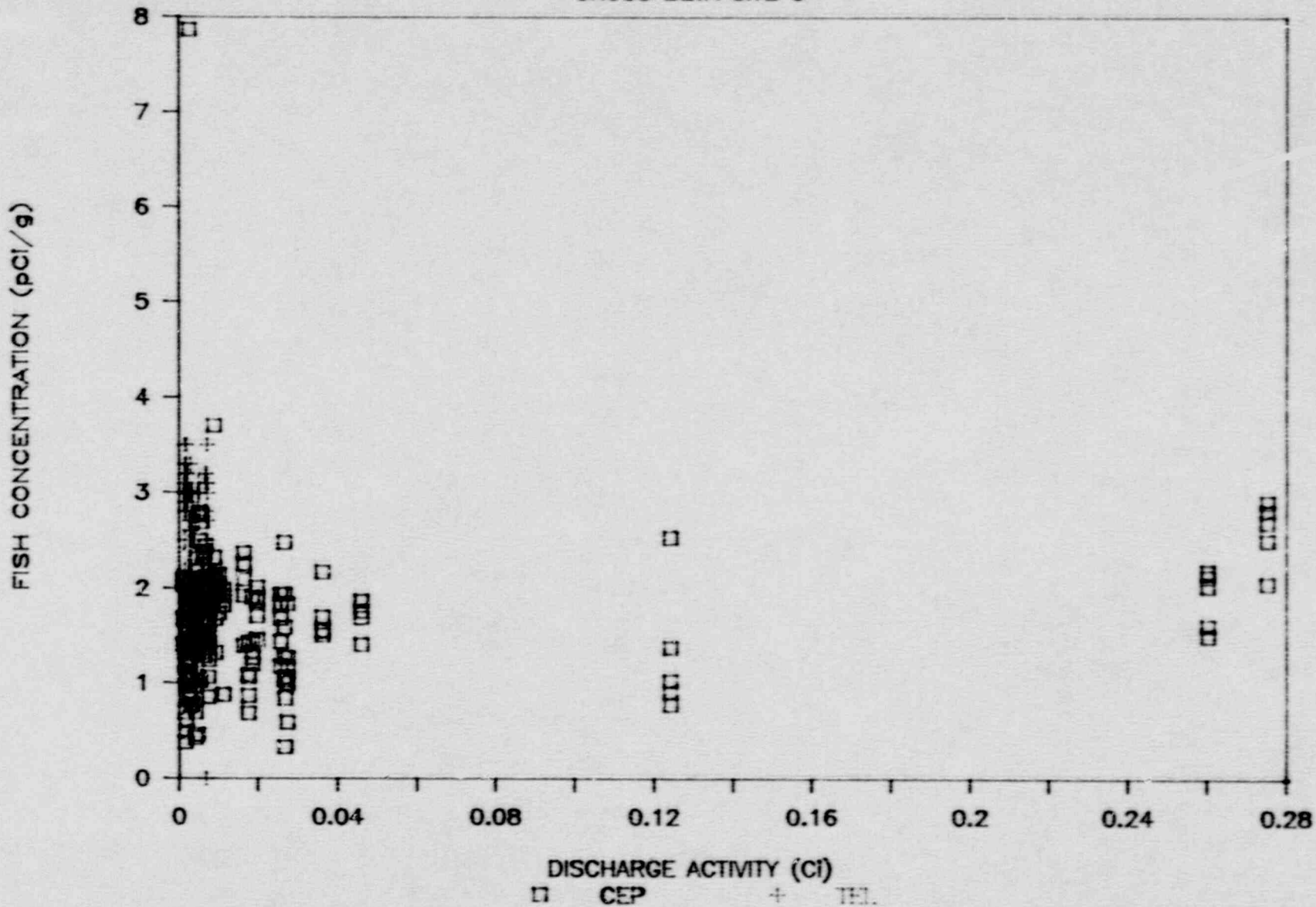


SR90 IN FISH, SITE A



CALLAWAY DISCHARGE VS FISH

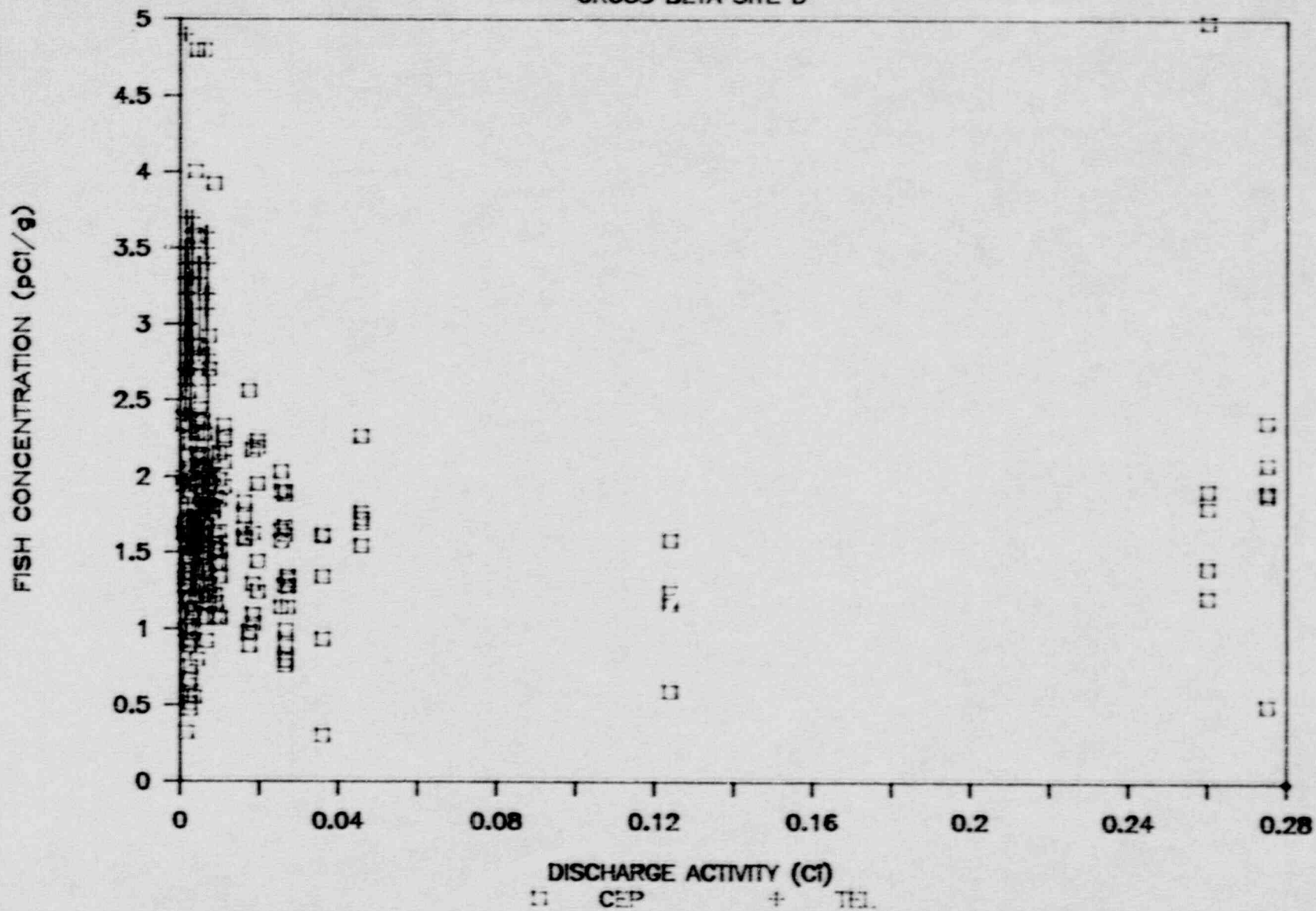
GROSS BETA SITE C



--85C--

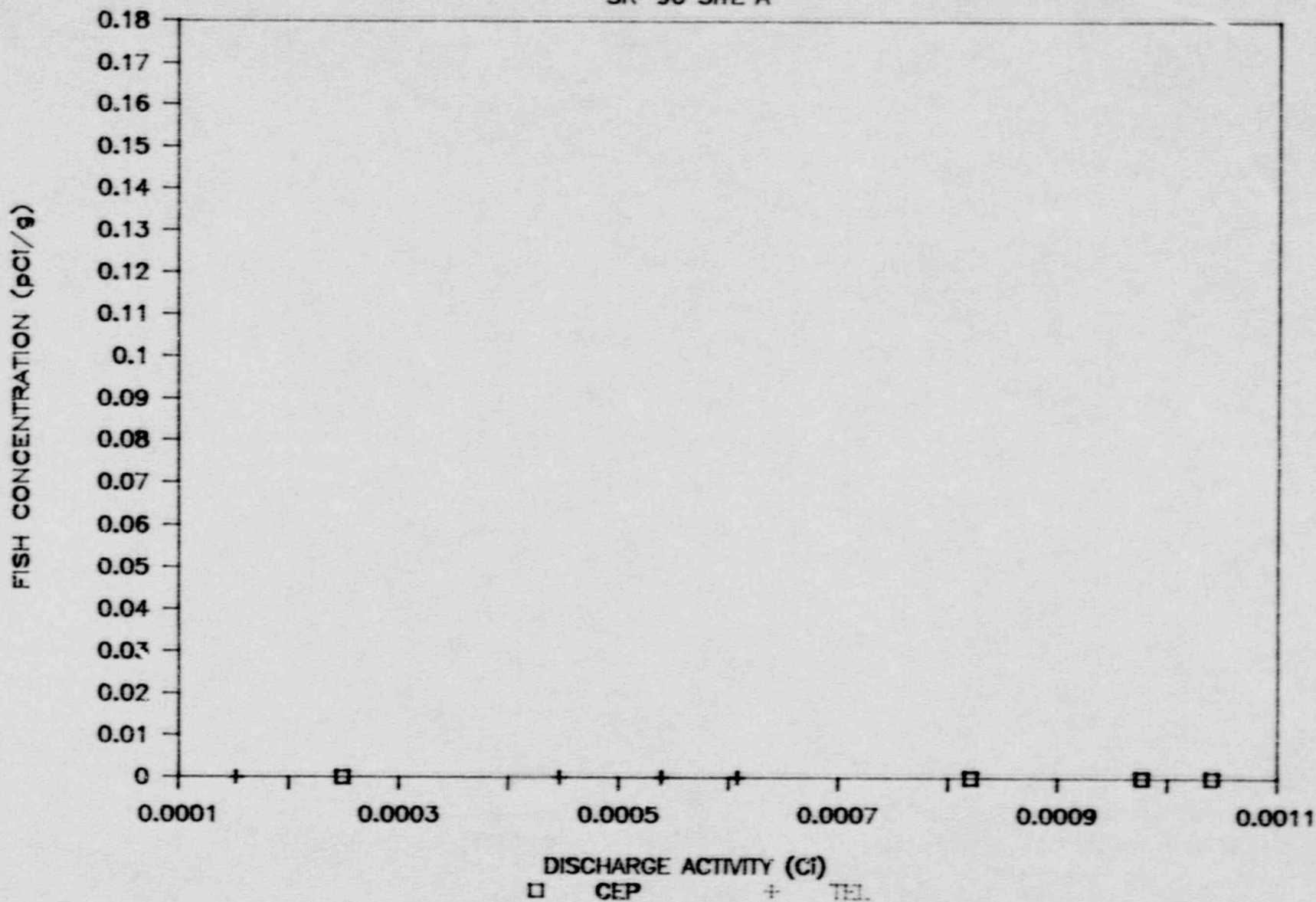
CALLAWAY DISCHARGE VS FISH

GROSS BETA SITE D



CALLAWAY DISCHARGE VS FISH

SR-90 SITE A

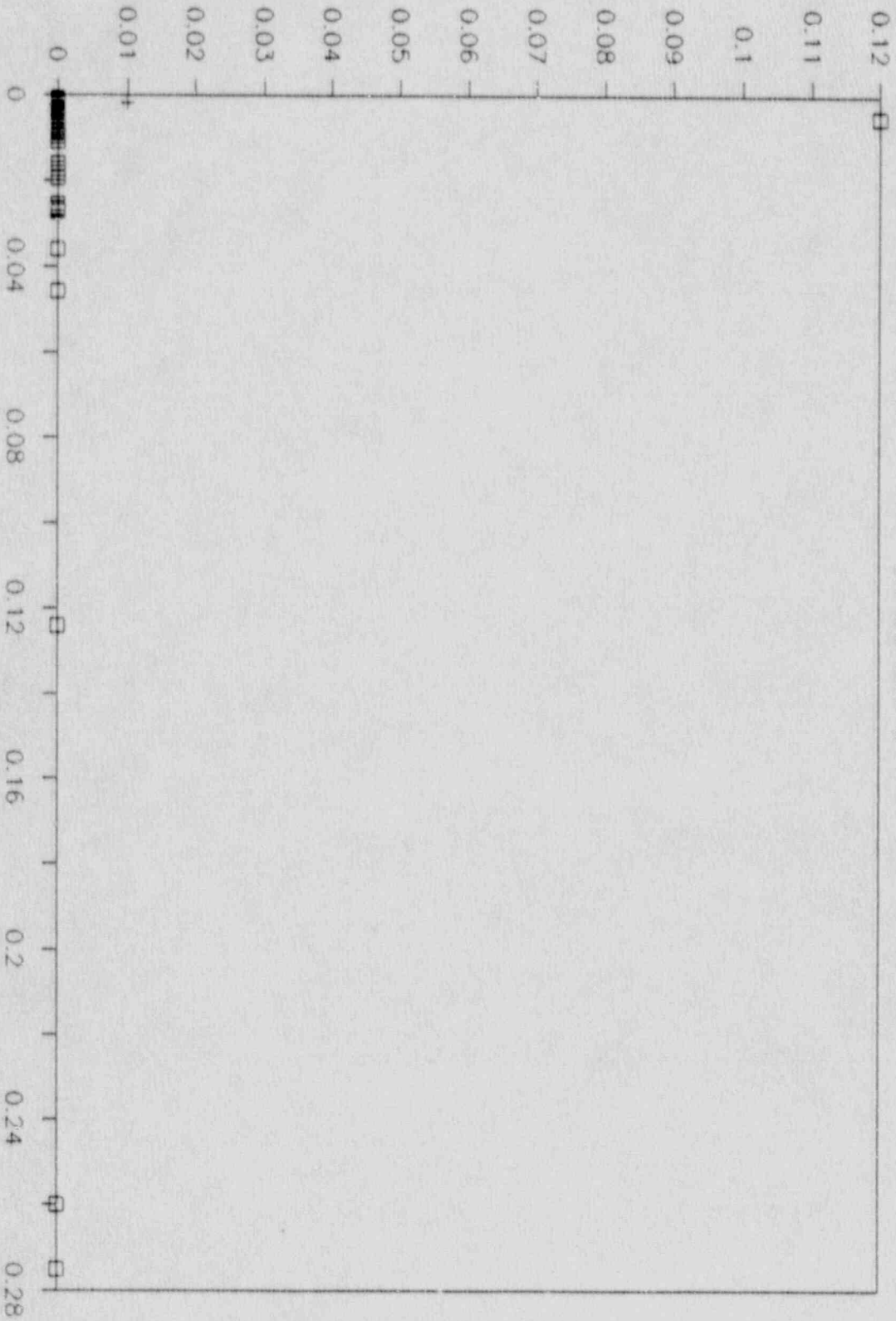


-J60-

FISH CONCENTRATION (pCi/g)

CALLAWAY DISCHARGE VS FISH

SR-90 SITE C

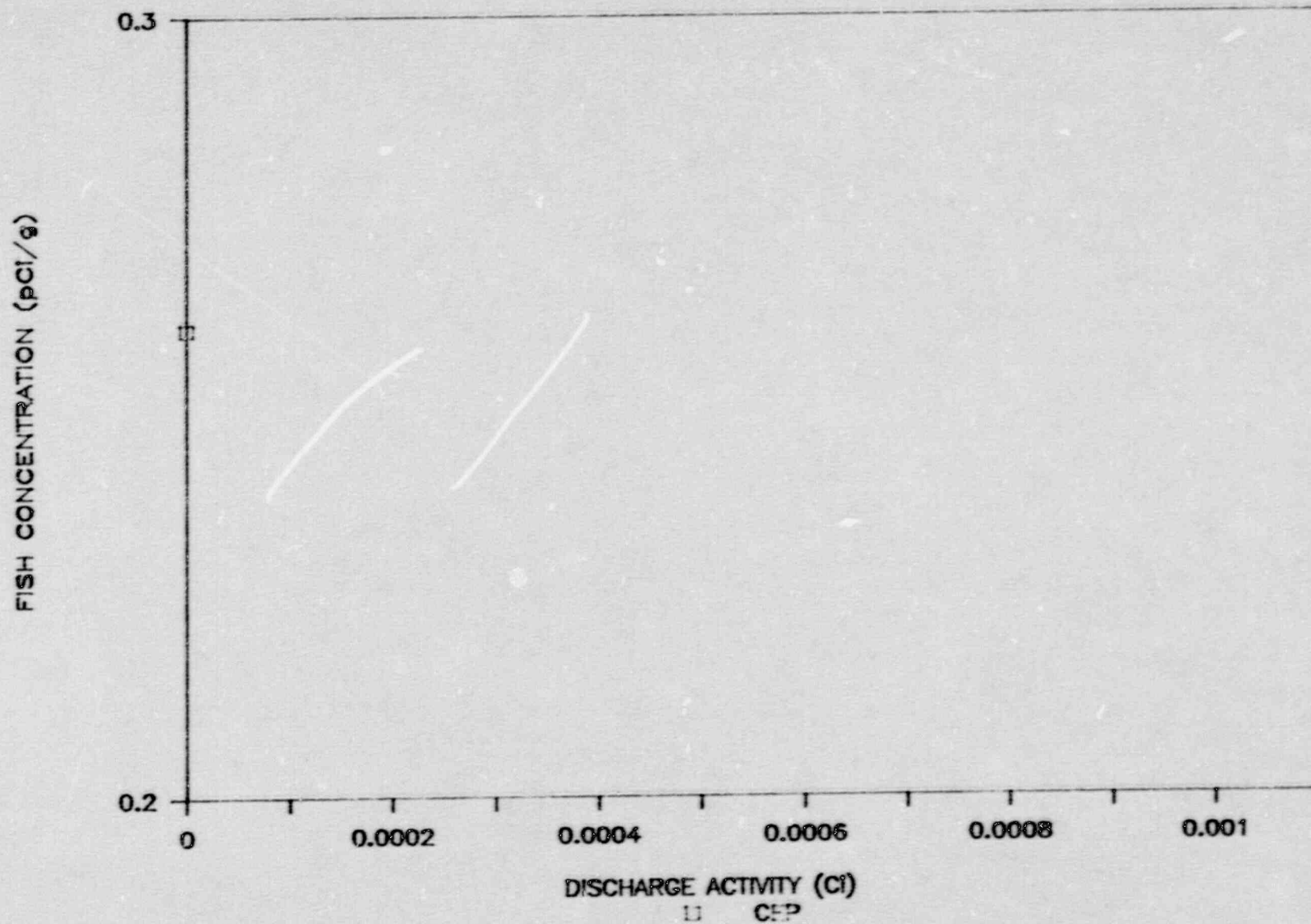


DISCHARGE ACTIVITY (Ci)

□ CEP
+ TEL

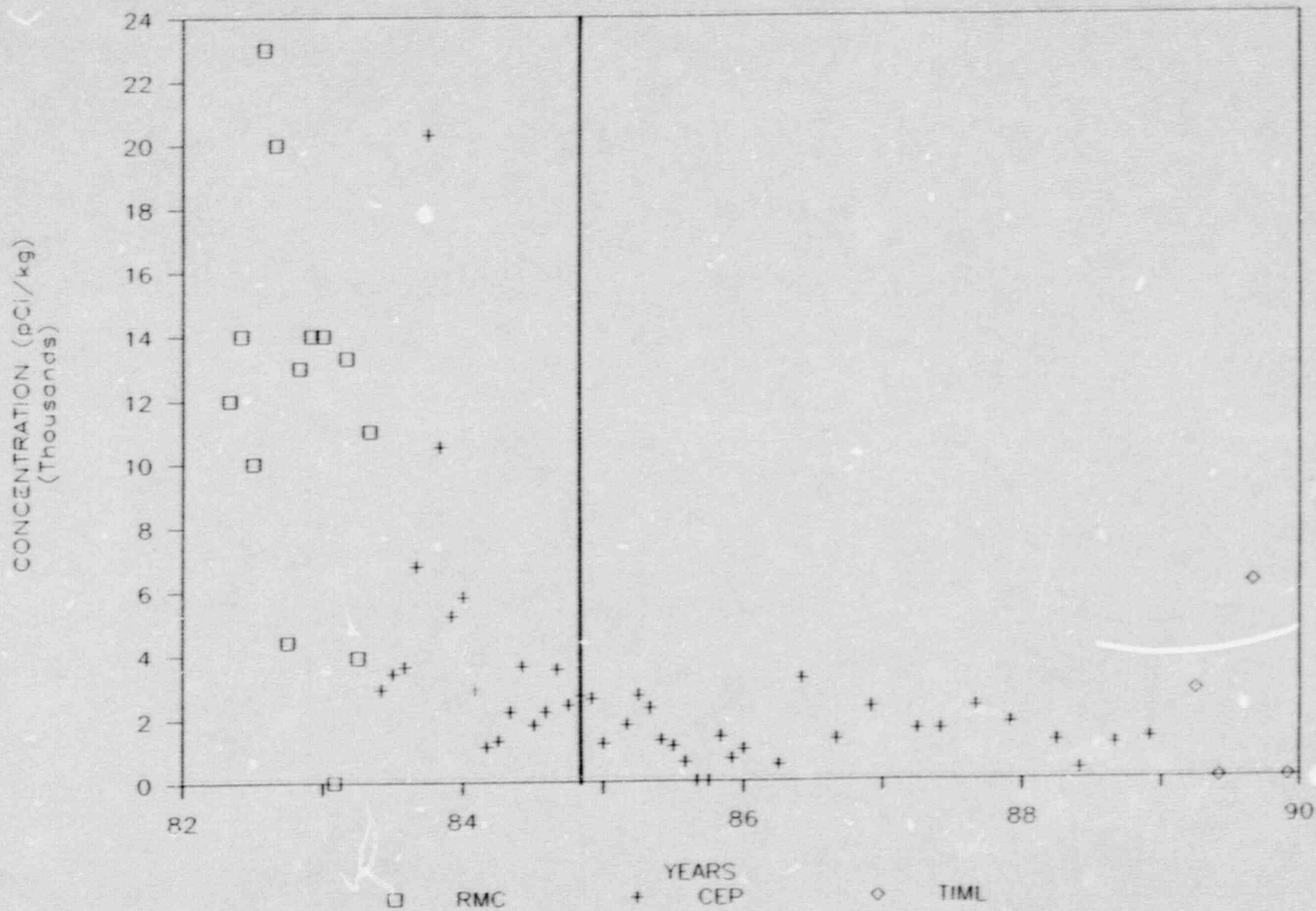
FISH SITE D VS CALLAWAY DISCHARGE

SR-90

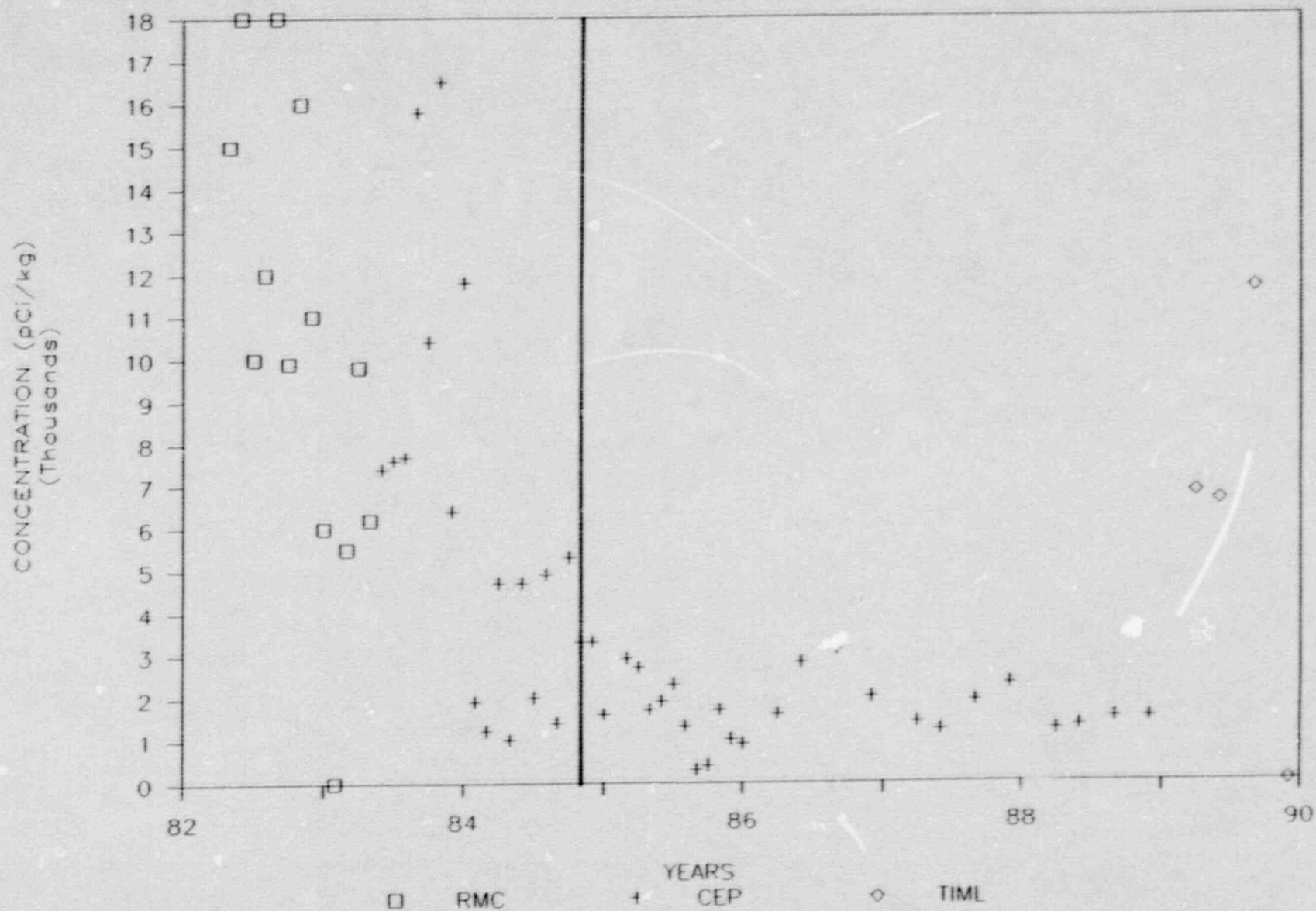


-J62-

GROSS ALPHA IN BOTTOM SEDIMENT, SITE A

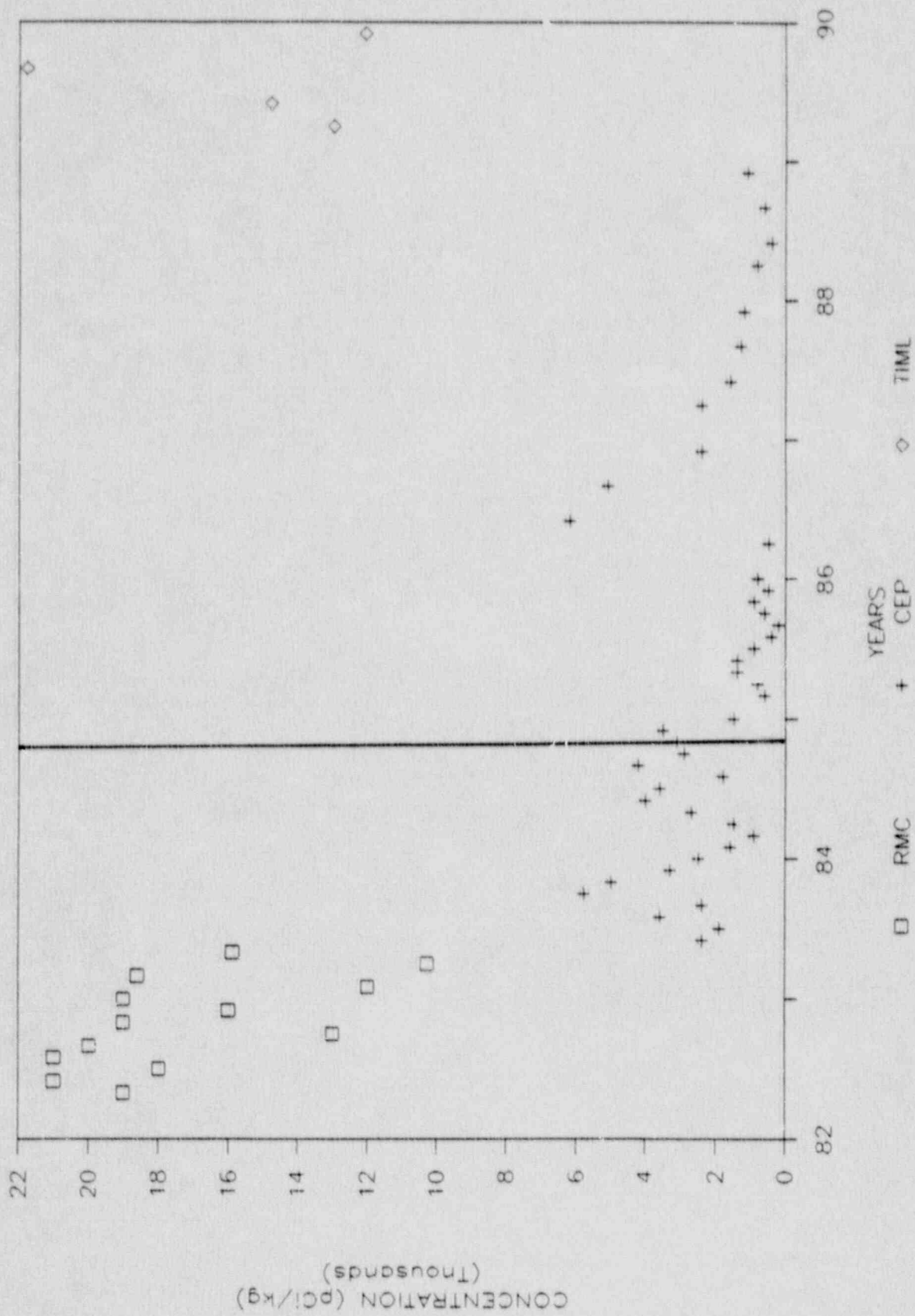


GROSS ALPHA IN BOTTOM SEDIMENT, SITE C

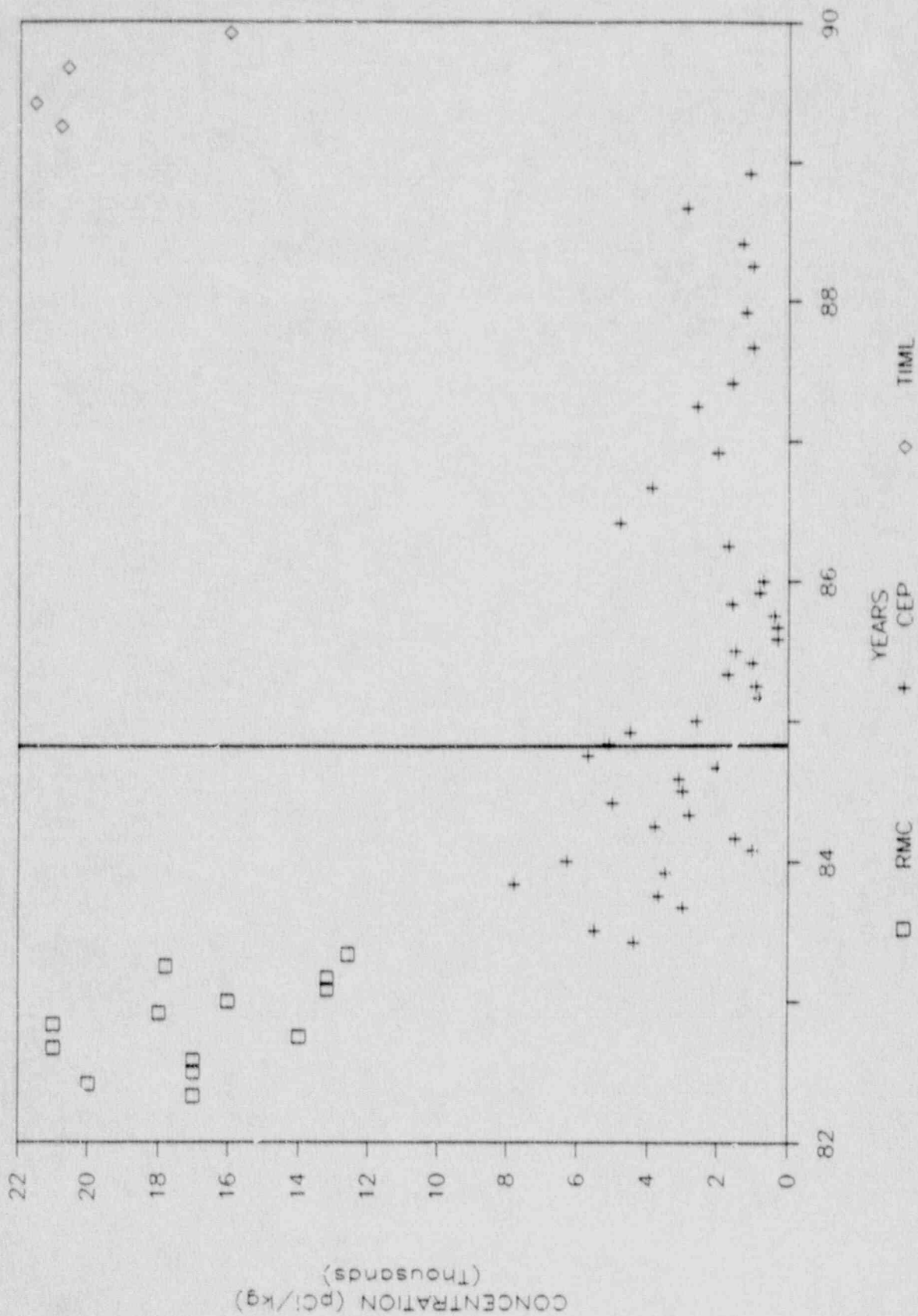


-J64-

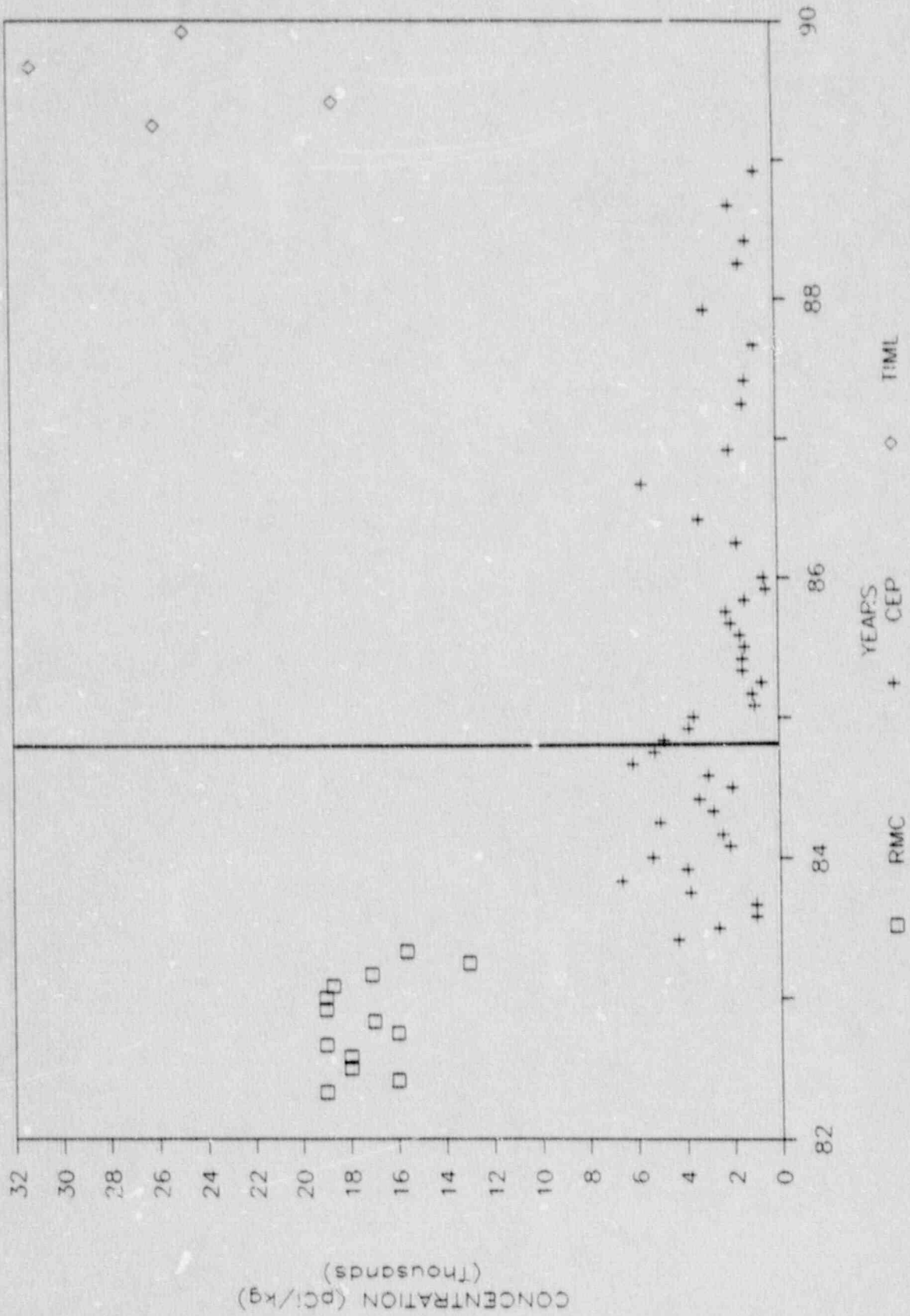
GROSS BETA IN BOTTOM SEDIMENT, SITE A



GROSS BETA IN BOTTOM SEDIMENT, SITE C

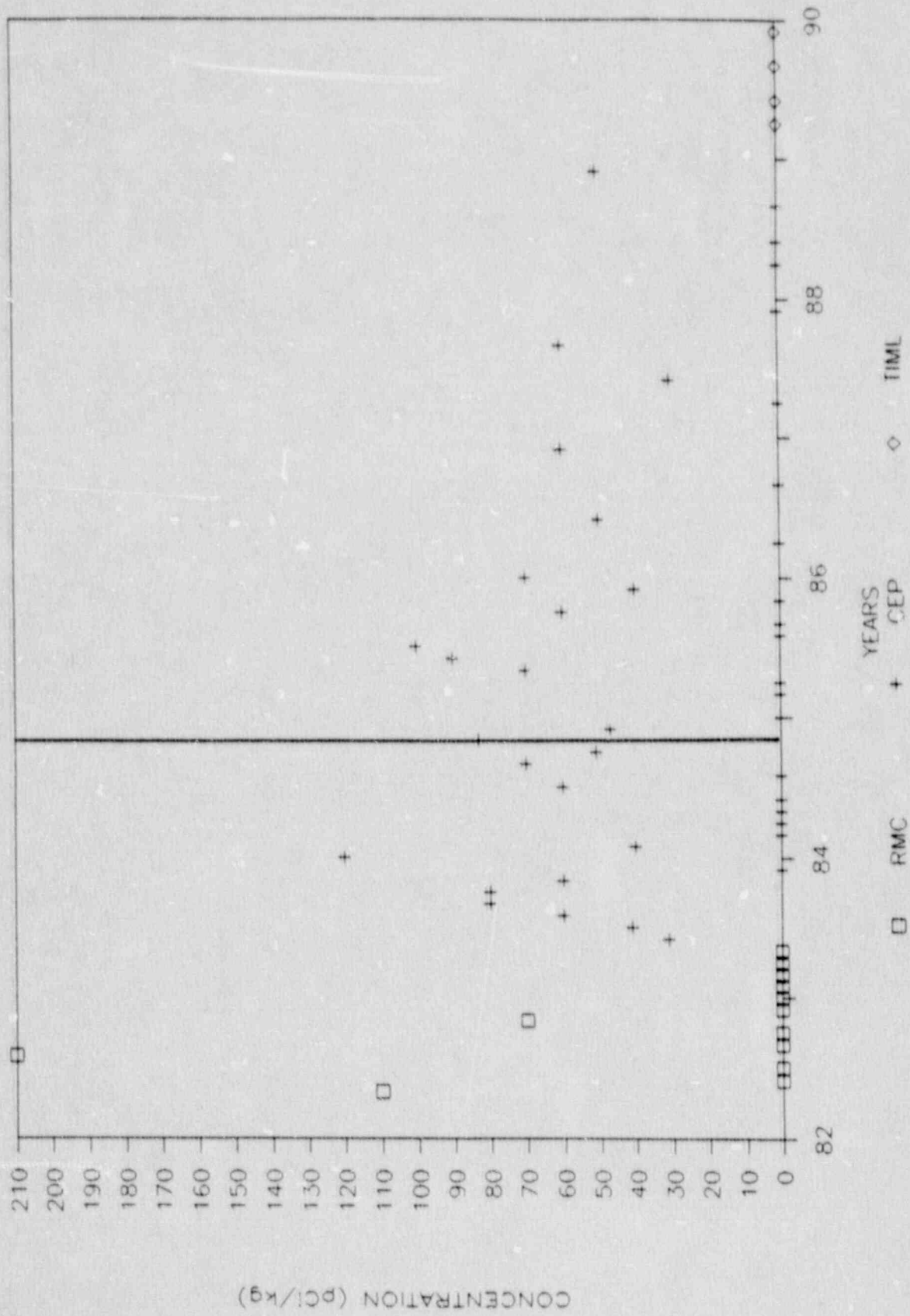


GROSS BETA IN BOTTOM SEDIMENT, SITE D

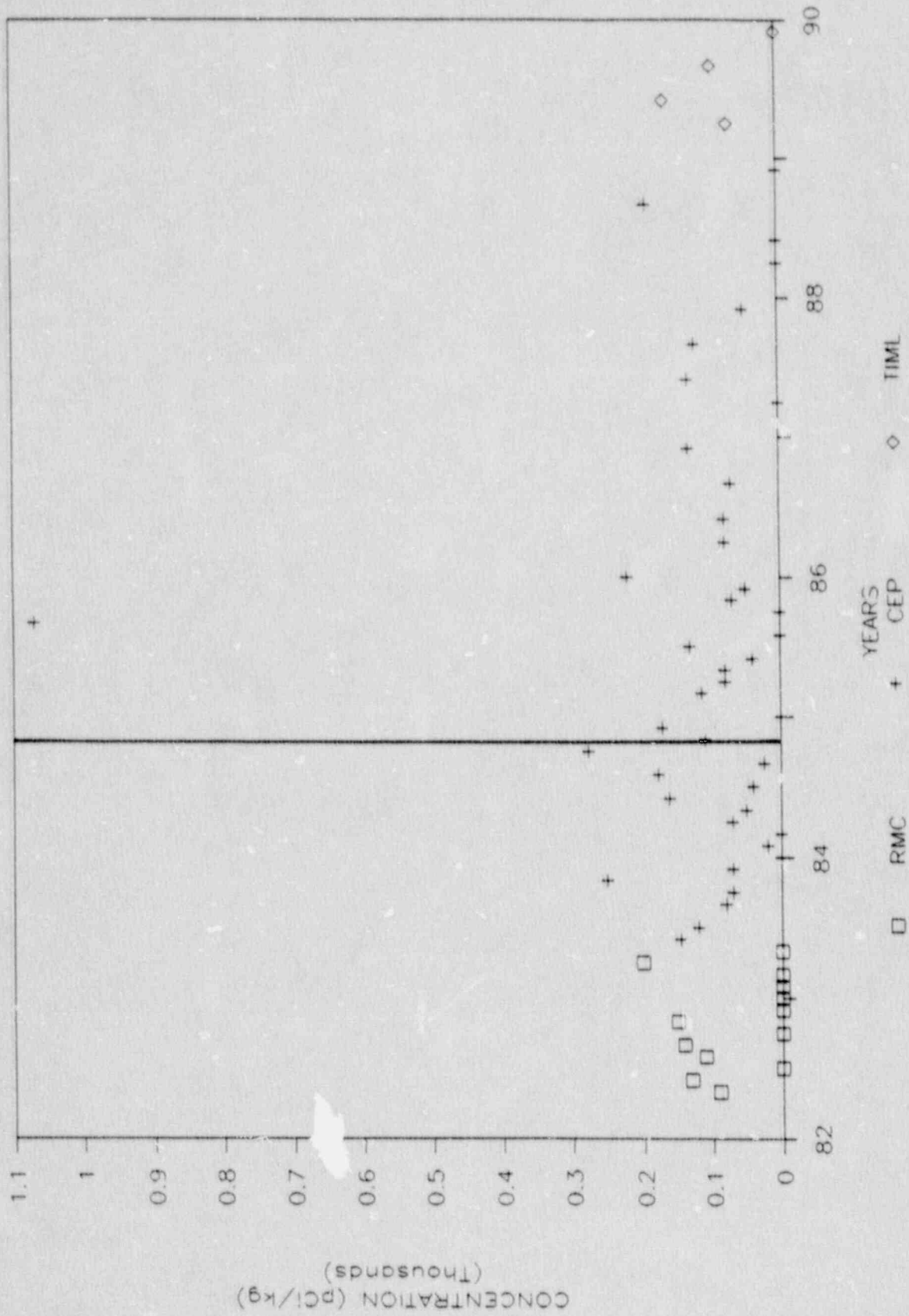


CS-137 IN BOTTOM SEDIMENT, SITE A

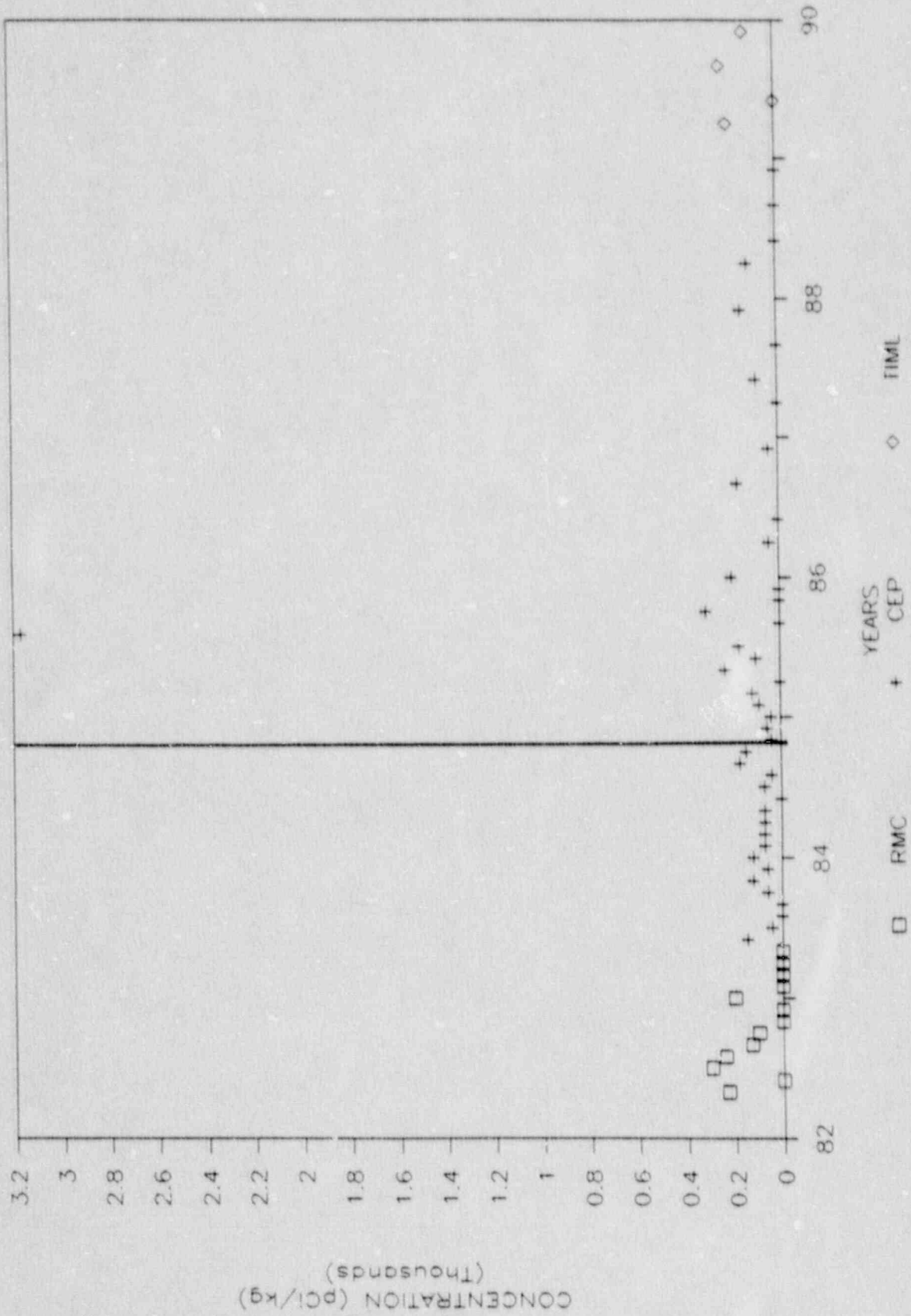
-J69-



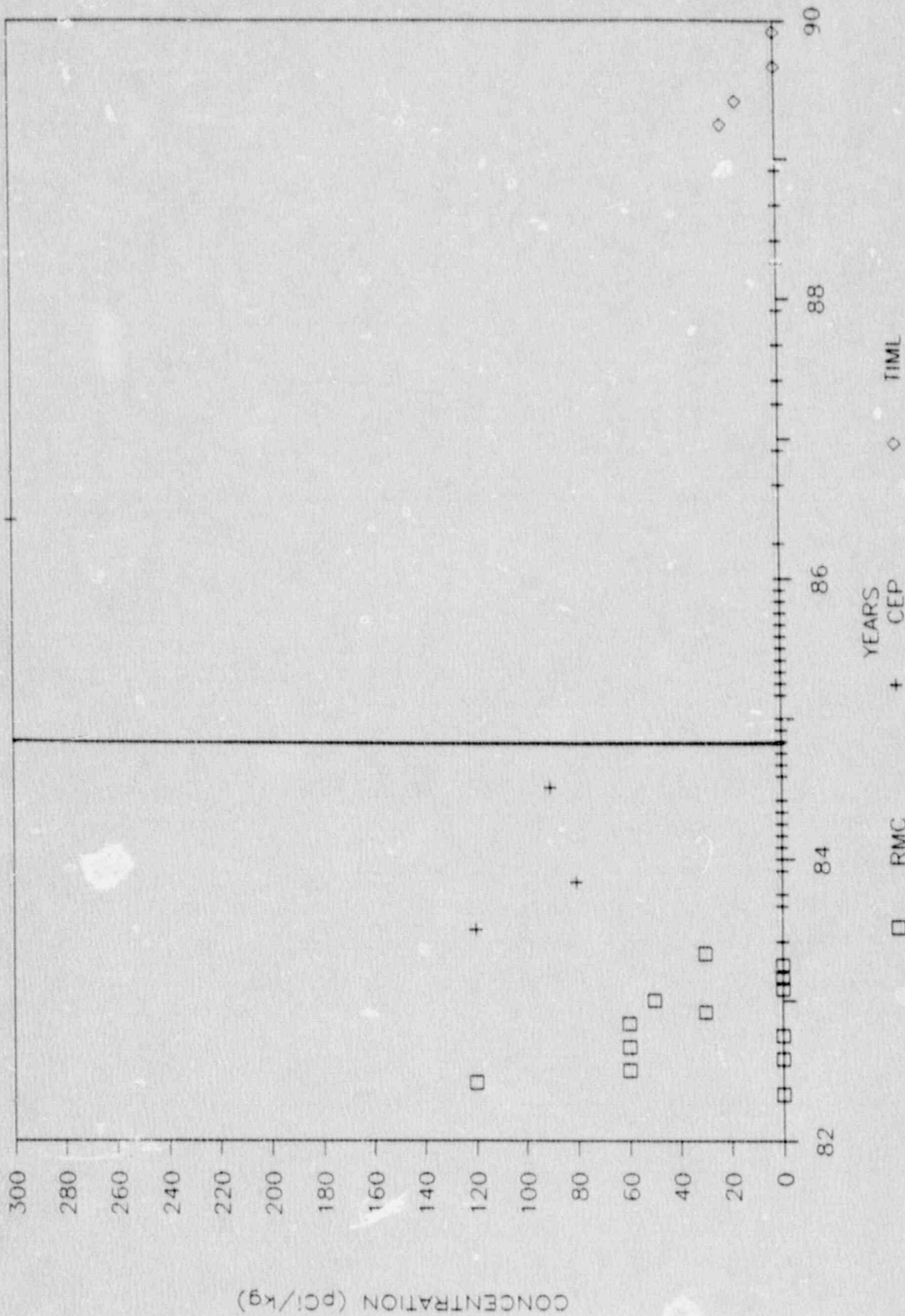
CS-137 IN BOTTOM SEDIMENT, SITE C



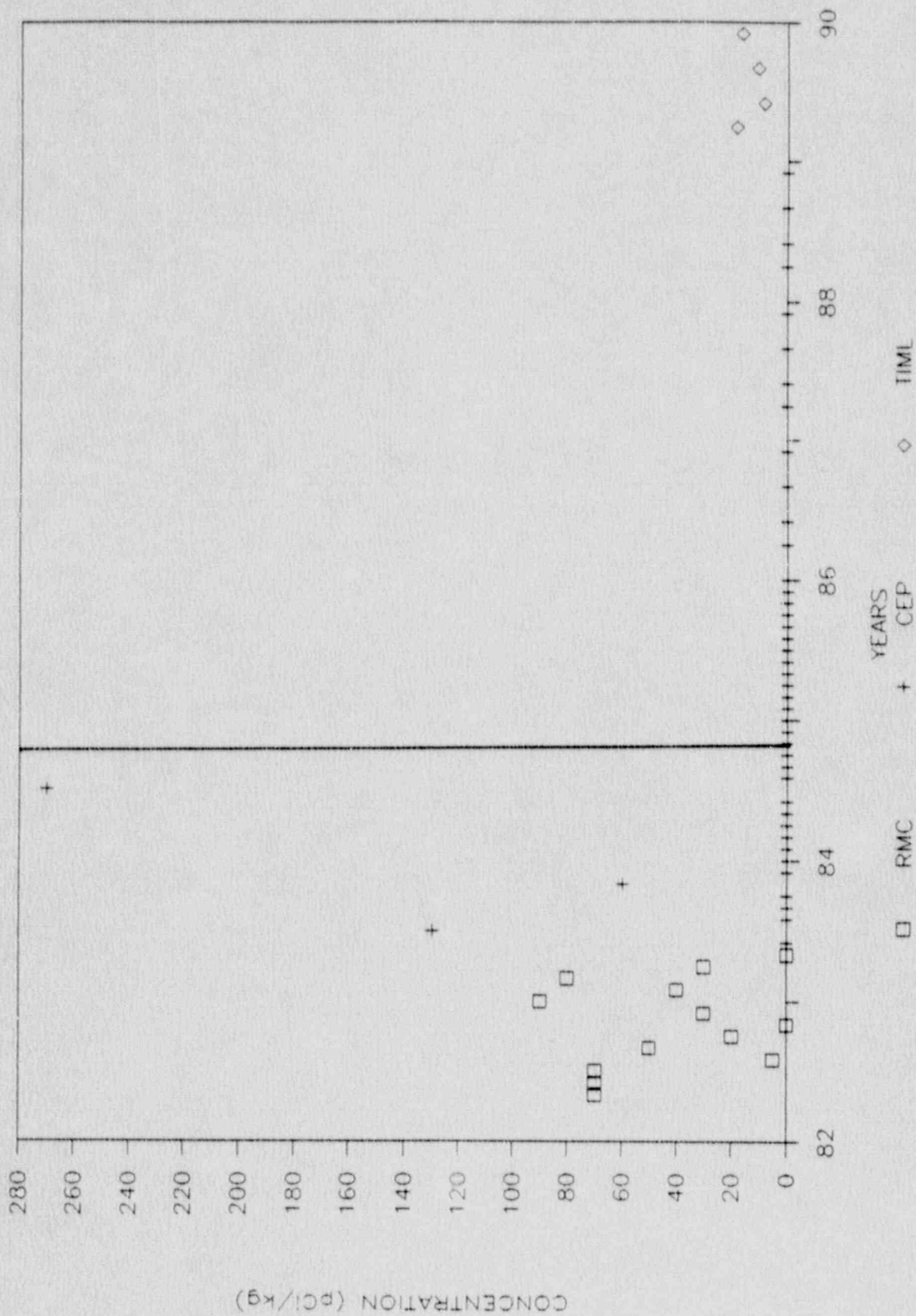
CS-137 IN BOTTOM SEDIMENT, SITE D



SR-90 IN BOTTOM SEDIMENT, SITE C

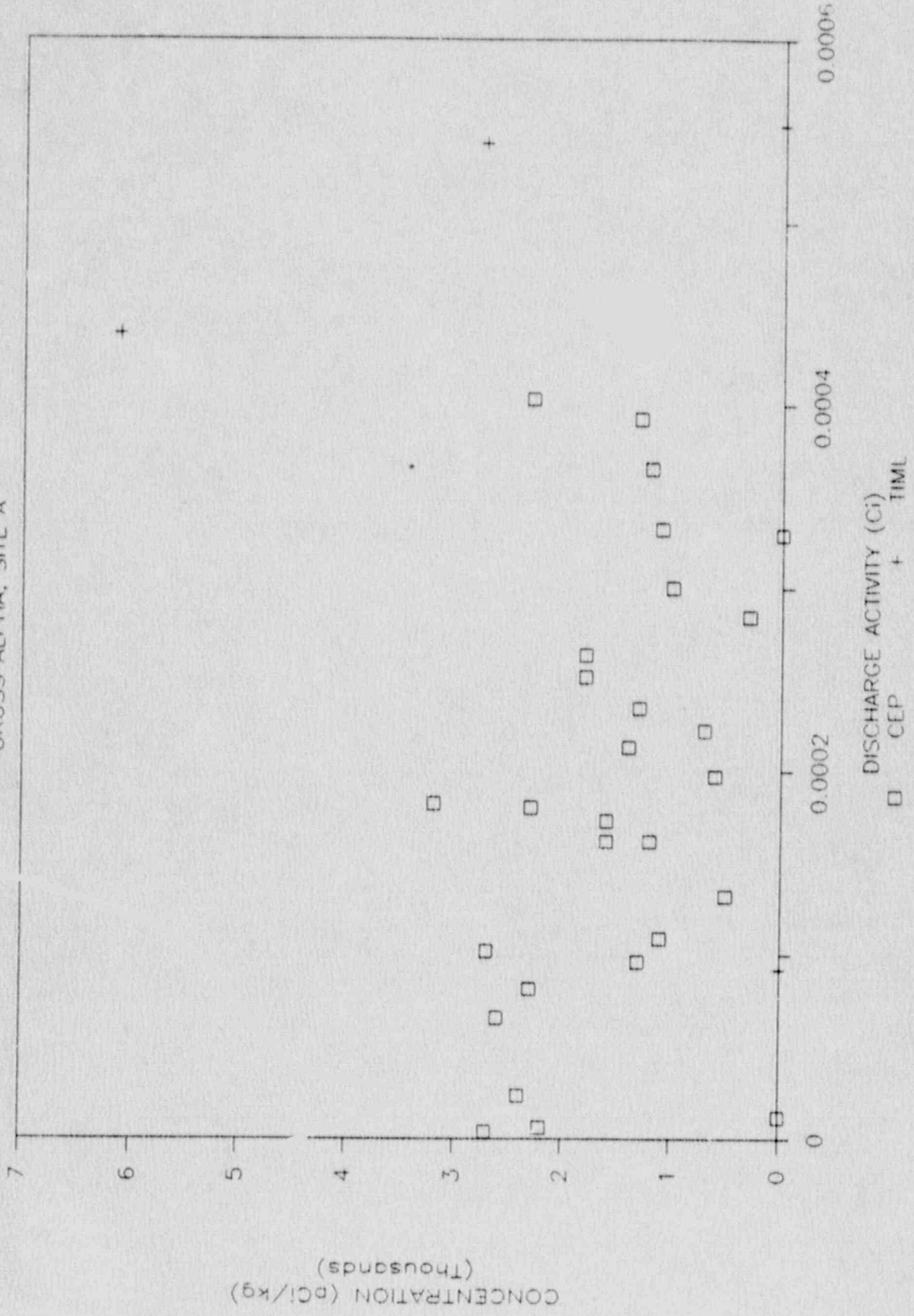


SR-90 IN BOTTOM SEDIMENT, SITE D



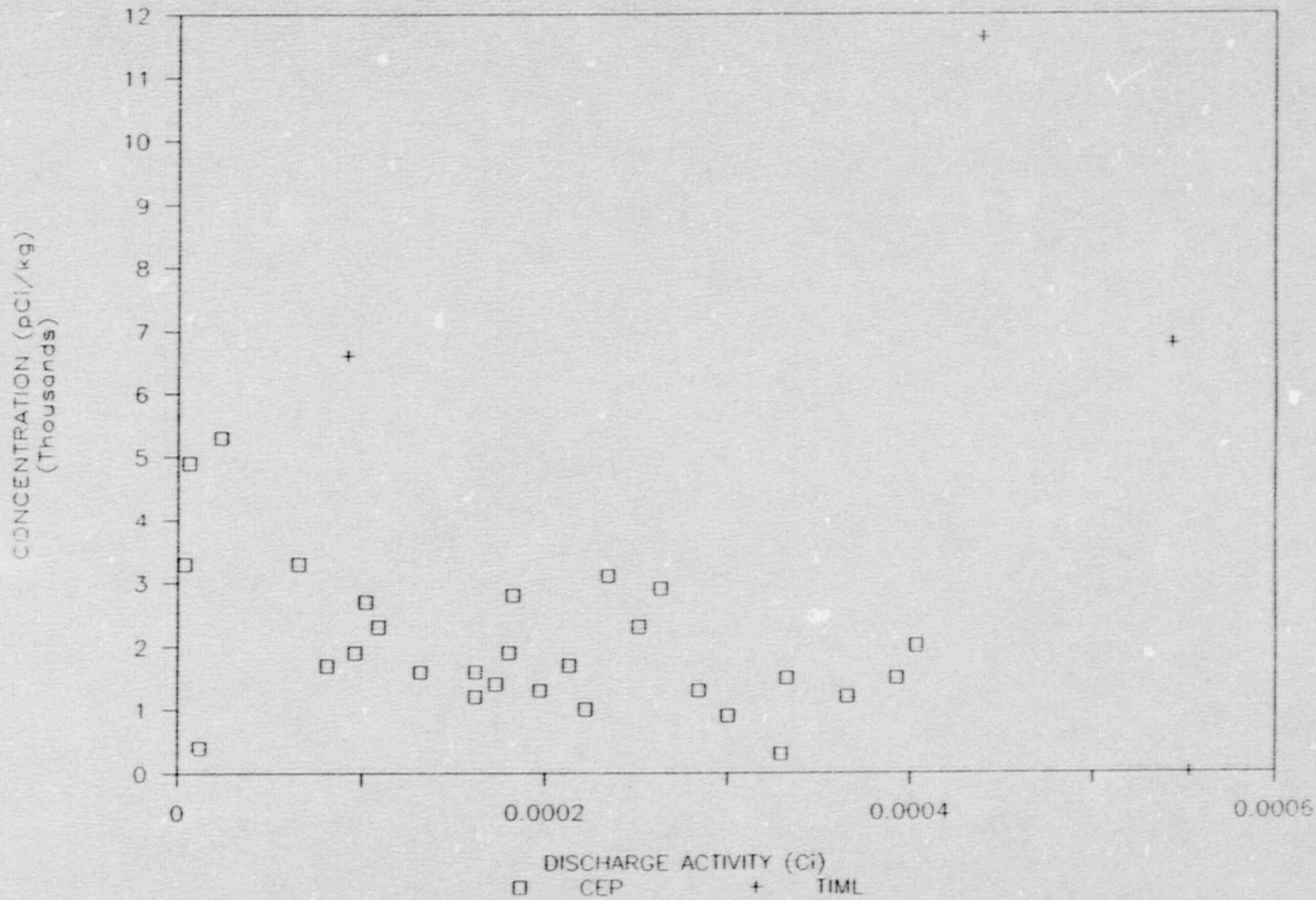
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

GROSS ALPHA, SITE A



CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

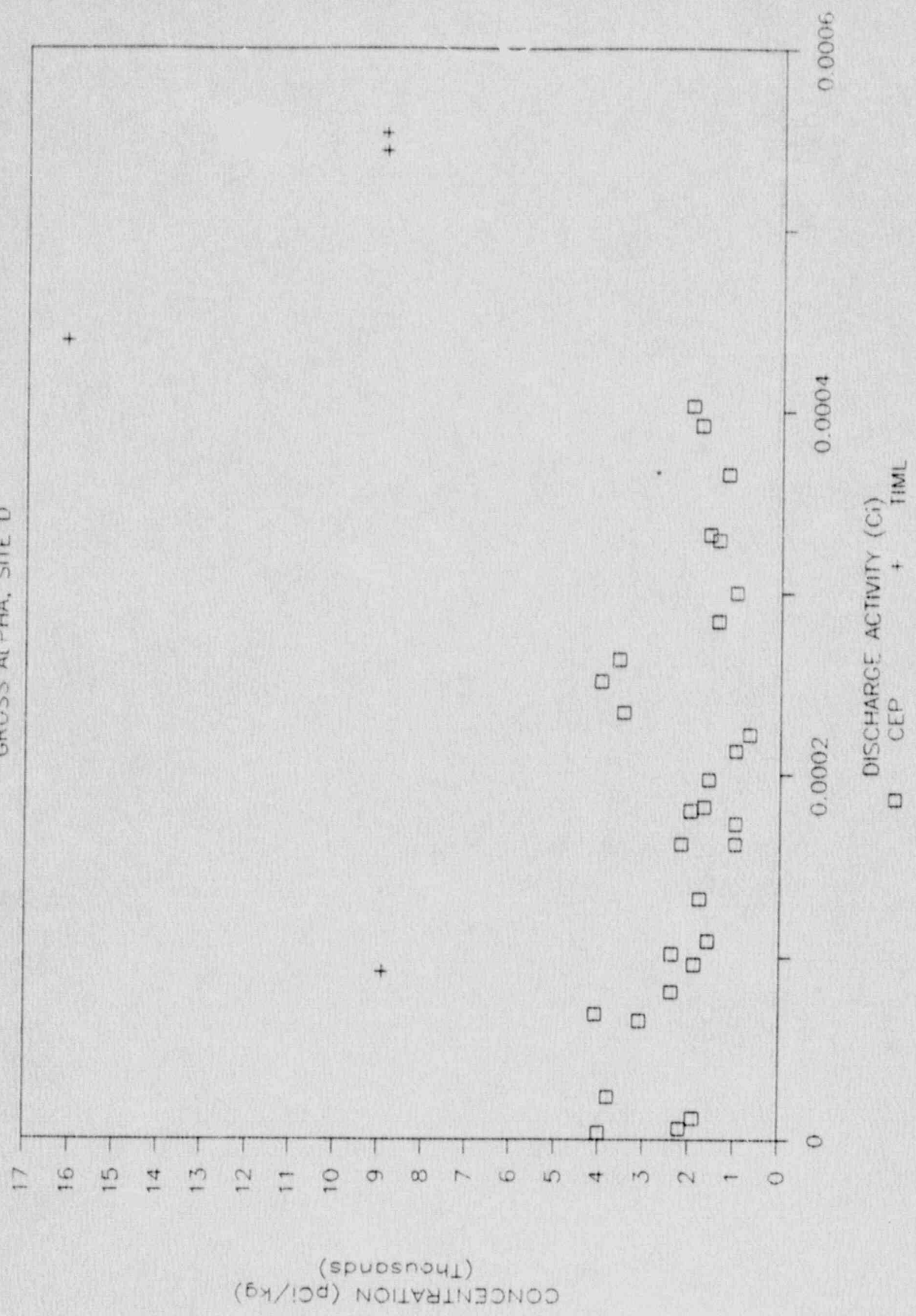
GROSS ALPHA, SITE C



-076-

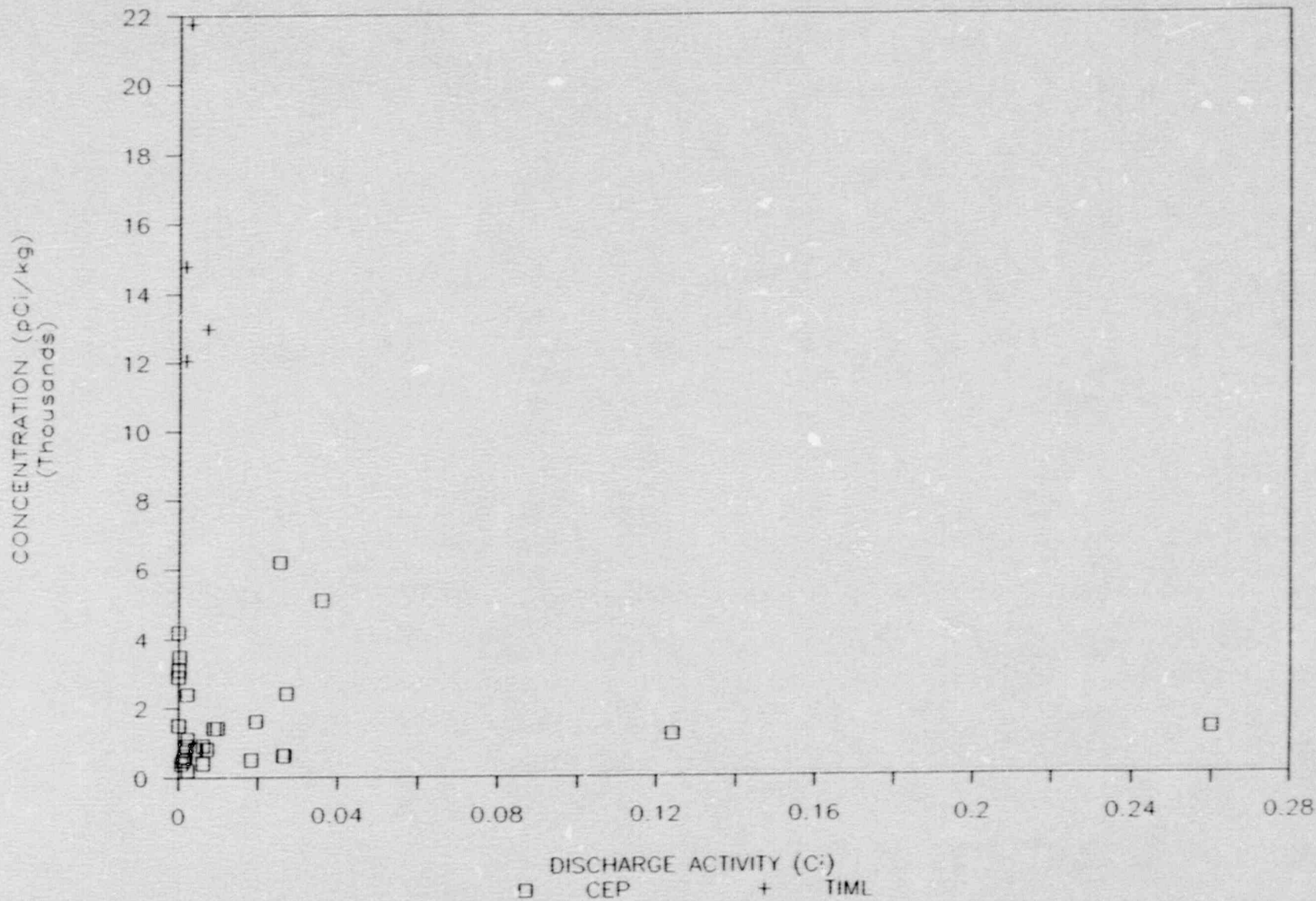
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

GROSS ALPHA, SITE D



CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

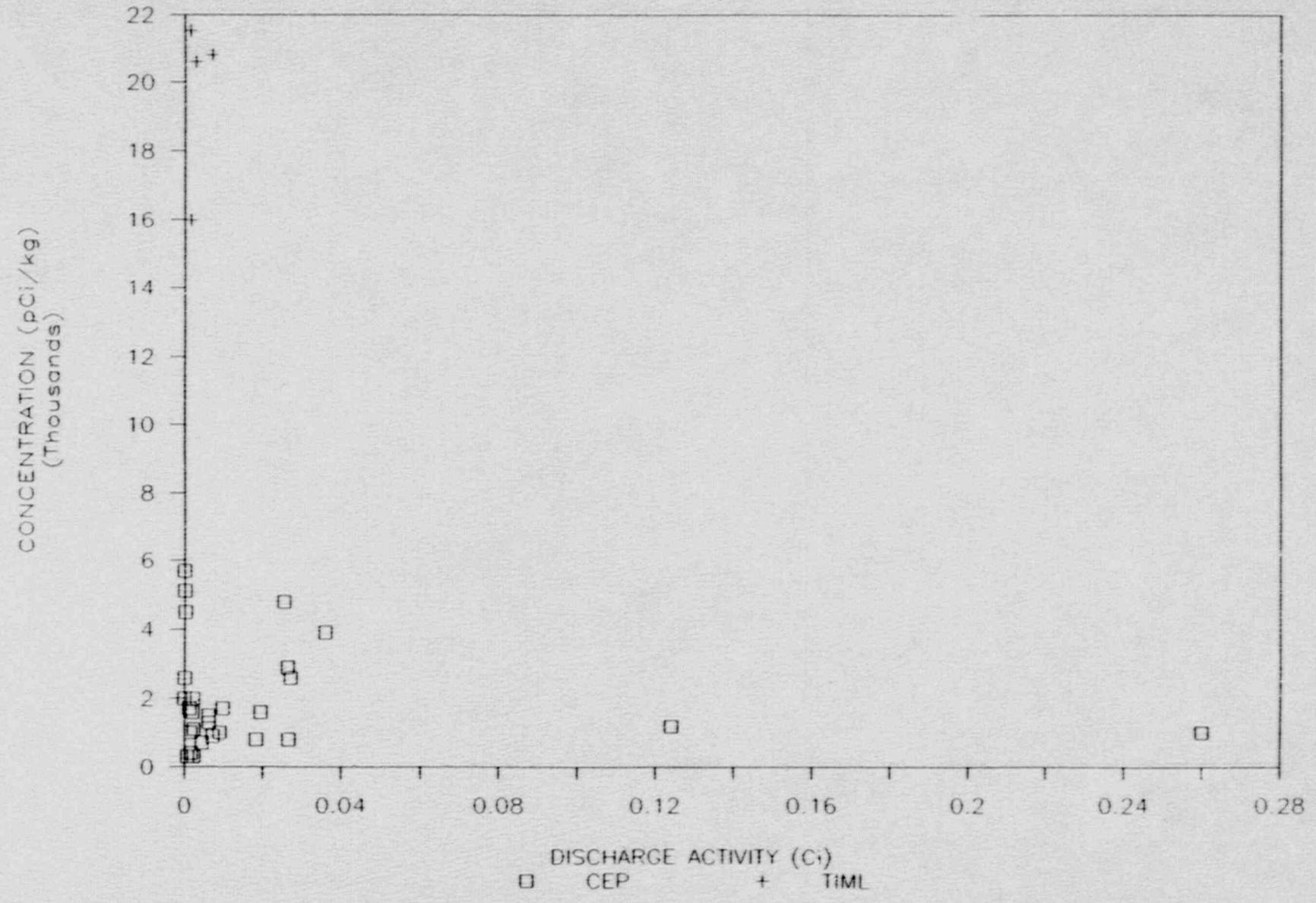
GROSS BETA, SITE A



-J78-

CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

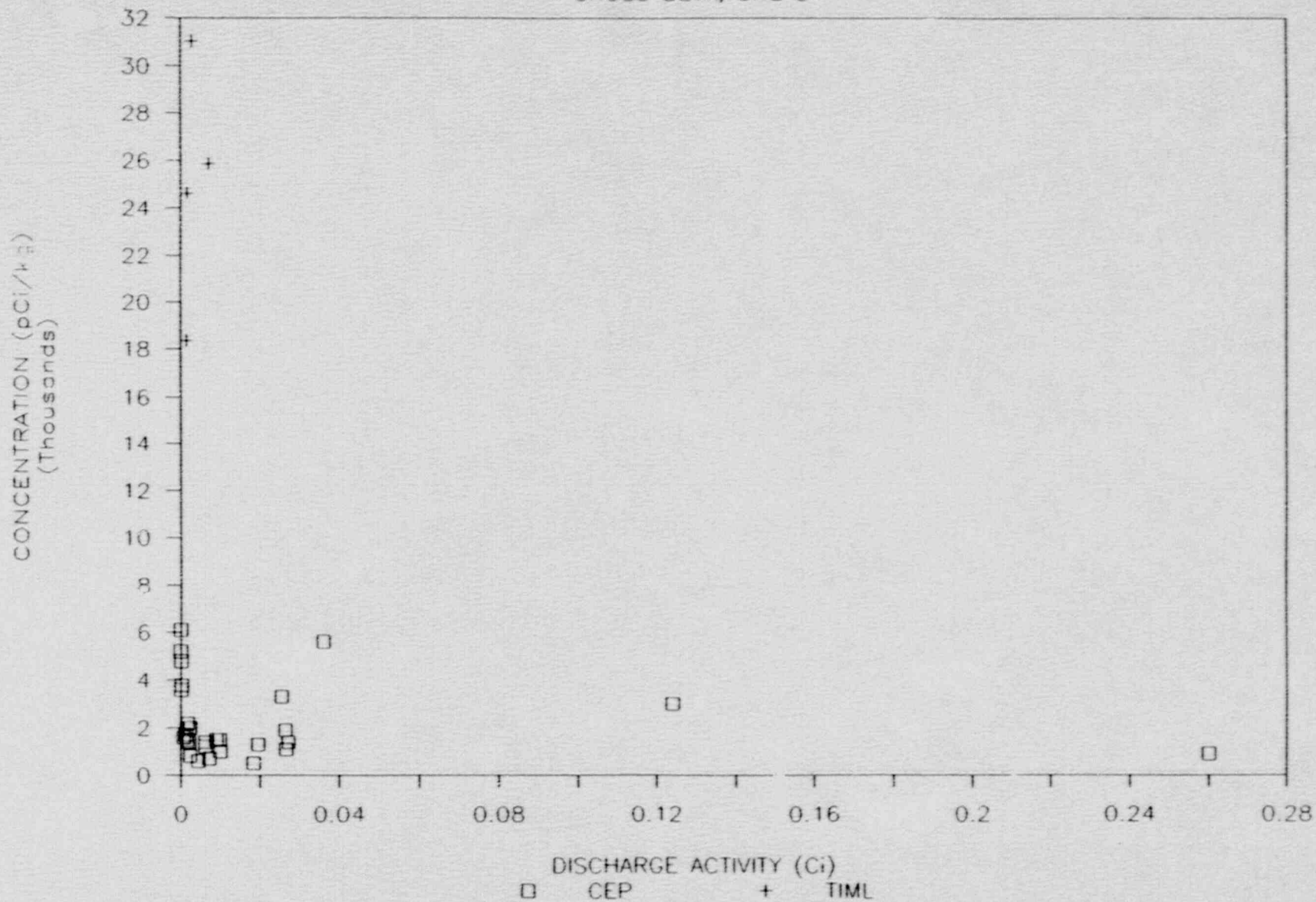
GROSS BETA, SITE C



-J79-

CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

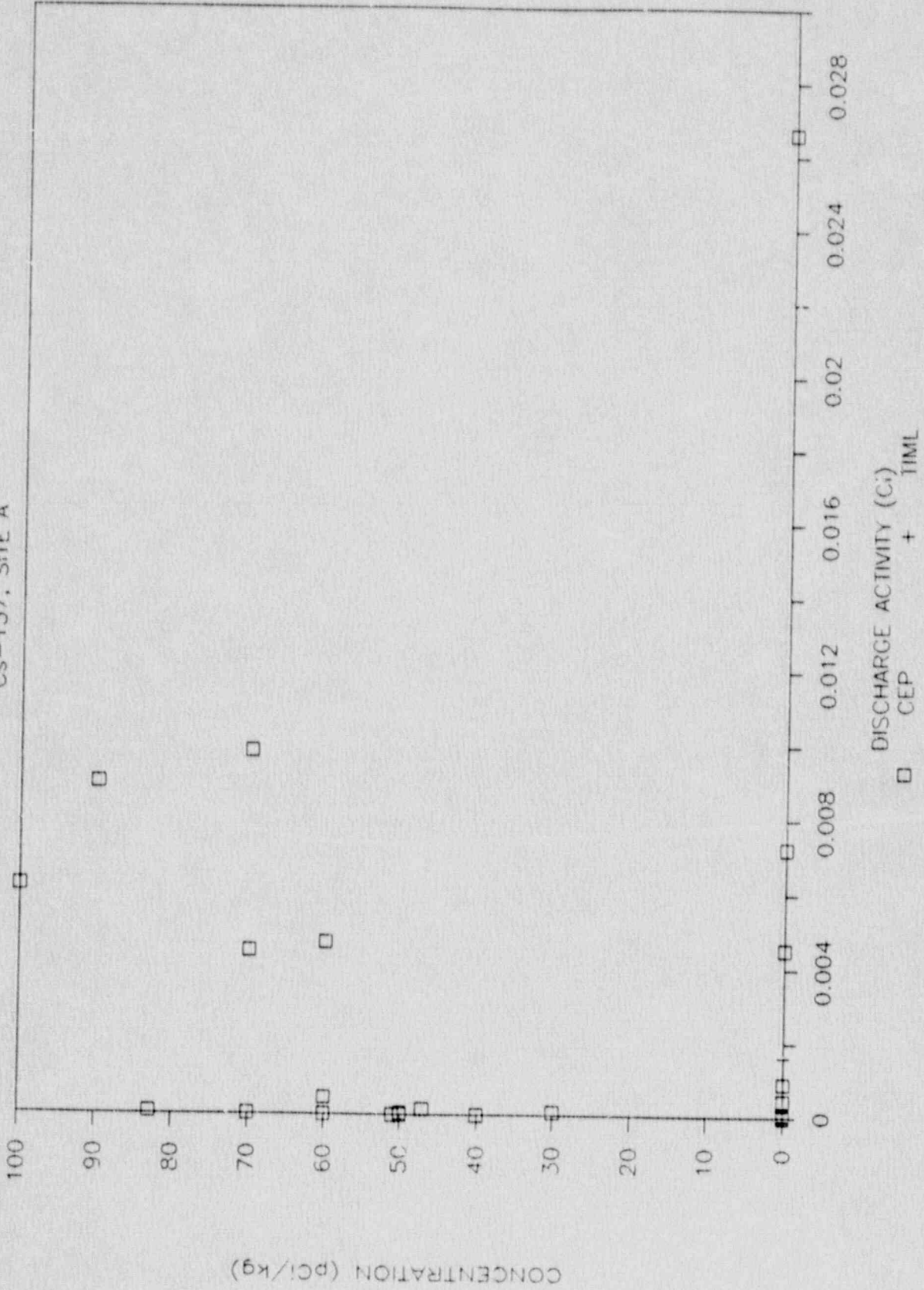
GROSS BETA, SITE D



-J30-

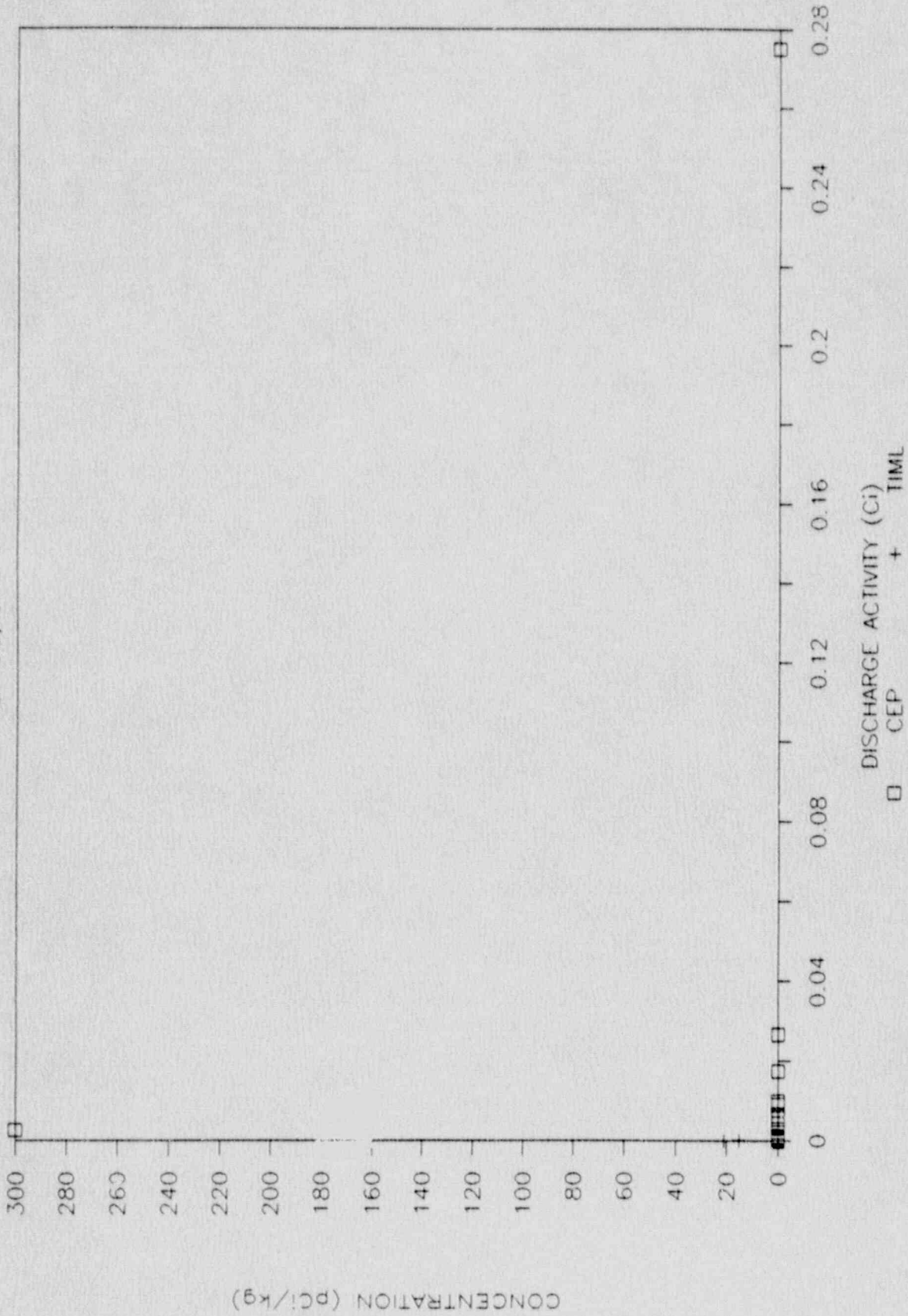
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

Cs-137, SITE A



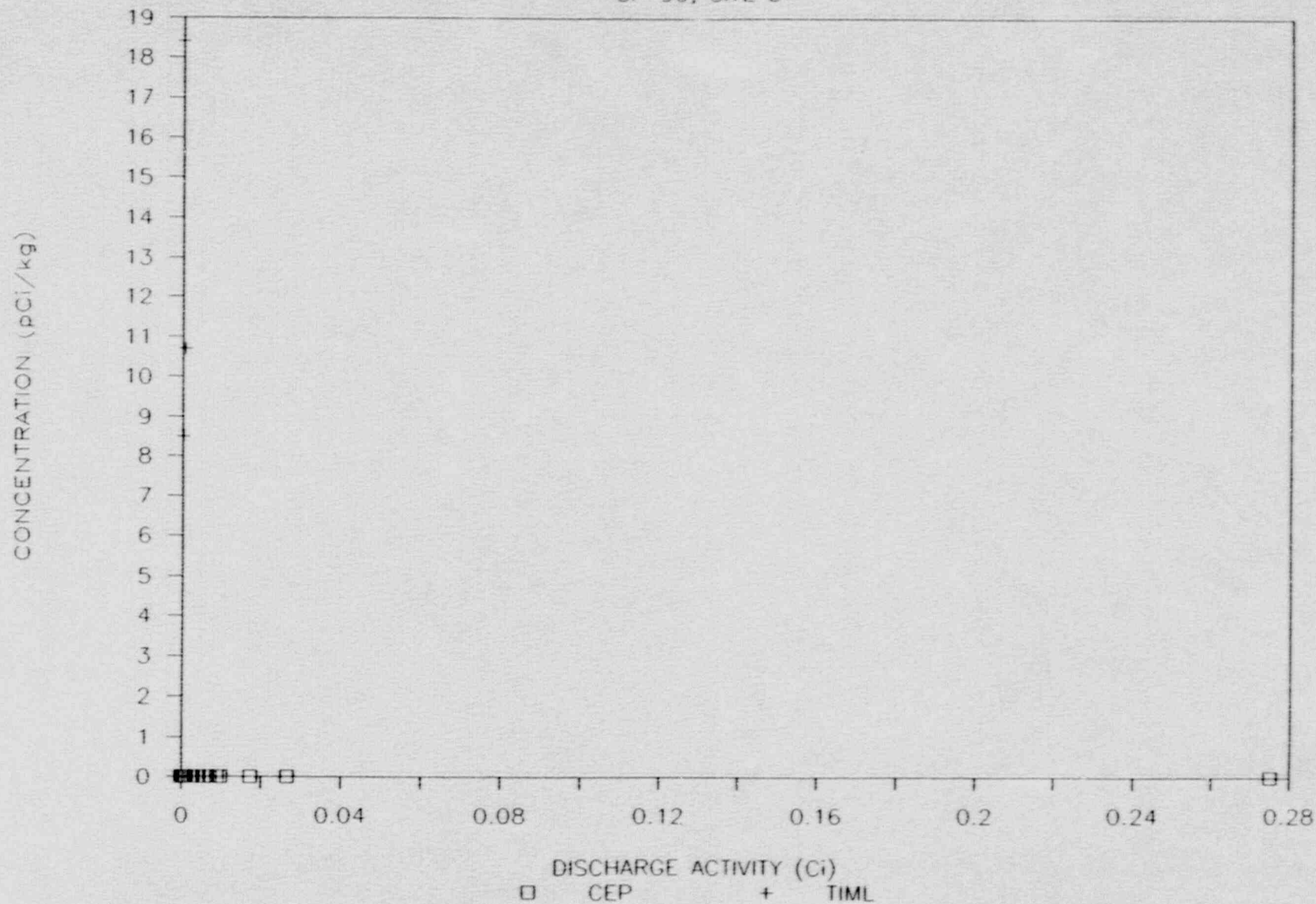
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

Sr-90, SITE C



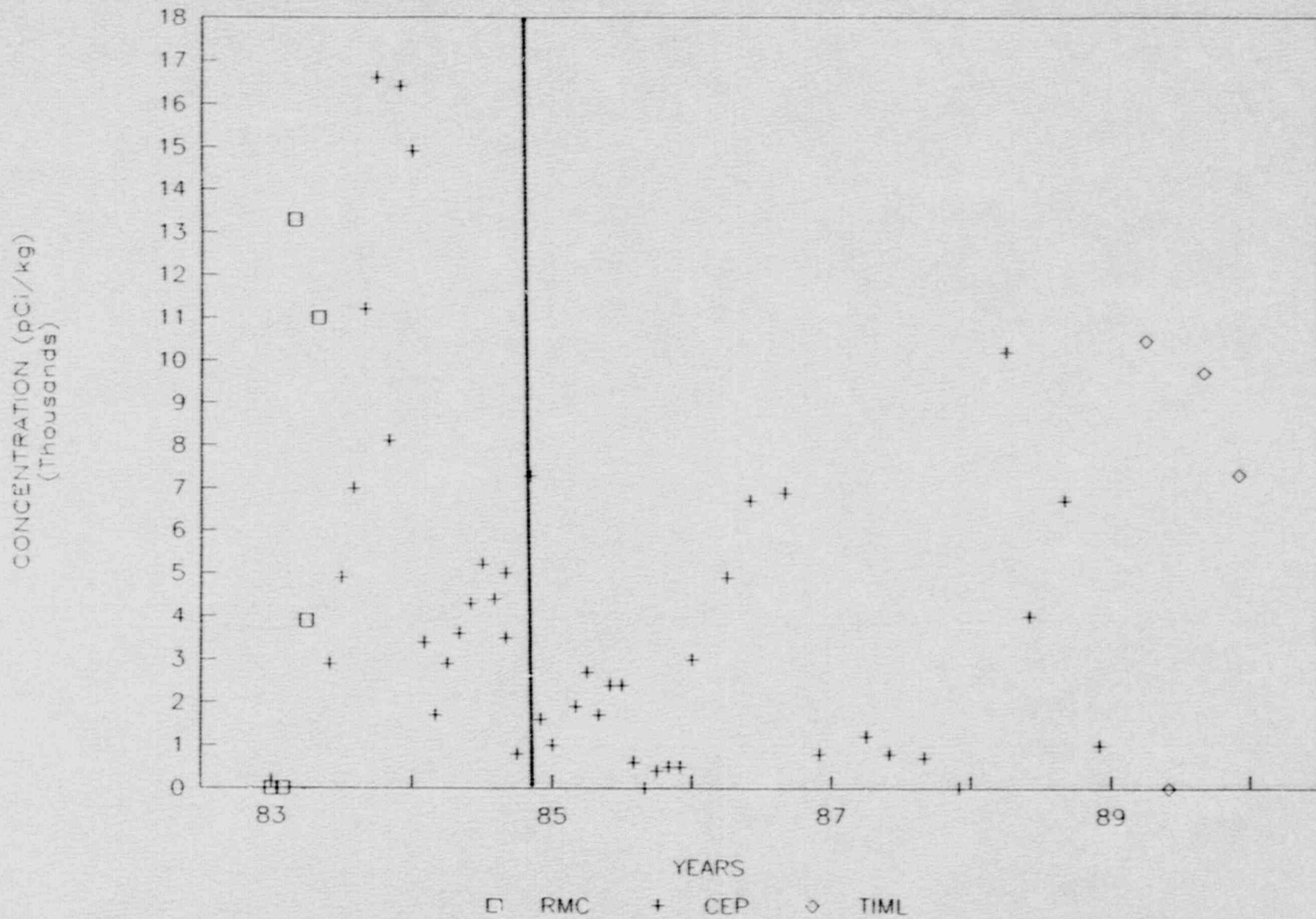
CALLAWAY DISCHARGE VS BOTTOM SEDIMENT

Sr-90, SITE D

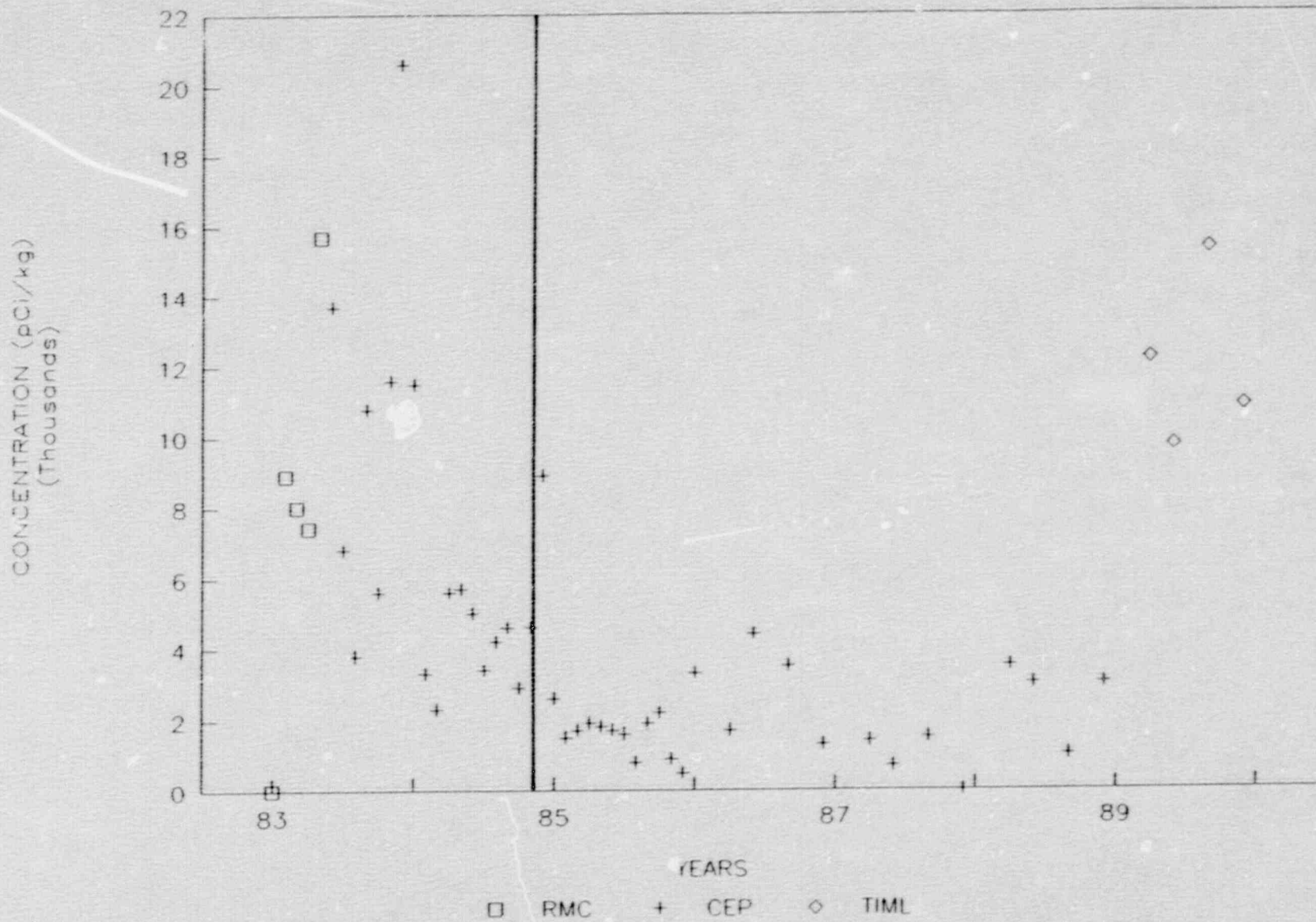


-506-

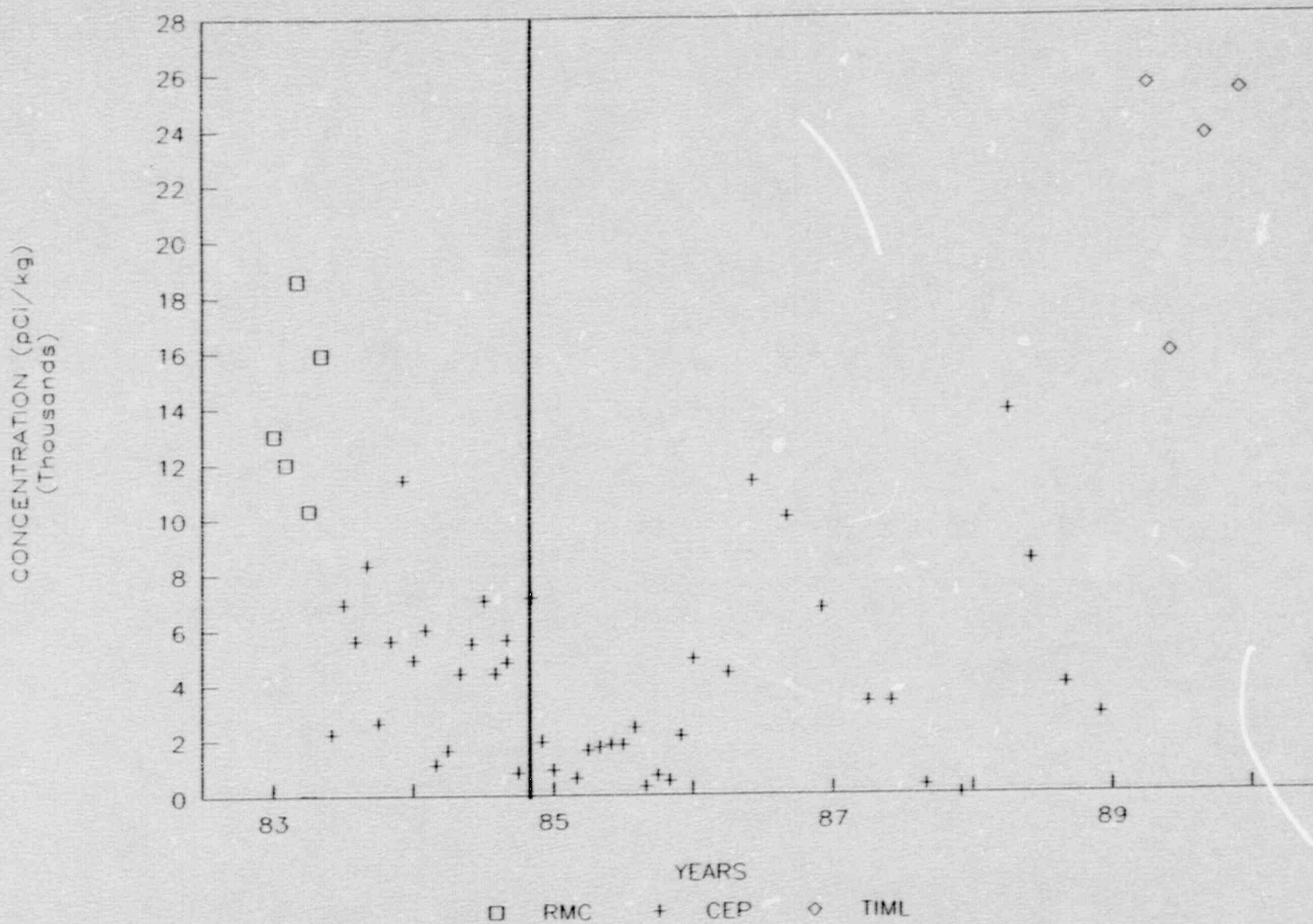
GROSS ALPHA IN BEDLOAD SEDIMENT, SITE A



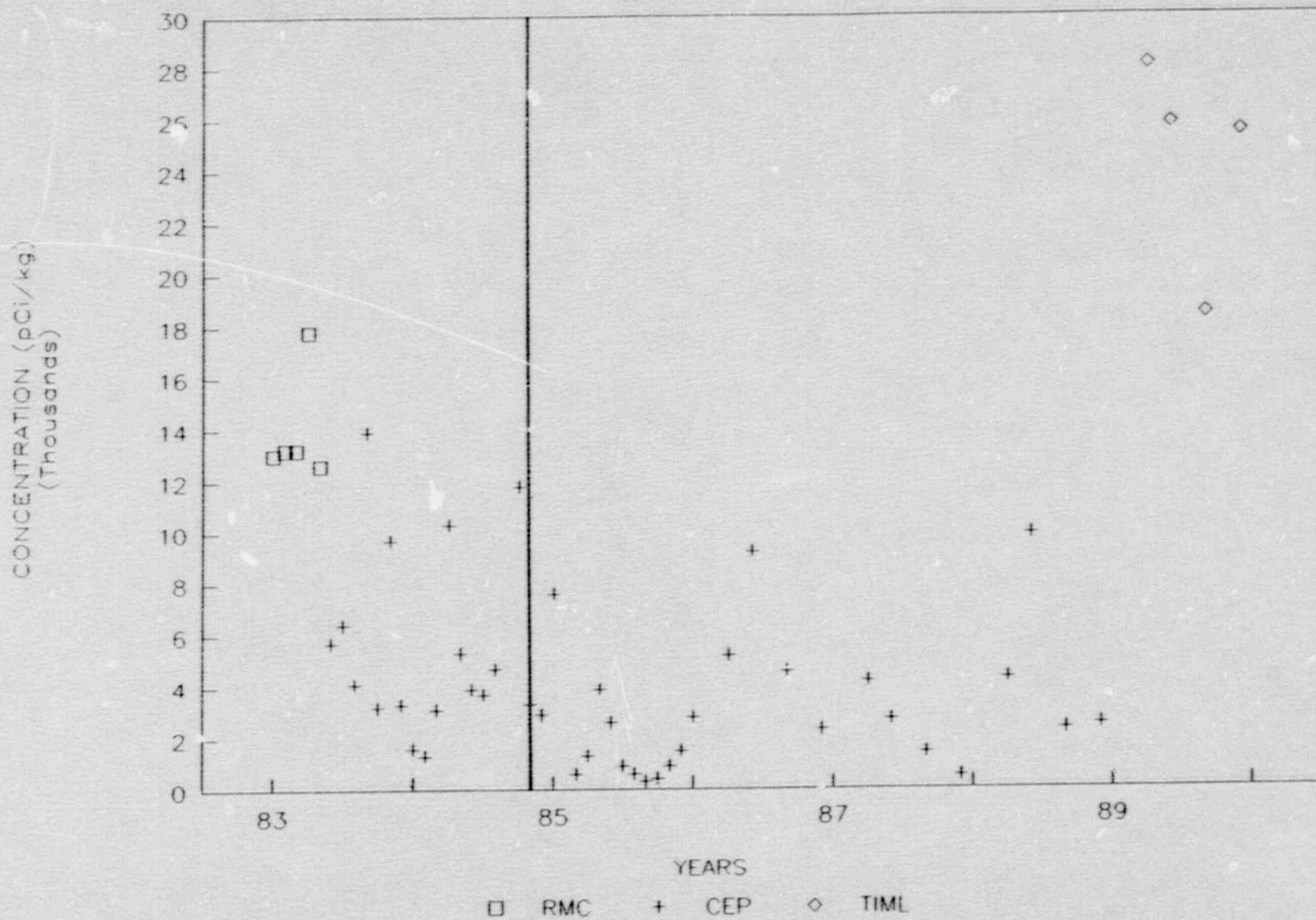
GROSS ALPHA IN BEDLOAD SEDIMENT, SITE D



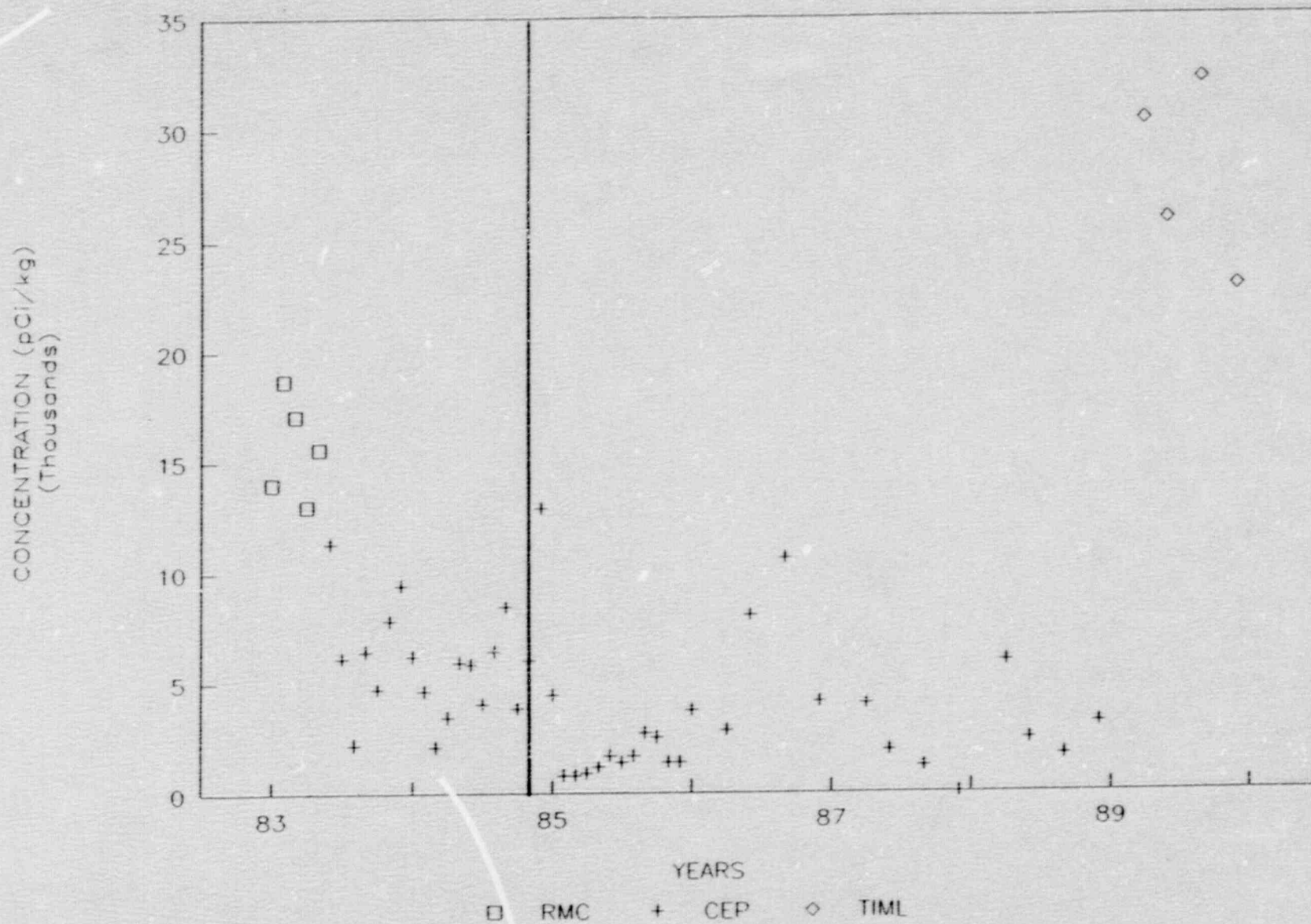
GROSS BETA IN BEDLOAD SEDIMENT, SITE A



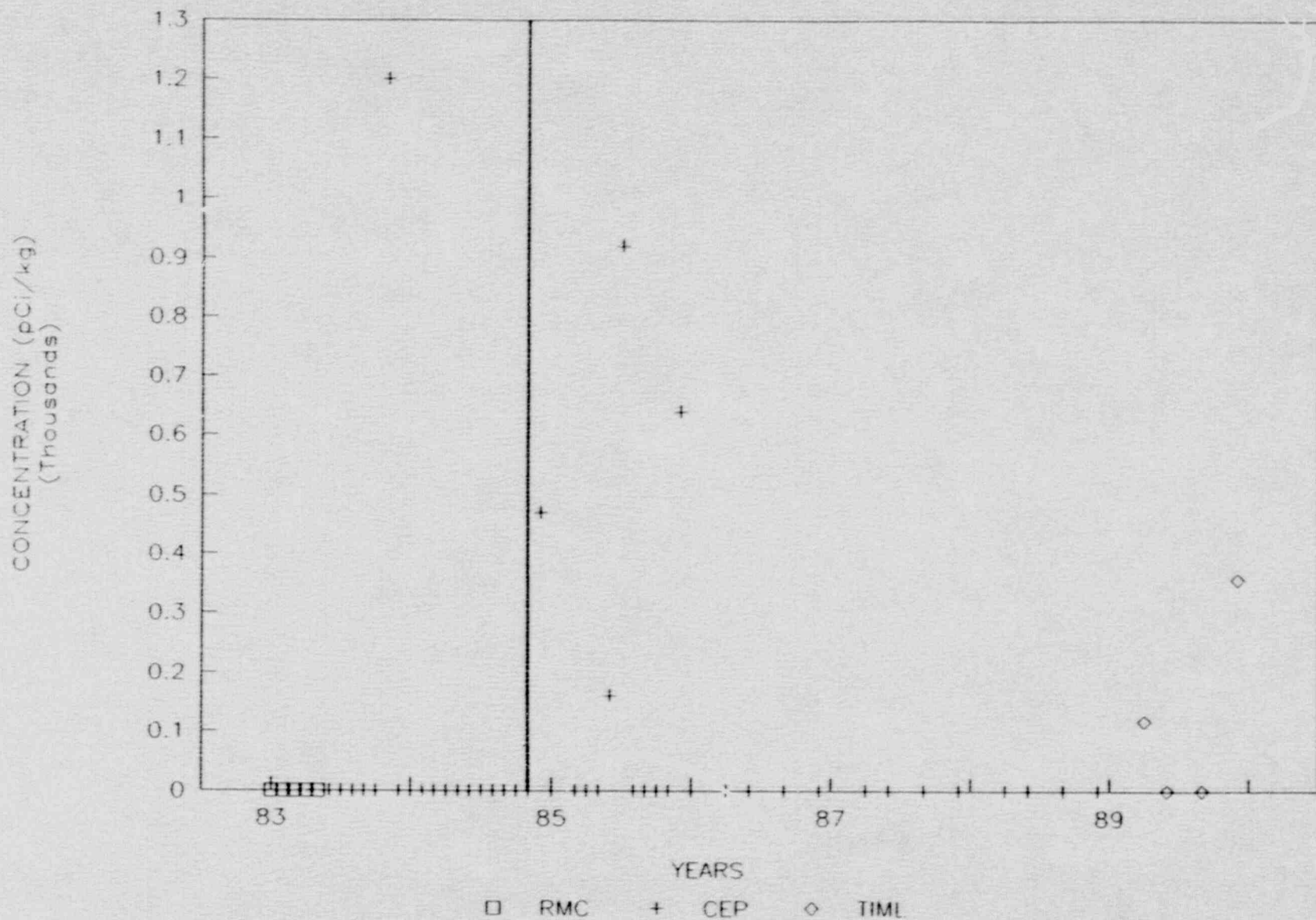
GROSS BETA IN BEDLOAD SEDIMENT, SITE C



GROSS BETA IN BEDLOAD SEDIMENT, SITE D

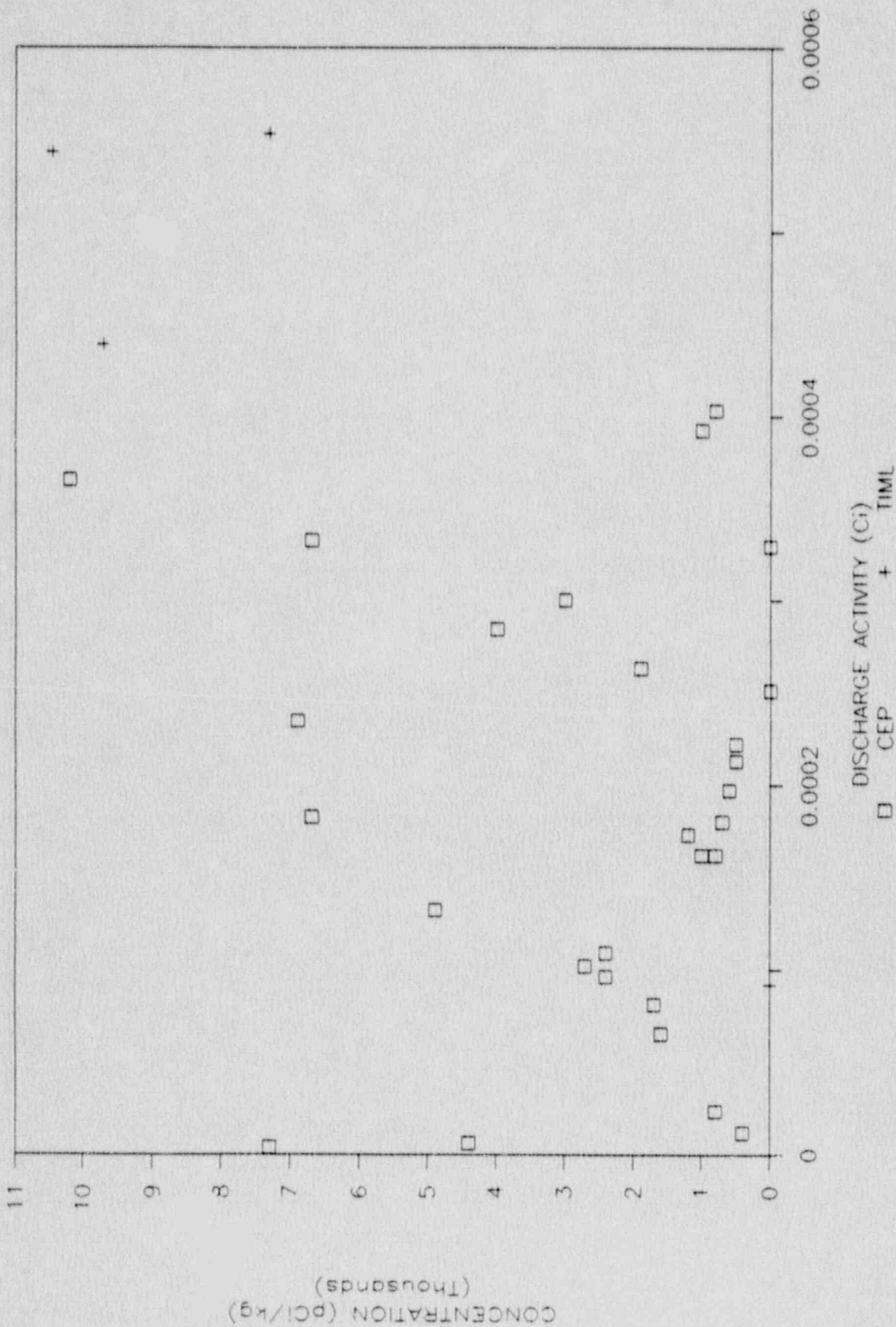


CS-137 IN BEDLOAD SEDIMENT, SITE A



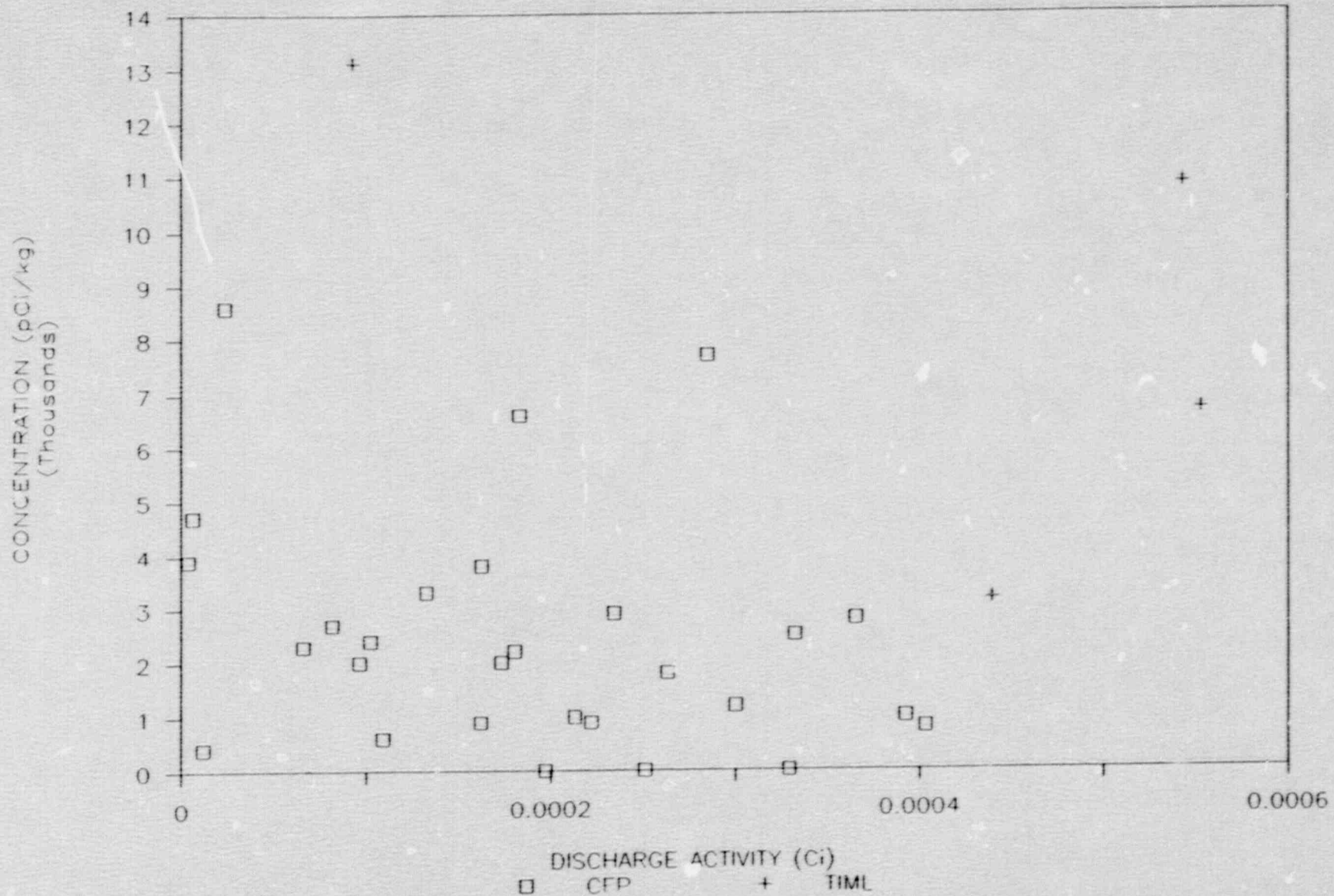
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

GROSS ALPHA, SITE A



CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

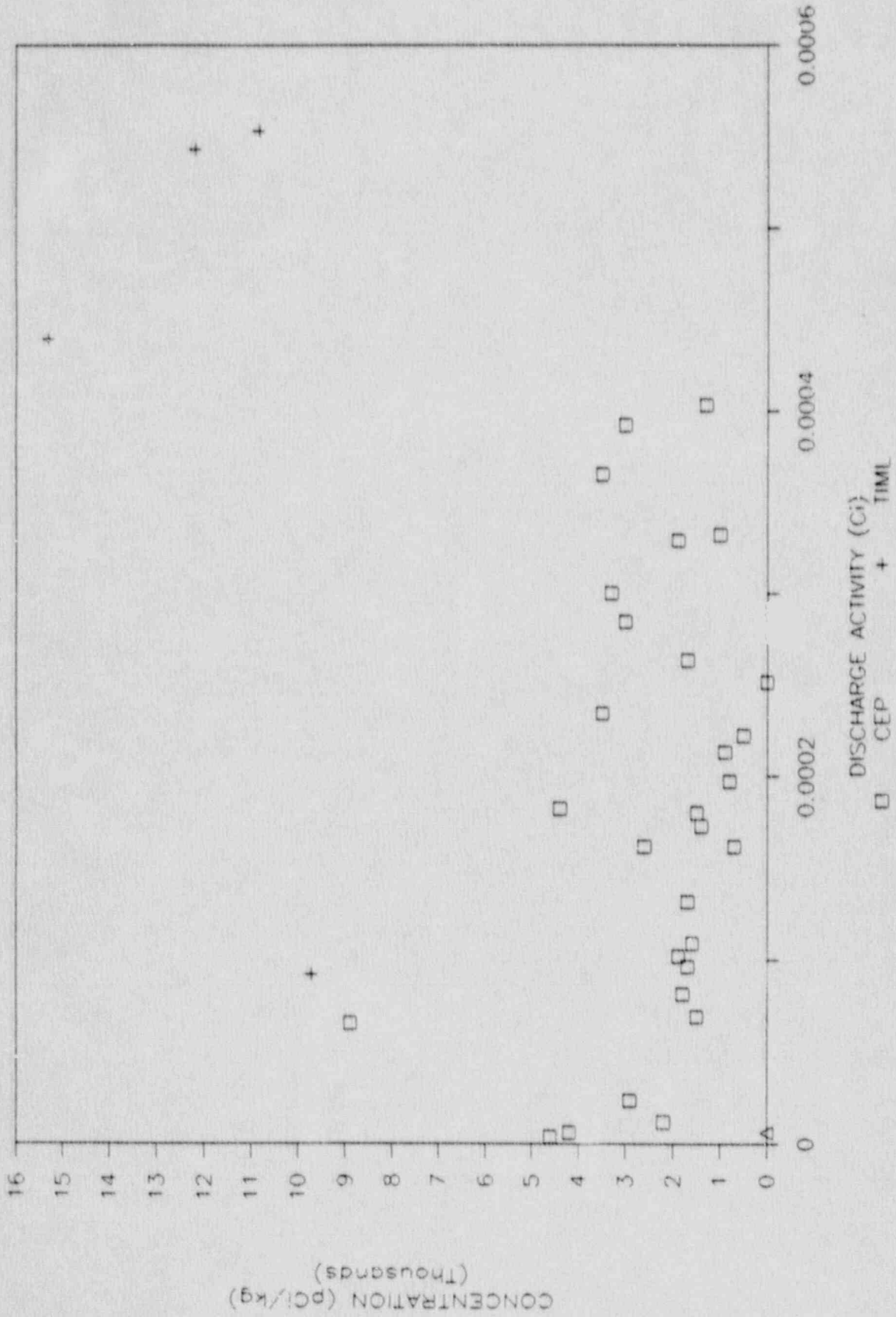
GROSS ALPHA, SITE C



-J100-

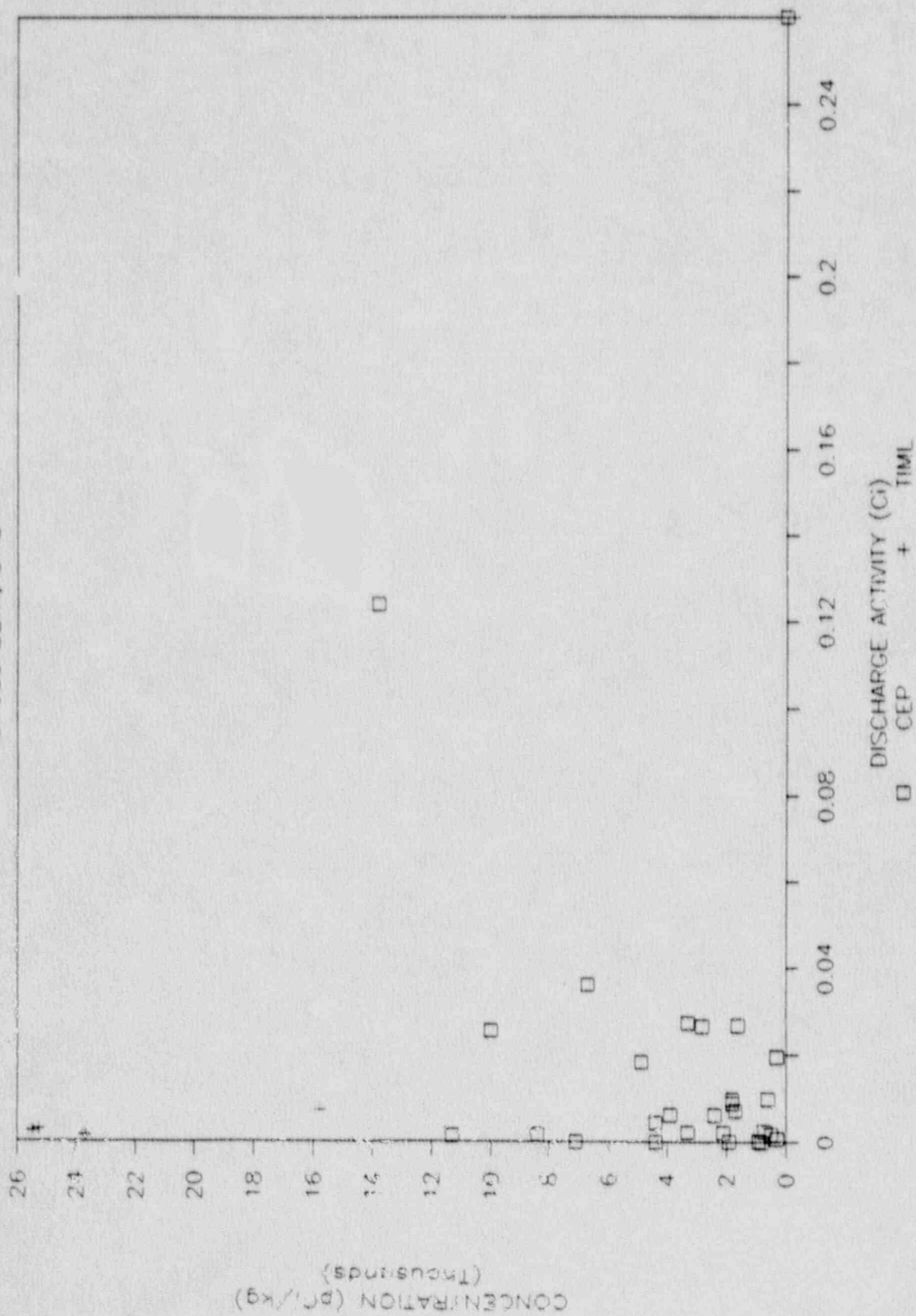
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

GROSS ALPHA, SITE D



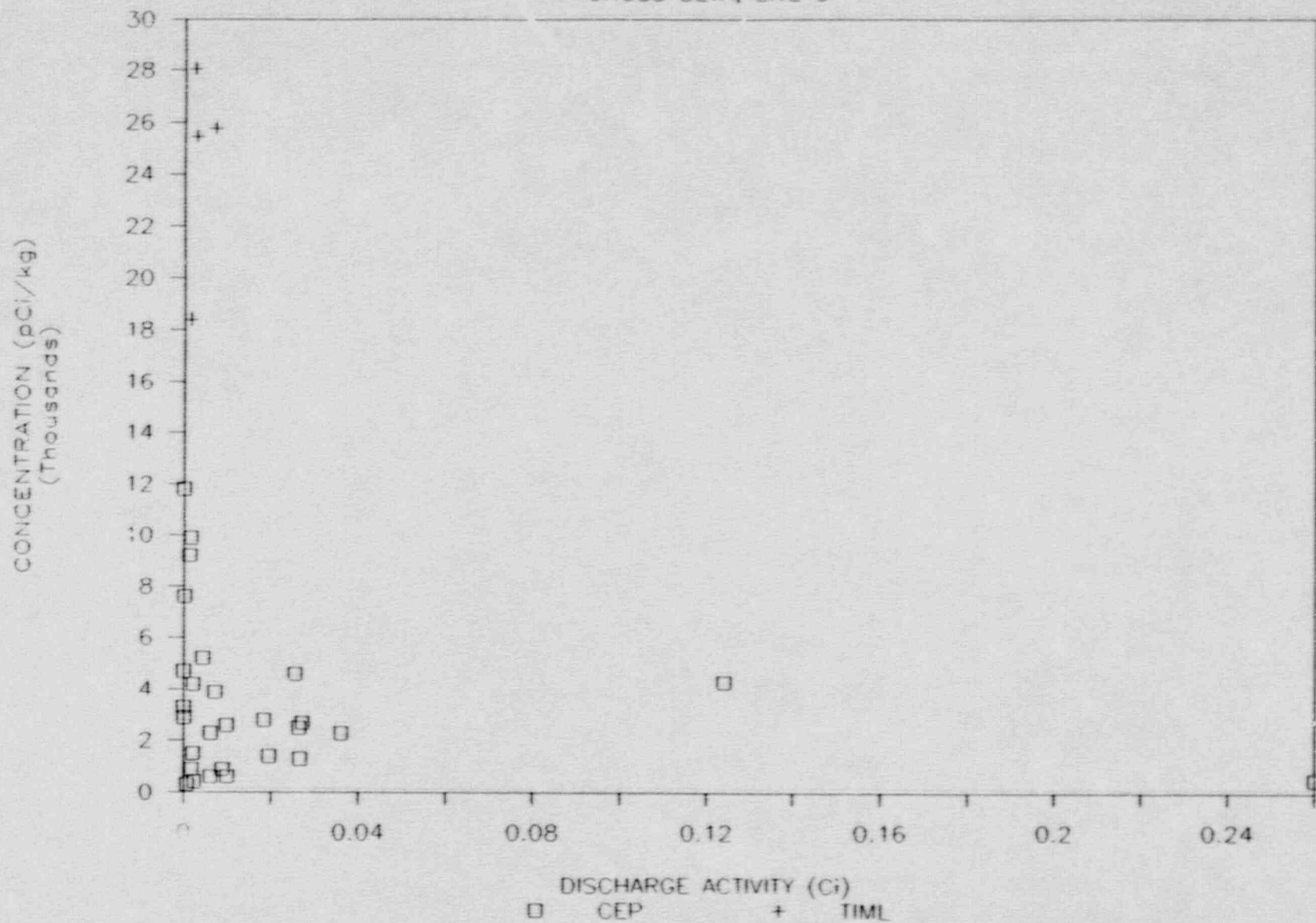
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

GROSS BEIA, SITE A



CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

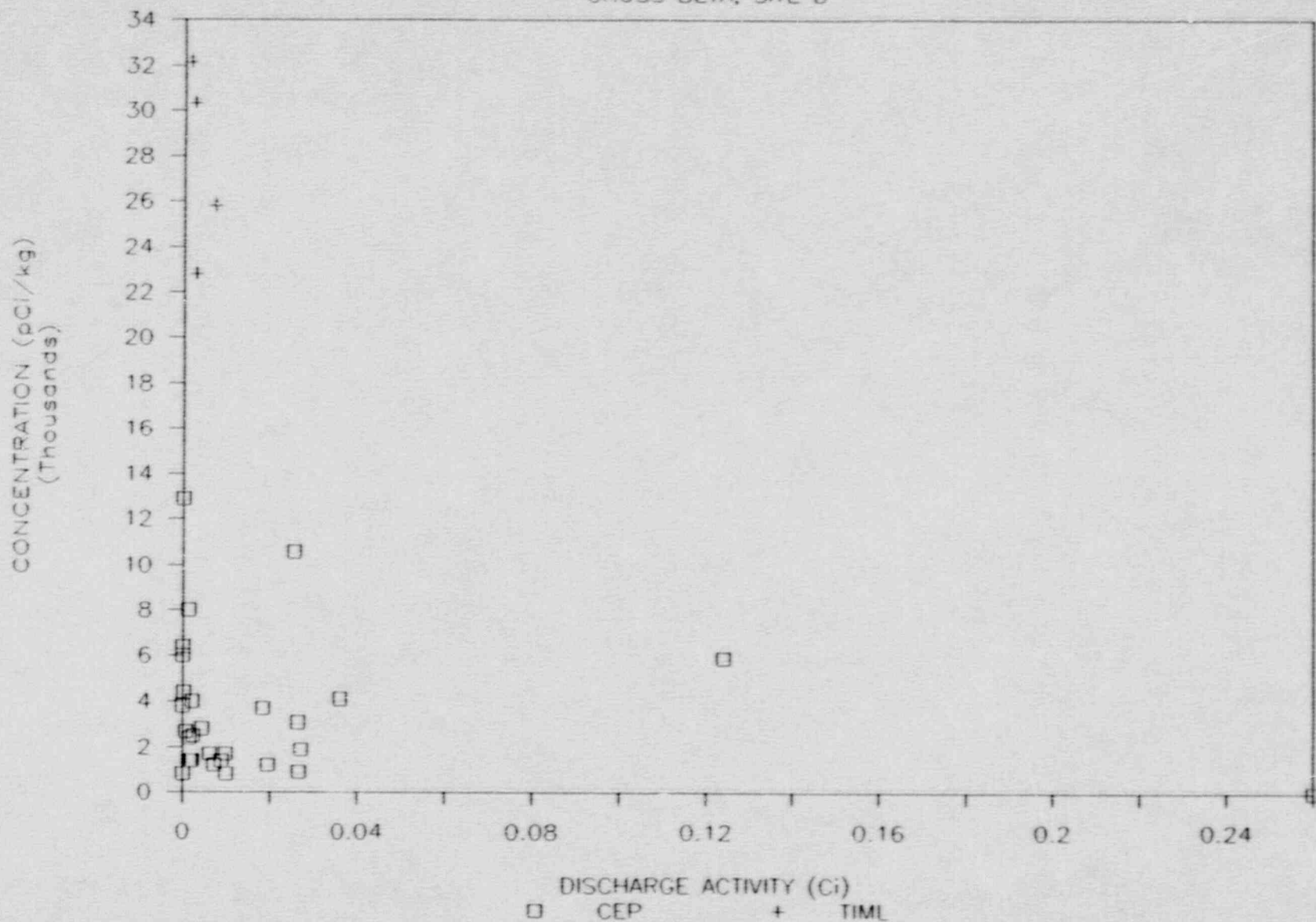
GROSS BETA, SITE C



-3103-

CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

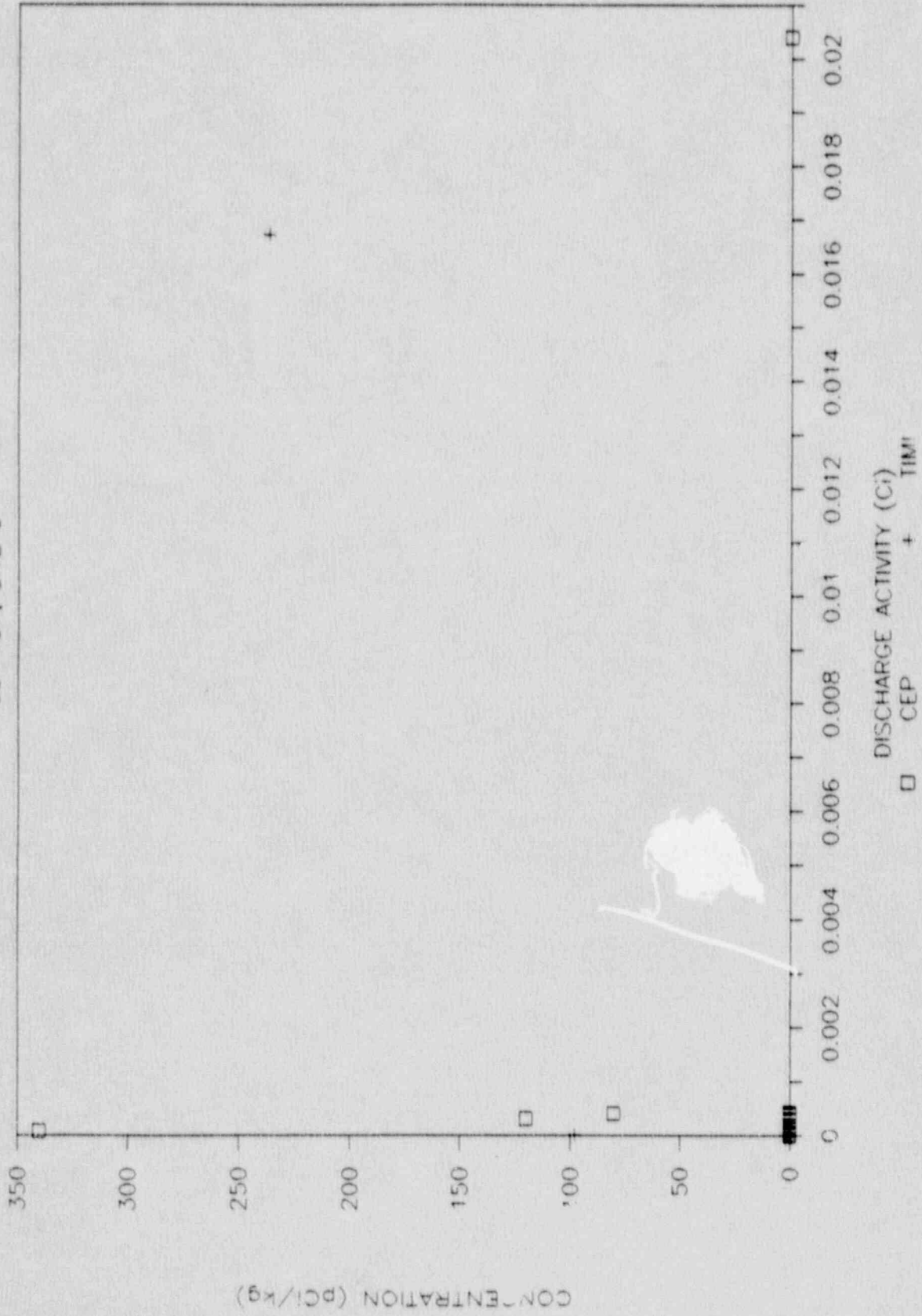
GROSS BETA, SITE D



-J104-

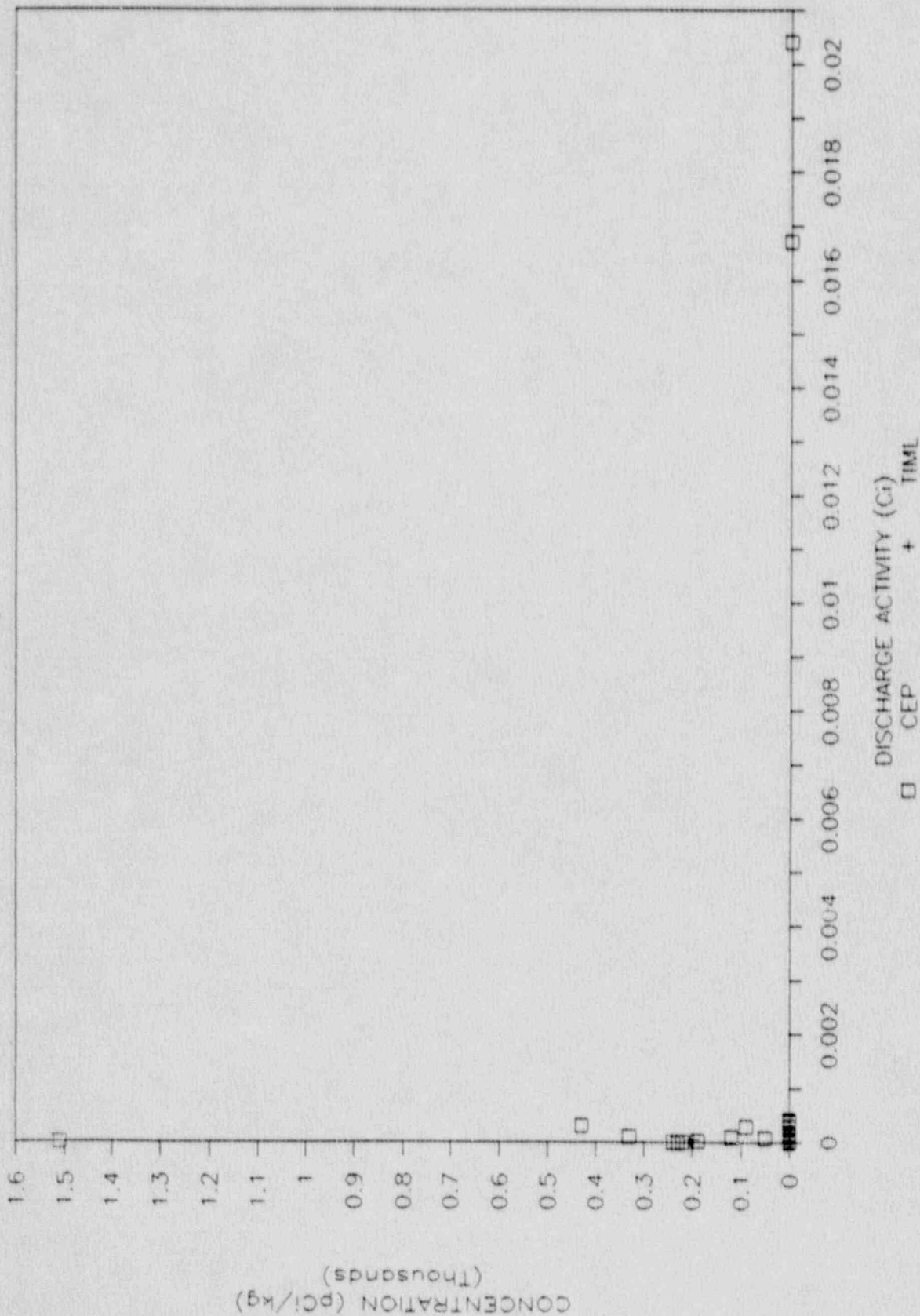
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

CS-137, SITE C



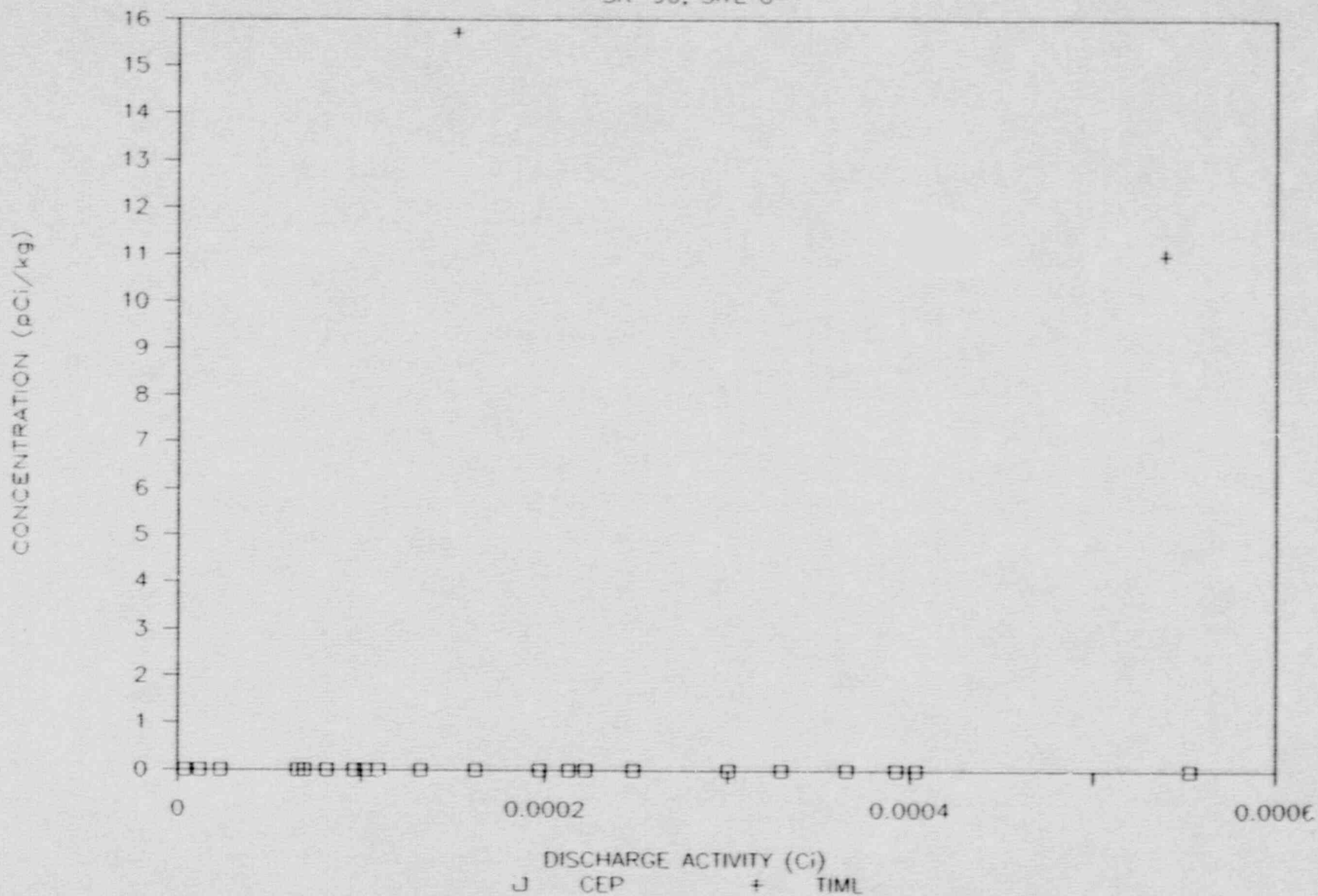
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

CS-137, SITE D



CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

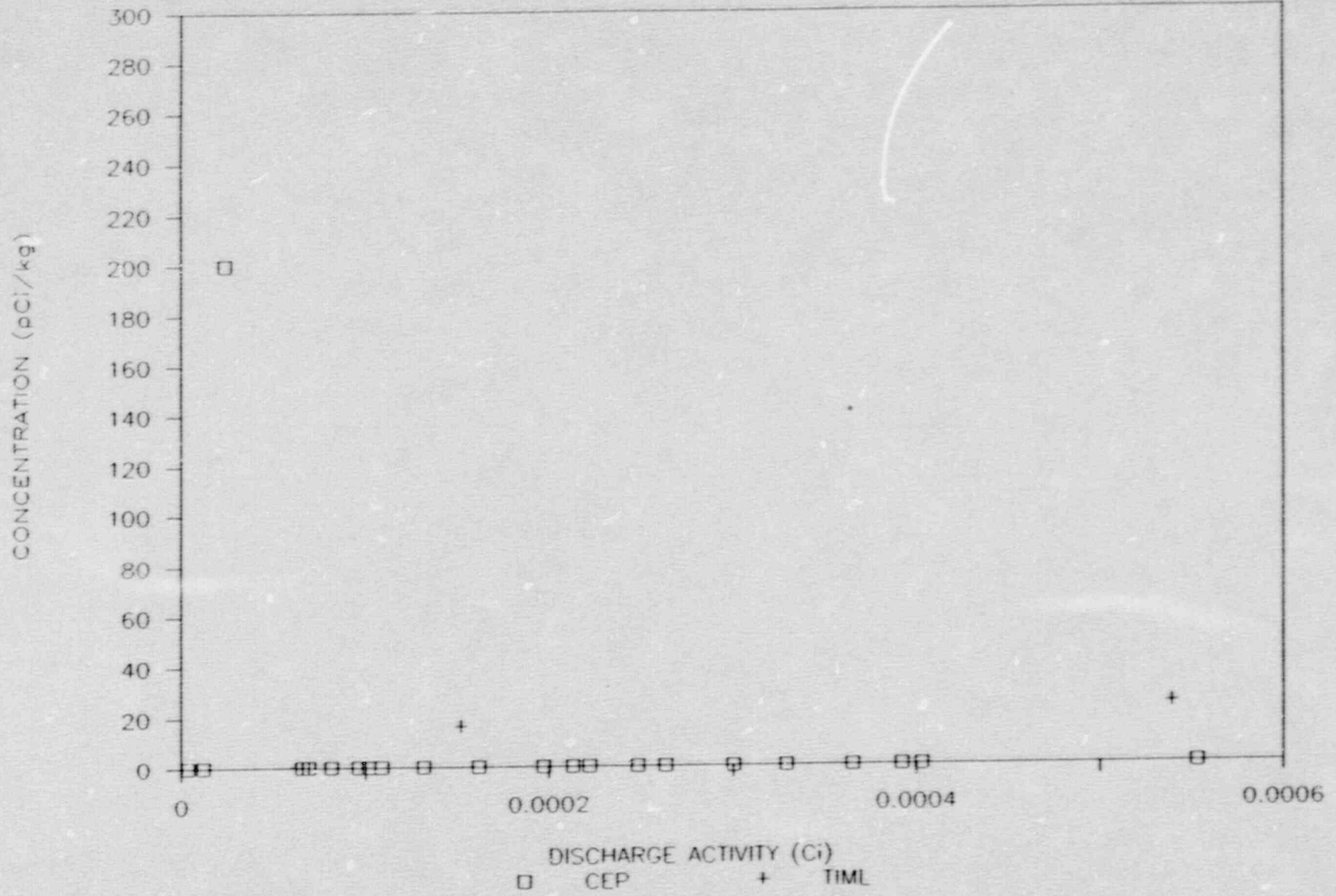
SR-90, SITE C



-J109-

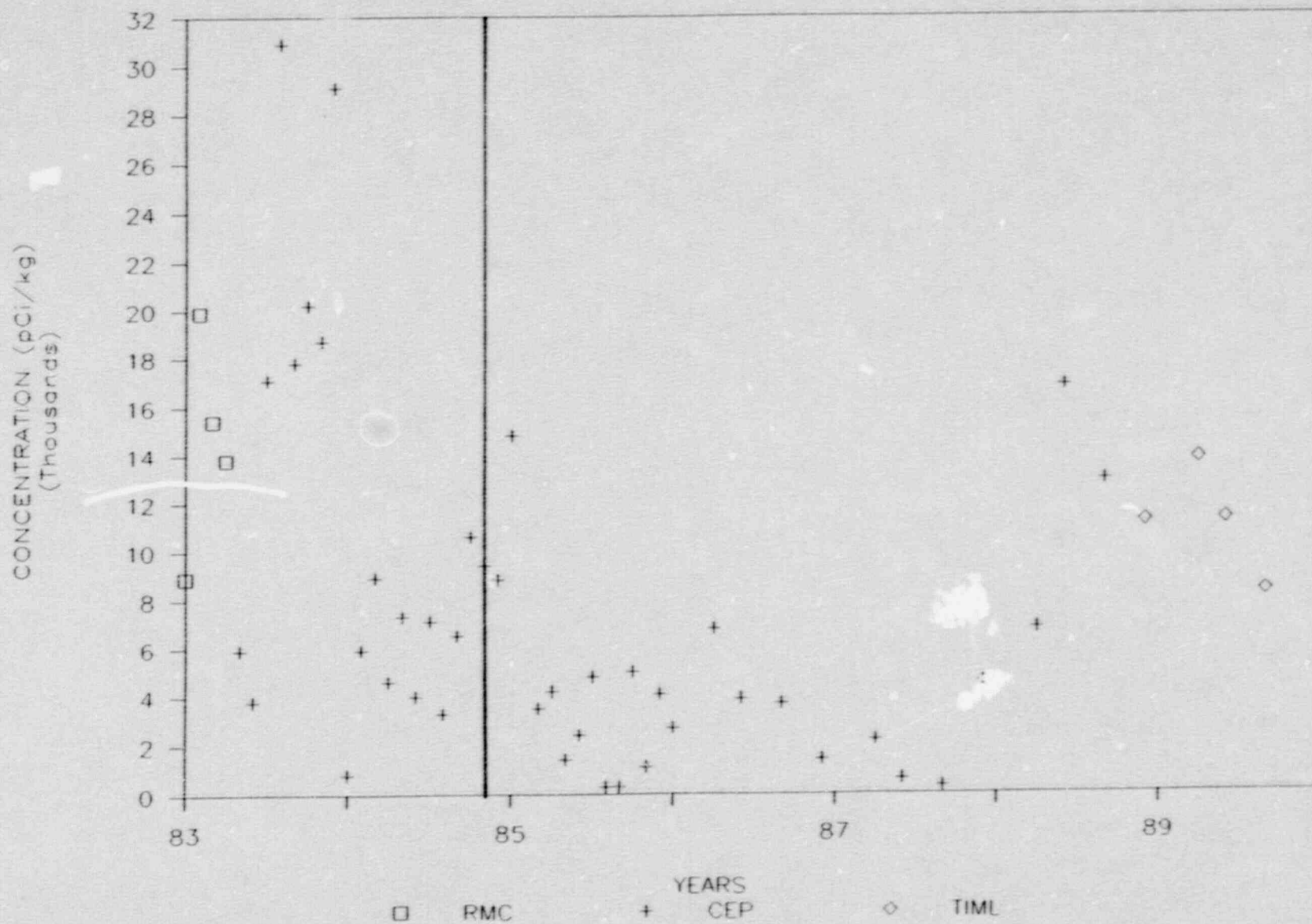
CALLAWAY DISCHARGE VS BEDLOAD SEDIMENT

SR-90, SITE D



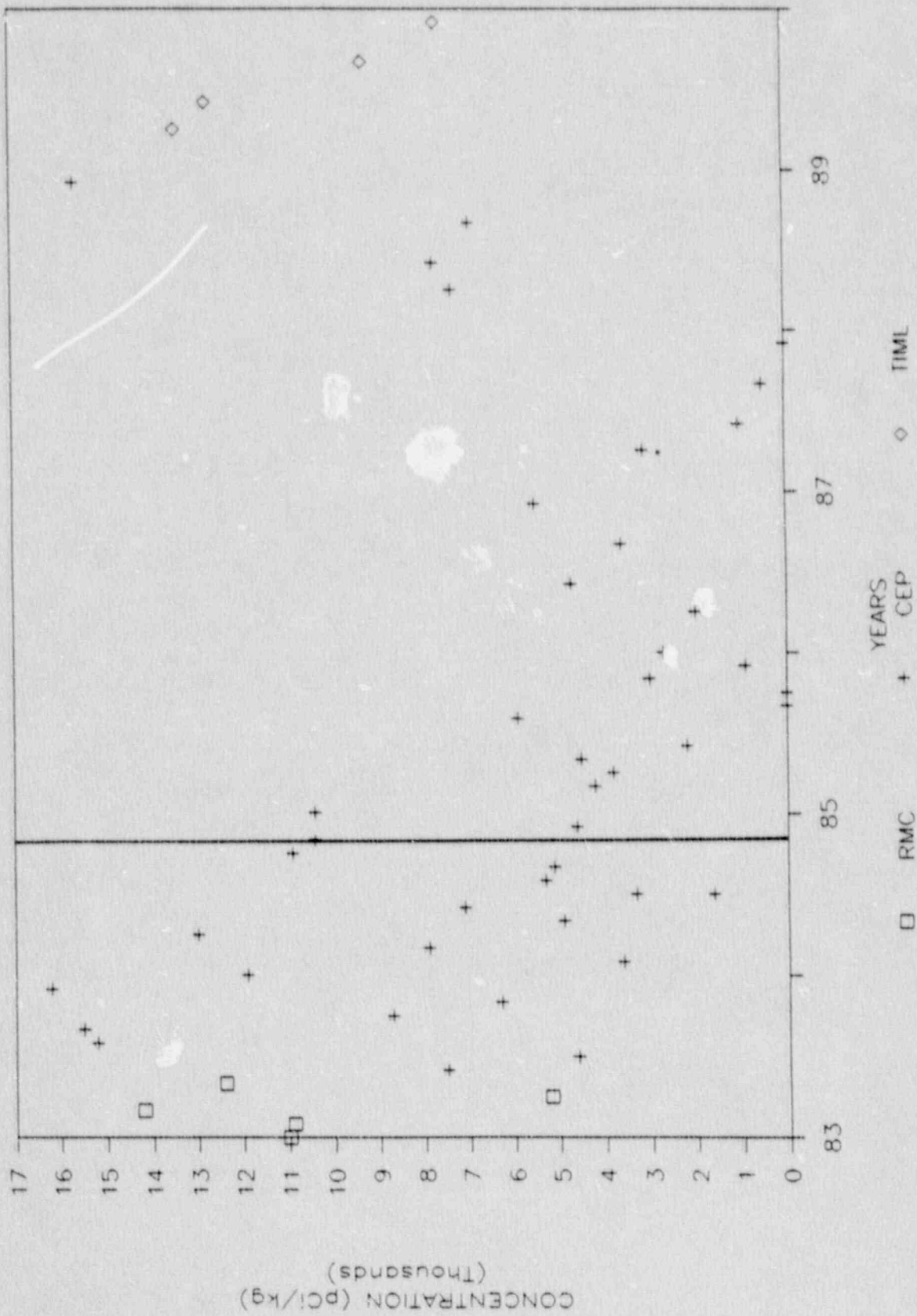
-J110-

GROSS ALPHA IN WASHLOAD SEDIMENT, SITE A

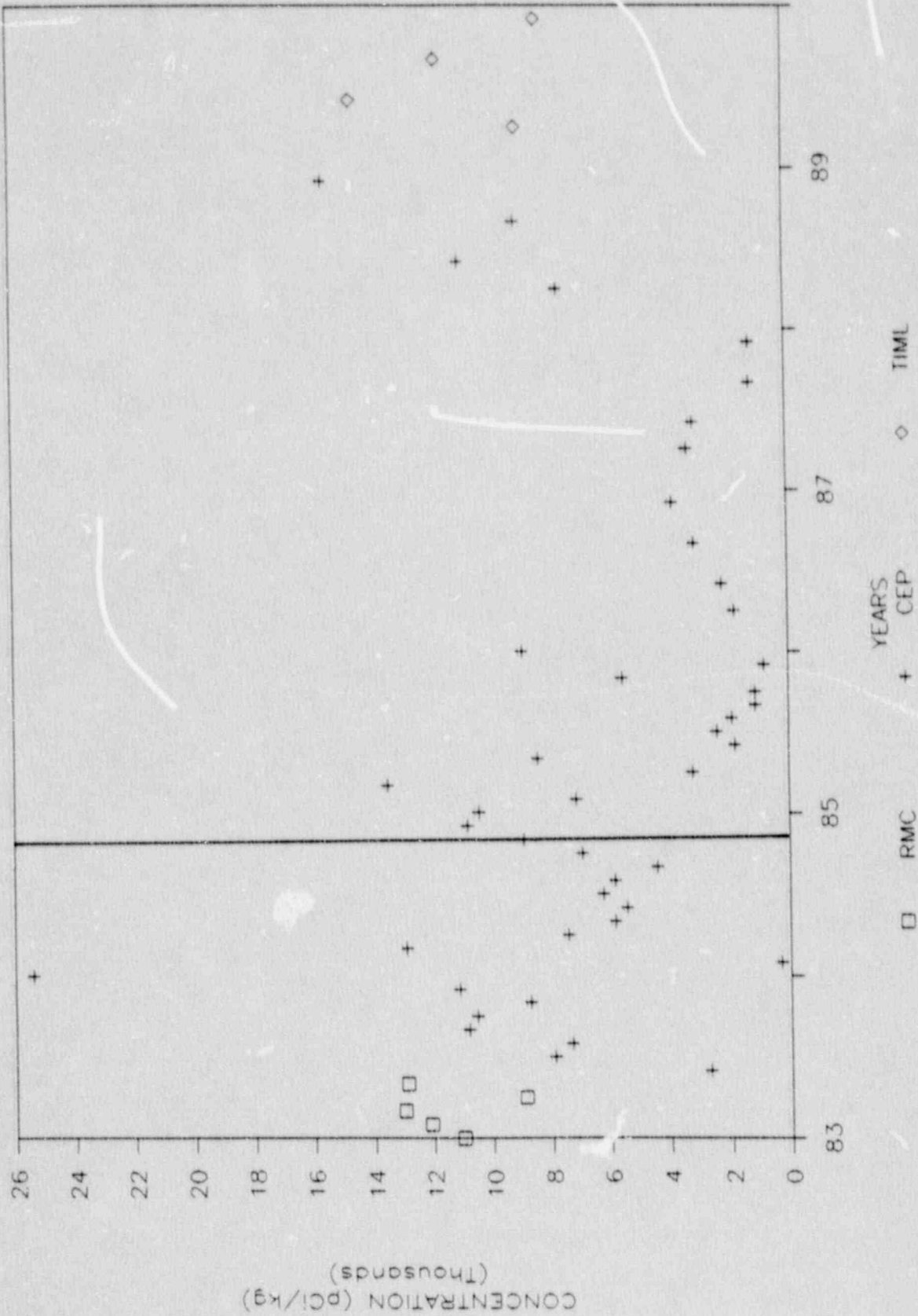


-5111-

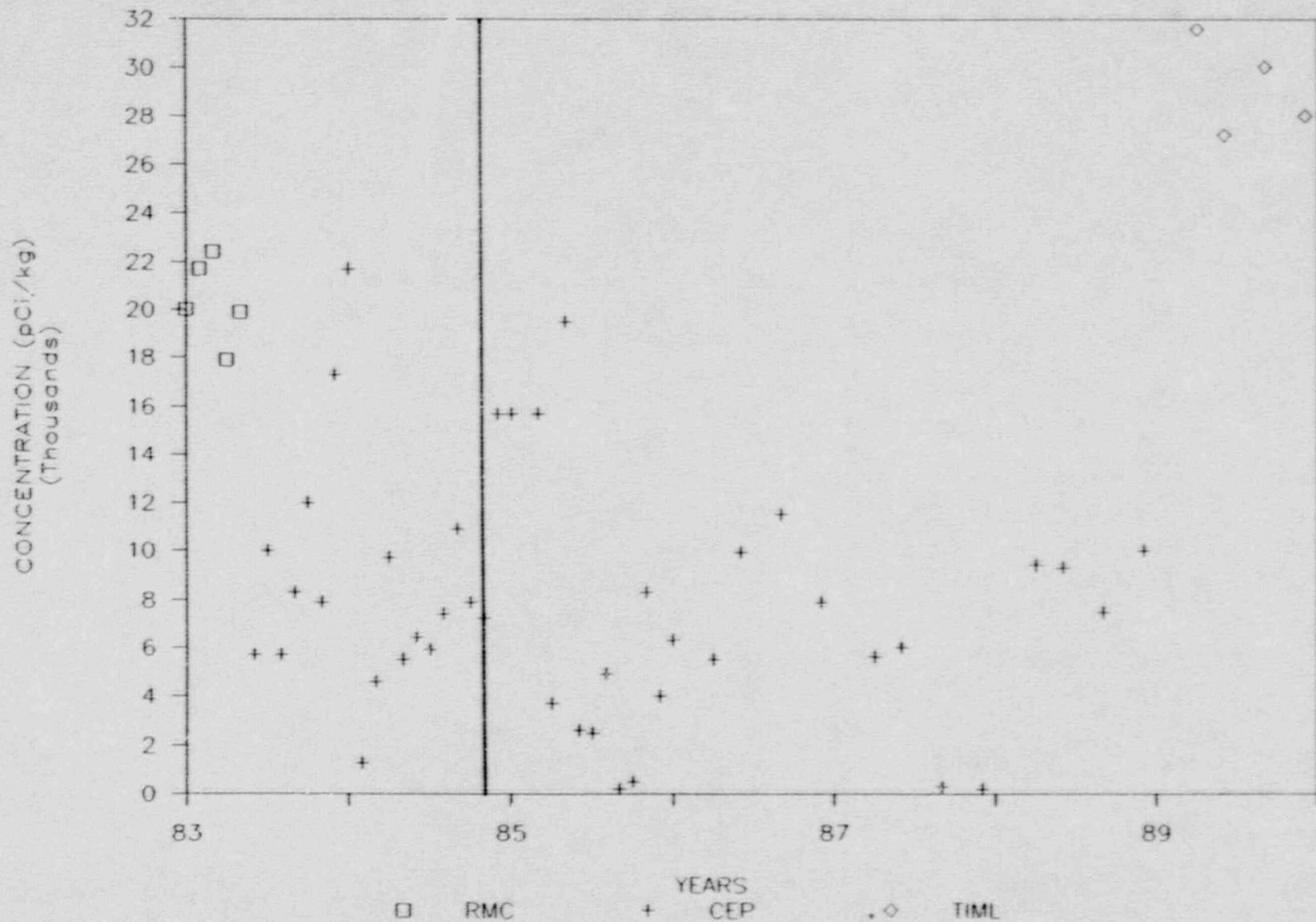
GROSS ALPHA IN WASHLOAD SEDIMENT, SITE C



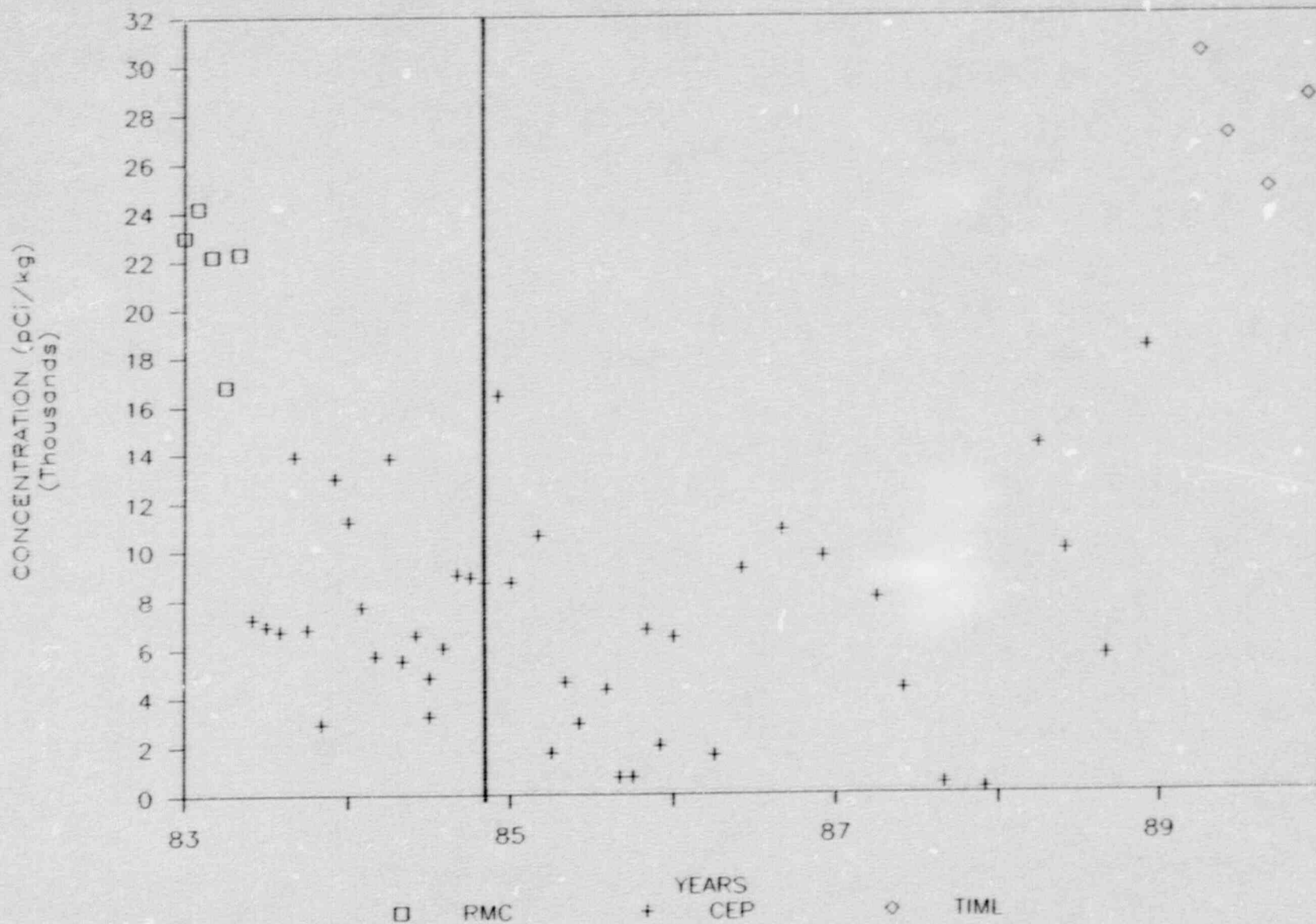
GROSS ALPHA IN WASHLOAD SEDIMENT, SITE D



GROSS BETA. IN WASHLOAD SEDIMENT, SITE A

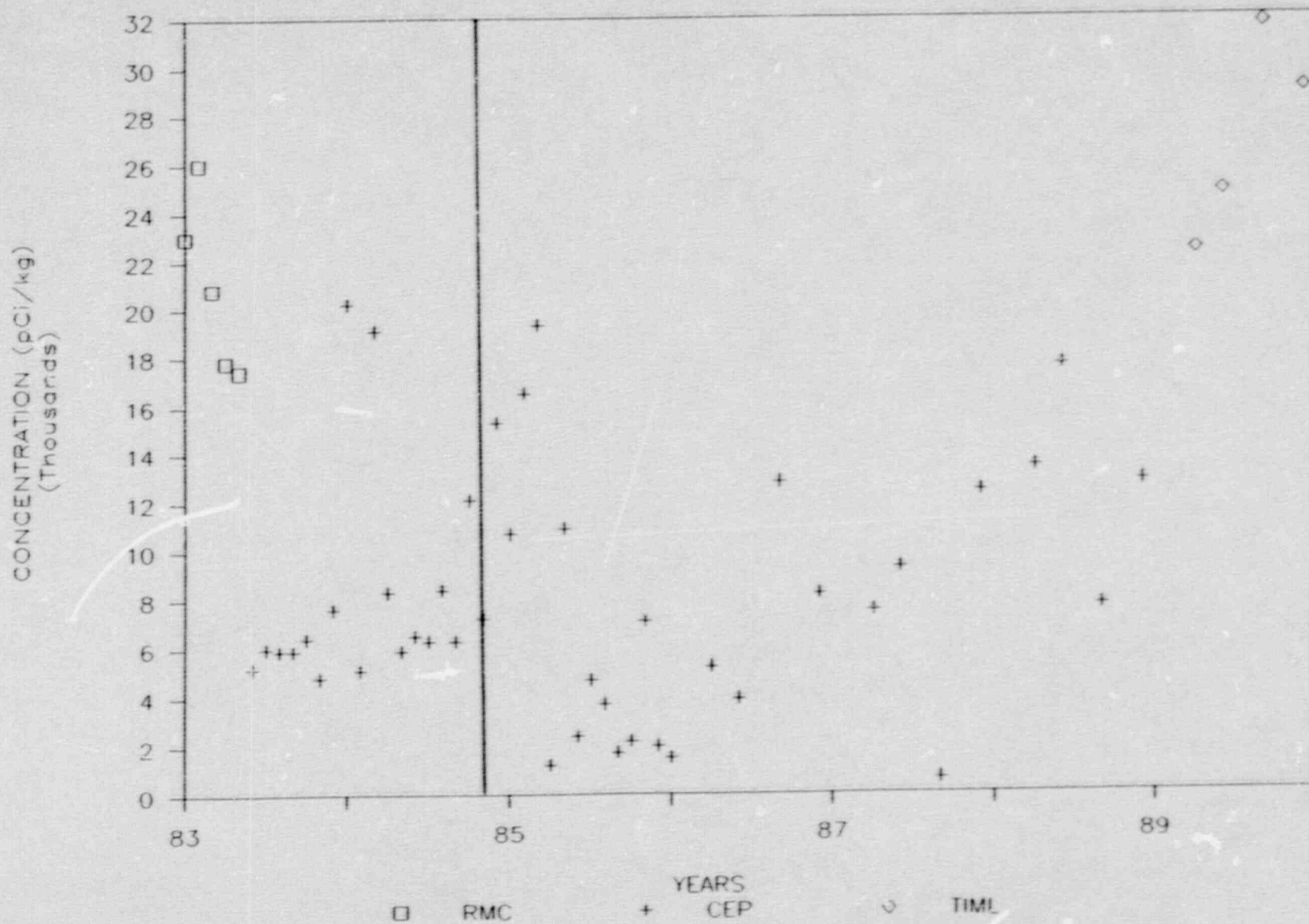


GROSS BETA IN WASHLOAD SEDIMENT, SITE C



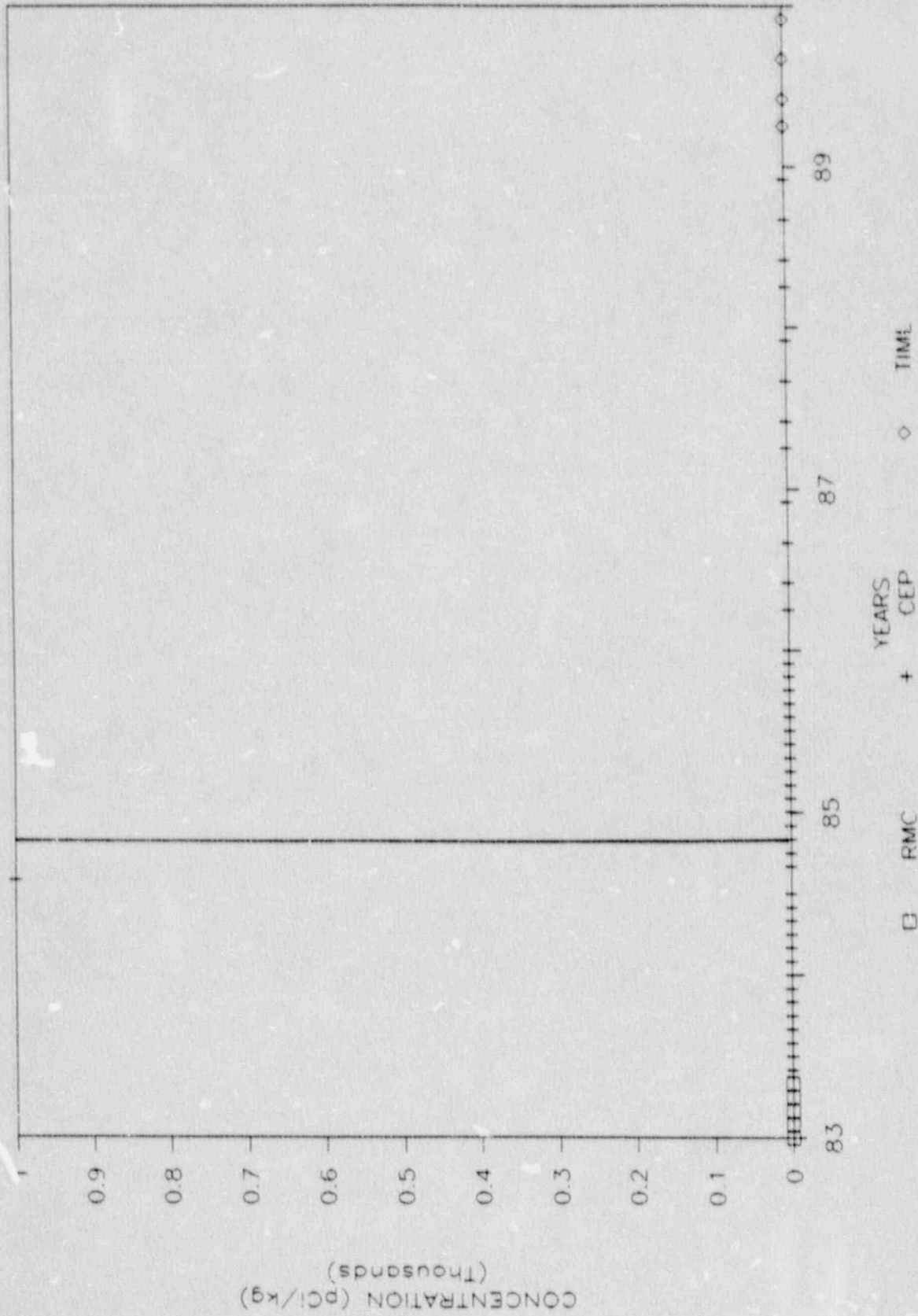
-0115-

GROSS BETA IN WASHLOAD SEDIMENT, SITE D

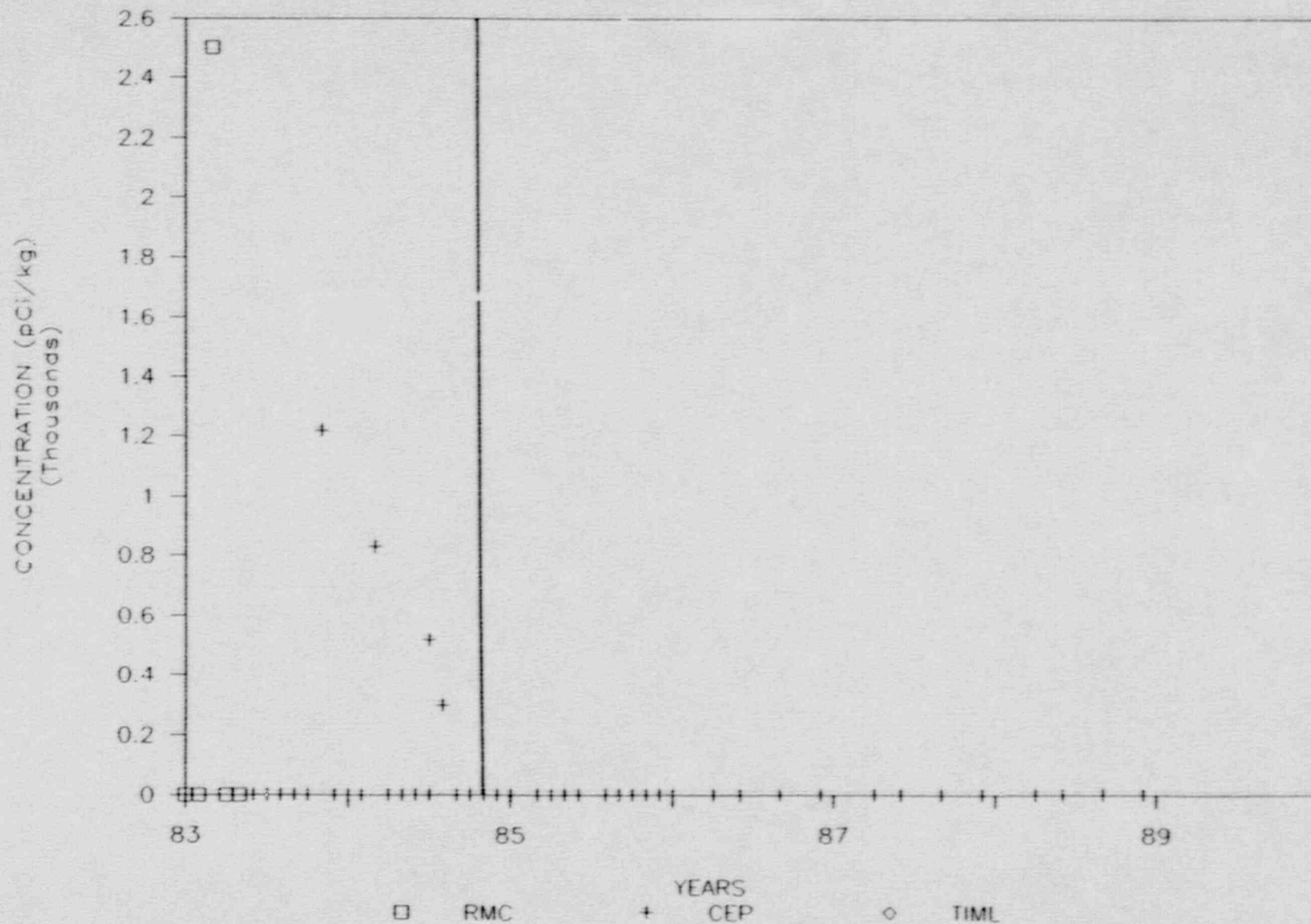


-3116-

CS-137 IN WASHLOAD SEDIMENT, SITE D



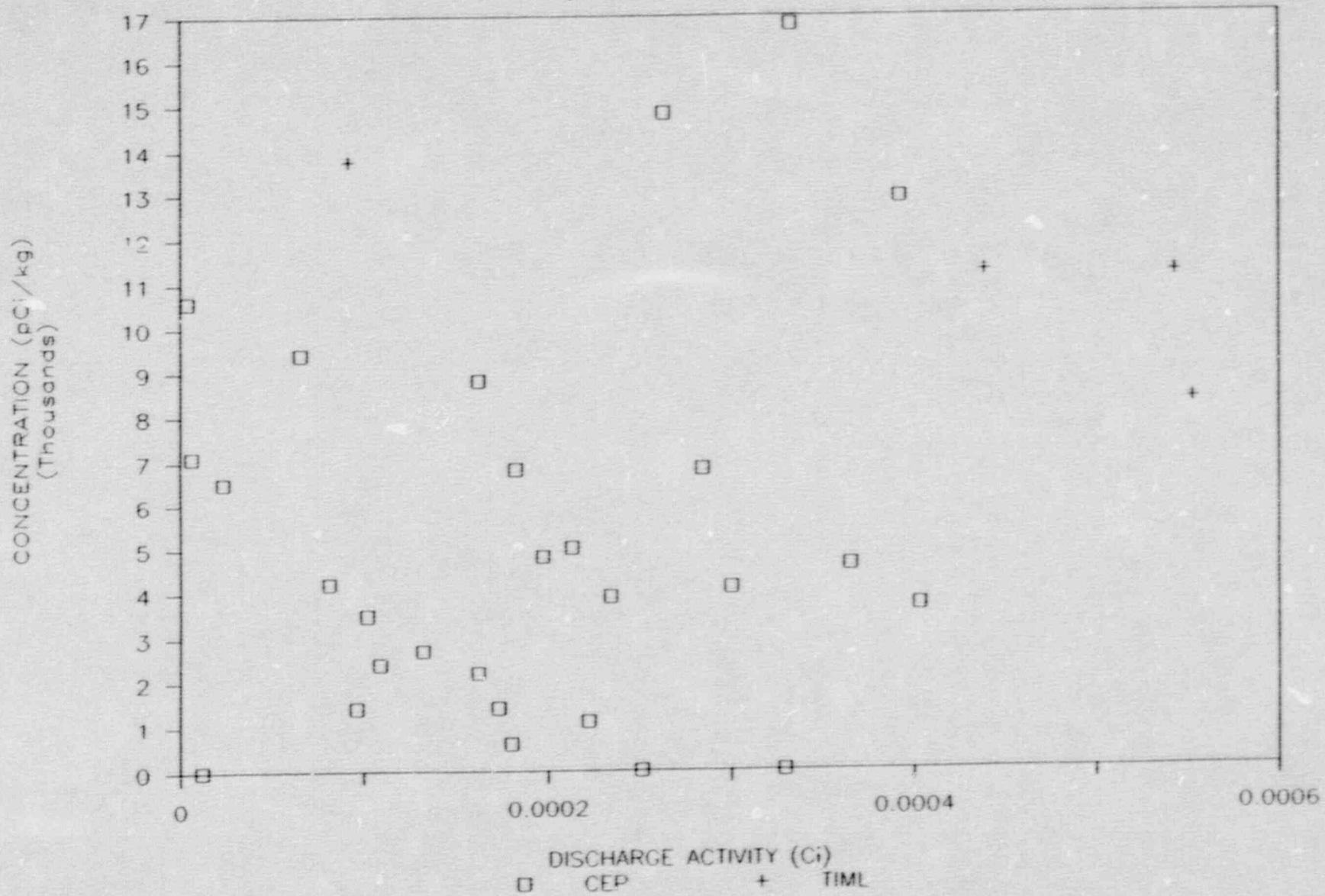
SR-90 IN WASHLOAD SEDIMENT, SITE C



-J121-

CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

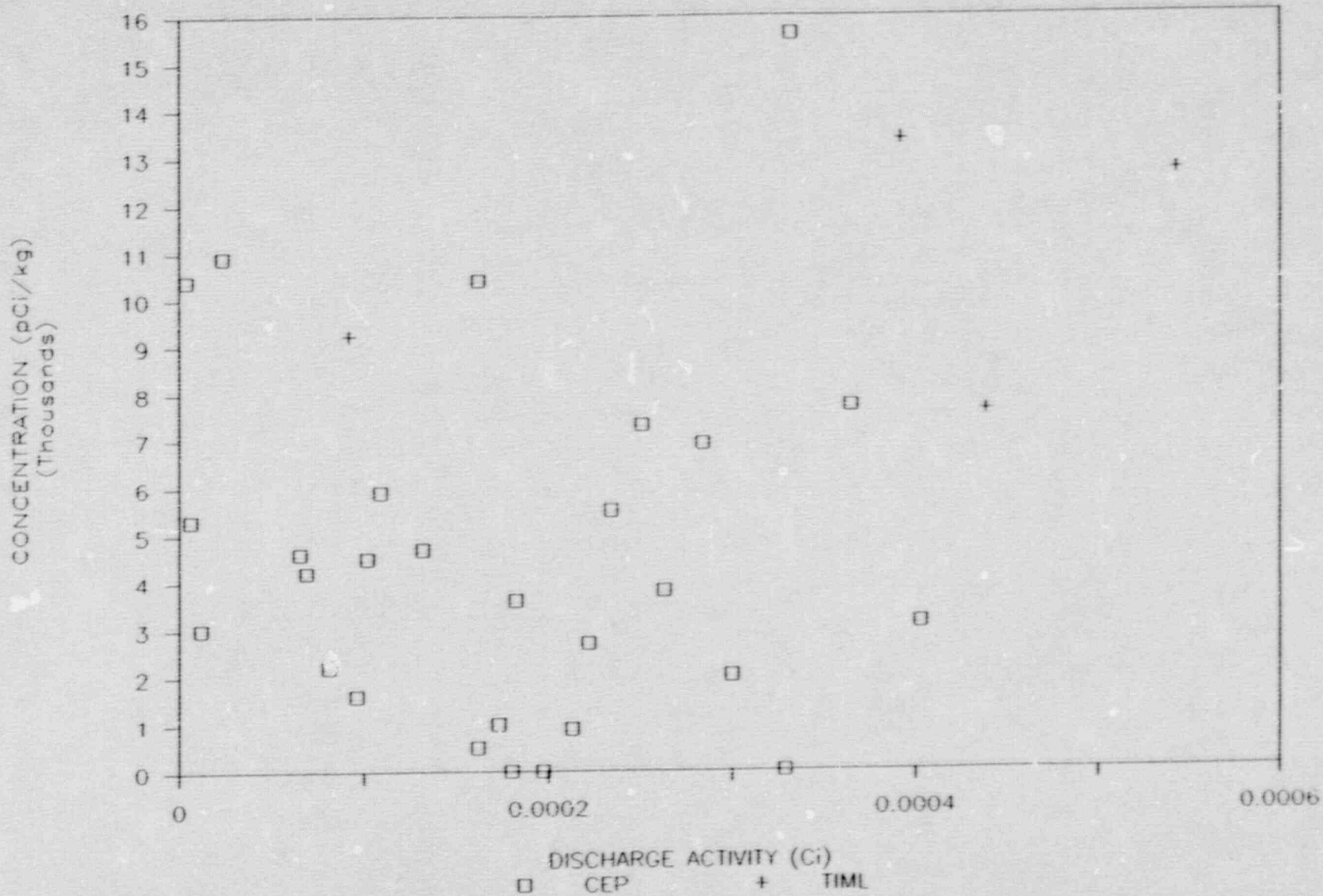
GROSS ALPHA, SITE A



-J123-

CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

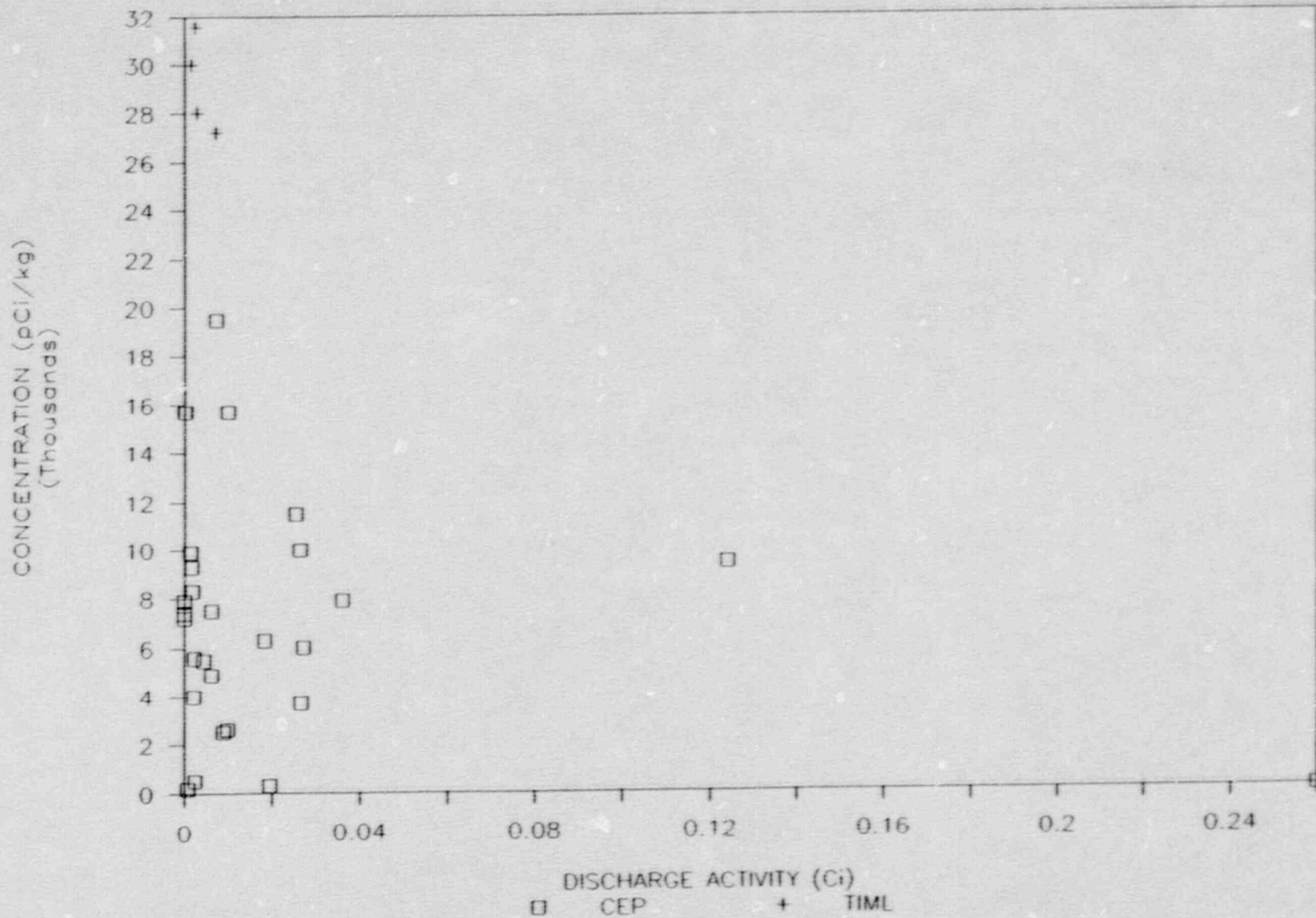
GROSS ALPHA, SITE C



-J124-

CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

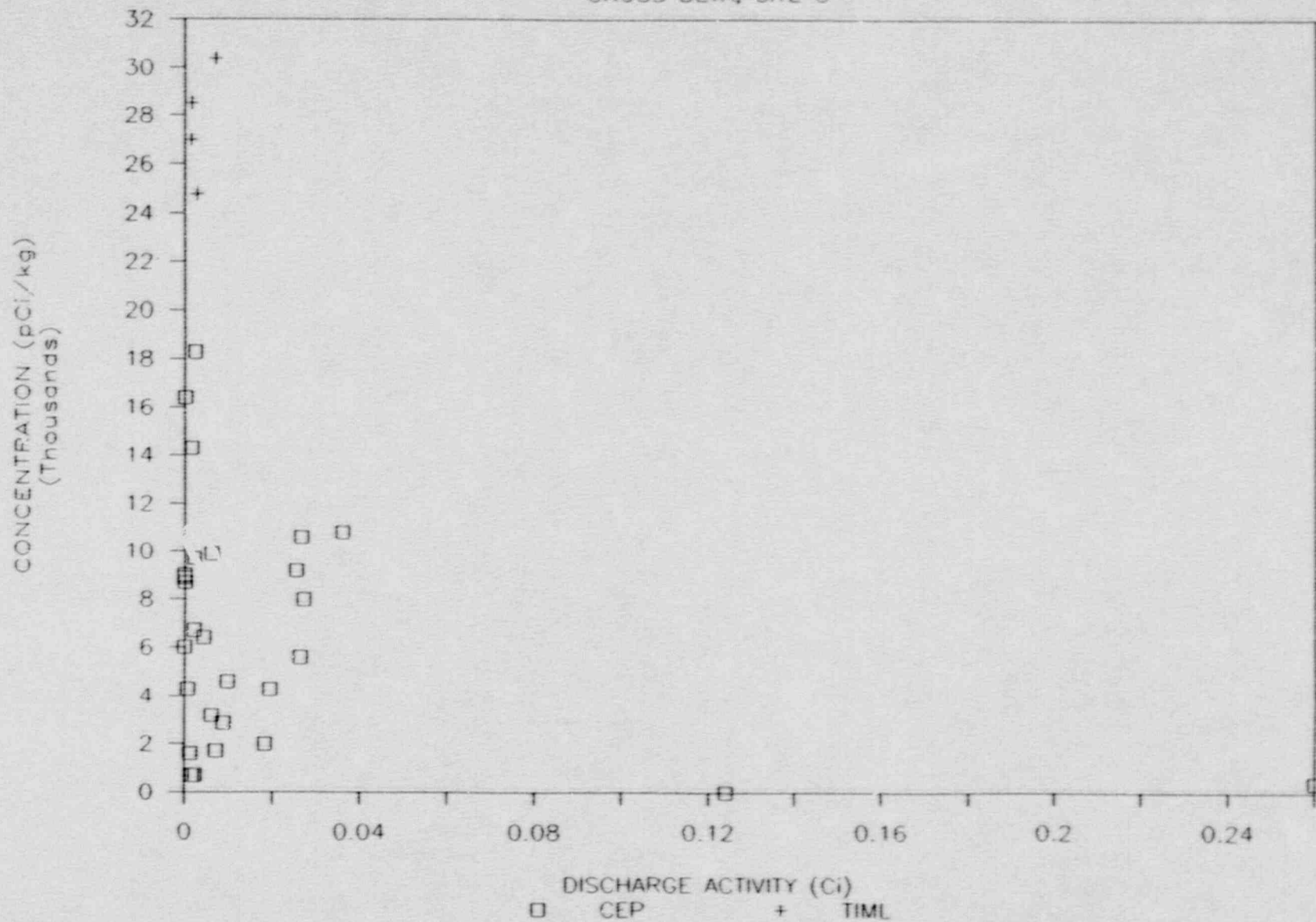
GROSS BETA, SITE A



-0126-

CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

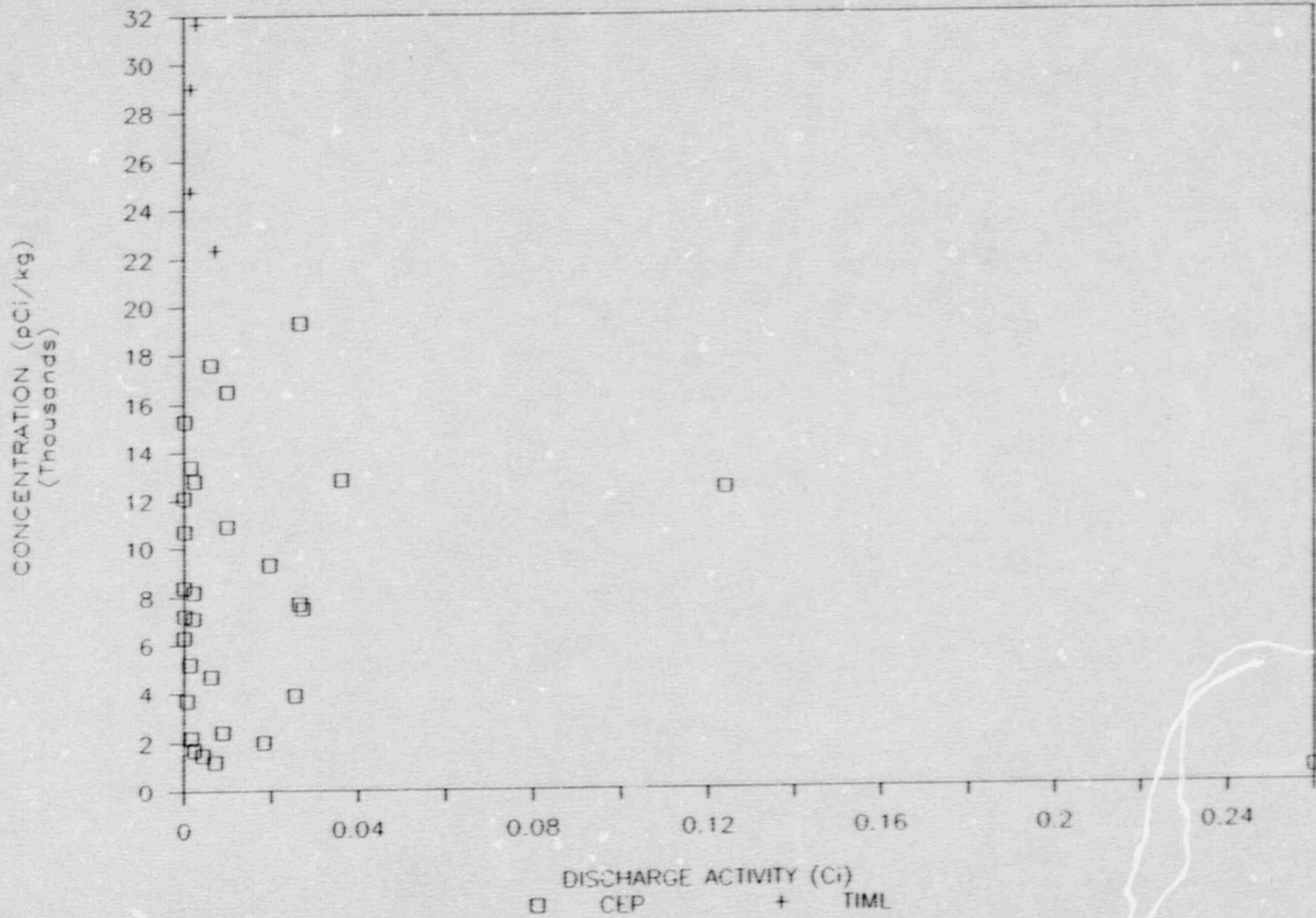
GROSS BETA, SITE C



-J127-

CAI LAWAY DISCHARGE VS WASHLOAD SEDIMENT

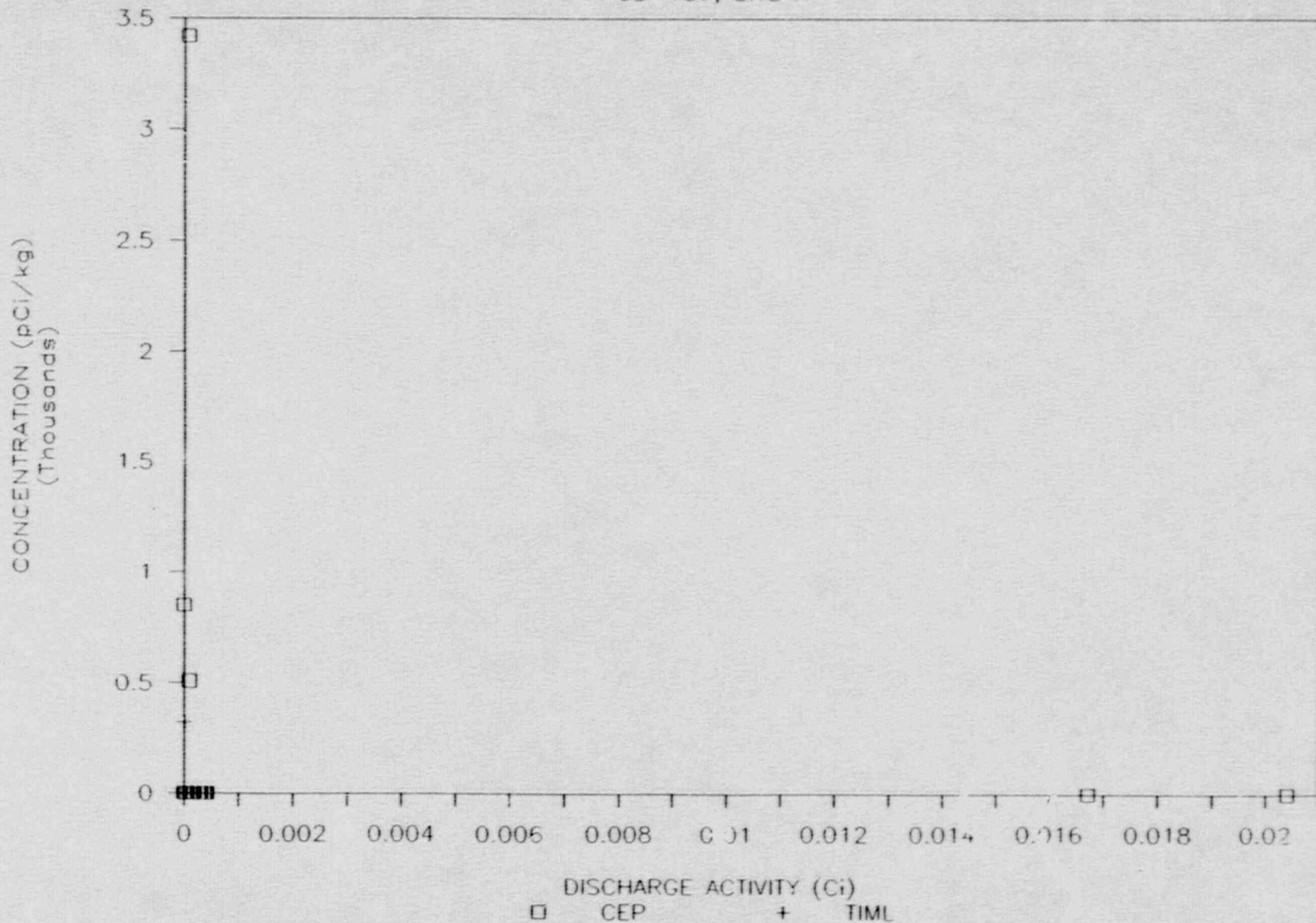
GROSS BETA, SITE D



-J129-

CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

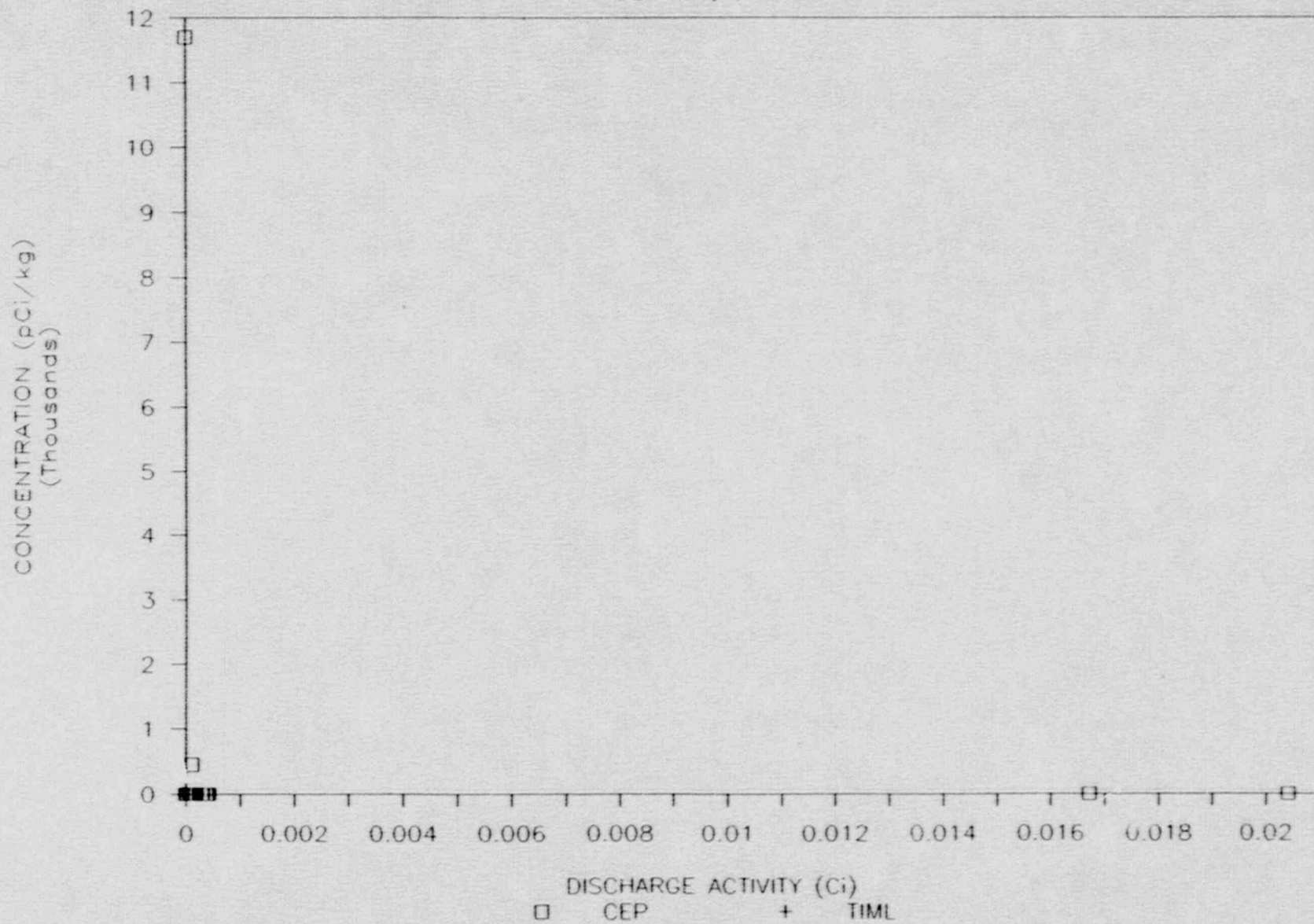
CS-137, SITE A



-J129-

CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

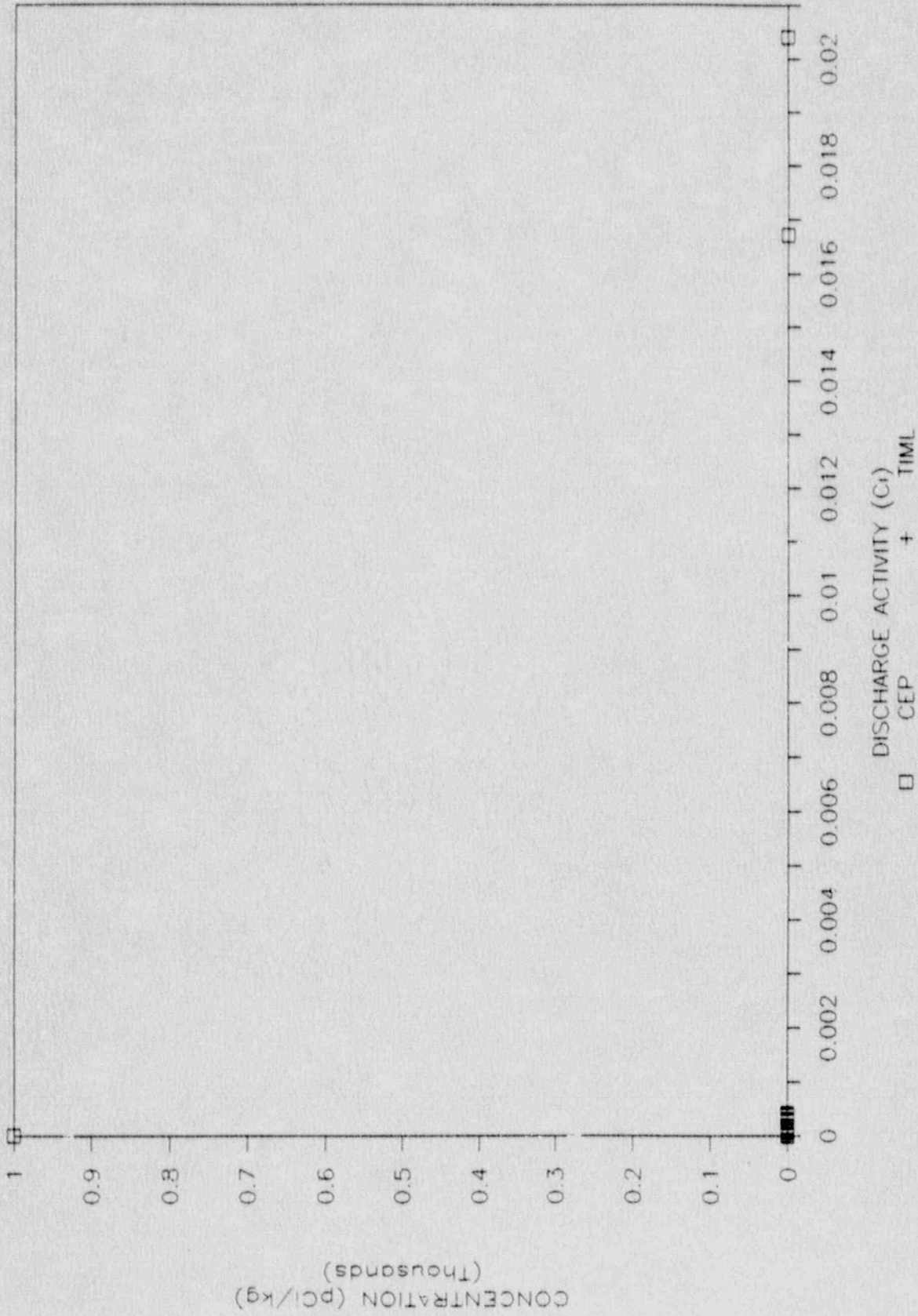
CS-137, SITE C



-J130-

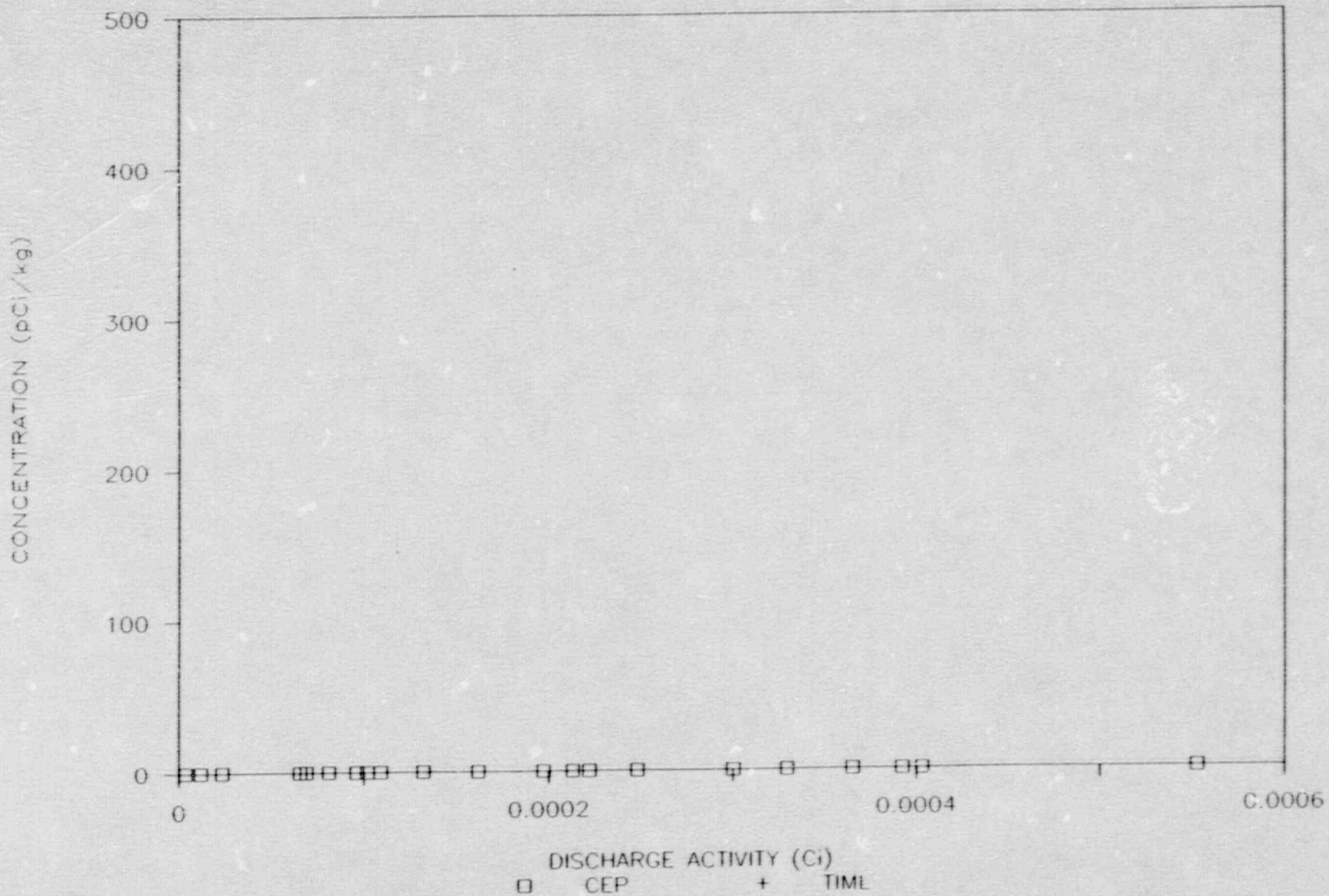
CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

CS-137, SITE D



CALLAWAY DISCHARGE VS WASHLOAD SEDIMENT

SR-90, SITE A



-J132-

