CHEMICALS

INDUSTRIES

~~R. L. Holliday~~ ~~W. L. Ogilesby~~ INTEROFFICE / LAKE CHARLES

Comments

~~Looks good to us~~

TO See Distribution

DATE May 25, 1983

FROM J. E. Wyche

SUBJECT Water Balance of Lake Charles Plant

In June of 1981, the BAT distributed a set of sketches depicting the quantity of incoming and outgoing water utilized by the Complex. In the process of updating our NPDES permit application this spring, an updated version of this "water balance" has been prepared and is attached for your information and use. If you are now aware or become aware in the course of future project work of better information than that shown, I would appreciate your bringing it to my attention.

R. L. Holliday, why don't you file this

/fk
Attachment

Distribution:

W. G. Wallace
R. J. Whitaker
J. G. Peck
D. V. Mumm
T. C. Jeffery
R. J. Samelson
File #317.1.01

SL 078088

PPG Industries, Inc.
Lake Charles, La.

WATER BALANCE SUMMARY

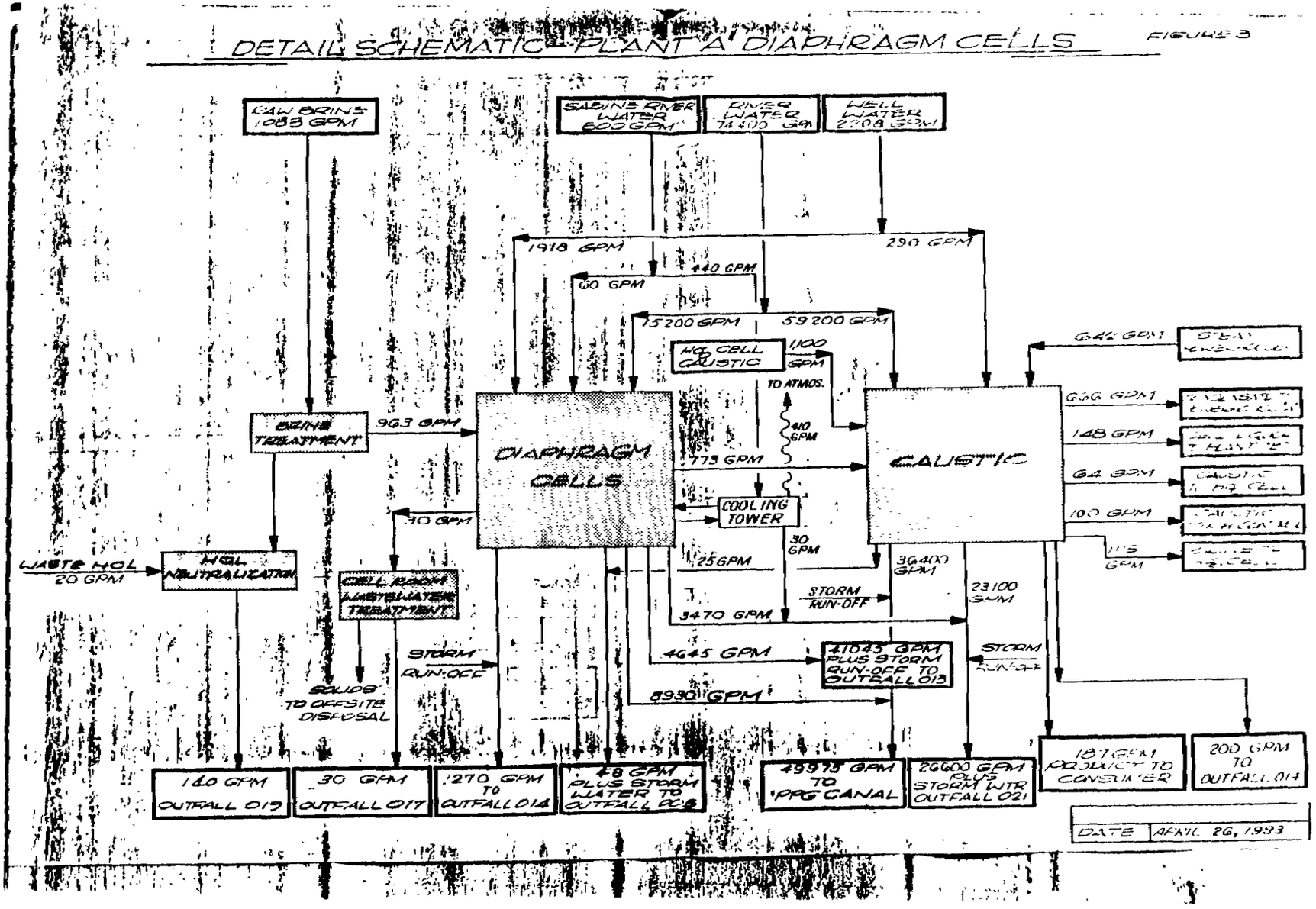
Incoming Water

Sources	Gallons Per Minute
Calcasieu River	201,655
Sabine River	6,907
Well Water	5,331
Raw Brine	3,267
Generated in process	87
Neighboring industries	600
Total	217,847

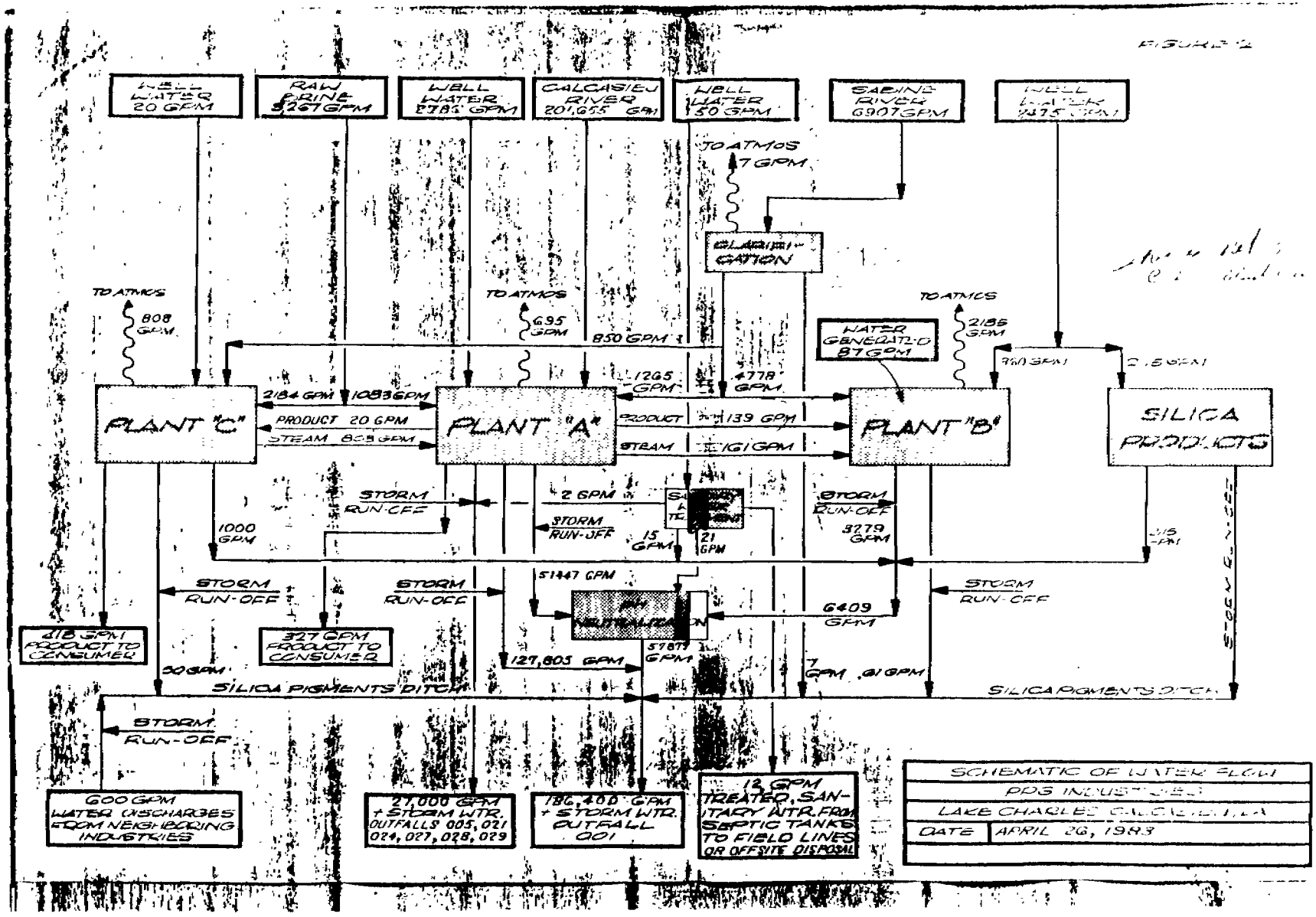
Effluent Water

Discharges	Gallons Per Minute
Bayou D'Inde	186,400
Bayou Verdine (Olin Ditch)	27,000
Atmosphere	3,695
Product	740
Field Lines (i.e., septic tank systems)	12
Total	217,847

SL 078089


DETAIL SCHEMATIC PLANT 'A' DIAPHRAGM CELLS
FIGURE 3
RAW BRINE 1083 GPM
SABINE RIVER WATER 600 GPM
RINSE WATER 7400 GPM
WELL WATER 2708 GPM
1918 GPM
290 GPM
440 GPM
60 GPM
75200 GPM
59200 GPM
HG CELL CAUSTIC
1100 GPM
TO ATMOS.
410 GPM
775 GPM
BRINE TREATMENT
963 GPM
DIAPHRAGM CELLS
CAUSTIC
COOLING TOWER
30 GPM
25 GPM
36400 GPM
23100 GPM
STORM RUN-OFF
3470 GPM
WASTE HCL 20 GPM
HCL NEUTRALIZATION
CELL ROOM WASTEWATER TREATMENT
SOLIDS TO OFFSITE DISPOSAL
STORM RUN-OFF
4645 GPM
41043 GPM PLUS STORM RUN-OFF TO OUTFALL 013
8930 GPM
140 GPM OUTFALL 013
30 GPM OUTFALL 017
1270 GPM TO OUTFALL 014
48 GPM PLUS STORM WATER TO OUTFALL 015
49973 GPM TO PPG CANAL
26600 GPM ONLY STORM WTR OUTFALL 021
187 GPM PRODUCT TO CONSUMER
200 GPM TO OUTFALL 014
DATE APRIL 26, 1993

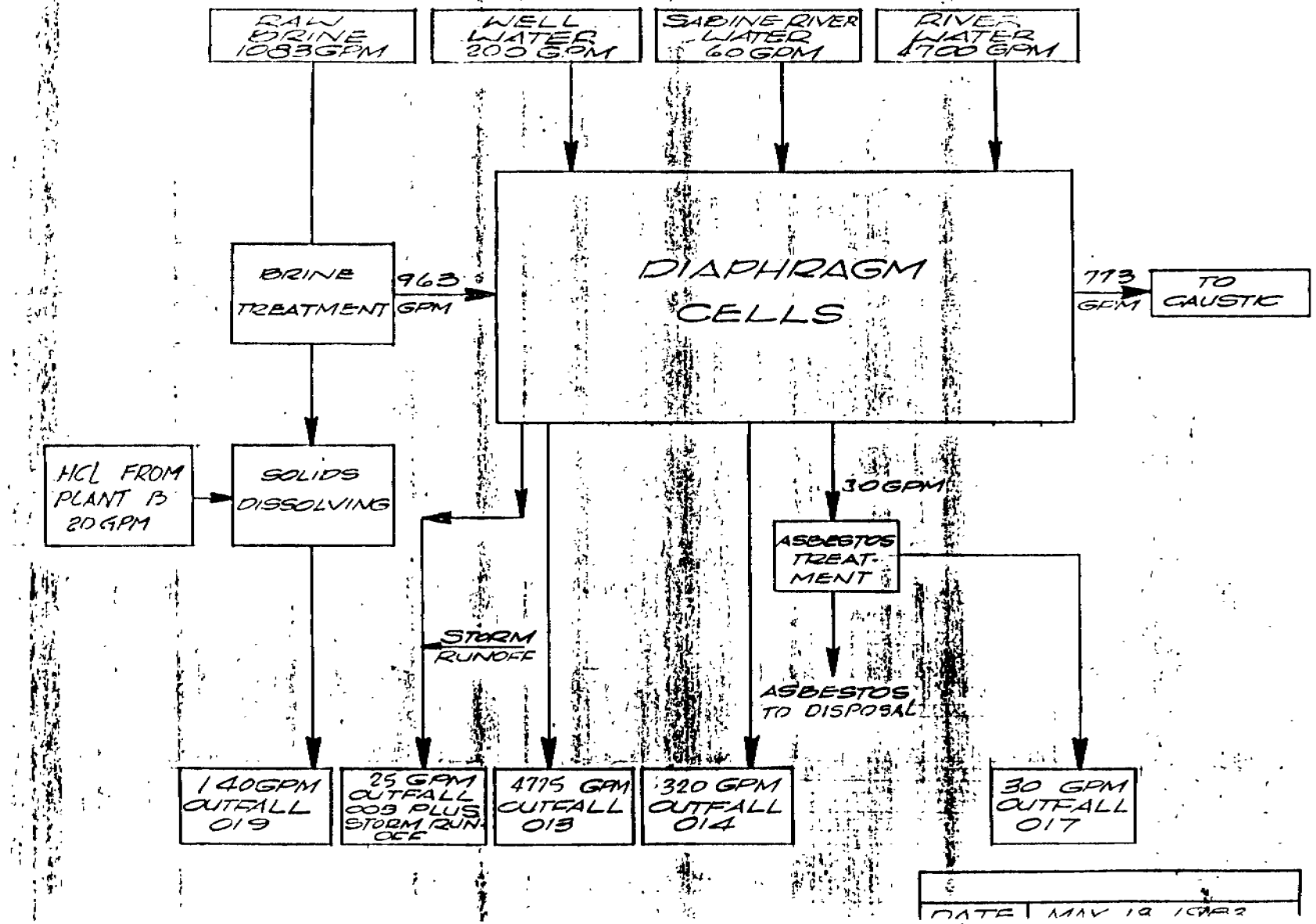
SL 078090


WELL WATER 20 GPM
RAW CANAL WATER 3267 GPM
WELL WATER 8783 GPM
CALCASIEU RIVER 201,655 GPM
WELL WATER 50 GPM
SABINE RIVER 6907 GPM
WELL WATER 2475 GPM
TO ATMOS 7 GPM
CHLORINATION
TO ATMOS 808 GPM
TO ATMOS 695 GPM
850 GPM
TO ATMOS 2186 GPM
WATER GENERATED 87 GPM
PLANT "C"
PLANT "A"
PLANT "B"
SILICA PRODUCTS
2184 GPM
10836 GPM
PRODUCT 20 GPM
STEAM 809 GPM
PRODUCT 139 GPM
STEAM 1161 GPM
STORM RUN-OFF
2 GPM
1000 GPM
15 GPM
21 GPM
3279 GPM
51447 GPM
6409 GPM
418 GPM PRODUCT TO CONSUMER
327 GPM PRODUCT TO CONSUMER
30 GPM
127,805 GPM
57877 GPM
7 GPM
41 GPM
SILICA PIGMENTS DITCH
600 GPM WATER DISCHARGES FROM NEIGHBORING INDUSTRIES
27,000 GPM + STORM WTR. OUTFALLS 005, 021 024, 027, 028, 029
186,400 GPM + STORM WTR. OUTFALL 001
12 GPM TREATED, SANITARY WTR. FROM SEPTIC TANKS TO FIELD LINES OR OFFSITE DISPOSAL
SCHEMATIC OF WATER FLOW
PPG INDUSTRIES
LAKE CHARLES, LOUISIANA
DATE APRIL 26, 1983

SL 078091

DETAIL SCHEMATIC - PLANT "A" DIAPHRAGM CELLS

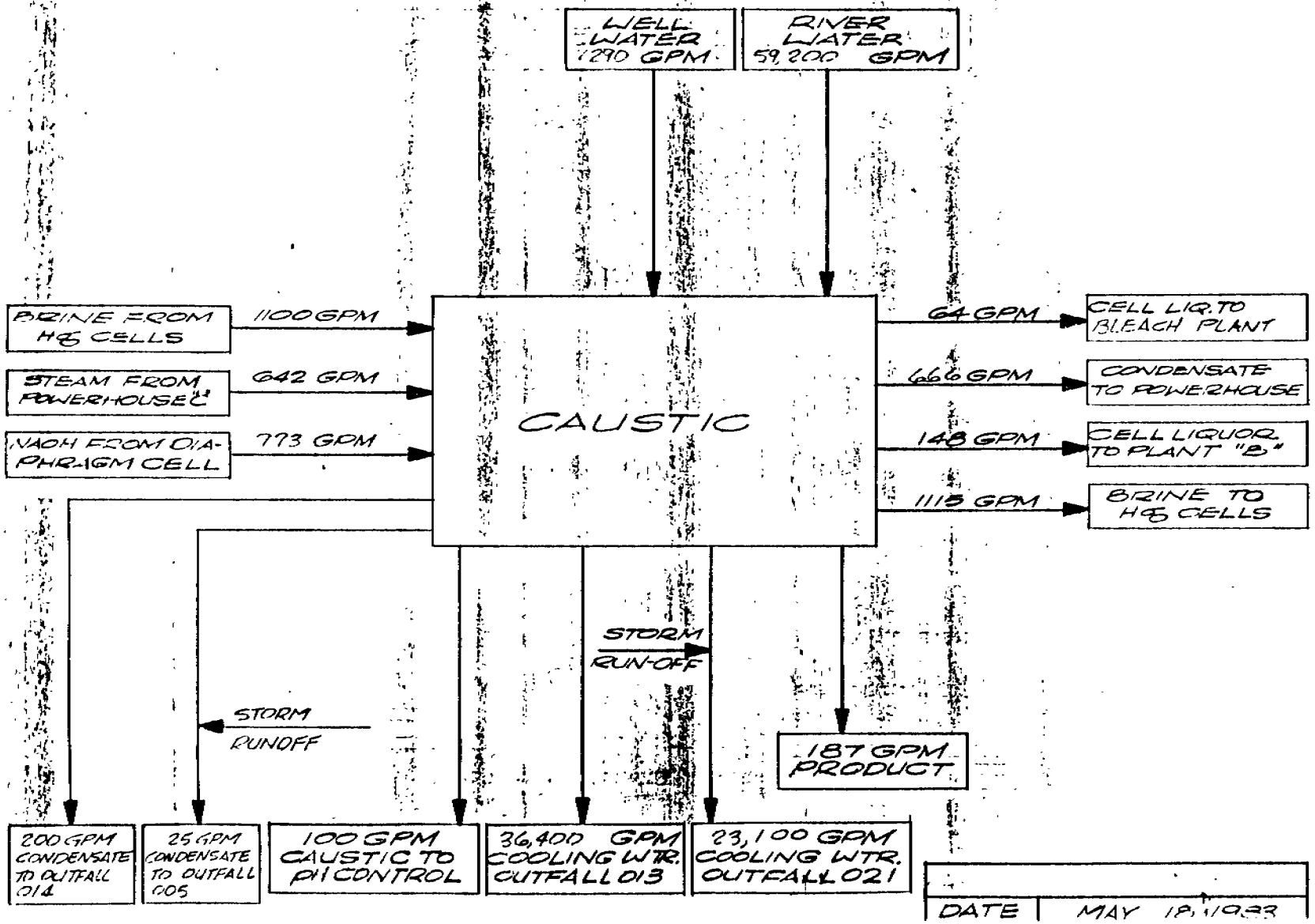
(SHEET 2 OF 4)



SL 078092

DETAIL SCHEMATIC – PLANT "A" DIAPHRAGM CELLS

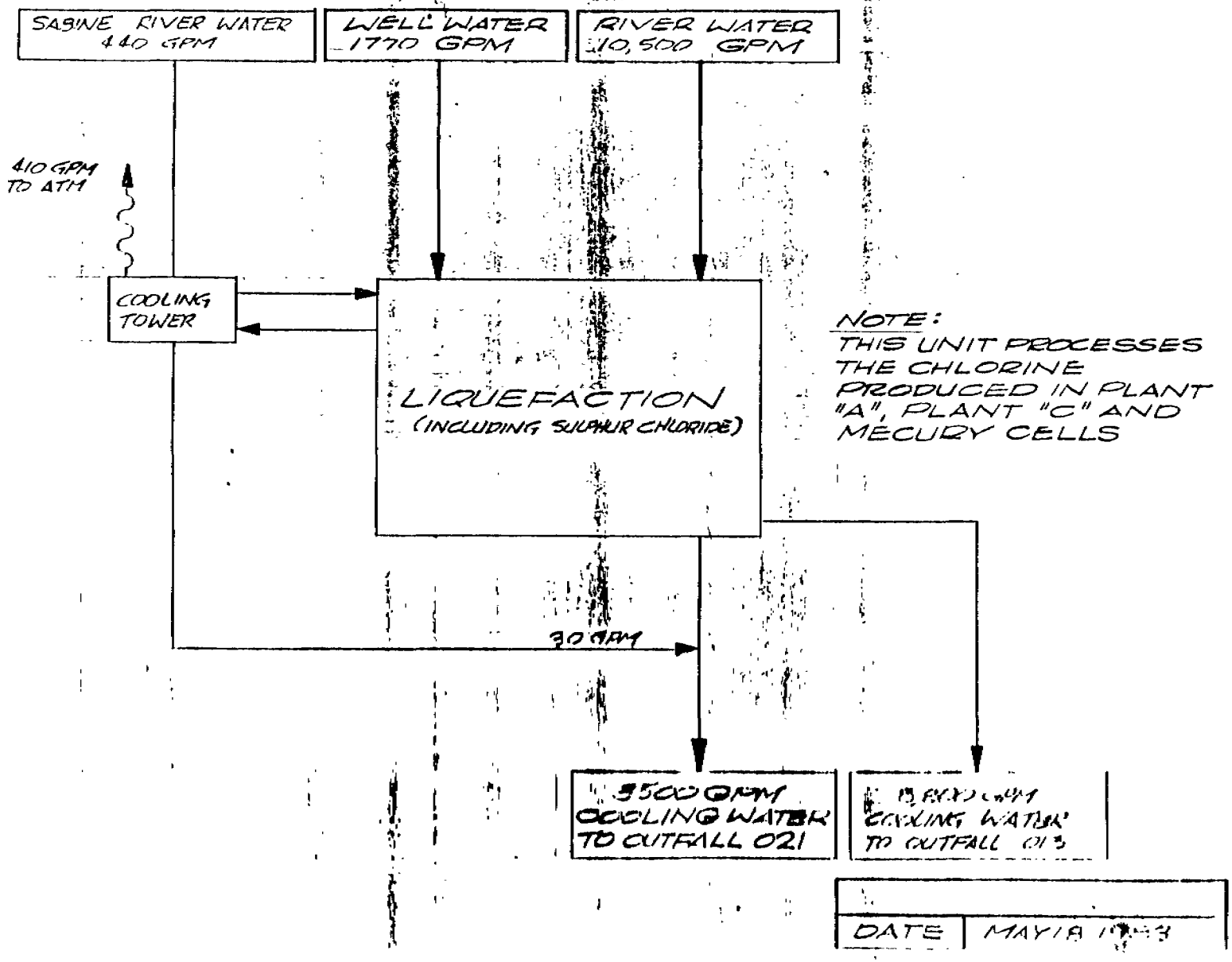
(SHEET 3 OF 4)



SL 078093

DETAIL SCHEMATIC-CHLORINE LIQUEFACTION UNIT

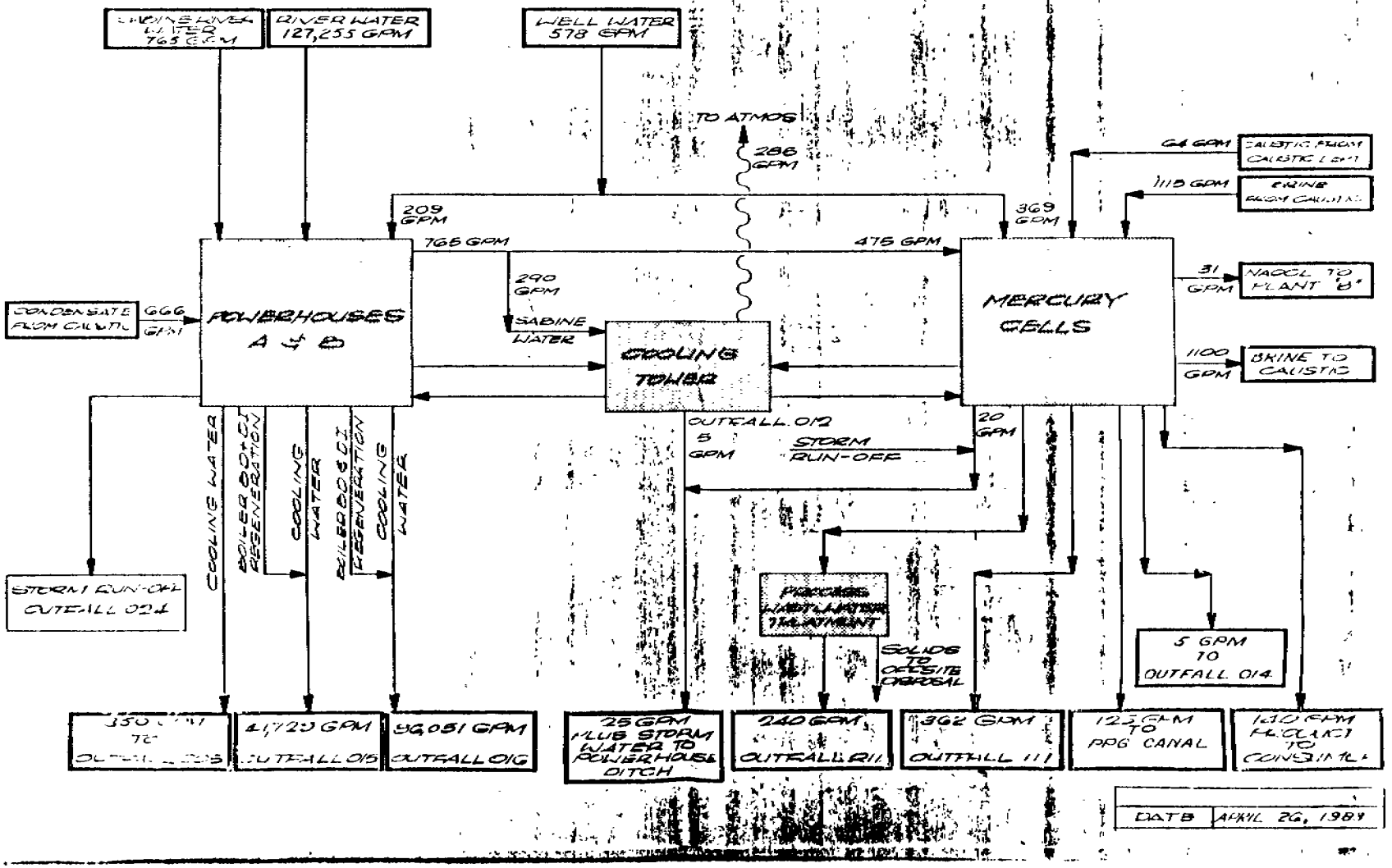
(SHEET 4 OF 4)



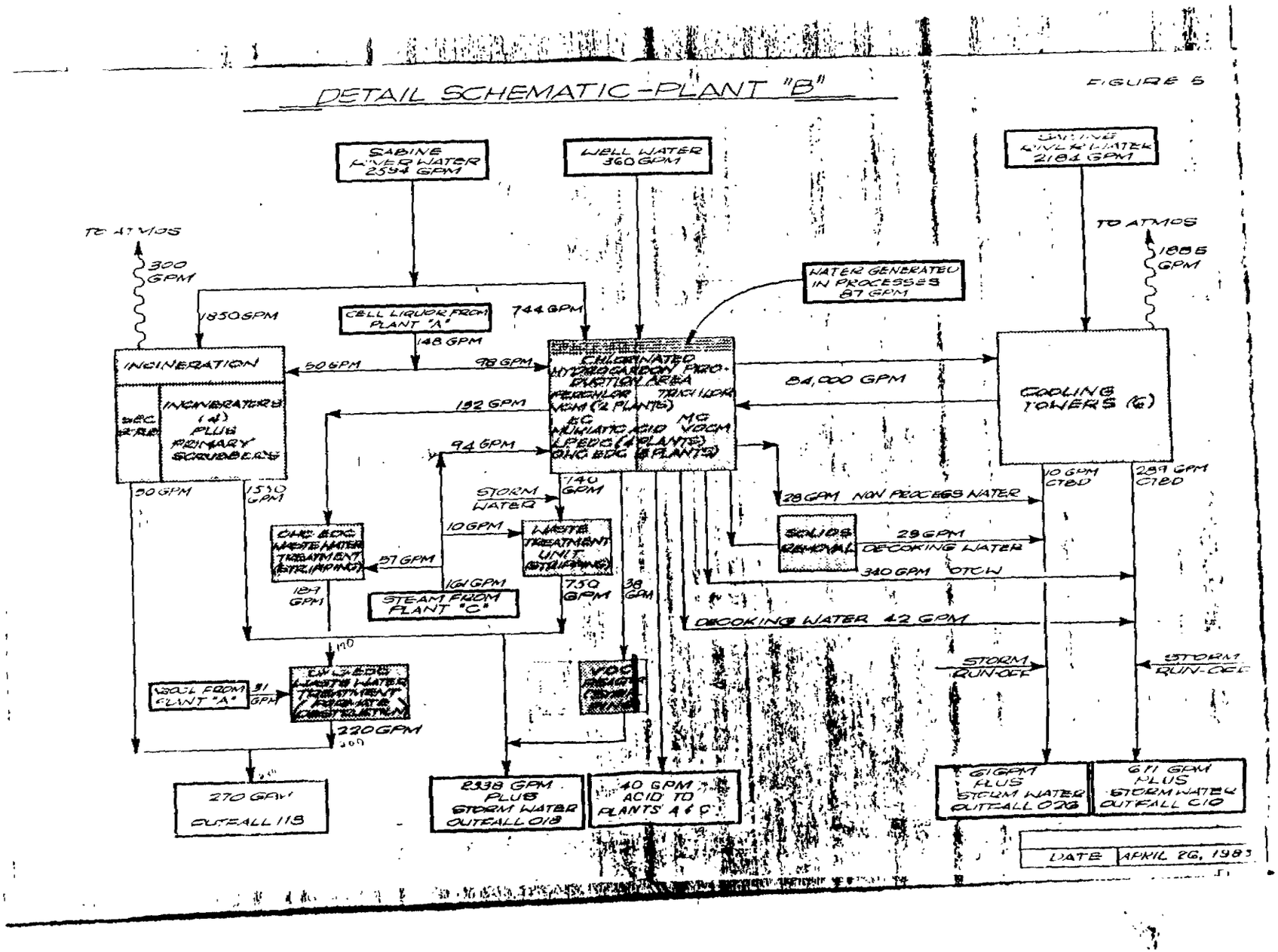
SL 078094

DETAIL SCHEMATIC - PLANT "A" POWERHOUSES/MERCURY CELLS

EXHIBIT A

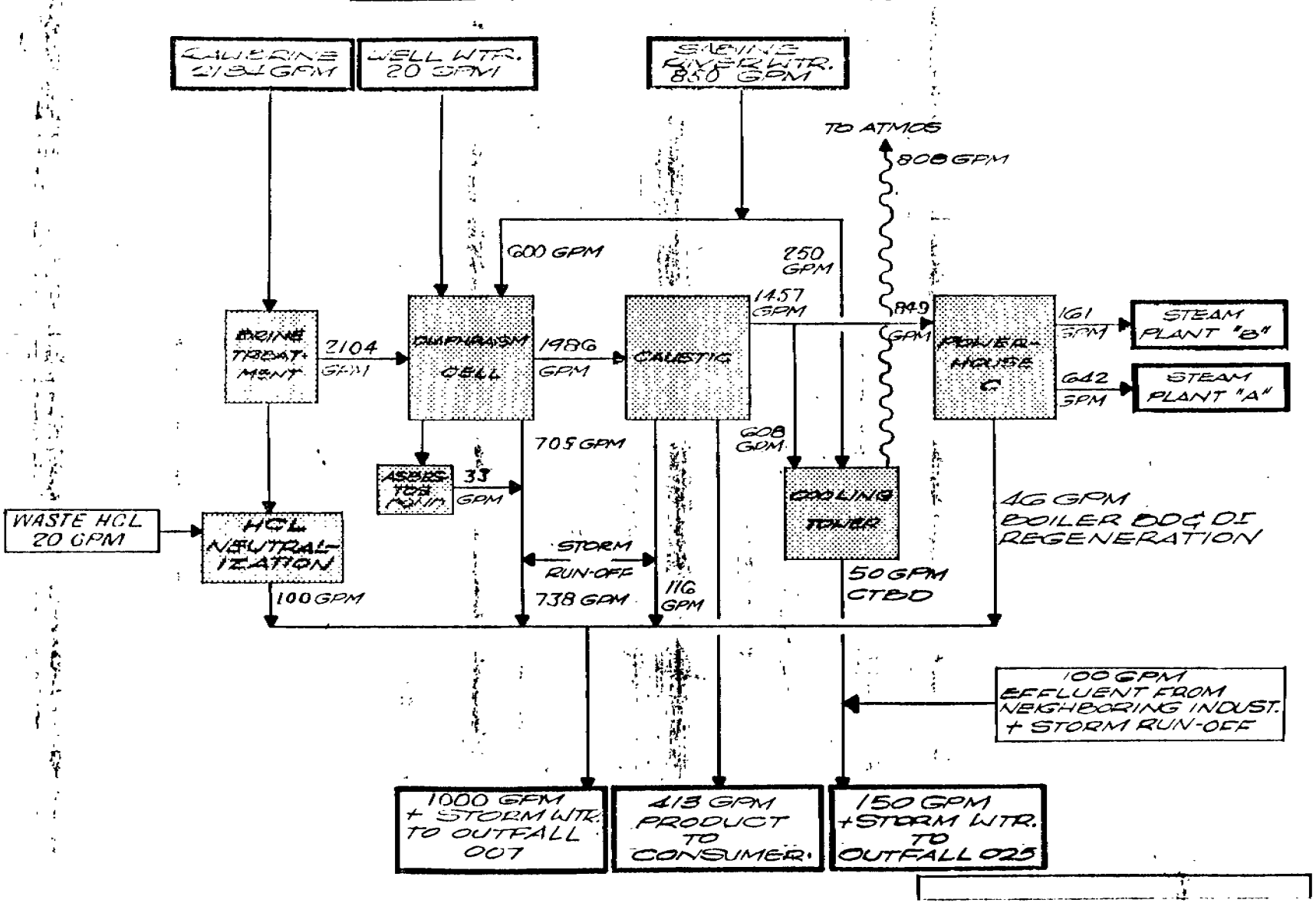


SL 078095


DETAIL SCHEMATIC-PLANT "B"
FIGURE 5
SABINE RIVER WATER 2594 GPM
WELL WATER 360 GPM
SABINE RIVER WATER 2184 GPM
TO ATMOS
300 GPM
1850 GPM
CELL LIQUOR FROM PLANT "A"
744 GPM
148 GPM
WATER GENERATED IN PROCESSES 87 GPM
TO ATMOS
1885 GPM
INCINERATION
50 GPM
98 GPM
CHLORINATED HYDROCARBON PRODUCTION AREA
84,000 GPM
COOLING TOWERS (6)
182 GPM
INCINERATORS (4) PLUS PRIMARY SCRUBBERS
94 GPM
50 GPM
1530 GPM
STORM WATER
140 GPM
10 GPM CTBD
289 GPM CTBD
28 GPM NON PROCESS WATER
10 GPM
WASTE TREATMENT UNIT
SOLIDS REMOVAL
29 GPM DECOKING WATER
340 GPM DTCW
97 GPM
184 GPM
161 GPM
STEAM FROM PLANT "C"
750 GPM
38 GPM
DECOKING WATER 42 GPM
STORM RUN-OFF
STORM RUN-OFF
VOCL FROM PLANT "A"
31 GPM
220 GPM
270 GPM OUTFALL 113
2338 GPM PLUS STORM WATER OUTFALL 013
40 GPM ACID TO PLANTS A & C
61 GPM PLUS STORM WATER OUTFALL 012
611 GPM PLUS STORM WATER OUTFALL 010
DATE APRIL 26, 1983

DETAIL SCHEMATIC - PLANT "C" DIAPHRAGM CELL AND POWERHOUSE

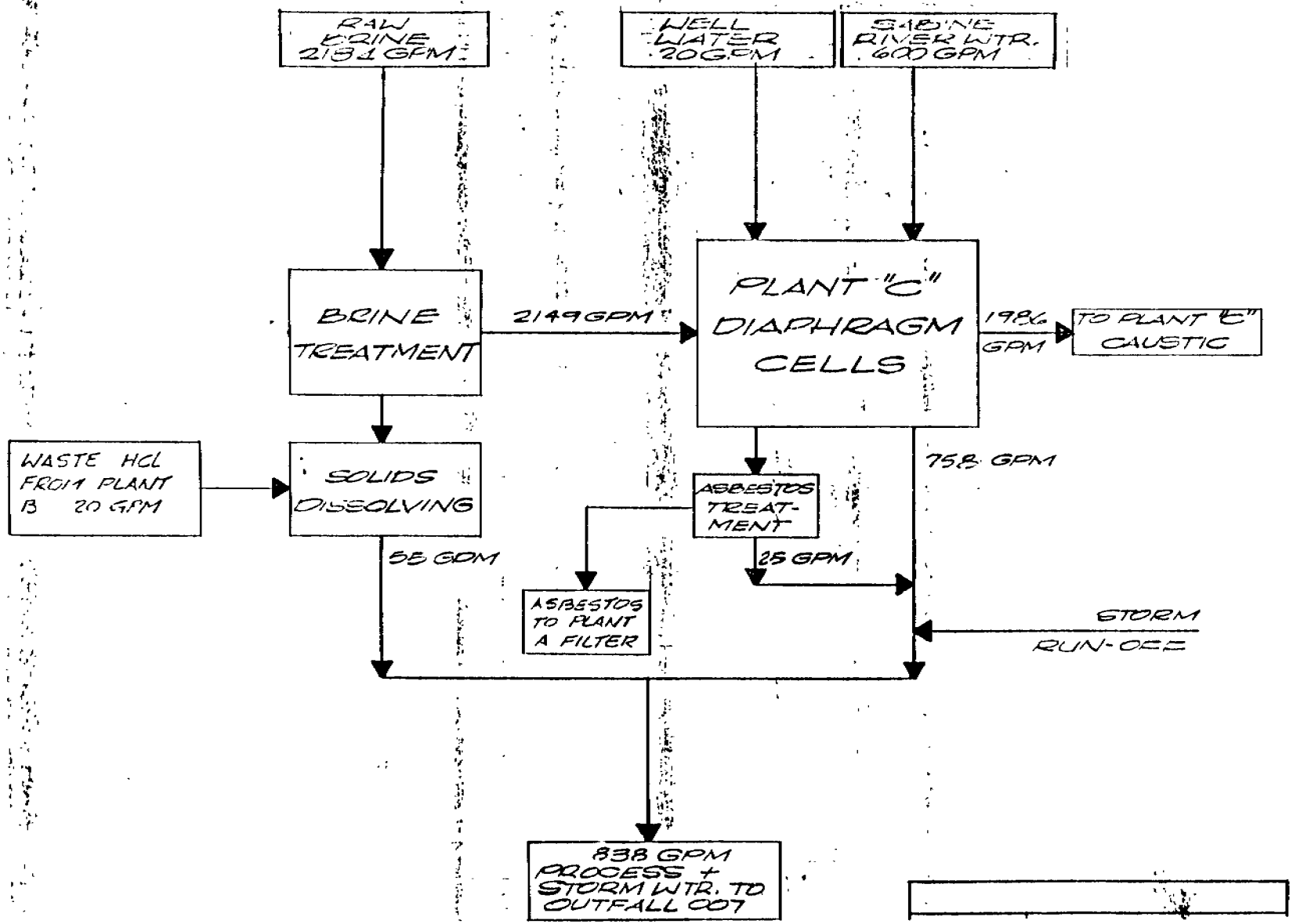
FIGURE G



SL 078097

DETAIL SCHEMATIC-PLANT "C"

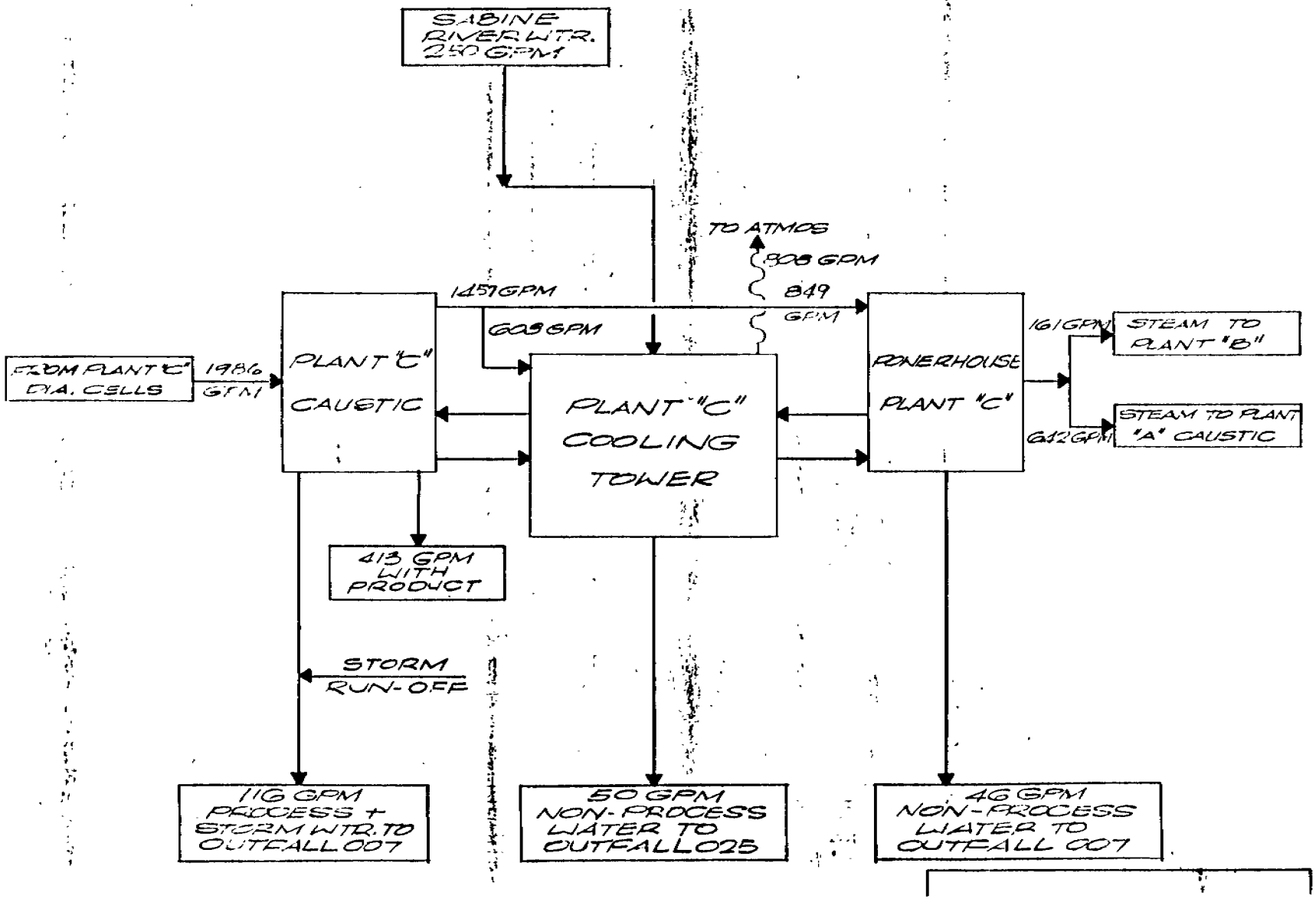
(SHEET 2 OF 3)



SL 078098

DETAIL SCHEMATIC - PLANT "C"

(SHEET 3 OF 3)



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DETAIL SCHEMATIC-SILICA PRODUCTS

FIGURE 7

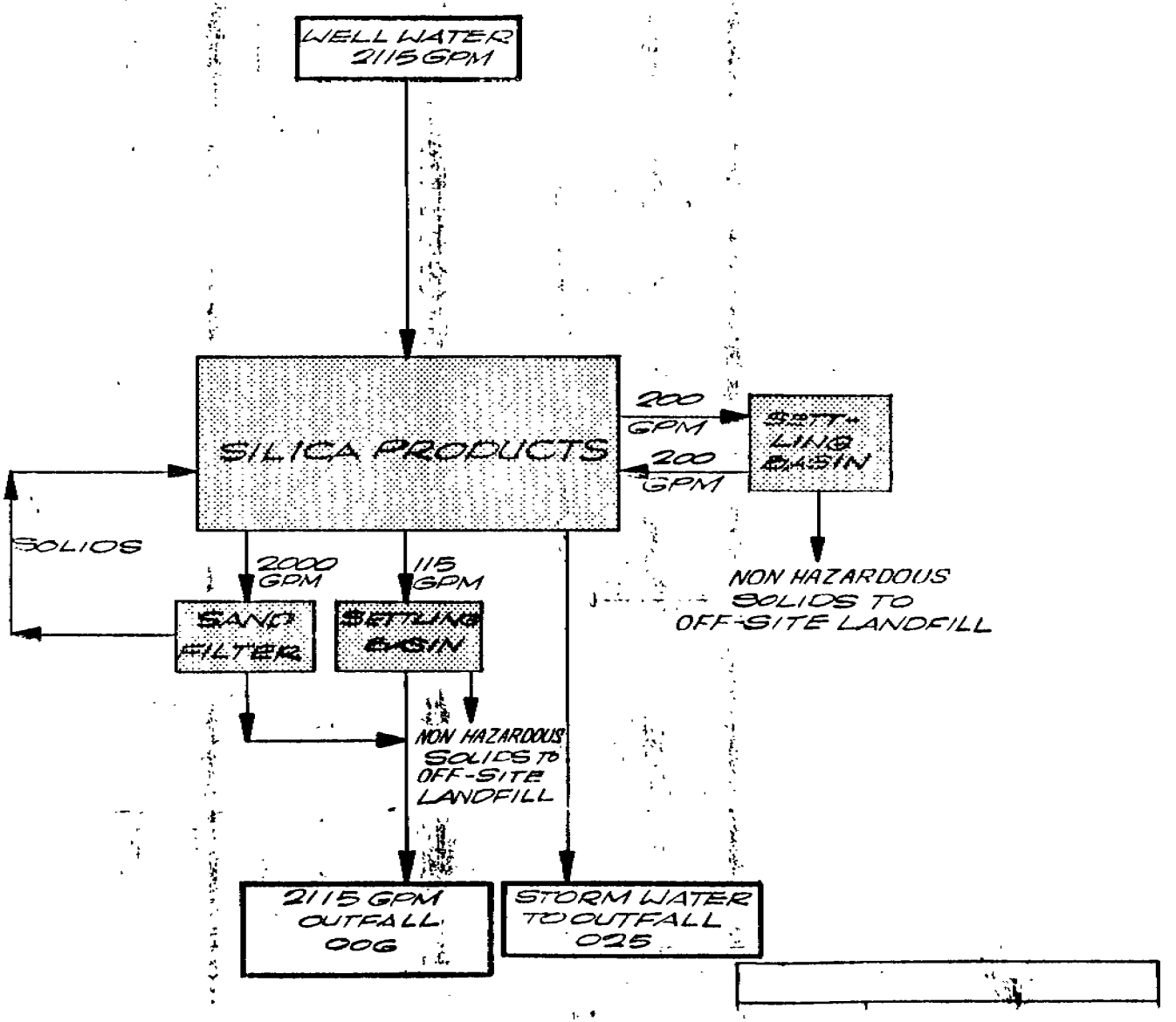

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FIGURE 9
COMBINED WASTEWATER NEUTRALIZATION SYSTEM
OUTFALL 001

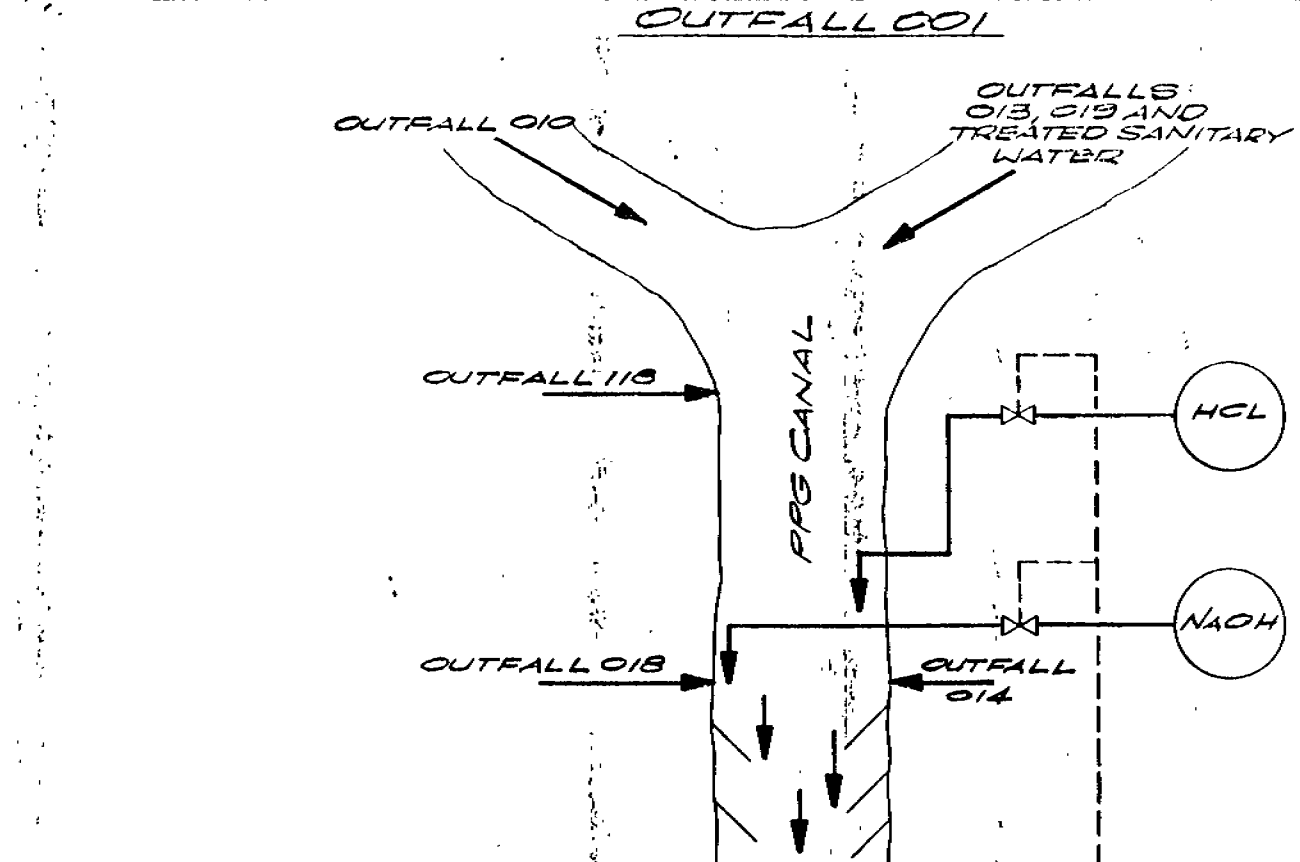
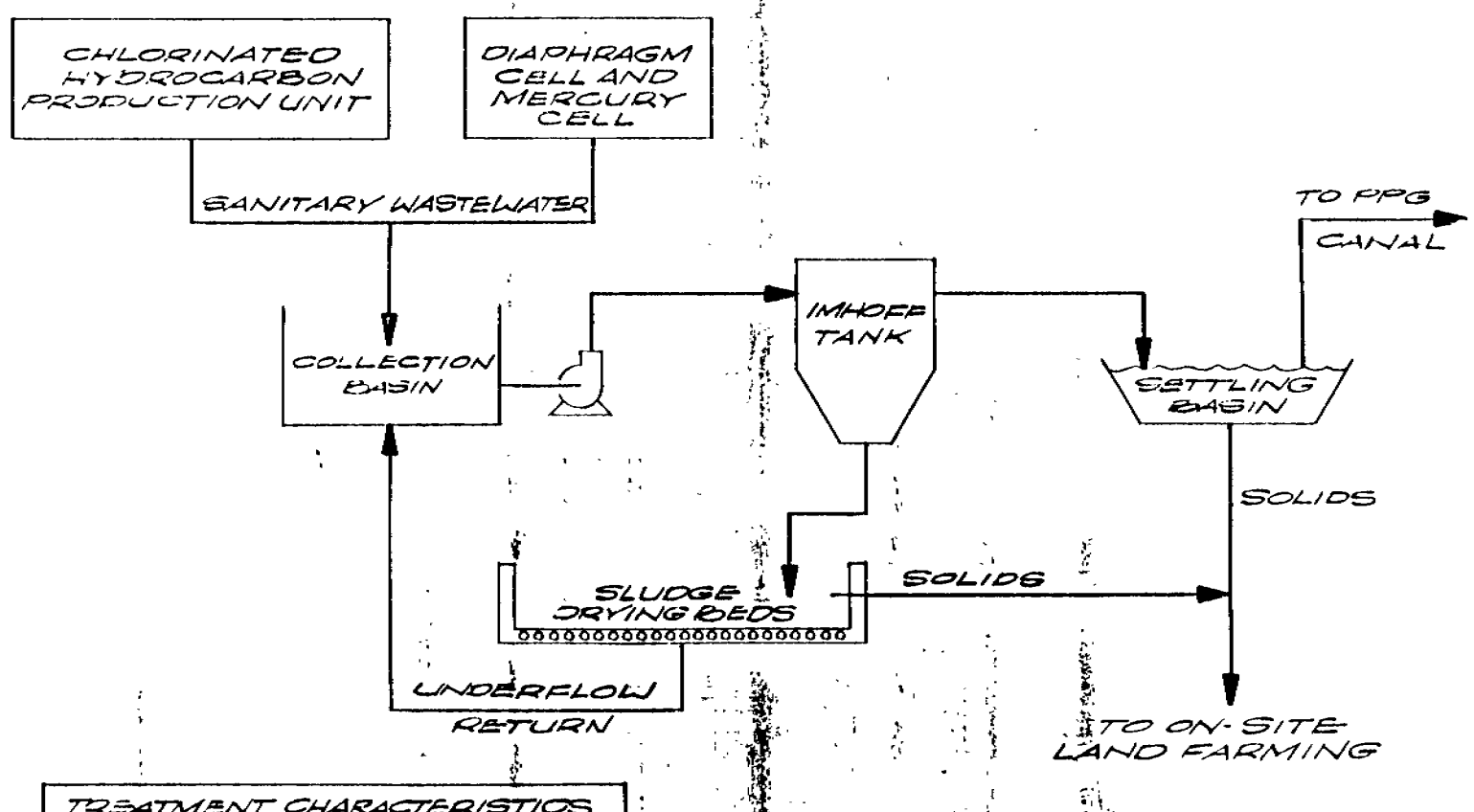


FIGURE 10
IMHOFF SANITARY WASTEWATER TREATMENT



TREATMENT CHARACTERISTICS

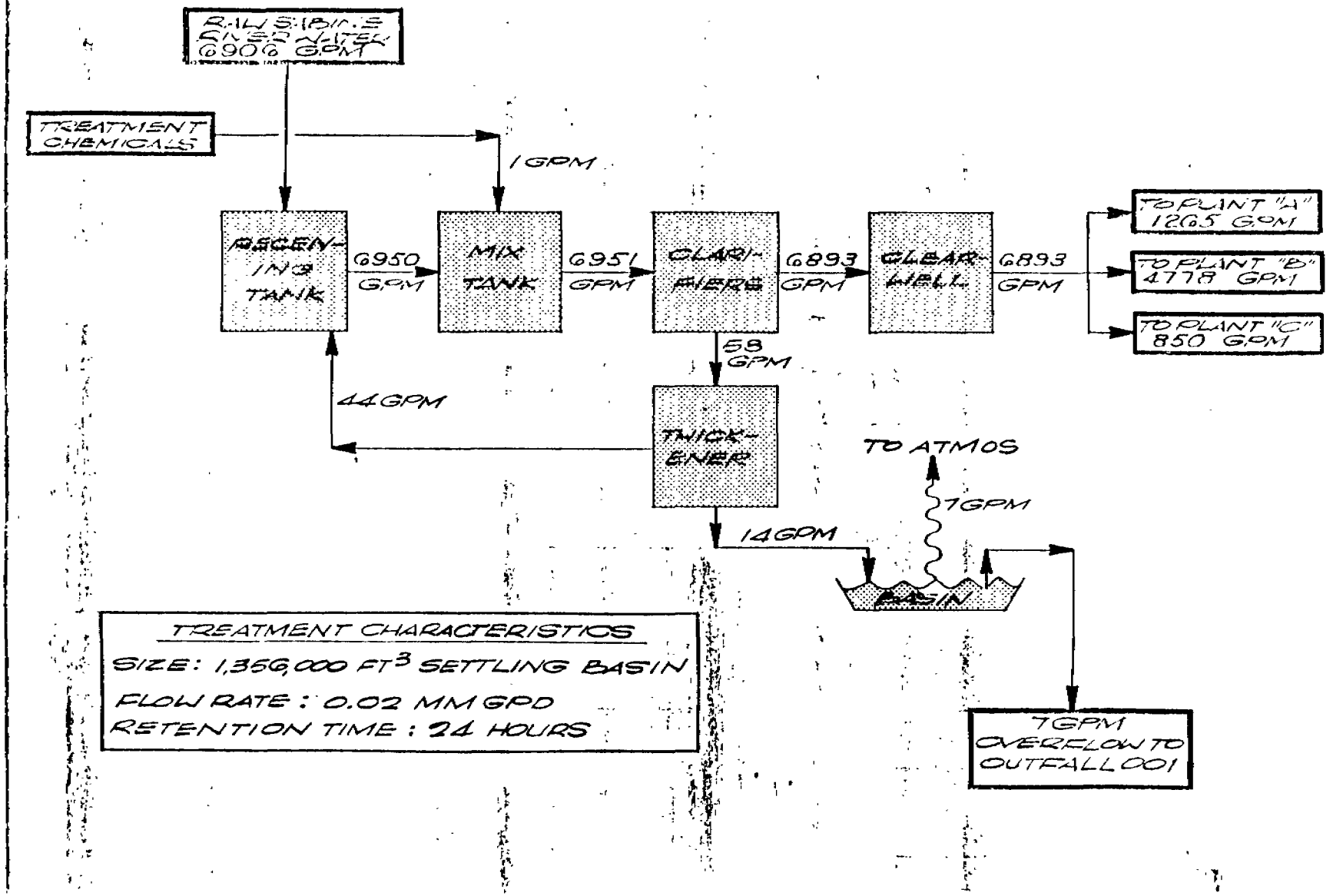
SIZE : 1100 POPULATION

FLOWRATE: 0.03 MMGPD

RETENTION TIME : 24 HOURS

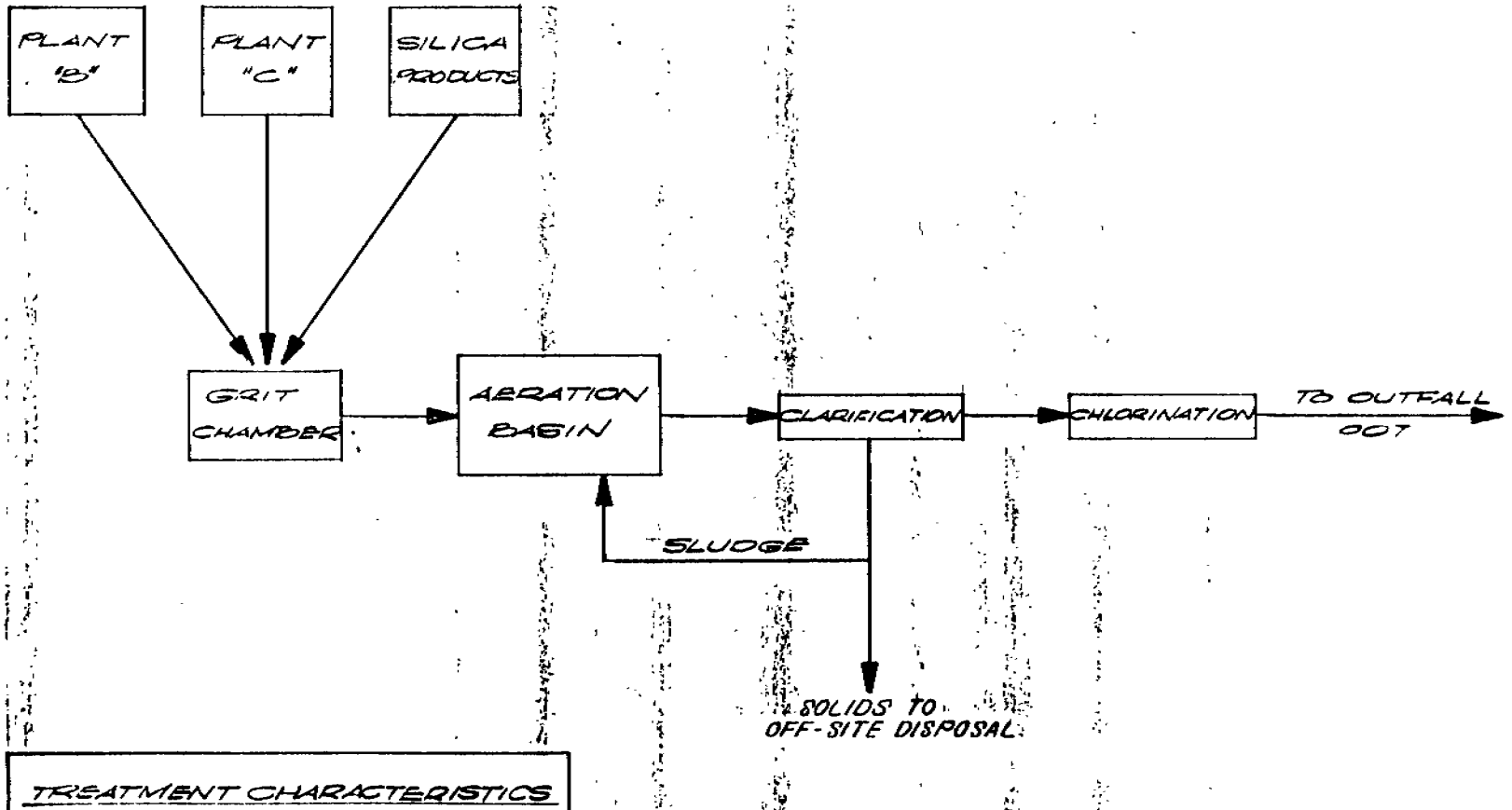
SL 078102

FIGURE 1.1
SABINE RIVER WATER CLARIFICATION SYSTEM



SL 078103

FIGURE 12
AEROBIC SANITARY TREATMENT SYSTEM

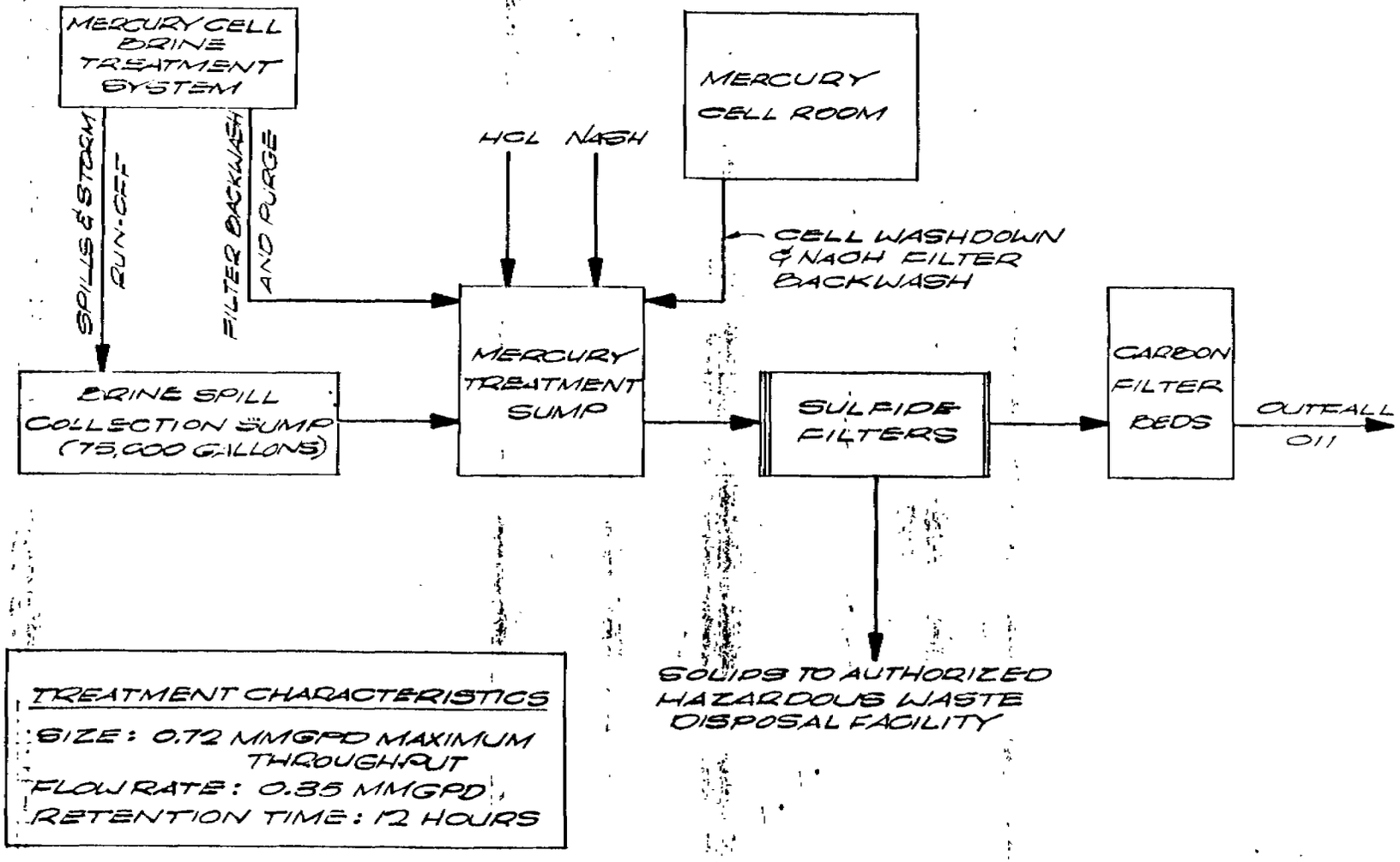


TREATMENT CHARACTERISTICS

SIZE: 800 POPULATION
FLOWRATE: 0.02 MMGPD
RETENTION TIME: 24 HOURS

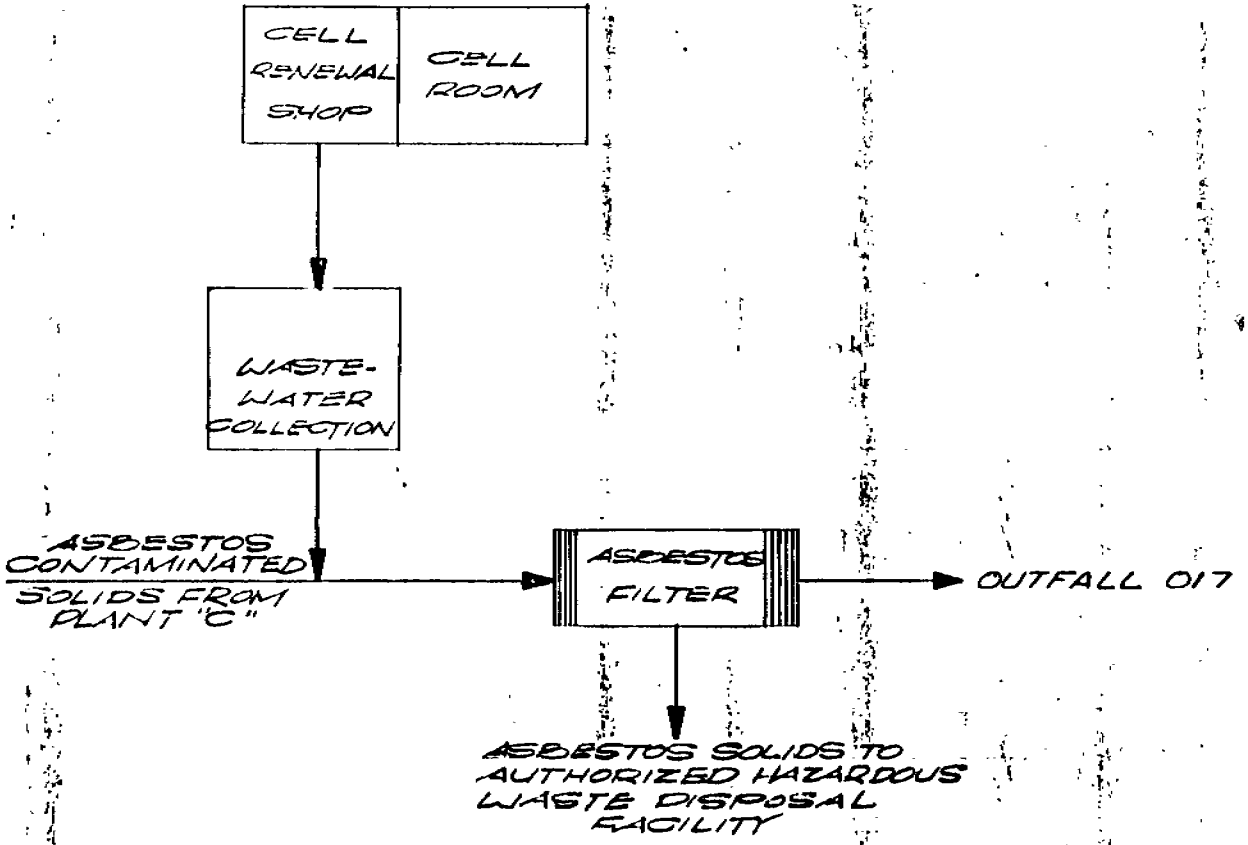
SL 078104

FIGURE 13
MERCURY TREATMENT SYSTEM
PLANT "A"



SL 078105

FIGURE 14
ASBESTOS TREATMENT SYSTEM
PLANT "A"

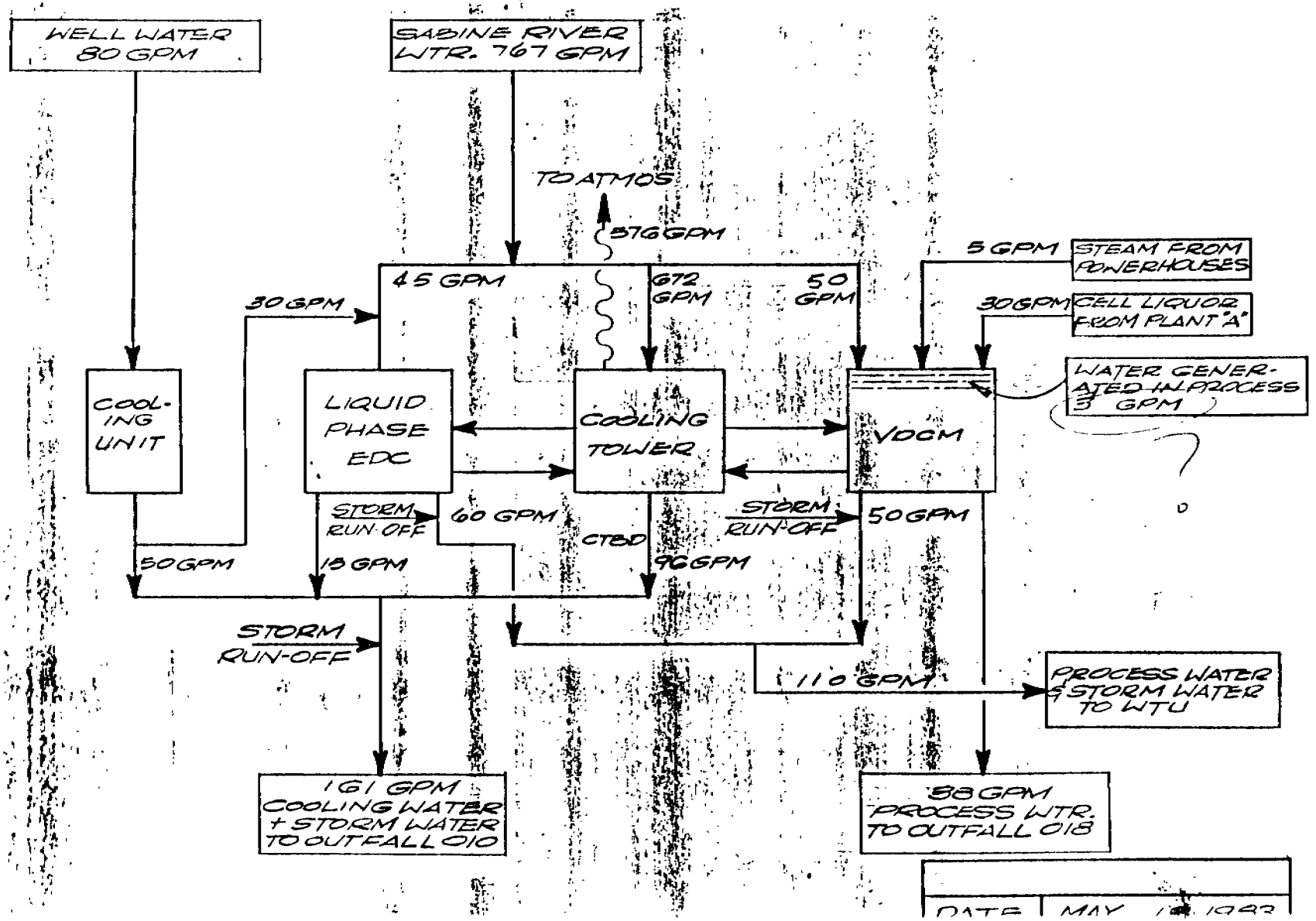


TREATMENT CHARACTERISTICS

SIZE: 0.07 MMGPD (MAXIMUM THROUGHPUT)
FLOWRATE: 0.04 MMGPD
RETENTION TIME: 3 HOURS

SL 078106

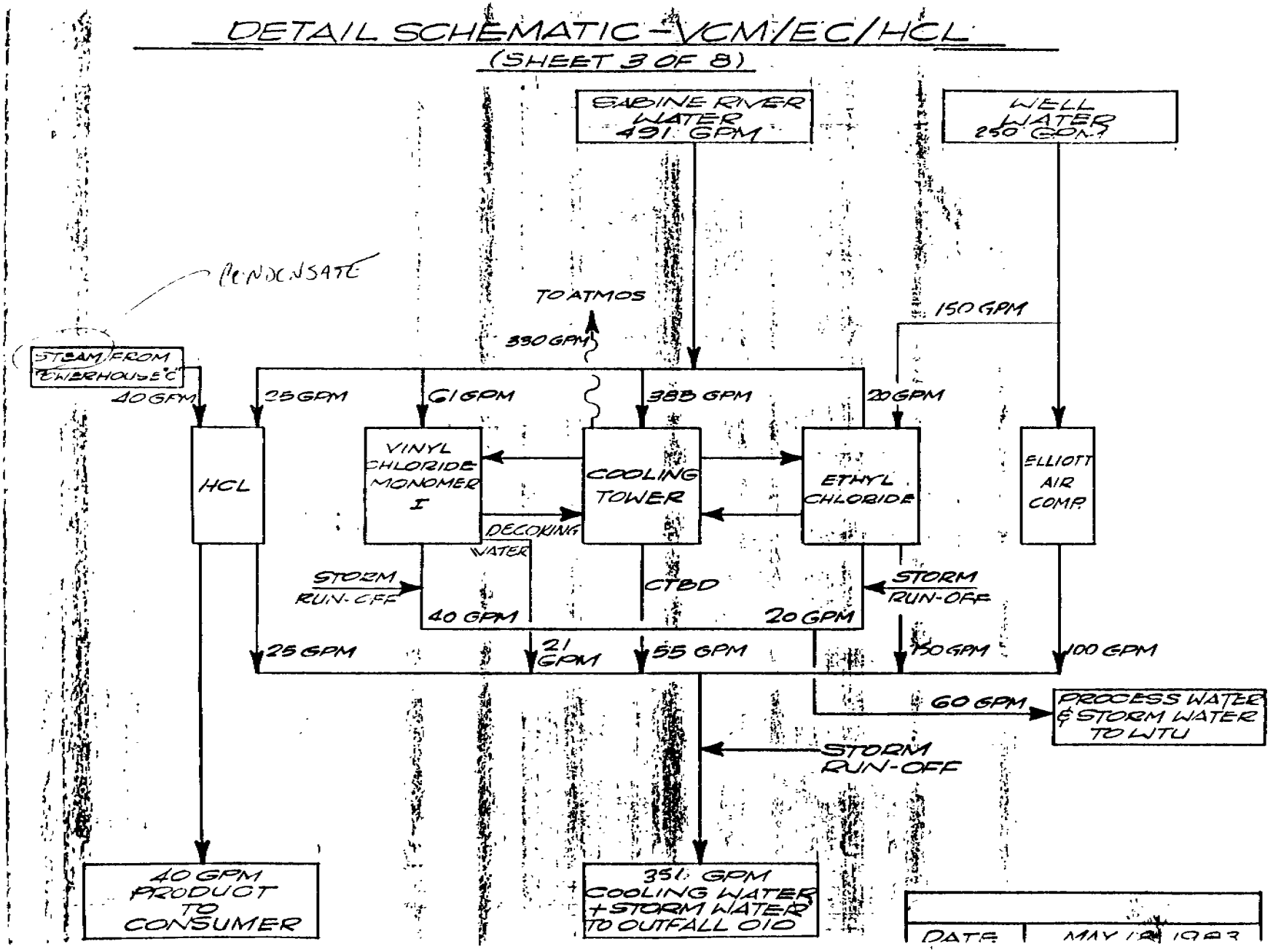
DETAIL SCHEMATIC-L.P. EDC/VDCM
(SHEET 2 OF 8)



SL 078107

DETAIL SCHEMATIC - VCM/EC/HCL

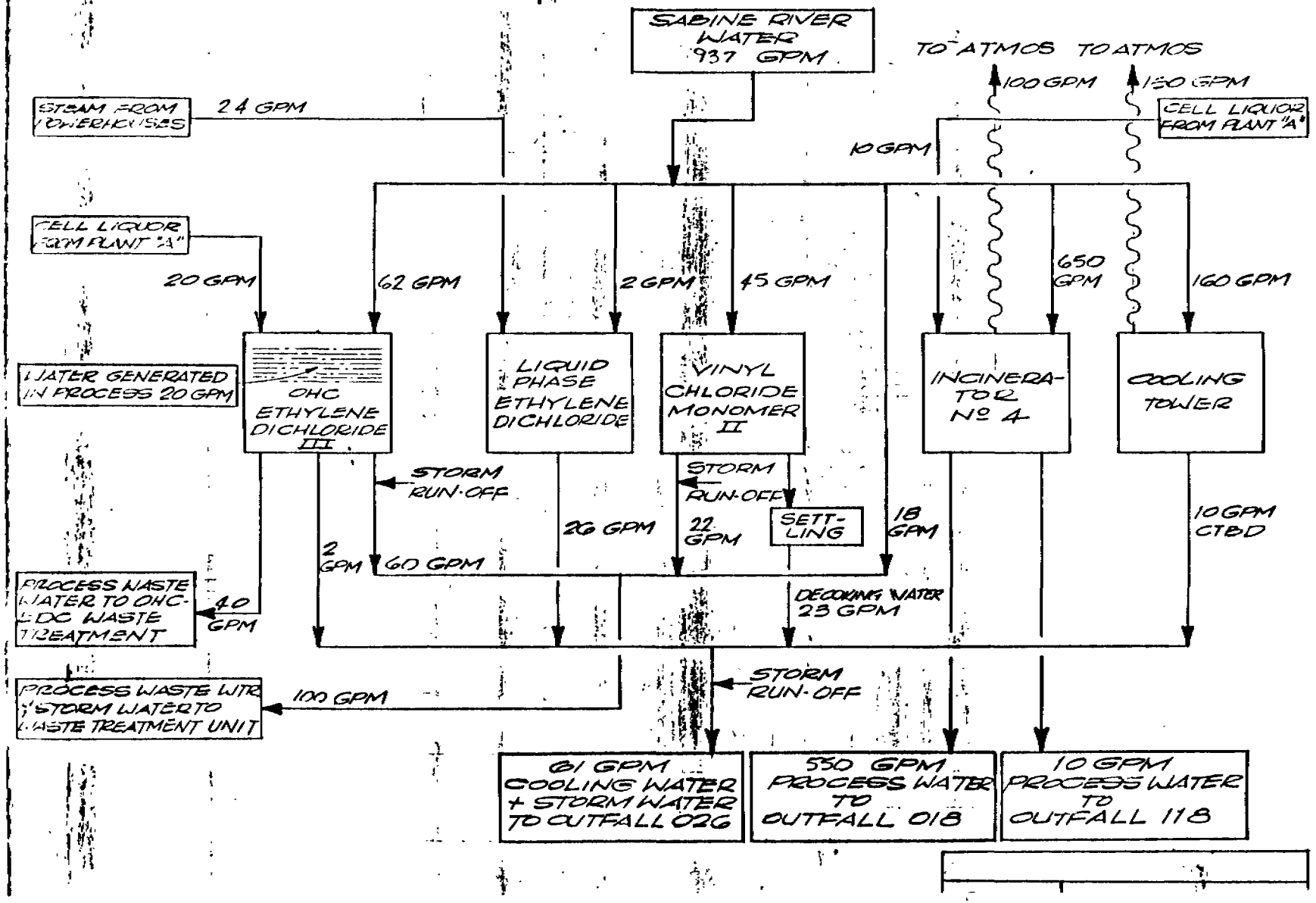
(SHEET 3 OF 8)



SL 078108

DETAIL SCHEMATIC - VCM II

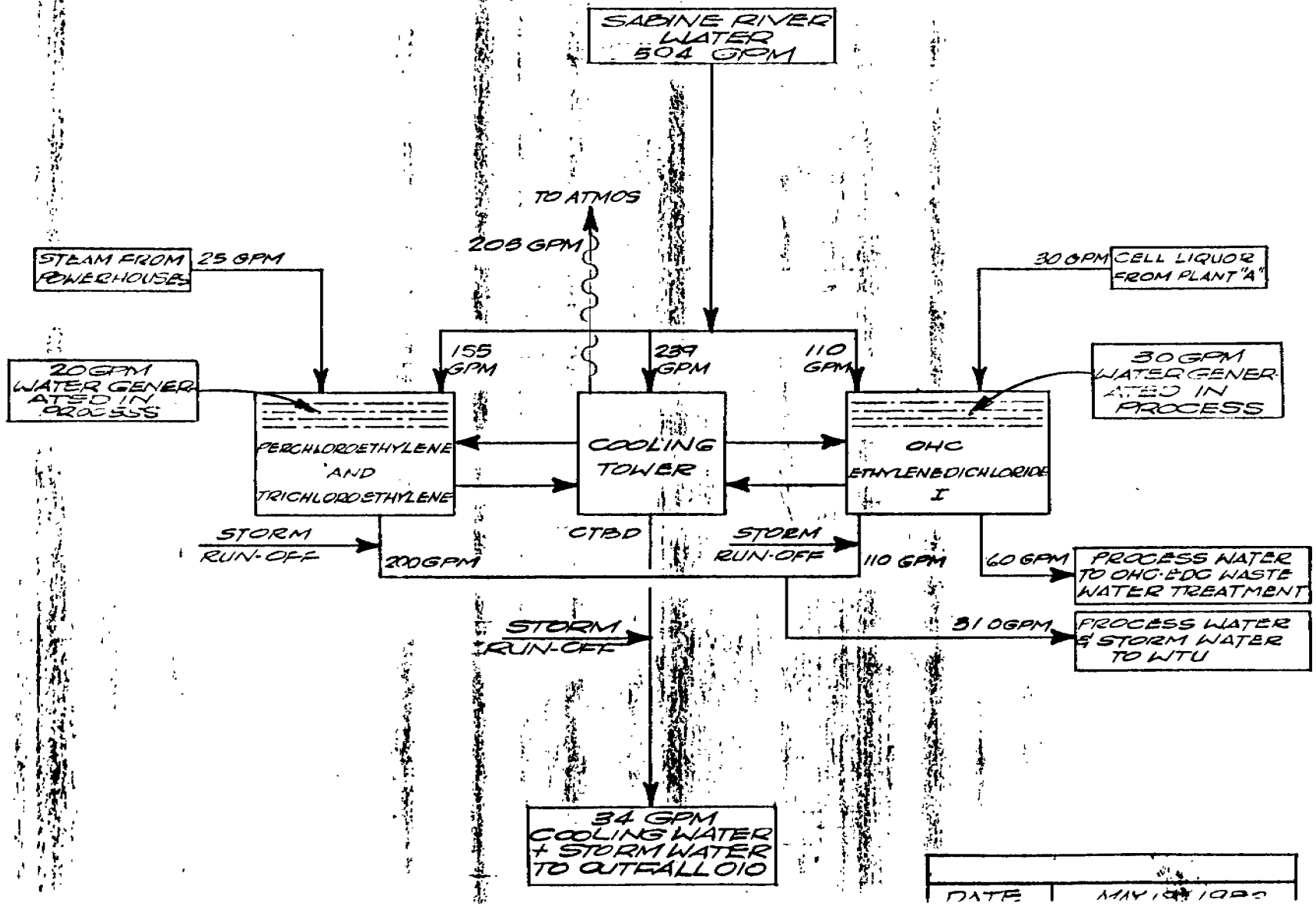
(SHEET 4 OF 8)



SL 078109

DETAIL SCHEMATIC - PER-TRI/OHC-EDC I

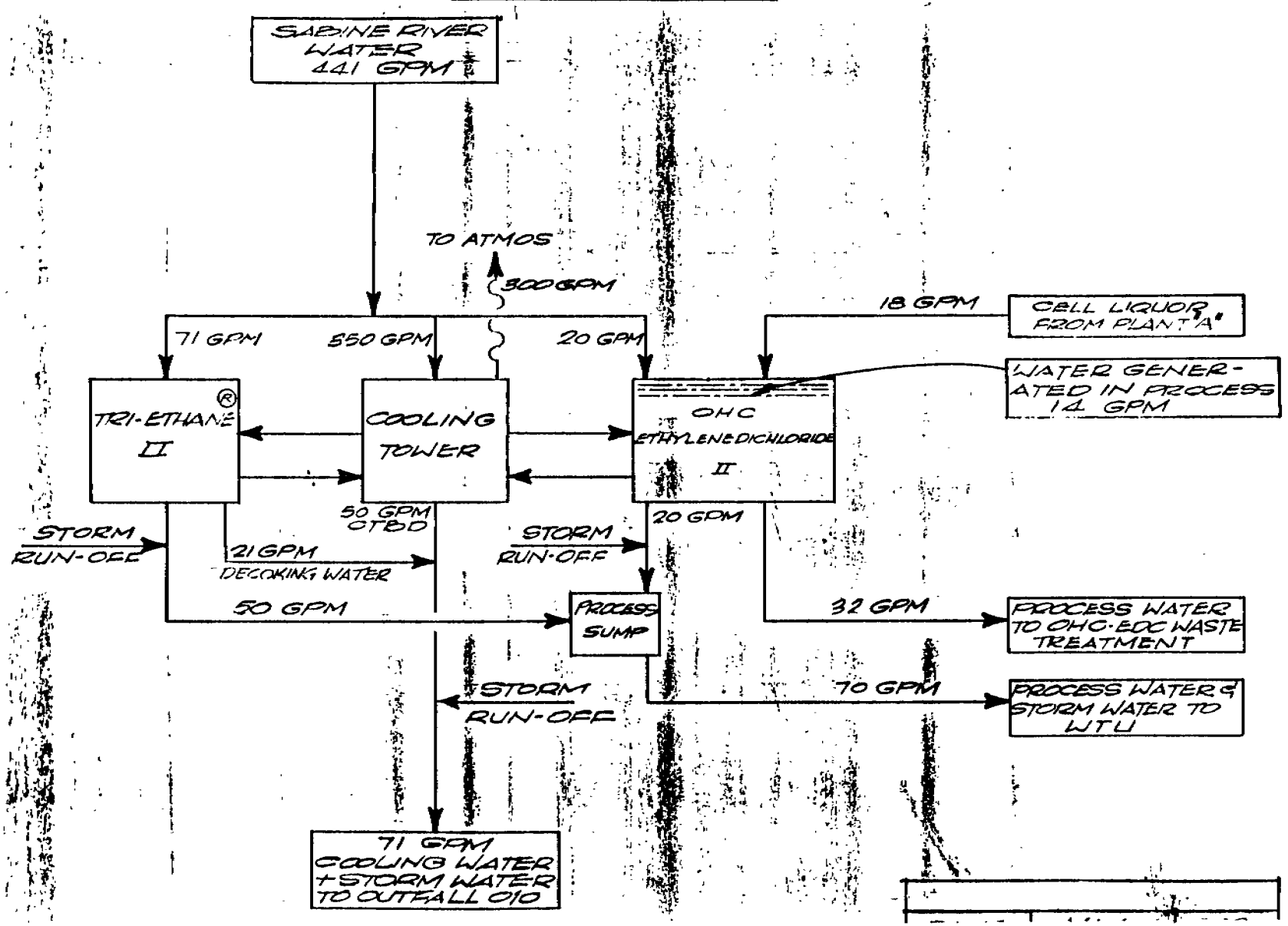
(SHEET 5 OF 8)



SL 078110

DETAIL SCHEMATIC-TRIETHANE II/OHC-EDC II

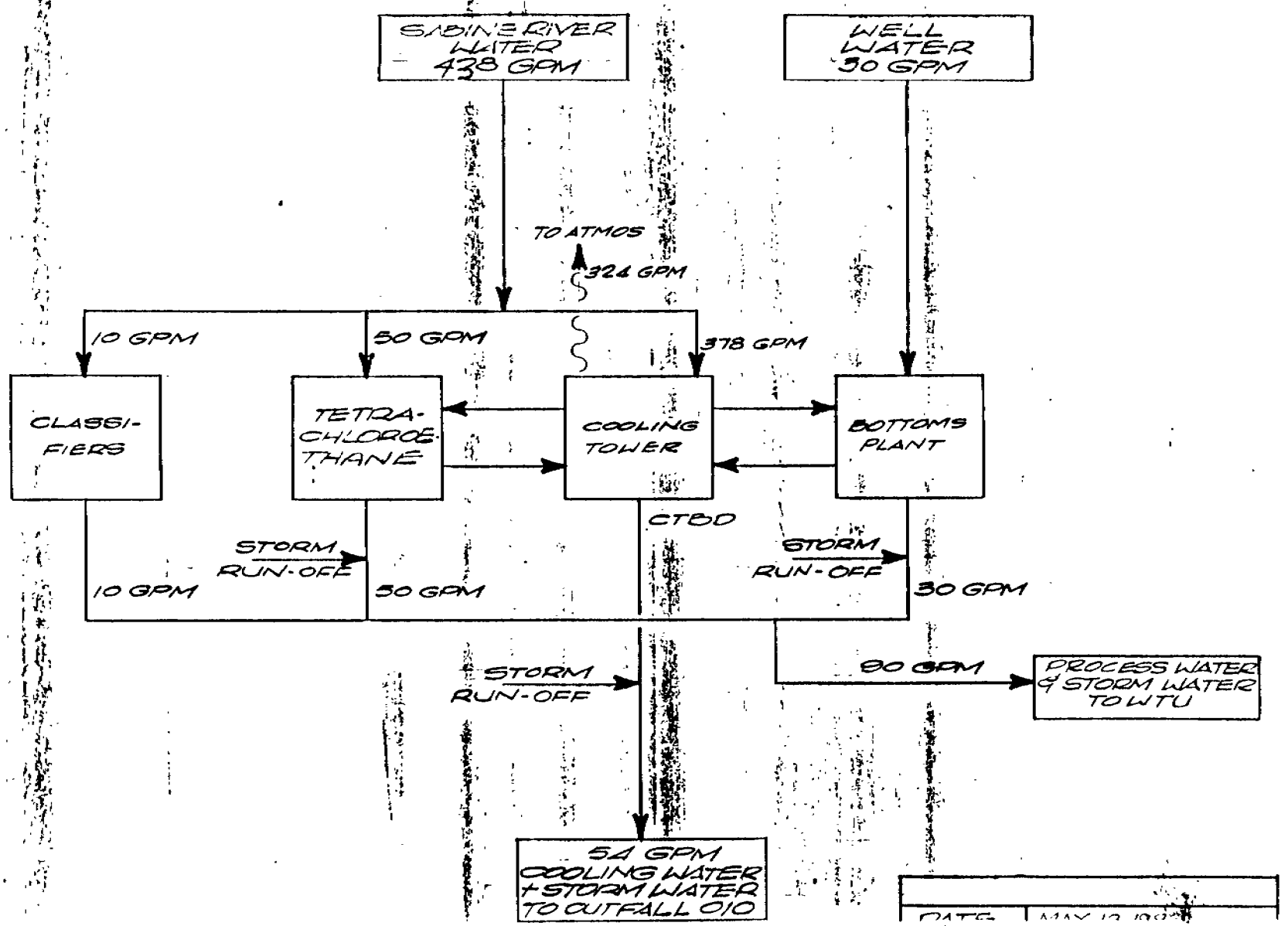
(SHEET 6 OF 8)



SL 078111

DETAIL SCHEMATIC — TETRA/BOTTOMS

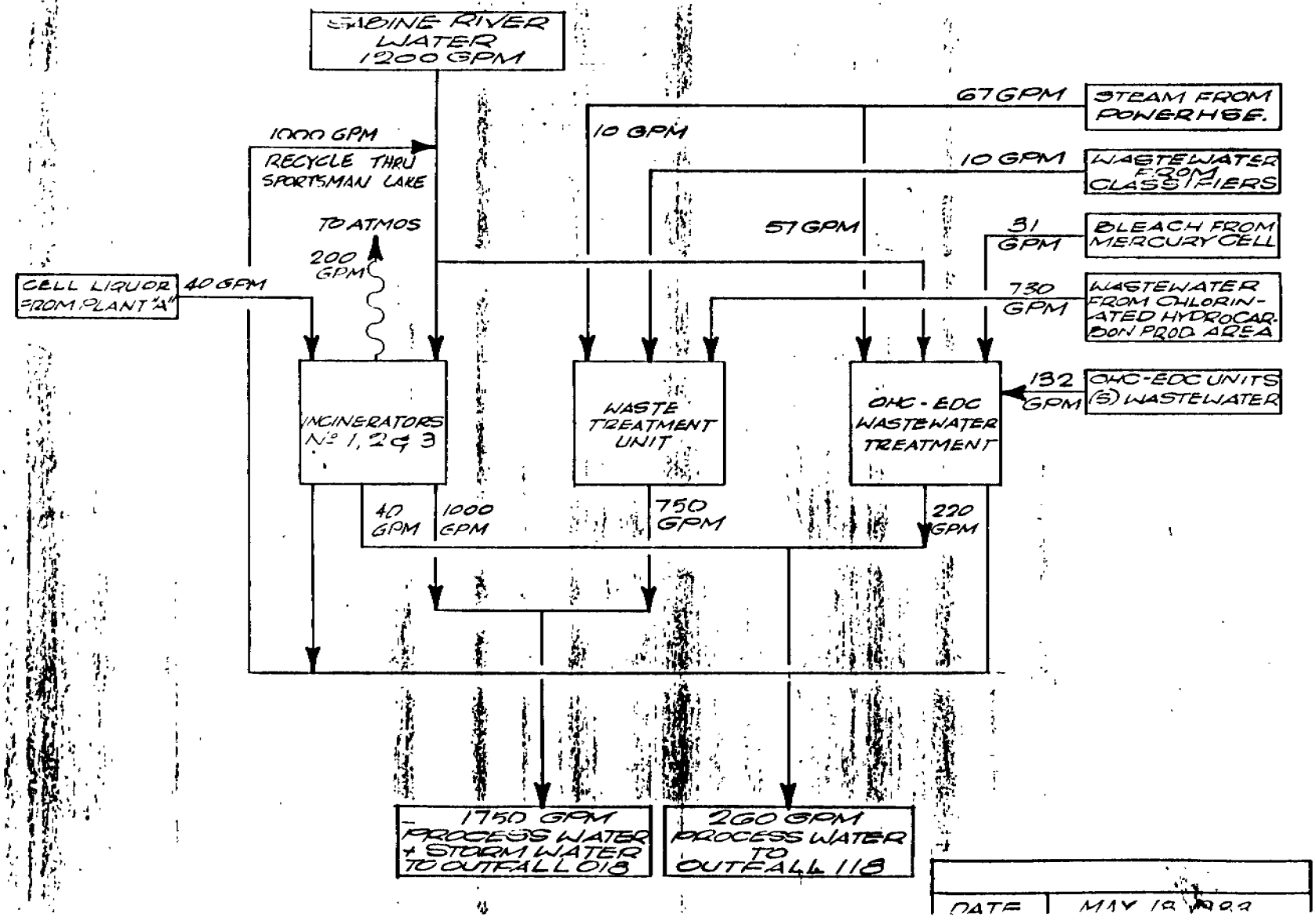
(SHEET 7 OF 8)



SL 078112

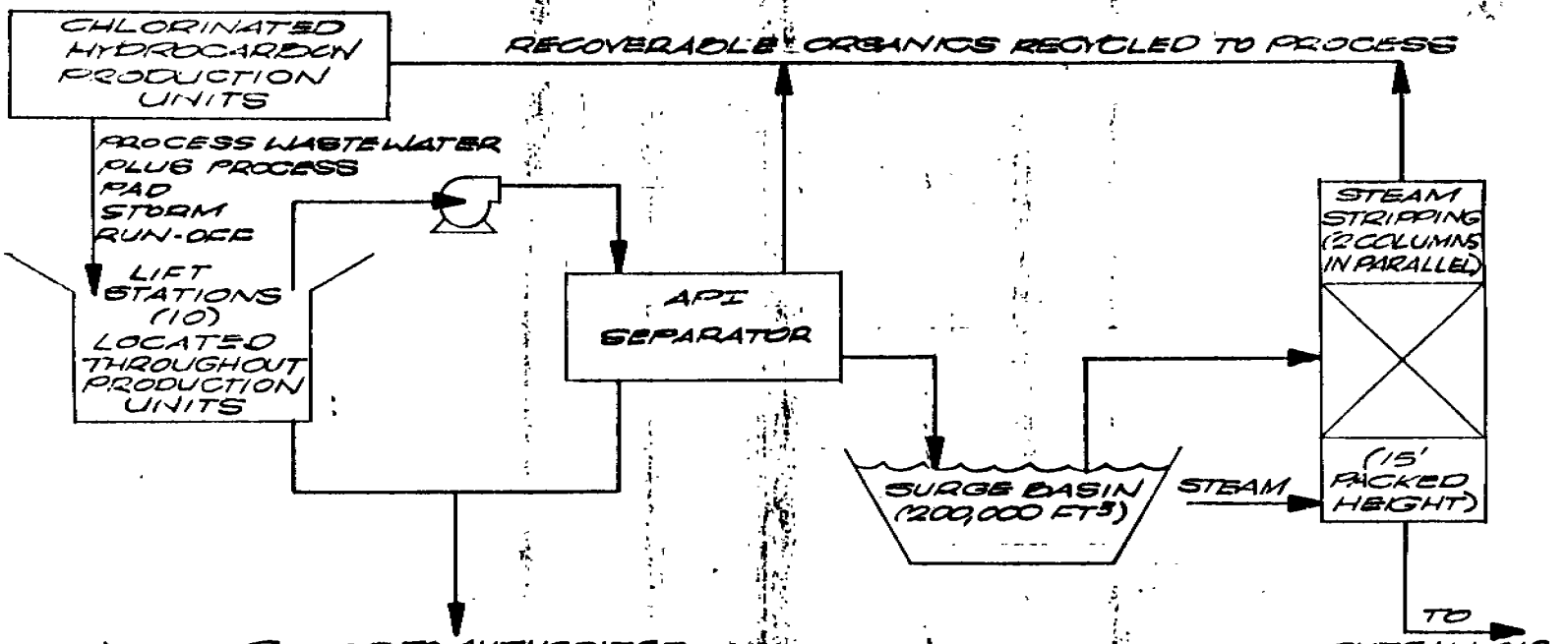
DETAIL SCHEMATIC-INCINERATORS/WTU/FORMATE

(SHEET 8 OF 8)



SL 078113

FIGURE 15
CHLORINATED HYDROCARBON WASTEWATER COLLECTION AND TREATMENT SYSTEM PLANT "B"



TREATMENT CHARACTERISTICS

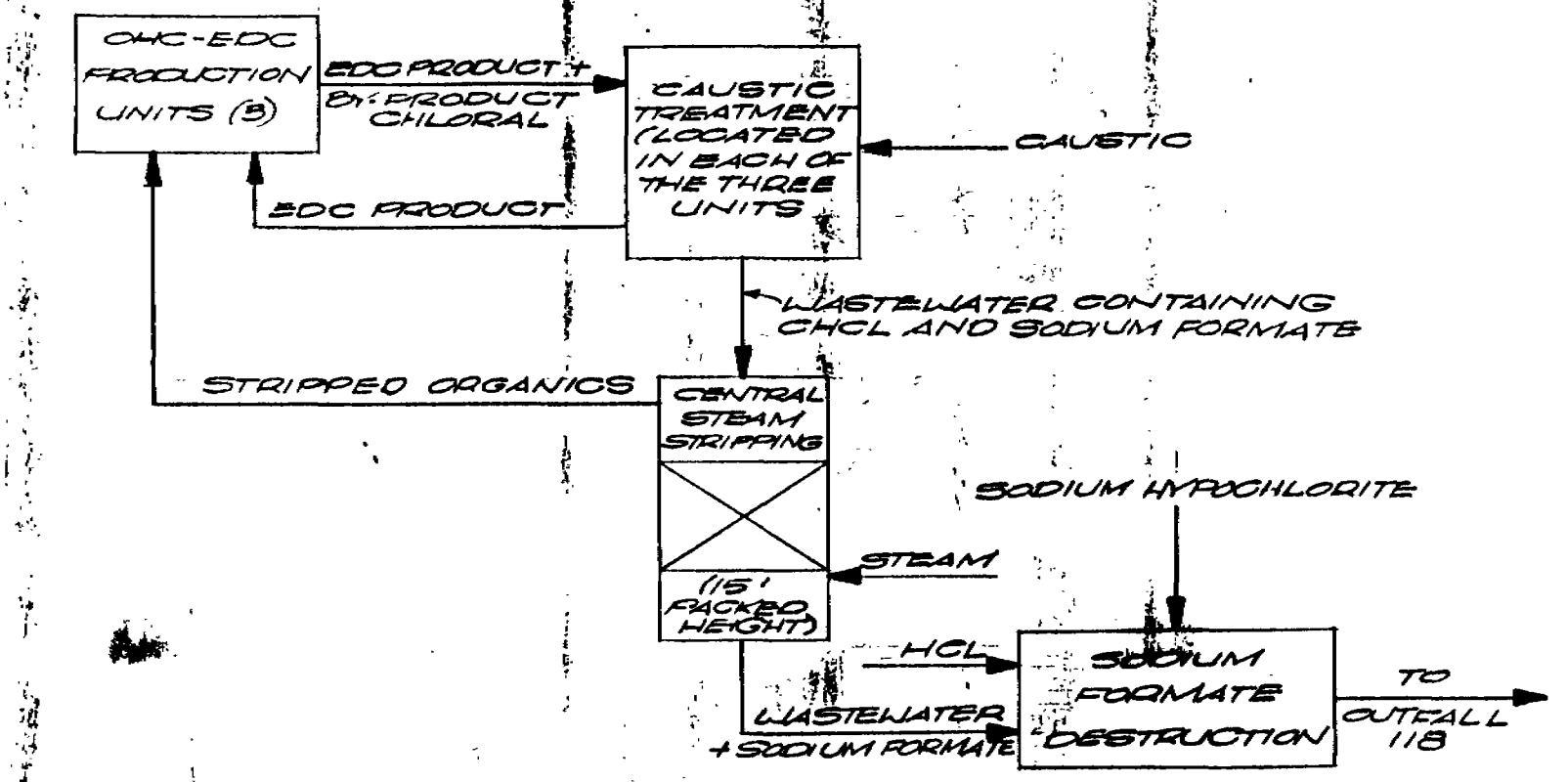
SIZE: 1.6 MMGPD (MAXIMUM CAPACITY)

FLOWRATE: 1.0 MMGPD

RETENTION TIME: 24 HOURS

SL 078114

FIGURE 16
OHC-EDC WASTEWATER TREATMENT SYSTEM PLANT "B"



TREATMENT CHARACTERISTICS

SIZE : 0.30 MMGPD (MAXIMUM THROUGHPUT)

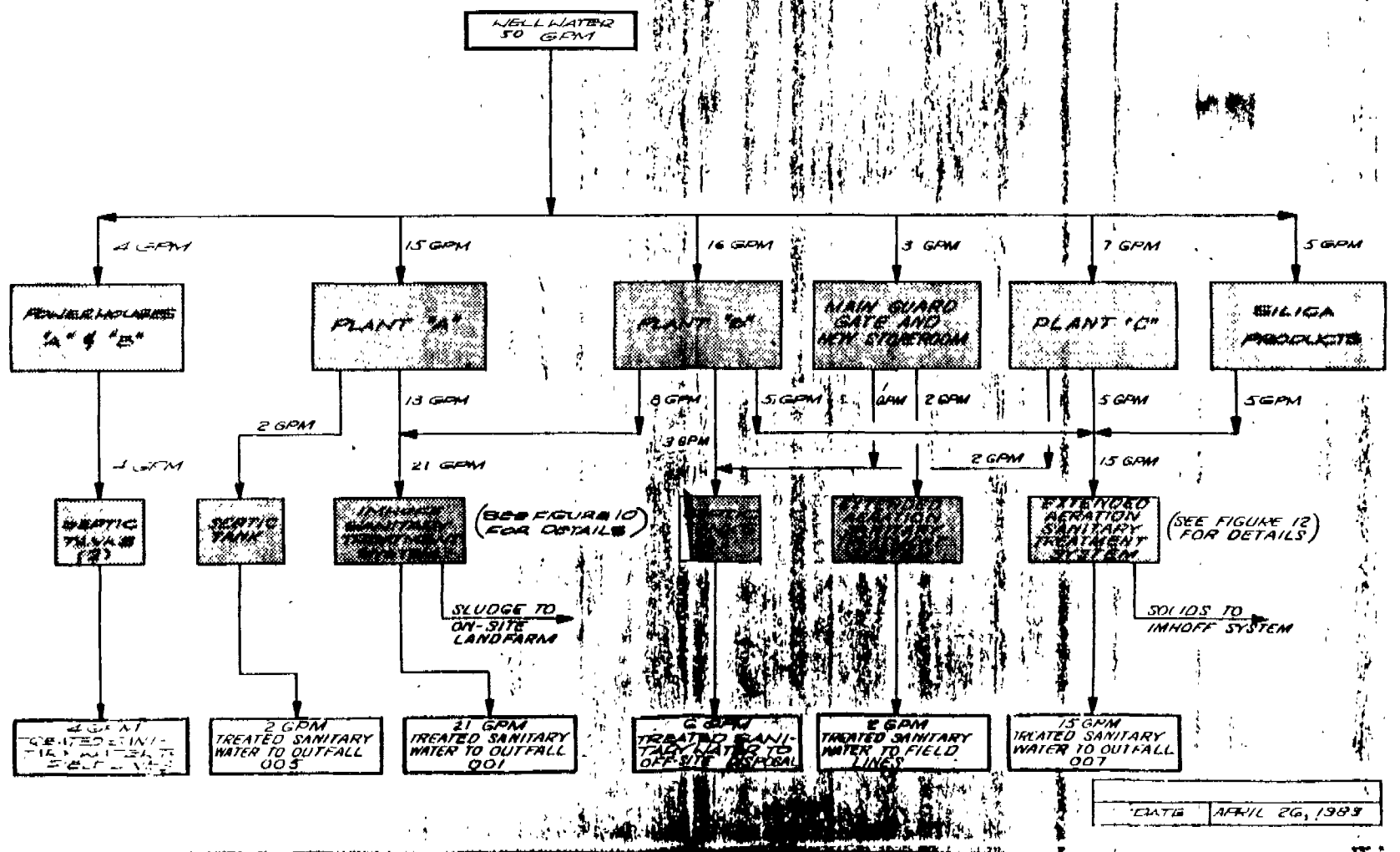
FLOWRATE: 0.20 MMGPD

RETENTION TIME: 4 HOURS

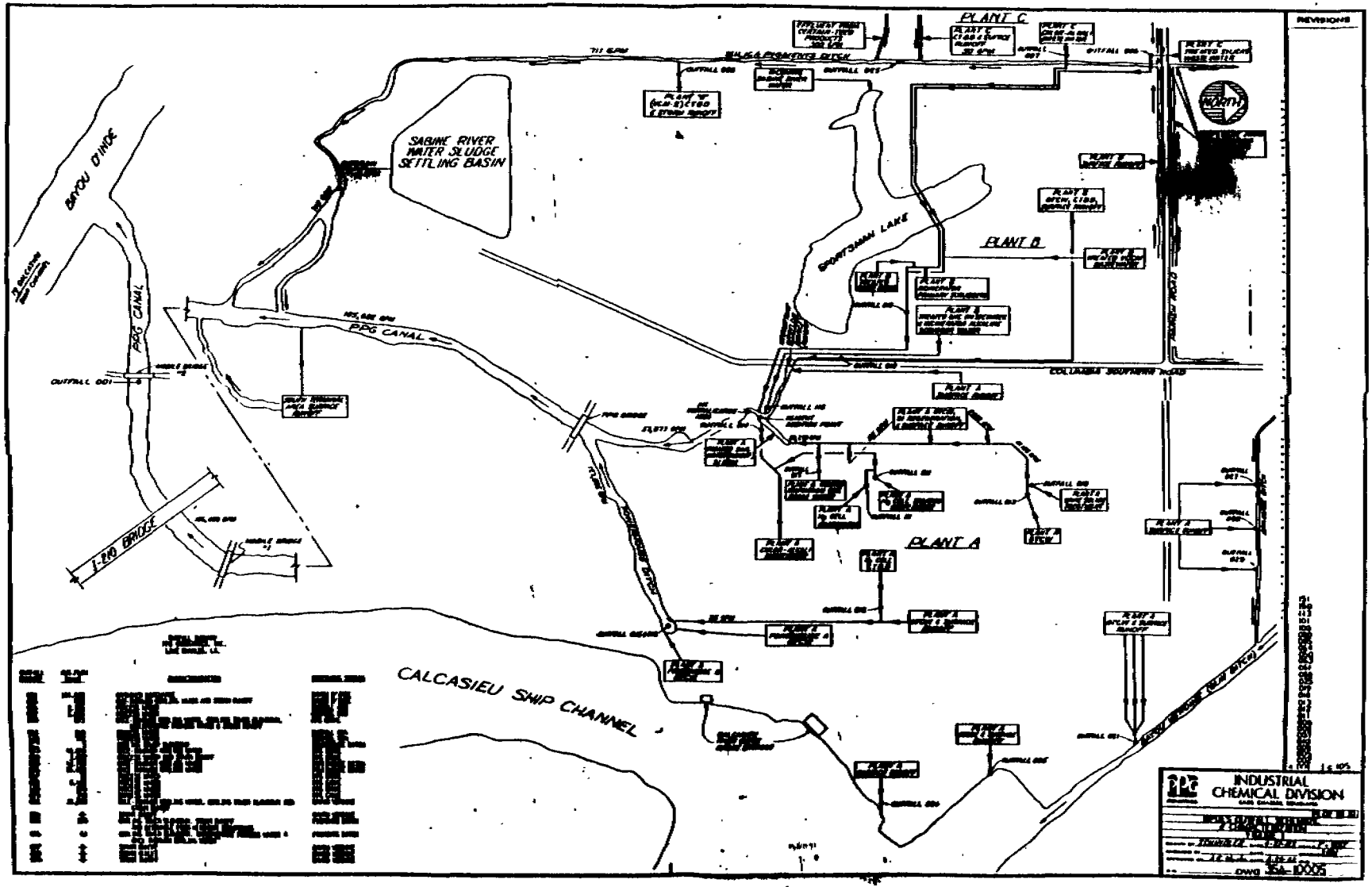
SL 078115

FIGURE 8

DETAIL SCHEMATIC - SANITARY WASTEWATER



SL 078116


PLANT C
PLANT B
PLANT A
SABINE RIVER WATER SLUDGE SETTLING BASIN
BAYOU D'INDE
PPG CANAL
SHORTCHAIN LAKE
I-210 BRIDGE
CALCASIEU SHIP CHANNEL
INDUSTRIAL CHEMICAL DIVISION

SL 078117