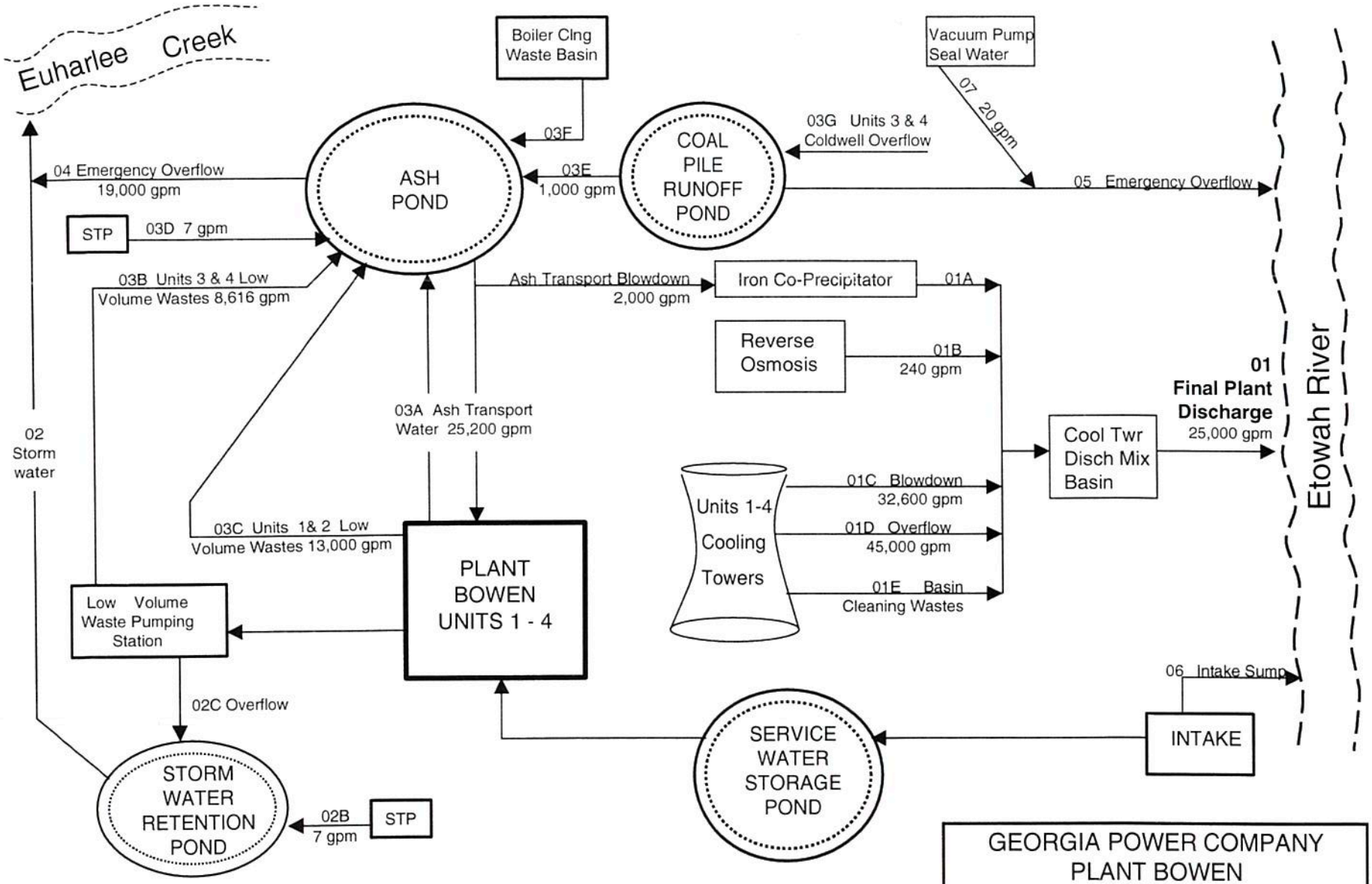

Euharlee Creek
Boiler Clng Waste Basin
Vacuum Pump Seal Water
07 20 gpm
03F
03G Units 3 & 4 Coldwell Overflow
ASH POND
03E 1,000 gpm
COAL PILE RUNOFF POND
04 Emergency Overflow 19,000 gpm
05 Emergency Overflow
STP
03D 7 gpm
03B Units 3 & 4 Low Volume Wastes 8,616 gpm
Ash Transport Blowdown 2,000 gpm
Iron Co-Precipitator
01A
Reverse Osmosis
01B 240 gpm
01 Final Plant Discharge 25,000 gpm
Etowah River
02 Storm water
03A Ash Transport Water 25,200 gpm
Cool Twr Disch Mix Basin
Units 1-4 Cooling Towers
01C Blowdown 32,600 gpm
01D Overflow 45,000 gpm
01E Basin Cleaning Wastes
03C Units 1& 2 Low Volume Wastes 13,000 gpm
PLANT BOWEN UNITS 1 - 4
Low Volume Waste Pumping Station
06 Intake Sump
02C Overflow
SERVICE WATER STORAGE POND
INTAKE
STORM WATER RETENTION POND
02B 7 gpm
STP
GEORGIA POWER COMPANY
PLANT BOWEN
NPDES PERMIT NO. GA 0001449
ALL FLOWS ARE MAXIMUM
Flow Bow.ppt Jan. 2002

PLANT BOWEN
ASH POND COTREATMENT
SUMMARY TABLE

A) DRY WEATHER (PROCESS) FLOWS	(Maximum Flows used)		
Coal Pile Runoff (03E)	1.44 MGD		1000 GPM
Low Volume Waste (03B & 03C)	31.13 MGD		21616 GPM
Sanitary Sewage Treatment (02B, 03D)	0.01		7 GPM
Ash Transport Water 100% Recycle	0 MGD		0 GPM
Total Dry Weather (Process) Flow	32.58 MG		
B) RAINFALL RUNOF (Using SCS Method)			
Ash Ponds Surface Area - Wet	48.0		
Ash Ponds Surface Area - Dry	208.0		
Roof, Precip., Wash, & Concrete Pav't	10.3		
Parking Lot	6.0		
Parking Lot	6.0		
Total Runoff Area	278.3 Acres		
10-year, 24 hour storm	5.55 inches		
Annual Rainfall	51.35 inches		(0.141 inches/day)
Equivalent Direct Run-off	4.75 inches		
TOTAL Rainfall Runoff	35.89 MG		
C) REQUIRED WATER VOLUME			
(A)Dry Weather Flow + (B)Rainfall Runoff =	68.47 MG	OR	338,982 CY

D) ASH POND REMAINING STORAGE (See Note 2 and Note 3)

From Ash Management Projections 2001 -2005 (Projected Sales of 53% or 54%)

Projected Remaining Pond Volume for Wet Storage on 12/31

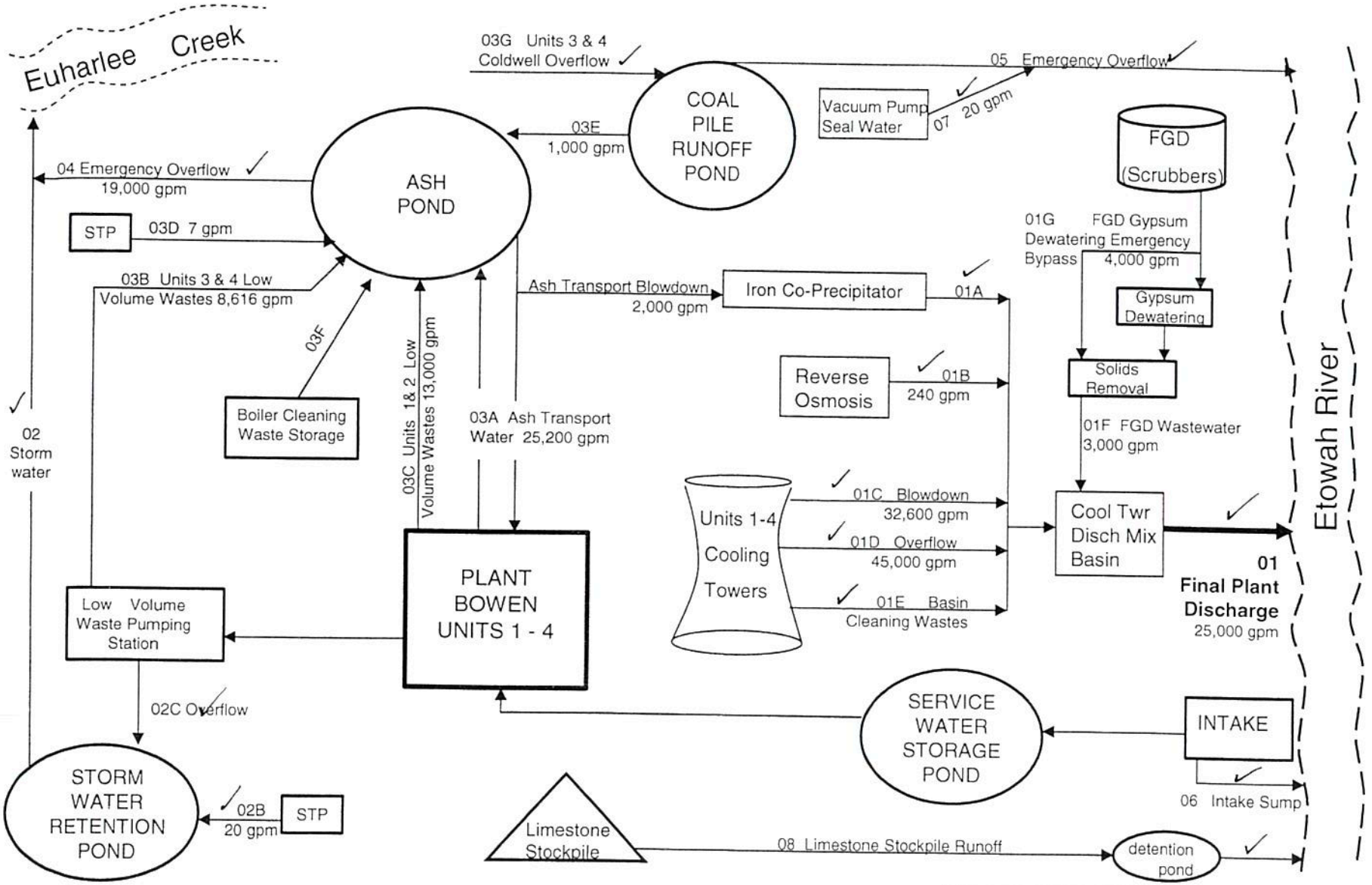
YEAR	2002	2003	2004	2005	2006	2007
CU YDS	338,982	338,982	338,982	338,982	338,982	338,982
MG	68.47	68.47	68.47	68.47	68.47	68.47

E) AVAILABLE WATER VOLUME on 12/31/2007			
See (D) Above and Note 3 Below	68.47 MG	OR	338,982 CY

FROM ABOVE, (E) IS EQUAL TO (C), THEREFORE ASH POND CAPACITY IS SUFFICIENT

NOTES:

1. The rainfall runoff was determined using the Soil Conservation Service (SCS) Method and Georgia Manual for Sediment and Erosion Control, 2000 edition.
2. Strict Interpertation uses elevation 711.0 in the ash pond.
3. Volume projected for strict interpretation through year 2007 assumes that adequate dredging and dry stacking facilities will be implemented to prevent storage volume from falling below the minimum required for co-treatment purposes.



GEORGIA POWER COMPANY
PLANT BOWEN
NPDES PERMIT NO. GA 0001449

ALL FLOWS ARE MAXIMUM

Flow Bow.ppt Jan. 2007

PLANT BOWEN
ASH POND COTREATMENT
SUMMARY TABLE

A) DRY WEATHER (PROCESS) FLOWS	(Maximum Flows used)		
Coal Pile Runoff (03E)	1.44	MGD	1000 GPM
Low Volume Waste (03B & 03C)	31.13	MGD	21616 GPM
Sanitary Sewage Treatment (02B, 03D)	0.01		7 GPM
Ash Transport Water 100% Recycle	0	MGD	0 GPM
Total Dry Weather (Process) Flow	32.58	MG	
B) RAINFALL RUNOF (Using SCS Method)			
Ash Ponds Surface Area - Wet	48.0		
Ash Ponds Surface Area - Dry	208.0		
Roof, Precip., Wash, & Concrete Pav't	10.3		
Parking Lot	6.0		
Parking Lot	6.0		
Total Runoff Area	278.3	Acres	
10-year, 24 hour storm	5.55	inches	
Annual Rainfall	51.35	inches	(0.141 inches/day)
Equivalent Direct Run-off	4.75	inches	
TOTAL Rainfall Runoff	35.89	MG	
C) REQUIRED WATER VOLUME			
(A)Dry Weather Flow + (B)Rainfall Runoff =	68.47	MG OR	338,982 CY

D) ASH POND REMAINING STORAGE (See Note 2 and Note 3)

From Ash Management Projections 2001 -2005 (Projected Sales of 53% or 54%)

Projected Remaining Pond Volume for Wet Storage on 12/31

YEAR	2002	2003	2004	2005	2006	2007
CU YDS	338,982	338,982	338,982	338,982	338,982	338,982
MG	68.47	68.47	68.47	68.47	68.47	68.47

E) AVAILABLE WATER VOLUME on 12/31/2007

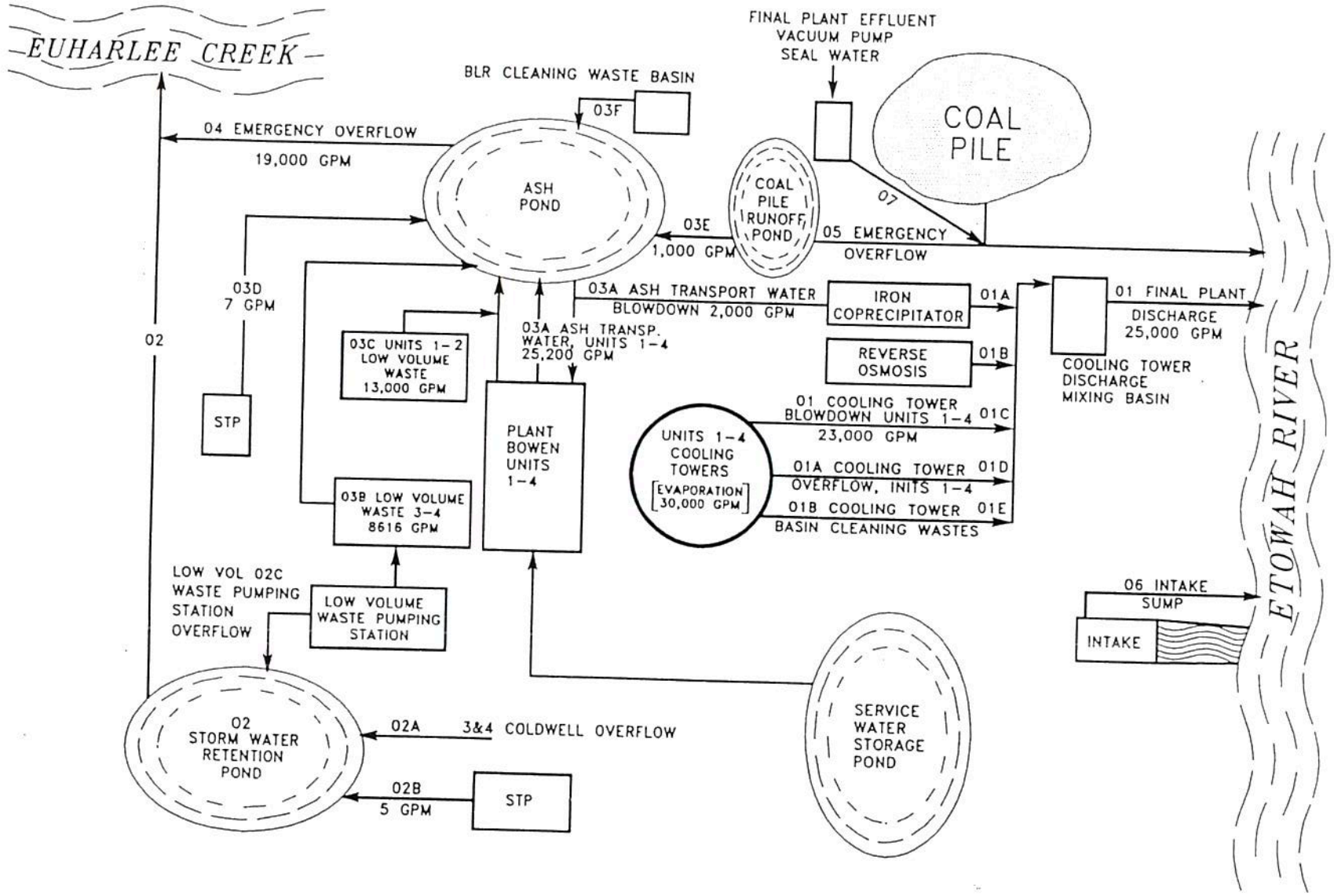
See (D) Above and Note 3 Below 68.47 MG OR 338,982 CY

FROM ABOVE, (E) IS EQUAL TO (C), THEREFORE ASH POND CAPACITY IS SUFFICIENT

NOTES:

1. The rainfall runoff was determined using the Soil Conservation Service (SCS) Method and Georgia Manual for Sediment and Erosion Control, 2000 edition.
2. Strict Interpertation uses elevation 711.0 in the ash pond.
3. Volume projected for strict interpretation through year 2007 assumes that adequate dredging and dry stacking facilities will be implemented to prevent storage volume from falling below the minimum required for co-treatment purposes.

GEORGIA POWER COMPANY / Plant Bowen



NOTE: ALL FLOWS ARE MAXIMUM

DWG/COMPLIAN

REV.3 3/27/97

PLANT BOWEN - ASH POND COTREATMENT

AVAILABLE INFORMATION

Low Volume Wastes	31.13	MGD	
Sewage Treatment Effluent	0.01		
Total Dry Weather Flow	31.14	MGD	95.56 acre feet
Ash Pond Surface Area	258.14	acres	
Roof, Precip. Wash, & Conc. Pvmnt.	10.30		
Parking Lot	6.00		
Yard Areas	6.00		
Total Runoff Area	280.44	acres	
10-year, 24-hour storm	5.60	inches	
Annual Rainfall	51.35	inches	(0.141 inches/day)
RAINFALL RUNOFF	41.26	MGD	126.63 acre feet
REQUIRED WATER VOLUME	358,487	cu yds	222.20 acre feet

AVAILABLE WATER VOLUME @ 12/31/02

Strict Interpretation:	629,830	cu yds	390	acre feet
Surcharge Capacity:	n/a	cu yds	n/a	acre feet

EFFLUENT LIMITS FOR DRY WEATHER FLOWS

EFFLUENT CATEGORY	FLOW MGD	DA TSS	DA O&G	DM TSS	DM O&G
Low Volume Waste	31.13	30	15	100	20
Sewage Trtmnt. Effl.	0.01	30	15	100	20
Ash Transport Water	0.00	30	15	100	20
Flow Weighted Concentrations	31.14	30	15	100	20

NOTES:

1. Rainfall determined by Soil Conservation Services method.
2. Rainfall runoff figure includes discharge from coal pile runoff system.

Ash Trans. Recycle	(25,200)	GPM
Units 1-4 Low Volume Waste	21,616	GPM
Sewage Treatment Effluent	7	GPM
Ash Transport (Net)	0	GPM

Projected Pond Volume for Wet Storage:

YEAR	1,998	1,999	2,000	2,001	2,002
cu yds	709,830	689,830	669,830	649,830	629,830

SURCHARGE CAPABILITY:

Note: Surcharge capability not applicable due to bottom ash management operation. Maximum pond level tolerable by JTM is elevation 709.

STRICT INTERPRETATION:

Projected Pond Volume on 12/31/2002: 629,830 cu yds

PLANT BOWEN ASH POND COTREATMENT
CURRENT CONDITIONS (THROUGH 1993)

AVAILABLE INFORMATION

Low Vol Waste	41.04 MGD		
Ash Transport Water	10.73	(75% RECYCLE)	
Total Dry Weather Flow	51.77 MGD		158.9 ACRE FEET

Ash Pond Surface	261.00 ACRES
Parking Lot Runoff	5.00
Yard Areas	6.00
Roof Drains, Pads, Pavements	11.30
Coal Pile	47.00
Total Runoff Area	330.30 ACRES

10-year,24-hour storm		5.50 inches	
Annual Rainfall	51.35 inches	(0.141 inches/day))	
RAINFALL RUNOFF		49.80 MG	152.8 ACRE FEET
REQUIRED WATER VOLUME		502,911 CU YDS	311.7 ACRE FEET

AVAILABLE WATER VOLUME @ 3/30/95

502,911 CU YDS	311.7 ACRE FEET

NOTE: THIS TABLE ONLY GOOD THROUGH 1993, AFTER WHICH TOP ASH WILL BE HANDLED DRY

EFFLUENT CATEGORY	FLOW MGD	DA TSS	DA O&G	DM TSS	DM O&G
Low Volume Wastes	41.04	30	15	100	20
Ash Transport	42.91	30	15	100	20
Subtotal	83.95				
Recycle	(32.18)				
Flow Weighted Concentrations	51.77	48.65	24.33	162.17	32.43
Effluent Limitations		30	15	100	20

PLANT BOWEN

ASH POND COTREATMENT
FUTURE CONDITIONS (AFTER 1993)

AVAILABLE INFORMATION

Low Vol Waste	18.72 MGD		
Ash Transport Water	0.00	(100% RECYCLE)	
Total Dry Weather Flow	18.72 MGD		57.5 ACRE FEET

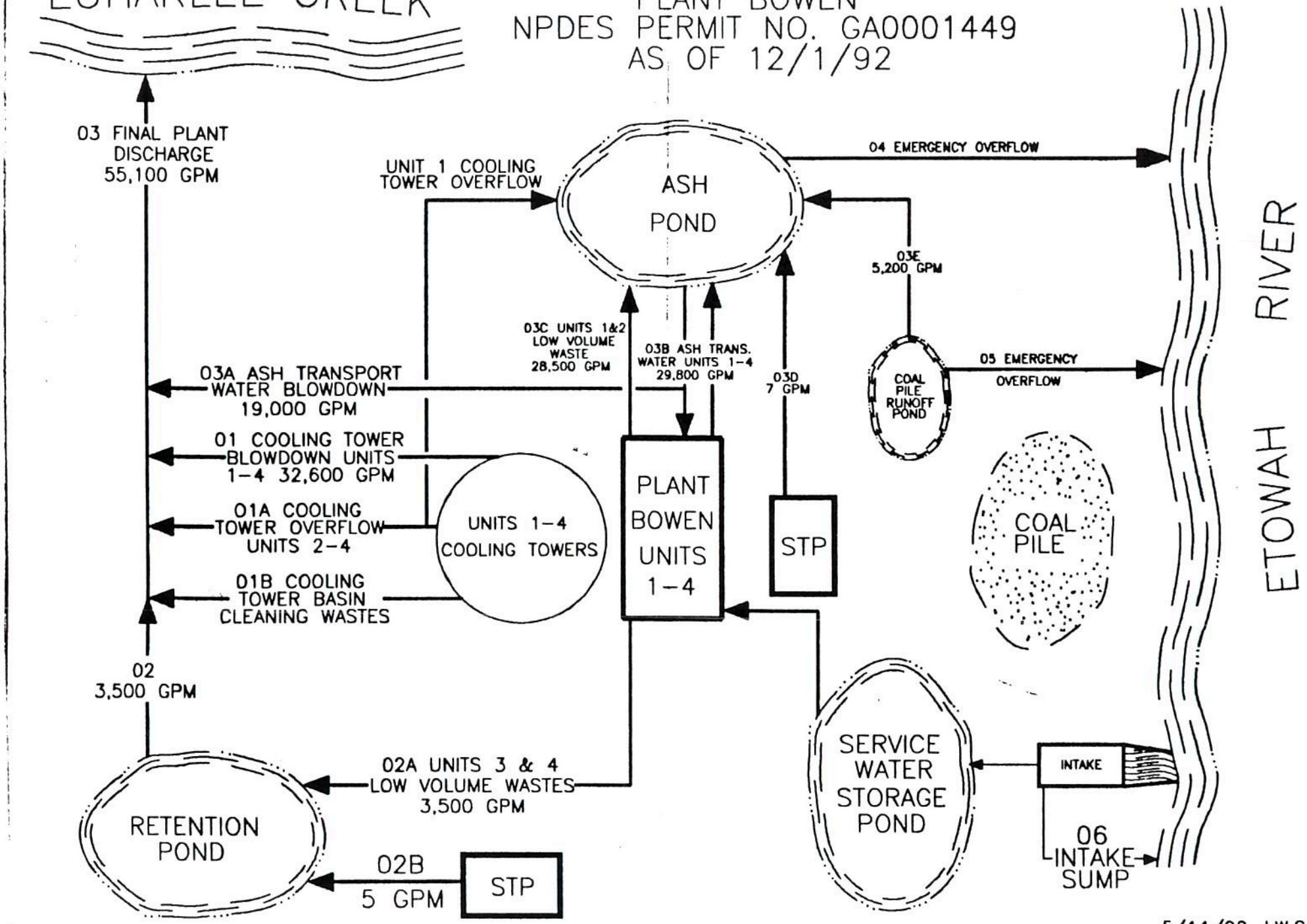
Ash Pond Surface	261.00 ACRES
Parking Lot Runoff	5.00
Yard Areas	6.00
Roof Drains, Pads, Pavements	11.30
Coal Pile	47.00
Total Runoff Area	330.30 ACRES

10-year,24-hour storm		5.50 inches	
Annual Rainfall	51.35 inches	(0.141 inches/day))	
RAINFALL RUNOFF		49.80 MG	152.8 ACRE FEET
REQUIRED WATER VOLUME		339,275 CU YDS	210.3 ACRE FEET
AVAILABLE WATER VOLUME @ 12/31/97		738,326 CU YDS	457.6 ACRE FEET

NOTE: THIS TABLE APPLIES AFTER 1993, WITH DRY TOP ASH HANDLING IN PLACE.

EFFLUENT CATEGORY	FLOW MGD	DA TSS	DA O&G	DM TSS	DM O&G
Low Volume Wastes	18.72	30	15	100	20
Ash Transport	16.70	30	15	100	20
Subtotal	35.42				
Recycle	(16.70)				
Flow Weighted Concentrations	18.72	56.77	28.38	189.23	37.85
Effluent Limitations		30	15	100	20

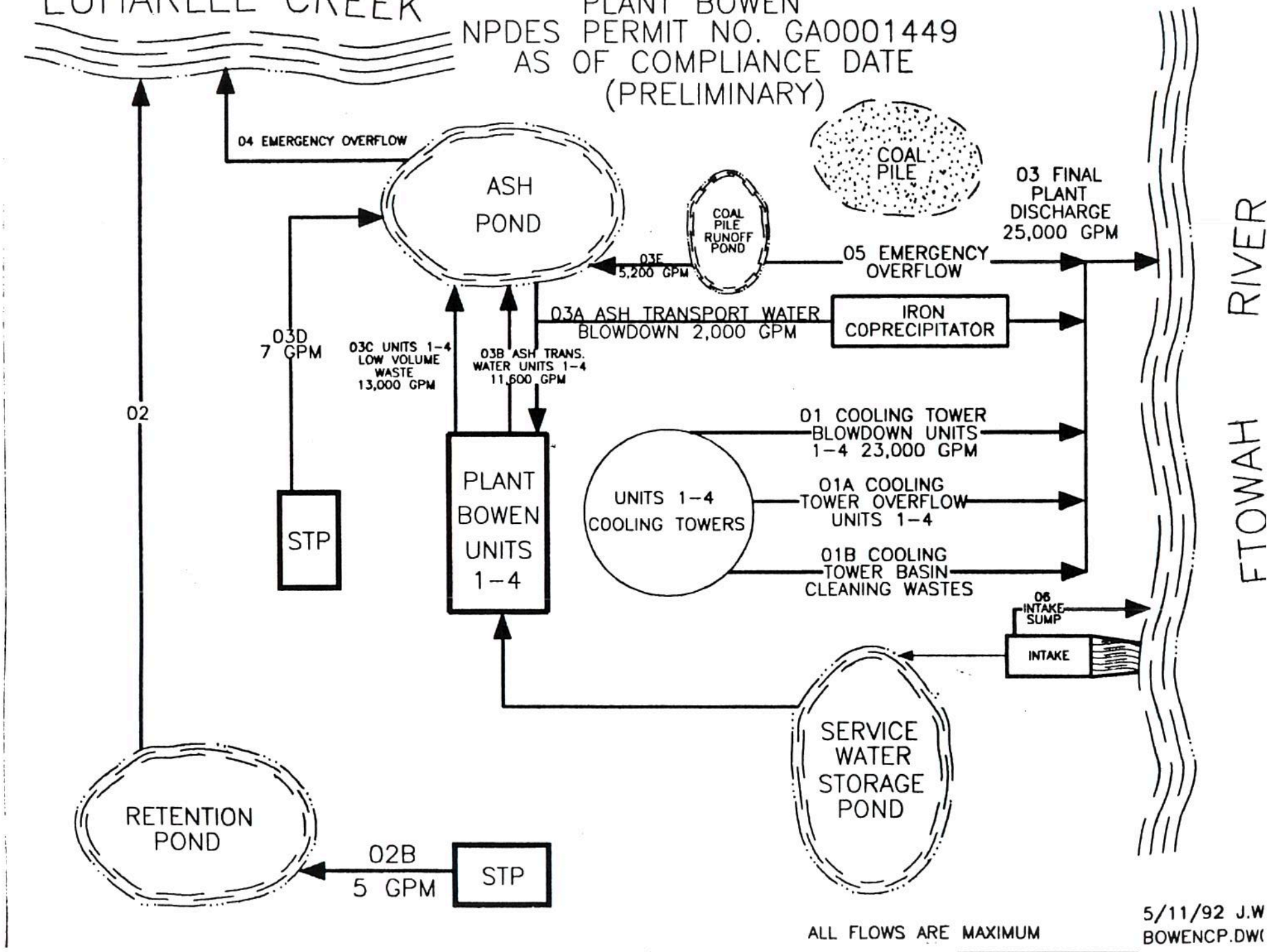
GEORGIA POWER COMPANY
PLANT BOWEN
NPDES PERMIT NO. GA0001449
AS OF 12/1/92



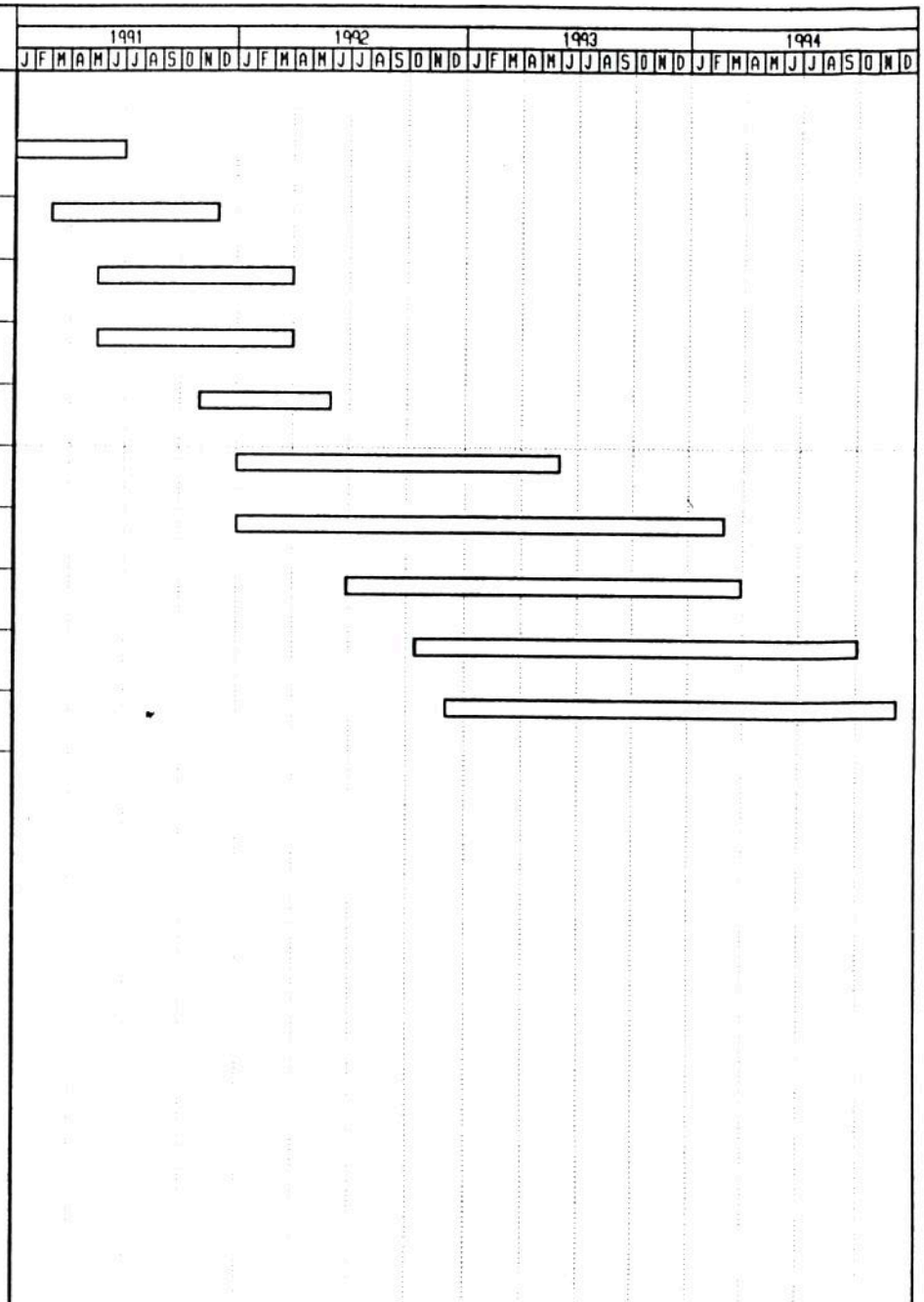
ALL FLOWS ARE MAXIMUM

5/11/92 J.W.S
BOWENEX.DWG

GEORGIA POWER COMPANY
PLANT BOWEN
NPDES PERMIT NO. GA0001449
AS OF COMPLIANCE DATE
(PRELIMINARY)



ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH
NPDES WATER SYSTEM EVALUATIONS	1JAN91	1JUL91
NPDES COMPLIANCE STRATEGIES	1MAR91	2DEC91
CONCEPTUAL COST ESTIMATES	16MAY91	1APR92
PRELIMINARY DESIGN & COST ESTIMATES	16MAY91	1APR92
IMPLEMENTATION PLANNING	1NOV91	1JUN92
FOUNDATION INVESTIGATIONS	1JAN92	1JUN93
DESIGN ENGINEERING	1JAN92	28FEB94
PROCUREMENT OF MATERIALS	26JUN92	29MAR94
INSTALLATIONS	13OCT92	30CT94
TESTING & STARTUP	1DEC92	1DEC94



Plot Date 26MAY92
Data Date 1JAN91
Project Start 1JAN91
Project Finish 31DEC94

(c) Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CBP

Sheet 1 of 1

NPDES COMPLIANCE SCHEDULE
BOWEN

Date	Revision	Checked	Approved