Department of
Environmental Protection
Panama City Branch Office
2353 Jenks Avenue
Panama City, FL 32405
Phone: (850)-872-4375 Fax: (850) 872-7790

Jeb Bush
Governor

David B. Struhs
Secretary

December 6, 2001

Gulf Power Company
C/o Richard Markey, Environmental Affairs
One Energy Place
Pensacola, Florida 32520-0328

REF.:	**STORMWATER GENERAL PERMIT - TYPE B**
Project:	Sinai Substation
File #:	32-0192195-001-RG
County:	Jackson

Dear Mr. Markey:

We have reviewed your Notice of General Permit received by the Department on November 13, 2001, concerning the above referenced project. The project appears to qualify for the General Permit specified by Rule 62-25.801, Florida Administrative Code (F.A.C.).

Please review and be aware of the general conditions associated with this General Permit as outlined in Rule 62-4.540, F.A.C. This General Permit does not relieve you, the permittee, from obtaining a dredge and fill permit or other permits (local, state or federal) which may be required.

We wish to point out that Section 62-25.801, F.A.C. also requires that the permittee file an As-Built Certification with the Department within thirty (30) days after the facility's completion. This certification is included as Page 4 of DEP form 62-1.215(2), the General Permit for Stormwater Discharge Facilities.

If you have any questions about the need to obtain additional permits, or any other matters, please call Robert Taylor at (850) 872-4375.

Sincerely,

Gary L. Shaffer
Branch Manager

GLS:rft

cc: DEP/PEN-Cliff Street, P.E.
Harry V. Durden, P.E.

One Energy Place
Pensacola, Florida 32520

Tel 850.444.6111

GULF POWER
A SOUTHERN COMPANY

November 9, 2001

Mr. Bob Taylor
Florida Department of Environmental Protection
2353 Jenks Avenue
Panama City, Florida 32405

RE: Sinai Substation Project - NOI to Use a General Permit for a New Stormwater Facility

Dear Mr. Taylor:

Enclosed please find the Notice of Intent to use a general permit for a new stormwater discharge facility. This new Sinai Substation stormwater discharge facility is located in Section 14, Township 3 North, Range 7 West, Jackson County Florida. A permit fee in the amount of $250 has been enclosed as specified in F.A.C. Rule 62-4.050(4)(p)a. In addition, the following attachments are included:

1. Topographic map illustrating the proposed location of the stormwater pond.
2. Notice of Intent to use a general permit for a new stormwater discharge facility.
3. Project summary/conclusions, and calculations, and pertinent drawings of the proposed project.

If you should have any questions regarding this permit application, please feel free to give me a call at (850) 444-6573. Thank you very much for your time in this matter.

Sincerely,

Richard "Mike" Markey, P.G.
Environmental Affairs

Cc: Gulf Power Company
Rachel Allen Terry
Tracy Judson
Jim Vick

Alabama Power Company
Harry Durden

H:\sinaisub\stormwaterpond.doc

Form Title	
Effective Date	
DER Application No	(Filled in by DEP)

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2815 Remington Green Circle, Ste. A, Tallahassee, Florida 32308-1513

**NOTICE OF INTENT TO USE GENERAL PERMIT (SECTION 17-4.71 F.A.C.)
FOR NEW STORMWATER DISCHARGE FACILITY CONSTRUCTION
CHAPTER 17-25 FLORIDA ADMINISTRATIVE CODE**

PREFACE

This form is to be completed and submitted to the Department along with the information specified in Part I-3, AT LEAST 30 DAYS PRIOR TO INITIATING CONSTRUCTION. Those facilities which qualify for a general permit are listed in Florida Administrative Code Rules 17-4.71 and 17-25.035.

Please provide the information listed below. Fill in all blanks and answer all questions in Parts I and III and the appropriate sections of Part II.

PART I: GENERAL INFORMATION

1. Person(s) or entity that owns the discharge facility:

   Name and Title: GULF POWER COMPANY

   Address: ONE ENERGY PLACE

   PENSACOLA, FL 32520-0328

   Phone: (850) 444.6573

2. Stormwater Discharge Facility Identity and Location:

   Source (Project) Name: SINAI SUBSTATION

   Source (Project) Location: Street OFF HAMMOND ROAD

   City SINAI County JACKSON

   14 (Section) T3N (Township) R7W (Range) 30 ° 39 ' 44.5 "N (Latitude) 84 ° 53 ' 57.7 "W (Longitude)

   Name(s) of surface waters* into which stormwater will be discharged:

   Not Applicable

   *(Please see Sections 403.031 and 403.817 F.S. and 17-4.02(17), F.A.C. for definition of surface waters of the state.)

   The surface waters into which stormwater will be discharged are classified as Class N/A waters. These waters are/are not an Outstanding Florida Water and are/are not subject to the additional treatment required by Section 17-25.025(9). Please see Section 17-3.041, F.A.C., for a list of Outstanding Florida Waters and Section 17-3.161 to determine the appropriate classification of the waters.

   Please attach a map(s) with sufficient detail to enable someone to locate the subject property.

Northwest District 160 Governmental Center Pensacola, Florida 32501-5794 904-436-8300
Northeast District 3426 Bills Rd. Jacksonville, Florida 32207 904-798-4200
Central District 3319 Maguire Blvd., Suite 232 Orlando, Florida 32803-3767 407-894-7555
Southwest District 4520 Oak Fair Blvd. Tampa, Florida 33610-7347 813-623-5561
South District 2269 Bay St. Fort Myers, Florida 33901-2896 813-332-2567
Southeast District 1900 S. Congress Ave., Suite A West Palm Beach, Florida 33406 407-964-8888

3. Please submit the following information about your Stormwater Discharge Facility:

   A. One set of engineering plans and specifications.

   B. One set of appropriate design analyses, calculations, drawings, narrative description or other information necessary to document and verify that the proposed stormwater discharge facility qualifies for the general permit indicated in Part II.

4. Other DER Permits for this project have been:
   A. Denied (date) _____ DER # _____
   B. Issued (date) _____ DER # _____
   C. Pending (date submitted) _____ DER # _____

PART II: SPECIAL INFORMATION RELATIVE TO GENERAL PERMITS REQUIRING A NOTICE BY CHAPTER 17-25.035 and BY SECTION 17-4.71, FLORIDA ADMINISTRATIVE CODE CODE RULES

1. Please indicate the GENERAL PERMIT category for which you qualify.

_____ A. Facilities which discharge into a stormwater discharge facility which is permitted pursuant to Fla. Admin. Code Rule 17-25.040 or was exempted pursuant to Fla. Admin. Code Rule 17-25.030 where the appropriate treatment criteria specified in Chapter 17-25 and applied to the permitted or exempt facility are not exceeded by the discharge. (Place a check mark in the space provided and proceed to number 2 of this section.)

__X__ B. Facilities which provide retention, or detention with filtration, of the runoff from the first one inch of rainfall; or, as an option, for projects or project subunits with drainage areas less than 100 acres, facilities which provide retention, or detention with filtration, of the first one-half inch of runoff. (Place a check mark in the space provided and proceed to number 3 of this section.)

_____ C. Modification or reconstruction by a city, county, state agency, special district with drainage responsibility, or water management district of an existing stormwater management system which is not intended to serve new development, and which will not increase pollution loading, or change points of discharge in a manner that would adversely affect the designated uses of waters of the state. (Place a check mark in the space provided and proceed to number 3 of this section.)

_____ D. Facilities of stormwater management systems that include a combination of best management practices including but not limited to retention basins, swales, pervious pavement, landscape or natural retention storage that will provide for the percolation of the runoff from a three-year one-hour design storm. (Place a check mark in the space provided and proceed to number 3 of this section.)

2. Please attach a letter of consent signed by the owner or his agent indicating that you have obtained the owner's permission to discharge into the permitted or exempt storm water discharge facility which you propose to utilize. (Complete number 3 of this section.)

3. The GENERAL PERMIT listed above required that a professional engineer certify that the criteria specified will be met by the facility as designed. You must complete Sections A and B in Part III and have your engineer complete Section C in order to qualify for the GENERAL PERMIT. Please note that Chapter 17-25 F.A.C. requires a professional engineer to certify within 30 days after completion of construction that the new stormwater discharge facility has been built in substantial compliance with the appropriate General Permit criteria. (Please use Section III-D of this form.)

PART III:

A. STATEMENT BY APPLICANT

The undersigned owner or authorized representative* of Gulf Power Company is fully aware that the statements made in this notice are true, correct and complete to the best of his or her knowledge and belief. The undersigned also agrees to retain the design engineer, or another professional engineer registered in Florida, to conduct on-site observations of construction.

Signature of the owner or *authorized representative

James O. Vick, Manager of Environmental
Name and title (Please type)

*Attach a letter of authorization.

Date: 11/12/01 Phone: (850) 444-6311

B. STATEMENT BY PERSON RESPONSIBLE FOR MAINTENANCE

The undersigned agrees to maintain and operate the discharge facilities in such a manner as to comply with the provisions of Chapter 17-25, F.A.C. Responsibility for maintenance and operation may be transferred to another entity upon written notice to the Department from the undersigned and from the entity assuming responsibility, certifying that the transfer of responsibility for maintenance and operation in compliance with Chapter 17-25, F.A.C. has been accepted.

Signature of the person responsible for maintenance
(May be the applicant)

Richard M. Markey Senior Geologist
Name and title (Please type.)

One Energy Place
Address

Pensacola, FL 32520-0328

Date: 11/12/01 Phone: 850.444.6573

C. STATEMENT BY PROFESSIONAL ENGINEER REGISTERED IN FLORIDA
(where required by Chapter 471, Florida Statutes)

This is to certify that the engineering features of this stormwater discharge facility have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of stormwater pollutants. I further certify that the facility has been designed in accordance with the appropriate specifications required under Chapter 17-25, Florida Administrative Code. It is also stated that the undersigned has furnished the applicant with a set of instructions for the maintenance and operation of the stormwater discharge facility.

Signature of Engineer

Harry V. Durden 46278
Name (Please type) Florida Reg. No.
Alabama Power Company
Company Name
P.O. Box 2641
Company Address
Birmingham, AL. 35291

(Affix Seal)

Date: 11/7/01 Telephone Number: (205)257-4263

DER Form 17-1.215(2)
Effective May 8, 1985

FPL 026841
20210015-EI

Gulf Power Company
Sinai Cemetery Substation
Stormwater Management Plan
BY: H.V. Durden Jr.
Date: November 7, 2001

The subject site is located near Sneads, Florida in Jackson County and is the site of a proposed Gulf Power Company electrical substation. The property is in the northwest ¼ of the northeast ¼ and the west ½ of the west ½ of the northeast ¼ of the northeast ¼ of section 14, township 3 north, range 7 west, Jackson County, Florida and comprises approximate 53.5 total acres. The site is surrounded to the east, west and south by undeveloped forest land recently logged. The terrain of the site is a gradual to steep slope to the southeast.

The substation will be constructed in the northwest portion of the property with a developed area approximately equal to 7.62 acres. Stormwater from the substation area will be routed via inlets and piping to a proposed stormwater detention pond located southeast of the substation. The pond will have a top of dike elevation of 97'-0 and a bottom elevation of 88'-0. The emergency overflow weir will be a vertical grate inlet with the bottom at elevation 93'-0. This will release runoff at a rate of 4.72 cfs, from the 100 year-24 hour storm, which is below the predevelopment rate of 6.16 cfs. The maximum pool elevation is allowed to be 96'-0 with 1'-0 freeboard. This results in a maximum pond capacity of approximately 178,768 cubic feet, which exceeds the 100 year-24 hour storm volume of 63,617 cubic feet.

Permeability testing in the area of the proposed pond indicates a rate of 8.97 inches per hour. Groundwater was not encountered at elevations above 86'-0. The pond will drawdown in approximately 1.5 hours for the ½" runoff.

The stormwater design exceeds the criteria established by FDEP. Please refer to the enclosed calculations and drawings for details.

11/7/01

Gulf Power Company
Sinai Site Substation
Stormwater Detention Pond
Summary/Conclusions
November, 2001

Total Site Drainage Area 7.62 Ac = 0.0119 mi^2

Pre-Development Conditions

$C_{pre} = 0.20$
$T_{c\ pre} = 12.0$ min
$I_{10yr} = 6.46$ in/hr
$Q_{peak\ pre} = 9.84$ cfs (rational method)

CN = 39
$T_c = 0.20$ hr
$Q_{peak\ pre} = 6.16$ cfs (TR-20 method) use

Post-Development Conditions

a) Routing 10 yr-24 hr storm through proposed detention pond using TR-20 computer program

$CN_{weighted} = 75$
$T_c = 20$ min = 0.333 hrs SCS Overland Method
$R_{10\ yr} = 7.40$ in
$Q_{peak\ post\ to\ pond} = 35.13$ cfs use

b) Rational Method Check

$C_{post} = 0.70$
$T_{cpost} = 20$ min Kirpich Nomograph
$I_{10yr} = 5.34$ in/hr
$Q_{peak\ post\ to\ pond} = 23.48$cfs

Storm Routing Results from TR-20 Program

Using riser weir at elevation 91.0 for both principal spillway and emergency spillway.

a) For 10yr-24hr storm R = 7.4 in

$Q_{peak\ post\ to\ pond} = 35.13$ cfs
$Q_{post\ out\ of\ pond} = 0.94$ cfs < 6.16 cfs
$WS_{elevation} = 91.14$

b) For 100 yr – 24 hr storm R = 10.6 in

$Q_{peak\ post\ to\ pond}$ = 57.15cfs
$Q_{post\ out\ of\ pond}$ = 4.72 cfs
$WS_{elevation}$ = 91.74

Required Pond Volumes by State and Local Regulations

1) Required FDEP Volume

½ inch * 1ft/12 in * 7.62 Ac * 43560 ft^2/Ac = 13830 ft^3
(req'd storage) (total site)

2) More Strict Local Requirements (if applies)

1 inch * 1ft/12 in * 7.62 Ac * 43560 ft^2/Ac = 27660 ft^3
(req'd storage) (total site)

Proposed Pond

Top elevation =	97.0	Area = 34848 ft^2
Max Pool, 1 ft = Freeboard elevation	96.0	Area = 32365 ft^2
Weir top, final = Selection for retention	93.0	Area = 24829 ft^2
Weir top, for = Detention, principal And emergency spillway	91.0	Area = 19820 ft^2
Bottom elevation =	88.0	Area = 12327 ft^2

Proposed volume, total pond
(32365 ft^2 + 12327 ft^2)/2 * 8 ft (depth) = 178768 ft^3
Area at El. 96.0 Area at El. 88.0

For weir elevation of 91.0
(19820 ft^2 + 12327 ft^2)/2 * 3 ft (depth) = 48220 ft^3

48220 ft^3 > 13830 ft^3	Ok	FDEP
48220 ft^3 > 27660 ft^3	Ok	County or local

For weir elevation of 93.0

(24829 ft^2 + 123327 ft^2)/2 * 5 ft (depth) = 92890 ft^3

92890 ft^3 > 48220 ft^3 Ok

Drawdown

Permeability rate calculated = 8.97 in/hr

Use 9 inch per hour = 0.75 ft per hour

Pond bottom area = 123327 ft^2

Drawdown rate = 12327 ft^2 *0.75 ft/hr = 9245 ft^3/hr

FDEP time = 13830 ft^3/9245 ft^3/hr = 1.5 hr

1.5 hours < 36 hours Ok

County or local time = 27660 ft^3/9245 ft^3/hr = 3.0 hr

3.0 hours < 36.0 hours Ok

```
1


 ******************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

 JOB TR-20                        FULLPRINT                        NOPLOTS          10
 TITLE 001    SINAI SUBSTATION SITE    TRIAL 3              10YR-24HR             20
 TITLE        STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                   30
  3 STRUCT      04                                                                110
  8                          88.00       0.000          0.000                     160
  8                          89.00       0.060          0.312                     165
  8                          90.00       0.070          0.681                     180
  8                          91.00       0.080          1.107                     185
  8                          91.10       0.490          1.153                     190
  8                          91.20       1.390          1.200                     210
  8                          91.30       2.560          1.247                     212
  8                          91.40       3.930          1.294                     213
  8                          91.50       4.640          1.342                     214
  8                          91.60       4.670          1.391                     215
  8                          91.70       4.710          1.440                     216
  8                          91.80       4.740          1.490                     217
  8                          91.90       4.770          1.541                     218
  8                          92.00       4.810          1.592                     220
  8                          92.10       4.840          1.643                     221
  8                          92.20       4.870          1.695                     222
  8                          93.00       5.130          2.133                     224
  8                          94.00       5.430          2.732                     225
  8                          95.00       5.720          3.388                     226
  8                          96.00       5.990          4.102                     227
  9 ENDTBL                                                                        228
  6 RUNOFF 1 001       1 0.0119      75.          0.333       1 1 1 1   1        230
  6 RESVOR 2    04 1   1   88.00                              1 1 1 1   1        260
    ENDATA                                                                        270
  7 INCREM 6             0.10                                                     280
  7 COMPUT 7 001      04              7.40       1.0          2 2  01  01        290
    ENDCMP 1                                                                      300
    ENDJOB 2                                                                      310
0*******************************END OF 80-80 LIST*********************************
1


 TR20 XEQ 10-23-01  16:56          SINAI SUBSTATION SITE    TRIAL 3             10YR-24HR           20
         JOB  1   PASS   1
      REV PC 09/83(.2)             STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                 30
                     PAGE   1



 EXECUTIVE CONTROL OPERATION INCREM
         RECORD ID     280
+                                    MAIN TIME INCREMENT =   .10 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT
         RECORD ID     290
+                                    FROM XSECTION   1
+                                                    TO STRUCTURE  4
         STARTING TIME =   .00    RAIN DEPTH =  7.40    RAIN DURATION=  1.00    RAIN TABLE NO.= 2    ANT.
 MOIST. COND= 2
         ALTERNATE NO.= 1         STORM NO.= 1    MAIN TIME INCREMENT =   .10 HOURS


 OPERATION RUNOFF   CROSS SECTION   1
            OUTPUT HYDROGRAPH=  1
            AREA=     .01 SQ MI   INPUT RUNOFF CURVE= 75.    TIME OF CONCENTRATION=   .33 HOURS
            INTERNAL HYDROGRAPH TIME INCREMENT=  .0444 HOURS
 ***ELEVATION OUTPUT OPTION REQUESTED BUT NO ELEVATIONS GIVEN***

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
               12.10                          35.13                       (RUNOFF)
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 TIME(HRS)          FIRST HYDROGRAPH POINT =    .00 HOURS      TIME INCREMENT =   .10 HOURS      DRAINAGE AR
EA =     .01 SQ.MI.
    6.00     DISCHG          .00       .00       .00       .00       .00       .00       .00       .00
   .01       .02
    7.00     DISCHG          .02       .03       .04       .05       .06       .07       .08       .09
   .10       .11
    8.00     DISCHG          .11       .13       .14       .16       .18       .21       .23       .25
   .27       .28
    9.00     DISCHG          .30       .32       .35       .38       .40       .42       .45       .48
   .52       .55
   10.00     DISCHG          .57       .60       .64       .69       .75       .83       .92      1.04
  1.17      1.31
   11.00     DISCHG         1.47      1.62      1.80      1.99      2.22      2.50      3.56      6.61
 10.75     18.36
   12.00     DISCHG        29.50     35.13     28.83     19.05     12.78      9.13      7.02      5.80
  5.05      4.48
   13.00     DISCHG         3.98      3.64      3.34      3.10      2.91      2.73      2.58      2.41
  2.27      2.16
   14.00     DISCHG         2.06      1.98      1.90      1.82      1.75      1.66      1.59      1.51
  1.44      1.40
   15.00     DISCHG         1.39      1.38      1.37      1.37      1.33      1.27      1.22      1.20
  1.19      1.19
   16.00     DISCHG         1.18      1.18      1.18      1.18      1.18      1.18      1.17      1.11
  1.05      1.02
   17.00     DISCHG         1.00      1.00       .99       .99       .99       .99       .99       .99
   .99       .95
   18.00     DISCHG          .89       .84       .82       .81       .80       .80       .80       .80
   .80       .80
   19.00     DISCHG          .80       .80       .80       .80       .80       .80       .80       .80
   .80       .76
   20.00     DISCHG          .69       .65       .62       .61       .61       .60       .60       .60
   .60       .60
   21.00     DISCHG          .60       .60       .60       .60       .60       .60       .60       .60
   .60       .60
   22.00     DISCHG          .60       .60       .60       .60       .60       .60       .60       .60
   .60       .60
   23.00     DISCHG          .61       .61       .61       .61       .61       .61       .61       .61
   .60       .56
   24.00     DISCHG          .50       .41       .27       .14       .07       .03       .01       .01
   .00

   RUNOFF VOLUME ABOVE BASEFLOW =  4.50 WATERSHED INCHES,     34.54 CFS-HRS,     2.85 ACRE-FEET;   BASEFL
OW =     .00 CFS


 OPERATION RESVOR   STRUCTURE  4
           INPUT HYDROGRAPH= 1     OUTPUT HYDROGRAPH= 1
           SURFACE ELEVATION=   88.00

 *** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =         .88 CFS.
1


 TR20 XEQ 10-23-01  16:56         SINAI SUBSTATION SITE    TRIAL 3            10YR-24HR          20
         JOB  1   PASS   1
      REV PC 09/83(.2)            STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                30
                     PAGE   2


           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
              18.00                          .88                        91.14

 TIME(HRS)          FIRST HYDROGRAPH POINT =    .00 HOURS      TIME INCREMENT =   .10 HOURS      DRAINAGE AR
EA =     .01 SQ.MI.
    9.00     DISCHG          .00       .00       .00       .00       .00       .00       .00       .00
   .00       .01
    9.00       ELEV        88.00     88.00     88.00     88.00     88.00     88.00     88.00     88.00
88.00     88.09
   10.00     DISCHG          .01       .01       .01       .01       .01       .01       .01       .01
   .01       .01
   10.00       ELEV        88.10     88.10     88.11     88.12     88.13     88.14     88.16     88.17
88.18     88.20
```

11.00	DISCHG	.01	.01	.02	.02	.02	.02	.02	.03
.04	.05								
11.00	ELEV	88.22	88.24	88.27	88.29	88.32	88.35	88.40	88.49
88.63	88.87								
12.00	DISCHG	.06	.07	.07	.07	.07	.07	.07	.07
.08	.08								
12.00	ELEV	89.22	89.61	89.94	90.13	90.25	90.34	90.41	90.46
90.51	90.55								
13.00	DISCHG	.08	.08	.08	.08	.08	.08	.08	.08
.08	.08								
13.00	ELEV	90.59	90.63	90.66	90.69	90.71	90.74	90.76	90.79
90.81	90.83								
14.00	DISCHG	.08	.08	.08	.08	.08	.08	.08	.08
.08	.08								
14.00	ELEV	90.85	90.87	90.88	90.90	90.92	90.93	90.95	90.96
90.97	90.99								
15.00	DISCHG	.08	.13	.17	.21	.25	.29	.32	.35
.38	.41								
15.00	ELEV	91.00	91.01	91.02	91.03	91.04	91.05	91.06	91.07
91.07	91.08								
16.00	DISCHG	.44	.46	.49	.54	.59	.63	.67	.70
.73	.75								
16.00	ELEV	91.09	91.09	91.10	91.11	91.11	91.12	91.12	91.12
91.13	91.13								
17.00	DISCHG	.77	.79	.80	.82	.83	.84	.85	.86
.87	.88								
17.00	ELEV	91.13	91.13	91.13	91.14	91.14	91.14	91.14	91.14
91.14	91.14								
18.00	DISCHG	.88	.88	.87	.87	.86	.86	.85	.85
.84	.84								
18.00	ELEV	91.14	91.14	91.14	91.14	91.14	91.14	91.14	91.14
91.14	91.14								
19.00	DISCHG	.84	.84	.83	.83	.83	.83	.82	.82
.82	.82								
19.00	ELEV	91.14	91.14	91.14	91.14	91.14	91.14	91.14	91.14
91.14	91.14								
20.00	DISCHG	.81	.80	.78	.77	.76	.75	.74	.73
.72	.71								
20.00	ELEV	91.14	91.13	91.13	91.13	91.13	91.13	91.13	91.13
91.13	91.12								
21.00	DISCHG	.70	.69	.69	.68	.68	.67	.66	.66
.66	.65								
21.00	ELEV	91.12	91.12	91.12	91.12	91.12	91.12	91.12	91.12
91.12	91.12								
22.00	DISCHG	.65	.65	.64	.64	.64	.63	.63	.63
.63	.63								
22.00	ELEV	91.12	91.12	91.12	91.12	91.12	91.12	91.12	91.12
91.12	91.12								
23.00	DISCHG	.63	.62	.62	.62	.62	.62	.62	.62
.62	.61								
23.00	ELEV	91.12	91.11	91.11	91.11	91.11	91.11	91.11	91.11
91.11	91.11								
24.00	DISCHG	.60	.59	.57	.54	.50	.48	.46	.45
.43	.41								
24.00	ELEV	91.11	91.11	91.11	91.11	91.10	91.10	91.09	91.09
91.09	91.08								
25.00	DISCHG	.40	.39	.37	.36	.35	.33	.32	.31
.30	.29								
25.00	ELEV	91.08	91.07	91.07	91.07	91.06	91.06	91.06	91.06
91.05	91.05								
26.00	DISCHG	.28	.27	.26	.25	.24	.23	.22	.22
.21	.20								
26.00	ELEV	91.05	91.05	91.04	91.04	91.04	91.04	91.04	91.03
91.03	91.03								
27.00	DISCHG	.19	.19	.18	.17	.17	.16	.16	.15
.15	.14								
27.00	ELEV	91.03	91.03	91.02	91.02	91.02	91.02	91.02	91.02
91.02	91.01								
28.00	DISCHG	.14	.13	.13	.12	.12	.11	.11	.10
.10	.10								
28.00	ELEV	91.01	91.01	91.01	91.01	91.01	91.01	91.01	91.01
91.01	91.00								
29.00	DISCHG	.09	.09	.09	.08	.08	.08	.08	.08
.08	.08								

```
   29.00      ELEV       91.00     91.00     91.00     91.00     91.00     91.00     91.00     91.00
91.00     91.00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.01 WATERSHED INCHES,      7.77 CFS-HRS,      .64 ACRE-FEET;   BASEFL
OW =     .00 CFS
1


 TR20 XEQ 10-23-01  16:56         SINAI SUBSTATION SITE    TRIAL 3             10YR-24HR           20
         JOB  1   PASS   2
      REV PC 09/83(.2)            STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                 30
                     PAGE   3



 EXECUTIVE CONTROL OPERATION ENDCMP
         RECORD ID     300
+                                      COMPUTATIONS COMPLETED FOR PASS   1



 EXECUTIVE CONTROL OPERATION ENDJOB
         RECORD ID     310
1


 TR20 XEQ 10-23-01  16:56         SINAI SUBSTATION SITE    TRIAL 3             10YR-24HR           20
         JOB  1   SUMMARY
      REV PC 09/83(.2)            STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                 30
                     PAGE   4


 SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
                   (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HY
DROGRAPH
                    A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

 SECTION/    STANDARD              RAIN  ANTEC  MAIN          PRECIPITATION                          P
EAK DISCHARGE
 STRUCTURE    CONTROL   DRAINAGE  TABLE  MOIST  TIME   ------------------------- RUNOFF    -------------
-------------------------
    ID       OPERATION    AREA      #    COND  INCREM  BEGIN    AMOUNT  DURATION  AMOUNT    ELEVATION   T
IME       RATE       RATE
                          (SQ MI)                (HR)   (HR)     (IN)     (HR)     (IN)       (FT)       (
HR)       (CFS)      (CSM)


    ALTERNATE    1   STORM    1
+   ____________________________
 XSECTION   1  RUNOFF      .01     2      2     .10      .0     7.40    24.00     4.50       ---       12
.10       35.13     2952.4
 STRUCTURE  4  RESVOR      .01     2      2     .10      .0     7.40    24.00     1.01      91.14      18
.00?       .88?      73.8
1                                                                                          PEAK ELEV


 TR20 XEQ 10-23-01  16:56         SINAI SUBSTATION SITE    TRIAL 3             10YR-24HR           20
         JOB  1   SUMMARY
      REV PC 09/83(.2)            STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                 30
                     PAGE   5


 SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

 XSECTION/          DRAINAGE
 STRUCTURE            AREA       STORM NUMBERS.....
   ID                (SQ MI)           1
```

```
0 STRUCTURE   4          .01
+_____________________________
    ALTERNATE    1                  .88
0 XSECTION    1          .01
+_____________________________
    ALTERNATE    1                35.13
1END OF  1 JOBS IN THIS RUN
```

Qp

1

```
 ******************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

 JOB TR-20                        FULLPRINT                        NOPLOTS          10
 TITLE 001    SINAI SUBSTATION SITE    TRIAL 3              100YR-24HR            20
 TITLE        STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                   30
  3 STRUCT      04                                                                110
  8                          88.00      0.000         0.000                       160
  8                          89.00      0.060         0.312                       165
  8                          90.00      0.070         0.681                       180
  8                          91.00      0.080         1.107                       185
  8                          91.10      0.490         1.153                       190
  8                          91.20      1.390         1.200                       210
  8                          91.30      2.560         1.247                       212
  8                          91.40      3.930         1.294                       213
  8                          91.50      4.640         1.342                       214
  8                          91.60      4.670         1.391                       215
  8                          91.70      4.710         1.440                       216
  8                          91.80      4.740         1.490                       217
  8                          91.90      4.770         1.541                       218
  8                          92.00      4.810         1.592                       220
  8                          92.10      4.840         1.643                       221
  8                          92.20      4.870         1.695                       222
  8                          93.00      5.130         2.133                       224
  8                          94.00      5.430         2.732                       225
  8                          95.00      5.720         3.388                       226
  8                          96.00      5.990         4.102                       227
  9 ENDTBL                                                                       228
  6 RUNOFF 1 001       1 0.0119      75.          0.333       1 1 1 1   1        230
  6 RESVOR 2    04 1   1   88.00                               1 1 1 1   1        260
    ENDATA                                                                       270
  7 INCREM 6             0.10                                                    280
  7 COMPUT 7 001      04              10.60       1.0         2 2  01   01       290
    ENDCMP 1                                                                     300
    ENDJOB 2                                                                     310
0*******************************END OF 80-80 LIST*********************************
1


 TR20 XEQ 10-23-01  17:10          SINAI SUBSTATION SITE    TRIAL 3             100YR-24HR          20
          JOB  1   PASS   1
      REV PC 09/83(.2)             STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                  30
                     PAGE   1



 EXECUTIVE CONTROL OPERATION INCREM
         RECORD ID     280
+                                    MAIN TIME INCREMENT =    .10 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT
         RECORD ID     290
+                                    FROM XSECTION   1
+                                                      TO STRUCTURE  4
         STARTING TIME =    .00     RAIN DEPTH = 10.60     RAIN DURATION=  1.00     RAIN TABLE NO.= 2     ANT.
 MOIST. COND= 2
         ALTERNATE NO.= 1           STORM NO.= 1     MAIN TIME INCREMENT =    .10 HOURS


 OPERATION RUNOFF   CROSS SECTION   1
            OUTPUT HYDROGRAPH=  1
            AREA=     .01 SQ MI    INPUT RUNOFF CURVE= 75.     TIME OF CONCENTRATION=    .33 HOURS
            INTERNAL HYDROGRAPH TIME INCREMENT=  .0444 HOURS
 ***ELEVATION OUTPUT OPTION REQUESTED BUT NO ELEVATIONS GIVEN***

            PEAK TIME(HRS)               PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               12.09                           57.15                        (RUNOFF)
```

```
 TIME(HRS)          FIRST HYDROGRAPH POINT =    .00 HOURS      TIME INCREMENT =   .10 HOURS      DRAINAGE AR
EA =     .01 SQ.MI.
    5.00     DISCHG          .00       .00       .01       .02       .03       .04       .05       .06
  .08        .09
    6.00     DISCHG          .10       .12       .14       .16       .18       .20       .22       .24
  .25        .27
    7.00     DISCHG          .28       .30       .32       .33       .34       .36       .37       .39
  .40        .41
    8.00     DISCHG          .43       .45       .49       .53       .59       .65       .69       .73
  .76        .78
    9.00     DISCHG          .80       .84       .89       .95      1.00      1.03      1.07      1.14
 1.21       1.26
   10.00     DISCHG         1.30      1.35      1.42      1.50      1.62      1.78      1.94      2.17
 2.40       2.66
   11.00     DISCHG         2.94      3.22      3.53      3.84      4.24      4.72      6.59     11.96
19.00      31.40
   12.00     DISCHG        48.95     57.11     46.32     30.38     20.24     14.37     10.99      9.04
 7.84       6.93
   13.00     DISCHG         6.16      5.61      5.16      4.78      4.48      4.20      3.96      3.71
 3.48       3.31
   14.00     DISCHG         3.16      3.03      2.90      2.79      2.67      2.55      2.44      2.31
 2.20       2.14
   15.00     DISCHG         2.12      2.10      2.10      2.09      2.03      1.94      1.86      1.83
 1.81       1.81
   16.00     DISCHG         1.80      1.80      1.80      1.80      1.80      1.80      1.78      1.69
 1.60       1.55
   17.00     DISCHG         1.53      1.52      1.51      1.51      1.51      1.51      1.51      1.51
 1.50       1.44
   18.00     DISCHG         1.35      1.27      1.24      1.22      1.22      1.21      1.21      1.21
 1.21       1.21
   19.00     DISCHG         1.21      1.21      1.21      1.21      1.21      1.21      1.21      1.21
 1.21       1.15
   20.00     DISCHG         1.05       .98       .94       .92       .92       .91       .91       .91
  .91        .91
   21.00     DISCHG          .91       .91       .91       .91       .91       .91       .91       .91
  .91        .91
   22.00     DISCHG          .91       .91       .91       .91       .91       .91       .91       .91
  .91        .91
   23.00     DISCHG          .91       .91       .91       .91       .91       .91       .91       .91
  .91        .85
   24.00     DISCHG          .75       .62       .41       .21       .10       .05       .02       .01
  .00

   RUNOFF VOLUME ABOVE BASEFLOW =  7.43 WATERSHED INCHES,     57.04 CFS-HRS,     4.71 ACRE-FEET;   BASEFL
OW =     .00 CFS


 OPERATION RESVOR   STRUCTURE  4
           INPUT HYDROGRAPH= 1     OUTPUT HYDROGRAPH= 1
           SURFACE ELEVATION=   88.00

           PEAK TIME(HRS)          PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
              13.30                        4.72                       91.74
+                                           *                          * FIRST POINT OF FLA
T PEAK
1


 TR20 XEQ 10-23-01  17:10         SINAI SUBSTATION SITE    TRIAL 3            100YR-24HR          20
        JOB  1   PASS   1
      REV PC 09/83(.2)            STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                 30
                    PAGE   2


 TIME(HRS)          FIRST HYDROGRAPH POINT =    .00 HOURS      TIME INCREMENT =   .10 HOURS      DRAINAGE AR
EA =     .01 SQ.MI.
    8.00     DISCHG          .00       .01       .01       .01       .01       .01       .01       .01
  .01        .01
    8.00       ELEV        88.00     88.09     88.09     88.10     88.11     88.12     88.13     88.14
88.15      88.16
    9.00     DISCHG          .01       .01       .01       .01       .01       .01       .01       .02
  .02        .02
```

9.00	ELEV	88.17	88.18	88.19	88.20	88.21	88.23	88.24	88.26
88.27	88.29								
10.00	DISCHG	.02	.02	.02	.02	.02	.02	.03	.03
.03	.03								
10.00	ELEV	88.31	88.32	88.34	88.36	88.38	88.41	88.43	88.46
88.49	88.53								
11.00	DISCHG	.03	.04	.04	.04	.05	.05	.05	.06
.06	.07								
11.00	ELEV	88.56	88.61	88.65	88.70	88.76	88.82	88.91	89.05
89.27	89.62								
12.00	DISCHG	.07	.08	.74	3.44	4.64	4.66	4.68	4.70
4.71	4.71								
12.00	ELEV	90.14	90.70	91.13	91.36	91.50	91.58	91.63	91.67
91.70	91.72								
13.00	DISCHG	4.72	4.72	4.72	4.72	4.72	4.72	4.72	4.72
4.71	4.71								
13.00	ELEV	91.73	91.74	91.74	91.74	91.74	91.73	91.73	91.72
91.71	91.70								
14.00	DISCHG	4.70	4.70	4.69	4.69	4.68	4.67	4.67	4.66
4.65	4.65								
14.00	ELEV	91.68	91.67	91.65	91.64	91.62	91.60	91.58	91.56
91.54	91.52								
15.00	DISCHG	4.64	4.51	4.37	4.24	4.11	3.98	3.80	3.59
3.40	3.23								
15.00	ELEV	91.50	91.48	91.46	91.44	91.43	91.41	91.39	91.38
91.36	91.35								
16.00	DISCHG	3.08	2.94	2.82	2.71	2.61	2.53	2.46	2.39
2.31	2.24								
16.00	ELEV	91.34	91.33	91.32	91.31	91.30	91.30	91.29	91.29
91.28	91.27								
17.00	DISCHG	2.18	2.11	2.06	2.01	1.96	1.92	1.88	1.84
1.81	1.78								
17.00	ELEV	91.27	91.26	91.26	91.25	91.25	91.25	91.24	91.24
91.24	91.23								
18.00	DISCHG	1.74	1.69	1.65	1.61	1.58	1.54	1.51	1.48
1.46	1.43								
18.00	ELEV	91.23	91.23	91.22	91.22	91.22	91.21	91.21	91.21
91.21	91.20								
19.00	DISCHG	1.41	1.39	1.38	1.37	1.36	1.35	1.34	1.33
1.32	1.30								
19.00	ELEV	91.20	91.20	91.20	91.20	91.20	91.20	91.19	91.19
91.19	91.19								
20.00	DISCHG	1.29	1.26	1.24	1.22	1.19	1.17	1.15	1.14
1.12	1.10								
20.00	ELEV	91.19	91.19	91.18	91.18	91.18	91.18	91.17	91.17
91.17	91.17								
21.00	DISCHG	1.09	1.08	1.07	1.05	1.04	1.03	1.02	1.02
1.01	1.00								
21.00	ELEV	91.17	91.17	91.16	91.16	91.16	91.16	91.16	91.16
91.16	91.16								
22.00	DISCHG	1.00	.99	.98	.98	.97	.97	.96	.96
.96	.95								
22.00	ELEV	91.16	91.16	91.15	91.15	91.15	91.15	91.15	91.15
91.15	91.15								
23.00	DISCHG	.95	.95	.95	.94	.94	.94	.94	.94
.93	.93								
23.00	ELEV	91.15	91.15	91.15	91.15	91.15	91.15	91.15	91.15
91.15	91.15								
24.00	DISCHG	.91	.89	.86	.81	.76	.71	.66	.61
.56	.52								
24.00	ELEV	91.15	91.14	91.14	91.14	91.13	91.12	91.12	91.11
91.11	91.10								
25.00	DISCHG	.49	.47	.45	.44	.42	.41	.39	.38
.36	.35								
25.00	ELEV	91.10	91.10	91.09	91.09	91.08	91.08	91.08	91.07
91.07	91.07								
26.00	DISCHG	.34	.33	.32	.30	.29	.28	.27	.26
.25	.25								
26.00	ELEV	91.06	91.06	91.06	91.05	91.05	91.05	91.05	91.04
91.04	91.04								
27.00	DISCHG	.24	.23	.22	.21	.20	.20	.19	.18
.18	.17								
27.00	ELEV	91.04	91.04	91.03	91.03	91.03	91.03	91.03	91.03
91.02	91.02								

```
   28.00     DISCHG          .16       .16       .15       .15       .14       .14       .13       .13
  .12        .12
   28.00       ELEV        91.02     91.02     91.02     91.02     91.02     91.01     91.01     91.01
91.01      91.01
   29.00     DISCHG          .11       .11       .11       .10       .10       .10       .09       .09
  .09        .08
   29.00       ELEV        91.01     91.01     91.01     91.01     91.00     91.00     91.00     91.00
91.00      91.00

   RUNOFF VOLUME ABOVE BASEFLOW =  3.94 WATERSHED INCHES,     30.23 CFS-HRS,     2.50 ACRE-FEET;   BASEFL
OW =     .00 CFS
1


 TR20 XEQ 10-23-01  17:10          SINAI SUBSTATION SITE    TRIAL 3             100YR-24HR          20
         JOB  1   PASS   2
      REV PC 09/83(.2)             STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                 30
                      PAGE   3



 EXECUTIVE CONTROL OPERATION ENDCMP
         RECORD ID     300
+                                      COMPUTATIONS COMPLETED FOR PASS   1



 EXECUTIVE CONTROL OPERATION ENDJOB
         RECORD ID     310
1


 TR20 XEQ 10-23-01  17:10          SINAI SUBSTATION SITE    TRIAL 3             100YR-24HR          20
         JOB  1   SUMMARY
      REV PC 09/83(.2)             STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                 30
                      PAGE   4


 SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
                   (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HY
DROGRAPH
                    A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

 SECTION/     STANDARD              RAIN  ANTEC  MAIN          PRECIPITATION                              P
EAK DISCHARGE
 STRUCTURE     CONTROL    DRAINAGE  TABLE  MOIST  TIME   ------------------------  RUNOFF    -----------
-------------------------
    ID        OPERATION     AREA      #    COND  INCREM  BEGIN    AMOUNT  DURATION  AMOUNT    ELEVATION   T
IME        RATE        RATE
                           (SQ MI)                (HR)   (HR)     (IN)     (HR)     (IN)       (FT)       (
HR)        (CFS)       (CSM)


    ALTERNATE     1   STORM     1
+   ____________________________
 XSECTION   1  RUNOFF        .01      2      2     .10      .0    10.60    24.00     7.43       ---         12
.09        57.15      4802.9
 STRUCTURE  4  RESVOR        .01      2      2     .10      .0    10.60    24.00     3.94      91.74        13
.30*        4.72*      396.8
1                                                                                          PEAK ELEV.


 TR20 XEQ 10-23-01  17:10          SINAI SUBSTATION SITE    TRIAL 3             100YR-24HR          20
         JOB  1   SUMMARY
      REV PC 09/83(.2)             STORM ROUTING CALCS - DETENTION POND W/ RISER PIPE                 30
                      PAGE   5
```

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID		DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1
0 STRUCTURE	4	.01	
+ ALTERNATE	1		4.72
0 XSECTION	1	.01	
+ ALTERNATE	1		57.15 Qp

1END OF 1 JOBS IN THIS RUN

```
1

 ******************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY******************


 JOB TR-20           ECON      FULLPRINT          SUMMARY   NOPLOTS      100
 TITLE 001        SINAI SUBSTATION SITE          10YR-24HR               200
 TITLE 001        STORM DRAINAGE CALCS - DET. POND  PRE-CONDITION        300
  6 RUNOFF 1 001       1  0.0119      39.         0.200      1 1   1   1 400
    ENDATA                                                               500
  7 INCREM 6             0.10                                            600
  7 COMPUT 7 001   001                 7.40         1.0       2 2  01  01 700
    ENDCMP 1                                                             800
    ENDJOB 2                                                             900
0*********************************END OF 80-80 LIST*********************************


 MAIN - UNEXPECTED RECORD FOUND(IGNORED) >>>
                  <<<


 MAIN - UNEXPECTED RECORD FOUND(IGNORED) >>>
                  <<<
1


 TR20 XEQ 11-02-01  07:14             SINAI SUBSTATION SITE          10YR-24HR              200
        JOB  1   PASS   1
      REV PC 09/83(.2)               STORM DRAINAGE CALCS - DET. POND  PRE-CONDITION       300
                  PAGE   1



 EXECUTIVE CONTROL OPERATION INCREM
        RECORD ID 600
+                                     MAIN TIME INCREMENT =    .10 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT
        RECORD ID 700
+                                     FROM XSECTION   1
+                                                        TO XSECTION   1
        STARTING TIME =    .00    RAIN DEPTH =  7.40    RAIN DURATION=  1.00    RAIN TABLE NO.= 2    ANT.
 MOIST. COND= 2
        ALTERNATE NO.= 1         STORM NO.= 1    MAIN TIME INCREMENT =    .10 HOURS


 OPERATION RUNOFF   CROSS SECTION   1
           OUTPUT HYDROGRAPH=  1
           AREA=     .01 SQ MI   INPUT RUNOFF CURVE= 39.    TIME OF CONCENTRATION=    .20 HOURS
           INTERNAL HYDROGRAPH TIME INCREMENT=  .0267 HOURS

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
              12.09                          6.16                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =    .00 HOURS      TIME INCREMENT =  .10 HOURS      DRAINAGE AR
EA =    .01 SQ.MI.
   11.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00
  .01       .90
   12.00    DISCHG        4.48      6.14      3.58      2.52      1.90      1.60      1.47      1.35
1.30      1.18
   13.00    DISCHG        1.10      1.04       .96       .93       .87       .84       .80       .74
  .72       .69
   14.00    DISCHG         .67       .65       .62       .61       .58       .56       .53       .50
  .49       .49
   15.00    DISCHG         .49       .49       .50       .49       .46       .44       .44       .44
  .44       .44
   16.00    DISCHG         .44       .44       .44       .44       .45       .45       .43       .40
  .38       .38
```

```
   17.00    DISCHG          .38       .38       .38       .38       .38       .39       .39       .39
  .38       .35
   18.00    DISCHG          .32       .32       .32       .32       .32       .32       .32       .32
  .32       .32
   19.00    DISCHG          .32       .32       .32       .32       .32       .32       .32       .33
  .32       .28
   20.00    DISCHG          .26       .25       .25       .25       .25       .25       .25       .25
  .25       .25
   21.00    DISCHG          .25       .25       .25       .25       .25       .25       .25       .25
  .25       .25
   22.00    DISCHG          .25       .25       .25       .25       .25       .26       .26       .26
  .26       .26
   23.00    DISCHG          .26       .26       .26       .26       .26       .26       .26       .26
  .25       .21
   24.00    DISCHG          .19       .13       .04       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =    .92 WATERSHED INCHES,      7.04 CFS-HRS,      .58 ACRE-FEET;   BASEFL
OW =     .00 CFS


 EXECUTIVE CONTROL OPERATION ENDCMP
         RECORD ID 800
+                                        COMPUTATIONS COMPLETED FOR PASS   1



 EXECUTIVE CONTROL OPERATION ENDJOB
         RECORD ID 900
1


 TR20 XEQ 11-02-01  07:14              SINAI SUBSTATION SITE           10YR-24HR              200
         JOB  1   SUMMARY
      REV PC 09/83(.2)                 STORM DRAINAGE CALCS - DET. POND  PRE-CONDITION        300
                 PAGE   2


 SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
                   (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HY
DROGRAPH
                    A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

 SECTION/     STANDARD              RAIN  ANTEC  MAIN          PRECIPITATION                          P
EAK DISCHARGE
 STRUCTURE    CONTROL   DRAINAGE  TABLE  MOIST  TIME   ------------------------- RUNOFF    ----------
-------------------------
    ID        OPERATION    AREA      #    COND  INCREM  BEGIN    AMOUNT  DURATION  AMOUNT    ELEVATION   T
IME       RATE       RATE
                          (SQ MI)                (HR)   (HR)     (IN)     (HR)     (IN)       (FT)      (
HR)       (CFS)      (CSM)


    ALTERNATE    1   STORM    1
+   ____________________________
 XSECTION   1  RUNOFF       .01      2      2     .10      .0     7.40    24.00      .92       ---      12
.09        6.16      518.0
1


 TR20 XEQ 11-02-01  07:14              SINAI SUBSTATION SITE           10YR-24HR              200
         JOB  1   SUMMARY
      REV PC 09/83(.2)                 STORM DRAINAGE CALCS - DET. POND  PRE-CONDITION        300
                 PAGE   3


 SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

 XSECTION/          DRAINAGE
 STRUCTURE            AREA       STORM NUMBERS.....
```

```
   ID                (SQ MI)          1

0 XSECTION     1          .01
+_____________________________________
     ALTERNATE     1                  6.16      CFS
1END OF  1 JOBS IN THIS RUN
```

Post Office Box 12951
Pensacola, FL 32520-0100
Telephone 904 444-6393

Gen JHN

G. Edison "Ed" Holland, Jr.
Vice President – Power Generation, Transmission and Corporate Counsel

the southern electric system

February 22, 1996

CERTIFIED MAIL

Mr. Rick Bradburn
Florida Department of Environmental Protection
160 Governmental Center
Pensacola, Florida 32501-5794

Dear Mr. Bradburn:

FL 000 2275 CRIST ELECTRIC GENERATING PLANT
FL 000 2267 SMITH ELECTRIC GENERATING PLANT
FL 000 2283 SCHOLZ ELECTRIC GENERATING PLANT

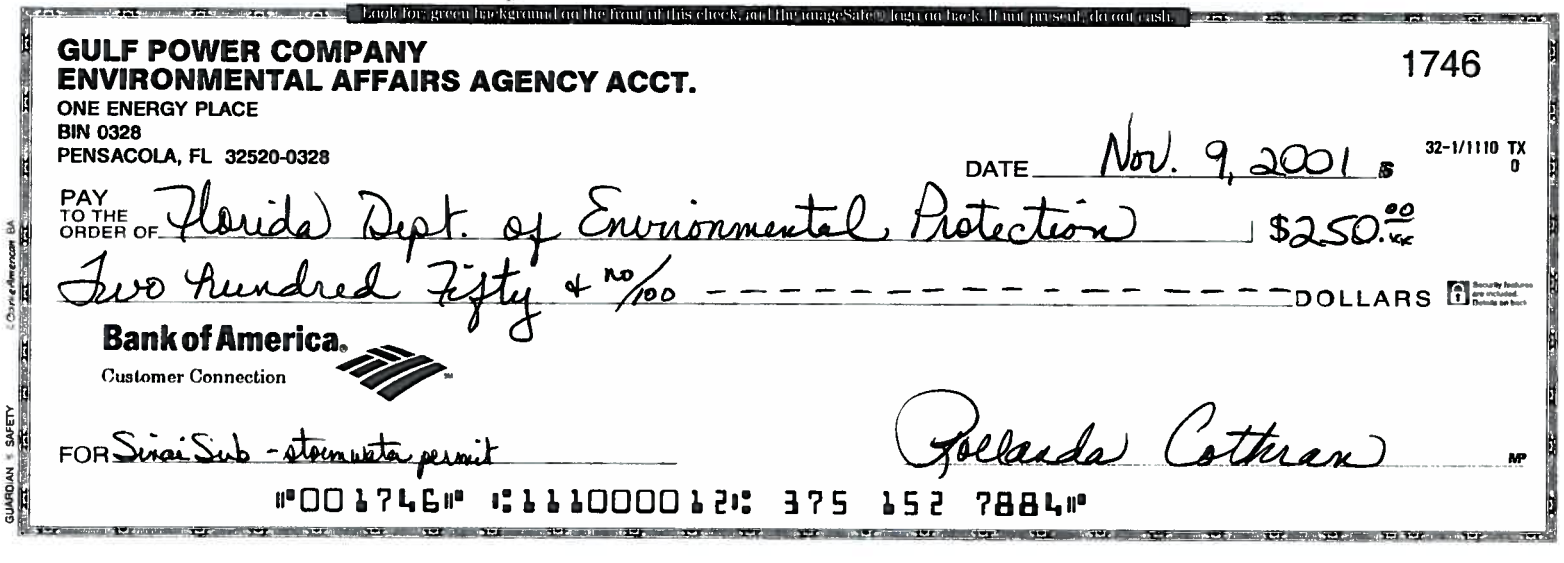
This letter is written to inform the Department of a change in the authorized agent for Gulf Power Company. M. L. Gilchrist, who is currently Gulf Power Company's authorized agent, will retire at the end of this month. The new authorized agent, effective March 1, 1996, will be Jim Vick.

If any questions arise concerning this information, please call me or Joe Neese at (904) 444-6429.

Sincerely,

E. Holland

cc: J. A. Babbitt
J. M. Dominey
M. L. Gilchrist
S. H. Houston, Jr.
J. W. Martin
J. H. Neese
P. Parker
K. Peacock
J. L. Sherouse
R. A. Terry
J. O. Vick



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GULF POWER COMPANY
ENVIRONMENTAL AFFAIRS AGENCY ACCT.
ONE ENERGY PLACE
BIN 0328
PENSACOLA, FL 32520-0328

1746

32-1/1110 TX 0

DATE Nov. 9, 2001

PAY TO THE ORDER OF Florida Dept. of Environmental Protection $250.00

Two Hundred Fifty & no/100 ---------- DOLLARS

Bank of America
Customer Connection

FOR Sirai Sub - stormwater permit

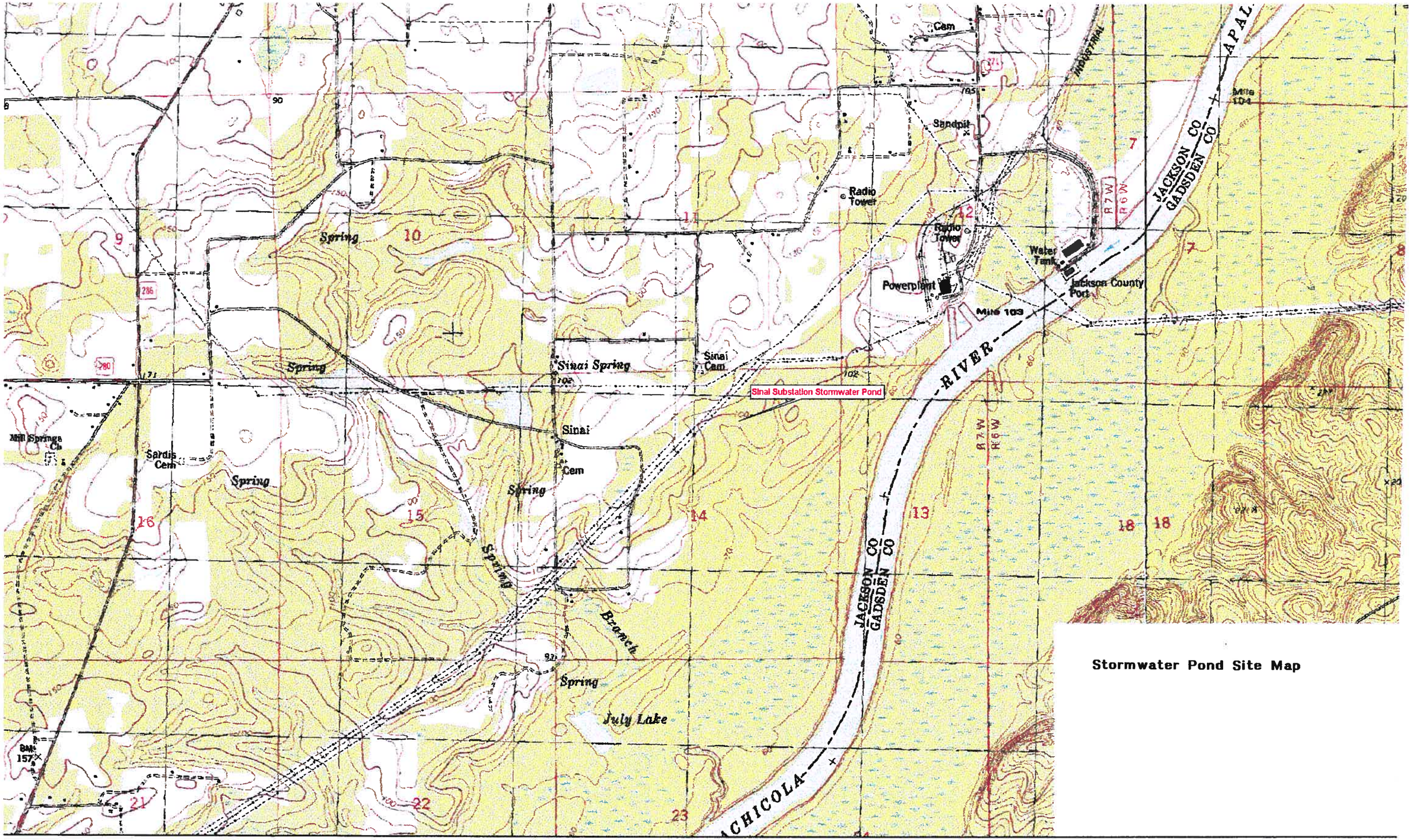
Rolanda Cothran

⑈001746⑈ ⑆111000012⑆ 375 152 7884⑈

GUARDIAN SAFETY

FPL 026860
20210015-EI

BAT
T-5
RMM (cost)



Stormwater Pond Site Map