

EFFLUENT AND WASTE DISPOSAL

SEMIANNUAL REPORT

1/1/82 - 6/30/82

Supplement

FLORIDA POWER CORPORATION

CRYSTAL RIVER - UNIT 3

FACILITY OPERATING LICENSE NO. DPR-72

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I INTRODUCTION

This Supplemental Report is submitted as required by Technical Specification 5.6.1.B of Appendix B to the Crystal River Unit 3 Facility Operating License No. DPR-72. This report contains the gaseous dose to an individual and the population for the period January 1, through June 30, 1982.

The summations of gaseous doses were delayed due to the unavailability of historical meteorological data for the period of the report. Failure of the magnetic tape unit on the meteorological data retrieval system necessitated the transcription of the historical data from strip charts thus delaying the report.

The individual and population doses were calculated using the GASPAR computer code obtained from the Nuclear Regulatory Commission and revised to include site specific data wherever possible.

TABLE I-1A
SUMMATION OF DOSES TO INDIVIDUALS FROM
GASEOUS EFFLUENT RELEASES

First Quarter

Beta Air Dose = $2.31\text{E}-02$ mrad/yr (Design Objective = $2.00\text{E}+1$ mrad/yr)
Gamma Air Dose = $7.79\text{E}-03$ mrad/yr (Design Objective = $1.00\text{E}+01$ mrad/yr)

<u>Effluent Release</u>	<u>Distance (Mi.) and Direction</u>	<u>Whole Body Dose</u>		<u>Dose (mrem/yr)</u>	<u>Design Objectives (mrem/yr)</u>
		<u>Age Group</u>	<u>Organ</u>		
Continuous Gaseous	4.00 at E	Child	N/A	$5.26\text{E}-03$	$5.00\text{E}+00$
Batch Gaseous	4.00 at E	Adult	N/A	$2.28\text{E}-02$	
<u>Organ Dose</u>					
Continuous Gaseous	4.00 at E	Child	Skin	$1.87\text{E}-02$	$1.50\text{E}+01$
Batch Gaseous	4.00 at E	Infant	Liver	$1.07\text{E}-01$	

Second Quarter

Beta Air Dose = $8.88\text{E}-03$ mrad/yr (Design Objective = $2.00\text{E}+01$ mrad/yr)
Gamma Air Dose = $5.22\text{E}-03$ mrad/yr (Design Objective = $1.00\text{E}+01$ mrad/yr)

<u>Whole Body Dose</u>					
Continuous Gaseous	4.00 at E	Child	N/A	$3.75\text{E}-03$	$5.00\text{E}+00$
Batch Gaseous	4.00 at E	Adult	N/A	$8.81\text{E}-04$	
<u>Organ Dose</u>					
Continuous Gaseous	4.00 at E	Infant	Thyroid	$4.15\text{E}-02$	$1.50\text{E}+01$
Batch Gaseous	4.00 at E	Infant	Thyroid	$7.82\text{E}-03$	

TABLE I-1B

SUMMATION OF DOSES TO THE POPULATION
FROM GASEOUS EFFLUENT RELEASESFirst Quarter

<u>Effluent Release</u>	<u>Whole Body Dose</u>		<u>Organ</u>	<u>Organ Dose</u>	
	<u>Dose</u> (MAN-REM/YR)	<u>Design Objectives</u> (MAN-REM/YR)		<u>Dose</u> (MAN-REM/YR)	<u>Design Objectives</u> (MAN-REM/YR)
Continuous Gases	6.16E-02	5.00E+02	Skin	3.57E-01	5.00E+02
Batch Gaseous	3.36E-02		Liver	4.55E-02	

Second Quarter

Continuous Gaseous	3.73E-02	5.00E+02	Skin	1.15E-04	5.00E+02
Batch Gaseous	2.04E-03		Thyroid	3.73E-03	

TABLE II-3
Doses to Individuals from Continuous Gaseous Effluent Releases

FIRST QUARTER

Beta Air Dose = $2.23\text{E-}02$ mrad/yr (4.0 miles, E)
Gamma Air Dose = $7.53\text{E-}03$ mrad/yr (4.0 miles, E)

Pathway	Whole Body Dose			Organ Dose			
	Distance (Mi.) and Direction	Age Group	Dose (mrem/yr)	Distance (Mi.) and Direction	Age Group	Organ	Dose (mrem/yr)
Plume Immersion	4.00 at E	Each	$4.78\text{E-}03$	4.00 at E	Each	Skin	$1.82\text{E-}02$
Ground Contamination	4.00 at E	Each	$4.59\text{E-}07$	4.00 at E	Each	Skin	$5.44\text{E-}07$
Inhalation	4.00 at E	Teen	$8.95\text{E-}05$	4.00 at E	Teen	Thyroid	$1.27\text{E-}04$
Vegetable Consumption	4.00 at E	Child	$1.74\text{E-}04$	4.00 at E	Child	Thyroid	$4.29\text{E-}04$
Cow Milk Consumption	4.00 at E	Infant	$1.10\text{E-}04$	4.00 at E	Infant	Thyroid	$5.25\text{E-}03$
Goat Milk Consumption	4.00 at E	Infant	$2.18\text{E-}04$	4.00 at E	Infant	Thyroid	$6.39\text{E-}03$
Meat Consumption	4.00 at E	Adult	$1.41\text{E-}05$	4.00 at E	Adult	Thyroid	$3.83\text{E-}05$
Total	4.00 at E	Child	$5.26\text{E-}03$	4.00 at E	Child	Skin	$1.87\text{E-}02$

SECOND QUARTER

Beta Air Dose = $8.83\text{E-}03$ mrad/yr (4.0 miles, E)
Gamma Air Dose = $5.20\text{E-}03$ mrad/yr (4.0 miles, E)

Pathway	Whole Body Dose			Organ Dose			
	Distance (Mi.) and Direction	Age Group	Dose (mrem/yr)	Distance (Mi.) and Direction	Age Group	Organ	Dose (mrem/yr)
Plume Immersion	4.00 at E	Each	$3.27\text{E-}03$	4.00 at E	Each	Skin	$7.70\text{E-}03$
Ground Contamination	4.00 at E	Each	$4.79\text{E-}06$	4.00 at E	Each	Skin	$5.78\text{E-}06$
Inhalation	4.00 at E	Teen	$4.16\text{E-}05$	4.00 at E	Child	Thyroid	$6.46\text{E-}04$
Vegetable Consumption	4.00 at E	Child	$2.73\text{E-}04$	4.00 at E	Child	Thyroid	$1.43\text{E-}03$
Cow Milk Consumption	4.00 at E	Infant	$8.63\text{E-}05$	4.00 at E	Infant	Thyroid	$1.71\text{E-}02$
Goat Milk Consumption	4.00 at E	Infant	$1.55\text{E-}04$	4.00 at E	Infant	Thyroid	$2.05\text{E-}02$
Meat Consumption	4.00 at E	Adult	$7.69\text{E-}06$	4.00 at E	Child	Thyroid	$2.80\text{E-}05$
Total	4.00	Child	$3.75\text{E-}03$	4.00 at E	Infant	Thyroid	$4.15\text{E-}02$

TABLE II-4
Doses to Individuals from Batch Gaseous Effluent Releases

FIRST QUARTER

Beta Air Dose = $7.74\text{E-}04$ mrad/yr (4.0 miles, E)
Gamma Air Dose = $2.64\text{E-}04$ mrad/yr (4.0 miles, E)

Pathway	Whole Body Dose			Organ Dose			
	Distance (Mi.) and Direction	Age Group	Dose (mrem/yr)	Distance (Mi.) and Direction	Age Group	Organ	Dose (mrem/yr)
Plume Immersion	4.00 at E	Each	$1.56\text{E-}04$	4.00 at E	Each	Skin	$4.70\text{E-}04$
Ground Contamination	4.00 at E	Each	$4.91\text{E-}03$	4.00 at E	Each	Skin	$5.72\text{E-}03$
Inhalation	4.00 at E	Adult	$1.23\text{E-}05$	4.00 at E	Child	Thyroid	$5.29\text{E-}05$
Vegetable Consumption	4.00 at E	Adult	$3.84\text{E-}03$	4.00 at E	Child	Liver	$1.32\text{E-}02$
Cow Milk Consumption	4.00 at E	Adult	$3.38\text{E-}03$	4.00 at E	Infant	Thyroid	$3.37\text{E-}02$
Goat Milk Consumption	4.00 at E	Adult	$1.01\text{E-}02$	4.00 at E	Infant	Liver	$7.62\text{E-}02$
Meat Consumption	4.00 at E	Adult	$3.97\text{E-}04$	4.00 at E	Child	Liver	$5.51\text{E-}04$
Total	4.00 at E	Adult	$2.28\text{E-}02$	4.00 at E	Infant	Liver	$1.07\text{E-}01$

SECOND QUARTER

Beta Air Dose = $5.59\text{E-}05$ mrad/yr (4.0 miles, E)
Gamma Air Dose = $2.13\text{E-}05$ mrad/yr (4.0 miles, E)

Pathway	Whole Body Dose			Organ Dose			
	Distance (Mi.) and Direction	Age Group	Dose (mrem/yr)	Distance (Mi.) and Direction	Age Group	Organ	Dose (mrem/yr)
Plume Immersion	4.00 at E	Each	$1.28\text{E-}05$	4.00 at E	Each	Skin	$3.54\text{E-}05$
Ground Contamination	4.00 at E	Each	$1.98\text{E-}04$	4.00 at E	Each	Skin	$2.31\text{E-}04$
Inhalation	4.00 at E	Adult	$9.25\text{E-}08$	4.00 at E	Child	Thyroid	$1.11\text{E-}06$
Vegetable Consumption	4.00 at E	Adult	$1.46\text{E-}04$	4.00 at E	Child	Liver	$5.17\text{E-}04$
Cow Milk Consumption	4.00 at E	Adult	$1.28\text{E-}04$	4.00 at E	Infant	Thyroid	$3.46\text{E-}03$
Goat Milk Consumption	4.00 at E	Adult	$3.82\text{E-}04$	4.00 at E	Infant	Thyroid	$4.15\text{E-}03$
Meat Consumption	4.00 at E	Adult	$1.50\text{E-}05$	4.00 at E	Child	Liver	$2.14\text{E-}05$
Total	4.00 at E	Adult	$8.81\text{E-}04$	4.00 at E	Infant	Thyroid	$7.82\text{E-}03$

TABLE II-5

Doses to the Population from Continuous Gaseous Effluent Releases

FIRST QUARTER

<u>Pathway</u>	<u>Whole Body Dose (Man-Rem)</u>	<u>Organ</u>	<u>Organ Dose (Man-Rem)</u>
Plume Immersion	5.80E-02	Skin	3.53E-01
Ground Contamination	3.93E-06	Skin	4.65E-06
Inhalation	2.10E-03	Thyroid	2.80E-03
Vegetable Consumption	1.04E-03	Thyroid	3.30E-03
Milk Consumption	2.72E-04	Thyroid	2.33E-03
Meat Consumption	2.26E-04	Thyroid	3.96E-04
Total	6.16E-02	Skin	3.57E-01

SECOND QUARTER

<u>Pathway</u>	<u>Whole Body Dose (Man-Rem)</u>	<u>Organ</u>	<u>Organ Dose (Man-Rem)</u>
Plume Immersion	3.55E-02	Skin	1.14E-01
Ground Contamination	2.22E-05	Skin	2.68E-05
Inhalation	8.91E-04	Thyroid	8.22E-03
Vegetable Consumption	6.95E-04	Thyroid	1.76E-03
Milk Consumption	1.30E-04	Thyroid	1.52E-03
Meat Consumption	9.98E-05	Thyroid	1.88E-04
Total	3.73E-02	Skin	1.15E-04

TABLE II-6

Doses to the Population from Batch Gaseous Effluent Releases

FIRST QUARTER

<u>Pathway</u>	<u>Whole Body Dose (Man-Rem)</u>	<u>Organ</u>	<u>Organ Dose (Man-Rem)</u>
Plume Immersion	3.54E-04	Skin	2.43E-03
Ground Contamination	2.24E-02	Skin	2.61E-02
Inhalation	2.34E-04	Thyroid	1.12E-03
Vegetable Consumption	5.57E-03	Liver	1.15E-02
Milk Consumption	4.00E-03	Liver	9.11E-03
Meat Consumption	1.05E-03	Liver	1.76E-03
Total	3.36E-02	Liver	4.55E-02

SECOND QUARTER

<u>Pathway</u>	<u>Whole Body Dose (Man-Rem)</u>	<u>Organ</u>	<u>Organ Dose (Man-Rem)</u>
Plume Immersion	4.06E-05	Skin	1.38E-04
Ground Contamination	1.28E-03	Skin	1.50E-03
Inhalation	2.90E-07	Thyroid	3.73E-06
Vegetable Consumption	4.81E-04	Thyroid	1.51E-03
Milk Consumption	1.62E-04	Thyroid	8.25E-04
Meat Consumption	7.27E-05	Liver	1.25E-04
Total	2.04E-03	Thyroid	3.73E-03

V METEOROLOGICAL DATA

The meteorological data at 33 feet (10 meters) is summarized in Tables V-1, V-2, V-3, and V-4 .

The classification of atmosphere stability is as follows:

Stability Classification	Pasquill Categories	Temperature change with height (°C/100m)
Extremely unstable	A	<-1.9
Moderately unstable	B	>-1.9 to <-1.7
Slightly unstable	C	>-1.7 to <-1.5
Neutral	D	>-1.5 to <-0.5
Slightly stable	E	>-0.5 to < 1.5
Moderately stable	F	> 1.5 to < 4.0
Extremely stable	G	> 4.0

The data recovery rates are:

First Quarter 89%
Second Quarter 84%

The meteorological data for this period was manually recovered from strip charts.

TABLE V-1

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982

STABILITY CLASS - A

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	3	4	0	0	0	7
NNE	1	6	3	0	0	0	10
NE	0	3	3	0	0	0	6
ENE	0	3	8	2	0	0	13
E	0	6	7	1	0	0	14
ESE	1	2	2	0	0	0	5
SE	1	4	3	1	0	0	9
SSE	0	4	1	1	0	0	6
S	0	1	0	0	0	0	1
SSW	0	7	1	0	0	0	8
SW	1	3	0	0	0	0	4
WSW	0	6	0	0	0	0	6
W	0	3	3	0	0	0	6
WNW	0	1	7	5	3	0	16
NW	1	0	2	1	1	0	5
NNW	1	2	3	0	0	0	6
TOTAL	6	54	47	11	4	0	122

PERIODS OF CALM (HOURS) - 0

TABLE V-1

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982

STABILITY CLASS - B

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	24+ -----	
N	0	0	0	0	0	0	0
NNE	0	0	2	0	0	0	2
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	1	3	1	0	0	0	5
ESE	0	0	0	0	0	0	0
SE	0	1	1	0	0	0	2
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	1	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	1	0	0	0	0	1
TOTAL	1	5	4	1	0	0	11

PERIODS OF CALM (HOURS) - 0

TABLE V-1

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982

STABILITY CLASS - C

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	1	2	1	0	0	4
NNE	0	2	1	0	0	0	3
NE	0	1	1	0	0	0	2
ENE	1	0	0	1	0	0	2
E	0	1	1	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	2	1	0	0	0	3
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	2	1	0	0	3
SW	0	1	0	0	0	0	1
WSW	0	1	0	0	0	0	1
W	0	1	0	0	0	0	1
WNW	0	1	3	0	0	0	4
NW	0	1	0	1	0	0	2
NNW	0	0	1	0	0	0	1
TOTAL	1	12	12	4	0	0	29

PERIODS OF CALM (HOURS) - 1

TABLE V-1

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982

STABILITY CLASS - D

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	2	24	18	3	0	0	47
NNE	4	22	16	1	0	0	43
NE	2	7	39	0	0	0	48
ENE	10	21	31	2	0	0	64
E	7	10	4	0	0	0	21
ESE	0	5	1	1	0	0	7
SE	0	1	1	0	0	0	2
SSE	1	2	1	2	0	0	6
S	0	3	2	2	0	0	7
SSW	1	2	5	2	0	0	10
SW	2	2	4	0	0	0	8
WSW	0	2	2	1	0	0	5
W	1	4	1	4	1	0	11
WNW	0	9	12	13	6	4	44
NW	2	13	12	8	1	1	37
NNW	0	5	11	2	0	0	18
TOTAL	32	132	160	41	8	5	378

PERIODS OF CALM (HOURS) - 1

TABLE V-1

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982

STABILITY CLASS - E

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	24+ -----	
N	7	12	19	0	0	0	38
NNE	4	29	23	0	0	0	56
NE	4	20	32	1	0	0	57
ENE	12	50	56	3	0	0	121
E	12	33	13	2	0	0	60
ESE	4	12	13	0	0	0	29
SE	3	7	14	2	0	0	26
SSE	1	4	8	5	1	0	19
S	2	3	1	1	2	0	9
SSW	1	5	8	8	1	0	23
SW	2	4	4	2	0	0	12
WSW	2	19	3	0	0	0	24
W	6	31	12	3	1	0	53
WNW	2	44	27	11	1	0	85
NW	7	17	14	7	0	0	45
NNW	8	12	9	6	0	0	35
TOTAL	77	302	256	51	6	0	692

PERIODS OF CALM (HOURS) - 2

TABLE V-1

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982

STABILITY CLASS - F

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	15	17	5	0	0	0	37
NNE	7	11	7	0	0	0	25
NE	5	4	3	0	0	0	12
ENE	6	9	10	0	0	0	25
E	6	15	6	0	0	0	27
ESE	7	4	3	0	0	0	14
SE	6	13	3	0	0	0	22
SSE	1	12	10	1	0	0	24
S	4	1	8	1	1	0	15
SSW	1	1	6	5	0	0	13
SW	0	3	3	0	0	0	6
WSW	3	1	0	0	0	0	4
W	2	11	7	0	0	0	20
WNW	4	5	4	1	0	0	14
NW	5	7	1	0	0	0	13
NNW	6	4	2	0	0	0	12
TOTAL	78	118	78	8	1	0	283

PERIODS OF CALM (HOURS) - 11

TABLE V-1

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982

STABILITY CLASS - G

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	5	0	3	1	0	0	9
NNE	3	2	1	0	0	0	6
NE	12	5	2	0	0	0	19
ENE	18	20	13	0	0	0	51
E	18	14	1	0	0	0	33
ESE	16	6	3	0	0	0	25
SE	11	8	1	2	0	0	22
SSE	5	10	4	2	0	0	21
S	5	9	3	2	0	0	19
SSW	10	10	7	5	0	0	32
SW	9	26	12	0	0	0	47
WSW	8	25	8	0	0	0	41
W	2	13	5	0	0	0	20
WNW	4	8	1	0	0	0	13
NW	4	1	3	1	0	0	9
NNW	4	1	1	0	0	0	6
TOTAL	134	158	68	13	0	0	373

PERIODS OF CALM (HOURS) - 9

TABLE V-2

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982 BATCH RELEASES

STABILITY CLASS - A

ELEVATION - 33 FT.

WIND DIR	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	24+	
----	----	----	----	----	----	----	-----
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	1	0	0	0	0	1
W	0	2	5	2	0	0	9
WNW	0	1	0	2	0	0	3
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	4	5	4	0	0	13

PERIODS OF CALM (HOURS) - 0

TABLE V-2

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982 BATCH RELEASES

STABILITY CLASS - B

ELEVATION - 33 FT.

WIND DIR	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	24+	
----	----	----	----	----	----	----	----
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	1	0	0	1
WNW	0	0	0	1	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	2	0	0	2

PERIODS OF CALM (HOURS) - 0

TABLE V-2

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982 BATCH RELEASES

STABILITY CLASS - C

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM (HOURS) - 0

TABLE V-2

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982 BATCH RELEASES

STABILITY CLASS - D

ELEVATION - 33 FT.

WIND DIR	WIND SPEED (MPH)						TOTAL
----	1-3	4-7	8-12	13-18	19-24	24+	-----
N	0	0	0	0	0	0	0
NNE	0	0	2	0	0	0	2
NE	0	0	3	2	0	0	5
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	1	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	1	1	0	0	2
WNW	0	0	2	0	0	0	2
NW	0	0	0	3	0	0	3
NNW	0	0	0	0	0	0	0
TOTAL	0	2	8	6	0	0	16

PERIODS OF CALM (HOURS) - 0

TABLE V-2

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982 BATCH RELEASES

STABILITY CLASS - E

ELEVATION - 33 FT.

WIND DIR	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	24+	
----	----	----	----	----	----	----	-----
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	1	0	1
SSE	0	1	1	0	0	0	2
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	1	0	0	1
W	0	0	0	0	0	0	0
WNW	1	1	2	3	0	0	7
NW	0	2	3	0	0	0	5
NNW	0	7	0	0	0	0	7
TOTAL	1	11	6	4	1	0	23

PERIODS OF CALM (HOURS) - 0

TABLE V-2

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982 BATCH RELEASES

STABILITY CLASS - F

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	0	0	0	0	0	0
NNE	0	1	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	1	0	0	0	0	1
WSW	0	3	0	0	0	0	3
W	0	2	0	0	0	0	2
WNW	1	0	0	0	0	0	1
NW	1	1	0	0	0	0	2
NNW	1	0	0	0	0	0	1
TOTAL	3	8	0	0	0	0	11

PERIODS OF CALM (HOURS) - 0

TABLE V-2

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - JANUARY 1, 1982 THROUGH MARCH 31, 1982 BATCH RELEASES

STABILITY CLASS - G

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM (HOURS) - 0

TABLE V-3

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982

STABILITY CLASS - A

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	3	0	0	0	0	3
NNE	0	6	1	0	0	0	7
NE	0	6	19	1	0	0	26
ENE	1	12	27	1	0	0	41
E	0	5	15	0	0	0	20
ESE	0	3	8	0	0	0	11
SE	0	4	2	0	0	0	6
SSE	1	5	1	0	0	0	7
S	0	9	6	0	0	0	15
SSW	0	9	9	1	0	0	19
SW	1	14	13	1	0	0	29
WSW	1	32	26	0	0	0	59
W	0	38	62	0	0	0	100
WNW	0	14	53	1	0	0	68
NW	0	4	3	0	0	0	7
NNW	0	1	0	0	0	0	1
TOTAL	4	165	245	5	0	0	419

PERIODS OF CALM (HOURS) - 0

TABLE V-3

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982

STABILITY CLASS - B

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	24+ -----	
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	0	0	1	1	0	0	2
ENE	0	0	6	2	0	0	8
E	0	1	1	0	0	0	2
ESE	0	2	1	0	0	0	3
SE	0	0	1	0	0	0	1
SSE	0	1	0	0	0	0	1
S	0	3	2	0	0	0	5
SSW	0	0	1	0	0	0	1
SW	1	1	1	1	0	0	4
WSW	1	1	1	0	0	0	3
W	0	4	1	0	0	0	5
WNW	0	0	5	2	0	0	7
NW	0	1	3	0	0	0	4
NNW	0	0	0	0	0	0	0
TOTAL	3	14	24	6	0	0	47

PERIODS OF CALM (HOURS) - 0

TABLE V-3

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982

STABILITY CLASS - C

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	24+ -----	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	1	1	0	0	0	2
ENE	0	1	2	0	0	0	3
E	0	0	0	0	0	0	0
ESE	1	3	1	0	0	0	5
SE	1	0	0	0	0	0	1
SSE	0	2	2	1	0	0	5
S	0	2	0	0	0	0	2
SSW	0	1	1	1	0	0	3
SW	0	2	2	0	0	0	4
WSW	0	4	0	0	0	0	4
W	0	0	1	0	0	0	1
WNW	0	1	4	1	0	0	6
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	2	17	14	3	0	0	36

PERIODS OF CALM (HOURS) - 0

TABLE V-3

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982

STABILITY CLASS - D

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	1	1	3	0	0	0	5
NNE	0	2	3	1	0	0	6
NE	0	4	17	5	0	0	26
ENE	2	5	17	2	0	0	26
E	1	6	7	0	0	0	14
ESE	2	9	3	0	0	0	14
SE	1	12	3	0	0	0	16
SSE	0	11	7	0	0	0	18
S	2	2	4	0	0	0	8
SSW	0	1	4	0	0	0	5
SW	0	4	5	0	0	0	9
WSW	0	9	3	0	0	0	12
W	2	4	6	0	0	0	12
WNW	0	3	11	1	0	0	15
NW	0	3	15	4	0	0	22
NNW	0	2	2	0	0	0	4
TOTAL	11	78	110	13	0	0	212

PERIODS OF CALM (HOURS) - 0

TABLE V-3

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982

STABILITY CLASS - E

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	2	8	4	1	0	0	15
NNE	4	10	15	2	0	0	31
NE	1	20	20	4	0	0	45
ENE	4	31	25	1	0	0	61
E	5	40	14	0	0	0	59
ESE	7	39	12	0	0	0	58
SE	3	40	11	0	0	0	54
SSE	1	10	7	1	0	0	19
S	0	6	5	1	1	0	13
SSW	1	5	15	3	1	0	25
SW	2	14	7	1	0	0	24
WSW	0	16	8	4	0	0	28
W	1	21	18	2	0	0	42
WNW	0	19	15	3	0	0	37
NW	0	9	13	2	0	0	24
NNW	5	9	1	0	0	0	15
TOTAL	36	297	190	25	2	0	550

PERIODS OF CALM (HOURS) - 0

TABLE V-3

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982

STABILITY CLASS - F

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	24+ -----	
N	4	12	0	0	0	0	16
NNE	2	11	0	0	0	0	13
NE	6	14	1	0	0	0	23
ENE	11	39	4	0	0	0	54
E	9	66	2	0	0	0	77
ESE	12	34	2	0	0	0	48
SE	5	23	3	0	0	0	31
SSE	0	9	5	1	0	0	15
S	1	1	1	0	0	0	3
SSW	1	0	3	2	0	0	6
SW	1	0	1	0	0	0	2
WSW	0	9	0	0	0	0	9
W	0	4	3	0	0	0	7
WNW	0	4	3	0	0	0	7
NW	2	2	3	0	0	0	7
NNW	5	6	1	0	0	0	12
TOTAL	61	234	32	3	0	0	330

PERIODS OF CALM (HOURS) - 0

TABLE V-3

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982

STABILITY CLASS - G

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	5	5	0	1	0	0	11
NNE	5	5	0	0	0	0	10
NE	6	5	1	0	0	0	12
ENE	13	25	3	0	0	0	41
E	13	38	0	0	0	0	51
ESE	11	21	0	0	0	0	32
SE	4	11	0	0	0	0	15
SSE	2	4	1	1	0	0	8
S	0	2	1	3	0	0	6
SSW	0	0	2	8	7	0	17
SW	0	0	8	11	1	0	20
WSW	1	2	0	0	0	0	3
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	1	0	0	0	0	0	1
NNW	4	0	0	0	0	0	4
TOTAL	65	118	16	24	8	0	231

PERIODS OF CALM (HOURS) - 0

TABLE V-4

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982 BATCH RELEASES

STABILITY CLASS - A

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	24+ -----	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	10	6	16
W	0	0	0	0	1	0	1
WNW	0	0	0	1	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	1	11	6	18

PERIODS OF CALM (HOURS) - 0

TABLE V-4

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982 BATCH RELEASES

STABILITY CLASS - B

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	1	1
WSW	0	0	0	0	0	1	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	1	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	3	3

PERIODS OF CALM (HOURS) - 0

TABLE V-4

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982 BATCH RELEASES

STABILITY CLASS - C

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	1	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	1	1

PERIODS OF CALM (HOURS) - 0

TABLE V-4

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982 BATCH RELEASES

STABILITY CLASS - D

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	24+ -----	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	1	1	0	2
ENE	0	0	1	5	1	0	7
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	1	5	6
SW	0	0	0	0	0	2	2
WSW	0	0	0	0	0	1	1
W	0	0	0	1	0	3	4
WNW	0	0	0	1	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	1	8	3	11	23

PERIODS OF CALM (HOURS) - 0

TABLE V-4

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982 BATCH RELEASES

STABILITY CLASS - E

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	0	0	0	0	0	0
NNE	0	0	0	2	0	0	2
NE	0	0	0	0	0	0	0
ENE	0	0	1	1	0	0	2
E	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	1	1	2
SSW	0	0	0	0	0	4	4
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	2	2
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	2	3	1	7	13

PERIODS OF CALM (HOURS) - 0

TABLE V-4

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982 BATCH RELEASES

STABILITY CLASS - F

ELEVATION - 33 FT.

WIND DIR ----	WIND SPEED (MPH)						TOTAL -----
	1-3 ----	4-7 ----	8-12 ----	13-18 ----	19-24 ----	24+ ----	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	2	1	0	0	0	3
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	2	1	0	0	0	3

PERIODS OF CALM (HOURS) - 0

TABLE V-4

FLORIDA POWER CORPORATION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD - APRIL 1, 1982 THROUGH JUNE 30, 1982 BATCH RELEASES

STABILITY CLASS - G

ELEVATION - 33 FT.

WIND DIR	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	24+	
----	----	----	----	----	----	----	-----
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	4	0	0	0	0	4
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	4	0	0	0	0	4

PERIODS OF CALM (HOURS) - 0