



Southern Nuclear Operating Company

*the southern electric system*

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Vice President  
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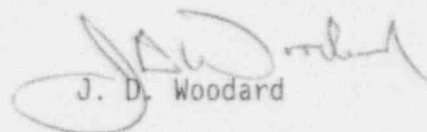
Joseph M. Farley Nuclear Plant  
Semiannual Radioactive Effluent Release Report

Gentlemen:

In accordance with the Unit 1 and 2 Technical Specifications, Section 6.9.1.8, the FNP Semiannual Radioactive Effluent Release Report for July 1, 1992 through December 31, 1992 is hereby submitted.

If you have any questions, please advise.

Respectfully submitted,

  
J. D. Woodard

DMH:sls

Attachment

cc: Mr. S. D. Ebnetter  
Mr. S. T. Hoffman  
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SOUTHERN NUCLEAR OPERATING COMPANY  
FARLEY NUCLEAR PLANT UNIT NO. ONE  
LICENSE NO. NPF-2  
AND  
FARLEY NUCLEAR PLANT UNIT NO. TWO  
LICENSE NO. NPF-8

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT  
JULY 1, 1992 THROUGH DECEMBER 31, 1992

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## CHAPTER 1

### INTRODUCTION

This semiannual radioactive release report, for the period July 1 through December 31, 1992, is submitted in accordance with Appendix A of License No.'s NPF-2 and NPF-8. Appendix A will hereinafter be referred to as the Technical Specifications or TS.

A single submittal is made for both units which combines those sections that are common. Separate tables of releases and release totals are included where separate processing systems exist.

This report includes an annual summary of hourly meteorological data collected over the past year and an assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the Farley Nuclear Plant site over the same period. Additionally Section 2.13 with associated dose contributions to sectors comprises an assessment of radiation doses to the likely most exposed member of the public from reactor releases and other nearby uranium fuel cycle sources (including doses from primary effluent pathways and direct radiation). All assessments of radiation doses are performed in accordance with the OFFSITE DOSE CALCULATION MANUAL (ODCM).

## CHAPTER 2

### SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL

#### 2.1 REGULATORY LIMITS

##### 2.1.1 Fission And Activation Gases

- 1) The dose rate from the site at any time due to noble gases shall be less than or equal to 500 mrem/yr to the total body and 3000 mrem/yr to the skin.
- 2) The air dose from each reactor unit from the site during any calendar quarter due to noble gases shall be less than or equal to 5 mrad for gamma radiation and 10 mrad for beta radiation.
- 3) The air dose from each reactor unit from the site during any calendar year due to noble gases shall be less than or equal to 10 mrad for gamma radiation and 20 mrad for beta radiation.

##### 2.1.2 Iodines And Particulates

- 1) The dose rate from the site at any time due to iodines, particulates and radionuclides with half-lives greater than 8 days shall be less than or equal to 1500 mrem/yr to any organ.
- 2) The dose from each reactor unit from the site during any calendar quarter due to iodines, particulates and radionuclides with half-lives greater than 8 days shall be less than or equal to 7.5 mrem to any organ.
- 3) The dose from each reactor unit from the site during any calendar year due to iodines, particulates and radionuclides with half-lives greater than 8 days shall be less than or equal to 15 mrem to any organ.

## SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL REGULATORY LIMITS

### 2.1.3 Liquid Effluents

1) The concentration of radioactive materials released in liquid effluents to unrestricted areas from all reactors at the site shall not exceed at any time the values specified in 10CFR Part 20, Appendix B, Table II, Column 2. The concentration of dissolved or entrained noble gases, released in liquid effluents to unrestricted areas from all reactors at the site, shall not exceed at any time  $2E-4$   $\mu\text{Ci/ml}$  in water.

2) The dose or dose commitment due to liquid effluents released from each reactor unit from the site during any calendar quarter shall be less than or equal to 1.5 mrem to the total body and 5 mrem to any organ.

3) The dose or dose commitment due to liquid effluents released from each reactor unit from the site during any calendar year shall be less than or equal to 3 mrem to the total body and 10 mrem to any organ.

### 2.2 MAXIMUM PERMISSIBLE CONCENTRATIONS

a) Airborne - The maximum permissible concentration of radioactive materials in gaseous effluents is limited by the dose rate restrictions of 10 CFR 20. In this case, the maximum permissible concentrations are actually determined by the dose factors in the ODCM.

b) Liquids - 10 CFR Part 20, Appendix B, Table II, Column 2.  
Note: The MPC chosen is the most conservative value of either the soluble or insoluble MPC for each isotope.

### 2.3 AVERAGE ENERGY

Not applicable for Farley's TS.

### 2.4 MEASUREMENTS AND APPROXIMATIONS OF TOTAL ACTIVITY

The following discussion details the methods used to measure and approximate total activity for the following:

- a. Fission and Activation Gases
- b. Iodines and Particulates
- c. Liquid Effluents

## SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL MEASUREMENTS AND APPROXIMATIONS OF TOTAL ACTIVITY

Tables 5 and 6 give sampling frequencies and minimum detectable concentration requirements for the analysis of gaseous and liquid effluent streams, respectively.

Values in the attached tables given as zero do not mean that the nuclides were not present. A zero indicates that the nuclide was not detected at levels greater than the sensitivity requirements shown in Tables 5 and 6. For some nuclides, lower detection limits than required may be readily achievable; when a nuclide is measured below its stated limit, it is reported.

### 2.4.1 Fission And Activation Gases

The following noble gases are considered in evaluating gaseous airborne discharge:

Kr-87	Xe-133
Kr-88	Xe-135
Xe-133m	Xe-138

Periodic grab samples from plant effluent streams are analyzed by a computerized pulse height analyzer system utilizing high resolution germanium detectors. (See Table 5 for sampling and analytical requirements). Isotopic values thus obtained are used for release rate calculations as specified in the ODCM. Only those nuclides that are detected are used in this computation. During the period between grab samples, the amount of radioactivity released is based on the effluent monitor readings.

The monitor meter response (cpm/uCi/ml) and the background (cpm) are used to adjust the activity released for variations in monitor readings, as described in the ODCM.

To ensure isotopic distributions do not change significantly during major operational occurrences, the frequency of grab sampling is increased to satisfy the requirements of footnotes (b) and (d) of TS Table 4.11-2, "Radioactive Gaseous Waste Sampling and Analysis Program".

### 2.4.2 Iodines And Particulates

The radioiodines and radioactive materials in particulate forms to be considered are:

Mn-54	I-131
Fe-59	I-133

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
MEASUREMENTS AND APPROXIMATIONS OF TOTAL ACTIVITY

Co-58	Cs-134
Co-60	Cs-137
Zn-65	Ce-141
Sr-89	Ce-144
Sr-90	*H-3
Mo-99	

Other nuclides with half-lives greater than 8 days which are identified and measured are also considered. The MDC's will vary and are not required to meet the MDC limits of those isotopes listed specifically.

\* Tritium is considered in the gaseous or water vapor form.

Continuous Releases: Continuous sampling is performed on the continuous release points (i.e. the Plant Vent Stack, Containment Purge and the Turbine Building Vent). Particulate material is collected by filtration. Periodically these filters are removed and analyzed on the pulse height analyzer to identify and quantify radioactive materials collected on the filters. Particulate filters are then analyzed for gross alpha and strontium as required. Gross alpha determinations are made using a 2 pi gas flow proportional counter. Sr-89 and 90 values are obtained by chemical separation and subsequent analysis using 2 pi gas flow proportional counters.

Batch Releases: The processing of batch type releases (from Containment or Waste Gas Decay Tanks) is analogous to continuous releases, except that the release is not commenced until samples have been obtained and analyzed.

#### 2.4.3 Liquid Effluents

The radionuclides listed below are considered when evaluating liquid effluents:

Mn-54	I-131
Fe-59	Cs-134
Co-58	Cs-137
Co-60	Ce-141
Zn-65	Ce-144
Sr-89	Mo-99
Sr-90	Fe-55
	H-3

Batch Releases: Representative pre-release grab samples are obtained and analyzed per Table 6. Isotopic analyses are performed using the computerized pulse height analysis system

## SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL MEASUREMENTS AND APPROXIMATIONS OF TOTAL ACTIVITY

previously described. Aliquots of each pre-release sample proportional to the waste volume released are composited in accordance with requirements in Table 6. Strontium determinations are made by performing a chemical separation and counting the isotope thus separated using a 2 pi gas flow proportional counter. Gross beta and gross alpha determinations are made using 2 pi gas flow proportional counters. Tritium and Iron 55 determinations are made using liquid scintillation techniques. Dissolved gases are determined employing grab sampling techniques and then counting on the pulse height analyzer.

Continuous Releases: Continuous releases (from the Steam Generator Blowdown) are analogous to that of the batch releases except that they are analyzed on a weekly composite basis per Table 6.

### 2.5 BATCH RELEASES AND ABNORMAL RELEASES

Batch releases and abnormal (non-routine) releases from units 1 and 2 are shown on the following pages.

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
BATCH RELEASES AND ABNORMAL RELEASES

BATCH RELEASES - UNIT 1

---

LIQUIDS	RELEASE(S): ALL	QUARTER 3	QUARTER 4
Number of batch releases		129.	212.
Total time period for batch releases (min)		18692.	19542.
Maximum time period for a batch release (min)		1133.	304.
Average time period for a batch release (min)		145.	92.
Minimum time period for a batch release (min)		4.	67.
Average stream flow during periods of release (cfs)	* 6.10E+03		* 1.60E+04
GASES	RELEASE(S): ALL		
Number of batch releases		2.	11.
Total time period for batch releases (min)		998.	5448.
Maximum time period for a batch release (min)		537.	771.
Average time period for a batch release (min)		499.	495.
Minimum time period for a batch release (min)		461.	186.

\* Average River Flow Rate, taken at Walter F. George Lock and Dam,  
located 30.7 miles above Farley Nuclear Plant.

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
 BATCH RELEASES AND ABNORMAL RELEASES

ABNORMAL RELEASES - UNIT 1

---

	QUARTER 3	QUARTER 4
 LIQUIDS		
Number of releases	0.	0.
Total activity released	0.00E+00 Ci	0.00E+00 Ci
 GASES		
Number of releases	0.	0.
Total activity released	0.00E+00 Ci	0.00E+00 Ci

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
BATCH RELEASES AND ABNORMAL RELEASES

BATCH RELEASES - UNIT 2

---

LIQUIDS	RELEASE(S): ALL	QUARTER 3	QUARTER 4
Number of batch releases		91.	115.
Total time period for batch releases (min)		8975.	11282.
Maximum time period for a batch release (min)		255.	168.
Average time period for a batch release (min)		99.	98.
Minimum time period for a batch release (min)		2.	2.
Average stream flow during periods of release (cfs)	* 6.10E+03		* 1.60E+04
GASES	RELEASE(S): ALL		
Number of batch releases		3.	3.
Total time period for batch releases (min)		1136.	720.
Maximum time period for a batch release (min)		630.	366.
Average time period for a batch release (min)		379.	110.
Minimum time period for a batch release (min)		173.	143.

\* Average River Flow Rate, taken at Walter F. George Lock and Dam,  
located 30.7 miles above Farley Nuclear Plant.

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
 BATCH RELEASES AND ABNORMAL RELEASES

ABNORMAL RELEASES - UNIT 2

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	QUARTER 3	QUARTER 4
 LIQUIDS		
Number of releases	0.	0.
Total activity released	0.00E+00 Ci	0.00E+00 Ci
 GASES		
Number of releases	0.	0.
Total activity released	0.00E+00 Ci	0.00E+00 Ci

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
ESTIMATE OF TOTAL ERROR

2.6 ESTIMATE OF TOTAL ERROR

2.6.1 Liquid

1) The maximum error associated with volume and flow measurements, based upon plant calibration practice is estimated to be + or - 10%.

2) The average error associated with counting is estimated to be less than + or - 15%.

2.6.2 Gaseous

1) The maximum errors associated with monitor readings, sample flow, vent flow, sample collection, monitor calibration and laboratory procedure are collectively estimated to be:

Fission and Activation Gases	Iodine	Particulates	Tritium
75%	60%	50%	45%

2) The average error associated with counting is estimated to be:

Fission and Activation Gases	Iodine	Particulates	Tritium
19%	28%	20%	8%

2.6.3 Solid Radwaste

The error involved in determining the contents of solid radwaste shipments is estimated to be less than + or - 15%.

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
SOLID WASTE

2.7 SOLID WASTE

See Table 3

2.8 RADIOLOGICAL IMPACT ON MAN

The doses from liquid and gaseous releases for units 1 and 2 are shown on the following pages.

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
RADIOLOGICAL IMPACT ON MAN

DOSES FROM LIQUID AND GASEOUS EFFLUENTS - UNIT 1

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	QUARTER 3	QUARTER 4
LIQUIDS (mrem)	RELEASE(S): ALL	
Bone	2.77E-03	7.21E-03
Liver	5.74E-03	1.10E-02
Whole body	4.51E-03	7.67E-03
Thyroid	1.57E-03	9.69E-04
Kidney	2.90E-03	4.33E-03
Lung	4.75E-03	2.28E-03
GI - LLI	2.30E-02	6.41E-02

GASES                      RELEASE(S): ALL

NOBLE GASES (mRAD)

Gamma Air	6.81E-03	6.86E-04
Beta Air	1.09E-02	8.14E-04

PARTICULATE AND IODINE (mrem)

Bone	4.08E-06	1.60E-03
Liver	1.20E-03	2.02E-03
Whole body	1.20E-03	1.94E-03
Thyroid	2.76E-03	6.32E-02
Kidney	1.20E-03	2.04E-03
Lung	1.20E-03	1.85E-03
GI - LLI	1.20E-03	2.15E-03
Skin	3.37E-08	1.69E-03

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
RADIOLOGICAL IMPACT ON MAN

DOSES FROM LIQUID AND GASEOUS EFFLUENTS - UNIT 2

---

	QUARTER 3	QUARTER 4
LIQUIDS (mrem)	RELEASE(S): ALL	
Bone	5.08E-03	2.71E-03
Liver	8.48E-03	5.67E-03
Whole body	6.20E-03	4.42E-03
Thyroid	1.03E-03	1.40E-03
Kidney	3.46E-03	2.75E-03
Lung	2.81E-03	2.61E-03
GI - LLI	4.16E-02	6.33E-02

GASES                      RELEASE(S): ALL

NOBLE GASES (mRAD)

Gamma Air	3.16E-03	1.80E-03
Beta Air	1.14E-03	6.36E-04

PARTICULATE AND IODINE (mrem)

Bone	2.21E-04	9.81E-06
Liver	3.40E-03	1.43E-03
Whole body	3.41E-03	1.42E-03
Thyroid	4.98E-03	5.19E-03
Kidney	3.40E-03	1.43E-03
Lung	3.40E-03	1.42E-03
GI - LLI	3.45E-03	1.42E-03
Skin	2.55E-04	7.48E-08

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
METEOROLOGICAL DATA

2.9 METEOROLOGICAL DATA

See Table 4A, "Cumulative Joint Frequency Distribution".

Continuous Release Mode:

3rd Quarter, 1992 : 4A-CQ3  
4th Quarter, 1992 : 4A-CQ4

Batch Release Mode (Units 1 and 2):

3rd Quarter, 1992 : 4A-1BQ3 and 4A-2BQ3  
4th Quarter, 1992 : 4A-1BQ4 and 4A-2BQ4

2.10 MINIMUM DETECTABLE CONCENTRATION (MDC)

Detectable limits for activity analyses are based upon the technical feasibility and on the potential significance in the environment of the quantities released. However, in practice, when an isotope's a posteriori MDC could not be met due to other nuclides being present in much greater concentrations, the a priori MDC as defined in the TS table 4.11-1 a. is relied upon.

2.11 DEVIATIONS FROM LIQUID WASTE RELEASE PROGRAM

A deviation from the Liquid Waste Release Program occurred on Unit 2 during Quarter 3 in that five Waste Monitor Tank releases were performed based on data from a gamma spectroscopy system which had a faulty energy calibration. These releases were recalculated after the calibration was corrected, and no 10CFR20 or dose limits were found to have been either exceeded or approached.

A deviation from the Liquid Waste Release Program occurred on Unit 1 during Quarter 4 in that the December 10 Turbine Building Sump daily sample was missed due to an inoperable auto-sampler.

2.12 DEVIATIONS FROM GASEOUS WASTE RELEASE PROGRAM

A deviation from the Gaseous Waste Release Program occurred on Unit 2 during Quarter 3 in that a continuous sample was not obtained on the Unit 2 Containment Purge the week of August 22 due to a defective pump switch.

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
ANNUAL RADIATION DOSE ASSESSMENT (1992)

2.13 ANNUAL RADIATION DOSE ASSESSMENT (1992)

DOSES FROM LIQUID AND GASEOUS EFFLUENTS

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LIQUIDS (mrem) RELEASE(S): ALL

Bone	3.66E-02
Liver	6.54E-02
Whole body	4.86E-02
Thyroid	1.21E-02
Kidney	2.95E-02
Lung	2.31E-02
GI - LLI	3.57E-01

GASES RELEASE(S): ALL

NOBLE GASES (mRAD)

Gamma Air	2.71E-02
Beta Air	3.29E-02

PARTICULATE AND IODINE (mrem)

Bone	1.84E-03
Liver	1.60E-02
Whole body	1.59E-02
Thyroid	8.44E-02
Kidney	1.60E-02
Lung	1.58E-02
GI - LLI	1.61E-02
Skin	1.95E-03

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
ANNUAL RADIATION DOSE ASSESSMENT (1992)

Maximum Real Exposure  
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The maximum real exposure is an assessment of radiation doses to the likely most exposed member of the public from reactor releases and other nearby uranium fuel cycle sources including doses from all primary effluent pathways and direct radiation (liquid pathways are limited to the Chattahoochee River ) for the previous 12 consecutive months in conformance with 40 CFR 190.

A tabulation of doses to sixteen 22.5 degree sectors around the plant calculated at the site boundary provides the quarterly and yearly dose for each sector. The dose or dose commitment to any member of the public due to releases of radioactivity and radiation from uranium fuel cycle sources are limited to less than or equal to 25 mrem to the total body or an organ (except the thyroid which is limited to less than or equal to 75 mrem) over 4 consecutive quarters. This technical specification is provided to meet the dose limitations of 40 CFR 190.

Since the Farley Nuclear Plant is the only uranium fuel cycle source within a radius of 50 miles, the dose to any member of the public will be less than the dose in the highest sector. The tabulation below includes the quarterly and yearly doses from the highest sector for each of the following:

1. Gaseous iodine / particulate
2. Noble gases
3. Direct Radiation (Direct radiation data are actual field measurements made by thermoluminescent dosimetry as opposed to calculated data based on effluents. It should be noted that the direct radiation values reported herein include background radiation. Based on preoperational data, the reported direct radiation doses are essentially attributable to background radiation.)

SUPPLEMENTAL INFORMATION FOR EFFLUENT AND WASTE DISPOSAL  
ANNUAL RADIATION DOSE ASSESSMENT (1992)

MAXIMUM OFF-SITE DOSES

Dose, Millirems *						
Source	Note	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Year
Organ		GI	GI	GI	GI	GI
Liquid effluents	(1)	6.31E-02	1.02E-01	6.46E-02	1.27E-01	3.57E-01
Organ		THY	THY	THY	THY	THY
Iodines and Particulates	(2)	4.56E-03	3.68E-03	7.74E-03	6.84E-02	8.44E-02
Type of Air Dose		GAMMA	BETA	BETA	GAMMA	BETA
Noble gases	(2)	5.17E-03	1.52E-02	1.20E-02	2.49E-03	3.29E-02
Sector		NE	E	NE	NE	NE
Direct radiation	(3)	2.40E+01	2.01E+01	1.99E+01	2.51E+01	8.07E+01

Note:

1. The liquid effluent total body and organ doses are determined by the fish and irrigated vegetable pathways. These are calculated using the bioaccumulation factors, dose conversion factors, and assumptions of Regulatory Guide 1.109 (October 1977).
2. Gaseous effluent doses are calculated using annual average X/Q methodology per NUREG-0133 (October 1978).
3. Direct radiation was assessed using thermoluminescent dosimetry. Two dosimeters containing three LiF TLD chips were placed at selected locations within each of 16 sectors around the plant. These chips were collected and read quarterly and annually.

\* All doses in mrem except noble gas doses which are in mRAD.

# CHAPTER 3

## TABLE 1A-1

GASEOUS EFFLUENTS -- SUMMATION OF RELEASE(S): ALL - UNIT 1

	UNITS	QUARTER 3	QUARTER 4
A. FISSION AND ACTIVATION GASES			
1. TOTAL RELEASE	Ci	2.46E+02	1.80E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/SEC	3.09E+01	2.26E+00
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A
B. IODINES			
1. TOTAL IODINE-131	Ci	4.44E-06	1.75E-04
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/SEC	5.59E-07	2.20E-05
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A

TABLE 1A-1

GASEOUS EFFLUENTS -- SUMMATION OF RELEASE(S): ALL - UNIT 1

	UNITS	QUARTER 3	QUARTER 4
C. PARTICULATES			
1. PARTICULATES WITH HALF-LIVES >8 DAYS	Ci	0.00E+00	2.01E-04
2. AVERAGE RELEASE RATE FOR PERIOD	µCi/SEC	0.00E+00	2.53E-05
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A
4. GROSS ALPHA RADIOACTIVITY	Ci	8.36E-08	0.00E+00

## D. TRITIUM

1. TOTAL RELEASE	Ci	9.73E+00	3.17E+00
2. AVERAGE RELEASE RATE FOR PERIOD	µCi/SEC	1.22E+00	3.98E-01
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A

# CHAPTER 4

TABLE 1A-2

GASEOUS EFFLUENTS -- SUMMATION OF RELEASE(S): ALL - UNIT 2

	UNITS	QUARTER 3	QUARTER 4
A. FISSION AND ACTIVATION GASES			
1. TOTAL RELEASE	Ci	1.07E+01	5.67E+00
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/SEC	1.35E+00	7.13E-01
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A
B. IODINES			
1. TOTAL IODINE-131	Ci	4.52E-06	1.08E-05
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/SEC	5.69E-07	1.35E-06
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A

TABLE 1A-2

GASEOUS EFFLUENTS -- SUMMATION OF RELEASE(S): ALL - UNIT 2

	UNITS	QUARTER 3	QUARTER 4
C. PARTICULATES			
1. PARTICULATES WITH HALF-LIVES >8 DAYS	Ci	3.03E-05	0.00E+00
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/SEC	3.81E-06	0.00E+00
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A
4. GROSS ALPHA RADIOACTIVITY	Ci	7.27E-08	7.46E-08
D. TRITIUM			
1. TOTAL RELEASE	Ci	1.87E+01	1.21E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/SEC	2.35E+00	1.52E+00
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A

# CHAPTER 5

## TABLE 1B-1

GASEOUS EFFLUENTS - Elevated Releases RELEASE(S): ALL - UNIT 1

CONTINUOUS MODE				BATCH MODE	
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED	:	3	4	3	4

### 1. FISSION AND ACTIVATION GASES

AR-41	Ci	7.84E+00	1.60E+00	0.00E+00	0.00E+00
KR-85	Ci	0.00E+00	0.00E+00	1.80E+00	1.47E+00
KR-85M	Ci	3.56E-01	0.00E+00	0.00E+00	0.00E+00
XE-131M	Ci	0.00E+00	0.00E+00	2.00E-01	4.46E-01
XE-133	Ci	1.92E+02	3.20E+00	1.70E+01	1.13E+01
XE-133M	Ci	0.00E+00	0.00E+00	1.02E-01	8.82E-03
XE-135	Ci	2.61E+01	0.00E+00	9.78E-04	4.32E-04

TOTAL FOR	:	:	:	:	:
PERIOD	:	Ci	2.26E+02	4.80E+00	1.91E+01
(ABOVE)	:	:	:	:	:

TABLE 1B-1

GASEOUS EFFLUENTS - Elevated Releases RELEASE(S): ALL - UNIT 1

CONTINUOUS MODE				BATCH MODE	
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4

## 2. IODINES

I-131	Ci	4.44E-06	1.75E-04	0.00E+00	0.00E+00
I-133	Ci	2.88E-06	0.00E+00	0.00E+00	0.00E+00

TOTAL FOR					
PERIOD	Ci	7.32E-06	1.75E-04	0.00E+00	0.00E+00
(ABOVE)					

TABLE 1B-1

GASEOUS EFFLUENTS - Elevated Releases RELEASE(S): ALL - UNIT 1

CONTINUOUS MODE				BATCH MODE	
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4

## 3. PARTICULATES

H-3	Ci	9.73E+00	3.17E+00	0.00E+00	0.00E+00
CO-58	Ci	0.00E+00	0.00E+00	0.00E+00	1.54E-09
CO-60	Ci	0.00E+00	0.00E+00	0.00E+00	2.01E-04
G.ALPHA	Ci	8.36E-08	0.00E+00	0.00E+00	0.00E+00

TOTAL FOR	:	:	:	:	:	:
PERIOD	:	Ci	9.73E+00	3.17E+00	0.00E+00	2.01E-04
(ABOVE)	:	:	:	:	:	:

# CHAPTER 6

## TABLE 1B-2

GASEOUS EFFLUENTS - Elevated Releases RELEASE(S): ALL - UNIT 2

CONTINUOUS MODE				BATCH MODE	
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER
: RELEASED	:	: 3	: 4	: 3	: 4

### 1. FISSION AND ACTIVATION GASES

AR-41	Ci	9.89E+00	5.67E+00	0.00E+00	0.00E+00
XE-133	Ci	8.13E-01	0.00E+00	1.16E-02	1.99E-04
XE-135	Ci	0.00E+00	0.00E+00	3.73E-03	0.00E+00

TOTAL FOR	:	:	:	:	:
PERIOD	:	Ci	:	:	:
(ABOVE)	:	:	:	:	:

TABLE 1B-2

GASEOUS EFFLUENTS - Elevated Releases RELEASE(S): ALL - UNIT 2

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4	3	4

## 2. IODINES

I-131	Ci	4.52E-06	1.08E-05	0.00E+00	0.00E+00
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TOTAL FOR					
PERIOD	Ci	4.52E-06	1.08E-05	0.00E+00	0.00E+00
(ABOVE)					

TABLE 1B-2

GASEOUS EFFLUENTS - Elevated Releases RELEASE(S): ALL - UNIT 2

CONTINUOUS MODE				BATCH MODE	
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4

## 3. PARTICULATES

H-3	Ci	1.87E+01	1.21E+01	0.00E+00	0.00E+00
CO-60	Ci	0.00E+00	0.00E+00	3.03E-05	0.00E+00
G.ALPHA	Ci	7.27E-08	7.46E-08	0.00E+00	0.00E+00

TOTAL FOR	:	:	:	:	:
PERIOD	:	Ci	1.87E+01	1.21E+01	3.03E-05
(ABOVE)	:	:	:	:	:

CHAPTER 7

TABLE 1C-1

GASEOUS EFFLUENTS - Ground Level Releases      RELEASE(S): ALL - UNIT 1

CONTINUOUS MODE				BATCH MODE			
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER	:	:
: RELEASED	:	: 3	: 4	: 3	: 4	:	:

1. FISSION AND ACTIVATION GASES

XE-133	Ci	8.61E-02	0.00E+00	0.00E+00	0.00E+00
--------	----	----------	----------	----------	----------

TOTAL FOR	:	:	:	:	:	:	:
PERIOD	:	Ci	: 8.61E-02	: 0.00E+00	: 0.00E+00	: 0.00E+00	:
(ABOVE)	:	:	:	:	:	:	:

TABLE 1C-1

GASEOUS EFFLUENTS - Ground Level Releases

RELEASE(S): ALL - UNIT 1

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4	3	4

2. IODINES

TOTAL FOR	:	:	:	:	:	:	:
PERIOD	:	C1	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00	:
(ABOVE)	:	:	:	:	:	:	:

TABLE 1C-1

GASEOUS EFFLUENTS - Ground Level Releases      RELEASE(S): ALL - UNIT 1

CONTINUOUS MODE				BATCH MODE	
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4

## 3. PARTICULATES

H-3	Ci	2.06E-03	5.08E-04	0.00E+00	0.00E+00
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TOTAL FOR	:	:	:	:	:	:
PERIOD	:	Ci	2.06E-03	5.08E-04	0.00E+00	0.00E+00
(ABOVE)	:	:	:	:	:	:

# CHAPTER 8

## TABLE 1C-2

GASEOUS EFFLUENTS - Ground Level Releases

RELEASE(S): ALL - UNIT 2

CONTINUOUS MODE				BATCH MODE			
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER	:	:
: RELEASED	:	: 3	: 4	: 3	: 4	:	:

### 1. FISSION AND ACTIVATION GASES

TOTAL FOR	:	:	:	:	:	:	:
PERIOD	:	Ci	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00	:
(ABOVE)	:	:	:	:	:	:	:

TABLE 1C-2

GASEOUS EFFLUENTS - Ground Level Releases

RELEASE(S): ALL - UNIT 2

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4	3	4

2. IODINES

TOTAL FOR	:	:	:	:	:	:	:
PERIOD	:	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	:
(ABOVE)	:	:	:	:	:	:	:

TABLE 1C-2

GASECUS EFFLUENTS - Ground Level Releases      RELEASE(S): ALL - UNIT 2

CONTINUOUS MODE				BATCH MODE	
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4

## 3. PARTICULATES

H-3	Ci	9.15E-04	2.78E-03	0.00E+00	0.00E+00
-----	----	----------	----------	----------	----------

TOTAL FOR	:	:	:	:	:	:
PERIOD	:	Ci	9.15E-04	2.78E-03	0.00E+00	0.00E+00
(ABOVE)	:	:	:	:	:	:

# CHAPTER 9

## TABLE 2A-1

LIQUID EFFLUENTS -- SUMMATION OF RELEASE(S): ALL - UNIT 1

UNITS	QUARTER	QUARTER
	3	4

### A. FISSION AND ACTIVATION PRODUCTS

1. TOTAL RELEASE (EXCL. TRIT., GASES, ALPHA)	Ci	4.95E-02	4.15E-02
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	3.39E-09	3.29E-09
3. PERCENT OF APPLICABLE LIMIT	%	N/A	N/A

### B. TRITIUM

1. TOTAL RELEASE	Ci	2.10E+02	1.42E+02
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	1.44E-05	1.13E-05
3. PERCENT OF APPLICABLE LIM.	%	N/A	N/A

TABLE 2A-1

## LIQUID EFFLUENTS -- SUMMATION OF RELEASE(S): ALL - UNIT 1

UNITS	QUARTER 3	QUARTER 4
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## C. DISSOLVED AND ENTRAINED GASES

1. TOTAL RELEASE	Ci	1.07E-03	1.50E-03
2. AVERAGE DILUTED CONC. DURING PERIOD	µCi/ml	7.32E-11	1.19E-10
3. PERCENT OF APPLICABLE LIMIT	%	N/A	N/A

## D. GROSS ALPHA RADIOACTIVITY

1. TOTAL RELEASE	Ci	1.11E-04	1.52E-05
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E. VOLUME WASTE RELEASED (PRIOR TO DILUTION)	LITERS	7.96E+07	6.03E+07
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F. VOLUME DILUTION WATER USED DURING PERIOD	LITERS	1.46E+10	1.26E+10
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# CHAPTER 10

## TABLE 2A-2

LIQUID EFFLUENTS -- SUMMATION OF RELEASE(S): ALL - UNIT 2

UNITS	QUARTER 3	QUARTER 4
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### A. FISSION AND ACTIVATION PRODUCTS

1. TOTAL RELEASE (EXCL. TRIT., GASES, ALPHA)	Ci	3.89E-02	4.33E-02
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	2.42E-09	3.09E-09
3. PERCENT OF APPLICABLE LIMIT	%	N/A	N/A

### B. TRITIUM

1. TOTAL RELEASE	Ci	1.49E+02	1.84E+02
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	9.26E-06	1.31E-05
3. PERCENT OF APPLICABLE LIMIT	%	N/A	N/A

TABLE 2A-2

## LIQUID EFFLUENTS -- SUMMATION OF RELEASE(S): ALL - UNIT 2

UNITS	QUARTER	QUARTER
	3	4

## C. DISSOLVED AND ENTRAINED GASES

1. TOTAL RELEASE	Ci	1.65E-03	2.61E-03
2. AVERAGE DILUTED CONC. DURING PERIOD	µCi/ml	1.02E-10	1.86E-10
3. PERCENT OF APPLICABLE LIMIT	%	N/A	N/A

## D. GROSS ALPHA RADIOACTIVITY

1. TOTAL RELEASE	Ci	4.09E-05	1.35E-05
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E. VOLUME WASTE RELEASED (PRIOR TO DILUTION)	LITERS	7.22E+07	7.24E+07
---	--------	----------	----------

F. VOLUME DILUTION WATER USED DURING PERIOD	LITERS	1.61E+10	1.40E+10
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## CHAPTER 11

TABLE 2B-1

LIQUID EFFLUENTS

RELEASE(S): ALL - UNIT 1

CONTINUOUS MODE				BATCH MODE			
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER	:	:
: RELEASED	:	: 3	: 4	: 3	: 4	:	:
H-3	Ci	0.00E+00	3.21E-01	2.10E+02	1.42E+02		
CR-51	Ci	0.00E+00	0.00E+00	8.28E-03	1.04E-02		
MN-54	Ci	0.00E+00	0.00E+00	9.51E-04	5.34E-04		
FE-55	Ci	1.06E-03	0.00E+00	5.23E-03	2.79E-03		
FE-59	Ci	0.00E+00	0.00E+00	4.74E-05	1.68E-04		
CO-58	Ci	0.00E+00	1.86E-04	3.85E-03	1.58E-02		
CO-60	Ci	0.00E+00	0.00E+00	1.66E-02	6.14E-03		
ZN-65	Ci	0.00E+00	0.00E+00	5.41E-06	9.14E-06		
SR-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
SR-90	Ci	0.00E+00	0.00E+00	0.00E+00	8.93E-06		
SR-92	Ci	0.00E+00	0.00E+00	3.15E-04	7.70E-06		
Y-91M	Ci	0.00E+00	0.00E+00	0.00E+00	3.97E-06		
ZR-95	Ci	0.00E+00	0.00E+00	2.24E-04	7.52E-04		
NB-95	Ci	0.00E+00	0.00E+00	4.07E-04	1.58E-03		
MO-99	Ci	0.00E+00	0.00E+00	1.03E-05	0.00E+00		
TC-99M	Ci	0.00E+00	0.00E+00	1.22E-06	0.00E+00		
RU-103	Ci	0.00E+00	0.00E+00	1.39E-06	1.93E-04		
RU-105	Ci	0.00E+00	0.00E+00	1.72E-05	8.24E-06		
RU-106	Ci	0.00E+00	0.00E+00	4.27E-05	0.00E+00		

TABLE 2B-1

## LIQUID EFFLUENTS

RELEASE(S): ALL - UNIT 1

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4
AG-110M	Ci	0.00E+00	0.00E+00	1.12E-02	1.54E-03
TE-132	Ci	0.00E+00	0.00E+00	0.00E+00	1.14E-04
I-131	Ci	0.00E+00	0.00E+00	0.00E+00	1.48E-05
I-132	Ci	0.00E+00	0.00E+00	0.00E+00	1.05E-04
CS-134	Ci	0.00E+00	0.00E+00	2.80E-05	2.59E-05
CS-137	Ci	0.00E+00	0.00E+00	2.17E-04	7.11E-04
BA-139	Ci	0.00E+00	0.00E+00	0.00E+00	4.04E-06
CE-144	Ci	0.00E+00	0.00E+00	3.11E-04	6.42E-06
PR-144	Ci	0.00E+00	0.00E+00	0.00E+00	2.60E-04
G.ALPHA	Ci	0.00E+00	0.00E+00	1.11E-04	1.52E-05
SB-124	Ci	0.00E+00	0.00E+00	2.87E-05	5.62E-06
NB-97	Ci	0.00E+00	0.00E+00	4.98E-05	1.78E-05
SB-125	Ci	0.00E+00	0.00E+00	6.35E-04	5.51E-05
CO-57	Ci	0.00E+00	0.00E+00	2.07E-06	1.07E-05
TOTAL FOR					
PERIOD	Ci	1.06E-03	3.21E-01	2.10E+02	1.42E+02
(ABOVE)					

TABLE 2B-1

## LIQUID EFFLUENTS - DISSOLVED AND ENTRAINED GASES - UNIT 1

RELEASE(S): ALL							
CONTINUOUS MODE				BATCH MODE			
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER	:	:
: RELEASED	:	: 3	: 4	: 3	: 4	:	:
<hr/>							
XE-133M	Ci	0.00E+00	0.00E+00	8.58E-06	0.00E+00		
XE-133	Ci	0.00E+00	0.00E+00	1.06E-03	1.50E-03		

TOTAL FOR	:	:	:	:	:	:	:
PERIOD	:	Ci	:	0.00E+00	:	0.00E+00	:
(ABOVE)	:	:	:	:	:	1.07E-03	:
	:	:	:	:	:	1.50E-03	:

## CHAPTER 12

TABLE 2B-2

LIQUID EFFLUENTS

RELEASE(S): ALL - UNIT 2

CONTINUOUS MODE				BATCH MODE	
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER
: RELEASED	:	: 3	: 4	: 3	: 4
H-3	Ci	3.48E-02	5.79E-02	1.49E+02	1.84E+02
CR-51	Ci	0.00E+00	0.00E+00	3.00E-03	7.59E-03
MN-54	Ci	0.00E+00	0.00E+00	9.56E-04	6.56E-04
FE-55	Ci	1.07E-03	0.00E+00	4.15E-03	3.66E-03
FE-59	Ci	0.00E+00	0.00E+00	1.07E-04	1.39E-04
CO-58	Ci	0.00E+00	0.00E+00	8.15E-03	1.88E-02
CO-60	Ci	0.00E+00	0.00E+00	1.36E-02	7.77E-03
ZN-65	Ci	0.00E+00	0.00E+00	0.00E+00	1.74E-06
SR-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SR-90	Ci	0.00E+00	0.00E+00	5.03E-06	0.00E+00
SR-92	Ci	0.00E+00	0.00E+00	1.04E-04	1.60E-05
ZR-95	Ci	0.00E+00	0.00E+00	4.39E-04	7.26E-04
NB-95	Ci	0.00E+00	0.00E+00	8.91E-04	1.44E-03
TC-99M	Ci	0.00E+00	0.00E+00	2.60E-06	0.00E+00
RU-103	Ci	0.00E+00	0.00E+00	1.97E-06	8.78E-05
RU-105	Ci	0.00E+00	0.00E+00	2.39E-05	2.39E-05
RU-106	Ci	0.00E+00	0.00E+00	2.71E-05	0.00E+00
AG-110M	Ci	0.00E+00	0.00E+00	5.71E-03	1.26E-03
TE-132	Ci	0.00E+00	0.00E+00	0.00E+00	6.04E-05

TABLE 2B-2

LIQUID EFFLUENTS

RELEASE(S): ALL - UNIT 2

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4
I-131	Ci	0.00E+00	0.00E+00	1.07E-05	1.69E-05
I-132	Ci	0.00E+00	0.00E+00	0.00E+00	5.58E-05
CS-134	Ci	0.00E+00	0.00E+00	6.38E-05	3.54E-05
CS-137	Ci	0.00E+00	0.00E+00	3.71E-04	1.83E-04
BA-139	Ci	0.00E+00	0.00E+00	9.25E-06	0.00E+00
CE-144	Ci	0.00E+00	0.00E+00	1.27E-05	5.20E-06
PR-144	Ci	0.00E+00	0.00E+00	8.00E-05	5.00E-04
G.ALPHA	Ci	0.00E+00	0.00E+00	4.09E-05	1.35E-05
SB-124	Ci	0.00E+00	0.00E+00	0.00E+00	4.99E-06
NB-97	Ci	0.00E+00	0.00E+00	1.98E-05	7.33E-05
SB-125	Ci	0.00E+00	0.00E+00	1.19E-04	1.96E-04
CO-57	Ci	0.00E+00	0.00E+00	1.03E-05	2.40E-05
TOTAL FOR	:	:	:	:	:
PERIOD	Ci	3.59E-02	5.79E-02	1.49E+02	1.84E+02
(ABOVE)	:	:	:	:	:

TABLE 2B-2

## LIQUID EFFLUENTS - DISSOLVED AND ENTRAINED GASES - UNIT 2

RELEASE(S): ALL							
CONTINUOUS MODE				BATCH MODE			
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER	:	:
: RELEASED	:	: 3	: 4	: 3	: 4	:	:
AR-41	Ci	0.00E+00	0.00E+00	1.11E-05	0.00E+00		
KR-88	Ci	0.00E+00	0.00E+00	0.00E+00	6.03E-06		
XE-133	Ci	0.00E+00	0.00E+00	1.63E-03	2.60E-03		
XE-135	Ci	0.00E+00	0.00E+00	0.00E+00	1.98E-06		
TOTAL FOR							
PERIOD	Ci	0.00E+00	0.00E+00	1.65E-03	2.61E-03		
(ABOVE)							

# CHAPTER 13

## TABLE 3

### SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

2nd Half, 1992

#### SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL

(not irradiated fuel)

1. Type of Waste	UNITS	PERIOD July 1 - Dec. 31
	3	
a. Spent resins, filter sludges, evaporator bottoms, etc.	m Ci*	8.300E+01 1.553E+03
	3	
b. Dry compressible waste, contaminated equipment, etc.	m Ci*	3.090E+01 8.170E+00
	3	
c. Irradiated components, control rods, etc.	m Ci	None None
	3	
d. Other	m Ci	None None

\* Measured and/or estimated by correlations in accordance with  
10 CFR 61.55.

TABLE 3

## 2. Estimate of major nuclide composition

	ISOTOPES	%
a.	Co-58	45.20
	Ni-63	15.60
	Co-60	15.40
	Fe-55	14.40
	Mn-54	3.10
	Cs-137	1.70
	Ru-106	1.20
b.	Fe-55	41.10
	Co-60	14.80
	Co-58	12.40
	Ni-63	11.00
	Nb-95	6.10
	Zr-95	2.90
	Mn-54	2.40
	Cr-51	2.30
	Pu-241	1.60
	C-14	1.30
	Ag-110M	1.20

TABLE 3

TABLE 3 (con't)

## SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

2nd Half, 1992

3. Solid Waste Disposition		
a.	Number of Shipments	66
b.	Mode of Transportation	Highway
c.	Destination	Chem-Nuclear Systems, Inc. Barnwell, South Carolina
4. Type of Containers		
a.	( 1a )	High Integrity Containers. Strong Tight Containers.
b.	( 1b )	Strong Tight Containers.
c.	( 1c )	N/A
5. Solidification Agents		
a.	( 1a )	All items shipped dewatered, except for Floor Drain Tank sludge which was sent to Scientific Ecology Group (SEG). SEG solidified the Floor Drain Tank sludge with Hittman Cement.
b.	( 1b )	N/A
B. IRRADIATED FUEL SHIPMENTS (Disposition)		
1.	Number of Shipments	None
2.	Mode of Transportation	N/A
3.	Destination	N/A

CHAPTER 14

TABLE 4A-CQ3

The Quarter 3 cumulative joint frequency table for all releases is contained on the following pages.

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: A

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	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	0	0	0
SSW	0	1	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	2	0	0	0	0	2
NW	0	2	0	0	0	0	2
NNW	0	1	0	0	0	0	1
VARIABLE	4	5	0	0	0	0	9
Total	4	11	2	0	0	0	17

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: B

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	3	0	0	0	3
ENE	0	2	4	0	0	0	6
E	0	2	0	0	0	0	2
ESE	0	2	1	0	0	0	3
SE	0	2	0	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	1	1	0	0	0	2
WSW	0	3	0	0	0	0	3
W	0	3	0	0	0	0	3
WNW	0	13	2	0	0	0	15
NW	0	6	0	0	0	0	6
NNW	1	0	0	0	0	0	1
VARIABLE	5	13	0	0	0	0	18
Total	6	48	11	0	0	0	65

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: C

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	0	0	0	0	1
NNE	0	4	1	0	0	0	5
NE	1	1	5	0	0	0	7
ENE	0	2	8	0	0	0	10
E	1	10	1	0	0	0	12
ESE	2	3	1	0	0	0	6
SE	0	5	0	0	0	0	5
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	6	4	0	0	0	10
WSW	0	8	2	0	0	0	10
W	1	14	3	0	0	0	18
WNW	0	13	2	0	0	0	15
NW	1	9	0	0	0	0	10
NNW	1	1	0	0	0	0	2
VARIABLE	26	18	1	0	0	0	45
Total	33	96	28	0	0	0	157

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: D

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	3	0	0	0	0	0	3
NNE	18	11	0	0	0	0	29
NE	14	58	32	0	0	0	104
ENE	16	45	16	0	0	0	77
E	12	19	1	0	0	0	32
ESE	6	32	2	0	0	0	40
SE	4	15	9	0	0	0	28
SSE	3	3	4	2	0	0	12
S	2	3	1	3	0	0	9
SSW	6	5	6	4	0	0	21
SW	7	59	26	1	0	0	93
WSW	16	50	5	0	0	0	71
W	12	16	1	1	0	0	30
WNW	7	25	2	0	0	0	34
NW	11	9	0	0	0	0	20
NNW	9	12	0	0	0	0	21
VARIABLE	136	66	6	0	0	0	208
Total	282	428	111	11	0	0	832

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: E

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	5	0	0	0	0	0	5
NNE	26	16	0	0	0	0	42
NE	29	17	0	0	0	0	46
ENE	30	10	1	0	0	0	41
E	21	10	0	0	0	0	31
ESE	9	11	2	0	0	0	22
SE	2	8	4	0	0	0	14
SSE	4	3	1	0	0	0	8
S	2	11	0	0	0	0	13
SSW	4	11	0	0	0	0	15
SW	34	50	2	0	0	0	86
WSW	40	28	1	0	0	0	69
W	20	7	0	0	0	0	27
WNW	15	2	0	0	0	0	17
NW	11	11	0	0	0	0	22
NNW	13	12	1	0	0	0	26
VARIABLE	226	34	4	0	0	0	264
Total	491	241	16	0	0	0	748

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: F

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	2	0	0	0	0	0	2
NNE	12	0	0	0	0	0	12
NE	7	0	0	0	0	0	7
ENE	8	2	0	0	0	0	10
E	7	2	0	0	0	0	9
ESE	2	1	0	0	0	0	3
SE	1	3	0	0	0	0	4
SSE	0	2	0	0	0	0	2
S	1	0	0	0	0	0	1
SSW	3	2	0	0	0	0	5
SW	4	5	1	0	0	0	10
WSW	12	5	0	0	0	0	17
W	12	1	0	0	0	0	13
WNW	6	2	0	0	0	0	8
NW	8	5	0	0	0	0	13
NNW	16	2	0	0	0	0	18
VARIABLE	151	12	0	0	0	0	163
Total	252	44	1	0	0	0	297

Periods of calm(hours):

2

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: G

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	2	1	0	0	0	0	3
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	1	0	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	1	0	0	0	0	1
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	3	0	0	0	0	0	3
WNW	1	0	0	0	0	0	1
NW	7	0	0	0	0	0	7
NNW	17	1	0	0	0	0	18
VARIABLE	54	1	0	0	0	0	55
Total	85	4	0	0	0	0	89

Periods of calm(hours):

1

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: A

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	3	0	0	0	0	3
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
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	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	4	0	0	0	0	4
NNW	0	0	0	0	0	0	0
VARIABLE	2	6	0	0	0	0	8
Total	2	13	2	0	0	0	17

Periods of calm(hours): 0

Hours of missing data: 0 (this stability class)

Hours of missing data: 0 (this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: B

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	1	1	0	0	0	0	2
NE	0	2	3	0	0	0	5
ENE	0	0	3	2	0	0	5
E	0	0	3	0	0	0	3
ESE	0	1	3	0	0	0	4
SE	0	1	2	0	0	0	3
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	2	0	0	0	3
W	0	0	4	0	0	0	4
WNW	0	3	4	0	0	0	7
NW	0	7	2	0	0	0	9
NNW	0	8	3	0	0	0	11
VARIABLE	3	6	0	0	0	0	9
Total	4	30	29	2	0	0	65

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: C

ALL HOURS IN PERIOD

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	2	0	0	0	0	2
NNE	4	2	1	0	0	0	7
NE	1	8	2	1	0	0	12
ENE	1	4	7	2	0	0	14
E	0	9	1	0	0	0	10
ESE	0	5	4	0	0	0	9
SE	0	2	2	0	0	0	4
SSE	0	2	0	0	0	0	2
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	1	2	0	0	0	3
WSW	0	6	8	0	0	0	14
W	0	6	9	0	0	0	15
WNW	0	9	7	0	0	0	16
NW	3	12	1	0	0	0	16
NNW	1	1	0	0	0	0	2
VARIABLE	17	12	2	0	0	0	31
Total	27	81	46	3	0	0	157

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: D

ALL HOURS IN PERIOD

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	6	3	0	0	0	9
NNE	10	32	8	0	0	0	50
NE	15	29	31	8	0	0	83
ENE	14	30	60	6	0	0	110
E	7	10	10	1	0	0	28
ESE	4	24	6	0	0	0	34
SE	3	22	5	0	0	0	30
SSE	3	6	9	5	0	0	23
S	1	2	1	8	0	0	12
SSW	2	5	4	5	1	0	17
SW	5	27	44	9	0	0	85
WSW	5	34	26	4	0	0	69
W	6	29	8	2	0	0	45
WNW	5	15	8	0	0	0	28
NW	8	22	2	0	0	0	32
NNW	5	8	1	0	0	0	14
VARIABLE	92	60	11	0	0	0	163
Total	185	361	237	48	1	0	832

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: E

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	12	13-18	19-24	>24	
N	0	11	3	0	0	0	14
NNE	4	28	16	0	0	0	48
NE	3	20	19	0	0	0	42
ENE	2	34	13	0	0	0	49
E	4	22	10	0	0	0	36
ESE	4	27	10	0	0	0	41
SE	4	7	11	0	0	0	22
SSE	6	15	9	0	0	0	30
S	3	6	6	0	0	0	15
SSW	3	18	8	0	0	0	29
SW	1	39	47	1	0	0	88
WSW	7	52	27	1	0	0	87
W	3	36	8	0	0	0	47
WNW	5	15	4	0	0	0	24
NW	4	5	6	0	0	0	15
NNW	3	5	5	1	0	0	14
VARIABLE	66	66	13	2	0	0	147
Total	122	406	215	5	0	0	748

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: F

ALL HOURS IN PERIOD

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	5	1	0	0	0	6
NNE	3	9	1	0	0	0	13
NE	2	9	4	0	0	0	15
ENE	2	13	4	0	0	0	19
E	0	6	6	0	0	0	12
ESE	2	7	1	0	0	0	10
SE	0	12	4	0	0	0	16
SSE	4	5	4	1	0	0	14
S	1	2	1	0	0	0	4
SSW	7	2	3	0	0	0	12
SW	5	13	12	2	0	0	32
WSW	4	13	5	0	0	0	22
W	3	9	5	0	0	0	17
WNW	0	14	3	0	0	0	17
NW	2	10	3	0	0	0	15
NNW	2	4	5	0	0	0	11
VARIABLE	37	26	1	0	0	0	64
Total	74	159	63	3	0	0	299

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ3

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: G

ALL HOURS IN PERIOD

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	11	1	0	0	0	13
NNE	1	8	0	0	0	0	9
NE	0	0	0	0	0	0	0
ENE	1	1	0	0	0	0	2
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	1
SSE	0	2	1	0	0	0	3
S	1	0	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	2	2	0	0	0	0	4
WSW	0	2	0	0	0	0	2
W	1	1	2	0	0	0	4
WNW	0	3	1	0	0	0	4
NW	1	8	7	0	0	0	16
NNW	2	5	0	0	0	0	7
VARIABLE	14	9	0	0	0	0	23
Total	24	53	13	0	0	0	90

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

CHAPTER 15

TABLE 4A-CQ4

The Quarter 4 cumulative joint frequency table for all releases is contained on the following pages.

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: A

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	1	0	0	0	1
NE	0	1	4	0	0	0	5
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	1	0	0	0	0	1
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	1	0	0	0	0	1
WNW	0	1	0	0	0	0	1
NW	0	2	2	0	0	0	4
NNW	0	1	0	0	0	0	1
VARIABLE	0	10	0	0	0	0	10
Total	0	18	7	0	0	0	25

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: B

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	5	0	0	0	5
ENE	0	2	2	0	0	0	4
E	0	0	1	0	0	0	1
ESE	0	2	1	0	0	0	3
SE	0	0	0	0	0	0	0
SSE	0	0	1	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	3	0	0	0	0	3
WSW	0	0	0	0	0	0	0
W	0	0	2	0	0	0	2
WNW	0	3	1	0	0	0	4
NW	0	5	8	2	0	0	15
NNW	0	4	3	0	0	0	7
VARIABLE	1	14	3	0	0	0	18
Total	1	33	27	2	0	0	63

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: C

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	3	0	0	0	4
NNE	1	3	0	0	0	0	4
NE	1	4	5	0	0	0	10
ENE	1	15	7	0	0	0	23
E	0	5	3	0	0	0	8
ESE	0	0	2	0	0	0	2
SE	0	0	1	0	0	0	1
SSE	0	0	2	0	0	0	2
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	4	1	0	0	0	5
WSW	0	2	1	0	0	0	3
W	0	0	1	0	0	0	1
WNW	1	6	2	0	0	0	9
NW	1	4	3	2	0	0	10
NNW	0	7	5	0	0	0	12
VARIABLE	8	21	7	1	0	0	37
Total	13	72	43	3	0	0	131

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: D

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	2	14	2	0	0	0	18
NNE	6	37	2	0	0	0	45
NE	13	121	33	0	0	0	167
ENE	10	59	38	0	0	0	107
E	5	24	20	0	0	0	49
ESE	0	11	2	0	0	0	13
SE	1	34	13	0	0	0	48
SSE	2	10	18	0	0	0	30
S	0	2	2	5	0	0	9
SSW	1	0	3	2	0	0	6
SW	2	24	16	2	0	0	44
WSW	7	26	1	0	0	0	34
W	6	8	1	0	0	0	15
WNW	4	17	1	0	0	0	22
NW	5	46	24	2	0	0	77
NNW	5	52	25	0	0	0	82
VARIABLE	47	63	9	0	0	0	119
Total	116	548	210	11	0	0	885

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: E

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	6	1	0	0	0	0	7
NNE	37	17	0	0	0	0	54
NE	20	27	0	0	0	0	47
ENE	9	15	0	0	0	0	24
E	8	10	1	0	0	0	19
ESE	4	7	1	0	0	0	12
SE	5	26	8	0	0	0	39
SSE	5	6	16	1	0	0	28
S	4	2	2	0	0	0	8
SSW	2	6	4	0	0	0	12
SW	13	35	11	0	0	0	59
WSW	13	11	0	1	0	0	25
W	10	4	0	0	0	0	14
WNW	11	17	1	0	0	0	29
NW	12	39	8	0	0	0	59
NNW	12	36	4	0	0	0	52
VARIABLE	73	12	2	0	0	0	87
Total	244	271	58	2	0	0	575

Periods of calm(hours):

1

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: F

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	14	1	0	0	0	0	15
NNE	21	5	0	0	0	0	26
NE	8	6	0	0	0	0	14
ENE	1	2	0	0	0	0	3
E	2	0	0	0	0	0	2
ESE	1	0	0	0	0	0	1
SE	2	2	0	0	0	0	4
SSE	0	2	0	0	0	0	2
S	0	0	0	0	0	0	0
SSW	0	1	0	0	0	0	1
SW	5	2	3	0	0	0	10
WSW	7	2	0	0	0	0	9
W	7	1	0	0	0	0	8
WNW	9	4	0	0	0	0	13
NW	13	10	0	0	0	0	23
NNW	29	9	0	0	0	0	38
VARIABLE	75	6	0	0	0	0	81
Total	194	53	3	0	0	0	250

Periods of calm(hours):

1

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: G

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	28	4	0	0	0	0	32
NNE	6	3	0	0	0	0	9
NE	9	1	0	0	0	0	10
ENE	0	1	0	0	0	0	1
E	0	2	0	0	0	0	2
ESE	1	0	0	0	0	0	1
SE	1	1	0	0	0	0	2
SSE	1	0	0	0	0	0	1
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	13	1	0	0	0	0	14
W	1	1	0	0	0	0	2
WNW	4	1	0	0	0	0	5
NW	18	3	0	0	0	0	21
NNW	57	6	0	0	0	0	63
VARIABLE	105	0	0	0	0	0	105
Total	244	25	0	0	0	0	269

Periods of calm(hours):

8

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: A

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	0	5	1	0	0	6
ENE	0	0	0	0	0	0	0
E	0	1	0	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	1	0	0	0	0	1
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	1	0	0	0	0	1
WNW	0	1	0	0	0	0	1
NW	0	1	0	0	0	0	1
NNW	0	1	3	0	0	0	4
VARIABLE	0	6	2	0	0	0	8
Total	0	14	10	1	0	0	25

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: B

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	1	0	0	0	1
NNE	0	1	1	0	0	0	2
NE	0	1	3	0	0	0	4
ENE	0	2	4	0	0	0	6
E	0	0	0	0	0	0	0
ESE	0	1	2	0	0	0	3
SE	0	0	0	0	0	0	0
SSE	0	0	0	1	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	2	0	0	0	0	2
WSW	0	0	1	0	0	0	1
W	0	0	0	2	0	0	2
WNW	0	0	0	0	0	0	0
NW	0	6	7	5	0	0	18
NNW	0	3	4	0	0	0	7
VARIABLE	1	11	4	0	0	0	16
Total	1	27	27	8	0	0	63

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: C

ALL HOURS IN PERIOD

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	2	4	0	0	0	6
NNE	1	5	2	0	0	0	8
NE	0	5	3	1	0	0	9
ENE	1	7	12	4	0	0	24
E	0	4	6	1	0	0	11
ESE	0	1	1	3	0	0	5
SE	1	0	1	0	0	0	2
SSE	0	2	0	2	0	0	4
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	2	2	0	0	0	4
WSW	0	2	1	0	0	0	3
W	0	0	0	2	0	0	2
WNW	0	3	3	0	0	0	6
NW	0	3	4	4	0	0	11
NNW	1	3	2	0	0	0	6
VARIABLE	7	11	12	0	0	0	30
Total	11	50	53	17	0	0	131

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: D

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	16	22	1	0	0	39
NNE	2	23	26	2	0	0	53
NE	5	48	69	1	0	0	123
ENE	7	40	93	13	0	0	153
E	2	27	27	9	0	0	65
ESE	1	6	6	0	0	0	13
SE	1	13	11	0	0	0	25
SSE	1	14	39	7	0	0	61
S	0	2	1	6	0	0	9
SSW	1	0	2	6	0	0	9
SW	2	6	17	5	3	0	33
WSW	4	29	10	0	0	0	43
W	2	14	2	2	0	0	20
WNW	2	7	6	1	0	0	16
NW	3	25	37	9	1	0	75
NNW	2	20	36	7	0	0	65
VARIABLE	24	34	21	4	0	0	83
Total	59	324	425	73	4	0	885

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: E

ALL HOURS IN PERIOD

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	11	6	0	0	0	17
NNE	1	23	12	0	0	0	36
NE	1	25	26	0	0	0	52
ENE	1	35	30	0	0	0	66
E	1	11	16	0	0	0	28
ESE	2	6	2	1	0	0	11
SE	1	7	13	0	0	0	21
SSE	3	4	26	7	0	0	40
S	4	5	3	8	0	0	20
SSW	2	11	5	4	0	0	22
SW	0	10	37	8	0	0	55
WSW	0	16	12	0	0	0	28
W	2	12	2	0	1	0	17
WNW	1	5	19	2	0	0	27
NW	3	6	44	10	0	0	63
NNW	1	5	21	5	0	0	32
VARIABLE	12	20	8	0	0	0	40
Total	35	212	282	45	1	0	575

Periods of calm(hours):

1

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: F

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	14	12	0	0	0	26
NNE	0	6	19	0	0	0	25
NE	0	12	26	0	0	0	38
ENE	0	8	19	0	0	0	27
E	3	4	2	0	0	0	9
ESE	1	3	1	0	0	0	5
SE	0	4	1	0	0	0	5
SSE	0	0	1	0	0	0	1
S	1	1	1	0	0	0	3
SSW	3	4	3	0	0	0	10
SW	0	4	4	3	0	0	11
WSW	1	4	9	0	0	0	14
W	0	5	3	0	0	0	8
WNW	1	0	13	0	0	0	14
NW	0	5	15	0	0	0	20
NNW	0	4	12	1	0	0	17
VARIABLE	4	13	1	0	0	0	18
Total	14	91	142	4	0	0	251

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-CQ4

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: G

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	17	15	0	0	0	32
NNE	3	14	16	0	0	0	33
NE	3	11	13	0	0	0	27
ENE	1	23	11	0	0	0	35
E	0	10	3	0	0	0	13
ESE	0	4	4	0	0	0	8
SE	0	3	2	0	0	0	5
SSE	0	11	4	0	0	0	15
S	0	1	0	0	0	0	1
SSW	1	0	0	0	0	0	1
SW	1	3	2	0	0	0	6
WSW	14	4	2	0	0	0	20
W	3	4	1	0	0	0	8
WNW	0	6	5	0	0	0	11
NW	0	14	19	0	0	0	33
NNW	0	9	5	0	0	0	14
VARIABLE	4	8	3	0	0	0	15
Total	30	142	105	0	0	0	277

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

CHAPTER 16

TABLE 4A-1BQ3

The Quarter 3 cumulative joint frequency table for Unit 1 batch releases is contained on the following pages.

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: A

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: B

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: C

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	1	0	0	0	0	1
Total	0	1	0	0	0	0	1

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: D

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	7	0	0	0	0	7
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0
Total	0	7	0	0	0	0	7

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: E

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	1

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: F

DURING BATCH RELEASES

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: G

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	0	0	0	0	0	1
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	5	0	0	0	0	0	5
VARIABLE	4	0	0	0	0	0	4
Total	10	0	0	0	0	0	10

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: A

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: B

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: C

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	0	0	0	0	1
VARIABLE	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: D

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	0	0	0	0	1
NW	0	6	0	0	0	0	6
NNW	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0
Total	0	7	0	0	0	0	7

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: E

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	0	0	0	0	1
NNW	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: F

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ3

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: G

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	4	0	0	0	0	5
NNE	0	4	0	0	0	0	4
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
VARIABLE	0	1	0	0	0	0	1
Total	1	9	0	0	0	0	10

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

CHAPTER 17

TABLE 4A-1BQ4

The Quarter 4 cumulative joint frequency table for Unit 1 batch releases is contained on the following pages.

TABLE 4A-1EQ4

## FARLEY NUCLEAR PLANT - UNIT 1

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: A

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	1	0	0	0	1
NNW	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	1

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: B

DURING BATCH RELEASES

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	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	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	1	0	0	0	1
VARIABLE	0	3	0	0	0	0	3
Total	0	4	1	0	0	0	5

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: C

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	1	0	0	0	0	1
E	0	1	0	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	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	3	0	0	0	0	3
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
VARIABLE	0	5	0	0	0	0	5
Total	0	10	0	0	0	0	10

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: D

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	2	0	0	0	0	2
NE	0	1	0	0	0	0	1
ENE	0	1	0	0	0	0	1
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	1	0	0	0	1
S	0	0	2	5	0	0	7
SSW	0	0	0	1	0	0	1
SW	0	0	2	1	0	0	3
WSW	0	0	0	0	0	0	0
W	0	1	0	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	1	0	0	0	0	1
NNW	0	2	1	0	0	0	3
VARIABLE	1	6	0	0	0	0	7
Total	1	15	6	7	0	0	29

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: E

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	3	1	0	0	0	0	4
NE	0	1	0	0	0	0	1
ENE	2	2	0	0	0	0	4
E	0	1	0	0	0	0	1
ESE	0	1	0	0	0	0	1
SE	0	3	0	0	0	0	3
SSE	0	0	0	0	0	0	0
S	0	0	1	0	0	0	1
SSW	0	1	0	0	0	0	1
SW	2	2	0	0	0	0	4
WSW	1	0	0	0	0	0	1
W	1	0	0	0	0	0	1
WNW	1	0	0	0	0	0	1
NW	0	1	0	0	0	0	1
NNW	0	1	0	0	0	0	1
VARIABLE	4	3	0	0	0	0	7
Total	14	17	1	0	0	0	32

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: F

ELEVATION: 10.0 m.

DURING BATCH RELEASES

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	1	0	0	0	0	0	1
NNW	3	2	0	0	0	0	5
VARIABLE	1	0	0	0	0	0	1
Total	5	2	0	0	0	0	7

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

## FARLEY NUCLEAR PLANT - UNIT 1

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: G

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	5	0	0	0	0	0	5
NNE	1	0	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	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	3	1	0	0	0	0	4
NNW	5	0	0	0	0	0	5
VARIABLE	4	0	0	0	0	0	4
Total	18	1	0	0	0	0	19

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: A

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	0	0	0	1
VARIABLE	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	1

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: B

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	1	0	0	0	2
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	1	0	0	0	1
VARIABLE	0	2	0	0	0	0	2
Total	0	3	2	0	0	0	5

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: C

DURING BATCH RELEASES

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	0	0	0	0	1
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	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	2	0	0	0	0	2
NW	0	1	0	0	0	0	1
NNW	0	0	0	0	0	0	0
VARIABLE	0	4	0	0	0	0	4
Total	0	10	0	0	0	0	10

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: D

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	2	0	0	0	3
NNE	0	0	1	0	0	0	1
NE	0	1	1	0	0	0	2
ENE	0	1	0	0	0	0	1
E	0	2	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	1	0	0	1
S	0	0	0	4	0	0	4
SSW	0	0	0	4	0	0	4
SW	0	0	0	1	1	0	2
WSW	0	0	0	0	0	0	0
W	0	1	0	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	1	1	0	0	0	0	2
NNW	0	0	1	0	0	0	1
VARIABLE	0	3	1	1	0	0	5
Total	1	10	6	11	1	0	29

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: E

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	1	0	0	0	1
NNE	0	5	1	0	0	0	6
NE	0	0	1	0	0	0	1
ENE	0	3	1	0	0	0	4
E	0	1	0	0	0	0	1
ESE	0	1	1	0	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	1	2	0	0	0	3
S	0	0	0	0	0	0	0
SSW	0	0	1	0	0	0	1
SW	0	0	3	0	0	0	3
WSW	0	2	1	0	0	0	3
W	0	1	0	0	0	0	1
WNW	0	0	1	0	0	0	1
NW	0	0	1	0	0	0	1
NNW	0	0	1	0	0	0	1
VARIABLE	0	1	2	0	0	0	3
Total	0	15	17	0	0	0	32

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: F

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	3	0	0	0	3
NNE	0	1	1	0	0	0	2
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	1	0	0	0	1
VARIABLE	0	1	0	0	0	0	1
Total	0	2	5	0	0	0	7

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-1BQ4

FARLEY NUCLEAR PLANT - UNIT 1

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: G

DURING BATCH RELEASES

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	1	0	0	0	2
NNE	0	1	3	0	0	0	4
NE	0	1	2	0	0	0	3
ENE	0	4	2	0	0	0	6
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	1	0	0	0	0	1
NNW	0	1	2	0	0	0	3
VARIABLE	0	0	0	0	0	0	0
Total	0	9	10	0	0	0	19

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

CHAPTER 18

TABLE 4A-2BQ3

The Quarter 3 cumulative joint frequency table for Unit 2 batch releases is contained on the following pages.

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: A

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: B

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

## FARLEY NUCLEAR PLANT - UNIT 2

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: C

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: D

DURING BATCH RELEASES

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	0	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	2	3	0	0	0	5
ENE	0	1	0	0	0	0	1
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	1	0	0	0	1
SW	0	1	0	0	0	0	1
WSW	0	3	0	0	0	0	3
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	1	0	0	0	0	1
VARIABLE	4	0	0	0	0	0	4
Total	5	8	4	0	0	0	17

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: E

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	0	0	0	0	0	0
WSW	0	2	0	0	0	0	2
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
VARIABLE	1	0	0	0	0	0	1
Total	1	3	0	0	0	0	4

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: F

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

## FARLEY NUCLEAR PLANT - UNIT 2

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: G

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: A

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: B

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: C

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: D

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	2	0	0	0	0	2
NE	0	1	1	3	0	0	5
ENE	0	0	1	0	0	0	1
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	1	0	0	0	1
SW	0	0	1	0	0	0	1
WSW	0	3	0	0	0	0	3
W	0	0	0	0	0	0	0
WNW	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
VARIABLE	2	1	0	0	0	0	3
Total	3	7	4	3	0	0	17

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: E

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	0	0	0	0	1
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	1	0	0	0	1
WSW	0	0	1	0	0	0	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
VARIABLE	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	4

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

## FARLEY NUCLEAR PLANT - UNIT 2

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: F

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ3

## FARLEY NUCLEAR PLANT - UNIT 2

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JUL-92 00:00 TO 30-SEP-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: G

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

CHAPTER 19

TABLE 4A-2BQ4

The Quarter 4 cumulative joint frequency table for Unit 2 batch releases is contained on the following pages.

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: A

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: B

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: C

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: D

DURING BATCH RELEASES

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	2	0	0	0	0	0	2
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	1	0	0	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	2	0	0	0	0	2
NNW	0	0	0	0	0	0	0
VARIABLE	2	0	0	0	0	0	2
Total	5	2	0	0	0	0	7

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: E

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	0	0	0	0	1
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	3	0	0	0	0	3
NNW	0	2	0	0	0	0	2
VARIABLE	0	1	0	0	0	0	1
Total	0	7	0	0	0	0	7

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: F

DURING BATCH RELEASES

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						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	1	0	0	0	0	1
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
VARIABLE	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: G

ELEVATION: 10.0 m.

DURING BATCH RELEASES

Wind Direction	Wind Speed (mph) at 10.0 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

## FARLEY NUCLEAR PLANT - UNIT 2

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: A

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

## FARLEY NUCLEAR PLANT - UNIT 2

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: B

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2  
 CUMULATIVE JOINT FREQUENCY DISTRIBUTION  
 HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59  
 RELEASE MODE: Elevated  
 STABILITY CLASS: C  
 ELEVATION: 60.3 m.

DURING BATCH RELEASES

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

Hours of missing data:

0

(this stability class)

0 (this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: D

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	0	0	0	0	1
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	1	0	0	0	0	1
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	1	0	0	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	1	0	0	0	1
NNW	0	0	1	0	0	0	1
VARIABLE	0	1	0	0	0	0	1
Total	1	4	2	0	0	0	7

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: E

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	0	0	0	0	1
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	1	0	0	0	0	1
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	1	0	0	0	1
NNW	0	0	4	0	0	0	4
VARIABLE	0	0	0	0	0	0	0
Total	0	2	5	0	0	0	7

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: F

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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	1	0	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	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
VARIABLE	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 4A-2BQ4

FARLEY NUCLEAR PLANT - UNIT 2

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-OCT-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: G

DURING BATCH RELEASES

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						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
VARIABLE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

# CHAPTER 20

TABLE 4B

TABLE 4B

## CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	<sup>a</sup> $\sigma_\theta$ (degrees)	Temperature channel with height ( $^{\circ}$ F/51m)
Extremely unstable	A	25.0	<-1.74
Moderately unstable	B	20.0	-1.74 to -1.56
Slightly unstable	C	15.0	-1.56 to -1.38
Neutral	D	10.0	-1.38 to -0.46
Slightly stable	E	5.0	-0.46 to 1.38
Moderately stable	F	2.5	1.38 to 3.6
Extremely stable	G	1.7	>3.6

<sup>a</sup> Standard deviations of horizontal wind direction fluctuation over a period of 15 minutes to 1 hour. The values shown are averages for each stability classification.

CHAPTER 21

TABLE 5

TABLE 5

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM  
FARLEY NUCLEAR PLANT - UNITS 1 & 2

					a,h
Gaseous Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Minimum Detectable Concentration (MDC) (uCi/ml)	
A. Waste Gas Storage Tank	Each Tank Grab Sample P	Each Tank P	Principle Gamma Emitters <sup>g,j</sup>	1E-04	
B. Containment Purge	Each Purge Grab Sample P <sup>b</sup>	Each Purge Grab Sample P <sup>b</sup>	Principle Gamma Emitters <sup>g,j</sup>	1E-04	
			H-3	1E-06	
C. Condenser Steam Jet Air Ejector Plant Vent Stack	M-b,c,e Grab Sample	b M	Principle Gamma Emitters <sup>g,j</sup>	1E-04	
			H-3	1E-06	

TABLE 5

TABLE 5 (Continued)

					a,h
Gaseous Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Minimum Detectable Concentration (MDC) (uCi/ml)	
D. Plant Vent Stack Containment Purge	f				
	Continuous	Charcoal	I-131	1E-12	
	Charcoal	Sample d			
		W	I-133	1E-10	
	f				
	Continuous	Particulate	Principle g		
		Sample d	Gamma Emitters	1E-11	
		W	(I-131, Others)		
f					
Continuous	M i				
		Composite	Gross Alpha	1E-11	
		Particulate			
		Sample			
f					
Continuous	Q i				
		Composite			
		Particulate	Sr-89, Sr-90	1E-11	
		Sample			
f					
Continuous		Noble Gas	Noble Gases Gross	1E-06	
		Monitor	Beta and Gamma		

TABLE 5

TABLE 5 (Continued)

## TABLE NOTATION

- a. The MDC is the smallest concentration of radioactive material in a sample that will be detected with 95% probability with 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system (which may include radiochemical separation):

$$\text{MDC} = \frac{4.66 s_b}{E * V * 2.22 \times 10^6 * Y * \exp(-\lambda \Delta t)}$$

where:

MDC is the "a priori" lower limit of detection as defined above (as microcurie per unit mass or volume),

$s_b$  is the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate (as counts per minute),

E is the counting efficiency (as counts per transformation),

V is the sample size (in units mass or volume),

$2.22 \times 10^6$  is the number of transformations per minute per microcurie,

Y is the fractional radiochemical yield (when applicable),

$\lambda$  is the radioactive decay constant for the particular radionuclide, and

$\Delta t$  is the elapsed time between midpoint of sample collection and time of counting (for plant effluents, not environmental samples).

The value of  $s_b$  used in the calculation of the MDC for a

detection system shall be based on the actual observed variance of the background counting rate or of the counting rate of the blank samples (as appropriate) rather than on an unverified theoretically predicted variance. Typical values of E, V, Y, and  $\Delta t$  shall be used in the calculation.

TABLE 5

TABLE 5 (Continued)

TABLE NOTATION

- b. Analyses shall also be performed following shutdown from  $>$  or  $=$  15% RATED THERMAL POWER, startup to  $>$  or  $=$  15% RATED THERMAL POWER or a THERMAL POWER change exceeding 15% of the RATED THERMAL POWER within a one hour period.
- c. Tritium grab samples shall be taken from the plant vent stack at least once per 24 hours when the refueling canal is flooded.
- d. Samples shall be changed at least once per 7 days and analyses shall be completed within 48 hours after changing (or after removal from sampler). Sampling shall also be performed at least once per 24 hours for at least 2 days following each shutdown from  $>$  or  $=$  15% RATED THERMAL POWER, startup to  $>$  or  $=$  15% RATED THERMAL POWER or THERMAL POWER change exceeding 15% of RATED THERMAL POWER in one hour and analyses shall be completed within 48 hours of changing. When samples collected for 24 hours are analyzed, the corresponding MDC may be increased by a factor of 10.
- e. Tritium grab samples shall be taken at least once per 7 days from the ventilation exhaust from the spent fuel pool area, whenever spent fuel is in the spent fuel pool.
- f. The ratio of the sample flow rate to the sampled stream flow rate shall be known for the time period covered by each dose or dose rate calculation made in accordance with Specifications 3.11.2.1, 3.11.2.2 and 3.11.2.3.
- g. The principle gamma emitters for which the MDC specification applies exclusively are the following radionuclides: Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, Cs-134, Cs-137, Ce-141 and Ce-144 for particulate emissions. This list does not mean that only these nuclides are to be detected and reported. Other which are measurable and identifiable, together with the above nuclides, shall also be identified and reported.
- h. Deviations from MDC requirements of Table 4.11-2 shall be reported per Specification 6.9.1.8 in lieu of any other report.
- i. A composite particulate sample is one in which the quantity of air sampled is proportional to the quantity of air discharged. Either a specimen which is representative of the air discharged may be accumulated and analyzed or the individual samples may be analyzed and weighted in proportion to their respective volume discharged.

TABLE 5

TABLE 5 (Continued)

- j. The principle gamma emitters for which the MDC specification applies exclusively are the following radionuclides: Kr-87, Kr-88, Xe-133, Xe-133m, Xe-135, and Xe-138 for gaseous emissions. This does not mean that only these nuclides are to be detected and reported. Other peaks which are measurable and identifiable together with the above nuclides, shall also be identified and reported.

TABLE 5

TABLE 5 (Continued)

TYPICAL GAS MDC'S FOR RCLS  
COUNTING SYSTEM

Nuclide -----	MDC ( $\mu\text{Ci/ml}$ ) -----	Nuclide -----	MDC ( $\mu\text{Ci/ml}$ ) -----
Mn-54	1.46E-14	Ce-144	5.08E-14
Fe-59	4.51E-14	Kr-87	3.44E-08
Co-58	1.55E-14	Kr-88	4.71E-08
Co-60	2.81E-14	Xe-133	6.30E-08
Zn-65	3.04E-14	Xe-133M	1.54E-07
Mo-99	1.02E-13	Xe-135	1.91E-08
Cs-134	4.08E-11	Xe-138	5.04E-08
Cs-137	1.31E-14	I-131	3.20E-14
Ce-141	1.13E-14	I-133	2.87E-14

CHAPTER 22

TABLE 6

TABLE 6

RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM  
FARLEY NUCLEAR PLANT - UNITS 1 & 2

Liquid Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Minimum Detectable Concentration (MDC) (uCi/ml)
A. Batch Waste Release Tanks	P Each Batch	P Each Batch	Principle <sup>e</sup> Gamma Emitters	5E-07
			I-131	1E-06
	One Batch/M	M	Dissolved & Entrained Gases (Gamma Emitters)	1E-05
	P Each Batch	b M Composite	H-3	1E-05
			Gross Alpha	1E-07

TABLE 6

TABLE 6 (Continued)

Liquid Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Minimum Detectable Concentration (MDC) (uCi/ml)
	P Each Batch	b Q Composite	Sr-89, Sr-90 Fe-55	5E-08 1E-06
B. Continuous Releases	d,f D Grab Sample	b W Composite	e Principle Gamma Emitters I-131	5E-07 1E-06
1. Steam Generator Blowdown	M Grab Sample	M	Dissolved & Entrained Gases (Gamma Emitters)	1E-05
	D Grab Sample	b M Composite	H-3 Gross Alpha	1E-05 1E-07
	D Grab Sample	b Q Composite	Sr-89, Sr-90 Fe-55	5E-08 1E-06
2. Turbine Building Sump	P Grab Sample	b W Composite	e Principle Gamma Emitters H-3	5E-07 1E-05

TABLE 6

TABLE 6 (Continued)

## TABLE NOTATION

- a. The MDC is the smallest concentration of radioactive material in a sample that will be detected with 95% probability with 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system (which may include radiochemical separation):

$$\text{MDC} = \frac{4.66 s_b}{E * V * 2.22 \times 10^6 * Y * \exp(-\lambda \Delta t)}$$

where:

MDC is the "a priori" lower limit of detection as defined above (as microcurie per unit mass or volume),

$s_b$  is the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate (as counts per minute),

E is the counting efficiency (as counts per transformation),

V is the sample size (in units mass or volume),

$2.22 \times 10^6$  is the number of transformations per minute per microcurie,

Y is the fractional radiochemical yield (when applicable),

$\lambda$  is the radioactive decay constant for the particular radionuclide, and

$\Delta t$  is the elapsed time between midpoint of sample collection and time of counting (for plant effluents, not environmental samples).

The value of  $s_b$  used in the calculation of the MDC for a detection system shall be based on the actual observed variance of the background counting rate or of the counting rate of the blank samples (as appropriate) rather than on an unverified theoretically predicted variance. Typical values of E, V, Y, and  $\Delta t$  shall be used in the calculation.

TABLE 6

TABLE 6 (Continued)

TABLE NOTATION

- b. A composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged and in which the method of sampling employed results in a specimen which is representative of the liquids released.
- c. A batch release is the discharge of liquid wastes of a discrete volume. Prior to sampling for analyses, each batch shall be isolated, and then thoroughly mixed, by a method described in the ODCM, to assure representative sampling.
- d. A continuous release is the discharge of liquid wastes of a nondiscrete volume; e.g., from a volume of system that has an input flow during the effluent release.
- e. The principle gamma emitters for which the MDC specification applies exclusively are the following radionuclides: Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, Cs-134, Cs-137, Ce-141, and Ce-144. This list does not mean that only these nuclides are to be detected and reported. Other peaks which are measurable and identifiable, together with the above nuclides, shall also be identified and reported.
- f. Sampling will be performed only if the effluent will be discharged to the environment.
- g. Deviation from the MDC requirements of Table 4.11-1 of the TS shall be reported per Specification 6.9.1.8 in lieu of any other report.

TABLE 6

TABLE 6 (Continued)

TYPICAL LIQUID MDC'S FOR RCLS  
COUNTING SYSTEM

Nuclide -----	MDC ( uCi/ml ) -----	Nuclide -----	MDC ( uCi/ml ) -----
Mn-54	2.88E-08	I-131	2.13E-08
Co-58	2.15E-08	Cs-134	1.75E-08
Fe-59	4.43E-08	Cs-137	2.67E-08
Co-60	3.86E-08	Ce-141	3.40E-08
Zn-65	7.94E-08	Ce-144	1.65E-07
Mo-99	1.88E-07		

# CHAPTER 23

## TABLE 7

### TABLE 7

LIQUID DISCHARGES NOT MEETING SPECIFIED DETECTION LIMITS  
Farley Units 1 & 2 - 2nd half, 1992

Batch #	N/A*
Date	N/A
Count Time in Seconds	N/A
Volume Discharged in Gallons	N/A
Dilution Water in Gallons	N/A
Total Isotopic Activity ( uCi/ml )	N/A
Isotope of Interest	N/A
MDC Measured	N/A
% of Total Isotopic Activity	N/A
% of Total Dose	N/A

\* No liquid discharges made that did not meet specified detection limits.

CHAPTER 24

TABLE 8-CA

The annual cumulative joint frequency table for all releases is contained on the following pages.

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: A

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	1	0	0	0	1
NNE	0	0	2	0	0	0	2
NE	0	1	8	0	0	0	9
ENE	0	1	10	0	0	0	11
E	0	2	2	0	0	0	4
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	2	0	0	0	0	2
S	0	0	1	0	0	0	1
SSW	0	5	1	0	0	0	6
SW	0	8	1	0	0	0	9
WSW	3	7	7	0	0	0	17
W	1	3	5	0	0	0	9
WNW	1	5	7	0	0	0	13
NW	0	4	10	0	0	0	14
NNW	0	2	1	0	0	0	3
VARIABLE	5	15	3	0	0	0	23
Total	10	55	59	0	0	0	124

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: B

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	0	0	0	0	1
NNE	0	1	1	0	0	0	2
NE	0	5	10	0	0	0	15
ENE	0	10	14	1	0	0	25
E	0	3	2	0	0	0	5
ESE	0	4	4	0	0	0	8
SE	0	2	1	0	0	0	3
SSE	0	0	1	0	0	0	1
S	0	2	0	0	0	0	2
SSW	0	6	0	0	0	0	6
SW	0	12	4	0	0	0	16
WSW	0	8	5	1	0	0	14
W	0	9	7	0	0	0	16
WNW	1	22	13	0	0	0	36
NW	1	14	28	7	0	0	50
NNW	1	7	10	0	0	0	18
VARIABLE	10	46	4	0	0	0	60
Total	13	152	104	9	0	0	278

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: C

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	3	4	0	0	0	7
NNE	1	7	1	0	0	0	9
NE	2	15	13	0	0	0	30
ENE	2	25	25	0	0	0	52
E	1	25	5	0	0	0	31
ESE	2	6	6	0	0	0	14
SE	1	8	3	0	0	0	12
SSE	0	3	5	0	0	0	8
S	0	3	1	0	0	0	4
SSW	2	3	0	0	0	0	5
SW	1	16	8	1	0	0	26
WSW	0	30	11	1	0	0	42
W	1	33	13	0	0	0	47
WNW	1	42	20	0	0	0	63
NW	2	28	47	6	0	0	83
NNW	1	17	21	1	0	0	40
VARIABLE	49	91	12	1	0	0	153
Total	66	355	195	10	0	0	626

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: D

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	7	19	3	0	0	0	29
NNE	30	98	16	0	0	0	144
NE	32	282	90	3	0	0	407
ENE	38	182	66	0	0	0	286
E	24	103	25	0	0	0	152
ESE	11	92	17	1	0	0	121
SE	11	96	62	2	0	0	171
SSE	8	30	40	2	0	0	80
S	3	20	9	9	0	0	41
SSW	11	23	32	9	0	0	75
SW	14	167	92	6	0	0	279
WSW	38	133	15	2	0	0	188
W	35	63	16	4	0	0	118
WNW	25	111	22	0	0	0	158
NW	26	127	106	12	0	0	271
NNW	23	105	71	2	0	0	201
VARIABLE	315	249	27	1	0	0	592
Total	651	1900	709	53	0	0	3313

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: E

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	15	3	0	0	0	0	18
NNE	79	49	0	0	0	0	128
NE	73	53	0	0	0	0	126
ENE	67	58	3	0	0	0	128
E	65	50	1	0	0	0	116
ESE	24	56	6	0	0	0	86
SE	12	66	29	0	0	0	107
SSE	16	20	31	3	0	0	70
S	11	24	6	0	0	0	41
SSW	15	39	19	0	0	0	73
SW	85	153	45	3	0	0	286
WSW	96	89	7	1	0	0	193
W	63	26	0	0	0	0	89
WNW	60	53	3	0	0	0	116
NW	48	157	24	1	0	0	230
NNW	50	100	16	0	0	0	166
VARIABLE	449	92	10	0	0	0	551
Total	1228	1088	200	8	0	0	2524

Periods of calm(hours):

1

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: F

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	28	2	0	0	0	0	30
NNE	50	5	0	0	0	0	55
NE	35	7	0	0	0	0	42
ENE	24	6	0	0	0	0	30
E	22	5	0	0	0	0	27
ESE	6	7	0	0	0	0	13
SE	5	8	1	0	0	0	14
SSE	1	5	0	0	0	0	6
S	1	0	0	0	0	0	1
SSW	5	7	0	0	0	0	12
SW	16	14	4	0	0	0	34
WSW	31	20	0	0	0	0	51
W	34	14	0	0	0	0	48
WNW	38	26	0	0	0	0	64
NW	58	55	0	0	0	0	113
NNW	96	34	0	0	0	0	130
VARIABLE	335	27	0	0	0	0	362
Total	785	242	5	0	0	0	1032

Periods of calm(hours):

7

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Ground

STABILITY CLASS: G

ALL HOURS IN PERIOD

ELEVATION: 10.0 m.

Wind Direction	Wind Speed (mph) at 10.0 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	53	8	0	0	0	0	61
NNE	30	3	0	0	0	0	33
NE	28	1	0	0	0	0	29
ENE	9	3	0	0	0	0	12
E	5	2	0	0	0	0	7
ESE	3	1	0	0	0	0	4
SE	4	4	0	0	0	0	8
SSE	3	0	0	0	0	0	3
S	0	0	0	0	0	0	0
SSW	1	1	0	0	0	0	2
SW	2	5	0	0	0	0	7
WSW	17	4	0	0	0	0	21
W	13	3	0	0	0	0	16
WNW	19	3	0	0	0	0	22
NW	55	7	0	0	0	0	62
NNW	141	11	0	0	0	0	152
VARIABLE	412	4	0	0	0	0	416
Total	795	60	0	0	0	0	855

Periods of calm(hours):

24

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: A

ALL HOURS IN PERIOD

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	0	0	0	0	1
NNE	0	3	1	0	0	0	4
NE	0	0	9	1	0	0	10
ENE	0	0	5	4	0	0	9
E	0	1	7	0	0	0	8
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	2	1	0	0	0	3
SSW	0	4	1	0	0	0	5
SW	0	4	4	0	0	0	8
WSW	0	8	3	1	0	0	12
W	0	4	3	3	0	0	10
WNW	1	3	5	6	0	0	15
NW	0	6	2	7	0	0	15
NNW	0	1	3	0	0	0	4
VARIABLE	3	13	4	0	0	0	20
Total	4	50	48	22	0	0	124

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: B

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	4	0	0	0	5
NNE	2	4	3	0	0	0	9
NE	0	5	10	0	0	0	15
ENE	0	4	19	5	0	0	28
E	0	3	4	0	0	0	7
ESE	0	2	8	0	0	0	10
SE	0	1	3	0	0	0	4
SSE	0	0	0	1	0	0	1
S	0	2	0	0	0	0	2
SSW	0	3	1	0	0	0	4
SW	0	7	4	0	0	0	11
WSW	0	3	9	4	0	0	16
W	0	4	11	3	0	0	18
WNW	0	5	15	0	0	0	20
NW	2	16	21	18	0	0	57
NNW	0	12	14	2	0	0	28
VARIABLE	6	30	7	0	0	0	43
Total	10	102	133	33	0	0	278

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: C

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	6	13	0	1	0	20
NNE	7	10	3	0	0	0	20
NE	3	23	10	2	0	0	38
ENE	2	20	28	8	0	0	58
E	0	16	15	1	0	0	32
ESE	0	8	12	3	0	0	23
SE	1	3	5	0	0	0	9
SSE	1	5	5	2	0	0	13
S	0	3	2	0	0	0	5
SSW	1	2	2	1	0	0	6
SW	1	7	7	0	0	0	15
WSW	0	19	20	5	0	0	44
W	0	20	25	2	1	0	48
WNW	0	22	25	3	0	0	50
NW	3	27	52	13	0	0	95
NNW	3	10	23	2	0	0	38
VARIABLE	31	62	19	0	0	0	112
Total	53	263	266	42	2	0	626

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: D

ALL HOURS IN PERIOD

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	31	33	1	0	0	65
NNE	15	89	65	14	1	0	184
NE	25	108	181	21	0	0	335
ENE	26	121	187	20	0	0	354
E	15	79	70	11	0	0	175
ESE	9	69	36	4	0	0	118
SE	6	67	60	6	1	0	140
SSE	8	37	78	24	0	0	147
S	2	14	17	20	0	0	53
SSW	4	14	28	19	1	0	66
SW	8	71	124	33	5	0	241
WSW	14	117	66	13	0	0	210
W	19	80	29	15	3	0	146
WNW	13	70	53	12	0	0	148
NW	17	95	118	45	7	1	283
NNW	12	52	75	29	1	0	169
VARIABLE	207	204	55	13	0	0	479
Total	400	1318	1275	300	19	1	3313

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: E

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	2	43	18	0	0	0	63
NNE	7	63	44	0	0	0	114
NE	9	59	59	0	0	0	127
ENE	7	107	65	0	0	0	179
E	6	66	53	0	0	0	125
ESE	9	69	39	1	0	0	118
SE	10	38	57	1	0	0	106
SSE	14	35	67	24	0	0	140
S	8	30	21	10	0	0	69
SSW	5	44	42	15	0	0	106
SW	5	89	146	23	0	0	263
WSW	9	117	104	8	1	0	239
W	9	85	39	1	1	0	135
WNW	11	44	66	4	0	0	125
NW	14	44	118	23	1	0	200
NNW	7	23	86	17	0	0	133
VARIABLE	119	120	41	2	0	0	282
Total	251	1076	1065	129	3	0	2524

Periods of calm(hours):

1

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: F

ALL HOURS IN PERIOD

ELEVATION: 60.3 m.

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	31	22	0	0	0	53
NNE	3	19	46	0	0	0	68
NE	3	24	41	0	0	0	68
ENE	4	33	35	0	0	0	72
E	7	23	19	0	0	0	49
ESE	3	24	24	0	0	0	51
SE	1	22	14	0	0	0	37
SSE	7	8	10	3	0	0	28
S	4	3	2	0	0	0	9
SSW	11	7	8	0	0	0	26
SW	5	24	26	5	0	0	60
WSW	5	27	31	0	0	0	63
W	5	32	30	0	0	0	67
WNW	3	28	33	1	0	0	65
NW	6	28	75	0	0	0	109
NNW	3	24	53	3	0	0	53
VARIABLE	56	61	14	0	0	0	131
Total	126	418	483	12	0	0	1039

Periods of calm(hours):

0

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

TABLE 8-CA

## FARLEY NUCLEAR PLANT

## CUMULATIVE JOINT FREQUENCY DISTRIBUTION

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01-JAN-92 00:00 TO 31-DEC-92 23:59

RELEASE MODE: Elevated

STABILITY CLASS: G

ALL HOURS IN PERIOD

Wind Direction	Wind Speed (mph) at 60.3 m. level						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	4	44	20	0	0	0	68
NNE	4	33	25	0	0	0	62
NE	6	36	33	0	0	0	75
ENE	8	34	19	0	0	0	61
E	7	35	16	0	0	0	58
ESE	8	25	15	0	0	0	48
SE	1	17	13	0	0	0	31
SSE	2	23	10	2	0	0	37
S	3	3	2	0	0	0	8
SSW	3	5	2	0	0	0	10
SW	5	12	3	0	0	0	20
WSW	16	15	9	0	0	0	40
W	7	25	8	0	0	0	40
WNW	5	38	9	0	0	0	52
NW	9	47	58	0	0	0	114
NNW	7	28	24	0	0	0	59
VARI. 'E	47	42	6	0	0	0	95
Total	142	462	272	2	0	0	878

Periods of calm(hours):

1

Hours of missing data:

0

(this stability class)

Hours of missing data:

0

(this time period, all stability classes)

## CHAPTER 25

### PROCESS CONTROL PROGRAM

There were no changes to the Process Control Program during the second half of 1992.