ALABAMA POWER COMPANY

FARLEY NUCLEAR PLANT UNIT NO. ONE

LICENSE NO. NPF-2

AND

FARLEY NUCLEAR PLANT UNIT NO. TWO

LICENSE NO. NPF-8

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

JULY 1, 1983 THROUGH DECEMBER 31, 1983

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INTRODUCTION

This Semi-Annual radioactive release report, for the period July 1 to December 31, 1983 is submitted in accordance with appendix A of License No. NPF-2 and NPF-8. Appendix A will hereinafter be referred to as the Standard Technical Specifications or STS.

A single submittal is made for both units which combines those sections that are common. Separate tables of releases and 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 radioactive liquid and gaseous effluents released from the Farley Nuclear Plant site over the same period. Additionally, section 12.d with associated dose contributions to sectors comprises an assesment 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).

Submittal of this report was delayed due to skewed stability class data in the original draft as a result of a meteorological hardware failure and a data acquisition hardware deficiency. This report also reflects the correction of several errors in the offsite dose calculation computer software. In both the draft and final reports, calculated doses are well within the limits established by the Farley Nuclear Plant Technical Specifications.

SUPPLEMENTARY INFORMATION FOR EFFLUENT AND WASTE DISPOSAL

1. Regulatory Limits

a. Fission and Activation Gases

The release rate limit at any time of noble gases to areas at or beyond the site boundary shall be such that

$$10^{6}\,\frac{pCi}{uCi}\sum_{i}^{14}\left[K_i\left[\sum_{v}^{2}\left[(\overline{X/Q})_v\,Q_{iv}\right]\right]\right] < 500 \text{ mrem/yr}$$

and

$$10^{6}\,\frac{pCi}{uCi}\sum_{i}^{14}\left[(L_i + 1.1\,M_i)\sum_{v}^{2}\left[(\overline{X/Q})_v\,Q_{iv}\right]\right] < 3000 \text{ mrem/yr}$$

where the terms are defined in the ODCM.

b. Iodines and Particulates

The release rate limits for sampling period of all radioiodines and radioactive materials in particulate form and radionuclides other than noble gases released to the environs as part of the gaseous wastes from the site shall be such that

$$10^{6}\,\frac{pCi}{uCi}\sum_{i}^{18}\left[P_i\sum_{v}^{2}\left[(\overline{X/Q})_{mv}\,Q_{iv}\right]\right] < 6.3 \text{ mrem/yr}$$

where the terms are defined in the ODCM.

c. Liquid Effluents

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 10 CFR 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 4 E-5 uCi/ml in water.

2. Maximum Permissible Concentrations

a. Airborne - The maximum permissible concentration of radioactive materials in gaseous effluents is limited by the dose rate restrictions of 10CFR20. In this case, the maximum permissible concentrations are actually determined by the dose factors in the ODCM.

b. Liquid - 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.

3. Average Energy
Not Applicable for Farley's STS.

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
c. Particulates
d. Liquid Effluents

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

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 present 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 limits, it is reported.

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 6 for sampling and analytical requirements). Isotopic values thus obtained are used for dose release rate calculations as given in section 1a of this report. 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. Monitors are assigned a calibration factor based upon the last isotopic analysis using the following relationship:

$CF_i = A_i / m$, where

CF_i = isotopic calibration factor for isotope i.

A_i = concentration of isotope in the grab sample, in uCi/ml.

m = net monitor reading associated with the effluent stream.

These calibration factors along with the hourly effluent monitor readings are input to the laboratory computer where the release rates for individual nuclides are calculated and stored.

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 & d of Table 4.11-2, "Radioactive Gaseous Waste Sampling and Analysis Program", (STS Table 4.11-2).

Particulate and Iodine

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

Mn-54	I-131
Fe-59	I-133
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-lifes 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 Purge and Waste Gas Decay Tanks) is analogous to continuous releases, except that the release is not commenced until grab samples have been obtained and analyzed.

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 5. Isotopic analyses are performed using the computerized pulse height analysis system previously described. Aliquots of each pre-release sample proportional to the waste volume released are composited in accordance with requirements in Table 5. Strontium and Iron 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 concentrations are determined by 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 to be analyzed on a weekly composite basis per Table 5.

5. Batch Release

a. Liquid	Quarter 3	Quarter 4
1. Number of batch releases:	98	139
2. Total time period for releases:	8030 min.	11535 min.
3. Maximum time period for a release:	166 min.	183 min.
4. Average time period for a release:	82 min.	83 min.
5. Minimum time period for a release:	55 min.	38 min.
6. Average stream flow during periods of release of effluent into a flowing stream:	*1.15E4 cfs	*1.15E4 cfs

b. Gaseous	Quarter 3	Quarter 4
1. Number of releases:	0	0
2. Total time period for releases:	0 min.	0 min.
3. Maximum time period for a release:	0 min.	0 min.
4. Average time period for a release:	0 min.	0 min.
5. Minimum time period for a release:	0 min.	0 min.

6. Abnormal Releases

a. Liquid	
1. Number of releases:	None
2. Total activity released:	N/A

b. Gaseous	
1. Number of releases:	None
2. Total activity released:	N/A

* Annual Average River Flow Rate.

UNIT # 2

5. Batch Release

a. Liquid	Quarter 3	Quarter 4
1. Number of batch releases:	70	77
2. Total time period for releases:	5906 min.	6668 min.
3. Maximum time period for a release:	193 min.	116 min.
4. Average time period for a release:	84 min.	87 min.
5. Minimum time period for a release:	42 min.	3 min.
6. Average stream flow during periods of release of effluent into a flowing stream:	*1.15E4 cfs	*1.15E4 cfs

b. Gaseous	Quarter 3	Quarter 4
1. Number of releases:	8	3
2. Total time period for releases:	3660 min.	1200 min.
3. Maximum time period for a release:	600 min.	480 min.
4. Average time period for a release:	480 min.	420 min.
5. Minimum time period for a release:	300 min.	240 min.

6. Abnormal Releases

a. Liquid	
1. Number of releases:	None
2. Total activity released:	N/A

b. Gaseous	
1. Number of releases:	None
2. Total activity released:	N/A

* Annual Average River Flow Rate.

7. Estimate of Total Error

a. 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%.

b. 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	Iodines	Particulates	Tritium
75%	60%	50%	45%

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

Fission and Activation Gases	Iodines	Particulates	Tritium
6%	18%	19%	12%

c. Solid Radwaste

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

8. Solid Waste

See Table 3

9. Radiological Impact On Man

a. Water Related Exposure Pathways

	3rd Quarter	4th Quarter
Total Body =	1.7E-03 mrem	8.5E-04 mrem
Bone =	1.2E-03 mrem	3.1E-04 mrem
Liver =	2.2E-03 mrem	9.9E-04 mrem
Thyroid =	8.8E-04 mrem	5.9E-04 mrem
Kidney =	1.1E-03 mrem	6.9E-04 mrem
Lungs =	7.4E-04 mrem	5.9E-04 mrem
GI Tract =	2.9E-02 mrem	2.0E-03 mrem

b. Gaseous Related Exposure Pathways

	3rd Quarter	4th Quarter
Total Body =	9.1E-02 mrem	8.9E-02 mrem
Skin =	1.4E-01 mrem	1.6E-01 mrem

c. Particulate and Iodine

	3rd Quarter	4th Quarter
Organ Dose =	6.5E-03 mrem	6.2E-03 mrem

8. Solid Waste

   See Table 3

9. Radiological Impact On Man

   a. Water Related Exposure Pathways

	3rd Quarter	4th Quarter
Total Body =	1.0E-03 mrem	2.8E-03 mrem
Bone =	1.6E-04 mrem	1.5E-03 mrem
Liver =	1.1E-03 mrem	3.5E-03 mrem
Thyroid =	1.1E-03 mrem	1.2E-03 mrem
Kidney =	9.6E-04 mrem	1.9E-03 mrem
Lungs =	9.1E-04 mrem	1.4E-03 mrem
GI Tract =	6.1E-03 mrem	1.8E-03 mrem

   b. Gaseous Related Exposure Pathways

	3rd Quarter	4th Quarter
Total Body =	9.4E-02 mrem	1.9E-03 mrem
Skin =	1.0E-01 mrem	5.0E-03 mrem

   c. Particulate and Iodine

	3rd Quarter	4th Quarter
Organ Dose =	1.4E-01 mrem	2.9E-02 mrem

10. Meteorological Data

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

Continuous Release Mode:
3rd Quarter, 1983
4th Quarter, 1983

Batch Release Mode (Unit 2):
3rd Quarter, 1983
4th Quarter, 1983

11. 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 STS Table 4.11-1 a. is relied upon.

12. Annual Radiation Dose Assessment (1983)

a. Water Related Exposure Pathways

Total Body	= 4.9E-02	mrem
Bone	= 3.8E-02	mrem
Liver	= 6.4E-02	mrem
Thyroid	= 6.3E-03	mrem
Kidney	= 2.5E-02	mrem
Lungs	= 1.2E-02	mrem
GI Tract	= 5.2E-01	mrem

b. Gaseous Related Exposure Pathways

Total Body	= 6.2E-01	mrem
Skin	= 1.1E 00	mrem

c. Particulate and Iodine

Organ	= 7.6E-01	mrem

Note: The meteorological conditions concurrent with the time of release of radioactive materials in gaseous effluents (as determined by sampling frequency and measurement outlined in Tables 5 and 6 have been used for the gaseous pathway doses. The assessment of radiation doses has been performed in accordance with the OFFSITE DOSE CALCULATION MANUAL (ODCM).

d. Maximum Real Exposure

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 16, 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 by technical specification 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 Farley Nuclear Plant is the only uranium fuel cycle source within a radius of greater than 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 highest organ dose or the whole body dose if greater for each quarter from liquid effluents. The tabulation also 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

MAXIMUM* OFF-SITE DOSES AND DOSE COMMITMENTS
TO MEMBERS OF THE PUBLIC

Source	Dose, Millirems 1st Q	2nd Q	3rd Q	4th Q	Year**
Organ	G I	G I	G I	G I	G I
Liquid Effluents (1)	4.2E-01	6.3E-02	3.5E-02	3.8E-03	5.2E-01
Airborne Effluents					
Sector	SW	WSW	WSW	SW	SW
Iodines & Particulates (2)	2.3E-01	7.2E-03	1.2E-02	1.6E-02	3.4E-01
Sector	S	S	S	S	S
Noble gases (3)	7.6E-02	1.4E-01	1.3E-01	4.2E-02	3.9E-01
Sector	SW	SSE	S	ENE	SSE
Direct Radiation (4)	3.0E 01	2.3E 01	1.7E 01	2.5E 01	5.9E 01

Based on meteorology data provided in Table 8.

*"Maximum" means the largest fraction of the corresponding Appendix I dose design objective.

**"Maximum" dose for the year may not equal the sum of the quarterly maximum doses because the doses may be to different organs or may occur at different places.

1. The liquid effluent total body and organ doses are determined primarily by the fish pathway. These are calculated using the bioaccumulation factors, dose conversion factors and assumptions of Regulatory guide 1.109 (March 1976).

2. Airborne effluent iodine and particulate doses are determined through the inhalation pathway using reported isotopic concentrations, atmospheric dispersion assumptions of Regulatory guide 1.111 (March 1976) and inhalation dose factors of Regulatory guide 1.109. Once calculated these doses are multiplied by a constant (238) to convert them to the grass/cow/milk pathway equivalents.

3. The noble gas doses are determined using the measured isotopic concentrations, the atmospheric dispersion assumptions of Regulatory guide 1.111 and submersion dose factors from Regulatory guide 1.109.

4. Direct radiation was assessed using thermal luminescent dosimetry. Two dosimeters containing three LiF TLD chips each were placed at selected locations within each of 16 sectors around the plant. These chips were collected and read quarterly and annually.

TABLE 1A-1Q3

GASEOUS EFFLUENTS--SUMMATION OF ALL RELEASES

Farley Unit 1 - 3rd Quarter, 1983

	UNITS	QTR 3	Est Error
A. Fission & activation gases:			
1. Total release	Ci	1.51E 03	4.18E 01
2. Average Release rate	uCi/sec	1.90E 02	
3. % of Technical specification	%	6.28E-03*	
	%	1.26E-02**	
B. Iodines			
1. Total iodine-131	Ci	4.95E-05	8.14E-06
2. Average Release rate	uCi/sec	6.23E-06	
3. % of Technical specification	%	1.90E-08***	
C. Particulates			
1. Particulates with T1/2>8 days	Ci	7.47E-06	1.83E-06
2. Average Release rate	uCi/sec	9.40E-07	
3. % of Technical specification	%	2.49E-07***	
4. Gross alpha radioactivity	Ci	0.00E 00	
D. Tritium			
1. Total release	Ci	4.68E 01	1.63E-01
2. Average Release rate	uCi/sec	5.89E 00	
3. % of Technical specification	%	5.45E-07***	

*: Whole body limit (<500 mrem/yr)
**: Extrem. limit (<3000 mrem/yr)
***: % of 6.3 mrem/yr for all 19 isotopes

TABLE 1A-1Q4

GASEOUS EFFLUENTS--SUMMATION OF ALL RELEASES

Farley Unit 1 - 4th Quarter, 1983

	UNITS	QTR 4	Est Error
A. Fission & activation gases:			
1. Total release	Ci	2.08E 03	5.17E 01
2. Average Release rate	uCi/sec	2.61E 02	
3. % of Technical specification	%	6.04E-03*	
	%	1.29E-02**	
B. Iodines			
1. Total iodine-131	Ci	7.68E-05	4.79E-05
2. Average Release rate	uCi/sec	9.66E-06	
3. % of Technical specification	%	2.94E-08***	
C. Particulates			
1. Particulates with T1/2>8 days	Ci	1.21E-04	2.52E-04
2. Average Release rate	uCi/sec	1.52E-05	
3. % of Technical specification	%	3.47E-06***	
4. Gross alpha radioactivity	Ci	0.00E 00	
D. Tritium			
1. Total release	Ci	2.33E 01	1.51E-01
2. Average Release rate	uCi/sec	2.94E 00	
3. % of Technical specification	%	2.72E-07***	

*: Whole body limit (<500 mrem/yr)
**: Extrem. limit (<3000 mrem/yr)
***: % of 6.3 mrem/yr for all 19 isotopes

TABLE 1A-2Q3

GASEOUS EFFLUENTS--SUMMATION OF ALL RELEASES

Farley Unit 2 - 3rd Quarter, 1983

	UNITS	QTR 3	Est Error
A. Fission & activation gases:			
1. Total release	Ci	5.87E 02	8.11E 01
2. Average Release rate	uCi/sec	7.38E 01	
3. % of Technical specification	%	3.49E-03*	
	%	6.26E-03**	
B. Iodines			
1. Total iodine-131	Ci	1.52E-05	1.67E-06
2. Average Release rate	uCi/sec	1.91E-06	
3. % of Technical specification	%	5.82E-09***	
C. Particulates			
1. Particulates with T1/2>8 days	Ci	1.87E-08	5.65E-09
2. Average Release rate	uCi/sec	2.35E-09	
3. % of Technical specification	%	1.38E-08***	
4. Gross alpha radioactivity	Ci	0.00E 00	
D. Tritium			
1. Total release	Ci	1.10E 02	3.25E-01
2. Average Release rate	uCi/sec	1.38E 01	
3. % of Technical specification	%	1.28E-06***	

*: Whole body limit (<500 mrem/yr)
**: Extrem. limit (<3000 mrem/yr)
***: % of 6.3 mrem/yr for all 19 isotopes

TABLE 1A-2Q4

GASEOUS EFFLUENTS--SUMMATION OF ALL RELEASES

Farley Unit 2 - 4th Quarter, 1983

	UNITS	QTR 4	Est Error
A. Fission & activation gases:			
1. Total release	Ci	7.27E 01	6.22E 00
2. Average Release rate	uCi/sec	9.14E 00	
3. % of Technical specification	%	1.21E-04*	
	%	2.74E-04**	
B. Iodines			
1. Total iodine-131	Ci	1.84E-05	2.92E-06
2. Average Release rate	uCi/sec	2.31E-06	
3. % of Technical specification	%	7.04E-09***	
C. Particulates			
1. Particulates with T1/2>8 days	Ci	3.05E-06	9.58E-07
2. Average Release rate	uCi/sec	3.84E-07	
3. % of Technical specification	%	3.68E-07***	
4. Gross alpha radioactivity	Ci	0.00E 00	
D. Tritium			
1. Total release	Ci	2.38E 02	5.48E 00
2. Average Release rate	uCi/sec	2.99E 01	
3. % of Technical specification	%	2.77E-06***	

*: Whole body limit (<500 mrem/yr)
**: Extrem. limit (<3000 mrem/yr)
***: % of 6.3 mrem/yr for all 19 isotopes

TABLE 1B-1Q3

GASEOUS EFFLUENTS--ELEVATED RELEASE

Farley Unit 1 - 3rd Quarter, 1983

Nuclides Released	Unit	CONTINUOUS Mode QTR# 3	BATCH Mode QTR# 3
1. Fission gases			
Ar-41	Ci	7.49E-02	0.00E 00
Xe-138	Ci	0.00E 00	0.00E 00
Kr-87	Ci	4.05E-03	0.00E 00
Kr-85M	Ci	5.32E-04	0.00E 00
Xe-135	Ci	3.57E 02	0.00E 00
Xe-133M	Ci	0.00E 00	0.00E 00
Kr-88	Ci	2.40E 01	0.00E 00
Xe-133	Ci	1.13E 03	0.00E 00
Total for period	Ci	1.51E 03	0.00E 00
2. Iodines			
I-133	Ci	4.40E-07	0.00E 00
I-131	Ci	4.95E-05	0.00E 00
Total for period	Ci	5.00E-05	0.00E 00
3. Particulates			
* Mo-99	Ci	0.00E 00	0.00E 00
Co-60	Ci	0.00E 00	0.00E 00
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Co-58	Ci	5.48E-06	0.00E 00
Cs-137	Ci	0.00E 00	0.00E 00
Cs-134	Ci	0.00E 00	0.00E 00
* I-133	Ci	8.73E-05	0.00E 00
I-131	Ci	1.99E-06	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Total for period	Ci	9.48E-05	0.00E 00

* Isotope with half-life less then 8 days

TABLE 1B-1Q4

GASEOUS EFFLUENTS--ELEVATED RELEASE

Farley Unit 1 - 4th Quarter, 1983

Nuclides Released	Unit	CONTINUOUS Mode QTR# 4	BATCH Mode QTR# 4
1. Fission gases			
Ar-41	Ci	2.15E-01	0.00E 00
Xe-138	Ci	0.00E 00	0.00E 00
Kr-87	Ci	0.00E 00	0.00E 00
Xe-135	Ci	3.18E 02	0.00E 00
Xe-133M	Ci	5.20E-01	0.00E 00
Kr-88	Ci	1.28E 01	0.00E 00
Xe-133	Ci	1.74E 03	0.00E 00
Total for period	Ci	2.08E 03	0.00E 00
2. Iodines			
I-133	Ci	1.18E-04	0.00E 00
I-131	Ci	7.67E-05	0.00E 00
Total for period	Ci	1.95E-04	0.00E 00
3. Particulates			
* Mo-99	Ci	0.00E 00	0.00E 00
Co-60	Ci	1.01E-05	0.00E 00
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Co-58	Ci	1.23E-05	0.00E 00
Cs-137	Ci	0.00E 00	0.00E 00
Cs-134	Ci	0.00E 00	0.00E 00
* I-133	Ci	5.93E-04	0.00E 00
I-131	Ci	8.98E-06	0.00E 00
Cr-51	Ci	8.96E-05	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Total for period	Ci	7.14E-04	0.00E 00

* Isotope with half-life less then 8 days

TABLE 1B-2Q3

GASEOUS EFFLUENTS--ELEVATED RELEASE

Farley Unit 2 - 3rd Quarter, 1983

Nuclides Released	Unit	CONTINUOUS Mode QTR# 3	BATCH Mode QTR# 3
1. Fission gases			
Ar-41	Ci	4.87E 01	2.88E-04
Xe-137	Ci	0.00E 00	2.65E-03
Kr-85	Ci	0.00E 00	1.58E-01
Xe-138	Ci	0.00E 00	0.00E 00
Kr-87	Ci	0.00E 00	0.00E 00
Kr-85M	Ci	0.00E 00	1.41E-02
Xe-135	Ci	9.33E 01	3.35E-01
Xe-133M	Ci	0.00E 00	1.78E-01
Kr-88	Ci	0.00E 00	1.86E-03
Xe-131M	Ci	0.00E 00	2.87E-01
Xe-133	Ci	4.26E 02	1.30E 01
Total for period	Ci	5.68E 02	1.40E 01
2. Iodines			
I-133	Ci	2.41E-07	0.00E 00
I-131	Ci	1.52E-05	5.67E-10
Total for period	Ci	1.54E-05	5.67E-10
3. Particulates			
* Mo-99	Ci	0.00E 00	0.00E 00
Co-60	Ci	0.00E 00	5.39E-09
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Co-58	Ci	0.00E 00	7.11E-09
Cs-137	Ci	0.00E 00	0.00E 00
Cs-134	Ci	0.00E 00	0.00E 00
* I-133	Ci	0.00E 00	0.00E 00
I-131	Ci	0.00E 00	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Total for period	Ci	0.00E 00	1.25E-08

* Isotope with half-life less then 8 days

TABLE 1B-2Q4

GASEOUS EFFLUENTS--ELEVATED RELEASE

Farley Unit 2 - 4th Quarter, 1983

Nuclides Released	Unit	CONTINUOUS Mode QTR# 4	BATCH Mode QTR# 4
1. Fission gases			
Ar-41	Ci	2.95E-0	0.00E 00
Kr-85	Ci	0.00E 00	8.03E-02
Xe-138	Ci	0.00E 00	0.00E 00
Kr-87	Ci	0.00E 00	0.00E 00
Kr-85M	Ci	0.00E 00	4.26E-03
Xe-135	Ci	9.87E-01	9.86E-02
Xe-133M	Ci	0.00E 00	7.26E-02
Kr-88	Ci	0.00E 00	0.00E 00
Xe-131M	Ci	0.00E 00	3.04E-03
Xe-133	Ci	6.97E 01	1.40E 00
Total for period	Ci	7.10E 01	1.66E 00
2. Iodines			
I-133	Ci	8.09E-07	0.00E 00
I-131	Ci	1.81E-05	2.51E-07
Total for period	Ci	1.89E-05	2.51E-07
3. Particulates			
* Mo-99	Ci	0.00E 00	0.00E 00
Co-60	Ci	1.28E-06	5.21E-10
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Co-58	Ci	0.00E 00	0.00E 00
Cs-137	Ci	0.00E 00	0.00E 00
Cs-134	Ci	0.00E 00	0.00E 00
* I-133	Ci	0.00E 00	0.00E 00
I-131	Ci	1.77E-06	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Total for period	Ci	3.05E-06	5.21E-10

* Isotope with half-life less then 8 days

TABLE 1C-1Q3

GASEOUS EFFLUENTS--GROUND RELEASE

Farley Unit 1 - 3rd Quarter, 1983

Nuclides Released	Unit	CONTINUOUS Mode QTR# 3	BATCH Mode QTR# 3
1. Fission gases			
Xe-138	Ci	0.00E 00	0.00E 00
Kr-87	Ci	0.00E 00	0.00E 00
Xe-135	Ci	9.70E-05	0.00E 00
Xe-133M	Ci	0.00E 00	0.00E 00
Kr-88	Ci	0.00E 00	0.00E 00
Xe-133	Ci	2.56E-04	0.00E 00
Total for period	Ci	3.53E-04	0.00E 00
2. Iodines			
I-133	Ci	7.78E-11	0.00E 00
I-131	Ci	1.37E-08	0.00E 00
Total for period	Ci	1.38E-08	0.00E 00
3. Particulates			
* Mo-99	Ci	0.00E 00	0.00E 00
Co-60	Ci	0.00E 00	0.00E 00
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Co-58	Ci	0.00E 00	0.00E 00
Cs-137	Ci	0.00E 00	0.00E 00
Cs-134	Ci	0.00E 00	0.00E 00
* I-133	Ci	0.00E 00	0.00E 00
I-131	Ci	3.33E-11	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Total for period	Ci	3.33E-11	0.00E 00

* Isotope with half-life less then 8 days

TABLE 1C-1Q4

GASEOUS EFFLUENTS--GROUND RELEASE

Farley Unit 1 - 4th Quarter, 1983

Nuclides Released	Unit	CONTINUOUS Mode QTR# 4	BATCH Mode QTR# 4
1. Fission gases			
Xe-138	Ci	0.00E 00	0.00E 00
Kr-87	Ci	0.00E 00	0.00E 00
Xe-135	Ci	5.59E-01	0.00E 00
Xe-133M	Ci	0.00E 00	0.00E 00
Kr-88	Ci	4.35E-02	0.00E 00
Xe-133	Ci	1.75E 00	0.00E 00
Total for period	Ci	2.35E 00	0.00E 00
2. Iodines			
I-133	Ci	5.90E-10	0.00E 00
I-131	Ci	6.52E-08	0.00E 00
Total for period	Ci	6.58E-08	0.00E 00
3. Particulates			
* Mo-99	Ci	0.00E 00	0.00E 00
Co-60	Ci	1.83E-09	0.00E 00
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Co-58	Ci	0.00E 00	0.00E 00
Cs-137	Ci	0.00E 00	0.00E 00
Cs-134	Ci	0.00E 00	0.00E 00
* I-133	Ci	7.87E-07	0.00E 00
I-131	Ci	0.00E 00	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Total for period	Ci	7.89E-07	0.00E 00

* Isotope with half-life less then 8 days

TABLE 1C-2Q3

GASEOUS EFFLUENTS--GROUND RELEASE

Farley Unit 2 - 3rd Quarter, 1983

Nuclides Released	Unit	CONTINUOUS Mode QTR# 3	BATCH Mode QTR# 3
1. Fission gases			
Ar-41	Ci	4.56E-08	0.00E 00
Kr-85	Ci	1.52E-02	0.00E 00
Xe-138	Ci	0.00E 00	0.00E 00
Kr-87	Ci	0.00E 00	0.00E 00
Xe-135	Ci	4.62E 00	0.00E 00
Xe-133M	Ci	2.11E-02	0.00E 00
Kr-88	Ci	1.04E-01	0.00E 00
Xe-131M	Ci	4.56E-02	0.00E 00
Xe-133	Ci	3.24E-02	0.00E 00
Total for period	Ci	4.84E 00	0.00E 00
2. Iodines			
I-133	Ci	0.00E 00	0.00E 00
I-131	Ci	1.07E-09	0.00E 00
Total for period	Ci	1.07E-09	0.00E 00
3. Particulates			
* Mo-99	Ci	0.00E 00	0.00E 00
Co-60	Ci	6.20E-09	0.00E 00
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Co-58	Ci	0.00E 00	0.00E 00
Cs-137	Ci	0.00E 00	0.00E 00
Cs-134	Ci	0.00E 00	0.00E 00
* I-133	Ci	0.00E 00	0.00E 00
I-131	Ci	0.00E 00	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Total for period	Ci	6.20E-09	0.00E 00

* Isotope with half-life less then 8 days

TABLE 1C-2Q4

GASEOUS EFFLUENTS--GROUND RELEASE

Farley Unit 2 - 4th Quarter, 1983

Nuclides Released	Unit	CONTINUOUS Mode QTR# 4	BATCH Mode QTR# 4
1. Fission gases			
Xe-138	Ci	0.00E 00	0.00E 00
Kr-87	Ci	0.00E 00	0.00E 00
Xe-135	Ci	0.00E 00	0.00E 00
Xe-133M	Ci	0.00E 00	0.00E 00
Kr-88	Ci	0.00E 00	0.00E 00
Xe-133	Ci	4.24E-02	0.00E 00
Total for period	Ci	4.24E-02	0.00E 00
2. Iodines			
I-133	Ci	2.50E-09	0.00E 00
I-131	Ci	5.59E-09	0.00E 00
Total for period	Ci	8.09E-09	0.00E 00
3. Particulates			
* Mo-99	Ci	0.00E 00	0.00E 00
Co-60	Ci	0.00E 00	0.00E 00
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Co-58	Ci	0.00E 00	0.00E 00
Cs-137	Ci	0.00E 00	0.00E 00
Cs-134	Ci	0.00E 00	0.00E 00
* I-133	Ci	0.00E 00	0.00E 00
I-131	Ci	0.00E 00	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Total for period	Ci	0.00E 00	0.00E 00

* Isotope with half-life less then 8 days

TABLE 2A-1

LIQUID EFFLUENT--SUMMATION OF ALL RELEASES
Farley Unit 1 - 2nd Half, 1983

		UNIT	Qrtr 3, 83	Qrtr 4, 83
A. Fission and Activation Products				
1. Total release	Note (4)	Ci	5.97E-03	3.58E-03
2. Average diluted concentration During Period	Note (1)	uCi/ml	5.26E-09	3.08E-09
3. Percent of applicable limit During Period	Note (1)	%	4.10E-04	7.03E-05
B. Tritium				
1. Total release	Note (4)	Ci	6.68E 01	2.38E 02
2. Average diluted concentration During Period	Note (1)	uCi/ml	5.89E-05	2.09E-03
3. Percent of applicable limit During Period	Note (1)	%	1.97E 00	6.83E 00
C. Dissolved and Entrained Gases				
1. Total release	Note (4)	Ci	3.94E-01	2.83E 00
2. Average diluted concentration During Period	Note (1)	uCi/ml	3.48E-07	2.45E-06
3. Percent of applicable limit During Period	Note (1)	%	8.68E-01	6.10E 00
D. Gross Alpha Radioactivity				
1. Total release	Note (4)	Ci	5.51E-05	3.56E-04
E. Volume of Waste Water	Note (2)			
1. WMT		liters	1.42E 06	2.00E 06
2. SGBD and Turbine Bldg Sumps		liters	7.21E 07	7.77E 07
3. Liquid Radioactive Effluent TOTAL	Note(3)	liters	1.42E 06	2.00E 06
F. Volume of Dilution Water During Quarter		liters	1.37E 10	1.81E 10

NOTE:

(1) During period of discharge
(2) Prior to dilution
(3) Steam Generator Blowdown and Turbine Building Sump releases are excluded from Total Liquid Radioactive Effluent in accordance with 10 CFR 20, Appendix B, Note 5.
(4) Steam Generator Blowdown and Turbine Building Sump release curie amounts and doses were measured and are included in these totals and in table 2B-1C in accordance with Table 4.11-1, Footnote E of Joseph M. Farley Nuclear Plant Unit Number 1 Technical Specifications (Appendix A of License No. NPF-2).

TABLE 2A-2

LIQUID EFFLUENT--SUMMATION OF ALL RELEASES
Farley Unit 2 - 2nd Half, 1983

		UNIT	Qrtr 3, 83	Qrtr 4, 83
A. Fission and Activation Products				
1. Total release	Note (4)	Ci	8.58E-04	2.11E-03
2. Average diluted concentration During Period	Note (1)	uCi/ml	7.57E-10	1.81E-09
3. Percent of applicable limit During Period	Note (1)	%	5.89E-05	4.14E-05
B. Tritium				
1. Total release	Note (4)	Ci	9.23E 01	1.60E 02
2. Average diluted concentration During Period	Note (1)	uCi/ml	8.14E-05	1.38E-04
3. Percent of applicable limit During Period	Note (1)	%	2.72E 00	4.59E 00
C. Dissolved and Entrained Gases				
1. Total release	Note (4)	Ci	2.91E-01	1.84E 00
2. Average diluted concentration During Period	Note (1)	uCi/ml	2.57E-07	1.59E-06
3. Percent of applicable limit During Period	Note (1)	%	6.41E-01	3.97E 00
D. Gross Alpha Radioactivity				
1. Total release	Note (4)	Ci	1.67E-05	5.83E-06
E. Volume of Waste Water	Note (2)			
1. WMT		liters	1.07E 06	1.17E 06
2. SGBD and Turbine Bldg Sumps		liters	7.33E 07	7.66E 07
3. Liquid Radioactive Effluent TOTAL	Note(3)	liters	1.07E 06	1.17E 06
F. Volume of Dilution Water During Quarter		liters	2.25E 10	2.70E 10

NOTE:

(1) During period of discharge
(2) Prior to dilution
(3) Steam Generator Blowdown and Turbine Building Sump releases are excluded from Total Liquid Radioactive Effluent in accordance with 10 CFR 20, Appendix B, Note 5.
(4) Steam Generator Blowdown and Turbine Building Sump release curie amounts and doses were measured and are included in these totals and in table 2B-2C in accordance with Table 4.11-1, Footnote E of Joseph M. Farley Nuclear Plant Unit Number 2 Technical Specifications (Appendix A of License No. NPF-8).

TABLE 2B-1B

LIQUID EFFLUENTS--BATCH
Farley Unit 1 - 2nd Half, 1983

Nuclides Released	Unit	Qrtr 3, 1983	Qrtr 4, 1983
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Fe-55	Ci	0.00E 00	3.06E-06
Co-57	Ci	0.00E 00	1.25E-06
Ce-144	Ci	9.79E-04	1.19E-03
Tc-99M	Ci	0.00E 00	2.09E-06
Ce-141	Ci	9.07E-06	0.00E 00
Cr-51	Ci	0.00E 00	1.79E-04
I-131	Ci	1.47E-04	2.99E-05
Ru-103	Ci	4.48E-05	1.45E-06
I-133	Ci	4.19E-05	3.92E-05
As-76	Ci	0.00E 00	3.69E-07
Cs-134	Ci	1.32E-06	5.67E-05
Ru-106	Ci	1.13E-05	0.00E 00
Cs-137	Ci	9.97E-05	1.82E-04
Mo-99	Ci	0.00E 00	0.00E 00
Zr-95	Ci	2.48E-04	1.60E-05
Nb-95	Ci	6.41E-04	1.18E-04
Co-58	Ci	9.35E-04	7.06E-04
Mn-54	Ci	6.23E-05	6.29E-05
Ag-110M	Ci	1.94E-04	3.76E-05
Zn-65	Ci	0.00E 00	1.27E-06
Fe-59	Ci	0.00E 00	1.57E-05
Co-60	Ci	2.47E-03	9.14E-04
La-140	Ci	7.42E-06	4.76E-06
Zr-97	Ci	1.67E-05	2.38E-05
Sb-124	Ci	2.18E-07	0.00E 00
TOTALS	Ci	5.91E-03	3.58E-03
Xe-133	Ci	3.94E-01	2.83E 00
Xe-135	Ci	2.18E-07	2.45E-04
TOTALS	Ci	3.94E-01	2.83E 00
H-3	Ci	6.66E 01	2.38E 02

TABLE 2B-2B

LIQUID EFFLUENTS--BATCH
Farley Unit 2 - 2nd Half, 1983

Nuclides Released	Unit	Qrtr 3, 1983	Qrtr 4, 1983
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
Fe-55	Ci	1.89E-07	1.10E-06
Co-57	Ci	0.00E 00	0.00E 00
Ce-144	Ci	6.67E-06	5.73E-04
Ce-141	Ci	0.00E 00	0.00E 00
Cr-51	Ci	0.00E 00	3.32E-05
I-131	Ci	9.15E-05	1.61E-05
Ru-103	Ci	2.49E-06	0.00E 00
I-133	Ci	2.47E-05	3.77E-05
As-76	Ci	0.00E 00	8.09E-07
Cs-134	Ci	1.32E-06	4.51E-05
Ru-106	Ci	0.00E 00	3.36E-06
Cs-137	Ci	1.44E-05	1.19E-04
Mo-99	Ci	0.00E 00	0.00E 00
Zr-95	Ci	2.29E-05	1.56E-06
Nb-95	Ci	1.22E-04	1.48E-05
Co-58	Ci	1.92E-04	7.30E-04
Mn-54	Ci	3.95E-06	2.67E-05
Ag-110M	Ci	8.54E-05	3.49E-06
Sr-91	Ci	1.96E-06	0.00E 00
Zn-65	Ci	0.00E 00	0.00E 00
I-135	Ci	0.00E 00	1.25E-06
Fe-59	Ci	0.00E 00	0.00E 00
Co-60	Ci	2.73E-04	1.86E-04
Na-24	Ci	0.00E 00	3.10E-04
La-140	Ci	0.00E 00	4.24E-07
Zr-97	Ci	9.75E-06	1.07E-05
Sb-124	Ci	2.18E-07	0.00E 00
TOTALS	Ci	8.51E-04	2.11E-03
Xe-133	Ci	2.90E-01	1.84E 00
Xe-135	Ci	8.92E-04	5.23E-06
TOTALS	Ci	2.90E-01	1.84E 00
H-3	Ci	9.23E 01	1.50E 02

TABLE 2B-1C

LIQUID EFFLUENTS--CONTINUOUS
Farley Unit 1 - 2nd Half, 1983

Nuclides Released	Unit	Qrtr 3, 1983	Qrtr 4, 1983
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
H-3	Ci	0.00E 00	0.00E 00
Fe-55	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Cs-134	Ci	0.00E 00	0.00E 00
Cs-137	Ci	0.00E 00	0.00E 00
Mo-99	Ci	0.00E 00	0.00E 00
Co-58	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Co-60	Ci	5.50E-05	0.00E 00
TOTALS	Ci	5.50E-05	0.00E 00
Xe-133	Ci	0.00E 00	2.42E-04
H-3	Ci	0.00E 00	0.00E 00

NOTE:

(1) Although Steam Generator Blowdown and Turbine Building Sump releases were excluded from total liquid radioactive effluent volume in accordance with 10 CFR 20, Appendix B, Note 5, curie amounts and doses from these releases were measured and are reported here in accordance with Table 4.11-1, Footnote E of Joseph M. Farley Nuclear Plant Unit Number 1 Technical Specification (Appendix A of License No. NPF-2).

TABLE 2B-2C

LIQUID EFFLUENTS--CONTINUOUS
Farley Unit 2 - 2nd Half, 1983

Nuclides Released	Unit	Qrtr 3, 1983	Qrtr 4, 1983
Sr-89	Ci	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00
H-3	Ci	0.00E 00	0.00E 00
Fe-55	Ci	0.00E 00	0.00E 00
Ce-144	Ci	0.00E 00	0.00E 00
Ce-141	Ci	0.00E 00	0.00E 00
Cs-134	Ci	2.46E-06	0.00E 00
Cs-137	Ci	0.00E 00	0.00E 00
Mo-99	Ci	0.00E 00	0.00E 00
Co-58	Ci	0.00E 00	0.00E 00
Mn-54	Ci	0.00E 00	0.00E 00
Zn-65	Ci	0.00E 00	0.00E 00
Fe-59	Ci	0.00E 00	0.00E 00
Co-60	Ci	2.50E-05	0.00E 00
TOTALS	Ci	2.50E-05	0.00E 00
Xe-133	Ci	5.70E-04	1.08E-05
Xe-135	Ci	1.70E-05	0.00E 00
TOTALS	Ci	5.87E-04	1.08E-05
H-3	Ci	0.00E 00	1.02E 01

NOTE:

(1) Although Steam Generator Blowdown and Turbine Building Sump releases were excluded from total liquid radioactive effluent volume in accordance with 10 CFR 20, Appendix B, Note 5, curie amounts and doses from these releases were measured and are reported here in accordance with Table 4.11-1, Footnote E of Joseph M. Farley Nuclear Plant Unit Number 2 Technical Specification (Appendix A of License No. NPF-8).

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL
(Not irradiated fuel)

1. Type of Waste	UNITS	PERIOD 6-MONTHS
a. Spent resins, filter sludges, evaporator bottoms, etc.	m^3	2.220E 00
	Ci	2.132E 02
b. Dry compressible waste, comtaminated equipment, etc.	m^3	2.148E 02
	Ci	2.100E 01
c. Irradiated components, control rods, etc.	m^3	1.0
	Ci	5.1
d. Other (described)	m^3	None
	Ci	None

2. Estimate of major nuclide composition

	ISOTOPES	%
a.	Mn-54	2.8E 00
	Co-58	2.2E 01
	Co-60	4.1E 01
	Nb-95	1.2E 00
	Cs-134	8.9E 00
	Cs-137	2.1E 01
b.	Mn-54	7.4E 00
	Co-58	3.5E 01
	Co-60	2.8E 01
	Nb-95	1.6E 00
	Ce-144	3.3E 00
	I-131	2.2E 00
	Cs-137	5.2E 00
	Cr-51	1.2E 01
	Cs-134	1.6E 00
c.	Co-60	1.0E 02

TABLE 3 (con't)

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

3.	Solid Waste Disposition	
	a. Number of Shipments	17
	b. Mode of Transportation	Chem-Nuclear Transport (11) Hittman Transport (6)
	c. Destination	Chem-Nuclear Systems, Inc. Barnwell, South Carolina
4.	Type of Containers	
	a. (1a)	170 cf. steel liners (dewatered resin & charcoal media) 55 cf. High Integrity Containers (Spent filters)
	b. (1b)	55 gallon steel drum 112 cf. wooden boxes
5.	Solidification Agents	
	a. (1a)	Cement, (unless shipped dewatered)
	b. (1b)	N/A

B. IRRADIATED FUEL SHIPMENTS (Disposition)

1.	Number of Shipments	None
2.	Mode of Transportation	N/A
3.	Destination	N/A

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: A
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	7	0	0	0	0	0	7
NNE	7	1	0	0	0	0	8
NE	99	29	0	0	0	0	128
ENE	35	0	0	0	0	0	35
E	8	0	0	0	0	0	8
ESE	12	0	0	0	0	0	12
SE	11	2	0	0	0	0	13
SSE	2	1	0	0	0	0	3
S	4	0	0	0	0	0	4
SSW	25	10	0	0	0	0	35
SW	5	0	0	0	0	0	5
WSW	4	0	0	0	0	0	4
W	58	1	0	0	0	0	59
WNW	10	1	0	0	0	0	11
NW	6	0	0	0	0	0	6
NNW	59	9	0	0	0	0	68
VARIABLE	583	38	0	0	0	0	621
Total	352	54	0	0	0	0	406

Periods of calm(hours): 2
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: A
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	11	0	0	0	0	0	11
NNE	6	0	0	0	0	0	6
NE	13	6	0	0	0	0	19
ENE	19	0	0	0	0	0	19
E	6	0	0	0	0	0	6
ESE	8	0	0	0	0	0	8
SE	28	2	0	0	0	0	30
SSE	3	0	0	0	0	0	3
S	3	0	0	0	0	0	3
SSW	16	1	0	0	0	0	17
SW	6	0	0	0	0	0	6
WSW	2	0	0	0	0	0	2
W	49	0	0	0	0	0	49
WNW	7	0	0	0	0	0	7
NW	5	0	0	0	0	0	5
NNW	144	10	0	0	0	0	154
VARIABLE	661	23	0	0	0	0	684
Total	326	19	0	0	0	0	345

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: B
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	2	0	0	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	17	1	0	0	0	0	18
ENE	12	0	0	0	0	0	12
E	1	0	0	0	0	0	1
ESE	1	0	0	0	0	0	1
SE	2	0	0	0	0	0	2
SSE	1	0	0	0	0	0	1
S	4	0	0	0	0	0	4
SSW	16	8	0	0	0	0	24
SW	0	0	0	0	0	0	0
WSW	1	0	0	0	0	0	1
W	18	0	0	0	0	0	18
WNW	0	0	0	0	0	0	0
NW	1	0	0	0	0	0	1
NNW	11	0	0	0	0	0	11
VARIABLE	89	6	0	0	0	0	95
Total	87	9	0	0	0	0	96

Periods of calm(hours): 1
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: B
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	3	0	0	0	0	0	3
ENE	12	0	0	0	0	0	12
E	1	0	0	0	0	0	1
ESE	3	0	0	0	0	0	3
SE	3	0	0	0	0	0	3
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	13	1	0	0	0	0	14
SW	6	0	0	0	0	0	6
WSW	0	0	0	0	0	0	0
W	11	0	0	0	0	0	11
WNW	2	0	0	0	0	0	2
NW	1	0	0	0	0	0	1
NNW	22	0	0	0	0	0	22
VARIABLE	111	1	0	0	0	0	112
Total	79	1	0	0	0	0	80

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: C
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	20	0	0	0	0	0	20
ENE	5	0	0	0	0	0	5
E	0	0	0	0	0	0	0
ESE	1	0	0	0	0	0	1
SE	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	2	0	0	0	0	0	2
SSW	10	0	0	0	0	0	10
SW	0	0	0	0	0	0	0
WSW	2	0	0	0	0	0	2
W	10	0	0	0	0	0	10
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	14	2	0	0	0	0	16
VARIABLE	56	6	0	0	0	0	62
Total	66	2	0	0	0	0	68

Periods of calm(hours): 2
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: C
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	3	0	0	0	0	0	3
E	2	0	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	2	0	0	0	0	0	2
SSE	1	0	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	4	0	0	0	0	0	4
SW	1	0	0	0	0	0	1
WSW	1	0	0	0	0	0	1
W	8	0	0	0	0	0	8
WNW	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	21	0	0	0	0	0	21
VARIABLE	84	2	0	0	0	0	86
Total	45	0	0	0	0	0	45

Periods of calm(hours): 1
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: D
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	2	0	0	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	35	0	0	0	0	0	35
ENE	8	0	0	0	0	0	8
E	4	0	0	0	0	0	4
ESE	8	0	0	0	0	0	8
SE	3	0	0	0	0	0	3
SSE	1	0	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	30	6	0	0	0	0	36
SW	1	0	0	0	0	0	1
WSW	1	0	0	0	0	0	1
W	28	0	0	0	0	0	28
WNW	2	0	0	0	0	0	2
NW	0	0	0	0	0	0	0
NNW	17	0	0	0	0	0	17
VARIABLE	151	3	0	0	0	0	154
Total	140	6	0	0	0	0	146

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: D
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	4	0	0	0	0	0	4
NNE	2	0	0	0	0	0	2
NE	2	0	0	0	0	0	2
ENE	4	0	0	0	0	0	4
E	5	0	0	0	0	0	5
ESE	3	0	0	0	0	0	3
SE	13	0	0	0	0	0	13
SSE	1	0	0	0	0	0	1
S	1	0	0	0	0	0	1
SSW	11	0	0	0	0	0	11
SW	1	1	0	0	0	0	2
WSW	0	0	0	0	0	0	0
W	20	0	0	0	0	0	20
WNW	4	0	0	0	0	0	4
NW	1	0	0	0	0	0	1
NNW	45	0	0	0	0	0	45
VARIABLE	182	0	0	0	0	0	182
Total	117	1	0	0	0	0	118

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: E
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	25	2	0	0	0	0	27
ENE	7	0	0	0	0	0	7
E	1	0	0	0	0	0	1
ESE	4	0	0	0	0	0	4
SE	0	0	0	0	0	0	0
SSE	1	0	0	0	0	0	1
S	3	0	0	0	0	0	3
SSW	26	6	0	0	0	0	32
SW	1	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	24	0	0	0	0	0	24
WNW	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	23	0	0	0	0	0	23
VARIABLE	145	7	1	0	0	0	153
Total	118	8	0	0	0	0	126

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: E
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	4	0	0	0	0	0	4
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	3	0	0	0	0	0	3
E	1	0	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	4	0	0	0	0	0	4
SSE	3	0	0	0	0	0	3
S	1	0	0	0	0	0	1
SSW	4	1	0	0	0	0	5
SW	1	1	0	0	0	0	2
WSW	0	0	0	0	0	0	0
W	22	0	0	0	0	0	22
WNW	3	0	0	0	0	0	3
NW	0	0	0	0	0	0	0
NNW	25	0	0	0	0	0	25
VARIABLE	203	2	0	0	0	0	205
Total	72	2	0	0	0	0	74

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: F
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	1	0	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	26	2	0	0	0	0	28
ENE	3	0	0	0	0	0	3
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	2	0	0	0	0	0	2
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	18	3	0	0	0	0	21
SW	1	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	9	1	0	0	0	0	10
WNW	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	23	1	0	0	0	0	24
VARIABLE	56	2	0	0	0	0	58
Total	84	8	0	0	0	0	92

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: F
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
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	1	0	0	0	0	0	1
SE	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	6	1	0	0	0	0	7
SW	2	0	0	0	0	0	2
WSW	0	0	0	0	0	0	0
W	17	1	0	0	0	0	18
WNW	1	0	0	0	0	0	1
NW	2	0	0	0	0	0	2
NNW	31	0	0	0	0	0	31
VARIABLE	84	0	0	0	0	0	84
Total	64	2	0	0	0	0	66

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: G
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	22	1	0	0	0	0	23
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	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	11	4	0	0	0	0	15
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	17	2	0	0	0	0	19
WNW	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	9	0	0	0	0	0	9
VARIABLE	56	1	0	0	0	0	57
Total	62	7	0	0	0	0	69

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: G
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
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	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	5	0	0	0	0	0	5
SW	1	0	0	0	0	0	1
WSW	1	0	0	0	0	0	1
W	19	0	0	0	0	0	19
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	12	0	0	0	0	0	12
VARIABLE	86	0	0	0	0	0	86
Total	40	0	0	0	0	0	40

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: A
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	11	1	0	0	0	0	12
NNE	11	4	0	0	0	0	15
NE	151	24	0	0	0	0	175
ENE	32	2	0	0	0	0	34
E	2	0	0	0	0	0	2
ESE	9	1	0	0	0	0	10
SE	15	43	0	0	0	0	58
SSE	1	0	0	0	0	0	1
S	1	1	0	0	0	0	2
SSW	35	19	4	0	0	0	58
SW	6	0	0	0	0	0	6
WSW	0	1	0	0	0	0	1
W	38	24	0	0	0	0	62
WNW	10	6	0	0	0	0	16
NW	10	4	0	0	0	0	14
NNW	71	43	0	0	0	0	114
VARIABLE	438	115	6	0	0	0	559
Total	403	173	4	0	0	0	580

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: A
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	10	0	0	0	0	0	10
NNE	1	0	0	0	0	0	1
NE	11	0	0	0	0	0	11
ENE	8	0	0	0	0	0	8
E	2	0	0	0	0	0	2
ESE	7	0	0	0	0	0	7
SE	23	34	0	0	0	0	57
SSE	4	0	0	0	0	0	4
S	0	0	0	0	0	0	0
SSW	36	14	1	0	0	0	51
SW	6	1	0	0	0	0	7
WSW	6	5	0	0	0	0	11
W	80	35	0	0	0	0	115
WNW	13	0	0	0	0	0	13
NW	5	0	0	0	0	0	5
NNW	205	36	0	0	0	0	241
VARIABLE	514	81	1	0	0	0	596
Total	417	125	1	0	0	0	543

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: B
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	2	0	0	0	0	0	2
NNE	1	0	0	0	0	0	1
NE	29	2	0	0	0	0	31
ENE	9	1	0	0	0	0	10
E	1	1	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	1	20	0	0	0	0	21
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	6	5	4	0	0	0	15
SW	1	0	0	0	0	0	1
WSW	1	0	0	0	0	0	1
W	4	1	0	0	0	0	5
WNW	0	2	0	0	0	0	2
NW	1	1	0	0	0	0	2
NNW	33	5	0	0	0	1	39
VARIABLE	91	19	0	0	0	0	110
Total	89	38	4	0	0	1	132

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: B
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	2	0	0	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	2	0	0	0	0	0	2
ENE	1	0	0	0	0	0	1
E	1	0	0	0	0	0	1
ESE	3	0	0	0	0	0	3
SE	11	13	0	0	0	0	24
SSE	0	0	0	0	0	0	0
S	1	0	0	0	0	0	1
SSW	7	6	0	0	0	0	13
SW	0	1	0	0	0	0	1
WSW	1	0	0	0	0	0	1
W	23	1	0	0	0	0	24
WNW	5	0	0	0	0	0	5
NW	4	0	0	0	0	0	4
NNW	44	0	0	0	0	0	44
VARIABLE	104	12	0	0	0	0	116
Total	105	21	0	0	0	0	126

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: C
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	13	0	0	0	0	0	13
ENE	9	1	0	0	0	0	10
E	2	0	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	3	6	3	0	0	0	12
SSE	0	0	0	0	0	0	0
S	0	1	0	0	0	0	1
SSW	5	3	1	0	0	0	9
SW	1	0	0	0	0	0	1
WSW	1	0	0	0	0	0	1
W	7	3	0	0	0	0	10
WNW	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	11	0	0	0	0	0	11
VARIABLE	41	13	2	0	0	0	56
Total	53	14	4	0	0	0	71

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: C
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	6	0	0	0	0	0	6
E	0	0	0	0	0	0	0
ESE	2	0	0	0	0	0	2
SE	7	8	0	0	0	0	15
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	6	3	0	0	0	0	9
SW	1	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	9	0	0	0	0	0	9
WNW	0	0	0	0	0	0	0
NW	1	0	0	0	0	0	1
NNW	15	0	0	0	0	0	15
VARIABLE	61	7	0	0	0	0	68
Total	48	11	0	0	0	0	59

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: D
ELEVATION:45.7m

	Wind Speed (mph) at 45.7m level						
Wind Direction	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	12	0	0	0	0	0	12
ENE	6	2	0	0	0	0	8
E	0	0	0	0	0	0	0
ESE	1	0	0	0	0	0	1
SE	3	0	0	0	0	0	3
SSE	0	1	0	0	0	0	1
S	1	1	0	0	0	0	2
SSW	4	10	2	0	0	0	16
SW	1	0	0	0	0	0	1
WSW	1	0	0	0	0	0	1
W	12	3	0	0	0	0	15
WNW	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	18	2	0	0	0	0	20
VARIABLE	51	16	2	0	0	0	69
Total	60	19	2	0	0	0	81

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: D
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	1	0	0	0	0	0	1
ENE	3	0	0	0	0	0	3
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	3	1	0	0	0	0	4
SSE	0	0	0	0	0	0	0
S	2	1	0	0	0	0	3
SSW	4	7	0	0	0	0	11
SW	1	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	12	0	0	0	0	0	12
WNW	2	0	0	0	0	0	2
NW	1	0	0	0	0	0	1
NNW	27	0	0	0	0	0	27
VARIABLE	75	8	0	0	0	0	83
Total	58	9	0	0	0	0	67

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: E
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	2	1	0	0	0	0	3
NNE	2	0	0	0	0	0	2
NE	31	0	0	0	0	0	31
ENE	13	0	0	0	0	0	13
E	1	0	0	0	0	0	1
ESE	1	0	0	0	0	0	1
SE	4	1	0	0	0	0	5
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	11	6	0	0	0	0	17
SW	1	0	0	0	0	0	1
WSW	1	0	0	0	0	0	1
W	21	7	0	0	0	0	28
WNW	0	1	0	0	0	0	1
NW	1	0	0	0	0	0	1
NNW	27	0	0	0	0	0	27
VARIABLE	55	3	0	0	0	0	58
Total	116	16	0	0	0	0	132

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: E
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	1	0	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	3	0	0	0	0	0	3
ENE	5	0	0	0	0	0	5
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	2	0	0	0	0	0	2
SSE	2	0	0	0	0	0	2
S	1	0	0	0	0	0	1
SSW	11	0	0	0	0	0	11
SW	5	0	0	0	0	0	5
WSW	1	0	0	0	0	0	1
W	30	0	0	0	0	0	30
WNW	3	0	0	0	0	0	3
NW	4	0	0	0	0	0	4
NNW	30	0	0	0	0	0	30
VARIABLE	91	1	0	0	0	0	92
Total	98	0	0	0	0	0	98

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: F
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	2	0	0	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	18	1	0	0	0	0	19
ENE	2	0	0	0	0	0	2
E	0	0	0	0	0	0	0
ESE	1	0	0	0	0	0	1
SE	2	3	0	0	0	0	5
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	7	4	0	0	0	0	11
SW	2	0	0	0	0	0	2
WSW	1	0	0	0	0	0	1
W	10	8	0	0	0	0	18
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	19	1	0	0	0	0	20
VARIABLE	21	1	0	0	0	0	22
Total	64	17	0	0	0	0	81

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: F
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	1	0	0	0	0	0	1
ENE	2	0	0	0	0	0	2
E	2	0	0	0	0	0	2
ESE	2	0	0	0	0	0	2
SE	3	0	0	0	0	0	3
SSE	1	0	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	6	0	0	0	0	0	6
SW	1	1	0	0	0	0	2
WSW	0	0	0	0	0	0	0
W	24	0	0	0	0	0	24
WNW	0	0	0	0	0	0	0
NW	1	0	0	0	0	0	1
NNW	15	0	0	0	0	0	15
VARIABLE	43	0	0	0	0	0	43
Total	59	1	0	0	0	0	60

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: G
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	3	0	0	0	0	0	3
NNE	0	0	0	0	0	0	0
NE	31	0	0	0	0	0	31
ENE	9	1	0	0	0	0	10
E	0	0	0	0	0	0	0
ESE	4	0	0	0	0	0	4
SE	9	2	0	0	0	0	11
SSE	1	0	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	16	1	0	0	0	0	17
SW	2	0	0	0	0	0	2
WSW	2	0	0	0	0	0	2
W	18	0	0	0	0	0	18
WNW	0	0	0	0	0	0	0
NW	1	0	0	0	0	0	1
NNW	56	3	0	0	0	0	59
VARIABLE	97	1	0	0	0	0	98
Total	152	7	0	0	0	0	159

Periods of calm(hours): 0
Hours of missing data: 0

Table 4A-CQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: G
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
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	3	0	0	0	0	0	3
SE	1	0	0	0	0	0	1
SSE	3	0	0	0	0	0	3
S	2	0	0	0	0	0	2
SSW	4	0	0	0	0	0	4
SW	0	0	0	0	0	0	0
WSW	1	0	0	0	0	0	1
W	42	0	0	0	0	0	42
WNW	3	0	0	0	0	0	3
NW	2	0	0	0	0	0	2
NNW	48	0	0	0	0	0	46
VARIABLE	145	0	0	0	0	0	145
Total	112	0	0	0	0	0	112

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: A
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	2	1	0	0	0	0	3
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	1	0	0	0	0	0	1
VARIABLE	10	3	0	0	0	0	13
Total	4	1	0	0	0	0	5

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: A
ELEVATION:10.0m

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

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: B
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	1	0	0	0	0	0	1
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	3	0	0	0	0	0	3
Total	1	0	0	0	0	0	1

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: B
ELEVATION:10.0m

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

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: C
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	2	0	0	0	0	0	2
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	1	0	0	0	0	0	1
VARIABLE	3	1	0	0	0	0	4
Total	3	0	0	0	0	0	3

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: C
ELEVATION:10.0m

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

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: D
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	1	0	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	1	0	0	0	0	0	1
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	0	0	0	0	0	0
NNW	2	0	0	0	0	0	2
VARIABLE	13	0	0	0	0	0	13
Total	5	0	0	0	0	0	5

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: D
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	1	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	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	1	0	0	0	0	0	1
VARIABLE	15	0	0	0	0	0	15
Total	3	0	0	0	0	0	3

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: E
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	2	0	0	0	0	0	2
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	1	1	0	0	0	0	2
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	3	0	0	0	0	0	3
VARIABLE	10	0	0	0	0	0	10
Total	6	1	0	0	0	0	7

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: E
ELEVATION:10.0m

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

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: F
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	1	0	0	0	0	0	1
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	2	0	0	0	0	0	2
VARIABLE	1	0	0	0	0	0	1
Total	3	0	0	0	0	0	3

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: F
ELEVATION:10.0m

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

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: G
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ3

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 3rd Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 7 -1-83 } 9-30-83
STABILITY CLASS: G
ELEVATION:10.0m

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

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: A
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: A
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: B
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	1	0	0	0	0	0	1
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

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: B
ELEVATION:10.0m

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

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: C
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	1	0	0	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	1	0	0	0	0	0	1
VARIABLE	3	0	0	0	0	0	3
Total	2	0	0	0	0	0	2

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: C
ELEVATION:10.0m

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

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: D
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	1	0	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	2	0	0	0	0	0	2
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	1	0	0	0	0	0	1
VARIABLE	2	0	0	0	0	0	2
Total	4	0	0	0	0	0	4

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: D
ELEVATION:10.0m

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

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: E
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	1	0	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	4	0	0	0	0	0	4
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	2	0	0	0	0	0	2
VARIABLE	1	0	0	0	0	0	1
Total	7	0	0	0	0	0	7

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 ; 12-31-83
STABILITY CLASS: E
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	1	0	0	0	0	0	1
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	6	0	0	0	0	0	6
Total	2	0	0	0	0	0	2

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: F
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	2	0	0	0	0	0	2
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0
Total	2	0	0	0	0	0	2

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: F
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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	2	0	0	0	0	0	2
Total	0	0	0	0	0	0	0

Periods of calm(hours): 0
Hours of missing data: 0

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: G
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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

TABLE 4A-2BQ4

CUMULATIVE JOINT FREQUENCY DISTRIBUTION

Farley Unit 2 - 4th Quarter, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: BATCH
PERIOD OF RECORD: 10 -1-83 } 12-31-83
STABILITY CLASS: G
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
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

TABLE 4B

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	$\theta\sigma$[a] (degrees)	Temperature change with height (^{0} C/100m)
Extremely unstable	A	25.0	<-1.9
Moderately unstable	B	20.0	-1.9 to -1.7
Slightly unstable	C	15.0	-1.7 to -1.5
Neutral	D	10.0	-1.5 to -0.5
Slightly stable	E	5.0	-0.5 to 1.5
Moderately stable	F	2.5	1.5 to 4.0
Extremely stable	G	1.7	>4.0

[a] Standard deviation of horizontal wind direction fluctuation over a period of 15 minutes to 1 hour. The values shown are average for each stability classification.

TABLE 5

RADIAOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM
FARLEY NUCLEAR PLANT - UNIT 1 & 2

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

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):

$$MDC = 4.66\, s_b / E * V * 2.22 \times 10^6 * Y * \exp(-\lambda \Delta t)$$

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),

2.22×10^6 is the number of transformations per minute per microcurie,

Y is the fractional radiochemical yield (when applicable),

λ is the radioactive decay constant for the particular radionuclide, and

Δt 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 Δt shall be used in the calculation.

TABLE 5 (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 principal 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 identifable, 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 shall be reported per Specification 6.9.1.8 in lieu of any other report.

TABLE 6

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

Gaseous Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis [a,h]	Minimum Detectable Concentration (MDC)(uCi/ml)
A. Waste Gas Storage Tank	Each Tank Grab Sample [b] P	Each Tank P	Principle Gamma Emitters [g,h]	1E-04
B. Containment Purge	Each Purge Grab Sample [b] P	Each Purge Grab Sample [b] P	Principle Gamma Emitters [g,j]	1E-04
			H-3	1E-06
C. Condenser Steam Jet Air Ejector Plant Vent Stack	M-Grab Sample [b,c,e]	M [b]	Principle Gamma Emitters [g,j]	1E-04
			H-3	1E-06
D. Plant Vent Stack Containment Purge	Continuous [f] Charcoal	Charcoal Sample W [d]	I-131	1E-12
			I-133	1E-10
	Continuous [f]	Particulate Sample W [d]	Principle Gamma Emitters (I-131, Others) [g]	1E-11
	Continuous [f]	W Composite Particulate Sample [i]	Gross Alpha	1E-11
	Continuous [f]	Q Composite Particulate Sample [i]	Sr-89, Sr-90	1E-11
	Continuous [f]	Noble Gas Monitor	Noble Gases Gross Beta & Gamma	1E-06

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):

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

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),

2.22×10^6 is the number of transformations per minute per microcurie,

Y is the fractional radiochemical yield (when applicable),

λ is the radioactive decay constant for the particular radionuclide, and

Δt 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 Δt shall be used in the calculation.

TABLE 6 (Continued)

TABLE NOTATION

b. Analyses shall also be performed following shutdown from > or = 15% RATED THERMAL POWER, startup to > or = 15% RATED THERMAL POWER 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 emmissions. This list does not mean that only these nuclides are to be detected and reported. Other which are measureable 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.

j. The principal 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 7

LIQUID DISCHARGES NOT MEETING SPECIFIED DETECTION LIMITS
Farley Units 1 & 2 - 2nd half, 1983

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 Acitvity (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.

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: A
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	21	1	0	0	0	0	22
NNE	22	5	0	0	0	0	27
NE	303	90	2	0	0	0	395
ENE	97	6	0	0	0	0	103
E	20	2	0	0	0	0	22
ESE	32	3	0	0	0	0	35
SE	63	103	4	0	0	0	170
SSE	3	2	0	0	0	0	5
S	5	5	0	0	0	0	10
SSW	89	67	19	0	0	0	175
SW	15	3	0	0	0	0	18
WSW	8	5	0	0	0	0	13
W	129	87	2	0	0	0	218
WNW	34	12	0	0	0	1	47
NW	22	7	0	0	0	0	29
NNW	196	71	0	0	0	0	267
VARIABLE	1593	359	18	1	0	0	1971
Total	1059	469	27	0	0	1	1556

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: A
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	27	1	0	0	0	0	28
NNE	18	0	0	0	0	0	18
NE	39	8	0	0	0	0	47
ENE	48	3	0	0	0	0	51
E	19	1	0	0	0	0	20
ESE	22	1	0	0	0	0	23
SE	93	84	3	0	0	0	180
SSE	9	3	0	0	0	0	12
S	3	4	0	0	0	0	7
SSW	72	45	10	0	0	0	127
SW	20	4	0	0	0	0	24
WSW	19	7	0	0	0	0	26
W	180	71	0	0	0	0	251
WNW	29	4	0	0	0	0	33
NW	14	4	0	0	0	0	18
NNW	420	62	0	0	0	0	482
VARIABLE	1846	330	4	0	0	0	2180
Total	1032	302	13	0	0	0	1347

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: B
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	6	1	0	0	0	0	7
NNE	2	3	0	0	0	0	5
NE	80	30	1	0	0	0	111
ENE	36	17	0	0	0	0	53
E	4	3	0	0	0	0	7
ESE	3	5	0	0	0	0	8
SE	13	39	8	0	0	0	60
SSE	1	0	0	0	0	0	1
S	4	0	1	0	0	0	5
SSW	25	24	7	0	0	0	56
SW	1	0	0	0	0	0	1
WSW	3	1	0	0	0	0	4
W	36	22	2	0	0	0	60
WNW	0	2	0	0	0	0	2
NW	5	2	0	0	0	0	7
NNW	81	31	0	0	0	1	113
VARIABLE	325	82	3	0	0	0	410
Total	300	180	19	0	0	1	500

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: B
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	7	1	0	0	0	0	8
NNE	3	0	0	0	0	0	3
NE	29	3	0	0	0	0	32
ENE	20	6	0	0	0	0	26
E	11	1	0	0	0	0	12
ESE	8	0	0	0	0	0	8
SE	29	36	5	0	0	0	70
SSE	1	0	0	0	0	0	1
S	1	0	0	0	0	0	1
SSW	26	21	0	0	0	0	47
SW	11	1	0	0	0	0	12
WSW	3	0	0	0	0	0	3
W	45	5	0	0	0	0	50
WNW	9	1	0	0	0	0	10
NW	7	1	0	0	0	0	8
NNW	111	11	0	0	0	0	122
VARIABLE	425	72	0	0	0	0	497
Total	321	87	5	0	0	0	413

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: C
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	4	0	0	0	0	0	4
NNE	1	4	0	0	0	0	5
NE	60	28	8	0	0	0	96
ENE	24	18	0	0	0	0	42
E	5	0	0	0	0	0	5
ESE	3	4	0	0	0	0	7
SE	12	37	4	0	0	0	53
SSE	0	2	0	0	0	0	2
S	2	1	0	0	0	0	3
SSW	36	32	4	0	0	0	72
SW	1	0	0	0	0	0	1
WSW	3	1	0	0	0	0	4
W	35	19	0	0	0	0	54
WNW	2	0	0	0	0	0	2
NW	1	1	0	0	0	0	2
NNW	60	9	0	0	0	0	69
VARIABLE	221	76	7	0	0	0	304
Total	249	156	16	0	0	0	421

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: C
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	3	3	0	0	0	0	6
NNE	3	0	0	0	0	0	3
NE	22	11	0	0	0	0	33
ENE	19	15	0	0	0	0	34
E	5	0	0	0	0	0	5
ESE	7	0	0	0	0	0	7
SE	32	31	1	0	0	0	64
SSE	2	0	0	0	0	0	2
S	0	0	0	0	0	0	0
SSW	31	16	3	0	0	0	50
SW	4	0	0	0	0	0	4
WSW	1	0	0	0	0	0	1
W	39	4	0	0	0	0	43
WNW	4	0	0	0	0	0	4
NW	1	0	0	0	0	0	1
NNW	65	6	0	0	0	0	71
VARIABLE	336	61	0	0	0	0	397
Total	238	86	4	0	0	0	328

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: D
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	5	0	0	0	0	0	5
NNE	3	0	0	0	0	0	3
NE	95	11	6	0	0	0	112
ENE	35	4	0	0	0	0	39
E	7	2	0	0	0	0	9
ESE	32	4	0	0	0	0	36
SE	21	23	3	0	0	0	47
SSE	2	2	0	0	0	0	4
S	1	1	0	0	0	0	2
SSW	68	68	4	0	0	0	140
SW	4	2	0	0	0	0	6
WSW	2	0	0	0	0	0	2
W	64	8	0	0	0	0	72
WNW	5	1	0	0	0	0	6
NW	2	2	0	0	0	0	4
NNW	84	6	0	0	0	0	90
VARIABLE	434	90	8	0	0	0	532
Total	430	134	13	0	0	0	577

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: D
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	7	0	0	0	0	0	7
NNE	3	0	0	0	0	0	3
NE	17	1	0	0	0	0	18
ENE	15	5	0	0	0	0	20
E	8	0	0	0	0	0	8
ESE	9	0	0	0	0	0	9
SE	55	13	0	0	0	0	68
SSE	1	0	0	0	0	0	1
S	3	1	0	0	0	0	4
SSW	61	19	0	0	0	0	80
SW	6	3	0	0	0	0	9
WSW	2	0	0	0	0	0	2
W	67	2	0	0	0	0	69
WNW	8	0	0	0	0	0	8
NW	6	0	0	0	0	0	6
NNW	128	6	0	0	0	0	134
VARIABLE	613	49	1	0	0	0	663
Total	396	50	0	0	0	0	446

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: E
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	4	1	0	0	0	0	5
NNE	4	0	0	0	0	0	4
NE	89	6	0	0	0	0	95
ENE	35	1	0	0	0	0	36
E	2	0	0	0	0	0	2
ESE	11	5	0	0	0	0	16
SE	13	12	0	0	0	0	25
SSE	1	0	0	0	0	0	1
S	4	1	0	0	0	0	5
SSW	85	67	3	0	0	0	155
SW	2	2	0	0	0	0	4
WSW	1	0	0	0	0	0	1
W	103	39	0	0	0	0	142
WNW	3	1	0	0	0	0	4
NW	4	0	0	0	0	0	4
NNW	125	2	0	0	0	0	127
VARIABLE	446	53	1	0	0	0	500
Total	486	137	3	0	0	0	626

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: E
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	6	0	0	0	0	0	6
NNE	2	0	0	0	0	0	2
NE	10	1	0	0	0	0	11
ENE	16	0	0	0	0	0	16
E	3	1	0	0	0	0	4
ESE	4	0	0	0	0	0	4
SE	27	2	0	0	0	0	29
SSE	6	0	0	0	0	0	6
S	2	0	0	0	0	0	2
SSW	76	13	0	0	0	0	89
SW	11	2	0	0	0	0	13
WSW	3	0	0	0	0	0	3
W	114	1	0	0	0	0	115
WNW	12	0	0	0	0	0	12
NW	8	0	0	0	0	0	8
NNW	129	3	0	0	0	0	132
VARIABLE	666	8	0	0	0	0	674
Total	429	23	0	0	0	0	452

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: F
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	3	0	0	0	0	0	3
NNE	0	0	0	0	0	0	0
NE	62	4	0	0	0	0	66
ENE	11	0	0	0	0	0	11
E	0	0	0	0	0	0	0
ESE	6	0	0	0	0	0	6
SE	14	6	0	0	0	0	20
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	48	27	0	0	0	0	75
SW	7	0	0	0	0	0	7
WSW	1	0	0	0	0	0	1
W	54	27	0	0	0	0	81
WNW	1	0	0	0	0	0	1
NW	2	0	0	0	0	0	2
NNW	97	3	0	0	0	0	100
VARIABLE	172	10	1	0	0	0	183
Total	306	68	0	0	0	0	374

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: F
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	1	0	0	0	0	0	1
NNE	2	0	0	0	0	0	2
NE	1	0	0	0	0	0	1
ENE	7	0	0	0	0	0	7
E	2	0	0	0	0	0	2
ESE	3	0	0	0	0	0	3
SE	10	0	0	0	0	0	10
SSE	1	0	0	0	0	0	1
S	1	0	0	0	0	0	1
SSW	34	2	0	0	0	0	36
SW	7	1	0	0	0	0	8
WSW	2	0	0	0	0	0	2
W	96	1	0	0	0	0	97
WNW	1	0	0	0	0	0	1
NW	4	0	0	0	0	0	4
NNW	99	1	0	0	0	0	100
VARIABLE	280	1	0	0	0	0	281
Total	271	5	0	0	0	0	276

Periods of calm(hours): 0
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: G
ELEVATION:45.7m

Wind Direction	Wind Speed (mph) at 45.7m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	3	0	0	0	0	0	3
NNE	0	0	0	0	0	0	0
NE	68	1	0	0	0	0	69
ENE	30	2	0	0	0	0	32
E	1	0	0	0	0	0	1
ESE	17	6	0	0	0	0	23
SE	17	3	0	0	0	0	20
SSE	1	0	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	60	13	0	0	0	0	73
SW	3	0	0	0	0	0	3
WSW	3	0	0	0	0	0	3
W	91	21	0	0	0	0	112
WNW	1	0	0	0	0	0	1
NW	1	0	0	0	0	0	1
NNW	129	5	0	0	0	0	134
VARIABLE	321	6	1	0	0	0	328
Total	425	51	0	0	0	0	476

Periods of calm(hours): 2
Hours of missing data: 0

Table 8-CA

CUMLATIVE JOINT FREQUENCY DISTRIBUTION

Farley Nuclear Plant - Annual, 1983

HOURS AT EACH WIND SPEED AND DIRECTION

RELEASE MODE: CONTINOUS
PERIOD OF RECORD: 1 -1-83 } 12-31-83
STABILITY CLASS: G
ELEVATION:10.0m

Wind Direction	Wind Speed (mph) at 10.0m level						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	6	0	0	0	0	0	6
NNE	2	0	0	0	0	0	2
NE	1	0	0	0	0	0	1
ENE	5	0	0	0	0	0	5
E	3	0	0	0	0	0	3
ESE	5	0	0	0	0	0	5
SE	6	0	0	0	0	0	6
SSE	3	0	0	0	0	0	3
S	3	0	0	0	0	0	3
SSW	29	0	0	0	0	0	29
SW	3	0	0	0	0	0	3
WSW	3	0	0	0	0	0	3
W	125	0	0	0	0	0	125
WNW	5	0	0	0	0	0	5
NW	3	0	0	0	0	0	3
NNW	109	0	0	0	0	0	109
VARIABLE	489	1	0	0	0	0	490
Total	311	0	0	0	0	0	311

Periods of calm(hours): 5
Hours of missing data: 0