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PNPS TS Section 5.6.3
Reg. Guide 1.21

May 15, 2000
ENGCLtr. 2.00.042

U. S. Nuclear Regulatory Commission
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The enclosed 1999 annual "Radioactive Effluent and Waste Disposal Report" is submitted in accordance with Pilgrim Nuclear Power Station Technical Specification 5.6.3.

Sincerely,

A handwritten signature in black ink, appearing to read "J.F. Alexander", is written over a printed name label.

J.F. Alexander

RLC/

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IE48

PILGRIM NUCLEAR POWER STATION

Radioactive Effluent and Waste Disposal Report

January 01 through December 31, 1999

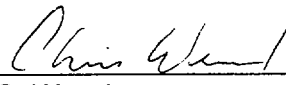




PILGRIM NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT AND WASTE DISPOSAL REPORT
JANUARY 01 THROUGH DECEMBER 31, 1999

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Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
January-December 1999

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EXECUTIVE SUMMARY

PILGRIM NUCLEAR POWER STATION RADIOACTIVE EFFLUENT AND WASTE DISPOSAL REPORT INCLUDING METEOROLOGICAL DATA JANUARY 01 THROUGH DECEMBER 31, 1999

INTRODUCTION

This report quantifies the radioactive gaseous, liquid, and radwaste releases, and summarizes the local meteorological data for the period from January 01 through December 31, 1999. This document has been prepared in accordance with the requirements set forth in the Pilgrim Nuclear Power Station (PNPS) Technical Specifications and Revision 1 of Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Material in Liquid and Gaseous Effluents from Light Water Cooled Nuclear Power Plants".

In July 1999, ownership and control of Pilgrim Station was transferred from Boston Edison Company to Entergy Nuclear Generation Company. Although the operating license of the plant was transferred with the ownership, no changes were made in the operation of the plant which would affect the releases of radioactivity to the environment, as summarized in this report.

The quantity of radioactive material released from PNPS was determined from sample analyses and continuous on-line monitoring of gaseous releases from the main stack, reactor building vent, turbine building, and various decontamination facilities, and liquid releases into the discharge canal.

The quantity and volume of radioactive waste which was shipped offsite from PNPS for processing and burial were determined from data contained on the radwaste shipping documentation. The meteorological data were obtained from monitoring instruments located on the 220-foot meteorological tower located at Pilgrim Station.

GASEOUS EFFLUENTS

Gaseous radioactive releases for the reporting period are quantified in Tables 2.2-A, 2.2-B, and 2.2-C. Radioactive noble gases released during the period totaled 591 Curies. Releases of radioactive particulates and iodines totaled 0.023 Curies, and tritium releases totaled 52 Curies. No gross alpha radioactivity was detected in gaseous effluents.

Noble gases released in gaseous effluents resulted in a maximum total body dose of 0.12 mrem, with a corresponding skin dose of 0.29 mrem. The release of radioactivity in gaseous effluents from PNPS during 1999 resulted in a total body dose to the maximum-exposed hypothetical individual of about 0.44 mrem from radioactive particulates, iodines, and tritium. The maximum hypothetical dose to any organ from radioactive particulates, iodines, and tritium was about 0.93 mrem. All of these maximum doses occurred to a hypothetical individual located on property under Entergy control. The maximum, hypothetical total body dose from the combined release of radioactivity in gaseous effluents was 0.56 mrem. The cumulative total body dose to the entire population within 50 miles of PNPS from combined gaseous effluents was about 0.62 person-rem. The average individual living within 50 miles of PNPS received a total body dose of about 0.00015 mrem from combined gaseous effluents released during 1999.

The maximum individual doses from gaseous radioactive effluents were compared to the applicable ODCM dose limits. Noble gas doses were less than 1.9% of the corresponding 10CFR50 dose objectives. Maximum doses resulting from releases of particulates, iodines, and tritium in gaseous effluents were less than 7% of corresponding 10CFR50 objectives.

LIQUID EFFLUENTS

Liquid radioactive releases for the reporting period are quantified in Tables 2.3-A and 2.3-B. Liquid effluents released into the discharge canal contained 0.093 Curies of fission and activation products, and 6.6 Curies of tritium. No dissolved/entrained noble gases or gross alpha radioactivity were detected in liquid effluents.

The release of radioactivity in liquid effluents from PNPS during 1999 resulted in a total body dose of about 0.027 mrem to the maximum-exposed hypothetical individual. The maximum hypothetical dose to any organ from liquid effluents was about 0.17 mrem. The cumulative total body dose from liquid effluents to the entire population within 50 miles of PNPS was about 0.30 person-rem. The average individual living within 50 miles of PNPS received a total body dose of about 0.000072 mrem from liquid effluents released during 1999.

The maximum individual doses from liquid radioactive effluents were compared to the applicable ODCM dose limits. All doses from liquid effluents were less than 12% of their corresponding effluent control limit. In addition, all quarterly average concentrations of radioactivity in liquids released to Cape Cod Bay were less than 3% of the corresponding limits.

METEOROLOGICAL DATA

Meteorological joint frequency distributions are listed in Appendix A. The data recovery for the annual reporting period exceeded 91%. The predominant wind direction was from the south-southwest, which occurred approximately 13% of the time during the reporting period. The predominant stability class was Class E, which occurred about 36% of the time during the reporting period.

OFFSITE AMBIENT RADIATION MEASUREMENTS

Ambient radiation exposure was evaluated to complete the assessment of radiological impact on humans. A small number of thermoluminescent dosimeters (TLDs) indicated an increase in ambient radiation exposure on Entergy property in close proximity to the station, resulting from nitrogen-16 contained within the plant steam system. The dose to a hypothetical member of the public accessing such areas on Entergy property during 1999 was estimated as being about 1.8 mrem. There was no measurable increase during 1999 in ambient radiation measurements at the location of the nearest resident to PNPS.

The collective total body dose to a maximum-exposed hypothetical individual from radioactive gases, liquids, and ambient exposure resulting from PNPS operation during 1999 was calculated as being 2.9 mrem. This amount is about 0.8% of the typical dose of 300 to 400 mrem received each year by an average person from other sources of natural and man-made radiation. Although this calculated collective dose occurs to a maximum-exposed hypothetical individual, it is also well below the NRC dose limit of 100 mrem/yr specified in 10CFR20.1301, as well as the EPA dose limit of 25 mrem/yr specified in 40CFR190. Both of these limits are to be applied to real members of the general public, so the fact that the dose to the hypothetical maximum-exposed individual is within the limits ensures that any dose received by a real member of the public would be smaller and well within any applicable limit.

RADIOACTIVE SOLID WASTE DISPOSAL

Solid radioactive waste shipped offsite for processing and disposal during the reporting period is described in Table 8.0. Approximately 1224 cubic meters of solid waste, containing 791 Curies of radioactivity, were shipped during the reporting period.

CONCLUSION

The PNPS Offsite Dose Calculation Manual contains effluent controls to limit doses resulting from releases of radioactivity to the environment. None of the effluent controls associated with liquid or gaseous effluents were exceeded during the reporting period, as confirmed by conservative dose assessments performed at weekly and monthly intervals. Conformance to the PNPS ODCM effluent control limits ensures that releases of radioactivity in liquid and gaseous effluents are kept as low as reasonably achievable in accordance with 10 CFR Part 50, Appendix I. Compliance with the ODCM also demonstrates that requirements of the Environmental Protection Agency's nuclear fuel cycle standard, 40CFR190.10, Subpart B, have been met. Based on the dose assessment results for 1999, there was no significant radiological impact on the general public from PNPS operation.

2.0 RADIOACTIVE EFFLUENT DATA

Radioactive gaseous and liquid releases for the reporting period are given in the standard format presented in Tables 1A, 1B, 1C, 2A, 2B, and Supplemental Information table from NRC Regulatory Guide 1.21 (Reference 1) format.

2.1 Supplemental Effluent Release Data

Supplemental information related to radioactive gaseous and liquid releases for the reporting period are given in the standard NRC Regulatory Guide 1.21 format in Table 2.1.

2.2 Gaseous Effluent Data

Gaseous radioactivity is released from Pilgrim Station to the atmosphere from the main stack, reactor building vent, turbine building, and various decontamination facilities. Combined gaseous effluent releases from all release points are summarized in Table 2.2-A. No alpha activity was detected on any of the particulate filters collected during the reporting period. The total gaseous releases for various categories of radionuclides, as well as the corresponding average release rates, can be summarized as follows:

- Noble gases: 591 Ci, 18.8 $\mu\text{Ci/sec}$
- Particulates and iodines with half-life greater than 8 days 0.0230 Ci, 0.000730 $\mu\text{Ci/sec}$
- Tritium: 52.0 Ci, 1.65 $\mu\text{Ci/sec}$

Effluent releases from the main stack are detailed in Table 2.2-B. The main stack is an elevated release point with a height of approximately 400 feet above sea level. The main stack is located about 700 feet west-northwest of the reactor building.

Ground-level effluent releases are detailed in Table 2.2-C. Data in this table includes releases from the reactor building vent, turbine building, and assorted equipment decontamination facilities (e.g., hot machine shop, carbon dioxide pellet decon trailer, plastic media decon trailer, etc.) used during the period. Due to the close proximity of the reactor building, both of these release points are considered to be mixed-mode/ground level release points.

2.3 Liquid Effluent Data

Liquid radioactivity is released from PNPS to Cape Cod Bay via the circulating water discharge canal. These effluents enter Cape Cod Bay at the outfall of the canal, which is located about 1100 feet north of the reactor building.

Liquid effluent releases are summarized in Table 2.3-A. Detailed breakdowns for individual radionuclides are listed in Table 2.3-B. No dissolved/entrained gases or gross alpha radioactivity were detected in liquid effluents released during the reporting period. Total releases for the various categories of radionuclides, as well as their corresponding mean concentrations, can be summarized as follows:

- Total Effluent Volume: 1,070,000 Liters
- Total Dilution Volume: 1,380,000,000 Liters
- Fission/Activation products: 0.0929 Ci, 0.0000000674 $\mu\text{Ci/mL}$
- Tritium: 6.63 Ci, 0.00000481 $\mu\text{Ci/mL}$
- Dissolved/entrained noble gases: Not Detected

Table 2.1
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Supplemental Information
January-June 1999

FACILITY: PILGRIM NUCLEAR POWER STATION

LICENSE: DPR-35

1. REGULATORY LIMITS

- | | |
|---|--|
| a. Fission and activation gases: | 500 mrem/yr total body and 3000 mrem/yr for skin at site boundary |
| b,c. Iodines, particulates with half-life: >8 days, tritium | 1500 mrem/yr to any organ at site boundary |
| d. Liquid effluents: | 0.06 mrem/month for whole body and
0.2 mrem/month for any organ
(without radwaste treatment) |

2. EFFLUENT CONCENTRATION LIMITS

- | | |
|--|--|
| a. Fission and activation gases: | 10CFR20 Appendix B Table II |
| b. Iodines: | 10CFR20 Appendix B Table II |
| c. Particulates with half-life > 8 days: | 10CFR20 Appendix B Table II |
| d. Liquid effluents: | 2E-04 μ Ci/mL for entrained noble gases;
10CFR20 Appendix B Table II values for all other radionuclides |

3. AVERAGE ENERGY

Not Applicable

4. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

- | | |
|----------------------------------|--|
| a. Fission and activation gases: | High purity germanium gamma spectroscopy for all gamma emitters; radiochemistry analysis for H-3, Fe-55 (liquid effluents), Sr-89, and Sr-90 |
| b. Iodines: | |
| c. Particulates: | |
| d. Liquid effluents: | |

5. BATCH RELEASES

- a. Liquid Effluents
1. Total number of releases:
 2. Total time period (minutes):
 3. Maximum time period (minutes):
 4. Average time period (minutes):
 5. Minimum time period (minutes):
 6. Average stream flow (Liters/min):
during periods of release of effluents into a flowing stream

- b. Gaseous Effluents

Jan-Mar 1999	Apr-Jun 1999
6.00E+00	1.60E+01
1.85E+02	2.24E+03
5.00E+01	2.25E+02
3.08E+01	1.40E+02
2.30E+01	5.00E+00
1.18E+06	1.20E+05
None	None
None	None
None	None
None	None

6. ABNORMAL RELEASES

- a. Liquid Effluents
- b. Gaseous Effluents

Table 2.1 (continued)
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Supplemental Information
July-December 1999

FACILITY: PILGRIM NUCLEAR POWER STATION

LICENSE: DPR-35

1. REGULATORY LIMITS

- | | |
|---|--|
| a. Fission and activation gases: | 500 mrem/yr total body and 3000 mrem/yr for skin at site boundary |
| b,c. Iodines, particulates with half-life: >8 days, tritium | 1500 mrem/yr to any organ at site boundary |
| d. Liquid effluents: | 0.06 mrem/month for whole body and
0.2 mrem/month for any organ
(without radwaste treatment) |

2. EFFLUENT CONCENTRATION LIMITS

- | | |
|--|--|
| a. Fission and activation gases: | 10CFR20 Appendix B Table II |
| b. Iodines: | 10CFR20 Appendix B Table II |
| c. Particulates with half-life > 8 days: | 10CFR20 Appendix B Table II |
| d. Liquid effluents: | 2E-04 μ Ci/mL for entrained noble gases;
10CFR20 Appendix B Table II values for all other radionuclides |

3. AVERAGE ENERGY

Not Applicable

4. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

- | | |
|----------------------------------|--|
| a. Fission and activation gases: | High purity germanium gamma spectroscopy for all gamma emitters; radiochemistry analysis for H-3, Fe-55 (liquid effluents), Sr-89, and Sr-90 |
| b. Iodines: | |
| c. Particulates: | |
| d. Liquid effluents: | |

5. BATCH RELEASES

- a. Liquid Effluents
1. Total number of releases:
 2. Total time period (minutes):
 3. Maximum time period (minutes):
 4. Average time period (minutes):
 5. Minimum time period (minutes):
 6. Average stream flow (Liters/min):
during periods of release of effluents into a flowing stream

- b. Gaseous Effluents

Jul-Sep 1999	Oct-Dec 1999
1.70E+01	2.00E+00
7.40E+02	4.00E+01
2.15E+02	2.00E+01
4.35E+01	2.00E+01
1.50E+01	2.00E+01
1.14E+06	1.18E+06
None	None
None	None
None	None

6. ABNORMAL RELEASES

- a. Liquid Effluents
- b. Gaseous Effluents

Table 2.2-A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Summation of All Releases
January-June 1999

Period: Jan-Mar 1999	Period: Apr-Jun 1999	Estimated Total Error
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A. FISSION AND ACTIVATION GASES

Total Release: Ci	1.80E+02	5.14E+01	±22%
Average Release Rate During Period: $\mu\text{Ci/sec}$	2.28E+01	6.52E+00	
Percent of Effluent Control Limit	*	*	

B. IODINES

Total Iodine-131 Release: Ci	1.05E-03	8.97E-04	±20%
Average Release Rate During Period: $\mu\text{Ci/sec}$	1.33E-04	1.14E-04	
Percent of Effluent Control Limit	*	*	

C. PARTICULATES

Total Release: Ci	5.44E-04	4.18E-04	±21%
Average Release Rate During Period: $\mu\text{Ci/sec}$	6.90E-05	5.30E-05	
Percent of Effluent Control Limit	*	*	
Gross Alpha Radioactivity: Ci	NDA	NDA	

D. TRITIUM

Total Release: Ci	1.65E+01	1.57E+01	±20%
Average Release Rate During Period: $\mu\text{Ci/sec}$	2.09E+00	1.99E+00	
Percent of Effluent Control Limit	*	*	

Notes for Table 2.2-A:

* Percent of Effluent Control Limit values based on dose assessments are provided in Section 7 of this report.

1. NDA stands for No Detectable Activity.
2. LLD for airborne gross alpha activity listed as NDA is $1\text{E-}11 \mu\text{Ci/cc}$.

Table 2.2-A (continued)
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Summation of All Releases
July-December 1999

Period: Jul-Sep 1999	Period: Oct-Dec 1999	Estimated Total Error
-------------------------	-------------------------	--------------------------

A. FISSION AND ACTIVATION GASES

Total Release: Ci	1.99E+02	1.61E+02	±22%
Average Release Rate During Period: µCi/sec	2.52E+01	2.04E+01	
Percent of Effluent Control Limit	*	*	

B. IODINES

Total Iodine-131 Release: Ci	4.01E-04	2.87E-04	±20%
Average Release Rate During Period: µCi/sec	5.09E-05	3.64E-05	
Percent of Effluent Control Limit	*	*	

C. PARTICULATES

Total Release: Ci	4.67E-04	2.06E-04	±21%
Average Release Rate During Period: µCi/sec	5.92E-05	2.61E-05	
Percent of Effluent Control Limit	*	*	
Gross Alpha Radioactivity: Ci	NDA	NDA	

D. TRITIUM

Total Release: Ci	1.07E+01	9.06E+00	±20%
Average Release Rate During Period: µCi/sec	1.36E+00	1.15E+00	
Percent of Effluent Control Limit	*	*	

Notes for Table 2.2-A:

* Percent of Effluent Control Limit values based on dose assessments are provided in Section 7 of this report.

1. NDA stands for No Detectable Activity.
2. LLD for airborne gross alpha activity listed as NDA is 1E-11 µCi/cc.

Table 2.2-B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Elevated Release
January-June 1999

Nuclide Released	Continuous	Mode	Batch	Mode
	Jan-Mar 1999	Apr-Jun 1999	Jan-Mar 1999	Apr-Jun 1999

1. FISSION AND ACTIVATION GASES - Ci

Ar-41	NDA	NDA	N/A	N/A
Kr-85m	3.30E+01	1.06E+01	N/A	N/A
Kr-87	9.46E+00	4.19E+00	N/A	N/A
Kr-88	5.48E+01	1.88E+01	N/A	N/A
Xe-131m	NDA	NDA	N/A	N/A
Xe-133	3.63E+01	1.06E+01	N/A	N/A
Xe-135	1.36E+01	7.16E+00	N/A	N/A
Xe-135m	NDA	NDA	N/A	N/A
Xe-138	2.09E+00	NDA	N/A	N/A
Total for period	1.49E+02	5.14E+01	N/A	N/A

2. IODINES – Ci

I-131	1.82E-04	1.73E-04	N/A	N/A
I-133	9.25E-04	4.57E-04	N/A	N/A
Total for period	1.11E-03	6.30E-04	N/A	N/A

3. PARTICULATES – Ci

Cr-51	NDA	NDA	N/A	N/A
Mn-54	NDA	7.44E-06	N/A	N/A
Fe-59	NDA	NDA	N/A	N/A
Co-58	NDA	NDA	N/A	N/A
Co-60	NDA	3.37E-06	N/A	N/A
Zn-65	NDA	NDA	N/A	N/A
Sr-89	3.97E-05	2.56E-05	N/A	N/A
Sr-90	NDA	1.81E-06	N/A	N/A
Cs-134	NDA	NDA	N/A	N/A
Cs-137	2.03E-06	2.12E-06	N/A	N/A
Ba/La-140	1.51E-04	5.70E-05	N/A	N/A
Total for period	1.93E-04	9.74E-05	N/A	N/A

4. TRITIUM – Ci

H-3	6.95E-01	4.75E-01	N/A	N/A
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Notes for Table 2.2-B:

1. N/A stands for not applicable.
2. NDA stands for No Detectable Activity.
3. LLD for airborne radionuclides listed as NDA are as follows:
Fission Gases: 1E-04 µCi/cc
Iodines: 1E-12 µCi/cc
Particulates: 1E-11 µCi/cc

Table 2.2-B (continued)
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Elevated Release
July-December 1999

Nuclide Released	Continuous Mode		Batch Mode	
	Jul-Sep 1999	Oct-Dec 1999	Jul-Sep 1999	Oct-Dec 1999

1. FISSION AND ACTIVATION GASES - Ci

Ar-41	7.47E-01	1.36E+00	N/A	N/A
Kr-85m	3.03E+01	2.57E+01	N/A	N/A
Kr-87	3.70E+01	3.29E+01	N/A	N/A
Kr-88	8.04E+01	6.40E+01	N/A	N/A
Xe-131m	NDA	NDA	N/A	N/A
Xe-133	1.98E+01	1.64E+01	N/A	N/A
Xe-135	3.04E+01	2.08E+01	N/A	N/A
Xe-135m	NDA	NDA	N/A	N/A
Xe-138	NDA	NDA	N/A	N/A
Total for period	1.99E+02	1.61E+02	N/A	N/A

2. IODINES - Ci

I-131	3.80E-04	2.21E-04	N/A	N/A
I-133	2.33E-03	1.17E-03	N/A	N/A
Total for period	2.71E-03	1.39E-03	N/A	N/A

3. PARTICULATES - Ci

Cr-51	NDA	NDA	N/A	N/A
Mn-54	2.08E-05	NDA	N/A	N/A
Fe-59	NDA	NDA	N/A	N/A
Co-58	NDA	NDA	N/A	N/A
Co-60	5.14E-06	1.25E-06	N/A	N/A
Zn-65	NDA	NDA	N/A	N/A
Sr-89	1.49E-04	1.28E-05	N/A	N/A
Sr-90	1.56E-06	NDA	N/A	N/A
Cs-134	NDA	NDA	N/A	N/A
Cs-137	4.24E-06	1.21E-06	N/A	N/A
Ba/La-140	1.46E-04	1.39E-04	N/A	N/A
Total for period	3.27E-04	1.54E-04	N/A	N/A

4. TRITIUM - Ci

H-3	2.14E+00	1.42E+00	N/A	N/A
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Notes for Table 2.2-B:

1. N/A stands for not applicable.
2. NDA stands for No Detectable Activity.
3. LLD for airborne radionuclides listed as NDA are as follows:
Fission Gases: 1E-04 $\mu\text{Ci/cc}$
Iodines: 1E-12 $\mu\text{Ci/cc}$
Particulates: 1E-11 $\mu\text{Ci/cc}$

Table 2.2-C
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Ground Level Release
January-June 1999

Nuclide Released	Continuous Mode		Batch Mode	
	Jan-Mar 1999	Apr-Jun 1999	Jan-Mar 1999	Apr-Jun 1999

1. FISSION AND ACTIVATION GASES - Ci

Kr-85m	NDA	NDA	N/A	N/A
Kr-87	NDA	NDA	N/A	N/A
Kr-88	NDA	NDA	N/A	N/A
Xe-133	NDA	NDA	N/A	N/A
Xe-135	NDA	NDA	N/A	N/A
Xe-135m	3.07E+01	NDA	N/A	N/A
Xe-138	NDA	NDA	N/A	N/A
Total for period	3.07E+01	NDA	N/A	N/A

2. IODINES - Ci

I-131	8.63E-04	7.24E-04	N/A	N/A
I-133	8.77E-03	4.38E-03	N/A	N/A
Total for period	9.63E-03	5.10E-03	N/A	N/A

3. PARTICULATES - Ci

Cr-51	NDA	8.87E-06	N/A	N/A
Mn-54	NDA	6.56E-05	N/A	N/A
Fe-59	NDA	1.46E-05	N/A	N/A
Co-58	NDA	1.59E-06	N/A	N/A
Co-60	NDA	4.41E-05	N/A	N/A
Zn-65	NDA	9.50E-06	N/A	N/A
Sr-89	2.20E-04	3.34E-05	N/A	N/A
Sr-90	NDA	3.21E-06	N/A	N/A
Cs-134	NDA	NDA	N/A	N/A
Cs-137	5.29E-06	2.81E-06	N/A	N/A
Ba/La-140	1.26E-04	1.37E-04	N/A	N/A
Total for period	3.51E-04	3.21E-04	N/A	N/A

4. TRITIUM - Ci

H-3	1.58E+01	1.52E+01	N/A	N/A
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Notes for Table 2.2-C:

1. N/A stands for not applicable.
2. NDA stands for No Detectable Activity.
3. LLD for airborne radionuclides listed as NDA are as follows:
Fission Gases: 1E-04 $\mu\text{Ci/cc}$
Iodines: 1E-12 $\mu\text{Ci/cc}$
Particulates: 1E-11 $\mu\text{Ci/cc}$

Table 2.2-C (continued)
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Ground Level Release
July-December 1999

Nuclide Released	Continuous Mode		Batch Mode	
	Jul-Sep 1999	Oct-Dec 1999	Jul-Sep 1999	Oct-Dec 1999

1. FISSION AND ACTIVATION GASES - Ci

Kr-85m	NDA	NDA	N/A	N/A
Kr-87	NDA	NDA	N/A	N/A
Kr-88	NDA	NDA	N/A	N/A
Xe-133	NDA	NDA	N/A	N/A
Xe-135	NDA	NDA	N/A	N/A
Xe-135m	NDA	NDA	N/A	N/A
Xe-138	NDA	NDA	N/A	N/A
Total for period	NDA	NDA	N/A	N/A

2. IODINES – Ci

I-131	2.09E-05	6.55E-05	N/A	N/A
I-133	2.29E-04	4.98E-04	N/A	N/A
Total for period	2.50E-04	5.64E-04	N/A	N/A

3. PARTICULATES – Ci

Cr-51	NDA	NDA	N/A	N/A
Mn-54	4.38E-05	NDA	N/A	N/A
Fe-59	8.22E-06	NDA	N/A	N/A
Co-58	NDA	NDA	N/A	N/A
Co-60	1.61E-05	2.50E-06	N/A	N/A
Zn-65	NDA	NDA	N/A	N/A
Sr-89	6.16E-05	4.90E-05	N/A	N/A
Sr-90	NDA	NDA	N/A	N/A
Cs-134	NDA	NDA	N/A	N/A
Cs-137	1.55E-06	NDA	N/A	N/A
Ba/La-140	9.17E-06	NDA	N/A	N/A
Total for period	1.40E-04	5.15E-05	N/A	N/A

4. TRITIUM – Ci

H-3	8.56E+00	7.64E+00	N/A	N/A
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Notes for Table 2.2-C:

1. N/A stands for not applicable.
2. NDA stands for No Detectable Activity.
3. LLD for airborne radionuclides listed as NDA are as follows:
Fission Gases: 1E-04 μ Ci/cc
Iodines: 1E-12 μ Ci/cc
Particulates: 1E-11 μ Ci/cc

Table 2.3-A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents - Summation of All Releases
January-June 1999

Period: Jan-Mar 1999	Period: Apr-Jun 1999	Estimated Total Error
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A. FISSION AND ACTIVATION PRODUCTS

Total Release (not including H-3, noble gas, or alpha): Ci	3.10E-04	9.09E-02	±12%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	1.43E-09	3.38E-07	
Percent of Effluent Concentration Limit*	3.40E-02%	2.74E+00%	

B. TRITIUM

Total Release: Ci	7.85E-04	6.11E+00	±9.4%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	3.60E-09	2.27E-05	
Percent of Effluent Concentration Limit*	3.60E-04%	2.27E+00%	

C. DISSOLVED AND ENTRAINED GASES

Total Release: Ci	NDA	NDA	±16%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	NDA	NDA	
Percent of Effluent Concentration Limit*	NDA	NDA	

D. GROSS ALPHA RADIOACTIVITY

Total Release: Ci	NDA	NDA	±34%
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E. VOLUME OF WASTE RELEASED PRIOR TO DILUTION

Waste Volume: Liters	9.81E+03	9.19E+05	±5.7%
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F. VOLUME OF DILUTION WATER USED DURING PERIOD

Dilution Volume: Liters	2.18E+08	2.68E+08	±10%
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Notes for Table 2.3-A:

* Additional percent of Effluent Control Limit values based on dose assessments are provided in Section 7 of this report.

1. NDA stands for No Detectable Activity.
2. LLD for dissolved and entrained gases listed as NDA is $1\text{E-}05 \mu\text{Ci/mL}$.
3. LLD for liquid gross alpha activity listed as NDA is $1\text{E-}07 \mu\text{Ci/mL}$.

Table 2.3-A (continued)
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents - Summation of All Releases
July-December 1999

Period: Jul-Sep 1999	Period: Oct-Dec 1999	Estimated Total Error
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A. FISSION AND ACTIVATION PRODUCTS

Total Release (not including H-3, noble gas, or alpha): Ci	1.52E-03	1.74E-04	±12%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	1.80E-09	3.70E-09	
Percent of Effluent Concentration Limit*	2.81E-02%	4.09E-02%	

B. TRITIUM

Total Release: Ci	5.19E-01	3.27E-04	±9.4%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	6.14E-07	6.96E-09	
Percent of Effluent Concentration Limit*	6.14E-02%	6.96E-04%	

C. DISSOLVED AND ENTRAINED GASES

Total Release: Ci	NDA	NDA	±16%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	NDA	NDA	
Percent of Effluent Concentration Limit*	NDA	NDA	

D. GROSS ALPHA RADIOACTIVITY

Total Release: Ci	NDA	NDA	±34%
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E. VOLUME OF WASTE RELEASED PRIOR TO DILUTION

Waste Volume: Liters	1.36E+05	2.84E+03	±5.7%
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F. VOLUME OF DILUTION WATER USED DURING PERIOD

Dilution Volume: Liters	8.45E+08	4.70E+07	±10%
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Notes for Table 2.3-A:

* Additional percent of Effluent Control Limit values based on dose assessments are provided in Section 7 of this report.

1. NDA stands for No Detectable Activity.
2. LLD for dissolved and entrained gases listed as NDA is $1\text{E-}05 \mu\text{Ci/mL}$.
3. LLD for liquid gross alpha activity listed as NDA is $1\text{E-}07 \mu\text{Ci/mL}$.

Table 2.3-B

Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents
January-June 1999

Nuclide Released	Continuous	Mode	Batch	Mode
	Jan-Mar 1999	Apr-Jun 1999	Jan-Mar 1999	Apr-Jun 1999

1. FISSION AND ACTIVATION PRODUCTS - Ci

Cr-51	N/A	N/A	NDA	9.68E-03
Mn-54	N/A	N/A	1.63E-05	2.92E-02
Fe-55	N/A	N/A	1.86E-04	1.87E-02
Fe-59	N/A	N/A	NDA	1.82E-02
Co-58	N/A	N/A	NDA	8.38E-04
Co-60	N/A	N/A	5.45E-05	9.63E-03
Zn-65	N/A	N/A	NDA	1.71E-03
Sr-89	N/A	N/A	5.89E-07	6.36E-07
Sr-90	N/A	N/A	1.28E-06	2.03E-06
Zr/Nb-95	N/A	N/A	NDA	1.81E-04
Mo-99/Tc-99m	N/A	N/A	NDA	NDA
Ag-110m	N/A	N/A	NDA	2.14E-03
Sb-124	N/A	N/A	NDA	3.05E-04
I-131	N/A	N/A	NDA	NDA
I-133	N/A	N/A	NDA	NDA
Cs-134	N/A	N/A	NDA	NDA
Cs-137	N/A	N/A	5.10E-05	1.17E-04
Ba/La-140	N/A	N/A	NDA	2.30E-04
Ce-141	N/A	N/A	NDA	NDA
Total for period	N/A	N/A	3.10E-04	9.09E-02

2. DISSOLVED AND ENTRAINED GASES - Ci

Xe-133	N/A	N/A	NDA	NDA
Xe-135	N/A	N/A	NDA	NDA
Total for period	N/A	N/A	NDA	NDA

Notes for Table 2.3-B:

1. N/A stands for not applicable.
2. NDA stands for No Detectable Activity.
3. LLD for liquid radionuclides listed as NDA are as follows:
 Strontium: 5E-08 $\mu\text{Ci/mL}$
 Iodines: 1E-06 $\mu\text{Ci/mL}$
 Noble Gases: 1E-05 $\mu\text{Ci/mL}$
 All Others: 5E-07 $\mu\text{Ci/mL}$

Table 2.3-B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents
July-December 1999

Nuclide Released	Continuous Mode		Batch Mode	
	Jul-Sep 1999	Oct-Dec 1999	Jul-Sep 1999	Oct-Dec 1999

1. FISSION AND ACTIVATION PRODUCTS - Ci

Cr-51	N/A	N/A	NDA	NDA
Mn-54	N/A	N/A	4.14E-04	6.70E-05
Fe-55	N/A	N/A	4.90E-04	7.24E-05
Fe-59	N/A	N/A	1.26E-04	1.13E-06
Co-58	N/A	N/A	1.01E-05	6.79E-07
Co-60	N/A	N/A	2.95E-04	2.06E-05
Zn-65	N/A	N/A	4.63E-05	4.10E-06
Sr-89	N/A	N/A	NDA	5.96E-07
Sr-90	N/A	N/A	1.92E-06	3.95E-07
Zr/Nb-95	N/A	N/A	NDA	NDA
Mo-99/Tc-99m	N/A	N/A	NDA	NDA
Ag-110m	N/A	N/A	4.75E-05	NDA
Sb-124	N/A	N/A	NDA	NDA
I-131	N/A	N/A	NDA	NDA
I-133	N/A	N/A	NDA	NDA
Cs-134	N/A	N/A	NDA	NDA
Cs-137	N/A	N/A	8.63E-05	7.58E-06
Ba/La-140	N/A	N/A	NDA	NDA
Ce-141	N/A	N/A	NDA	NDA
Total for period	N/A	N/A	1.52E-03	1.74E-04

2. DISSOLVED AND ENTRAINED GASES - Ci

Xe-133	N/A	N/A	NDA	NDA
Xe-135	N/A	N/A	NDA	NDA
Total for period	N/A	N/A	NDA	NDA

Notes for Table 2.3-B:

1. N/A stands for not applicable.
2. NDA stands for No Detectable Activity.
3. LLD for liquid radionuclides listed as NDA are as follows:
 Strontium: 5E-08 $\mu\text{Ci/mL}$
 Iodines: 1E-06 $\mu\text{Ci/mL}$
 Noble Gases: 1E-05 $\mu\text{Ci/mL}$
 All Others: 5E-07 $\mu\text{Ci/mL}$

3.0 METEOROLOGICAL DATA

Meteorological data (Reference 2) are summarized for the reporting period in Appendix A, in the standard joint frequency distribution format as given in NRC Regulatory Guide 1.21.

The predominant meteorological conditions observed during the annual reporting period can be summarized with their corresponding frequencies as follows:

- Stability Class: Class E, 36%
- Wind Direction (from): South-southwest, 13%
- 33-ft Wind Speed: 4-7 mph, 53%
- 220-ft Wind Speed: 13-18 mph, 37%

There were a limited number of instances when data collection from the 220-ft meteorological tower was not continuous. Typically, such data losses were attributed to lightening strikes, loss of power, malfunction of the sensors, and/or malfunction of the digital dataloggers. Data recovery for the period was about 95% for the 33-ft level, and 91% for the 220-ft level of the tower. These data recovery values exceed the NRC's recommended annual recovery goal of 90%.

4.0 MAXIMUM INDIVIDUAL DOSES

Doses to the maximum exposed individual resulting from radionuclides in effluents released offsite were calculated using methods presented in the PNPS Offsite Dose Calculation Manual (ODCM, Reference 3), NRC Regulatory Guide 1.109 (Reference 4), NRC Regulatory Guide 1.111 (Reference 5), and the Pilgrim Station Unit 1 Appendix I Evaluation (Reference 6). Maximum individual doses are calculated separately for: (1) noble gases in gaseous effluents, (2) particulates, iodines, and tritium in gaseous effluents; and, (3) liquid effluents. Maximum consumption and use factors for various pathways from Table E-5 of the PNPS ODCM are used for calculating the doses to the maximum exposed individual.

Information related to liquid and gaseous effluent releases are summarized Section 2 of this report. These effluent release data were used as input to computer programs to calculate the resulting doses. The Duke Engineering and Services "YODA"-series of computer programs (Reference 7) was used to compile the dose contributions to the various organs in each age class from major exposure pathways.

4.1 Doses From Noble Gas Releases

Gaseous effluent release data presented in Tables 2.2-A, 2.2-B, and 2.2-C from this effluent release report were used as input to the Duke Engineering "YODA" computer programs to calculate radiation doses. These data include gaseous releases from the PNPS main stack, reactor building vent, and turbine building roof exhausters. Meteorological data obtained from the PNPS 220-foot meteorological tower during 1999 were also used as input to the Duke Engineering's "AEOLUS" computer program (Reference 8). This program calculated the atmospheric dispersion and deposition factors used in the "YODA"-series of computer programs to calculate maximum individual doses. These various dispersion (χ/Q) and deposition (D/Q) factors are presented in Appendix B.

The maximum individual doses resulting from radioactive noble gases released in gaseous effluents are presented in Table 4.1 according to specific receptor locations. This table includes all noble gas doses for the individual calendar quarters and total calendar year.

It should be noted that doses calculated for the entire year may not equal the sum of the doses for individual quarters. Doses from gaseous effluents are largely dependent on the meteorological conditions during the release period, as prescribed by the NRC in regulatory guides 1.109 and 1.111. Changes in meteorological conditions throughout the year can affect the amount of dispersion of gaseous effluents and the resulting dose. For example, a release of gaseous effluent during a period when there is little mixing in the air will yield a higher dose than if the same amount of radioactivity is released during a period when atmospheric mixing is high. Quarterly dose values presented in the following tables were calculated using meteorological conditions observed during the applicable quarterly period. In the case of the annual dose values presented, the radionuclide activity from the four quarters were summed for the entire year and doses were calculated using annual-average meteorological conditions.

Noble gases released in gaseous effluents from PNPS during 1999 resulted in a maximum total body dose of 0.12 mrem. The maximum skin dose was 0.29 mrem. Both of these doses occurred to a hypothetical individual, located at the shoreline 0.08 kilometers N of the PNPS Reactor Building. This area is under Entergy Control. Doses to more "realistic" individuals at offsite locations would be lower than doses for these hypothetical site boundary individuals.

Table 4.1

Maximum Doses From Noble Gas Releases During 1999

Release Period	Gamma Air Dose (location)	Beta Air Dose (location)	Total Body Dose (location)	Skin Dose (location)
Jan-Mar	6.75E-02 mrad (0.13 km ENE)	8.44E-02 mrad (0.11 km NE)	4.44E-02 mrem (0.13 km ENE)	1.31E-01 mrem (0.11 km NE)
Apr-Jun	9.45E-03 mrad (0.44 km SSE)	1.12E-03 mrad (1.23 km SSW)	6.38E-03 mrem (0.44 km SSE)	8.11E-03 mrem (0.44 km SSE)
Jul-Sep	6.73E-02 mrad (0.08 km N)	5.40E-03 mrad (1.23 km SSW)	4.54E-02 mrem (0.08 km N)	5.23E-02 mrem (0.08 km N)
Oct-Dec	4.87E-02 mrad (0.15 km E)	1.87E-03 mrad (1.23 km SSW)	3.29E-02 mrem (0.15 km E)	3.78E-02mrem (0.15 km E)
Jan-Dec	1.84E-01 mrad (0.08 km N)	1.54E-01 mrad (0.08 km N)	1.22E-01 mrem (0.08 km N)	2.91E-01 mrem (0.08 km N)

4.2 Doses From Gaseous Effluent Releases

Gaseous effluent release data presented in Tables 2.2-A, 2.2-B, and 2.2-C from this effluent release report were used as input to the Duke Engineering "YODA" computer programs to calculate radiation doses. These data include gaseous releases from the PNPS main stack, reactor building vent, and turbine building roof exhausters. Meteorological data obtained from the PNPS 220-foot meteorological tower during 1999 were also used as input to the Duke Engineering's "AEOLUS" computer program (Reference 8). This program calculated the atmospheric dispersion and deposition factors used in the "YODA"-series of computer programs to calculate maximum individual doses. These various dispersion (χ/Q) and deposition (D/Q) factors are presented in Appendix B.

The maximum individual doses resulting from radioactive particulates, iodines, and tritium released in gaseous effluents are presented in Tables 4.2-A through 4.2-E. These tables cover the individual calendar quarters and the total calendar year, respectively. Doses resulting from releases of noble gases are addressed independently in the PNPS ODCM. Therefore, none of these tables for maximum individual doses include any dose contribution from noble gases. The presentation and analysis of doses resulting from noble gases are addressed in Section 4.1 of this report.

Tables 4.2-A through 4.2-E summarize the maximum total body and organ doses for the adult, teen, child, and infant age classes resulting from the major gaseous exposure pathways. These tables present the dose data according to specific receptor location and the exposure pathways assumed to occur at that location. For example, the second column of the tables presents the information for the hypothetical maximum-exposed at the most restrictive site boundary location, where only inhalation and ground deposition exposure pathways are assumed to occur. Since this is a shoreline location controlled by Entergy, the other pathways of garden vegetable production, milk production, and meat production are assumed not to occur. Doses for other offsite locations not under Entergy control, where other exposure pathways can and do occur, are presented in subsequent columns of the tables, and represent the potential maximum doses to individuals at these locations.

It should be noted that doses calculated for the entire year may not equal the sum of the doses for individual quarters. As was the case with noble gas doses described in Section 4.1, quarterly doses were calculated using meteorological conditions observed during the applicable quarterly period. Annual dose values are based on the sum of the quarterly noble gas releases, along with the annual-average meteorological conditions. A more detailed discussion of the reasons for the differences in annual doses from the summed quarterly doses can be found in Section 4.1.

Radioactivity released in gaseous effluents from PNPS during 1999 resulted in a maximum total body dose (teen age class) of 0.44 mrem. The maximum organ dose (child age class, thyroid) was 0.93 mrem. Both of these doses occurred to hypothetical individuals at the shoreline 0.08 kilometers N of the PNPS Reactor Building, an area under Entergy control. For the more "realistic" individuals at offsite locations, the maximum total body dose was 0.019 mrem (child age class at a location 0.8 kilometers SE from the Reactor Building), while the maximum organ dose was 0.062 mrem (infant thyroid at a location 4 kilometers WSW from the Reactor Building, yielding vegetables, cow milk, and goat milk).

Table 4.2-A

Maximum Individual Organ Dose at Receptor Location -- mrem
From Gaseous Release Period: January-March 1999

Receptor: Direction: Distance ¹ : Pathway ² :	Bound NE 0.11km DI	Cow/Goat WSW 3.97km DIVCG ³	Garden SE 0.87km DIV ³	Cow/Meat W 5.77km DIVCM ³	Resident ESE 0.80km DI	Meat** S 3.80km DIVM ³
Age Class: Adult						
Bone	1.72E-03	1.16E-05	5.66E-05	3.49E-06	6.78E-05	3.13E-06
GI-LLI	7.61E-02	1.60E-04	1.48E-03	6.66E-05	1.73E-03	7.38E-05
Kidney	7.64E-02	1.64E-04	1.49E-03	6.77E-05	1.74E-03	7.39E-05
Liver	7.60E-02	1.63E-04	1.48E-03	6.71E-05	1.73E-03	7.37E-05
Lung	7.71E-02	1.59E-04	1.50E-03	6.64E-05	1.75E-03	7.44E-05
Thyroid	1.81E-01	1.18E-03	3.36E-03	3.84E-04	3.94E-03	1.61E-04
Total Body	7.56E-02	1.61E-04	1.47E-03	6.65E-05	1.72E-03	7.34E-05
Age Class: Teen						
Bone	1.98E-03	2.01E-05	6.12E-05	5.30E-06	7.32E-05	3.16E-06
GI-LLI	7.66E-02	1.96E-04	1.49E-03	7.03E-05	1.74E-03	6.64E-05
Kidney	7.73E-02	2.04E-04	1.50E-03	7.26E-05	1.76E-03	6.67E-05
Liver	7.67E-02	2.02E-04	1.49E-03	7.16E-05	1.75E-03	6.64E-05
Lung	7.88E-02	1.94E-04	1.53E-03	7.03E-05	1.79E-03	6.78E-05
Thyroid	2.15E-01	1.80E-03	3.96E-03	5.57E-04	4.64E-03	1.67E-04
Total Body	7.62E-02	1.97E-04	1.48E-03	7.04E-05	1.73E-03	6.60E-05
Age Class: Child						
Bone	2.30E-03	4.70E-05	6.70E-05	1.14E-05	8.01E-05	3.98E-06
GI-LLI	6.76E-02	2.76E-04	1.32E-03	8.70E-05	1.54E-03	6.24E-05
Kidney	6.86E-02	2.92E-04	1.34E-03	9.16E-05	1.56E-03	6.30E-05
Liver	6.80E-02	2.89E-04	1.33E-03	9.02E-05	1.55E-03	6.27E-05
Lung	6.98E-02	2.75E-04	1.36E-03	8.73E-05	1.59E-03	6.39E-05
Thyroid	2.41E-01	3.44E-03	4.41E-03	1.02E-03	5.18E-03	1.93E-04
Total Body	6.76E-02	2.80E-04	1.32E-03	8.81E-05	1.54E-03	6.24E-05
Age Class: Infant						
Bone	1.99E-03	8.75E-05	6.14E-05	1.96E-05	7.35E-05	2.48E-06
GI-LLI	3.93E-02	3.80E-04	7.76E-04	9.50E-05	9.09E-04	2.86E-05
Kidney	4.00E-02	4.10E-04	7.90E-04	1.03E-04	9.24E-04	2.91E-05
Liver	3.99E-02	4.14E-04	7.87E-04	1.03E-04	9.22E-04	2.90E-05
Lung	4.15E-02	3.80E-04	8.16E-04	9.54E-05	9.55E-04	3.02E-05
Thyroid	1.99E-01	7.95E-03	3.63E-03	2.26E-03	4.26E-03	1.26E-04
Total Body	3.94E-02	3.91E-04	7.78E-04	9.78E-05	9.11E-04	2.87E-05

¹ Distances are measured with respect to the reactor building vent.

² Pathway designations are as follows:

D = Deposition (Ground Plane)

I = Inhalation

V = Vegetable Garden

C = Cow Milk

G = Goat Milk

M = Meat

³ Doses are conservative since it is unlikely for vegetables to be grown outside or for animals to be fed on pasture during winter months.

Table 4.2-B

Maximum Individual Organ Dose at Receptor Location -- mrem
From Gaseous Release Period: April-June 1999

Receptor:	Bound	Cow/Goat	Garden	Cow/Meat	Resident	Meat
Direction:	NNE	WSW	SE	W	ESE	S
Distance ¹ :	0.10km	3.97km	0.87km	5.77km	0.80km	3.80km
Pathway ² :	DI	DIVCG	DIV	DIVCM	DI	DIVM
Age Class: Adult						
Bone	2.50E-02	2.08E-04	9.22E-04	7.77E-05	3.25E-04	6.34E-05
GI-LLI	1.20E-01	1.11E-03	4.36E-03	3.33E-04	1.82E-03	1.50E-04
Kidney	1.21E-01	1.13E-03	4.30E-03	3.32E-04	1.83E-03	1.45E-04
Liver	1.20E-01	1.12E-03	4.30E-03	3.30E-04	1.82E-03	1.45E-04
Lung	1.23E-01	1.09E-03	4.30E-03	3.23E-04	1.86E-03	1.44E-04
Thyroid	2.09E-01	8.80E-03	8.86E-03	2.00E-03	3.12E-03	4.14E-04
Total Body	1.20E-01	1.13E-03	4.41E-03	3.38E-04	1.82E-03	1.54E-04
Age Class: Teen						
Bone	2.53E-02	2.75E-04	1.10E-03	9.73E-05	3.30E-04	7.65E-05
GI-LLI	1.21E-01	1.31E-03	4.79E-03	3.64E-04	1.83E-03	1.57E-04
Kidney	1.22E-01	1.36E-03	4.73E-03	3.70E-04	1.84E-03	1.52E-04
Liver	1.21E-01	1.34E-03	4.73E-03	3.67E-04	1.84E-03	1.53E-04
Lung	1.25E-01	1.29E-03	4.74E-03	3.56E-04	1.90E-03	1.52E-04
Thyroid	2.36E-01	1.31E-02	8.95E-03	2.78E-03	3.52E-03	3.85E-04
Total Body	1.21E-01	1.35E-03	4.87E-03	3.74E-04	1.83E-03	1.64E-04
Age Class: Child						
Bone	2.54E-02	4.90E-04	1.72E-03	1.66E-04	3.31E-04	1.26E-04
GI-LLI	1.10E-01	1.89E-03	6.43E-03	5.01E-04	1.65E-03	2.06E-04
Kidney	1.10E-01	2.00E-03	6.41E-03	5.20E-04	1.66E-03	2.04E-04
Liver	1.10E-01	1.97E-03	6.42E-03	5.15E-04	1.66E-03	2.05E-04
Lung	1.13E-01	1.87E-03	6.41E-03	4.96E-04	1.71E-03	2.03E-04
Thyroid	2.51E-01	2.50E-02	1.25E-02	5.17E-03	3.72E-03	5.49E-04
Total Body	1.10E-01	1.98E-03	6.68E-03	5.30E-04	1.66E-03	2.25E-04
Age Class: Infant						
Bone	2.43E-02	3.76E-04	2.85E-04	7.28E-05	3.14E-04	1.35E-05
GI-LLI	7.27E-02	1.53E-03	8.44E-04	2.26E-04	1.08E-03	2.98E-05
Kidney	7.33E-02	1.72E-03	8.50E-04	2.62E-04	1.08E-03	3.00E-05
Liver	7.32E-02	1.73E-03	8.49E-04	2.62E-04	1.08E-03	3.00E-05
Lung	7.56E-02	1.52E-03	8.75E-04	2.23E-04	1.12E-03	3.09E-05
Thyroid	2.03E-01	5.57E-02	2.23E-03	1.06E-02	2.98E-03	7.16E-05
Total Body	7.29E-02	1.61E-03	8.45E-04	2.40E-04	1.08E-03	2.99E-05

¹ Distances are measured with respect to the reactor building vent.

² Pathway designations are as follows:

D = Deposition (Ground Plane)

C = Cow Milk

I = Inhalation

G = Goat Milk

V = Vegetable Garden

M = Meat

Table 4.2-C

Maximum Individual Organ Dose at Receptor Location -- mrem
From Gaseous Release Period: July-September 1999

Receptor: Direction: Distance ¹ : Pathway ² :	Bound N 0.08km DI	Cow/Goat WSW 3.97km DIVCG	Garden SE 0.87km DIV	Cow/Meat W 5.77km DIVCM	Resident NW 0.74km DI	Meat S 3.80km DIVM
Age Class: Adult						
Bone	1.06E-02	1.86E-04	2.04E-04	7.76E-05	1.29E-04	2.09E-05
GI-LLI	1.30E-01	1.63E-03	1.79E-03	2.20E-04	1.46E-03	7.17E-05
Kidney	1.29E-01	1.60E-03	1.76E-03	2.13E-04	1.45E-03	6.85E-05
Liver	1.29E-01	1.60E-03	1.76E-03	2.13E-04	1.45E-03	6.88E-05
Lung	1.32E-01	1.60E-03	1.76E-03	2.09E-04	1.48E-03	6.86E-05
Thyroid	1.37E-01	1.73E-03	1.90E-03	1.11E-03	1.54E-03	1.15E-04
Total Body	1.29E-01	1.61E-03	1.76E-03	2.17E-04	1.45E-03	7.03E-05
Age Class: Teen						
Bone	1.07E-02	2.53E-04	2.78E-04	1.11E-04	1.30E-04	2.86E-05
GI-LLI	1.30E-01	1.83E-03	2.01E-03	2.45E-04	1.47E-03	7.72E-05
Kidney	1.30E-01	1.79E-03	1.97E-03	2.40E-04	1.46E-03	7.40E-05
Liver	1.30E-01	1.80E-03	1.97E-03	2.40E-04	1.46E-03	7.45E-05
Lung	1.35E-01	1.80E-03	1.98E-03	2.33E-04	1.51E-03	7.43E-05
Thyroid	1.41E-01	1.92E-03	2.10E-03	1.54E-03	1.58E-03	1.14E-04
Total Body	1.30E-01	1.80E-03	1.98E-03	2.44E-04	1.46E-03	7.62E-05
Age Class: Child						
Bone	1.09E-02	5.13E-04	5.62E-04	2.33E-04	1.32E-04	5.87E-05
GI-LLI	1.16E-01	2.54E-03	2.78E-03	3.39E-04	1.31E-03	1.05E-04
Kidney	1.16E-01	2.51E-03	2.76E-03	3.44E-04	1.31E-03	1.03E-04
Liver	1.16E-01	2.52E-03	2.77E-03	3.43E-04	1.31E-03	1.04E-04
Lung	1.20E-01	2.52E-03	2.76E-03	3.31E-04	1.35E-03	1.03E-04
Thyroid	1.29E-01	2.69E-03	2.95E-03	2.85E-03	1.45E-03	1.63E-04
Total Body	1.16E-01	2.53E-03	2.78E-03	3.51E-04	1.31E-03	1.07E-04
Age Class: Infant						
Bone	1.07E-02	6.27E-05	6.90E-05	8.62E-05	1.30E-04	3.12E-06
GI-LLI	7.13E-02	2.45E-04	2.70E-04	1.27E-04	8.06E-04	1.02E-05
Kidney	7.13E-02	2.45E-04	2.70E-04	1.47E-04	8.06E-04	1.02E-05
Liver	7.13E-02	2.45E-04	2.70E-04	1.49E-04	8.06E-04	1.02E-05
Lung	7.41E-02	2.53E-04	2.78E-04	1.27E-04	8.35E-04	1.07E-05
Thyroid	8.34E-02	2.87E-04	3.15E-04	5.76E-03	9.42E-04	1.71E-05
Total Body	7.13E-02	2.45E-04	2.69E-04	1.35E-04	8.05E-04	1.02E-05

¹ Distances are measured with respect to the reactor building vent.

² Pathway designations are as follows:

D = Deposition (Ground Plane)

C = Cow Milk

I = Inhalation

G = Goat Milk

V = Vegetable Garden

M = Meat

Table 4.2-D

Maximum Individual Organ Dose at Receptor Location -- mrem
From Gaseous Release Period: October-December 1999

Receptor:	Bound	Cow/Goat	Garden	Cow/Meat	Resident	Meat**
Direction:	N	WSW	SE	W	SE	S
Distance ¹ :	0.08km	3.97km	0.87km	5.77km	0.79km	3.80km
Pathway ² :	DI	DIVCG ³	DIV ³	DIVCM ³	DI	DIVM ³
Age Class: Adult						
Bone	1.43E-03	3.63E-06	1.94E-05	1.04E-06	2.27E-05	6.38E-07
GI-LLI	8.08E-02	6.44E-05	4.58E-04	3.09E-05	5.32E-04	1.24E-05
Kidney	8.08E-02	6.52E-05	4.58E-04	3.11E-05	5.31E-04	1.24E-05
Liver	8.07E-02	6.48E-05	4.57E-04	3.09E-05	5.31E-04	1.23E-05
Lung	8.13E-02	6.41E-05	4.60E-04	3.09E-05	5.35E-04	1.24E-05
Thyroid	9.57E-02	3.06E-04	5.37E-04	9.11E-05	6.23E-04	1.67E-05
Total Body	8.07E-02	6.44E-05	4.57E-04	3.08E-05	5.31E-04	1.23E-05
Age Class: Teen						
Bone	1.50E-03	5.69E-06	1.98E-05	1.38E-06	2.31E-05	6.36E-07
GI-LLI	8.14E-02	7.84E-05	4.61E-04	3.26E-05	5.35E-04	1.11E-05
Kidney	8.14E-02	8.02E-05	4.61E-04	3.29E-05	5.35E-04	1.11E-05
Liver	8.13E-02	7.95E-05	4.60E-04	3.27E-05	5.34E-04	1.11E-05
Lung	8.23E-02	7.81E-05	4.66E-04	3.26E-05	5.41E-04	1.13E-05
Thyroid	1.01E-01	4.60E-04	5.63E-04	1.25E-04	6.55E-04	1.59E-05
Total Body	8.12E-02	7.86E-05	4.60E-04	3.25E-05	5.34E-04	1.11E-05
Age Class: Child						
Bone	1.59E-03	1.22E-05	2.02E-05	2.53E-06	2.37E-05	7.01E-07
GI-LLI	7.20E-02	1.11E-04	4.09E-04	4.04E-05	4.75E-04	1.05E-05
Kidney	7.21E-02	1.14E-04	4.10E-04	4.12E-05	4.76E-04	1.05E-05
Liver	7.20E-02	1.13E-04	4.09E-04	4.09E-05	4.75E-04	1.05E-05
Lung	7.29E-02	1.10E-04	4.14E-04	4.05E-05	4.81E-04	1.07E-05
Thyroid	9.61E-02	8.65E-04	5.37E-04	2.20E-04	6.24E-04	1.67E-05
Total Body	7.20E-02	1.12E-04	4.09E-04	4.06E-05	4.75E-04	1.05E-05
Age Class: Infant						
Bone	1.49E-03	2.23E-05	1.97E-05	4.11E-06	2.31E-05	5.76E-07
GI-LLI	4.19E-02	1.52E-04	2.43E-04	4.41E-05	2.82E-04	4.95E-06
Kidney	4.20E-02	1.59E-04	2.43E-04	4.56E-05	2.83E-04	4.97E-06
Liver	4.20E-02	1.59E-04	2.43E-04	4.56E-05	2.83E-04	4.96E-06
Lung	4.28E-02	1.52E-04	2.48E-04	4.43E-05	2.88E-04	5.10E-06
Thyroid	6.41E-02	1.97E-03	3.61E-04	4.66E-04	4.19E-04	9.13E-06
Total Body	4.19E-02	1.55E-04	2.43E-04	4.47E-05	2.82E-04	4.95E-06

¹ Distances are measured with respect to the reactor building vent.

² Pathway designations are as follows:

D = Deposition (Ground Plane)

I = Inhalation

V = Vegetable Garden

C = Cow Milk

G = Goat Milk

M = Meat

³ Doses are conservative since it is unlikely for vegetables to be grown outside or for animals to be fed on pasture during winter months.

Table 4.2-E

Maximum Individual Organ Dose at Receptor Location -- mrem
From Gaseous Release Period: January-December 1999

Receptor: Direction: Distance ¹ : Pathway ² :	Bound N 0.08km DI	Cow/Goat WSW 3.97km DIVCG	Garden SE 0.87km DIV	Cow/Meat W 5.77Km DIVCM	Resident NW 0.74Km DI	Meat S 3.80Km DIVM
Age Class: Adult						
Bone	3.53E-02	2.93E-04	2.25E-03	1.35E-04	5.27E-04	1.20E-04
GI-LLI	4.38E-01	1.96E-03	1.15E-02	7.07E-04	5.27E-03	4.27E-04
Kidney	4.39E-01	1.97E-03	1.13E-02	7.01E-04	5.28E-03	4.13E-04
Liver	4.38E-01	1.96E-03	1.13E-02	6.98E-04	5.27E-03	4.13E-04
Lung	4.46E-01	1.92E-03	1.12E-02	6.88E-04	5.35E-03	4.11E-04
Thyroid	7.69E-01	1.07E-02	2.38E-02	3.23E-03	8.92E-03	1.07E-03
Total Body	4.37E-01	1.96E-03	1.14E-02	7.05E-04	5.26E-03	4.23E-04
Age Class: Teen						
Bone	3.63E-02	4.24E-04	3.25E-03	1.84E-04	5.38E-04	1.58E-04
GI-LLI	4.41E-01	2.32E-03	1.39E-02	7.77E-04	5.31E-03	4.50E-04
Kidney	4.43E-01	2.36E-03	1.36E-02	7.78E-04	5.32E-03	4.36E-04
Liver	4.41E-01	2.34E-03	1.36E-02	7.74E-04	5.31E-03	4.37E-04
Lung	4.54E-01	2.28E-03	1.36E-02	7.59E-04	5.45E-03	4.36E-04
Thyroid	8.73E-01	1.55E-02	2.62E-02	4.34E-03	1.01E-02	1.01E-03
Total Body	4.40E-01	2.33E-03	1.38E-02	7.79E-04	5.29E-03	4.49E-04
Age Class: Child						
Bone	3.71E-02	8.84E-04	6.29E-03	3.69E-04	5.48E-04	3.08E-04
GI-LLI	3.93E-01	3.36E-03	1.87E-02	1.08E-03	4.74E-03	5.97E-04
Kidney	3.95E-01	3.47E-03	1.86E-02	1.10E-03	4.77E-03	5.90E-04
Liver	3.94E-01	3.45E-03	1.86E-02	1.09E-03	4.75E-03	5.92E-04
Lung	4.04E-01	3.33E-03	1.85E-02	1.06E-03	4.87E-03	5.88E-04
Thyroid	9.30E-01	2.92E-02	3.71E-02	7.89E-03	1.07E-02	1.44E-03
Total Body	3.93E-01	3.43E-03	1.90E-02	1.10E-03	4.74E-03	6.14E-04
Age Class: Infant						
Bone	3.49E-02	6.69E-04	5.70E-04	1.42E-04	5.23E-04	2.10E-05
GI-LLI	2.39E-01	2.70E-03	2.22E-03	4.71E-04	2.93E-03	7.04E-05
Kidney	2.41E-01	2.92E-03	2.24E-03	5.23E-04	2.95E-03	7.10E-05
Liver	2.41E-01	2.94E-03	2.23E-03	5.24E-04	2.95E-03	7.09E-05
Lung	2.49E-01	2.69E-03	2.30E-03	4.70E-04	3.04E-03	7.35E-05
Thyroid	7.34E-01	6.22E-02	5.95E-03	1.51E-02	8.39E-03	1.91E-04
Total Body	2.39E-01	2.78E-03	2.22E-03	4.90E-04	2.93E-03	7.05E-05

¹ Distances are measured with respect to the reactor building vent.

² Pathway designations are as follows:

D = Deposition (Ground Plane)

C = Cow Milk

I = Inhalation

G = Goat Milk

V = Vegetable Garden

M = Meat

4.3 Doses From Liquid Effluent Releases

Liquid effluent release data presented in Tables 2.3-A and 2.3-B were used as input to the Duke Engineering "YODA" computer programs to calculate radiation doses. The maximum individual doses resulting from radionuclides released in liquid effluents are presented in Tables 4.3-A through 4.3-E. These tables cover the individual calendar quarters and the total calendar year, respectively.

Tables 4.3-A through 4.3-E summarize the maximum total body and organ doses for the adult, teen, and child age classes resulting from the major liquid exposure pathways. NRC Regulatory Guide 1.109 does not recognize the infant age class as being exposed to the liquid effluent pathways. Therefore, doses for this age class are not included in any of the tables.

It should be noted that doses calculated for the entire year may not equal the sum of the doses for the individual quarters. Doses from liquid effluents are based on the concentration (activity divided by volume) of radionuclides released in the effluent, as prescribed by the NRC in Regulatory Guide 1.109. If a larger proportion of activity is released with a relatively smaller volume of dilution water during a given quarter, the resulting concentration for that quarter will be higher than concentrations from other quarters. This will result in a proportionally higher dose for that quarter. However, when that quarter's activity values are included in the annual sum, and divided by the total annual dilution flow, the resulting dose contribution will be smaller. In such a situation, the annual dose will actually be less than the sum of the individual quarterly doses.

Radioactivity released in liquid effluents from PNPS during 1999 resulted in a maximum total body dose (child age class) of 0.027 mrem. The maximum organ dose (adult age class, gastrointestinal tract/lower large intestine) was 0.17 mrem.

Table 4.3-A

Maximum Individual Organ Doses By Exposure Pathway -- mrem
From Liquid Release Period: January-March 1999

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating*	Total
Age Class: Adult					
Bone	1.16E-05	3.06E-05	5.45E-07	1.23E-09	4.27E-05
GI-LLI	6.49E-06	1.84E-05	5.45E-07	1.23E-09	2.54E-05
Kidney	5.94E-07	1.63E-07	5.45E-07	1.23E-09	1.30E-06
Liver	9.04E-06	2.13E-05	5.45E-07	1.23E-09	3.09E-05
Lung	4.18E-06	1.15E-05	5.45E-07	1.23E-09	1.62E-05
Thyroid	5.03E-10	2.23E-10	5.45E-07	1.23E-09	5.47E-07
Total Body	2.92E-06	5.95E-06	5.45E-07	1.23E-09	9.42E-06
Age Class: Teen					
Bone	1.22E-05	2.79E-05	3.04E-06	1.23E-09	4.31E-05
GI-LLI	4.95E-06	1.24E-05	3.04E-06	1.23E-09	2.04E-05
Kidney	6.16E-07	1.47E-07	3.04E-06	1.23E-09	3.80E-06
Liver	9.64E-06	2.00E-05	3.04E-06	1.23E-09	3.27E-05
Lung	5.10E-06	1.23E-05	3.04E-06	1.23E-09	2.04E-05
Thyroid	3.87E-10	1.50E-10	3.04E-06	1.23E-09	3.04E-06
Total Body	2.61E-06	5.41E-06	3.04E-06	1.23E-09	1.11E-05
Age Class: Child					
Bone	1.59E-05	4.22E-05	6.35E-07	6.87E-10	5.87E-05
GI-LLI	1.95E-06	5.68E-06	6.35E-07	6.87E-10	8.27E-06
Kidney	5.23E-07	1.45E-07	6.35E-07	6.87E-10	1.30E-06
Liver	9.27E-06	2.27E-05	6.35E-07	6.87E-10	3.26E-05
Lung	4.45E-06	1.25E-05	6.35E-07	6.87E-10	1.76E-05
Thyroid	3.19E-10	1.43E-10	6.35E-07	6.87E-10	6.36E-07
Total Body	2.83E-06	7.81E-06	6.35E-07	6.87E-10	1.13E-05

* These doses are conservative since the same usage factor was applied for each quarter. In reality, it is unlikely that anyone would be swimming or boating during these months. However, the resulting dose is considerably lower than those from other pathways and does not contribute much to the total dose.

Table 4.3-B

Maximum Individual Organ Doses By Exposure Pathway -- mrem
From Liquid Release Period: April-June 1999

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	2.69E-02	8.51E-02	8.14E-04	5.19E-06	1.13E-01
GI-LLI	1.73E-01	4.09E-01	8.14E-04	5.19E-06	5.83E-01
Kidney	3.96E-03	2.55E-02	8.14E-04	5.19E-06	3.03E-02
Liver	5.20E-02	1.63E-01	8.14E-04	5.19E-06	2.16E-01
Lung	1.41E-02	4.03E-02	8.14E-04	5.19E-06	5.52E-02
Thyroid	3.86E-05	1.78E-05	8.14E-04	5.19E-06	8.76E-04
Total Body	1.85E-02	6.30E-02	8.14E-04	5.19E-06	8.23E-02
Age Class: Teen					
Bone	2.77E-02	7.59E-02	4.55E-03	5.19E-06	1.08E-01
GI-LLI	1.24E-01	2.59E-01	4.55E-03	5.19E-06	3.88E-01
Kidney	3.80E-03	2.11E-02	4.55E-03	5.19E-06	2.95E-02
Liver	5.32E-02	1.46E-01	4.55E-03	5.19E-06	2.04E-01
Lung	1.66E-02	4.13E-02	4.55E-03	5.19E-06	6.25E-02
Thyroid	2.98E-05	1.21E-05	4.55E-03	5.19E-06	4.60E-03
Total Body	1.91E-02	5.68E-02	4.55E-03	5.19E-06	8.05E-02
Age Class: Child					
Bone	3.45E-02	1.08E-01	9.50E-04	2.90E-06	1.43E-01
GI-LLI	4.49E-02	1.10E-01	9.50E-04	2.90E-06	1.56E-01
Kidney	2.89E-03	1.89E-02	9.50E-04	2.90E-06	2.27E-02
Liver	4.54E-02	1.43E-01	9.50E-04	2.90E-06	1.89E-01
Lung	1.33E-02	3.85E-02	9.50E-04	2.90E-06	5.28E-02
Thyroid	2.47E-05	1.18E-05	9.50E-04	2.90E-06	9.89E-04
Total Body	2.10E-02	7.19E-02	9.50E-04	2.90E-06	9.39E-02

Table 4.3-C

Maximum Individual Organ Doses By Exposure Pathway -- mrem
 From Liquid Release Period: July-September 1999

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	4.50E-05	1.48E-04	2.63E-06	1.00E-08	1.96E-04
GI-LLI	2.03E-04	4.24E-04	2.63E-06	1.00E-08	6.30E-04
Kidney	1.04E-05	7.25E-05	2.63E-06	1.00E-08	8.55E-05
Liver	6.69E-05	2.43E-04	2.63E-06	1.00E-08	3.13E-04
Lung	1.90E-05	5.26E-05	2.63E-06	1.00E-08	7.42E-05
Thyroid	3.43E-07	1.52E-07	2.63E-06	1.00E-08	3.13E-06
Total Body	2.38E-05	9.58E-05	2.63E-06	1.00E-08	1.22E-04
Age Class: Teen					
Bone	4.65E-05	1.31E-04	1.47E-05	1.00E-08	1.92E-04
GI-LLI	1.44E-04	2.66E-04	1.47E-05	1.00E-08	4.25E-04
Kidney	9.94E-06	6.01E-05	1.47E-05	1.00E-08	8.48E-05
Liver	6.88E-05	2.17E-04	1.47E-05	1.00E-08	3.01E-04
Lung	2.25E-05	5.49E-05	1.47E-05	1.00E-08	9.22E-05
Thyroid	2.64E-07	1.02E-07	1.47E-05	1.00E-08	1.51E-05
Total Body	2.38E-05	8.62E-05	1.47E-05	1.00E-08	1.25E-04
Age Class: Child					
Bone	5.88E-05	1.87E-04	3.07E-06	5.58E-09	2.49E-04
GI-LLI	5.15E-05	1.12E-04	3.07E-06	5.58E-09	1.67E-04
Kidney	7.72E-06	5.40E-05	3.07E-06	5.58E-09	6.48E-05
Liver	6.00E-05	2.14E-04	3.07E-06	5.58E-09	2.77E-04
Lung	1.88E-05	5.32E-05	3.07E-06	5.58E-09	7.51E-05
Thyroid	2.18E-07	9.79E-08	3.07E-06	5.58E-09	3.40E-06
Total Body	2.59E-05	1.09E-04	3.07E-06	5.58E-09	1.38E-04

Table 4.3-D

Maximum Individual Organ Doses By Exposure Pathway -- mrem
 From Liquid Release Period: October-December 1999

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating*	Total
Age Class: Adult					
Bone	4.63E-06	1.50E-05	1.96E-07	7.99E-10	1.98E-05
GI-LLI	6.99E-06	1.61E-05	1.96E-07	7.99E-10	2.33E-05
Kidney	9.89E-07	6.26E-06	1.96E-07	7.99E-10	7.45E-06
Liver	5.29E-06	1.84E-05	1.96E-07	7.99E-10	2.39E-05
Lung	1.65E-06	4.66E-06	1.96E-07	7.99E-10	6.51E-06
Thyroid	2.10E-10	9.30E-11	1.96E-07	7.99E-10	1.97E-07
Total Body	1.57E-06	6.70E-06	1.96E-07	7.99E-10	8.47E-06
Age Class: Teen					
Bone	4.81E-06	1.33E-05	1.10E-06	7.99E-10	1.92E-05
GI-LLI	4.93E-06	1.01E-05	1.10E-06	7.99E-10	1.61E-05
Kidney	9.57E-07	5.19E-06	1.10E-06	7.99E-10	7.24E-06
Liver	5.48E-06	1.65E-05	1.10E-06	7.99E-10	2.31E-05
Lung	2.02E-06	4.97E-06	1.10E-06	7.99E-10	8.09E-06
Thyroid	1.62E-10	6.26E-11	1.10E-06	7.99E-10	1.10E-06
Total Body	1.57E-06	6.06E-06	1.10E-06	7.99E-10	8.73E-06
Age Class: Child					
Bone	6.20E-06	1.94E-05	2.29E-07	4.46E-10	2.58E-05
GI-LLI	1.75E-06	4.29E-06	2.29E-07	4.46E-10	6.27E-06
Kidney	7.35E-07	4.66E-06	2.29E-07	4.46E-10	5.62E-06
Liver	4.94E-06	1.68E-05	2.29E-07	4.46E-10	2.20E-05
Lung	1.75E-06	5.02E-06	2.29E-07	4.46E-10	7.00E-06
Thyroid	1.33E-10	5.99E-11	2.29E-07	4.46E-10	2.29E-07
Total Body	1.78E-06	7.88E-06	2.29E-07	4.46E-10	9.89E-06

* These doses are conservative since the same usage factor was applied for each quarter. In reality, it is unlikely that anyone would be swimming or boating during these months. However, the resulting dose is considerably lower than those from other pathways and does not contribute much to the total dose.

Table 4.3-E

Maximum Individual Organ Doses By Exposure Pathway -- mrem
 From Liquid Release Period: January-December 1999

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	7.69E-03	2.44E-02	2.38E-04	1.49E-06	3.23E-02
GI-LLI	4.92E-02	1.16E-01	2.38E-04	1.49E-06	1.65E-01
Kidney	1.14E-03	7.35E-03	2.38E-04	1.49E-06	8.73E-03
Liver	1.48E-02	4.65E-02	2.38E-04	1.49E-06	6.15E-02
Lung	4.02E-03	1.15E-02	2.38E-04	1.49E-06	1.58E-02
Thyroid	1.18E-05	5.40E-06	2.38E-04	1.49E-06	2.56E-04
Total Body	5.25E-03	1.79E-02	2.38E-04	1.49E-06	2.34E-02
Age Class: Teen					
Bone	7.93E-03	2.17E-02	1.33E-03	1.49E-06	3.10E-02
GI-LLI	3.51E-02	7.33E-02	1.33E-03	1.49E-06	1.10E-01
Kidney	1.10E-03	6.10E-03	1.33E-03	1.49E-06	8.53E-03
Liver	1.51E-02	4.16E-02	1.33E-03	1.49E-06	5.80E-02
Lung	4.72E-03	1.18E-02	1.33E-03	1.49E-06	1.78E-02
Thyroid	9.06E-06	3.67E-06	1.33E-03	1.49E-06	1.34E-03
Total Body	5.42E-03	1.62E-02	1.33E-03	1.49E-06	2.29E-02
Age Class: Child					
Bone	9.87E-03	3.08E-02	2.77E-04	8.31E-07	4.09E-02
GI-LLI	1.27E-02	3.12E-02	2.77E-04	8.31E-07	4.42E-02
Kidney	8.35E-04	5.47E-03	2.77E-04	8.31E-07	6.58E-03
Liver	1.29E-02	4.08E-02	2.77E-04	8.31E-07	5.40E-02
Lung	3.79E-03	1.10E-02	2.77E-04	8.31E-07	1.51E-02
Thyroid	7.51E-06	3.57E-06	2.77E-04	8.31E-07	2.89E-04
Total Body	5.96E-03	2.05E-02	2.77E-04	8.31E-07	2.67E-02

5.0 POPULATION AND AVERAGE INDIVIDUAL DOSES

Neither the PNPS Technical Specifications nor the ODCM contain limits related to population doses. However, NRC Regulatory Guide 1.21 (Reference 1) recommends calculation of population and average individual doses to the total body as part of the overall assessment of radiological impact on man.

The population dose is the collective sum of doses received by the entire population residing within 50 miles of PNPS. For example, the average individual receives about 300 to 400 mrem (0.3 to 0.4 rem) per year from cosmic radiation and naturally-occurring radionuclides in the air, soil, water, and food. Assuming each person in the population of 4.18 million people living within 50 miles of PNPS received a dose of 350 mrem (0.35 rem) from such natural radiation exposure, the population total body dose would be estimated to be:

$$0.35 \text{ rem/person} * 4.18 \text{ million people} = 1.46 \text{ million person-rem}$$

Total body doses to the entire population within 50 miles of Pilgrim Station resulting from radionuclides in effluents released offsite were calculated using the population distribution based on 1980 census data.

These cumulative population doses were also calculated using methods presented in the PNPS ODCM, NRC Regulatory Guide 1.109, NRC Regulatory Guide 1.111, and the PNPS Appendix I Evaluation. Population doses were calculated separately for gaseous and liquid effluents, and are presented in Tables 5.1-A and 5.2-A, respectively. Unlike the ODCM effluent controls addressing doses to maximum exposed individuals resulting from the three types of releases addressed in Section 4 of this report, population doses for gaseous effluents combine the dose contributions from noble gases along with those from radioactive particulates, iodines, and tritium. Also, in the case of the population doses, average consumption and use factors for various pathways from Table E-4 of the PNPS ODCM were assumed, rather than the maximum use factors assumed for the maximum exposed individual.

Information related to liquid and gaseous effluent releases, as summarized in Section 2 of this report, were used as input to computer programs to calculate the resulting total body doses. The Duke Engineering "YODA"-series of computer programs was used to compile the dose contributions to the total body in each age class from major exposure pathways.

In addition to the population total body doses, doses to an average individual in the population were calculated. These average total body doses were estimated by dividing the total population dose (person-rem) by the total population of 4.18 million people within 50 miles of PNPS. The average individual doses, in mrem, are presented for gaseous and liquid effluents in Tables 5.1-B and 5.2-C, respectively.

5.1 Doses From Gaseous Effluent Releases

Population total body doses (person-rem) resulting from releases of radionuclides in gaseous effluents are presented in Table 5.1-A. These population doses represent the collective sum of doses received by the entire population living within 50 mile of PNPS. This table includes the doses for the four calendar quarters and entire year resulting from the various gaseous exposure pathways. The corresponding average individual total body doses (mrem) are presented in Table 5.1-B.

Radioactivity released in gaseous effluents from PNPS during 1999 resulted in a cumulative population total body dose of 0.62 person-rem. The corresponding average individual total body dose was 0.00015 mrem.

Again, it should be noted that the calculated doses for the entire year may be different from the sum of the individual four quarters. This difference is due to the methods and equations used to calculate dose from gaseous effluents, as prescribed by the NRC in Regulatory Guide 1.109. A more detailed discussion of the reasons for the differences can be found in Sections 4.1 and 4.2, in the discussion of maximum individual doses from gaseous effluent releases.

Table 5.1-A

Population Doses From Gaseous Effluent Releases During 1999

Exposure Pathway	Population Total Body Dose : person-rem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Noble Gas	1.02E-01	4.99E-02	3.03E-01	1.25E-01	5.66E-01
Ground Deposition	1.40E-04	1.74E-03	9.44E-04	1.14E-04	2.66E-03
Inhalation	1.29E-02	1.56E-02	1.28E-02	5.37E-03	4.65E-02
Vegetables	8.72E-04	1.84E-03	1.11E-03	3.69E-04	4.06E-03
Milk	5.69E-04	1.28E-03	7.86E-04	2.49E-04	2.77E-03
Meat	3.24E-05	7.48E-05	4.35E-05	1.56E-05	1.61E-04
Total	1.17E-01	7.04E-02	3.19E-01	1.31E-01	6.22E-01

Table 5.1-B

Average Individual Doses From Gaseous Effluent Releases During 1999

Exposure Pathway	Average Individual Total Body Dose : mrem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Noble Gas	2.44E-05	1.19E-05	7.25E-05	2.99E-05	1.35E-04
Ground Deposition	3.35E-08	4.16E-07	2.26E-07	2.74E-08	6.37E-07
Inhalation	3.09E-06	3.73E-06	3.06E-06	1.30E-06	1.11E-05
Vegetables	2.09E-07	4.40E-07	2.66E-07	8.83E-08	9.70E-07
Milk	1.36E-07	3.05E-07	1.88E-07	5.95E-08	6.63E-07
Meat	7.74E-09	1.79E-08	1.04E-08	3.72E-09	3.85E-08
Total	2.79E-05	1.68E-05	7.63E-05	3.14E-05	1.48E-04

*Dose estimates are conservative since vegetables are not grown outside during winter months and animals are generally not fed on pasture during winter months.

5.2 Doses from Liquid Effluent Releases

Population total body doses (person-rem) resulting from releases of radionuclides in liquid effluents are presented in Table 5.2-A. These population doses represent the collective sum of doses received by the entire population living within 50 mile of PNPS. This table includes the doses for the four calendar quarters and entire year resulting from the various liquid exposure pathways. The corresponding average individual total body doses (mrem) are presented in Table 5.2-B.

Radioactivity released in liquid effluents from PNPS during 1999 resulted in a cumulative population total body dose of 0.30 person-rem. The corresponding average individual total body dose was 0.000072 mrem.

Again, it should be noted that the calculated doses for the entire year may be different from the sum of the individual four quarters. This difference is due to the methods and equations used to calculate dose from liquid effluents, as prescribed by the NRC in Regulatory Guide 1.109. A more detailed discussion of the reasons for the differences can be found in Section 4.3, in the discussion of maximum individual doses from liquid effluent releases.

Table 5.2-A

Population Doses From Liquid Effluent Releases During 1999

Exposure Pathway	Population Total Body Dose : person-rem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Fish	5.17E-05	3.44E-01	4.38E-04	2.92E-05	9.79E-02
Shellfish	6.74E-05	6.89E-01	1.05E-03	7.39E-05	1.97E-01
Shoreline	1.23E-08*	5.20E-05	1.00E-07	7.99E-09*	1.49E-05
Swimming	5.53E-06*	1.55E-02	3.76E-05	3.10E-06*	4.46E-03
Total	1.25E-04	1.05E+00	1.53E-03	1.06E-04	2.99E-01

Table 5.2-B

Average Individual Doses From Liquid Effluent Releases During 1999

Exposure Pathway	Average Individual Total Body Dose : mrem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Fish	1.24E-08	8.22E-05	1.05E-07	6.98E-09	2.34E-05
Shellfish	1.61E-08	1.65E-04	2.51E-07	1.77E-08	4.70E-05
Shoreline	2.94E-12*	1.24E-08	2.40E-11	1.91E-12*	3.57E-09
Swimming	1.32E-09*	3.70E-06	9.00E-09	7.40E-10*	1.07E-06
Total	2.98E-08	2.51E-04	3.65E-07	2.54E-08	7.15E-05

* Doses are conservative since swimming and beach activity during these months is very limited.

6.0 OFFSITE AMBIENT RADIATION MEASUREMENTS

The PNPS ODCM does not contain control limits related specifically to offsite ambient radiation exposure. However, Regulatory Guide 1.21 (Reference 1) recommends calculation of ambient radiation exposure as part of the overall assessment of radiological impact on man.

Thermoluminescent dosimeters (TLDs) are located at 83 sites beyond the boundary of the PNPS restricted/protected area. A number of these TLDs are located within the site boundary, on Entergy property in close proximity to the station proper. The TLDs are collected on a quarterly basis and used to calculate the ambient radiation exposure in milliRoentgen (mR) over the exposure period. These TLDs are grouped into four zones of increasing distance from the station. Average exposure values for each of these zones were calculated for each calendar quarter and the total year. The average exposure values (mR) for the four zones are presented in Table 6.0.

In addition to responding to ambient radiation exposure, TLDs will also record radiation resulting from noble gases (plume and immersion exposure), particulate materials deposited on the ground, cosmic rays from outer space, and from naturally-occurring radioactivity in the soil and air. Typically, the exposure from cosmic rays and other natural radioactivity components is about 40 to 70 mR/year. As calculated in Sections 4.1 and 4.2 of this report, the ambient radiation component of doses from PNPS effluent emissions are below 1 mrem/yr and would not be discernible above the natural radiation exposure levels.

The major source of ambient radiation exposure from PNPS results from high energy gamma rays emitted from nitrogen-16 (N-16) contained in steam flowing through the turbine. Although the N-16 is enclosed in the process lines and turbine and is not released into the environment, the ambient radiation exposure and sky shine from this contained source accounts for the majority of the radiation dose, especially in close proximity to the station. Other sources of ambient radiation exposure include radiation emitted from contained radioactive materials and/or radwaste at the facility. Despite these sources of ambient radiation exposure at PNPS, increases in exposure from ambient radiation are typically not observable above background radiation levels at locations beyond Entergy controlled property.

The average exposure values presented in Table 6.0 appear to indicate an elevation in ambient exposures in Zone 1, those TLDs within 2 miles of PNPS. Most of this apparent elevation is due to increases in exposure levels measured at TLD locations on Entergy property in close proximity to the station proper. For example, the annual exposure at TLD location OA, located at the Overlook Area near the PNPS Health Club (I&S Building), was 453 mR for the entire year. This location is immediately adjacent to the station proper and overlooks the turbine building, therefore receiving the highest direct ambient and sky shine exposure. When the near-site TLDs (those located within 0.6 km of the Reactor Building) are removed from the calculation of averages, the mean annual exposure in Zone 1 falls from 88.5 ± 70.9 mR/yr to 62.9 ± 6.9 mR/yr. Such a corrected dose is not statistically different from the Zone 4 average of 60.3 ± 5.5 mR/yr.

Although the annual exposure at TLD location OA was 393 mR above the average Zone 4 exposure rate, this area is not continuously occupied by members of the general public. When adjusted for such occupancy, a hypothetical member of the public who was at this location for 40 hours per year would only receive an incremental dose of 1.8 mrem over natural background radiation levels. At the nearest residence 0.80 kilometers(0.5 miles) southeast of the PNPS Reactor Building, the annual exposure was calculated as being 63.7 ± 5.9 mR, which compares quite well to the Zone 4 annual average of 60.3 ± 5.5 mR.

It must be emphasized that the projected ambient exposures discussed on the previous page are calculated to occur to a maximum-exposed hypothetical individual. Even though conservative assumptions are made in the projection of these dose consequences, all of the projected doses are well below the NRC dose limit of 100 mrem/yr specified in 10CFR20.1301, as well as the EPA dose limit of 25 mrem/yr specified in 40CFR190. Both of these limits are to be applied to real members of the general public, so the fact that the dose to the hypothetical maximum-exposed individual is within the limits ensures that any dose received by a real member of the public would be smaller and well within any applicable limit.

In 1994, Pilgrim Station contracted with the Plymouth Athletic Club to provide health club services in the old training facility (I&S Building) overlooking the plant. These personnel provided contract services in 1999 through mid-June, at which point Pilgrim Station personnel took over operation of the facility. This site is immediately adjacent to the protected area boundary near monitoring location OA and receives appreciable amounts of direct ambient and sky shine exposure from the turbine building. Although the personnel assigned to this facility are contractors of Entergy, and some have received Level 1 general employee training, they are considered to be members of the public. Due to their extended presence in the facility (1000 hr for the period Jan-Jun) during 1999, these personnel represent the most conservative case in regards to ambient radiation exposure to a member of the public. Their annual incremental radiation dose above background during 1999 is estimated as being about 16 mrem, based on the average exposure measured by three TLDs in the building.

The exposures measured by these three TLDs located in the health club would also include any increase in ambient radiation resulting from noble gases and/or particulate activity deposited on the ground from gaseous releases. However, they would not indicate any internal dose received by these contractor personnel from inhalation of small amounts of PNPS-related radioactivity contained in the air. An environmental air sampler located immediately adjacent to the health club did not indicate any PNPS-related activity during 1999. Dose calculations performed in the same manner as those outlined in Section 4.2 yielded a projected total body dose to the maximum-exposed contractor (1000 hr/yr exposure) of about 0.002 mrem, resulting from inhalation.

Again, it must be emphasized that this exposure was received by personnel who are contractors of Entergy, working in a facility on property under the ownership and control of Entergy. Since this exposure was received within the owner-controlled area, it is not used for comparison to the annual dose limit of 25 mrem/yr specified in 40CFR190. This regulation expressly applies to areas at or beyond the owner-controlled property, and is not applicable in this situation. As stated earlier, TLDs at and beyond the site boundary do not indicate elevated ambient radiation levels resulting from the operation of Pilgrim Station.

Although some of the TLDs in close proximity to PNPS indicate increases in exposure levels from ambient radiation, such increases are localized to areas under Entergy control. For members of the general public who are not employed or contracted with Entergy and are accessing Entergy controlled areas (e.g., Shorefront Recreation Area, Health Club, parking lots, etc.), such increases in dose from ambient radiation exposure are estimated as being less than 3 mrem/year.

Table 6.0

Average TLD Exposures By Distance Zone During 1999

Exposure Period	Average Exposure $\pm$ Standard Deviation: mR/period			
	Zone 1* 0-3 km	Zone 2 3-8 km	Zone 3 8-15 km	Zone 4 >15 km
Jan-Mar	23.2 $\pm$ 21.9	14.2 $\pm$ 2.6	14.2 $\pm$ 1.7	14.6 $\pm$ 1.2
Apr-Jun	18.3 $\pm$ 6.5	14.4 $\pm$ 2.8	13.9 $\pm$ 1.7	14.8 $\pm$ 1.3
Jul-Sep	22.0 $\pm$ 15.8	14.4 $\pm$ 2.7	14.3 $\pm$ 1.7	14.8 $\pm$ 1.3
Oct-Dec	25.1 $\pm$ 22.0	15.8 $\pm$ 2.7	15.6 $\pm$ 1.8	16.1 $\pm$ 1.5
Jan-Dec	88.5 $\pm$ 70.9**	58.8 $\pm$ 11.0	58.0 $\pm$ 7.0	60.3 $\pm$ 5.5

* Zone 1 extends from the PNPS restricted/protected area boundary outward to 3 kilometers (2 miles), and includes several TLDs located within the site boundary.

** When corrected for TLDs located within the site boundary, the Zone 1 annual average is calculated to be 62.9 $\pm$ 6.9 mR/yr.

7.0 PERCENT OF ODCM EFFLUENT CONTROL LIMITS

The PNPS ODCM contains dose and concentration limits for radioactive effluents. In addition, the effluent controls specified ensure that radioactive releases are maintained as low as reasonably achievable. The percentage of the PNPS ODCM Control limit values were determined from doses calculated in Section 4, the effluent releases summarized in Section 2, and the ODCM Control limits/objectives listed in Tables 7.1 and 7.2.

The percent of applicable control limit values are provided to supplement the information provided in the Section 2 of this report. The format for the percent of applicable limits is modified from that prescribed in Regulatory Guide 1.21 (Reference 1) to accommodate the Radioactive Effluents Technical Specifications (RETS) which became effective March 01, 1986. The percentages have been grouped according to whether the releases were via liquid or gaseous effluent pathways.

7.1 Gaseous Effluent Releases

Dose-based effluent controls related to exposures arising from gaseous effluent releases are presented in Table 7.1. The maximum quarterly air doses and annual whole body doses listed in Table 4.1 were used to calculate the percentage values shown in Table 7.1. All doses resulting from noble gas exposure were a small percentage of the applicable effluent control.

Organ dose limits for the maximum-exposed individual from radioactive particulates, iodines, and tritium from the PNPS ODCM are also shown in Table 7.1. The maximum quarterly and annual organ doses from Tables 4.2-A through 4.2-E were used to calculate the percentages shown in Table 7.1. The resulting organ doses from Pilgrim Station's gaseous releases during 1999 were a small percentage of the corresponding effluent control.

Table 7.1

Percent of ODCM Effluent Control Limits
for Gaseous Effluent Releases During 1999

A.	Instantaneous Dose Rate Limit - Noble Gases PNPS ODCM Control 3.3.1.a Limit: 500 mrem/yr Total Body Dose		
	<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
	January-December	1.22E-01	2.44E-02%
B.	Instantaneous Dose Rate Limit - Noble Gases PNPS ODCM Control 3.3.1.a Limit: 3000 mrem/yr Skin Dose		
	<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
	January-December	2.91E-01	9.70E-03%
C.	Instantaneous Dose Rate Limit - Particulates, Iodines, & Tritium PNPS ODCM Control 3.3.1.b Limit: 1500 mrem/yr Organ Dose		
	<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
	January-December	9.30E-01	6.20E-02%
D.	Quarterly Dose Objective - Noble Gas Gamma Air Dose PNPS ODCM Control 3.3.2.a Objective: 5 mrad Gamma Air Dose		
	<u>Period</u>	<u>Value - mrad</u>	<u>Fraction of Limit</u>
	January-March	6.75E-02	1.35E+00%
	April-June	9.45E-03	1.89E-01%
	July-September	6.73E-02	1.35E+00%
	October-December	4.87E-02	9.74E-01%
E.	Annual Dose Objective - Noble Gas Gamma Air Dose PNPS ODCM Control 3.3.2.b Objective: 10 mrad Gamma Air Dose		
	<u>Period</u>	<u>Value - mrad/yr</u>	<u>Fraction of Limit</u>
	January-December	1.84E-01	1.84E+00%

Table 7.1 (continued)

Percent of ODCM Effluent Control Limits
for Gaseous Effluent Releases During 1999

- F. Quarterly Dose Objective - Noble Gas Beta Air Dose
PNPS ODCM Control 3.3.2.a
Objective: 10 mrad Beta Air Dose

<u>Period</u>	<u>Value - mrad</u>	<u>Fraction of Limit</u>
January-March	8.44E-02	8.44E-01%
April-June	1.12E-03	1.12E-02%
July-September	5.40E-03	5.40E-02%
October-December	1.87E-03	1.87E-02%

- G. Annual Dose Objective - Noble Gas Gamma Air Dose
PNPS ODCM Control 3.3.2.b
Objective: 20 mrad Beta Air Dose

<u>Period</u>	<u>Value - mrad/yr</u>	<u>Fraction of Limit</u>
January-December	1.54E-01	7.70E-01%

- H. Quarterly Dose Objective - Particulates, Iodines, & Tritium
PNPS ODCM Control 3.3.3.a
Objective: 7.5 mrem Organ Dose

<u>Period</u>	<u>Value - mrem</u>	<u>Fraction of Limit</u>
January-March	2.41E-01	3.21E+00%
April-June	2.51E-01	3.35E+00%
July-September	1.41E-01	1.88E+00%
October-December	1.01E-01	1.35E+00%

- I. Annual Dose Objective - Particulates, Iodines, & Tritium
PNPS ODCM Control 3.3.3.b
Objective: 15 mrem Organ Dose

<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
January-December	9.30E-01	6.20E+00%

7.2 Liquid Effluent Releases

Liquid effluent concentration limits and dose objectives from the PNPS ODCM are shown in Table 7.2. The quarterly average concentrations from Table 2.3-A were used to calculate the percent concentration limits. The maximum quarterly and annual whole body and organ doses from Tables 4.3-A through 4.3-E were used to calculate the percentages shown in Table 7.2. The resulting concentration and doses from Pilgrim Station's liquid releases during 1999 were a very small percentage of the corresponding effluent control.

Table 7.2

Percent of ODCM Effluent Control Limits
for Liquid Effluent Releases During 1999

- A. Fission and Activation Product Effluent Concentration Limit
 PNPS ODCM Control 3.2.1
 Limit: 10CFR20 Appendix B, Table 2, Column 2 Value

<u>Period</u>	<u>Value - $\mu\text{Ci/mL}$</u>	<u>Fraction of Limit</u>
January-March	1.43E-09	3.40E-02%
April-June	3.38E-07	2.74E+00%
July-September	1.80E-09	2.81E-02%
October-December	3.70E-09	4.09E-02%

- B. Tritium Average Concentration Limit
 PNPS ODCM Control 3.2.1
 Limit: 1.0E-03 $\mu\text{Ci/mL}$

<u>Period</u>	<u>Value - $\mu\text{Ci/mL}$</u>	<u>Fraction of Limit</u>
January-March	3.60E-09	3.60E-04%
April-June	2.27E-05	2.27E+00%
July-September	6.14E-07	6.14E-02%
October-December	6.96E-09	6.96E-04%

- C. Dissolved and Entrained Noble Gases Concentration Limit
 PNPS ODCM Control 3.2.1
 Limit: 2.0E-04 $\mu\text{Ci/mL}$

<u>Period</u>	<u>Value - $\mu\text{Ci/mL}$</u>	<u>Fraction of Limit</u>
January-March	NDA	--
April-June	NDA	--
July-September	NDA	--
October-December	NDA	--

Table 7.2 (continued)

Percent of ODCM Effluent Control Limits
for Liquid Effluent Releases During 1999

- D. Quarterly Total Body Dose Objective
PNPS ODCM Control 3.2.2.a
Objective: 1.5 mrem Total Body Dose

<u>Period</u>	<u>Value - mrem</u>	<u>Fraction of Limit</u>
January-March	1.13E-05	7.53E-04%
April-June	9.39E-02	6.26E+00%
July-September	1.38E-04	9.20E-03%
October-December	9.89E-06	6.59E-04%

- E. Annual Total Body Dose Objective
PNPS ODCM Control 3.2.2.b
Objective: 3 mrem Total Body Dose

<u>Period</u>	<u>Value - mrem</u>	<u>Fraction of Limit</u>
January-December	2.67E-02	8.90E-01%

- F. Quarterly Organ Dose Objective
PNPS ODCM Control 3.2.2.a
Objective: 5 mrem Organ Dose

<u>Period</u>	<u>Value - mrem</u>	<u>Fraction of Limit</u>
January-March	5.87E-05	1.17E-03%
April-June	5.83E-01	1.17E+01%
July-September	6.30E-04	1.26E-02%
October-December	2.58E-05	5.16E-04%

- G. Annual Organ Dose Objective
PNPS ODCM Control 3.2.2.b
Objective: 10 mrem Organ Dose

<u>Period</u>	<u>Value - mrem</u>	<u>Fraction of Limit</u>
January-December	1.65E-01	1.65E+00%

8.0 RADIOACTIVE WASTE DISPOSAL DATA

Radioactive wastes which were shipped offsite for processing and disposal during the reporting period are described in Table 8.0, in the standard NRC Regulatory Guide 1.21 format.

The total quantity of radioactivity in Curies and the total volume in cubic meters are summarized in Table 8.0 for the following waste categories:

- Spent resins, filter sludges, and evaporator bottoms;
- Dry compressible wastes, contaminated equipment, etc.;
- Irradiated components, control rods, etc.; and,
- Other.

During the reporting period, a volume of 120 cubic meters of spent resins, filter sludges, etc., containing 758 Curies of radioactivity, was shipped from PNPS for processing and disposal. Dry compressible wastes and contaminated equipment shipped during the period totaled 1104 cubic meters and contained 32.7 Curies of radioactivity. No irradiated components were shipped during the reporting period. No shipments of irradiated fuel were made during the reporting period.

Estimates of major radionuclides, those comprising greater than 1% of the total activity in each waste category shipped, are listed in Table 8.0. Five shipments to Memphis, TN (Hake, Inc.), 2 shipments to Richland, WA (ATG), 1 shipment to Kingston, TN (DSSI), 13 shipments to Barnwell, SC (Chem-Nuclear), 10 shipments to Oak Ridge, TN (GTS Duratek), and 10 shipments to Oak Ridge, TN (ATG Catalytic) were made during the reporting period.

Table 8.0
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Solid Waste and Irradiated Fuel Shipments
January-June 1999

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

1. Estimate of volume and activity content by type of waste

Type of waste	Jan-Jun 1999		
	Volume - m ³	Curies	Total Error
a. Spent resins, filters, filter sludges, evaporator bottoms, etc.	3.43E+01	1.15E+02	± 25%
b. Dry compressible waste, contaminated equipment, etc.	4.82E+02	2.91E+01	± 25%
c. Irradiated components, control rods, etc.	None	None	N/A
d. Other (describe)	None	None	N/A

2. Estimate of major nuclide composition by type of waste¹

Type of waste	Radionuclide	Abundance	Total Error
a. Spent resins, filters, filter sludges, evaporator bottoms, etc.	Mn-54	5.85E+00%	± 25%
	Fe-55	8.23E+01%	± 25%
	Co-60	1.14E+01%	± 25%
b. Dry compressible waste, contaminated equipment, etc.	Mn-54	5.91E+00%	± 25%
	Fe-55	7.90E+01%	± 25%
	Co-60	1.21E+01%	± 25%
	Cs-137	1.65E+00%	± 25%
c. Irradiated components, control rods, etc.	None	None	N/A
d. Other (describe)	None	None	N/A

¹ "Major" is defined as any radionuclide comprising >1% of the total activity in the waste category.

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
5	Tractor-trailer	Hake Associates, ² Memphis, TN
6	Tractor-trailer	ATG Catalytic, LLC, ² Oak Ridge, TN
2	Tractor-trailer	GTS Duratek ² Oak Ridge, TN
1	Tractor-trailer	ATG ² Richland, WA
1	Tractor-trailer	DSSI ² Kingston, TN

² This processor provides volume reduction services for dry compressible waste, contaminated equipment, etc. Remaining radioactive wastes will be shipped to either Chem Nuclear Systems, Inc. in Barnwell, SC, or Envirocare of Utah for final disposal.

B. IRRADIATED FUEL SHIPMENTS & DISPOSITION

Number of Shipments	Mode of Transportation	Destination
None	N/A	N/A

Table 8.0 (continued)
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Solid Waste and Irradiated Fuel Shipments
July-December 1999

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

1. Estimate of volume and activity content by type of waste

Type of waste	Jul-Dec 1999		
	Volume - m ³	Curies	Total Error
a. Spent resins, filters, filter sludges, evaporator bottoms, etc.	8.59E+01	6.43E+02	± 25%
b. Dry compressible waste, contaminated equipment, etc.	6.22E+02	3.62E+00	± 25%
c. Irradiated components, control rods, etc.	None	None	N/A
d. Other (describe)	None	None	N/A

2. Estimate of major nuclide composition by type of waste¹

Type of waste	Radionuclide	Abundance	Total Error
a. Spent resins, filters, filter sludges, evaporator bottoms, etc.	Mn-54	6.63E+00%	± 25%
	Fe-55	7.23E+01%	± 25%
	Co-60	1.32E+01%	± 25%
	Cs-137	6.91E+00%	± 25%
b. Dry compressible waste, contaminated equipment, etc.	Cr-51	3.46E+00%	± 25%
	Mn-54	9.05E+00%	± 25%
	Fe-55	7.56E+01%	± 25%
	Fe-59	5.06E+00%	± 25%
	Co-60	5.99E+00%	± 25%
c. Irradiated components, control rods, etc.	None	None	N/A
d. Other (describe)	None	None	N/A

¹ "Major" is defined as any radionuclide comprising >1% of the total activity in the waste category.

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
1	Tractor-trailer	ATG, ² Richland, WA
8	Tractor-trailer	GTS Duratek, ² Oak Ridge, TN
13	Tractor-trailer	Chem Nuclear, ² Barnwell, SC
4	Tractor-trailer	ATG Catalytic, LLC, ² Oak Ridge, TN

² This processor provides volume reduction services for dry compressible waste, contaminated equipment, etc. Remaining radioactive wastes will be shipped to either Chem Nuclear Systems, Inc. in Barnwell, SC, or Envirocare of Utah for final disposal.

B. IRRADIATED FUEL SHIPMENTS & DISPOSITION

Number of Shipments	Mode of Transportation	Destination
None	N/A	N/A

9.0 OFFSITE DOSE CALCULATION MANUAL REVISIONS

The PNPS Offsite Dose Calculation Manual (ODCM) was not revised during the calendar year of 1999.

10.0 REFERENCES

1. U.S. Nuclear Regulatory Commission, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plants", Regulatory Guide 1.21, Revision 1, June 1974.
2. Duke Engineering and Services, Calculation BEC-091, "Pilgrim Station Meteorological Data Joint Frequency Distributions: First, Second, Third, and Fourth Quarters, 1999", dated March 2000.
3. "Pilgrim Nuclear Power Station Offsite Dose Calculation Manual", Revision 8, August 1999.
4. U.S. Nuclear Regulatory Commission, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10CFR50 Appendix I", Regulatory Guide 1.109, Revision 1, October 1977.
5. U.S. Nuclear Regulatory Commission, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors", Regulatory Guide 1.111, July 1977.
6. Boston Edison Company, "Pilgrim Station Unit 1 Appendix I Evaluation", April 1977.
7. DE&S Calculation No. BEC-092, "Dose Assessment for January-December 1999 Effluent Report", May 2000.
8. J.N. Hamawi, "AEOLUS", Yankee Atomic Electric Company, YAEC-1120, January 1977.

APPENDIX A

Meteorological Joint Frequency Distributions

TABLE	TABLE TITLE	PAGE
A-1	Distribution of Wind Directions and Speeds for the 33-ft Level of the 220-ft Tower	57
A-2	Distribution of Wind Directions and Speeds for the 220-ft Level of the 220-ft Tower	73

Table A-1
Distributions of Wind Directions and Speeds
for the 33-ft Level of the 220-ft Tower

PILGRIM JAN99-MAR99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS A				CLASS FREQUENCY (PERCENT) = 11.04												
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM										VRBL	TOTAL	
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
(1)	.00	.00	.00	.00	.00	.00	.00	.43	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.43
(2)	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
C-3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
(1)	.00	.00	.00	.00	.00	.00	.00	.43	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.43
(2)	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
4-7	12	18	5	8	7	4	2	1	6	0	0	5	12	25	20	17	0	142	
(1)	5.13	7.69	2.14	3.42	2.99	1.71	.85	.43	2.56	.00	.00	2.14	5.13	10.68	8.55	7.26	.00	60.68	
(2)	.57	.85	.24	.38	.33	.19	.09	.05	.28	.00	.00	.24	.57	1.18	.94	.80	.00	6.70	
8-12	2	5	2	0	2	3	2	0	2	6	4	5	13	13	8	2	0	69	
(1)	.85	2.14	.85	.00	.85	1.28	.85	.00	.85	2.56	1.71	2.14	5.56	5.56	3.42	.85	.00	29.49	
(2)	.09	.24	.09	.00	.09	.14	.09	.00	.09	.28	.19	.24	.61	.61	.38	.09	.00	3.25	
13-18	0	2	0	0	0	0	1	0	2	0	0	0	9	6	1	0	0	21	
(1)	.00	.85	.00	.00	.00	.00	.43	.00	.85	.00	.00	.00	3.85	2.56	.43	.00	.00	8.97	
(2)	.00	.09	.00	.00	.00	.00	.05	.00	.09	.00	.00	.00	.42	.28	.05	.00	.00	.99	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	14	25	7	8	9	7	5	3	10	6	4	10	34	44	29	19	0	234	
(1)	5.98	10.68	2.99	3.42	3.85	2.99	2.14	1.28	4.27	2.56	1.71	4.27	14.53	18.80	12.39	8.12	.00	100.00	
(2)	.66	1.18	.33	.38	.42	.33	.24	.14	.47	.28	.19	.47	1.60	2.08	1.37	.90	.00	11.04	

33.0 FT WIND DATA			STABILITY CLASS B					CLASS FREQUENCY (PERCENT) = 3.54											
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
(1)	.00	1.33	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.33	
(2)	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	
4-7	2	2	3	1	2	2	1	0	1	0	1	6	4	7	3	3	0	38	
(1)	2.67	2.67	4.00	1.33	2.67	2.67	1.33	.00	1.33	.00	1.33	8.00	5.33	9.33	4.00	4.00	.00	50.67	
(2)	.09	.09	.14	.05	.09	.09	.05	.00	.05	.00	.05	.28	.19	.33	.14	.14	.00	1.79	
8-12	3	2	1	0	3	3	0	0	1	2	1	2	8	4	3	2	0	35	
(1)	4.00	2.67	1.33	.00	4.00	4.00	.00	.00	1.33	2.67	1.33	2.67	10.67	5.33	4.00	2.67	.00	46.67	
(2)	.14	.09	.05	.00	.14	.14	.00	.00	.05	.09	.05	.09	.38	.19	.14	.09	.00	1.65	
13-18	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	1.33	.00	.00	.00	.00	.00	.00	.00	.00	1.33	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.05	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	5	5	4	1	5	5	1	0	3	2	2	8	12	11	6	5	0	75	
(1)	6.67	6.67	5.33	1.33	6.67	6.67	1.33	.00	4.00	2.67	2.67	10.67	16.00	14.67	8.00	6.67	.00	100.00	
(2)	.24	.24	.19	.05	.24	.24	.05	.00	.14	.09	.09	.38	.57	.52	.28	.24	.00	3.54	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM JAN99-MAR99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA		STABILITY CLASS C								CLASS FREQUENCY (PERCENT) = 3.68								TOTAL
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4-7	1	0	1	2	3	0	2	1	1	0	4	6	5	4	1	2	0	33
(1)	1.28	.00	1.28	2.56	3.85	.00	2.56	1.28	1.28	.00	5.13	7.69	6.41	5.13	1.28	2.56	.00	42.31
(2)	.05	.00	.05	.09	.14	.00	.09	.05	.05	.00	.19	.28	.24	.19	.05	.09	.00	1.56
8-12	1	4	1	0	1	0	0	0	2	2	7	4	5	5	2	0	0	34
(1)	1.28	5.13	1.28	.00	1.28	.00	.00	.00	2.56	2.56	8.97	5.13	6.41	6.41	2.56	.00	.00	43.59
(2)	.05	.19	.05	.00	.05	.00	.00	.00	.09	.09	.33	.19	.24	.24	.09	.00	.00	1.60
13-18	0	2	1	0	0	0	0	0	4	2	0	0	2	0	0	0	0	11
(1)	.00	2.56	1.28	.00	.00	.00	.00	.00	5.13	2.56	.00	.00	2.56	.00	.00	.00	.00	14.10
(2)	.00	.09	.05	.00	.00	.00	.00	.00	.19	.09	.00	.00	.09	.00	.00	.00	.00	.52
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL SPEEDS	2	6	3	2	4	0	2	1	7	4	11	10	12	9	3	2	0	78
(1)	2.56	7.69	3.85	2.56	5.13	.00	2.56	1.28	8.97	5.13	14.10	12.82	15.38	11.54	3.85	2.56	.00	100.00
(2)	.09	.28	.14	.09	.19	.00	.09	.05	.33	.19	.52	.47	.57	.42	.14	.09	.00	3.68

33.0 FT WIND DATA		STABILITY CLASS D								CLASS FREQUENCY (PERCENT) = 31.56								TOTAL
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	0	1	1	1	4	2	6	1	1	1	3	3	2	1	2	1	0	30
(1)	.00	.15	.15	.15	.60	.30	.90	.15	.15	.15	.45	.45	.30	.15	.30	.15	.00	4.48
(2)	.00	.05	.05	.05	.19	.09	.28	.05	.05	.05	.14	.14	.09	.05	.09	.05	.00	1.42
4-7	7	10	9	13	19	4	18	5	14	12	19	27	30	34	28	10	0	259
(1)	1.05	1.49	1.35	1.94	2.84	.60	2.69	.75	2.09	1.79	2.84	4.04	4.48	5.08	4.19	1.49	.00	38.71
(2)	.33	.47	.42	.61	.90	.19	.85	.24	.66	.57	.90	1.27	1.42	1.60	1.32	.47	.00	12.22
8-12	22	20	35	9	9	17	2	3	18	30	22	19	47	32	41	13	0	339
(1)	3.29	2.99	5.23	1.35	1.35	2.54	.30	.45	2.69	4.48	3.29	2.84	7.03	4.78	6.13	1.94	.00	50.67
(2)	1.04	.94	1.65	.42	.42	.80	.09	.14	.85	1.42	1.04	.90	2.22	1.51	1.93	.61	.00	15.99
13-18	2	6	5	1	0	3	3	1	11	4	0	0	2	1	2	0	0	41
(1)	.30	.90	.75	.15	.00	.45	.45	.15	1.64	.60	.00	.00	.30	.15	.30	.00	.00	6.13
(2)	.09	.28	.24	.05	.00	.14	.14	.05	.52	.19	.00	.00	.09	.05	.09	.00	.00	1.93
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL SPEEDS	31	37	50	24	32	26	29	10	44	47	44	49	81	68	73	24	0	669
(1)	4.63	5.53	7.47	3.59	4.78	3.89	4.33	1.49	6.58	7.03	6.58	7.32	12.11	10.16	10.91	3.59	.00	100.00
(2)	1.46	1.75	2.36	1.13	1.51	1.23	1.37	.47	2.08	2.22	2.08	2.31	3.82	3.21	3.44	1.13	.00	31.56

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM JAN99-MAR99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA		STABILITY CLASS E																	CLASS FREQUENCY (PERCENT) = 36.51	
		WIND DIRECTION FROM																		
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.00	.13		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.05		
C-3	3	0	0	3	4	15	16	6	7	10	6	12	13	12	6	6	0	119		
(1)	.39	.00	.00	.39	.52	1.94	2.07	.78	.90	1.29	.78	1.55	1.68	1.55	.78	.78	.00	15.37		
(2)	.14	.00	.00	.14	.19	.71	.75	.28	.33	.47	.28	.57	.61	.57	.28	.28	.00	5.61		
4-7	9	3	3	5	7	14	11	16	25	41	51	71	39	20	21	18	0	354		
(1)	1.16	.39	.39	.65	.90	1.81	1.42	2.07	3.23	5.30	6.59	9.17	5.04	2.58	2.71	2.33	.00	45.74		
(2)	.42	.14	.14	.24	.33	.66	.52	.75	1.18	1.93	2.41	3.35	1.84	.94	.99	.85	.00	16.70		
8-12	4	4	6	5	4	9	19	5	27	34	21	20	30	23	31	6	0	248		
(1)	.52	.52	.78	.65	.52	1.16	2.45	.65	3.49	4.39	2.71	2.58	3.88	2.97	4.01	.78	.00	32.04		
(2)	.19	.19	.28	.24	.19	.42	.90	.24	1.27	1.60	.99	.94	1.42	1.08	1.46	.28	.00	11.70		
13-18	6	11	2	4	0	3	6	3	9	4	0	0	0	1	1	2	0	52		
(1)	.78	1.42	.26	.52	.00	.39	.78	.39	1.16	.52	.00	.00	.00	.13	.13	.26	.00	6.72		
(2)	.28	.52	.09	.19	.00	.14	.28	.14	.42	.19	.00	.00	.00	.05	.05	.09	.00	2.45		
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	22	18	11	17	15	41	52	30	68	89	78	103	82	56	60	32	0	774		
(1)	2.84	2.33	1.42	2.20	1.94	5.30	6.72	3.88	8.79	11.50	10.08	13.31	10.59	7.24	7.75	4.13	.00	100.00		
(2)	1.04	.85	.52	.80	.71	1.93	2.45	1.42	3.21	4.20	3.68	4.86	3.87	2.64	2.83	1.51	.00	36.51		

33.0 FT WIND DATA		STABILITY CLASS F																	CLASS FREQUENCY (PERCENT) = 11.04	
		WIND DIRECTION FROM																		
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	0	0	0	0	2	4	3	4	3	9	14	6	4	0	0	0	49		
(1)	.00	.00	.00	.00	.00	.85	1.71	1.28	1.71	1.28	3.85	5.98	2.56	1.71	.00	.00	.00	20.94		
(2)	.00	.00	.00	.00	.00	.09	.19	.14	.19	.14	.42	.66	.28	.19	.00	.00	.00	2.31		
4-7	1	0	0	1	0	0	2	6	4	7	33	23	4	6	9	6	0	102		
(1)	.43	.00	.00	.43	.00	.00	.85	2.56	1.71	2.99	14.10	9.83	1.71	2.56	3.85	2.56	.00	43.59		
(2)	.05	.00	.00	.05	.00	.00	.09	.28	.19	.33	1.56	1.08	.19	.28	.42	.28	.00	4.81		
8-12	1	4	1	6	0	4	4	6	2	6	18	0	0	0	5	7	0	64		
(1)	.43	1.71	.43	2.56	.00	1.71	1.71	2.56	.85	2.56	7.69	.00	.00	.00	2.14	2.99	.00	27.35		
(2)	.05	.19	.05	.28	.00	.19	.19	.28	.09	.28	.85	.00	.00	.00	.24	.33	.00	3.02		
13-18	4	1	0	1	0	0	1	3	2	1	0	0	1	0	3	2	0	19		
(1)	1.71	.43	.00	.43	.00	.00	.43	1.28	.85	.43	.00	.00	.43	.00	1.28	.85	.00	8.12		
(2)	.19	.05	.00	.05	.00	.00	.05	.14	.09	.05	.00	.00	.05	.00	.14	.09	.00	.90		
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	6	5	1	8	0	6	11	18	12	17	60	37	11	10	17	15	0	234		
(1)	2.56	2.14	.43	3.42	.00	2.56	4.70	7.69	5.13	7.26	25.64	15.81	4.70	4.27	7.26	6.41	.00	100.00		
(2)	.28	.24	.05	.38	.00	.28	.52	.85	.57	.80	2.83	1.75	.52	.47	.80	.71	.00	11.04		

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 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM JAN99-MAR99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS G					CLASS FREQUENCY (PERCENT) = 2.64												
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM											VRBL	TOTAL	
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW				
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
(1)	.00	.00	.00	.00	.00	.00	1.79	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.79		
(2)	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05		
4-7	0	0	0	0	1	0	1	1	1	1	3	0	5	3	1	0	0	17		
(1)	.00	.00	.00	.00	1.79	.00	1.79	1.79	1.79	1.79	5.36	.00	8.93	5.36	1.79	.00	.00	30.36		
(2)	.00	.00	.00	.00	.05	.00	.05	.05	.05	.05	.14	.00	.24	.14	.05	.00	.00	.80		
8-12	1	0	0	0	1	0	8	4	0	2	2	0	1	0	1	2	0	22		
(1)	1.79	.00	.00	.00	1.79	.00	14.29	7.14	.00	3.57	3.57	.00	1.79	.00	1.79	3.57	.00	39.29		
(2)	.05	.00	.00	.00	.05	.00	.38	.19	.00	.09	.09	.00	.05	.00	.05	.09	.00	1.04		
13-18	3	4	0	0	0	0	0	0	1	0	0	0	2	0	1	5	0	16		
(1)	5.36	7.14	.00	.00	.00	.00	.00	.00	1.79	.00	.00	.00	3.57	.00	1.79	8.93	.00	28.57		
(2)	.14	.19	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.09	.00	.05	.24	.00	.75		
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	4	4	0	0	2	0	10	5	2	3	5	0	8	3	3	7	0	56		
(1)	7.14	7.14	.00	.00	3.57	.00	17.86	8.93	3.57	5.36	8.93	.00	14.29	5.36	5.36	12.50	.00	100.00		
(2)	.19	.19	.00	.00	.09	.00	.47	.24	.09	.14	.24	.00	.38	.14	.14	.33	.00	2.64		

33.0 FT WIND DATA			STABILITY CLASS ALL						CLASS FREQUENCY (PERCENT) = 100.00												
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM											VRBL	TOTAL		
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW					
CALM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2			
(1)	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.05	.00	.00	.09			
(2)	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.05	.00	.00	.09			
C-3	3	2	1	4	8	19	27	11	12	14	18	29	21	17	8	7	0	201			
(1)	.14	.09	.05	.19	.38	.90	1.27	.52	.57	.66	.85	1.37	.99	.80	.38	.33	.00	9.48			
(2)	.14	.09	.05	.19	.38	.90	1.27	.52	.57	.66	.85	1.37	.99	.80	.38	.33	.00	9.48			
4-7	32	33	21	30	39	24	37	30	52	61	111	138	99	99	83	56	0	945			
(1)	1.51	1.56	.99	1.42	1.84	1.13	1.75	1.42	2.45	2.88	5.24	6.51	4.67	4.67	3.92	2.64	.00	44.58			
(2)	1.51	1.56	.99	1.42	1.84	1.13	1.75	1.42	2.45	2.88	5.24	6.51	4.67	4.67	3.92	2.64	.00	44.58			
8-12	34	39	46	20	20	36	35	18	52	82	75	50	104	77	91	32	0	811			
(1)	1.60	1.84	2.17	.94	.94	1.70	1.65	.85	2.45	3.87	3.54	2.36	4.91	3.63	4.29	1.51	.00	38.25			
(2)	1.60	1.84	2.17	.94	.94	1.70	1.65	.85	2.45	3.87	3.54	2.36	4.91	3.63	4.29	1.51	.00	38.25			
13-18	15	26	8	6	0	6	11	7	30	11	0	0	16	8	8	9	0	161			
(1)	.71	1.23	.38	.28	.00	.28	.52	.33	1.42	.52	.00	.00	.75	.38	.38	.42	.00	7.59			
(2)	.71	1.23	.38	.28	.00	.28	.52	.33	1.42	.52	.00	.00	.75	.38	.38	.42	.00	7.59			
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
ALL SPEEDS	84	100	76	60	67	85	110	67	146	168	204	217	240	201	191	104	0	2120			
(1)	3.96	4.72	3.58	2.83	3.16	4.01	5.19	3.16	6.89	7.92	9.62	10.24	11.32	9.48	9.01	4.91	.00	100.00			
(2)	3.96	4.72	3.58	2.83	3.16	4.01	5.19	3.16	6.89	7.92	9.62	10.24	11.32	9.48	9.01	4.91	.00	100.00			

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
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 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM APR99-JUN99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS A						CLASS FREQUENCY (PERCENT) = 19.55											
			WIND DIRECTION FROM																	
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	3	1	0	1	0	1	0	1	0	0	0	0	1	1	1	0	10		
(1)	.00	.76	.25	.00	.25	.00	.25	.00	.25	.00	.00	.00	.00	.25	.25	.25	.00	2.53		
(2)	.00	.15	.05	.00	.05	.00	.05	.00	.05	.00	.00	.00	.00	.05	.05	.05	.00	.50		
4-7	9	32	36	38	21	18	1	4	8	6	6	10	13	7	7	9	0	225		
(1)	2.28	8.10	9.11	9.62	5.32	4.56	.25	1.01	2.03	1.52	1.52	2.53	3.29	1.77	1.77	2.28	.00	56.96		
(2)	.45	1.58	1.78	1.88	1.04	.89	.05	.20	.40	.30	.30	.50	.64	.35	.35	.45	.00	11.14		
8-12	6	15	12	5	7	2	6	0	19	30	15	5	12	6	3	6	0	149		
(1)	1.52	3.80	3.04	1.27	1.77	.51	1.52	.00	4.81	7.59	3.80	1.27	3.04	1.52	.76	1.52	.00	37.72		
(2)	.30	.74	.59	.25	.35	.10	.30	.00	.94	1.49	.74	.25	.59	.30	.15	.30	.00	7.38		
13-18	0	0	0	0	0	0	0	0	1	9	1	0	0	0	0	0	0	11		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.25	2.28	.25	.00	.00	.00	.00	.00	.00	2.78		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.05	.45	.05	.00	.00	.00	.00	.00	.00	.54		
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	15	50	49	43	29	20	8	4	29	45	22	15	25	14	11	16	0	395		
(1)	3.80	12.66	12.41	10.89	7.34	5.06	2.03	1.01	7.34	11.39	5.57	3.80	6.33	3.54	2.78	4.05	.00	100.00		
(2)	.74	2.48	2.43	2.13	1.44	.99	.40	.20	1.44	2.23	1.09	.74	1.24	.69	.54	.79	.00	19.55		

33.0 FT WIND DATA			STABILITY CLASS B					CLASS FREQUENCY (PERCENT) = 3.32											
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM										VRBL	TOTAL	
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2	
(1)	.00	.00	.00	.00	.00	.00	1.49	.00	1.49	.00	.00	.00	.00	.00	.00	.00	.00	2.99	
(2)	.00	.00	.00	.00	.00	.00	.05	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.10	
4-7	0	1	7	6	8	4	3	0	2	1	1	5	0	2	3	2	0	45	
(1)	.00	1.49	10.45	8.96	11.94	5.97	4.48	.00	2.99	1.49	1.49	7.46	.00	2.99	4.48	2.99	.00	67.16	
(2)	.00	.05	.35	.30	.40	.20	.15	.00	.10	.05	.05	.25	.00	.10	.15	.10	.00	2.23	
8-12	0	1	2	0	0	0	0	0	3	7	1	1	1	0	1	2	0	19	
(1)	.00	1.49	2.99	.00	.00	.00	.00	.00	4.48	10.45	1.49	1.49	1.49	.00	1.49	2.99	.00	28.36	
(2)	.00	.05	.10	.00	.00	.00	.00	.00	.15	.35	.05	.05	.05	.00	.05	.10	.00	.94	
13-18	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.49	.00	.00	.00	.00	.00	.00	.00	1.49	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.05	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	0	2	9	6	8	4	4	0	6	9	2	6	1	2	4	4	0	67	
(1)	.00	2.99	13.43	8.96	11.94	5.97	5.97	.00	8.96	13.43	2.99	8.96	1.49	2.99	5.97	5.97	.00	100.00	
(2)	.00	.10	.45	.30	.40	.20	.20	.00	.30	.45	.10	.30	.05	.10	.20	.20	.00	3.32	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM APR99-JUN99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS C					CLASS FREQUENCY (PERCENT) = 4.06												
			WIND DIRECTION FROM																	
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	1	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	5		
(1)	.00	1.22	.00	.00	1.22	1.22	.00	.00	.00	.00	.00	.00	.00	.00	1.22	1.22	.00	6.10		
(2)	.00	.05	.00	.00	.05	.05	.00	.00	.00	.00	.00	.00	.00	.00	.05	.05	.00	.25		
4-7	1	6	3	9	7	0	6	3	4	0	2	4	2	3	1	1	0	52		
(1)	1.22	7.32	3.66	10.98	8.54	.00	7.32	3.66	4.88	.00	2.44	4.88	2.44	3.66	1.22	1.22	.00	63.41		
(2)	.05	.30	.15	.45	.35	.00	.30	.15	.20	.00	.10	.20	.10	.15	.05	.05	.00	2.57		
8-12	0	4	0	0	1	0	0	0	9	7	2	0	1	0	1	0	0	25		
(1)	.00	4.88	.00	.00	1.22	.00	.00	.00	10.98	8.54	2.44	.00	1.22	.00	1.22	.00	.00	30.49		
(2)	.00	.20	.00	.00	.05	.00	.00	.00	.45	.35	.10	.00	.05	.00	.05	.00	.00	1.24		
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	1	11	3	9	9	1	6	3	13	7	4	4	3	3	3	2	0	82		
(1)	1.22	13.41	3.66	10.98	10.98	1.22	7.32	3.66	15.85	8.54	4.88	4.88	3.66	3.66	3.66	2.44	.00	100.00		
(2)	.05	.54	.15	.45	.45	.05	.30	.15	.64	.35	.20	.20	.15	.15	.15	.10	.00	4.06		

33.0 FT WIND DATA			STABILITY CLASS D				CLASS FREQUENCY (PERCENT) = 25.84												
			WIND DIRECTION FROM																
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	1	4	9	14	3	7	8	2	3	4	0	3	1	5	3	7	0	74	
(1)	.19	.77	1.72	2.68	.57	1.34	1.53	.38	.57	.77	.00	.57	.19	.96	.57	1.34	.00	14.18	
(2)	.05	.20	.45	.69	.15	.35	.40	.10	.15	.20	.00	.15	.05	.25	.15	.35	.00	3.66	
4-7	5	20	18	38	27	15	21	7	24	26	12	20	10	4	5	8	0	260	
(1)	.96	3.83	3.45	7.28	5.17	2.87	4.02	1.34	4.60	4.98	2.30	3.83	1.92	.77	.96	1.53	.00	49.81	
(2)	.25	.99	.89	1.88	1.34	.74	1.04	.35	1.19	1.29	.59	.99	.50	.20	.25	.40	.00	12.87	
8-12	9	14	16	5	18	2	1	1	19	65	9	6	5	2	4	5	0	181	
(1)	1.72	2.68	3.07	.96	3.45	.38	.19	.19	3.64	12.45	1.72	1.15	.96	.38	.77	.96	.00	34.67	
(2)	.45	.69	.79	.25	.89	.10	.05	.05	.94	3.22	.45	.30	.25	.10	.20	.25	.00	8.96	
13-18	3	1	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	7	
(1)	.57	.19	.00	.00	.00	.00	.00	.00	.00	.19	.38	.00	.00	.00	.00	.00	.00	1.34	
(2)	.15	.05	.00	.00	.00	.00	.00	.00	.00	.05	.10	.00	.00	.00	.00	.00	.00	.35	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	18	39	43	57	48	24	30	10	46	96	23	29	16	11	12	20	0	522	
(1)	3.45	7.47	8.24	10.92	9.20	4.60	5.75	1.92	8.81	18.39	4.41	5.56	3.07	2.11	2.30	3.83	.00	100.00	
(2)	.89	1.93	2.13	2.82	2.38	1.19	1.49	.50	2.28	4.75	1.14	1.44	.79	.54	.59	.99	.00	25.84	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM APR99-JUN99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS E				CLASS FREQUENCY (PERCENT) = 31.04												
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM										VRBL	TOTAL	
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	1	6	9	15	10	16	18	14	8	6	3	12	6	19	8	5	0	156	
(1)	.16	.96	1.44	2.39	1.59	2.55	2.87	2.23	1.28	.96	.48	1.91	.96	3.03	1.28	.80	.00	24.88	
(2)	.05	.30	.45	.74	.50	.79	.89	.69	.40	.30	.15	.59	.30	.94	.40	.25	.00	7.72	
4-7	6	6	6	24	10	13	12	10	30	46	42	53	31	20	20	22	0	351	
(1)	.96	.96	.96	3.83	1.59	2.07	1.91	1.59	4.78	7.34	6.70	8.45	4.94	3.19	3.19	3.51	.00	55.98	
(2)	.30	.30	.30	1.19	.50	.64	.59	.50	1.49	2.28	2.08	2.62	1.53	.99	.99	1.09	.00	17.38	
8-12	1	3	1	0	1	0	1	2	18	50	19	4	4	2	10	4	0	120	
(1)	.16	.48	.16	.00	.16	.00	.16	.32	2.87	7.97	3.03	.64	.64	.32	1.59	.64	.00	19.14	
(2)	.05	.15	.05	.00	.05	.00	.05	.10	.89	2.48	.94	.20	.20	.10	.50	.20	.00	5.94	
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	8	15	16	39	21	29	31	26	56	102	64	69	41	41	38	31	0	627	
(1)	1.28	2.39	2.55	6.22	3.35	4.63	4.94	4.15	8.93	16.27	10.21	11.00	6.54	6.54	6.06	4.94	.00	100.00	
(2)	.40	.74	.79	1.93	1.04	1.44	1.53	1.29	2.77	5.05	3.17	3.42	2.03	2.03	1.88	1.53	.00	31.04	

33.0 FT WIND DATA			STABILITY CLASS F					CLASS FREQUENCY (PERCENT) = 13.61											
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM										VRBL	TOTAL	
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	5	2	4	4	3	10	6	12	7	18	13	10	5	4	0	103	
(1)	.00	.00	1.82	.73	1.45	1.45	1.09	3.64	2.18	4.36	2.55	6.55	4.73	3.64	1.82	1.45	.00	37.45	
(2)	.00	.00	.25	.10	.20	.20	.15	.50	.30	.59	.35	.89	.64	.50	.25	.20	.00	5.10	
4-7	5	5	1	10	4	7	2	1	7	11	27	9	10	6	9	17	0	131	
(1)	1.82	1.82	.36	3.64	1.45	2.55	.73	.36	2.55	4.00	9.82	3.27	3.64	2.18	3.27	6.18	.00	47.64	
(2)	.25	.25	.05	.50	.20	.35	.10	.05	.35	.54	1.34	.45	.50	.30	.45	.84	.00	6.49	
8-12	0	0	0	0	0	0	0	0	0	17	22	1	1	0	0	0	0	41	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.18	8.00	.36	.36	.00	.00	.00	.00	14.91	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.84	1.09	.05	.05	.00	.00	.00	.00	2.03	
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	5	5	6	12	8	11	5	11	13	40	56	28	24	16	14	21	0	275	
(1)	1.82	1.82	2.18	4.36	2.91	4.00	1.82	4.00	4.73	14.55	20.36	10.18	8.73	5.82	5.09	7.64	.00	100.00	
(2)	.25	.25	.30	.59	.40	.54	.25	.54	.64	1.98	2.77	1.39	1.19	.79	.69	1.04	.00	13.61	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD

C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM APR99-JUN99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA		STABILITY CLASS G						CLASS FREQUENCY (PERCENT) = 2.57										TOTAL
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	0	0	1	0	0	0	0	1	0	0	5	3	1	0	2	0	0	13
(1)	.00	.00	1.92	.00	.00	.00	.00	1.92	.00	.00	9.62	5.77	1.92	.00	3.85	.00	.00	25.00
(2)	.00	.00	.05	.00	.00	.00	.00	.05	.00	.00	.25	.15	.05	.00	.10	.00	.00	.64
4-7	0	0	0	1	1	0	0	0	0	0	15	6	0	1	0	0	0	24
(1)	.00	.00	.00	1.92	1.92	.00	.00	.00	.00	.00	28.85	11.54	.00	1.92	.00	.00	.00	46.15
(2)	.00	.00	.00	.05	.05	.00	.00	.00	.00	.00	.74	.30	.00	.05	.00	.00	.00	1.19
8-12	0	0	0	0	0	0	0	0	0	8	7	0	0	0	0	0	0	15
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	15.38	13.46	.00	.00	.00	.00	.00	.00	28.85
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.40	.35	.00	.00	.00	.00	.00	.00	.74
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL SPEEDS	0	0	1	1	1	0	0	1	0	8	27	9	1	1	2	0	0	52
(1)	.00	.00	1.92	1.92	1.92	.00	.00	1.92	.00	15.38	51.92	17.31	1.92	1.92	3.85	.00	.00	100.00
(2)	.00	.00	.05	.05	.05	.00	.00	.05	.00	.40	1.34	.45	.05	.05	.10	.00	.00	2.57

33.0 FT WIND DATA		STABILITY CLASS ALL						CLASS FREQUENCY (PERCENT) = 100.00										TOTAL
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	2	14	25	31	19	28	31	27	19	22	15	36	21	35	20	18	0	363
(1)	.10	.69	1.24	1.53	.94	1.39	1.53	1.34	.94	1.09	.74	1.78	1.04	1.73	.99	.89	.00	17.97
(2)	.10	.69	1.24	1.53	.94	1.39	1.53	1.34	.94	1.09	.74	1.78	1.04	1.73	.99	.89	.00	17.97
4-7	26	70	71	126	78	57	45	25	75	90	105	107	66	43	45	59	0	1088
(1)	1.29	3.47	3.51	6.24	3.86	2.82	2.23	1.24	3.71	4.46	5.20	5.30	3.27	2.13	2.23	2.92	.00	53.86
(2)	1.29	3.47	3.51	6.24	3.86	2.82	2.23	1.24	3.71	4.46	5.20	5.30	3.27	2.13	2.23	2.92	.00	53.86
8-12	16	37	31	10	27	4	8	3	68	184	75	17	24	10	19	17	0	550
(1)	.79	1.83	1.53	.50	1.34	.20	.40	.15	3.37	9.11	3.71	.84	1.19	.50	.94	.84	.00	27.23
(2)	.79	1.83	1.53	.50	1.34	.20	.40	.15	3.37	9.11	3.71	.84	1.19	.50	.94	.84	.00	27.23
13-18	3	1	0	0	0	0	0	0	1	11	3	0	0	0	0	0	0	19
(1)	.15	.05	.00	.00	.00	.00	.00	.00	.05	.54	.15	.00	.00	.00	.00	.00	.00	.94
(2)	.15	.05	.00	.00	.00	.00	.00	.00	.05	.54	.15	.00	.00	.00	.00	.00	.00	.94
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL SPEEDS	47	122	127	167	124	89	84	55	163	307	198	160	111	88	84	94	0	2020
(1)	2.33	6.04	6.29	8.27	6.14	4.41	4.16	2.72	8.07	15.20	9.80	7.92	5.50	4.36	4.16	4.65	.00	100.00
(2)	2.33	6.04	6.29	8.27	6.14	4.41	4.16	2.72	8.07	15.20	9.80	7.92	5.50	4.36	4.16	4.65	.00	100.00

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE

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C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM JUL99-SEP99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS A						CLASS FREQUENCY (PERCENT) = 14.60											
			WIND DIRECTION FROM																	
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	2	5	1	1	3	1	0	1	1	0	1	0	1	6	1	0	24		
(1)	.00	.66	1.65	.33	.33	.99	.33	.00	.33	.33	.00	.33	.00	.33	1.98	.33	.00	7.92		
(2)	.00	.10	.24	.05	.05	.14	.05	.00	.05	.05	.00	.05	.00	.05	.29	.05	.00	1.16		
4-7	4	19	21	27	19	24	8	4	16	10	22	6	14	15	11	7	0	227		
(1)	1.32	6.27	6.93	8.91	6.27	7.92	2.64	1.32	5.28	3.30	7.26	1.98	4.62	4.95	3.63	2.31	.00	74.92		
(2)	.19	.92	1.01	1.30	.92	1.16	.39	.19	.77	.48	1.06	.29	.67	.72	.53	.34	.00	10.94		
8-12	0	0	0	0	1	1	0	0	4	27	4	1	7	0	0	0	0	45		
(1)	.00	.00	.00	.00	.33	.33	.00	.00	1.32	8.91	1.32	.33	2.31	.00	.00	.00	.00	14.85		
(2)	.00	.00	.00	.00	.05	.05	.00	.00	.19	1.30	.19	.05	.34	.00	.00	.00	.00	2.17		
13-18	0	0	0	0	0	0	0	0	1	5	0	0	1	0	0	0	0	7		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.33	1.65	.00	.00	.33	.00	.00	.00	.00	2.31		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.05	.24	.00	.00	.05	.00	.00	.00	.00	.34		
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	4	21	26	28	21	28	9	4	22	43	26	8	22	16	17	8	0	303		
(1)	1.32	6.93	8.58	9.24	6.93	9.24	2.97	1.32	7.26	14.19	8.58	2.64	7.26	5.28	5.61	2.64	.00	100.00		
(2)	.19	1.01	1.25	1.35	1.01	1.35	.43	.19	1.06	2.07	1.25	.39	1.06	.77	.82	.39	.00	14.60		

33.0 FT WIND DATA			STABILITY CLASS B				CLASS FREQUENCY (PERCENT) = 3.47													
			WIND DIRECTION FROM																	
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	1	0	0	0	0	0	0	1	2	1	0	0	1	1	1	1	0	9		
(1)	1.39	.00	.00	.00	.00	.00	.00	1.39	2.78	1.39	.00	.00	1.39	1.39	1.39	1.39	.00	12.50		
(2)	.05	.00	.00	.00	.00	.00	.00	.05	.10	.05	.00	.00	.05	.05	.05	.05	.00	.43		
4-7	0	1	1	5	8	2	3	3	3	5	2	7	6	2	0	0	0	48		
(1)	.00	1.39	1.39	6.94	11.11	2.78	4.17	4.17	4.17	6.94	2.78	9.72	8.33	2.78	.00	.00	.00	66.67		
(2)	.00	.05	.05	.24	.39	.10	.14	.14	.14	.24	.10	.34	.29	.10	.00	.00	.00	2.31		
8-12	0	0	0	0	0	0	0	0	3	10	0	0	0	1	0	0	0	14		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	4.17	13.89	.00	.00	.00	1.39	.00	.00	.00	19.44		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.14	.48	.00	.00	.00	.05	.00	.00	.00	.67		
13-18	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.39	.00	.00	.00	.00	.00	.00	1.39		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.05		
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	1	1	1	5	8	2	3	4	8	16	3	7	7	4	1	1	0	72		
(1)	1.39	1.39	1.39	6.94	11.11	2.78	4.17	5.56	11.11	22.22	4.17	9.72	9.72	5.56	1.39	1.39	.00	100.00		
(2)	.05	.05	.05	.24	.39	.10	.14	.19	.39	.77	.14	.34	.34	.19	.05	.05	.00	3.47		

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM JUL99-SEP99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS C				CLASS FREQUENCY (PERCENT) = 2.94													
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM										VRBL	TOTAL		
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW				
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	3	0	1	0	1	0	2	1	0	0	0	1	2	2	0	0	13		
(1)	.00	4.92	.00	1.64	.00	1.64	.00	3.28	1.64	.00	.00	.00	1.64	3.28	3.28	.00	.00	21.31		
(2)	.00	.14	.00	.05	.00	.05	.00	.10	.05	.00	.00	.00	.05	.10	.10	.00	.00	.63		
4-7	0	0	1	1	4	5	1	0	3	5	1	4	3	1	1	1	0	31		
(1)	.00	.00	1.64	1.64	6.56	8.20	1.64	.00	4.92	8.20	1.64	6.56	4.92	1.64	1.64	1.64	.00	50.82		
(2)	.00	.00	.05	.05	.19	.24	.05	.00	.14	.24	.05	.19	.14	.05	.05	.05	.00	1.49		
8-12	0	0	0	0	0	0	0	0	7	9	0	0	1	0	0	0	0	17		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	11.48	14.75	.00	.00	1.64	.00	.00	.00	.00	27.87		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.34	.43	.00	.00	.05	.00	.00	.00	.00	.82		
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	0	3	1	2	4	6	1	2	11	14	1	4	5	3	3	1	0	61		
(1)	.00	4.92	1.64	3.28	6.56	9.84	1.64	3.28	18.03	22.95	1.64	6.56	8.20	4.92	4.92	1.64	.00	100.00		
(2)	.00	.14	.05	.10	.19	.29	.05	.10	.53	.67	.05	.19	.24	.14	.14	.05	.00	2.94		

33.0 FT WIND DATA			STABILITY CLASS D				CLASS FREQUENCY (PERCENT) = 22.51												
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM										VRBL	TOTAL	
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	1	2	9	5	4	8	8	6	2	6	1	3	5	3	1	3	0	67	
(1)	.21	.43	1.93	1.07	.86	1.71	1.71	1.28	.43	1.28	.21	.64	1.07	.64	.21	.64	.00	14.35	
(2)	.05	.10	.43	.24	.19	.39	.39	.29	.10	.29	.05	.14	.24	.14	.05	.14	.00	3.23	
4-7	1	7	6	27	26	13	4	17	60	52	32	17	14	2	0	7	0	285	
(1)	.21	1.50	1.28	5.78	5.57	2.78	.86	3.64	12.85	11.13	6.85	3.64	3.00	.43	.00	1.50	.00	61.03	
(2)	.05	.34	.29	1.30	1.25	.63	.19	.82	2.89	2.51	1.54	.82	.67	.10	.00	.34	.00	13.73	
8-12	1	1	4	0	0	0	0	3	24	60	7	4	4	1	0	1	0	110	
(1)	.21	.21	.86	.00	.00	.00	.00	.64	5.14	12.85	1.50	.86	.86	.21	.00	.21	.00	23.55	
(2)	.05	.05	.19	.00	.00	.00	.00	.14	1.16	2.89	.34	.19	.19	.05	.00	.05	.00	5.30	
13-18	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	0	5	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.64	.00	.00	.00	.43	.00	.00	.00	.00	1.07	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.10	.00	.00	.00	.00	.24	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	3	10	19	32	30	21	12	26	89	118	40	24	25	6	1	11	0	467	
(1)	.64	2.14	4.07	6.85	6.42	4.50	2.57	5.57	19.06	25.27	8.57	5.14	5.35	1.28	.21	2.36	.00	100.00	
(2)	.14	.48	.92	1.54	1.45	1.01	.58	1.25	4.29	5.69	1.93	1.16	1.20	.29	.05	.53	.00	22.51	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM JUL99-SEP99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS E					CLASS FREQUENCY (PERCENT) = 38.80										
			WIND DIRECTION FROM															
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	1	6	7	17	14	30	43	25	29	20	15	18	11	16	11	10	0	273
(1)	.12	.75	.87	2.11	1.74	3.73	5.34	3.11	3.60	2.48	1.86	2.24	1.37	1.99	1.37	1.24	.00	33.91
(2)	.05	.29	.34	.82	.67	1.45	2.07	1.20	1.40	.96	.72	.87	.53	.77	.53	.48	.00	13.16
4-7	12	19	9	22	20	6	7	19	62	112	35	43	35	10	9	15	0	435
(1)	1.49	2.36	1.12	2.73	2.48	.75	.87	2.36	7.70	13.91	4.35	5.34	4.35	1.24	1.12	1.86	.00	54.04
(2)	.58	.92	.43	1.06	.96	.29	.34	.92	2.99	5.40	1.69	2.07	1.69	.48	.43	.72	.00	20.96
8-12	2	3	1	4	4	2	1	3	8	33	15	11	2	2	0	0	0	91
(1)	.25	.37	.12	.50	.50	.25	.12	.37	.99	4.10	1.86	1.37	.25	.25	.00	.00	.00	11.30
(2)	.10	.14	.05	.19	.19	.10	.05	.14	.39	1.59	.72	.53	.10	.10	.00	.00	.00	4.39
13-18	0	0	0	0	0	0	0	0	2	0	0	0	3	1	0	0	0	6
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.25	.00	.00	.00	.37	.12	.00	.00	.00	.75
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.14	.05	.00	.00	.00	.29
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL SPEEDS	15	28	17	43	38	38	51	47	101	165	65	72	51	29	20	25	0	805
(1)	1.86	3.48	2.11	5.34	4.72	4.72	6.34	5.84	12.55	20.50	8.07	8.94	6.34	3.60	2.48	3.11	.00	100.00
(2)	.72	1.35	.82	2.07	1.83	1.83	2.46	2.27	4.87	7.95	3.13	3.47	2.46	1.40	.96	1.20	.00	38.80

33.0 FT WIND DATA			STABILITY CLASS F				CLASS FREQUENCY (PERCENT) = 13.54												
			WIND DIRECTION FROM																
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.36	.00	.00	.00	.00	.00	.00	.00	.00	.36	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.05	
C-3	0	0	0	4	1	6	11	12	19	10	12	17	17	6	2	0	0	117	
(1)	.00	.00	.00	1.42	.36	2.14	3.91	4.27	6.76	3.56	4.27	6.05	6.05	2.14	.71	.00	.00	41.64	
(2)	.00	.00	.00	.19	.05	.29	.53	.58	.92	.48	.58	.82	.82	.29	.10	.00	.00	5.64	
4-7	1	0	1	2	0	0	0	2	22	25	48	20	0	0	6	1	0	128	
(1)	.36	.00	.36	.71	.00	.00	.00	.71	7.83	8.90	17.08	7.12	.00	.00	2.14	.36	.00	45.55	
(2)	.05	.00	.05	.10	.00	.00	.00	.10	1.06	1.20	2.31	.96	.00	.00	.29	.05	.00	6.17	
8-12	0	0	0	1	1	3	0	0	0	13	16	0	1	0	0	0	0	35	
(1)	.00	.00	.00	.36	.36	1.07	.00	.00	.00	4.63	5.69	.00	.36	.00	.00	.00	.00	12.46	
(2)	.00	.00	.00	.05	.05	.14	.00	.00	.00	.63	.77	.00	.05	.00	.00	.00	.00	1.69	
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	1	0	1	7	2	9	11	14	42	48	76	37	18	6	8	1	0	281	
(1)	.36	.00	.36	2.49	.71	3.20	3.91	4.98	14.95	17.08	27.05	13.17	6.41	2.14	2.85	.36	.00	100.00	
(2)	.05	.00	.05	.34	.10	.43	.53	.67	2.02	2.31	3.66	1.78	.87	.29	.39	.05	.00	13.54	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM JUL99-SEP99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA				STABILITY CLASS G				CLASS FREQUENCY (PERCENT) = 4.14													
				WIND DIRECTION FROM																	
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
C-3	0	0	0	1	0	0	0	0	1	6	8	15	13	1	0	0	0	45			
(1)	.00	.00	.00	1.16	.00	.00	.00	.00	1.16	6.98	9.30	17.44	15.12	1.16	.00	.00	.00	52.33			
(2)	.00	.00	.00	.05	.00	.00	.00	.00	.05	.29	.39	.72	.63	.05	.00	.00	.00	2.17			
4-7	0	0	0	3	0	1	0	0	1	3	22	1	0	0	0	1	0	32			
(1)	.00	.00	.00	3.49	.00	1.16	.00	.00	1.16	3.49	25.58	1.16	.00	.00	.00	1.16	.00	37.21			
(2)	.00	.00	.00	.14	.00	.05	.00	.00	.05	.14	1.06	.05	.00	.00	.00	.05	.00	1.54			
8-12	0	0	0	0	0	0	0	0	0	6	3	0	0	0	0	0	0	9			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.98	3.49	.00	.00	.00	.00	.00	.00	10.47			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.29	.14	.00	.00	.00	.00	.00	.00	.43			
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
ALL SPEEDS	0	0	0	4	0	1	0	0	2	15	33	16	13	1	0	1	0	86			
(1)	.00	.00	.00	4.65	.00	1.16	.00	.00	2.33	17.44	38.37	18.60	15.12	1.16	.00	1.16	.00	100.00			
(2)	.00	.00	.00	.19	.00	.05	.00	.00	.10	.72	1.59	.77	.63	.05	.00	.05	.00	4.14			

33.0 FT WIND DATA		STABILITY CLASS ALL						CLASS FREQUENCY (PERCENT) = 100.00												
		WIND DIRECTION FROM																		
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.05		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.05		
C-3	3	13	21	29	20	48	63	46	55	44	36	54	48	30	23	15	0	548		
(1)	.14	.63	1.01	1.40	.96	2.31	3.04	2.22	2.65	2.12	1.73	2.60	2.31	1.45	1.11	.72	.00	26.41		
(2)	.14	.63	1.01	1.40	.96	2.31	3.04	2.22	2.65	2.12	1.73	2.60	2.31	1.45	1.11	.72	.00	26.41		
4-7	18	46	39	87	77	51	23	45	167	212	162	98	72	30	27	32	0	1186		
(1)	.87	2.22	1.88	4.19	3.71	2.46	1.11	2.17	8.05	10.22	7.81	4.72	3.47	1.45	1.30	1.54	.00	57.16		
(2)	.87	2.22	1.88	4.19	3.71	2.46	1.11	2.17	8.05	10.22	7.81	4.72	3.47	1.45	1.30	1.54	.00	57.16		
8-12	3	4	5	5	6	6	1	6	46	158	45	16	15	4	0	1	0	321		
(1)	.14	.19	.24	.24	.29	.29	.05	.29	2.22	7.61	2.17	.77	.72	.19	.00	.05	.00	15.47		
(2)	.14	.19	.24	.24	.29	.29	.05	.29	2.22	7.61	2.17	.77	.72	.19	.00	.05	.00	15.47		
13-18	0	0	0	0	0	0	0	0	6	5	1	0	6	1	0	0	0	19		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.29	.24	.05	.00	.29	.05	.00	.00	.00	.92		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.29	.24	.05	.00	.29	.05	.00	.00	.00	.92		
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS 24	63	65	121	103	105	87	97	275	419	244	168	141	65	50	48	0	2075			
(1)	1.16	3.04	3.13	5.83	4.96	5.06	4.19	4.67	13.25	20.19	11.76	8.10	6.80	3.13	2.41	2.31	.00	100.00		
(2)	1.16	3.04	3.13	5.83	4.96	5.06	4.19	4.67	13.25	20.19	11.76	8.10	6.80	3.13	2.41	2.31	.00	100.00		

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM OCT99-DEC99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA				STABILITY CLASS A				CLASS FREQUENCY (PERCENT) = 16.48											
				WIND DIRECTION FROM															
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	1	1	0	2	1	1	0	2	0	0	1	3	0	1	3	0	16	
(1)	.00	.29	.29	.00	.58	.29	.29	.00	.58	.00	.00	.29	.87	.00	.29	.87	.00	4.65	
(2)	.00	.05	.05	.00	.10	.05	.05	.00	.10	.00	.00	.05	.14	.00	.05	.14	.00	.77	
4-7	11	3	8	15	14	7	4	2	11	7	6	11	43	23	24	4	0	193	
(1)	3.20	.87	2.33	4.36	4.07	2.03	1.16	.58	3.20	2.03	1.74	3.20	12.50	6.69	6.98	1.16	.00	56.10	
(2)	.53	.14	.38	.72	.67	.34	.19	.10	.53	.34	.29	.53	2.06	1.10	1.15	.19	.00	9.25	
8-12	0	4	0	1	7	6	1	3	8	19	16	17	19	13	9	0	0	123	
(1)	.00	1.16	.00	.29	2.03	1.74	.29	.87	2.33	5.52	4.65	4.94	5.52	3.78	2.62	.00	.00	35.76	
(2)	.00	.19	.00	.05	.34	.29	.05	.14	.38	.91	.77	.81	.91	.62	.43	.00	.00	5.89	
13-18	0	1	0	0	0	0	0	2	0	0	0	0	2	7	0	0	0	12	
(1)	.00	.29	.00	.00	.00	.00	.00	.58	.00	.00	.00	.00	.58	2.03	.00	.00	.00	3.49	
(2)	.00	.05	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.10	.34	.00	.00	.00	.57	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	11	9	9	16	23	14	6	7	21	26	22	29	67	43	34	7	0	344	
(1)	3.20	2.62	2.62	4.65	6.69	4.07	1.74	2.03	6.10	7.56	6.40	8.43	19.48	12.50	9.88	2.03	.00	100.00	
(2)	.53	.43	.43	.77	1.10	.67	.29	.34	1.01	1.25	1.05	1.39	3.21	2.06	1.63	.34	.00	16.48	

33.0 FT WIND DATA				STABILITY CLASS B				CLASS FREQUENCY (PERCENT) = 4.26											
				WIND DIRECTION FROM															
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	1	1	1	0	0	0	0	0	0	0	0	0	2	1	0	0	6	
(1)	.00	1.12	1.12	1.12	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.25	1.12	.00	.00	6.74	
(2)	.00	.05	.05	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.05	.00	.00	.29	
4-7	0	0	2	1	7	4	3	1	2	3	3	3	5	3	3	1	0	41	
(1)	.00	.00	2.25	1.12	7.87	4.49	3.37	1.12	2.25	3.37	3.37	3.37	5.62	3.37	3.37	1.12	.00	46.07	
(2)	.00	.00	.10	.05	.34	.19	.14	.05	.10	.14	.14	.14	.24	.14	.14	.05	.00	1.96	
8-12	0	0	1	3	0	0	0	3	2	9	8	1	6	2	2	0	0	37	
(1)	.00	.00	1.12	3.37	.00	.00	.00	3.37	2.25	10.11	8.99	1.12	6.74	2.25	2.25	.00	.00	41.57	
(2)	.00	.00	.05	.14	.00	.00	.00	.14	.10	.43	.38	.05	.29	.10	.10	.00	.00	1.77	
13-18	0	1	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	5	
(1)	.00	1.12	1.12	1.12	.00	.00	.00	.00	.00	.00	.00	.00	2.25	.00	.00	.00	.00	5.62	
(2)	.00	.05	.05	.05	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.24	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	0	2	5	6	7	4	3	4	4	12	11	4	13	7	6	1	0	89	
(1)	.00	2.25	5.62	6.74	7.87	4.49	3.37	4.49	4.49	13.48	12.36	4.49	14.61	7.87	6.74	1.12	.00	100.00	
(2)	.00	.10	.24	.29	.34	.19	.14	.19	.19	.57	.53	.19	.62	.34	.29	.05	.00	4.26	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM OCT99-DEC99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS C				CLASS FREQUENCY (PERCENT) = 3.45												
WIND DIRECTION FROM																			
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	3	
(1)	.00	.00	.00	1.39	1.39	.00	.00	.00	.00	.00	.00	.00	.00	1.39	.00	.00	.00	4.17	
(2)	.00	.00	.00	.05	.05	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.14	
4-7	0	0	1	2	0	1	0	2	3	8	0	2	5	2	0	0	0	26	
(1)	.00	.00	1.39	2.78	.00	1.39	.00	2.78	4.17	11.11	.00	2.78	6.94	2.78	.00	.00	.00	36.11	
(2)	.00	.00	.05	.10	.00	.05	.00	.10	.14	.38	.00	.10	.24	.10	.00	.00	.00	1.25	
8-12	0	3	0	0	0	0	1	0	10	7	3	2	7	5	1	0	0	39	
(1)	.00	4.17	.00	.00	.00	.00	1.39	.00	13.89	9.72	4.17	2.78	9.72	6.94	1.39	.00	.00	54.17	
(2)	.00	.14	.00	.00	.00	.00	.05	.00	.48	.34	.14	.10	.34	.24	.05	.00	.00	1.87	
13-18	0	1	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	
(1)	.00	1.39	2.78	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.39	.00	.00	.00	.00	5.56	
(2)	.00	.05	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.19	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	0	4	3	3	1	1	1	2	13	15	3	4	13	8	1	0	0	72	
(1)	.00	5.56	4.17	4.17	1.39	1.39	1.39	2.78	18.06	20.83	4.17	5.56	18.06	11.11	1.39	.00	.00	100.00	
(2)	.00	.19	.14	.14	.05	.05	.05	.10	.62	.72	.14	.19	.62	.38	.05	.00	.00	3.45	

33.0 FT WIND DATA				STABILITY CLASS D				CLASS FREQUENCY (PERCENT) = 26.35												
				WIND DIRECTION FROM																
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	0	0	2	1	1	3	3	4	2	3	6	0	2	2	0	0	29		
(1)	.00	.00	.00	.36	.18	.18	.55	.55	.73	.36	.55	1.09	.00	.36	.36	.00	.00	5.27		
(2)	.00	.00	.00	.10	.05	.05	.14	.14	.19	.10	.14	.29	.00	.10	.10	.00	.00	1.39		
4-7	8	12	9	6	6	9	6	6	23	29	27	32	21	9	22	0	0	225		
(1)	1.45	2.18	1.64	1.09	1.09	1.64	1.09	1.09	4.18	5.27	4.91	5.82	3.82	1.64	4.00	.00	.00	40.91		
(2)	.38	.57	.43	.29	.29	.43	.29	.29	1.10	1.39	1.29	1.53	1.01	.43	1.05	.00	.00	10.78		
8-12	4	23	3	1	3	2	10	6	32	32	20	12	43	38	22	3	0	254		
(1)	.73	4.18	.55	.18	.55	.36	1.82	1.09	5.82	5.82	3.64	2.18	7.82	6.91	4.00	.55	.00	46.18		
(2)	.19	1.10	.14	.05	.14	.10	.48	.29	1.53	1.53	.96	.57	2.06	1.82	1.05	.14	.00	12.17		
13-18	4	7	0	15	0	0	0	0	1	4	0	0	9	0	0	1	0	41		
(1)	.73	1.27	.00	2.73	.00	.00	.00	.00	.18	.73	.00	.00	1.64	.00	.00	.18	.00	7.45		
(2)	.19	.34	.00	.72	.00	.00	.00	.00	.05	.19	.00	.00	.43	.00	.00	.05	.00	1.96		
19-24	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
(1)	.00	.00	.00	.18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.18		
(2)	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	16	42	12	25	10	12	19	15	60	67	50	50	73	49	46	4	0	550		
(1)	2.91	7.64	2.18	4.55	1.82	2.18	3.45	2.73	10.91	12.18	9.09	9.09	13.27	8.91	8.36	.73	.00	100.00		
(2)	.77	2.01	.57	1.20	.48	.57	.91	.72	2.87	3.21	2.40	2.40	3.50	2.35	2.20	.19	.00	26.35		

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD

C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM OCT99-DEC99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS E				CLASS FREQUENCY (PERCENT) = 36.46												
			WIND DIRECTION FROM																
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	3	2	3	6	12	16	10	10	5	6	5	3	10	3	0	94	
(1)	.00	.00	.39	.26	.39	.79	1.58	2.10	1.31	1.31	.66	.79	.66	.39	1.31	.39	.00	12.35	
(2)	.00	.00	.14	.10	.14	.29	.57	.77	.48	.48	.24	.29	.24	.14	.48	.14	.00	4.50	
4-7	4	4	7	10	9	9	10	41	81	60	75	104	71	33	23	3	0	544	
(1)	.53	.53	.92	1.31	1.18	1.18	1.31	5.39	10.64	7.88	9.86	13.67	9.33	4.34	3.02	.39	.00	71.48	
(2)	.19	.19	.34	.48	.43	.43	.48	1.96	3.88	2.87	3.59	4.98	3.40	1.58	1.10	.14	.00	26.07	
8-12	2	0	1	1	0	1	1	13	23	28	14	5	18	7	1	0	0	115	
(1)	.26	.00	.13	.13	.00	.13	.13	1.71	3.02	3.68	1.84	.66	2.37	.92	.13	.00	.00	15.11	
(2)	.10	.00	.05	.05	.00	.05	.05	.62	1.10	1.34	.67	.24	.86	.34	.05	.00	.00	5.51	
13-18	0	0	1	2	0	0	0	2	1	1	0	0	1	0	0	0	0	8	
(1)	.00	.00	.13	.26	.00	.00	.00	.26	.13	.13	.00	.00	.13	.00	.00	.00	.00	1.05	
(2)	.00	.00	.05	.10	.00	.00	.00	.10	.05	.05	.00	.00	.05	.00	.00	.00	.00	.38	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	6	4	12	15	12	16	23	72	115	99	94	115	95	43	34	6	0	761	
(1)	.79	.53	1.58	1.97	1.58	2.10	3.02	9.46	15.11	13.01	12.35	15.11	12.48	5.65	4.47	.79	.00	100.00	
(2)	.29	.19	.57	.72	.57	.77	1.10	3.45	5.51	4.74	4.50	5.51	4.55	2.06	1.63	.29	.00	36.46	

33.0 FT WIND DATA			STABILITY CLASS F					CLASS FREQUENCY (PERCENT) = 11.31											
			WIND DIRECTION FROM																
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	1	0	0	0	2	10	11	12	13	13	8	1	0	0	0	71	
(1)	.00	.00	.42	.00	.00	.00	.85	4.24	4.66	5.08	5.51	5.51	3.39	.42	.00	.00	.00	30.08	
(2)	.00	.00	.05	.00	.00	.00	.10	.48	.53	.57	.62	.62	.38	.05	.00	.00	.00	3.40	
4-7	0	0	0	0	0	0	3	9	26	26	59	23	4	1	2	0	0	153	
(1)	.00	.00	.00	.00	.00	.00	1.27	3.81	11.02	11.02	25.00	9.75	1.69	.42	.85	.00	.00	64.83	
(2)	.00	.00	.00	.00	.00	.00	.14	.43	1.25	1.25	2.83	1.10	.19	.05	.10	.00	.00	7.33	
8-12	0	0	0	0	0	0	0	0	0	3	6	0	0	0	3	0	0	12	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.27	2.54	.00	.00	.00	1.27	.00	.00	5.08	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.29	.00	.00	.00	.14	.00	.00	.57	
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	0	0	1	0	0	0	5	19	37	41	78	36	12	2	5	0	0	236	
(1)	.00	.00	.42	.00	.00	.00	2.12	8.05	15.68	17.37	33.05	15.25	5.08	.85	2.12	.00	.00	100.00	
(2)	.00	.00	.05	.00	.00	.00	.24	.91	1.77	1.96	3.74	1.72	.57	.10	.24	.00	.00	11.31	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-1 (continued)

PILGRIM OCT99-DEC99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

33.0 FT WIND DATA			STABILITY CLASS G				CLASS FREQUENCY (PERCENT) = 1.68											
			WIND DIRECTION FROM															
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	0	0	1	0	1	0	0	1	3	1	4	1	0	0	0	0	0	12
(1)	.00	.00	2.86	.00	2.86	.00	.00	2.86	8.57	2.86	11.43	2.86	.00	.00	.00	.00	.00	34.29
(2)	.00	.00	.05	.00	.05	.00	.00	.05	.14	.05	.19	.05	.00	.00	.00	.00	.00	.57
4-7	0	0	0	0	0	0	0	1	1	2	6	6	0	0	0	0	0	16
(1)	.00	.00	.00	.00	.00	.00	.00	2.86	2.86	5.71	17.14	17.14	.00	.00	.00	.00	.00	45.71
(2)	.00	.00	.00	.00	.00	.00	.00	.05	.05	.10	.29	.29	.00	.00	.00	.00	.00	.77
8-12	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	7
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	14.29	5.71	.00	.00	.00	.00	.00	.00	20.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.24	.10	.00	.00	.00	.00	.00	.00	.34
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL SPEEDS	0	0	1	0	1	0	0	2	4	8	12	7	0	0	0	0	0	35
(1)	.00	.00	2.86	.00	2.86	.00	.00	5.71	11.43	22.86	34.29	20.00	.00	.00	.00	.00	.00	100.00
(2)	.00	.00	.05	.00	.05	.00	.00	.10	.19	.38	.57	.34	.00	.00	.00	.00	.00	1.68

33.0 FT WIND DATA			STABILITY CLASS ALL					CLASS FREQUENCY (PERCENT) = 100.00												
			WIND DIRECTION FROM																	
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	2	7	6	8	8	18	30	30	25	25	27	16	9	14	6	0	231		
(1)	.00	.10	.34	.29	.38	.38	.86	1.44	1.44	1.20	1.20	1.29	.77	.43	.67	.29	.00	11.07		
(2)	.00	.10	.34	.29	.38	.38	.86	1.44	1.44	1.20	1.20	1.29	.77	.43	.67	.29	.00	11.07		
4-7	23	19	27	34	36	30	26	62	147	135	176	181	149	71	74	8	0	1198		
(1)	1.10	.91	1.29	1.63	1.72	1.44	1.25	2.97	7.04	6.47	8.43	8.67	7.14	3.40	3.55	.38	.00	57.40		
(2)	1.10	.91	1.29	1.63	1.72	1.44	1.25	2.97	7.04	6.47	8.43	8.67	7.14	3.40	3.55	.38	.00	57.40		
8-12	6	30	5	6	10	9	13	25	75	103	69	37	93	65	38	3	0	587		
(1)	.29	1.44	.24	.29	.48	.43	.62	1.20	3.59	4.94	3.31	1.77	4.46	3.11	1.82	.14	.00	28.13		
(2)	.29	1.44	.24	.29	.48	.43	.62	1.20	3.59	4.94	3.31	1.77	4.46	3.11	1.82	.14	.00	28.13		
13-18	4	10	4	18	0	0	0	4	2	5	0	0	15	7	0	1	0	70		
(1)	.19	.48	.19	.86	.00	.00	.00	.19	.10	.24	.00	.00	.72	.34	.00	.05	.00	3.35		
(2)	.19	.48	.19	.86	.00	.00	.00	.19	.10	.24	.00	.00	.72	.34	.00	.05	.00	3.35		
19-24	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
(1)	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05		
(2)	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05		
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
ALL SPEEDS	33	61	43	65	54	47	57	121	254	268	270	245	273	152	126	18	0	2087		
(1)	1.58	2.92	2.06	3.11	2.59	2.25	2.73	5.80	12.17	12.84	12.94	11.74	13.08	7.28	6.04	.86	.00	100.00		
(2)	1.58	2.92	2.06	3.11	2.59	2.25	2.73	5.80	12.17	12.84	12.94	11.74	13.08	7.28	6.04	.86	.00	100.00		

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2
Distributions of Wind Directions and Speeds
for the 220-ft Level of the 220-ft Tower

PILGRIM JAN99-MAR99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS A				CLASS FREQUENCY (PERCENT) = 11.04											
				WIND DIRECTION FROM															
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	
(1)	.00	.00	.00	.00	.00	.43	.00	.00	.43	.00	.00	.00	.00	.00	.00	.00	.00	.85	
(2)	.00	.00	.00	.00	.00	.05	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.09	
4-7	2	2	1	1	4	0	0	0	0	0	0	1	2	1	3	2	0	19	
(1)	.85	.85	.43	.43	1.71	.00	.00	.00	.00	.00	.00	.43	.85	.43	1.28	.85	.00	8.12	
(2)	.09	.09	.05	.05	.19	.00	.00	.00	.00	.00	.00	.05	.09	.05	.14	.09	.00	.90	
8-12	5	6	0	4	2	2	3	0	2	0	0	1	1	6	5	9	0	46	
(1)	2.14	2.56	.00	1.71	.85	.85	1.28	.00	.85	.00	.00	.43	.43	2.56	2.14	3.85	.00	19.66	
(2)	.24	.28	.00	.19	.09	.09	.14	.00	.09	.00	.00	.05	.05	.28	.24	.42	.00	2.17	
13-18	8	4	2	0	4	3	4	1	3	6	4	7	13	17	8	15	0	99	
(1)	3.42	1.71	.85	.00	1.71	1.28	1.71	.43	1.28	2.56	1.71	2.99	5.56	7.26	3.42	6.41	.00	42.31	
(2)	.38	.19	.09	.00	.19	.14	.19	.05	.14	.28	.19	.33	.61	.80	.38	.71	.00	4.67	
19-24	2	0	0	0	1	0	0	0	1	0	0	0	6	7	11	5	0	33	
(1)	.85	.00	.00	.00	.43	.00	.00	.00	.43	.00	.00	.00	2.56	2.99	4.70	2.14	.00	14.10	
(2)	.09	.00	.00	.00	.05	.00	.00	.00	.05	.00	.00	.00	.28	.33	.52	.24	.00	1.56	
GT 24	5	2	0	0	0	0	2	0	0	0	0	0	1	20	5	0	0	35	
(1)	2.14	.85	.00	.00	.00	.00	.85	.00	.00	.00	.00	.00	.43	8.55	2.14	.00	.00	14.96	
(2)	.24	.09	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.05	.94	.24	.00	.00	1.65	
ALL SPEEDS	22	14	3	5	11	6	9	1	7	6	4	9	23	51	32	31	0	234	
(1)	9.40	5.98	1.28	2.14	4.70	2.56	3.85	.43	2.99	2.56	1.71	3.85	9.83	21.79	13.68	13.25	.00	100.00	
(2)	1.04	.66	.14	.24	.52	.28	.42	.05	.33	.28	.19	.42	1.08	2.41	1.51	1.46	.00	11.04	

220.0 FT WIND DATA				STABILITY CLASS B				CLASS FREQUENCY (PERCENT) = 3.54											
WIND DIRECTION FROM																			
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
4-7	0	2	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	5	
(1)	.00	2.67	.00	1.33	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.33	1.33	.00	.00	6.67	
(2)	.00	.09	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.05	.00	.00	.24	
8-12	0	2	0	0	0	1	1	0	1	0	1	3	3	0	1	0	0	13	
(1)	.00	2.67	.00	.00	.00	1.33	1.33	.00	1.33	.00	1.33	4.00	4.00	.00	1.33	.00	.00	17.33	
(2)	.00	.09	.00	.00	.00	.05	.05	.00	.05	.00	.05	.14	.14	.00	.05	.00	.00	.61	
13-18	0	3	0	0	1	4	2	0	2	2	0	3	4	3	3	4	0	31	
(1)	.00	4.00	.00	.00	1.33	5.33	2.67	.00	2.67	2.67	.00	4.00	5.33	4.00	4.00	5.33	.00	41.33	
(2)	.00	.14	.00	.00	.05	.19	.09	.00	.09	.09	.00	.14	.19	.14	.14	.19	.00	1.46	
19-24	2	0	1	0	0	0	0	0	1	0	1	0	5	4	5	2	0	21	
(1)	2.67	.00	1.33	.00	.00	.00	.00	.00	1.33	.00	1.33	.00	6.67	5.33	6.67	2.67	.00	28.00	
(2)	.09	.00	.05	.00	.00	.00	.00	.00	.05	.00	.05	.00	.24	.19	.24	.09	.00	.99	
GT 24	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	
(1)	2.67	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.00	.00	.00	.00	6.67	
(2)	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.24	
ALL SPEEDS	4	7	1	1	1	5	3	0	4	2	2	6	12	11	10	6	0	75	
(1)	5.33	9.33	1.33	1.33	1.33	6.67	4.00	.00	5.33	2.67	2.67	8.00	16.00	14.67	13.33	8.00	.00	100.00	
(2)	.19	.33	.05	.05	.05	.24	.14	.00	.19	.09	.09	.28	.57	.52	.47	.28	.00	3.54	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM JAN99-MAR99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS C						CLASS FREQUENCY (PERCENT) = 3.68											
				WIND DIRECTION FROM																	
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
C-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
4-7	1	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	0	6			
(1)	1.28	.00	.00	2.56	.00	.00	2.56	.00	.00	.00	.00	.00	1.28	.00	.00	.00	.00	7.69			
(2)	.05	.00	.00	.09	.00	.00	.09	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.28			
8-12	0	0	0	0	2	1	0	1	1	0	1	2	0	1	0	2	0	11			
(1)	.00	.00	.00	.00	2.56	1.28	.00	1.28	1.28	.00	1.28	2.56	.00	1.28	.00	2.56	.00	14.10			
(2)	.00	.00	.00	.00	.09	.05	.00	.05	.05	.00	.05	.09	.00	.05	.00	.09	.00	.52			
13-18	1	1	0	0	0	1	0	0	1	2	5	6	7	1	1	1	0	27			
(1)	1.28	1.28	.00	.00	.00	1.28	.00	.00	1.28	2.56	6.41	7.69	8.97	1.28	1.28	1.28	.00	34.62			
(2)	.05	.05	.00	.00	.00	.05	.00	.00	.05	.09	.24	.28	.33	.05	.05	.05	.00	1.27			
19-24	2	2	2	0	0	0	0	0	1	0	4	2	2	0	5	0	0	20			
(1)	2.56	2.56	2.56	.00	.00	.00	.00	.00	1.28	.00	5.13	2.56	2.56	.00	6.41	.00	.00	25.64			
(2)	.09	.09	.09	.00	.00	.00	.00	.00	.05	.00	.19	.09	.09	.00	.24	.00	.00	.94			
GT 24	2	0	1	0	0	0	0	0	2	3	0	0	0	6	0	0	0	14			
(1)	2.56	.00	1.28	.00	.00	.00	.00	.00	2.56	3.85	.00	.00	.00	7.69	.00	.00	.00	17.95			
(2)	.09	.00	.05	.00	.00	.00	.00	.00	.09	.14	.00	.00	.00	.28	.00	.00	.00	.66			
ALL SPEEDS	6	3	3	2	2	2	2	1	5	5	10	10	10	8	6	3	0	78			
(1)	7.69	3.85	3.85	2.56	2.56	2.56	2.56	1.28	6.41	6.41	12.82	12.82	12.82	10.26	7.69	3.85	.00	100.00			
(2)	.28	.14	.14	.09	.09	.09	.09	.05	.24	.24	.47	.47	.47	.38	.28	.14	.00	3.68			

220.0 FT WIND DATA				STABILITY CLASS D				CLASS FREQUENCY (PERCENT) = 31.56												
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	WIND DIRECTION FROM				SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL
									S	SSW	SSW	SSW								
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
(1)	.00	.00	.30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00	.45
(2)	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.14
4-7	0	2	2	2	8	4	4	2	0	2	1	0	2	0	1	0	0	0	0	30
(1)	.00	.30	.30	.30	1.20	.60	.60	.30	.00	.30	.15	.00	.30	.00	.15	.00	.00	.00	.00	4.48
(2)	.00	.09	.09	.09	.38	.19	.19	.09	.00	.09	.05	.00	.09	.00	.05	.00	.00	.00	.00	1.42
8-12	2	4	3	2	0	6	3	5	4	5	4	9	11	6	3	5	0	0	0	72
(1)	.30	.60	.45	.30	.00	.90	.45	.75	.60	.75	.60	1.35	1.64	.90	.45	.75	.00	.00	.00	10.76
(2)	.09	.19	.14	.09	.00	.28	.14	.24	.19	.24	.19	.42	.52	.28	.14	.24	.00	.00	.00	3.40
13-18	5	7	15	7	10	11	14	3	5	21	23	21	29	17	30	10	0	0	0	228
(1)	.75	1.05	2.24	1.05	1.49	1.64	2.09	.45	.75	3.14	3.44	3.14	4.33	2.54	4.48	1.49	.00	.00	.00	34.08
(2)	.24	.33	.71	.33	.47	.52	.66	.14	.24	.99	1.08	.99	1.37	.80	1.42	.47	.00	.00	.00	10.75
19-24	12	7	17	7	8	9	1	1	3	17	19	6	31	15	38	12	0	0	0	203
(1)	1.79	1.05	2.54	1.05	1.20	1.35	.15	.15	.45	2.54	2.84	.90	4.63	2.24	5.68	1.79	.00	.00	.00	30.34
(2)	.57	.33	.80	.33	.38	.42	.05	.05	.14	.80	.90	.28	1.46	.71	1.79	.57	.00	.00	.00	9.58
GT 24	18	9	5	1	4	6	4	1	6	10	0	0	12	18	29	10	0	0	0	133
(1)	2.69	1.35	.75	.15	.60	.90	.60	.15	.90	1.49	.00	.00	1.79	2.69	4.33	1.49	.00	.00	.00	19.88
(2)	.85	.42	.24	.05	.19	.28	.19	.05	.28	.47	.00	.00	.57	.85	1.37	.47	.00	.00	.00	6.27
ALL SPEEDS	37	29	44	19	30	36	26	12	18	55	47	36	86	56	101	37	0	0	0	669
(1)	5.53	4.33	6.58	2.84	4.48	5.38	3.89	1.79	2.69	8.22	7.03	5.38	12.86	8.37	15.10	5.53	.00	.00	.00	100.00
(2)	1.75	1.37	2.08	.90	1.42	1.70	1.23	.57	.85	2.59	2.22	1.70	4.06	2.64	4.76	1.75	.00	.00	.00	31.56

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM JAN99-MAR99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS E				CLASS FREQUENCY (PERCENT) = 36.51											
SPEED(MPH)	N	NNE	NE	ENE	WIND DIRECTION FROM										VRBL	TOTAL			
					E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW			NW	NNW	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	1	0	0	0	2	0	1	0	0	0	1	2	0	0	0	7	
(1)	.00	.00	.13	.00	.00	.00	.26	.00	.13	.00	.00	.00	.13	.26	.00	.00	.00	.90	
(2)	.00	.00	.05	.00	.00	.00	.09	.00	.05	.00	.00	.00	.05	.09	.00	.00	.00	.33	
4-7	1	4	0	2	5	4	5	1	8	2	3	5	6	3	1	6	0	56	
(1)	.13	.52	.00	.26	.65	.52	.65	.13	1.03	.26	.39	.65	.78	.39	.13	.78	.00	7.24	
(2)	.05	.19	.00	.09	.24	.19	.24	.05	.38	.09	.14	.24	.28	.14	.05	.28	.00	2.64	
8-12	2	3	1	1	11	19	7	4	3	9	9	10	14	14	14	6	0	127	
(1)	.26	.39	.13	.13	1.42	2.45	.90	.52	.39	1.16	1.16	1.29	1.81	1.81	1.81	.78	.00	16.41	
(2)	.09	.14	.05	.05	.52	.90	.33	.19	.14	.42	.42	.47	.66	.66	.66	.28	.00	5.99	
13-18	4	1	1	1	8	6	11	10	11	33	40	42	32	20	11	18	0	249	
(1)	.52	.13	.13	.13	1.03	.78	1.42	1.29	1.42	4.26	5.17	5.43	4.13	2.58	1.42	2.33	.00	32.17	
(2)	.19	.05	.05	.05	.38	.28	.52	.47	.52	1.56	1.89	1.98	1.51	.94	.52	.85	.00	11.75	
19-24	6	2	2	2	4	3	18	5	5	24	30	18	32	26	17	8	0	202	
(1)	.78	.26	.26	.26	.52	.39	2.33	.65	.65	3.10	3.88	2.33	4.13	3.36	2.20	1.03	.00	26.10	
(2)	.28	.09	.09	.09	.19	.14	.85	.24	.24	1.13	1.42	.85	1.51	1.23	.80	.38	.00	9.53	
GT 24	11	8	3	6	1	1	17	4	7	12	0	2	3	17	31	10	0	133	
(1)	1.42	1.03	.39	.78	.13	.13	2.20	.52	.90	1.55	.00	.26	.39	2.20	4.01	1.29	.00	17.18	
(2)	.52	.38	.14	.28	.05	.05	.80	.19	.33	.57	.00	.09	.14	.80	1.46	.47	.00	6.27	
ALL SPEEDS	24	18	8	12	29	33	60	24	35	80	82	77	88	82	74	48	0	774	
(1)	3.10	2.33	1.03	1.55	3.75	4.26	7.75	3.10	4.52	10.34	10.59	9.95	11.37	10.59	9.56	6.20	.00	100.00	
(2)	1.13	.85	.38	.57	1.37	1.56	2.83	1.13	1.65	3.77	3.87	3.63	4.15	3.87	3.49	2.26	.00	36.51	

220.0 FT WIND DATA				STABILITY CLASS F				CLASS FREQUENCY (PERCENT) = 11.04										
SPEED(MPH)	N	NNE	NE	ENE	WIND DIRECTION FROM										VRBL	TOTAL		
					E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW			NW	NNW
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	
(1)	.00	.00	.43	.00	.00	.00	.00	.00	.43	.00	.00	.00	.00	.00	.00	.00	.85	
(2)	.00	.00	.05	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.09	
4-7	0	0	0	2	0	3	1	1	2	1	3	4	6	4	4	0	31	
(1)	.00	.00	.00	.85	.00	1.28	.43	.43	.85	.43	1.28	1.71	2.56	1.71	1.71	.00	13.25	
(2)	.00	.00	.00	.09	.00	.14	.05	.05	.09	.05	.14	.19	.28	.19	.19	.00	1.46	
8-12	0	0	0	0	0	2	2	1	0	1	8	4	7	17	8	3	53	
(1)	.00	.00	.00	.00	.00	.85	.85	.43	.00	.43	3.42	1.71	2.99	7.26	3.42	1.28	22.65	
(2)	.00	.00	.00	.00	.00	.09	.09	.05	.00	.05	.38	.19	.33	.80	.38	.14	2.50	
13-18	1	0	0	1	0	0	4	2	0	0	2	8	15	9	4	6	52	
(1)	.43	.00	.00	.43	.00	.00	1.71	.85	.00	.00	.85	3.42	6.41	3.85	1.71	2.56	22.22	
(2)	.05	.00	.00	.05	.00	.00	.19	.09	.00	.00	.09	.38	.71	.42	.19	.28	2.45	
19-24	0	3	0	3	0	1	2	6	0	5	3	11	1	2	3	7	47	
(1)	.00	1.28	.00	1.28	.00	.43	.85	2.56	.00	2.14	1.28	4.70	.43	.85	1.28	2.99	20.09	
(2)	.00	.14	.00	.14	.00	.05	.09	.28	.00	.24	.14	.52	.05	.09	.14	.33	2.22	
GT 24	4	2	1	3	1	3	3	5	1	2	5	1	0	0	6	12	49	
(1)	1.71	.85	.43	1.28	.43	1.28	1.28	2.14	.43	.85	2.14	.43	.00	.00	2.56	5.13	20.94	
(2)	.19	.09	.05	.14	.05	.14	.14	.24	.05	.09	.24	.05	.00	.00	.28	.57	2.31	
ALL SPEEDS	5	5	2	9	1	9	12	15	4	9	21	28	29	32	25	28	234	
(1)	2.14	2.14	.85	3.85	.43	3.85	5.13	6.41	1.71	3.85	8.97	11.97	12.39	13.68	10.68	11.97	100.00	
(2)	.24	.24	.09	.42	.05	.42	.57	.71	.19	.42	.99	1.32	1.37	1.51	1.18	1.32	11.04	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
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 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM JAN99-MAR99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS G						CLASS FREQUENCY (PERCENT) = 2.64										
WIND DIRECTION FROM																				
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
4-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
8-12	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2		
(1)	.00	.00	.00	.00	.00	.00	.00	1.79	.00	.00	.00	1.79	.00	.00	.00	.00	.00	3.57		
(2)	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.05	.00	.00	.00	.00	.00	.09		
13-18	0	0	0	0	1	0	1	1	1	0	1	0	2	1	0	0	0	8		
(1)	.00	.00	.00	.00	1.79	.00	1.79	1.79	1.79	.00	1.79	.00	3.57	1.79	.00	.00	.00	14.29		
(2)	.00	.00	.00	.00	.05	.00	.05	.05	.05	.00	.05	.00	.09	.05	.00	.00	.00	.38		
19-24	0	0	0	0	0	0	2	3	0	0	1	1	2	5	1	0	0	15		
(1)	.00	.00	.00	.00	.00	.00	3.57	5.36	.00	.00	1.79	1.79	3.57	8.93	1.79	.00	.00	26.79		
(2)	.00	.00	.00	.00	.00	.00	.09	.14	.00	.00	.05	.05	.09	.24	.05	.00	.00	.71		
GT 24	5	1	0	0	0	0	7	0	0	0	2	0	1	0	2	13	0	31		
(1)	8.93	1.79	.00	.00	.00	.00	12.50	.00	.00	.00	3.57	.00	1.79	.00	3.57	23.21	.00	55.36		
(2)	.24	.05	.00	.00	.00	.00	.33	.00	.00	.00	.09	.00	.05	.00	.09	.61	.00	1.46		
ALL SPEEDS	5	1	0	0	1	0	10	5	1	0	4	2	5	6	3	13	0	56		
(1)	8.93	1.79	.00	.00	1.79	.00	17.86	8.93	1.79	.00	7.14	3.57	8.93	10.71	5.36	23.21	.00	100.00		
(2)	.24	.05	.00	.00	.05	.00	.47	.24	.05	.00	.19	.09	.24	.28	.14	.61	.00	2.64		

220.0 FT WIND DATA				STABILITY CLASS ALL							CLASS FREQUENCY (PERCENT) = 100.00										
SPEED(MPH)	N	NNE	NE	ENE	WIND DIRECTION FROM							SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
					E	ESE	SE	SSE	S	SSW	SSW										
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
C-3	0	0	4	0	0	1	2	0	3	0	0	0	2	2	0	0	0	14			
(1)	.00	.00	.19	.00	.00	.05	.09	.00	.14	.00	.00	.00	.09	.09	.00	.00	.00	.66			
(2)	.00	.00	.19	.00	.00	.05	.09	.00	.14	.00	.00	.00	.09	.09	.00	.00	.00	.66			
4-7	4	10	3	10	17	11	12	4	10	5	7	10	17	9	10	8	0	147			
(1)	.19	.47	.14	.47	.80	.52	.57	.19	.47	.24	.33	.47	.80	.42	.47	.38	.00	6.93			
(2)	.19	.47	.14	.47	.80	.52	.57	.19	.47	.24	.33	.47	.80	.42	.47	.38	.00	6.93			
8-12	9	15	4	7	15	31	16	12	11	15	23	30	36	44	31	25	0	324			
(1)	.42	.71	.19	.33	.71	1.46	.75	.57	.52	.71	1.08	1.42	1.70	2.08	1.46	1.18	.00	15.28			
(2)	.42	.71	.19	.33	.71	1.46	.75	.57	.52	.71	1.08	1.42	1.70	2.08	1.46	1.18	.00	15.28			
13-18	19	16	18	9	24	25	36	17	23	64	75	87	102	68	57	54	0	694			
(1)	.90	.75	.85	.42	1.13	1.18	1.70	.80	1.08	3.02	3.54	4.10	4.81	3.21	2.69	2.55	.00	32.74			
(2)	.90	.75	.85	.42	1.13	1.18	1.70	.80	1.08	3.02	3.54	4.10	4.81	3.21	2.69	2.55	.00	32.74			
19-24	24	14	22	12	13	13	23	15	11	46	58	38	79	59	80	34	0	541			
(1)	1.13	.66	1.04	.57	.61	.61	1.08	.71	.52	2.17	2.74	1.79	3.73	2.78	3.77	1.60	.00	25.52			
(2)	1.13	.66	1.04	.57	.61	.61	1.08	.71	.52	2.17	2.74	1.79	3.73	2.78	3.77	1.60	.00	25.52			
GT 24	47	22	10	10	6	10	33	10	16	27	7	3	17	64	73	45	0	400			
(1)	2.22	1.04	.47	.47	.28	.47	1.56	.47	.75	1.27	.33	.14	.80	3.02	3.44	2.12	.00	18.87			
(2)	2.22	1.04	.47	.47	.28	.47	1.56	.47	.75	1.27	.33	.14	.80	3.02	3.44	2.12	.00	18.87			
ALLSPEEDS	103	77	61	48	75	91	122	58	74	157	170	168	253	246	251	166	0	2120			
(1)	4.86	3.63	2.88	2.26	3.54	4.29	5.75	2.74	3.49	7.41	8.02	7.92	11.93	11.60	11.84	7.83	.00	100.00			
(2)	4.86	3.63	2.88	2.26	3.54	4.29	5.75	2.74	3.49	7.41	8.02	7.92	11.93	11.60	11.84	7.83	.00	100.00			

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM APR99-JUN99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS A					CLASS FREQUENCY (PERCENT) = 19.93											
WIND DIRECTION FROM																				
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
4-7	2	18	11	14	13	2	1	0	0	0	0	2	1	2	1	4	0	71		
(1)	.48	4.28	2.61	3.33	3.09	.48	.24	.00	.00	.00	.00	.48	.24	.48	.24	.95	.00	16.86		
(2)	.09	.85	.52	.66	.62	.09	.05	.00	.00	.00	.00	.09	.05	.09	.05	.19	.00	3.36		
8-12	6	13	6	5	16	17	6	2	4	4	3	9	9	4	2	2	0	108		
(1)	1.43	3.09	1.43	1.19	3.80	4.04	1.43	.48	.95	.95	.71	2.14	2.14	.95	.48	.48	.00	25.65		
(2)	.28	.62	.28	.24	.76	.80	.28	.09	.19	.19	.14	.43	.43	.19	.09	.09	.00	5.11		
13-18	11	8	21	4	7	9	11	3	21	17	9	5	6	7	3	10	0	152		
(1)	2.61	1.90	4.99	.95	1.66	2.14	2.61	.71	4.99	4.04	2.14	1.19	1.43	1.66	.71	2.38	.00	36.10		
(2)	.52	.38	.99	.19	.33	.43	.52	.14	.99	.80	.43	.24	.28	.33	.14	.47	.00	7.20		
19-24	5	4	0	0	2	0	3	0	5	14	8	1	7	1	4	16	0	70		
(1)	1.19	.95	.00	.00	.48	.00	.71	.00	1.19	3.33	1.90	.24	1.66	.24	.95	3.80	.00	16.63		
(2)	.24	.19	.00	.00	.09	.00	.14	.00	.24	.66	.38	.05	.33	.05	.19	.76	.00	3.31		
GT 24	3	0	0	0	0	0	0	0	0	5	1	0	2	0	5	4	0	20		
(1)	.71	.00	.00	.00	.00	.00	.00	.00	.00	1.19	.24	.00	.48	.00	1.19	.95	.00	4.75		
(2)	.14	.00	.00	.00	.00	.00	.00	.00	.00	.24	.05	.00	.09	.00	.24	.19	.00	.95		
ALL SPEEDS	27	43	38	23	38	28	21	5	30	40	21	17	25	14	15	36	0	421		
(1)	6.41	10.21	9.03	5.46	9.03	6.65	4.99	1.19	7.13	9.50	4.99	4.04	5.94	3.33	3.56	8.55	.00	100.00		
(2)	1.28	2.04	1.80	1.09	1.80	1.33	.99	.24	1.42	1.89	.99	.80	1.18	.66	.71	1.70	.00	19.93		

220.0 FT WIND DATA				STABILITY CLASS B					CLASS FREQUENCY (PERCENT) = 3.27										
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	WIND DIRECTION FROM								VRBL	TOTAL	
									S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
4-7	0	5	3	2	0	0	2	0	0	0	0	0	2	0	2	0	0	16	
(1)	.00	7.25	4.35	2.90	.00	.00	2.90	.00	.00	.00	.00	.00	2.90	.00	2.90	.00	.00	23.19	
(2)	.00	.24	.14	.09	.00	.00	.09	.00	.00	.00	.00	.00	.09	.00	.09	.00	.00	.76	
8-12	0	1	1	2	2	4	3	2	0	1	1	0	1	2	1	3	0	24	
(1)	.00	1.45	1.45	2.90	2.90	5.80	4.35	2.90	.00	1.45	1.45	.00	1.45	2.90	1.45	4.35	.00	34.78	
(2)	.00	.05	.05	.09	.09	.19	.14	.09	.00	.05	.05	.00	.05	.09	.05	.14	.00	1.14	
13-18	0	0	1	0	3	0	1	0	5	3	1	4	1	0	0	0	0	19	
(1)	.00	.00	1.45	.00	4.35	.00	1.45	.00	7.25	4.35	1.45	5.80	1.45	.00	.00	.00	.00	27.54	
(2)	.00	.00	.05	.00	.14	.00	.05	.00	.24	.14	.05	.19	.05	.00	.00	.00	.00	.90	
19-24	0	1	2	0	0	0	0	0	0	0	1	0	1	0	0	1	0	6	
(1)	.00	1.45	2.90	.00	.00	.00	.00	.00	.00	.00	1.45	.00	1.45	.00	.00	1.45	.00	8.70	
(2)	.00	.05	.09	.00	.00	.00	.00	.00	.00	.00	.05	.00	.05	.00	.00	.05	.00	.28	
GT 24	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	4	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.45	1.45	.00	.00	.00	1.45	1.45	.00	5.80	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.05	.00	.00	.00	.05	.05	.00	.19	
ALL SPEEDS	0	7	7	4	5	4	6	2	5	5	4	4	5	2	4	5	0	69	
(1)	.00	10.14	10.14	5.80	7.25	5.80	8.70	2.90	7.25	7.25	5.80	5.80	7.25	2.90	5.80	7.25	.00	100.00	
(2)	.00	.33	.33	.19	.24	.19	.28	.09	.24	.24	.19	.19	.24	.09	.19	.24	.00	3.27	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM APR99-JUN99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS C				CLASS FREQUENCY (PERCENT) = 4.02											
				WIND DIRECTION FROM															
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.18	.00	1.18	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.05	
4-7	1	2	2	4	3	1	1	0	0	0	0	2	1	0	1	3	0	21	
(1)	1.18	2.35	2.35	4.71	3.53	1.18	1.18	.00	.00	.00	.00	2.35	1.18	.00	1.18	3.53	.00	24.71	
(2)	.05	.09	.09	.19	.14	.05	.05	.00	.00	.00	.00	.09	.05	.00	.05	.14	.00	.99	
8-12	0	1	1	0	5	3	5	5	0	0	0	1	2	1	1	0	0	25	
(1)	.00	1.18	1.18	.00	5.88	3.53	5.88	5.88	.00	.00	.00	1.18	2.35	1.18	1.18	.00	.00	29.41	
(2)	.00	.05	.05	.00	.24	.14	.24	.24	.00	.00	.00	.05	.09	.05	.05	.00	.00	1.18	
13-18	1	3	1	0	1	0	1	0	9	4	4	1	1	1	0	0	0	27	
(1)	1.18	3.53	1.18	.00	1.18	.00	1.18	.00	10.59	4.71	4.71	1.18	1.18	1.18	.00	.00	.00	31.76	
(2)	.05	.14	.05	.00	.05	.00	.05	.00	.43	.19	.19	.05	.05	.05	.00	.00	.00	1.28	
19-24	0	3	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	8	
(1)	.00	3.53	.00	.00	.00	.00	.00	.00	1.18	2.35	2.35	.00	.00	.00	.00	.00	.00	9.41	
(2)	.00	.14	.00	.00	.00	.00	.00	.00	.05	.09	.09	.00	.00	.00	.00	.00	.00	.38	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	3	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.18	.00	1.18	1.18	.00	3.53	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.05	.05	.00	.14	
ALL SPEEDS	2	9	4	4	9	4	7	5	10	6	6	4	5	2	3	5	0	85	
(1)	2.35	10.59	4.71	4.71	10.59	4.71	8.24	5.88	11.76	7.06	7.06	4.71	5.88	2.35	3.53	5.88	.00	100.00	
(2)	.09	.43	.19	.19	.43	.19	.33	.24	.47	.28	.28	.19	.24	.09	.14	.24	.00	4.02	

220.0 FT WIND DATA				STABILITY CLASS D				CLASS FREQUENCY (PERCENT) = 25.47										VRBL	TOTAL
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	0	2	2	0	1	0	0	2	1	0	1	0	1	1	1	0		
(1)	.00	.00	.37	.37	.00	.19	.00	.00	.37	.19	.00	.19	.00	.19	.19	.19	.00		
(2)	.00	.00	.09	.09	.00	.05	.00	.00	.09	.05	.00	.05	.00	.05	.05	.05	.00		
4-7	0	4	9	9	21	7	5	2	3	3	3	3	3	2	3	2	0		
(1)	.00	.74	1.67	1.67	3.90	1.30	.93	.37	.56	.56	.56	.56	.56	.37	.56	.37	.00		
(2)	.00	.19	.43	.43	.99	.33	.24	.09	.14	.14	.14	.14	.14	.09	.14	.09	.00		
8-12	6	8	5	13	10	24	17	9	10	12	10	7	7	4	3	4	0		
(1)	1.12	1.49	.93	2.42	1.86	4.46	3.16	1.67	1.86	2.23	1.86	1.30	1.30	.74	.56	.74	.00		
(2)	.28	.38	.24	.62	.47	1.14	.80	.43	.47	.57	.47	.33	.33	.19	.14	.19	.00		
13-18	3	18	11	9	10	9	8	1	17	52	8	7	8	3	2	6	0		
(1)	.56	3.35	2.04	1.67	1.86	1.67	1.49	.19	3.16	9.67	1.49	1.30	1.49	.56	.37	1.12	.00		
(2)	.14	.85	.52	.43	.47	.43	.38	.05	.80	2.46	.38	.33	.38	.14	.09	.28	.00		
19-24	6	1	12	3	6	0	2	0	2	29	6	4	4	0	4	8	0		
(1)	1.12	.19	2.23	.56	1.12	.00	.37	.00	.37	5.39	1.12	.74	.74	.00	.74	1.49	.00		
(2)	.28	.05	.57	.14	.28	.00	.09	.00	.09	1.37	.28	.19	.19	.00	.19	.38	.00		
GT 24	14	0	0	0	2	0	0	0	1	2	6	0	2	2	3	7	0		
(1)	2.60	.00	.00	.00	.37	.00	.00	.00	.19	.37	1.12	.00	.37	.37	.56	1.30	.00		
(2)	.66	.00	.00	.00	.09	.00	.00	.00	.05	.09	.28	.00	.09	.09	.14	.33	.00		
ALL SPEEDS	29	31	39	36	49	41	32	12	35	99	33	22	24	12	16	28	0		
(1)	5.39	5.76	7.25	6.69	9.11	7.62	5.95	2.23	6.51	18.40	6.13	4.09	4.46	2.23	2.97	5.20	.00		
(2)	1.37	1.47	1.85	1.70	2.32	1.94	1.52	.57	1.66	4.69	1.56	1.04	1.14	.57	.76	1.33	.00		

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD

C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM APR99-JUN99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS E				CLASS FREQUENCY (PERCENT) = 31.82											
SPEED(MPH)	N	NNE	NE	ENE	WIND DIRECTION FROM						SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
					E	ESE	SE	SSE	S	SSW									
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	1	1	1	1	2	1	1	1	0	1	1	2	1	1	1	0	0	16	
(1)	.15	.15	.15	.15	.30	.15	.15	.15	.00	.15	.15	.30	.15	.15	.15	.00	.00	2.38	
(2)	.05	.05	.05	.05	.09	.05	.05	.05	.00	.05	.05	.09	.05	.05	.05	.00	.00	.76	
4-7	0	12	5	8	12	10	5	7	5	1	4	2	8	1	3	8	0	91	
(1)	.00	1.79	.74	1.19	1.79	1.49	.74	1.04	.74	.15	.60	.30	1.19	.15	.45	1.19	.00	13.54	
(2)	.00	.57	.24	.38	.57	.47	.24	.33	.24	.05	.19	.09	.38	.05	.14	.38	.00	4.31	
8-12	1	3	1	7	4	22	20	5	9	7	3	7	10	7	13	9	0	128	
(1)	.15	.45	.15	1.04	.60	3.27	2.98	.74	1.34	1.04	.45	1.04	1.49	1.04	1.93	1.34	.00	19.05	
(2)	.05	.14	.05	.33	.19	1.04	.95	.24	.43	.33	.14	.33	.47	.33	.62	.43	.00	6.06	
13-18	5	3	5	1	2	10	20	8	17	33	22	40	27	16	18	21	0	248	
(1)	.74	.45	.74	.15	.30	1.49	2.98	1.19	2.53	4.91	3.27	5.95	4.02	2.38	2.68	3.13	.00	36.90	
(2)	.24	.14	.24	.05	.09	.47	.95	.38	.80	1.56	1.04	1.89	1.28	.76	.85	.99	.00	11.74	
19-24	4	0	0	0	1	0	2	3	13	46	27	6	10	9	16	15	0	152	
(1)	.60	.00	.00	.00	.15	.00	.30	.45	1.93	6.85	4.02	.89	1.49	1.34	2.38	2.23	.00	22.62	
(2)	.19	.00	.00	.00	.05	.00	.09	.14	.62	2.18	1.28	.28	.47	.43	.76	.71	.00	7.20	
GT 24	5	0	0	0	0	0	0	0	0	10	5	0	1	2	10	4	0	37	
(1)	.74	.00	.00	.00	.00	.00	.00	.00	.00	1.49	.74	.00	.15	.30	1.49	.60	.00	5.51	
(2)	.24	.00	.00	.00	.00	.00	.00	.00	.00	.47	.24	.00	.05	.09	.47	.19	.00	1.75	
ALL SPEEDS	16	19	12	17	21	43	48	24	44	98	62	57	57	36	61	57	0	672	
(1)	2.38	2.83	1.79	2.53	3.13	6.40	7.14	3.57	6.55	14.58	9.23	8.48	8.48	5.36	9.08	8.48	.00	100.00	
(2)	.76	.90	.57	.80	.99	2.04	2.27	1.14	2.08	4.64	2.94	2.70	2.70	1.70	2.89	2.70	.00	31.82	

220.0 FT WIND DATA				STABILITY CLASS F				CLASS FREQUENCY (PERCENT) = 13.02											
SPEED(MPH)	WIND DIRECTION FROM																VRBL	TOTAL	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	2	0	2	2	3	3	2	1	1	1	1	0	2	1	1	0	22	
(1)	.00	.73	.00	.73	.73	1.09	1.09	.73	.36	.36	.36	.36	.00	.73	.36	.36	.00	8.00	
(2)	.00	.09	.00	.09	.09	.14	.14	.09	.05	.05	.05	.05	.00	.09	.05	.05	.00	1.04	
4-7	1	2	1	1	9	4	7	3	4	3	1	3	3	1	5	6	0	54	
(1)	.36	.73	.36	.36	3.27	1.45	2.55	1.09	1.45	1.09	.36	1.09	1.09	.36	1.82	2.18	.00	19.64	
(2)	.05	.09	.05	.05	.43	.19	.33	.14	.19	.14	.05	.14	.14	.05	.24	.28	.00	2.56	
8-12	2	5	1	0	1	8	8	3	4	7	4	1	3	3	6	11	0	67	
(1)	.73	1.82	.36	.00	.36	2.91	2.91	1.09	1.45	2.55	1.45	.36	1.09	1.09	2.18	4.00	.00	24.36	
(2)	.09	.24	.05	.00	.05	.38	.38	.14	.19	.33	.19	.05	.14	.14	.28	.52	.00	3.17	
13-18	12	0	0	0	1	3	3	2	3	7	8	19	8	10	3	13	0	92	
(1)	4.36	.00	.00	.00	.36	1.09	1.09	.73	1.09	2.55	2.91	6.91	2.91	3.64	1.09	4.73	.00	33.45	
(2)	.57	.00	.00	.00	.05	.14	.14	.09	.14	.33	.38	.90	.38	.47	.14	.62	.00	4.36	
19-24	0	0	0	0	0	0	0	1	0	11	9	5	2	3	5	1	0	37	
(1)	.00	.00	.00	.00	.00	.00	.00	.36	.00	4.00	3.27	1.82	.73	1.09	1.82	.36	.00	13.45	
(2)	.00	.00	.00	.00	.00	.00	.00	.05	.00	.52	.43	.24	.09	.14	.24	.05	.00	1.75	
GT 24	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.09	.00	.00	.00	.00	.00	.00	.00	1.09	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.14	
ALL SPEEDS	15	9	2	3	13	18	21	11	12	32	23	29	16	19	20	32	0	275	
(1)	5.45	3.27	.73	1.09	4.73	6.55	7.64	4.00	4.36	11.64	8.36	10.55	5.82	6.91	7.27	11.64	.00	100.00	
(2)	.71	.43	.09	.14	.62	.85	.99	.52	.57	1.52	1.09	1.37	.76	.90	.95	1.52	.00	13.02	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM APR99-JUN99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS G				CLASS FREQUENCY (PERCENT) = 2.46														
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	WIND DIRECTION FROM						SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL
									S	SSW	SSW	SSW	SSW	SSW								
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	1	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	0	0	5	
(1)	1.92	.00	.00	.00	.00	.00	1.92	.00	.00	.00	1.92	.00	.00	1.92	1.92	.00	.00	.00	.00	.00	9.62	
(2)	.05	.00	.00	.00	.00	.00	.05	.00	.00	.00	.05	.00	.00	.05	.05	.00	.00	.00	.00	.00	.24	
4-7	0	0	0	0	0	0	1	1	1	1	2	2	1	0	0	0	0	0	0	0	9	
(1)	.00	.00	.00	.00	.00	.00	1.92	1.92	1.92	1.92	3.85	3.85	1.92	.00	.00	.00	.00	.00	.00	.00	17.31	
(2)	.00	.00	.00	.00	.00	.00	.05	.05	.05	.05	.09	.09	.05	.00	.00	.00	.00	.00	.00	.00	.43	
8-12	0	0	0	0	0	0	0	0	0	2	3	1	4	2	1	0	0	0	0	0	13	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.85	5.77	1.92	7.69	3.85	1.92	.00	.00	.00	.00	.00	25.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.14	.05	.19	.09	.05	.00	.00	.00	.00	.00	.62	
13-18	0	0	0	0	0	0	0	0	0	1	2	6	3	1	1	0	0	0	0	0	14	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.92	3.85	11.54	5.77	1.92	1.92	.00	.00	.00	.00	.00	26.92	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.09	.28	.14	.05	.05	.00	.00	.00	.00	.00	.66	
19-24	0	0	0	0	0	0	0	0	0	3	7	0	0	0	1	0	0	0	0	0	11	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.77	13.46	.00	.00	.00	1.92	.00	.00	.00	.00	.00	21.15	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.33	.00	.00	.00	.05	.00	.00	.00	.00	.00	.52	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	1	0	0	0	0	0	2	1	1	7	15	9	8	4	4	0	0	0	0	0	52	
(1)	1.92	.00	.00	.00	.00	.00	3.85	1.92	1.92	13.46	28.85	17.31	15.38	7.69	7.69	.00	.00	.00	.00	.00	100.00	
(2)	.05	.00	.00	.00	.00	.00	.09	.05	.05	.33	.71	.43	.38	.19	.19	.00	.00	.00	.00	.00	2.46	

220.0 FT WIND DATA				STABILITY CLASS ALL				CLASS FREQUENCY (PERCENT) = 100.00												
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	WIND DIRECTION FROM				SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL
									S	SSW										
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	2	3	3	5	4	5	5	3	3	3	3	4	1	5	4	3	0		56	
(1)	.09	.14	.14	.24	.19	.24	.24	.14	.14	.14	.14	.19	.05	.24	.19	.14	.00	2.65		
(2)	.09	.14	.14	.24	.19	.24	.24	.14	.14	.14	.14	.19	.05	.24	.19	.14	.00	2.65		
4-7	4	43	31	38	58	24	22	13	13	8	10	14	19	6	15	23	0		341	
(1)	.19	2.04	1.47	1.80	2.75	1.14	1.04	.62	.62	.38	.47	.66	.90	.28	.71	1.09	.00	16.15		
(2)	.19	2.04	1.47	1.80	2.75	1.14	1.04	.62	.62	.38	.47	.66	.90	.28	.71	1.09	.00	16.15		
8-12	15	31	15	27	38	78	59	26	27	33	24	26	36	23	27	29	0		514	
(1)	.71	1.47	.71	1.28	1.80	3.69	2.79	1.23	1.28	1.56	1.14	1.23	1.70	1.09	1.28	1.37	.00	24.34		
(2)	.71	1.47	.71	1.28	1.80	3.69	2.79	1.23	1.28	1.56	1.14	1.23	1.70	1.09	1.28	1.37	.00	24.34		
13-18	32	32	39	14	24	31	44	14	72	117	54	82	54	38	27	50	0		724	
(1)	1.52	1.52	1.85	.66	1.14	1.47	2.08	.66	3.41	5.54	2.56	3.88	2.56	1.80	1.28	2.37	.00	34.28		
(2)	1.52	1.52	1.85	.66	1.14	1.47	2.08	.66	3.41	5.54	2.56	3.88	2.56	1.80	1.28	2.37	.00	34.28		
19-24	15	9	14	3	9	0	7	4	21	105	60	16	24	13	30	41	0		371	
(1)	.71	.43	.66	.14	.43	.00	.33	.19	.99	4.97	2.84	.76	1.14	.62	1.42	1.94	.00	17.57		
(2)	.71	.43	.66	.14	.43	.00	.33	.19	.99	4.97	2.84	.76	1.14	.62	1.42	1.94	.00	17.57		
GT 24	22	0	0	0	2	0	0	0	1	21	13	0	6	4	20	17	0		106	
(1)	1.04	.00	.00	.00	.09	.00	.00	.00	.05	.99	.62	.00	.28	.19	.95	.80	.00	5.02		
(2)	1.04	.00	.00	.00	.09	.00	.00	.00	.05	.99	.62	.00	.28	.19	.95	.80	.00	5.02		
ALL SPEEDS	90	118	102	87	135	138	137	60	137	287	164	142	140	89	123	163	0		2112	
(1)	4.26	5.59	4.83	4.12	6.39	6.53	6.49	2.84	6.49	13.59	7.77	6.72	6.63	4.21	5.82	7.72	.00	100.00		
(2)	4.26	5.59	4.83	4.12	6.39	6.53	6.49	2.84	6.49	13.59	7.77	6.72	6.63	4.21	5.82	7.72	.00	100.00		

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 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM JUL99-SEP99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS A				CLASS FREQUENCY (PERCENT) = 14.39											
SPEED(MPH)	WIND DIRECTION FROM																	TOTAL	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	
(1)	.00	.35	.00	.00	.00	.00	.00	.00	.00	.35	.00	.00	.00	.00	.00	.00	.00	.70	
(2)	.00	.05	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.10	
4-7	2	13	3	9	3	1	2	0	2	1	0	4	3	3	2	3	0	51	
(1)	.70	4.56	1.05	3.16	1.05	.35	.70	.00	.70	.35	.00	1.40	1.05	1.05	.70	1.05	.00	17.89	
(2)	.10	.66	.15	.45	.15	.05	.10	.00	.10	.05	.00	.20	.15	.15	.10	.15	.00	2.58	
8-12	1	9	5	8	21	12	6	4	8	14	6	2	4	5	6	3	0	114	
(1)	.35	3.16	1.75	2.81	7.37	4.21	2.11	1.40	2.81	4.91	2.11	.70	1.40	1.75	2.11	1.05	.00	40.00	
(2)	.05	.45	.25	.40	1.06	.61	.30	.20	.40	.71	.30	.10	.20	.25	.30	.15	.00	5.76	
13-18	0	2	0	1	2	17	1	5	11	16	4	9	13	6	4	4	0	95	
(1)	.00	.70	.00	.35	.70	5.96	.35	1.75	3.86	5.61	1.40	3.16	4.56	2.11	1.40	1.40	.00	33.33	
(2)	.00	.10	.00	.05	.10	.86	.05	.25	.56	.81	.20	.45	.66	.30	.20	.20	.00	4.80	
19-24	0	0	1	0	0	0	0	0	7	2	0	3	2	2	0	0	0	17	
(1)	.00	.00	.35	.00	.00	.00	.00	.00	2.46	.70	.00	1.05	.70	.70	.00	.00	.00	5.96	
(2)	.00	.00	.05	.00	.00	.00	.00	.00	.35	.10	.00	.15	.10	.10	.00	.00	.00	.86	
GT 24	0	0	0	0	0	0	0	0	0	4	0	1	1	0	0	0	0	6	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.40	.00	.35	.35	.00	.00	.00	.00	2.11	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00	.05	.05	.00	.00	.00	.00	.30	
ALL SPEEDS	3	25	9	18	26	30	9	9	28	38	10	19	23	16	12	10	0	285	
(1)	1.05	8.77	3.16	6.32	9.12	10.53	3.16	3.16	9.82	13.33	3.51	6.67	8.07	5.61	4.21	3.51	.00	100.00	
(2)	.15	1.26	.45	.91	1.31	1.52	.45	.45	1.41	1.92	.51	.96	1.16	.81	.61	.51	.00	14.39	

220.0 FT WIND DATA				STABILITY CLASS B						CLASS FREQUENCY (PERCENT) = 3.54										
SPEED(MPH)	N	NNE	NE	ENE	WIND DIRECTION FROM											VRBL	TOTAL			
					E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW					
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2		
(1)	.00	.00	.00	.00	.00	.00	.00	1.43	.00	.00	.00	1.43	.00	.00	.00	.00	.00	2.86		
(2)	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.05	.00	.00	.00	.00	.00	.10		
4-7	0	1	0	3	1	0	0	0	1	0	0	1	0	3	2	0	0	12		
(1)	.00	1.43	.00	4.29	1.43	.00	.00	.00	1.43	.00	.00	1.43	.00	4.29	2.86	.00	.00	17.14		
(2)	.00	.05	.00	.15	.05	.00	.00	.00	.05	.00	.00	.05	.00	.15	.10	.00	.00	.61		
8-12	0	0	0	1	5	5	3	0	2	1	4	3	0	0	1	0	0	25		
(1)	.00	.00	.00	1.43	7.14	7.14	4.29	.00	2.86	1.43	5.71	4.29	.00	.00	1.43	.00	.00	35.71		
(2)	.00	.00	.00	.05	.25	.25	.15	.00	.10	.05	.20	.15	.00	.00	.05	.00	.00	1.26		
13-18	0	1	0	0	0	1	1	4	6	4	0	3	3	0	0	0	0	23		
(1)	.00	1.43	.00	.00	.00	1.43	1.43	5.71	8.57	5.71	.00	4.29	4.29	.00	.00	.00	.00	32.86		
(2)	.00	.05	.00	.00	.00	.05	.05	.20	.30	.20	.00	.15	.15	.00	.00	.00	.00	1.16		
19-24	0	0	0	0	0	0	0	0	3	1	0	0	2	0	0	0	0	6		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	4.29	1.43	.00	.00	2.86	.00	.00	.00	.00	8.57		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.15	.05	.00	.00	.10	.00	.00	.00	.00	.30		
GT 24	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.86	.00	.00	.00	.00	.00	.00	2.86		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.10		
ALL SPEEDS	0	2	0	4	6	6	4	5	12	6	6	8	5	3	3	0	0	70		
(1)	.00	2.86	.00	5.71	8.57	8.57	5.71	7.14	17.14	8.57	8.57	11.43	7.14	4.29	4.29	.00	.00	100.00		
(2)	.00	.10	.00	.20	.30	.30	.20	.25	.61	.30	.30	.40	.25	.15	.15	.00	.00	3.54		

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 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM JUL99-SEP99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS C				CLASS FREQUENCY (PERCENT) = 2.98											
				WIND DIRECTION FROM															
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.69	.00	.00	1.69	.00	.00	.00	.00	3.39	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.05	.00	.00	.00	.00	.10	
4-7	0	1	0	0	1	0	1	0	3	0	0	1	4	1	0	0	0	12	
(1)	.00	1.69	.00	.00	1.69	.00	1.69	.00	5.08	.00	.00	1.69	6.78	1.69	.00	.00	.00	20.34	
(2)	.00	.05	.00	.00	.05	.00	.05	.00	.15	.00	.00	.05	.20	.05	.00	.00	.00	.61	
8-12	0	0	1	0	4	3	1	0	1	0	2	1	2	0	0	0	0	15	
(1)	.00	.00	1.69	.00	6.78	5.08	1.69	.00	1.69	.00	3.39	1.69	3.39	.00	.00	.00	.00	25.42	
(2)	.00	.00	.05	.00	.20	.15	.05	.00	.05	.00	.10	.05	.10	.00	.00	.00	.00	.76	
13-18	0	0	0	0	2	0	0	0	10	5	1	3	0	0	0	0	0	21	
(1)	.00	.00	.00	.00	3.39	.00	.00	.00	16.95	8.47	1.69	5.08	.00	.00	.00	.00	.00	35.59	
(2)	.00	.00	.00	.00	.10	.00	.00	.00	.51	.25	.05	.15	.00	.00	.00	.00	.00	1.06	
19-24	0	0	0	0	0	0	0	0	3	2	1	0	0	1	0	0	0	7	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	5.08	3.39	1.69	.00	.00	1.69	.00	.00	.00	11.86	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.15	.10	.05	.00	.00	.05	.00	.00	.00	.35	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.69	1.69	.00	.00	.00	3.39	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.05	.00	.00	.00	.10	
ALL SPEEDS	0	1	1	0	7	3	2	0	17	8	4	5	8	3	0	0	0	59	
(1)	.00	1.69	1.69	.00	11.86	5.08	3.39	.00	28.81	13.56	6.78	8.47	13.56	5.08	.00	.00	.00	100.00	
(2)	.00	.05	.05	.00	.35	.15	.10	.00	.86	.40	.20	.25	.40	.15	.00	.00	.00	2.98	

220.0 FT WIND DATA				STABILITY CLASS D				CLASS FREQUENCY (PERCENT) = 22.73													
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	WIND DIRECTION FROM						SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL
								SSE	S	SSW	SSW	SSW	SSW								
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	2	0	2	1	2	0	1	0	0	2	0	0	0	0	0	0	0	0	10	
(1)	.00	.44	.00	.44	.22	.44	.00	.22	.00	.00	.44	.00	.00	.00	.00	.00	.00	.00	.00	2.22	
(2)	.00	.10	.00	.10	.05	.10	.00	.05	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.51	
4-7	1	8	3	10	10	4	0	2	6	1	4	3	1	2	1	2	0	0	0	58	
(1)	.22	1.78	.67	2.22	2.22	.89	.00	.44	1.33	.22	.89	.67	.22	.44	.22	.44	.00	.00	.00	12.89	
(2)	.05	.40	.15	.51	.51	.20	.00	.10	.30	.05	.20	.15	.05	.10	.05	.10	.00	.00	.00	2.93	
8-12	1	1	1	2	13	28	16	18	20	11	9	3	6	2	1	3	0	0	0	135	
(1)	.22	.22	.22	.44	2.89	6.22	3.56	4.00	4.44	2.44	2.00	.67	1.33	.44	.22	.67	.00	.00	.00	30.00	
(2)	.05	.05	.05	.10	.66	1.41	.81	.91	1.01	.56	.45	.15	.30	.10	.05	.15	.00	.00	.00	6.82	
13-18	0	4	2	1	3	3	5	22	43	42	15	14	5	0	2	0	0	0	0	161	
(1)	.00	.89	.44	.22	.67	.67	1.11	4.89	9.56	9.33	3.33	3.11	1.11	.00	.44	.00	.00	.00	.00	35.78	
(2)	.00	.20	.10	.05	.15	.15	.25	1.11	2.17	2.12	.76	.71	.25	.00	.10	.00	.00	.00	.00	8.13	
19-24	2	2	2	1	0	0	4	0	27	27	0	1	6	2	1	0	0	0	0	75	
(1)	.44	.44	.44	.22	.00	.00	.89	.00	6.00	6.00	.00	.22	1.33	.44	.22	.00	.00	.00	.00	16.67	
(2)	.10	.10	.10	.05	.00	.00	.20	.00	1.36	1.36	.00	.05	.30	.10	.05	.00	.00	.00	.00	3.79	
GT 24	0	0	0	0	0	0	1	1	0	3	0	0	3	3	0	0	0	0	0	11	
(1)	.00	.00	.00	.00	.00	.00	.22	.22	.00	.67	.00	.00	.67	.67	.00	.00	.00	.00	.00	2.44	
(2)	.00	.00	.00	.00	.00	.00	.05	.05	.00	.15	.00	.00	.15	.15	.00	.00	.00	.00	.00	.56	
ALL SPEEDS	4	17	8	16	27	37	26	44	96	84	30	21	21	9	5	5	0	0	0	450	
(1)	.89	3.78	1.78	3.56	6.00	8.22	5.78	9.78	21.33	18.67	6.67	4.67	4.67	2.00	1.11	1.11	.00	.00	.00	100.00	
(2)	.20	.86	.40	.81	1.36	1.87	1.31	2.22	4.85	4.24	1.52	1.06	1.06	.45	.25	.25	.00	.00	.00	22.73	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM JUL99-SEP99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS E				CLASS FREQUENCY (PERCENT) = 39.24											
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM										VRBL	TOTAL	
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	2	1	2	8	2	5	4	2	1	0	3	2	1	0	0	0	33	
(1)	.00	.26	.13	.26	1.03	.26	.64	.51	.26	.13	.00	.39	.26	.13	.00	.00	.00	4.25	
(2)	.00	.10	.05	.10	.40	.10	.25	.20	.10	.05	.00	.15	.10	.05	.00	.00	.00	1.67	
4-7	1	10	4	7	20	19	9	5	19	6	1	1	3	2	7	3	0	117	
(1)	.13	1.29	.51	.90	2.57	2.45	1.16	.64	2.45	.77	.13	.13	.39	.26	.90	.39	.00	15.06	
(2)	.05	.51	.20	.35	1.01	.96	.45	.25	.96	.30	.05	.05	.15	.10	.35	.15	.00	5.91	
8-12	3	5	1	3	19	27	22	23	22	7	5	8	5	8	5	3	0	166	
(1)	.39	.64	.13	.39	2.45	3.47	2.83	2.96	2.83	.90	.64	1.03	.64	1.03	.64	.39	.00	21.36	
(2)	.15	.25	.05	.15	.96	1.36	1.11	1.16	1.11	.35	.25	.40	.25	.40	.25	.15	.00	8.38	
13-18	4	7	2	1	3	3	25	24	76	39	16	24	23	11	16	6	0	280	
(1)	.51	.90	.26	.13	.39	.39	3.22	3.09	9.78	5.02	2.06	3.09	2.96	1.42	2.06	.77	.00	36.04	
(2)	.20	.35	.10	.05	.15	.15	1.26	1.21	3.84	1.97	.81	1.21	1.16	.56	.81	.30	.00	14.14	
19-24	1	3	0	3	2	1	4	6	16	46	9	15	21	6	19	9	0	161	
(1)	.13	.39	.00	.39	.26	.13	.51	.77	2.06	5.92	1.16	1.93	2.70	.77	2.45	1.16	.00	20.72	
(2)	.05	.15	.00	.15	.10	.05	.20	.30	.81	2.32	.45	.76	1.06	.30	.96	.45	.00	8.13	
GT 24	2	0	0	3	0	1	1	0	0	3	1	0	4	2	2	1	0	20	
(1)	.26	.00	.00	.39	.00	.13	.13	.00	.00	.39	.13	.00	.51	.26	.26	.13	.00	2.57	
(2)	.10	.00	.00	.15	.00	.05	.05	.00	.00	.15	.05	.00	.20	.10	.10	.05	.00	1.01	
ALL SPEEDS	11	27	8	19	52	53	66	62	135	102	32	51	58	30	49	22	0	777	
(1)	1.42	3.47	1.03	2.45	6.69	6.82	8.49	7.98	17.37	13.13	4.12	6.56	7.46	3.86	6.31	2.83	.00	100.00	
(2)	.56	1.36	.40	.96	2.63	2.68	3.33	3.13	6.82	5.15	1.62	2.58	2.93	1.52	2.47	1.11	.00	39.24	

220.0 FT WIND DATA				STABILITY CLASS F				CLASS FREQUENCY (PERCENT) = 13.08											
WIND DIRECTION FROM																			
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	1	0	1	5	3	1	0	0	0	0	1	1	0	0	0	0	13	
(1)	.00	.39	.00	.39	1.93	1.16	.39	.00	.00	.00	.00	.39	.39	.00	.00	.00	.00	5.02	
(2)	.00	.05	.00	.05	.25	.15	.05	.00	.00	.00	.00	.05	.05	.00	.00	.00	.00	.66	
4-7	0	3	0	3	1	7	5	3	3	1	6	2	2	1	7	1	0	45	
(1)	.00	1.16	.00	1.16	.39	2.70	1.93	1.16	1.16	.39	2.32	.77	.77	.39	2.70	.39	.00	17.37	
(2)	.00	.15	.00	.15	.05	.35	.25	.15	.15	.05	.30	.10	.10	.05	.35	.05	.00	2.27	
8-12	0	0	0	0	3	8	8	5	4	6	1	7	5	4	4	0	0	55	
(1)	.00	.00	.00	.00	1.16	3.09	3.09	1.93	1.54	2.32	.39	2.70	1.93	1.54	1.54	.00	.00	21.24	
(2)	.00	.00	.00	.00	.15	.40	.40	.25	.20	.30	.05	.35	.25	.20	.20	.00	.00	2.78	
13-18	0	0	0	0	0	4	14	7	9	15	12	25	11	2	2	1	0	102	
(1)	.00	.00	.00	.00	.00	1.54	5.41	2.70	3.47	5.79	4.63	9.65	4.25	.77	.77	.39	.00	39.38	
(2)	.00	.00	.00	.00	.00	.20	.71	.35	.45	.76	.61	1.26	.56	.10	.10	.05	.00	5.15	
19-24	0	0	0	0	0	0	1	0	3	20	9	1	0	1	4	0	0	39	
(1)	.00	.00	.00	.00	.00	.00	.39	.00	1.16	7.72	3.47	.39	.00	.39	1.54	.00	.00	15.06	
(2)	.00	.00	.00	.00	.00	.00	.05	.00	.15	1.01	.45	.05	.00	.05	.20	.00	.00	1.97	
GT 24	0	0	0	0	0	1	0	0	0	1	1	0	0	1	1	0	0	5	
(1)	.00	.00	.00	.00	.00	.39	.00	.00	.00	.39	.39	.00	.00	.39	.39	.00	.00	1.93	
(2)	.00	.00	.00	.00	.00	.05	.00	.00	.00	.05	.05	.00	.00	.05	.05	.00	.00	.25	
ALL SPEEDS	0	4	0	4	9	23	29	15	19	43	29	36	19	9	18	2	0	259	
(1)	.00	1.54	.00	1.54	3.47	8.88	11.20	5.79	7.34	16.60	11.20	13.90	7.34	3.47	6.95	.77	.00	100.00	
(2)	.00	.20	.00	.20	.45	1.16	1.46	.76	.96	2.17	1.46	1.82	.96	.45	.91	.10	.00	13.08	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM JUL99-SEP99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS G				CLASS FREQUENCY (PERCENT) = 4.04											
				WIND DIRECTION FROM															
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	0	1	0	3	2	0	1	0	1	0	0	0	0	0	0	0	8	
(1)	.00	.00	1.25	.00	3.75	2.50	.00	1.25	.00	1.25	.00	.00	.00	.00	.00	.00	.00	10.00	
(2)	.00	.00	.05	.00	.15	.10	.00	.05	.00	.05	.00	.00	.00	.00	.00	.00	.00	.40	
4-7	0	1	0	0	3	4	4	2	3	2	0	2	3	0	3	2	0	29	
(1)	.00	1.25	.00	.00	3.75	5.00	5.00	2.50	3.75	2.50	.00	2.50	3.75	.00	3.75	2.50	.00	36.25	
(2)	.00	.05	.00	.00	.15	.20	.20	.10	.15	.10	.00	.10	.15	.00	.15	.10	.00	1.46	
8-12	1	0	0	0	1	0	0	1	1	5	6	0	1	0	3	0	0	19	
(1)	1.25	.00	.00	.00	1.25	.00	.00	1.25	1.25	6.25	7.50	.00	1.25	.00	3.75	.00	.00	23.75	
(2)	.05	.00	.00	.00	.05	.00	.00	.05	.05	.25	.30	.00	.05	.00	.15	.00	.00	.96	
13-18	0	0	0	0	0	0	0	0	1	6	2	1	6	0	0	0	0	16	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	1.25	7.50	2.50	1.25	7.50	.00	.00	.00	.00	20.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.05	.30	.10	.05	.30	.00	.00	.00	.00	.81	
19-24	0	0	0	0	0	0	0	1	1	4	0	0	0	0	1	0	0	7	
(1)	.00	.00	.00	.00	.00	.00	.00	1.25	1.25	5.00	.00	.00	.00	.00	1.25	.00	.00	8.75	
(2)	.00	.00	.00	.00	.00	.00	.00	.05	.05	.20	.00	.00	.00	.00	.05	.00	.00	.35	
GT 24	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.25	.00	.00	.00	.00	.00	.00	1.25	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.05	
ALL SPEEDS	1	1	1	0	7	6	4	5	6	18	9	3	10	0	7	2	0	80	
(1)	1.25	1.25	1.25	.00	8.75	7.50	5.00	6.25	7.50	22.50	11.25	3.75	12.50	.00	8.75	2.50	.00	100.00	
(2)	.05	.05	.05	.00	.35	.30	.20	.25	.30	.91	.45	.15	.51	.00	.35	.10	.00	4.04	

220.0 FT WIND DATA				STABILITY CLASS ALL				CLASS FREQUENCY (PERCENT) = 100.00											
WIND DIRECTION FROM																			
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	6	2	5	17	9	6	7	2	4	2	5	4	1	0	0	0	70	
(1)	.00	.30	.10	.25	.86	.45	.30	.35	.10	.20	.10	.25	.20	.05	.00	.00	.00	3.54	
(2)	.00	.30	.10	.25	.86	.45	.30	.35	.10	.20	.10	.25	.20	.05	.00	.00	.00	3.54	
4-7	4	37	10	32	39	35	21	12	37	11	11	14	16	12	22	11	0	324	
(1)	.20	1.87	.51	1.62	1.97	1.77	1.06	.61	1.87	.56	.56	.71	.81	.61	1.11	.56	.00	16.36	
(2)	.20	1.87	.51	1.62	1.97	1.77	1.06	.61	1.87	.56	.56	.71	.81	.61	1.11	.56	.00	16.36	
8-12	6	15	8	14	66	83	56	51	58	44	33	24	23	19	20	9	0	529	
(1)	.30	.76	.40	.71	3.33	4.19	2.83	2.58	2.93	2.22	1.67	1.21	1.16	.96	1.01	.45	.00	26.72	
(2)	.30	.76	.40	.71	3.33	4.19	2.83	2.58	2.93	2.22	1.67	1.21	1.16	.96	1.01	.45	.00	26.72	
13-18	4	14	4	3	10	28	46	62	156	127	50	79	61	19	24	11	0	698	
(1)	.20	.71	.20	.15	.51	1.41	2.32	3.13	7.88	6.41	2.53	3.99	3.08	.96	1.21	.56	.00	35.25	
(2)	.20	.71	.20	.15	.51	1.41	2.32	3.13	7.88	6.41	2.53	3.99	3.08	.96	1.21	.56	.00	35.25	
19-24	3	5	3	4	2	1	9	7	60	102	19	20	31	12	25	9	0	312	
(1)	.15	.25	.15	.20	.10	.05	.45	.35	3.03	5.15	.96	1.01	1.57	.61	1.26	.45	.00	15.76	
(2)	.15	.25	.15	.20	.10	.05	.45	.35	3.03	5.15	.96	1.01	1.57	.61	1.26	.45	.00	15.76	
GT 24	2	0	0	3	0	2	2	1	0	11	5	1	9	7	3	1	0	47	
(1)	.10	.00	.00	.15	.00	.10	.10	.05	.00	.56	.25	.05	.45	.35	.15	.05	.00	2.37	
(2)	.10	.00	.00	.15	.00	.10	.10	.05	.00	.56	.25	.05	.45	.35	.15	.05	.00	2.37	
ALL SPEEDS	19	77	27	61	134	158	140	140	313	299	120	143	144	70	94	41	0	1980	
(1)	.96	3.89	1.36	3.08	6.77	7.98	7.07	7.07	15.81	15.10	6.06	7.22	7.27	3.54	4.75	2.07	.00	100.00	
(2)	.96	3.89	1.36	3.08	6.77	7.98	7.07	7.07	15.81	15.10	6.06	7.22	7.27	3.54	4.75	2.07	.00	100.00	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD

C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM OCT99-DEC99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS A						CLASS FREQUENCY (PERCENT) = 17.20										
SPEED(MPH)	N	NNE	NE	ENE	WIND DIRECTION FROM										VRBL	TOTAL				
					E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW			NW	NNW		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
(1)	.00	.00	.00	.00	.00	.33	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.33		
(2)	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06		
4-7	1	0	3	5	4	1	2	0	1	1	2	3	7	6	1	1	0	38		
(1)	.33	.00	1.00	1.67	1.33	.33	.67	.00	.33	.33	.67	1.00	2.33	2.00	.33	.33	.00	12.67		
(2)	.06	.00	.17	.29	.23	.06	.11	.00	.06	.06	.11	.17	.40	.34	.06	.06	.00	2.18		
8-12	1	0	6	4	4	1	1	5	5	7	8	1	17	12	9	1	0	82		
(1)	.33	.00	2.00	1.33	1.33	.33	.33	1.67	1.67	2.33	2.67	.33	5.67	4.00	3.00	.33	.00	27.33		
(2)	.06	.00	.34	.23	.23	.06	.06	.29	.29	.40	.46	.06	.97	.69	.52	.06	.00	4.70		
13-18	0	2	0	1	7	12	0	2	5	9	9	10	20	14	6	2	0	99		
(1)	.00	.67	.00	.33	2.33	4.00	.00	.67	1.67	3.00	3.00	3.33	6.67	4.67	2.00	.67	.00	33.00		
(2)	.00	.11	.00	.06	.40	.69	.00	.11	.29	.52	.52	.57	1.15	.80	.34	.11	.00	5.68		
19-24	0	1	0	0	6	0	1	3	8	12	4	2	9	10	3	0	0	59		
(1)	.00	.33	.00	.00	2.00	.00	.33	1.00	2.67	4.00	1.33	.67	3.00	3.33	1.00	.00	.00	19.67		
(2)	.00	.06	.00	.00	.34	.00	.06	.17	.46	.69	.23	.11	.52	.57	.17	.00	.00	3.38		
GT 24	0	0	0	0	0	1	5	1	0	0	0	0	8	6	0	0	0	21		
(1)	.00	.00	.00	.00	.00	.33	1.67	.33	.00	.00	.00	.00	2.67	2.00	.00	.00	.00	7.00		
(2)	.00	.00	.00	.00	.00	.06	.29	.06	.00	.00	.00	.00	.46	.34	.00	.00	.00	1.20		
ALL SPEEDS	2	3	9	10	21	16	9	11	19	29	23	16	61	48	19	4	0	300		
(1)	.67	1.00	3.00	3.33	7.00	5.33	3.00	3.67	6.33	9.67	7.67	5.33	20.33	16.00	6.33	1.33	.00	100.00		
(2)	.11	.17	.52	.57	1.20	.92	.52	.63	1.09	1.66	1.32	.92	3.50	2.75	1.09	.23	.00	17.20		

220.0 FT WIND DATA				STABILITY CLASS B				CLASS FREQUENCY (PERCENT) = 4.30											
SPEED(MPH)	N	WIND DIRECTION FROM																VRBL	TOTAL
		NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	
(1)	1.33	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.33	.00	.00	2.67	
(2)	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	.11	
4-7	0	1	2	2	1	0	0	0	0	0	0	2	1	0	1	0	0	10	
(1)	.00	1.33	2.67	2.67	1.33	.00	.00	.00	.00	.00	.00	2.67	1.33	.00	1.33	.00	.00	13.33	
(2)	.00	.06	.11	.11	.06	.00	.00	.00	.00	.00	.00	.11	.06	.00	.06	.00	.00	.57	
8-12	0	0	0	1	4	1	1	2	0	1	1	0	2	2	0	0	0	15	
(1)	.00	.00	.00	1.33	5.33	1.33	1.33	2.67	.00	1.33	1.33	.00	2.67	2.67	.00	.00	.00	20.00	
(2)	.00	.00	.00	.06	.23	.06	.06	.11	.00	.06	.06	.00	.11	.11	.00	.00	.00	.86	
13-18	0	0	0	1	3	2	2	0	1	2	4	1	4	0	1	3	0	24	
(1)	.00	.00	.00	1.33	4.00	2.67	2.67	.00	1.33	2.67	5.33	1.33	5.33	.00	1.33	4.00	.00	32.00	
(2)	.00	.00	.00	.06	.17	.11	.11	.00	.06	.11	.23	.06	.23	.00	.06	.17	.00	1.38	
19-24	0	0	0	1	0	0	2	2	3	4	1	0	3	1	0	0	0	17	
(1)	.00	.00	.00	1.33	.00	.00	2.67	2.67	4.00	5.33	1.33	.00	4.00	1.33	.00	.00	.00	22.67	
(2)	.00	.00	.00	.06	.00	.00	.11	.11	.17	.23	.06	.00	.17	.06	.00	.00	.00	.97	
GT 24	0	0	2	1	1	0	0	0	0	0	0	0	1	2	0	0	0	7	
(1)	.00	.00	2.67	1.33	1.33	.00	.00	.00	.00	.00	.00	.00	1.33	2.67	.00	.00	.00	9.33	
(2)	.00	.00	.11	.06	.06	.00	.00	.00	.00	.00	.00	.00	.06	.11	.00	.00	.00	.40	
ALL SPEEDS	1	1	4	6	9	3	5	4	4	7	6	3	11	5	3	3	0	75	
(1)	1.33	1.33	5.33	8.00	12.00	4.00	6.67	5.33	5.33	9.33	8.00	4.00	14.67	6.67	4.00	4.00	.00	100.00	
(2)	.06	.06	.23	.34	.52	.17	.29	.23	.23	.40	.34	.17	.63	.29	.17	.17	.00	4.30	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
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 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM OCT99-DEC99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS C				CLASS FREQUENCY (PERCENT) = 3.15										TOTAL
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
(1)	.00	.00	1.82	.00	1.82	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.64
(2)	.00	.00	.06	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11
4-7	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
(1)	.00	1.82	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.82	.00	.00	.00	3.64
(2)	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	.11
8-12	0	1	0	0	1	0	0	1	3	4	1	0	2	1	0	0	0	14
(1)	.00	1.82	.00	.00	1.82	.00	.00	1.82	5.45	7.27	1.82	.00	3.64	1.82	.00	.00	.00	25.45
(2)	.00	.06	.00	.00	.06	.00	.00	.06	.17	.23	.06	.00	.11	.06	.00	.00	.00	.80
13-18	0	1	0	0	0	1	0	1	4	2	2	0	3	1	0	0	0	15
(1)	.00	1.82	.00	.00	.00	1.82	.00	1.82	7.27	3.64	3.64	.00	5.45	1.82	.00	.00	.00	27.27
(2)	.00	.06	.00	.00	.00	.06	.00	.06	.23	.11	.11	.00	.17	.06	.00	.00	.00	.86
19-24	0	2	0	0	0	0	1	2	2	4	1	0	0	3	0	0	0	15
(1)	.00	3.64	.00	.00	.00	.00	1.82	3.64	3.64	7.27	1.82	.00	.00	5.45	.00	.00	.00	27.27
(2)	.00	.11	.00	.00	.00	.00	.06	.11	.11	.23	.06	.00	.00	.17	.00	.00	.00	.86
GT 24	0	0	2	0	0	1	0	0	0	0	1	0	2	1	0	0	0	7
(1)	.00	.00	3.64	.00	.00	1.82	.00	.00	.00	.00	1.82	.00	3.64	1.82	.00	.00	.00	12.73
(2)	.00	.00	.11	.00	.00	.06	.00	.00	.00	.00	.06	.00	.11	.06	.00	.00	.00	.40
ALL SPEEDS	0	5	3	0	2	2	1	4	9	10	5	0	7	7	0	0	0	55
(1)	.00	9.09	5.45	.00	3.64	3.64	1.82	7.27	16.36	18.18	9.09	.00	12.73	12.73	.00	.00	.00	100.00
(2)	.00	.29	.17	.00	.11	.11	.06	.23	.52	.57	.29	.00	.40	.40	.00	.00	.00	3.15

220.0 FT WIND DATA				STABILITY CLASS D				CLASS FREQUENCY (PERCENT) = 24.25										TOTAL
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4
(1)	.00	.00	.00	.00	.00	.00	.00	.47	.47	.00	.00	.00	.00	.00	.00	.00	.00	.95
(2)	.00	.00	.00	.00	.00	.00	.00	.11	.11	.00	.00	.00	.00	.00	.00	.00	.00	.23
4-7	0	0	1	0	1	0	2	2	3	4	0	2	0	1	0	0	0	16
(1)	.00	.00	.24	.00	.24	.00	.47	.47	.71	.95	.00	.47	.00	.24	.00	.00	.00	3.78
(2)	.00	.00	.06	.00	.06	.00	.11	.11	.17	.23	.00	.11	.00	.06	.00	.00	.00	.92
8-12	1	4	1	4	3	2	2	4	11	11	11	7	4	5	2	0	0	72
(1)	.24	.95	.24	.95	.71	.47	.47	.95	2.60	2.60	2.60	1.65	.95	1.18	.47	.00	.00	17.02
(2)	.06	.23	.06	.23	.17	.11	.11	.23	.63	.63	.63	.40	.23	.29	.11	.00	.00	4.13
13-18	4	6	2	3	6	1	3	5	17	34	7	12	22	5	7	5	0	139
(1)	.95	1.42	.47	.71	1.42	.24	.71	1.18	4.02	8.04	1.65	2.84	5.20	1.18	1.65	1.18	.00	32.86
(2)	.23	.34	.11	.17	.34	.06	.17	.29	.97	1.95	.40	.69	1.26	.29	.40	.29	.00	7.97
19-24	4	4	0	7	4	0	7	9	19	6	5	4	15	17	15	2	0	118
(1)	.95	.95	.00	1.65	.95	.00	1.65	2.13	4.49	1.42	1.18	.95	3.55	4.02	3.55	.47	.00	27.90
(2)	.23	.23	.00	.40	.23	.00	.40	.52	1.09	.34	.29	.23	.86	.97	.86	.11	.00	6.77
GT 24	1	0	0	13	1	7	2	1	0	0	1	0	16	15	16	1	0	74
(1)	.24	.00	.00	3.07	.24	1.65	.47	.24	.00	.00	.24	.00	3.78	3.55	3.78	.24	.00	17.49
(2)	.06	.00	.00	.75	.06	.40	.11	.06	.00	.00	.06	.00	.92	.86	.92	.06	.00	4.24
ALL SPEEDS	10	14	4	27	15	10	16	23	52	55	24	25	57	43	40	8	0	423
(1)	2.36	3.31	.95	6.38	3.55	2.36	3.78	5.44	12.29	13.00	5.67	5.91	13.48	10.17	9.46	1.89	.00	100.00
(2)	.57	.80	.23	1.55	.86	.57	.92	1.32	2.98	3.15	1.38	1.43	3.27	2.47	2.29	.46	.00	24.25

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD

C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM OCT99-DEC99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS E					CLASS FREQUENCY (PERCENT) = 37.04											
SPEED(MPH)	N	NNE	NE	ENE	WIND DIRECTION FROM										VRBL	TOTAL				
					E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW			NW	NNW		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
C-3	0	0	0	0	1	0	0	2	0	0	0	0	1	0	0	0	0	4		
(1)	.00	.00	.00	.00	.15	.00	.00	.31	.00	.00	.00	.00	.15	.00	.00	.00	.00	.62		
(2)	.00	.00	.00	.00	.06	.00	.00	.11	.00	.00	.00	.00	.06	.00	.00	.00	.00	.23		
4-7	0	3	0	2	2	3	3	0	1	5	1	0	0	2	1	0	0	23		
(1)	.00	.46	.00	.31	.31	.46	.46	.00	.15	.77	.15	.00	.00	.31	.15	.00	.00	3.56		
(2)	.00	.17	.00	.11	.11	.17	.17	.00	.06	.29	.06	.00	.00	.11	.06	.00	.00	1.32		
8-12	0	3	8	7	4	7	4	11	11	15	7	11	15	4	12	7	0	126		
(1)	.00	.46	1.24	1.08	.62	1.08	.62	1.70	1.70	2.32	1.08	1.70	2.32	.62	1.86	1.08	.00	19.50		
(2)	.00	.17	.46	.40	.23	.40	.23	.63	.63	.86	.40	.63	.86	.23	.69	.40	.00	7.22		
13-18	1	1	2	3	3	14	14	22	54	66	41	46	57	23	6	12	0	365		
(1)	.15	.15	.31	.46	.46	2.17	2.17	3.41	8.36	10.22	6.35	7.12	8.82	3.56	.93	1.86	.00	56.50		
(2)	.06	.06	.11	.17	.17	.80	.80	1.26	3.10	3.78	2.35	2.64	3.27	1.32	.34	.69	.00	20.93		
19-24	0	0	1	2	1	1	7	15	13	17	9	12	16	7	3	3	0	107		
(1)	.00	.00	.15	.31	.15	.15	1.08	2.32	2.01	2.63	1.39	1.86	2.48	1.08	.46	.46	.00	16.56		
(2)	.00	.00	.06	.11	.06	.06	.40	.86	.75	.97	.52	.69	.92	.40	.17	.17	.00	6.14		
GT 24	0	0	0	3	0	0	1	2	1	0	3	0	3	3	5	0	0	21		
(1)	.00	.00	.00	.46	.00	.00	.15	.31	.15	.00	.46	.00	.46	.46	.77	.00	.00	3.25		
(2)	.00	.00	.00	.17	.00	.00	.06	.11	.06	.00	.17	.00	.17	.17	.29	.00	.00	1.20		
ALL SPEEDS	1	7	11	17	11	25	29	52	80	103	61	69	92	39	27	22	0	646		
(1)	.15	1.08	1.70	2.63	1.70	3.87	4.49	8.05	12.38	15.94	9.44	10.68	14.24	6.04	4.18	3.41	.00	100.00		
(2)	.06	.40	.63	.97	.63	1.43	1.66	2.98	4.59	5.91	3.50	3.96	5.28	2.24	1.55	1.26	.00	37.04		

220.0 FT WIND DATA				STABILITY CLASS F				CLASS FREQUENCY (PERCENT) = 12.10											
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	WIND DIRECTION FROM										VRBL	TOTAL	
							SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW			
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
C-3	0	1	0	1	1	0	3	0	0	1	0	0	0	1	0	0	0	8	
(1)	.00	.47	.00	.47	.47	.00	1.42	.00	.00	.47	.00	.00	.00	.47	.00	.00	.00	3.79	
(2)	.00	.06	.00	.06	.06	.00	.17	.00	.00	.06	.00	.00	.00	.06	.00	.00	.00	.46	
4-7	1	0	4	3	4	1	2	3	1	2	1	0	1	3	0	2	0	28	
(1)	.47	.00	1.90	1.42	1.90	.47	.95	1.42	.47	.95	.47	.00	.47	1.42	.00	.95	.00	13.27	
(2)	.06	.00	.23	.17	.23	.06	.11	.17	.06	.11	.06	.00	.06	.17	.00	.11	.00	1.61	
8-12	0	0	0	0	1	4	7	2	3	2	1	17	8	3	3	1	0	52	
(1)	.00	.00	.00	.00	.47	1.90	3.32	.95	1.42	.95	.47	8.06	3.79	1.42	1.42	.47	.00	24.64	
(2)	.00	.00	.00	.00	.06	.23	.40	.11	.17	.11	.06	.97	.46	.17	.17	.06	.00	2.98	
13-18	0	0	0	0	0	2	10	13	7	14	13	23	16	4	1	0	0	103	
(1)	.00	.00	.00	.00	.00	.95	4.74	6.16	3.32	6.64	6.16	10.90	7.58	1.90	.47	.00	.00	48.82	
(2)	.00	.00	.00	.00	.00	.11	.57	.75	.40	.80	.75	1.32	.92	.23	.06	.00	.00	5.91	
19-24	0	0	0	0	0	0	5	0	3	2	3	0	3	0	0	0	0	16	
(1)	.00	.00	.00	.00	.00	.00	2.37	.00	1.42	.95	1.42	.00	1.42	.00	.00	.00	.00	7.58	
(2)	.00	.00	.00	.00	.00	.00	.29	.00	.17	.11	.17	.00	.17	.00	.00	.00	.00	.92	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47	1.42	.00	1.90	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.17	.00	.23	
ALL SPEEDS	1	1	4	4	6	7	27	18	14	21	18	40	28	11	5	6	0	211	
(1)	.47	.47	1.90	1.90	2.84	3.32	12.80	8.53	6.64	9.95	8.53	18.96	13.27	5.21	2.37	2.84	.00	100.00	
(2)	.06	.06	.23	.23	.34	.40	1.55	1.03	.80	1.20	1.03	2.29	1.61	.63	.29	.34	.00	12.10	

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

Table A-2 (continued)

PILGRIM OCT99-DEC99 MET DATA JOINT FREQUENCY DISTRIBUTION (220-FOOT TOWER)

220.0 FT WIND DATA				STABILITY CLASS G				CLASS FREQUENCY (PERCENT) = 1.95										TOTAL
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
(1)	.00	.00	2.94	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.94
(2)	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06
4-7	0	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	4
(1)	.00	.00	.00	.00	.00	.00	2.94	.00	2.94	.00	2.94	.00	2.94	.00	.00	.00	.00	11.76
(2)	.00	.00	.00	.00	.00	.00	.06	.00	.06	.00	.06	.00	.06	.00	.00	.00	.00	.23
8-12	0	0	0	0	0	0	1	3	0	0	0	0	4	3	0	0	0	11
(1)	.00	.00	.00	.00	.00	.00	2.94	8.82	.00	.00	.00	.00	11.76	8.82	.00	.00	.00	32.35
(2)	.00	.00	.00	.00	.00	.00	.06	.17	.00	.00	.00	.00	.23	.17	.00	.00	.00	.63
13-18	0	0	0	0	0	0	1	0	0	5	5	2	3	1	0	0	0	17
(1)	.00	.00	.00	.00	.00	.00	2.94	.00	.00	14.71	14.71	5.88	8.82	2.94	.00	.00	.00	50.00
(2)	.00	.00	.00	.00	.00	.00	.06	.00	.00	.29	.29	.11	.17	.06	.00	.00	.00	.97
19-24	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.94	.00	.00	.00	.00	.00	.00	2.94
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.06
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL SPEEDS	0	0	1	0	0	0	3	3	1	5	7	2	8	4	0	0	0	34
(1)	.00	.00	2.94	.00	.00	.00	8.82	8.82	2.94	14.71	20.59	5.88	23.53	11.76	.00	.00	.00	100.00
(2)	.00	.00	.06	.00	.00	.00	.17	.17	.06	.29	.40	.11	.46	.23	.00	.00	.00	1.95

220.0 FT WIND DATA				STABILITY CLASS ALL				CLASS FREQUENCY (PERCENT) = 100.00										TOTAL
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	1	1	2	1	3	1	3	4	2	1	0	0	1	1	1	0	0	22
(1)	.06	.06	.11	.06	.17	.06	.17	.23	.11	.06	.00	.00	.06	.06	.06	.00	.00	1.26
(2)	.06	.06	.11	.06	.17	.06	.17	.23	.11	.06	.00	.00	.06	.06	.06	.00	.00	1.26
4-7	2	5	10	12	12	5	10	5	7	12	5	7	10	13	3	3	0	121
(1)	.11	.29	.57	.69	.69	.29	.57	.29	.40	.69	.29	.40	.57	.75	.17	.17	.00	6.94
(2)	.11	.29	.57	.69	.69	.29	.57	.29	.40	.69	.29	.40	.57	.75	.17	.17	.00	6.94
8-12	2	8	15	16	17	15	16	28	33	40	29	36	52	30	26	9	0	372
(1)	.11	.46	.86	.92	.97	.86	.92	1.61	1.89	2.29	1.66	2.06	2.98	1.72	1.49	.52	.00	21.33
(2)	.11	.46	.86	.92	.97	.86	.92	1.61	1.89	2.29	1.66	2.06	2.98	1.72	1.49	.52	.00	21.33
13-18	5	10	4	8	19	32	30	43	88	132	81	94	125	48	21	22	0	762
(1)	.29	.57	.23	.46	1.09	1.83	1.72	2.47	5.05	7.57	4.64	5.39	7.17	2.75	1.20	1.26	.00	43.69
(2)	.29	.57	.23	.46	1.09	1.83	1.72	2.47	5.05	7.57	4.64	5.39	7.17	2.75	1.20	1.26	.00	43.69
19-24	4	7	1	10	11	1	23	31	48	45	24	18	46	38	21	5	0	333
(1)	.23	.40	.06	.57	.63	.06	1.32	1.78	2.75	2.58	1.38	1.03	2.64	2.18	1.20	.29	.00	19.09
(2)	.23	.40	.06	.57	.63	.06	1.32	1.78	2.75	2.58	1.38	1.03	2.64	2.18	1.20	.29	.00	19.09
GT 24	1	0	4	17	2	9	8	4	1	0	5	0	30	27	22	4	0	134
(1)	.06	.00	.23	.97	.11	.52	.46	.23	.06	.00	.29	.00	1.72	1.55	1.26	.23	.00	7.68
(2)	.06	.00	.23	.97	.11	.52	.46	.23	.06	.00	.29	.00	1.72	1.55	1.26	.23	.00	7.68
ALL SPEEDS	15	31	36	64	64	63	90	115	179	230	144	155	264	157	94	43	0	1744
(1)	.86	1.78	2.06	3.67	3.67	3.61	5.16	6.59	10.26	13.19	8.26	8.89	15.14	9.00	5.39	2.47	.00	100.00
(2)	.86	1.78	2.06	3.67	3.67	3.61	5.16	6.59	10.26	13.19	8.26	8.89	15.14	9.00	5.39	2.47	.00	100.00

(1) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD

C = CALM (WIND SPEED LESS THAN OR EQUAL TO 0.95 MPH)

APPENDIX B

Atmospheric Dispersion and Deposition Factors

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Table B-1
Undepleted χ/Q Factors for Main Stack

PNPS 1ST QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
GROUND-LEVEL AVERAGE CHI/Q BEFORE DEPLETION -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	74	2.805E-10	1.405E-08	1.360E-08	8.951E-09	8.157E-09	8.894E-09	9.527E-09	9.481E-09
NNE	157	2.718E-10	8.269E-09	6.414E-09	6.502E-09	9.164E-09	1.493E-08	1.721E-08	1.724E-08
NE	170	1.820E-10	5.814E-09	7.817E-09	9.002E-09	1.106E-08	1.580E-08	1.783E-08	1.786E-08
ENE	168	4.119E-10	1.728E-08	1.670E-08	1.355E-08	1.338E-08	1.615E-08	1.775E-08	1.773E-08
E	253	9.929E-10	3.256E-08	2.550E-08	1.958E-08	2.057E-08	2.606E-08	2.810E-08	2.748E-08
ESE	246	2.002E-09	5.547E-08	2.951E-08	1.944E-08	1.903E-08	2.231E-08	2.355E-08	2.292E-08
SE	251	2.025E-09	6.511E-08	4.625E-08	3.187E-08	3.162E-08	3.896E-08	3.014E-08	2.804E-08
SSE	166	3.198E-09	8.820E-08	4.956E-08	6.254E-08	7.203E-08	6.124E-08	4.989E-08	4.093E-08
S	103	2.985E-09	4.821E-08	6.510E-08	9.337E-08	7.228E-08	5.661E-08	4.165E-08	3.047E-08
SSW	77	3.054E-09	4.747E-08	6.743E-08	7.565E-08	1.033E-07	7.397E-08	4.703E-08	3.340E-08
SW	61	1.406E-09	1.096E-08	3.407E-08	6.212E-08	5.583E-08	4.331E-08	3.171E-08	2.427E-08
WSW	48	3.196E-09	2.702E-08	2.785E-08	2.696E-08	3.198E-08	2.872E-08	2.200E-08	1.742E-08
W	75	3.326E-09	3.847E-08	3.014E-08	3.531E-08	4.164E-08	4.075E-08	3.123E-08	2.584E-08
WNW	91	8.108E-10	1.812E-08	2.507E-08	2.649E-08	3.447E-08	3.720E-08	3.104E-08	2.708E-08
NW	122	8.792E-10	1.486E-08	9.965E-09	8.445E-09	9.901E-09	1.375E-08	1.520E-08	1.497E-08
NNW	58	4.894E-11	1.484E-09	1.051E-09	1.470E-09	2.441E-09	4.400E-09	5.241E-09	5.367E-09
AVERAGE	2120	1.567E-09	3.083E-08	2.850E-08	3.133E-08	3.355E-08	3.144E-08	2.619E-08	2.253E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	74	8.993E-09	8.442E-09	7.894E-09	7.400E-09	6.910E-09	5.000E-09	3.832E-09	2.557E-09
NNE	157	1.623E-08	1.503E-08	1.385E-08	1.278E-08	1.179E-08	8.163E-09	6.059E-09	3.849E-09
NE	170	1.689E-08	1.575E-08	1.463E-08	1.362E-08	1.266E-08	9.022E-09	6.849E-09	4.511E-09
ENE	168	1.680E-08	1.573E-08	1.468E-08	1.372E-08	1.280E-08	9.234E-09	7.073E-09	4.719E-09
E	253	2.565E-08	2.367E-08	2.181E-08	2.015E-08	1.862E-08	1.307E-08	9.846E-09	6.424E-09
ESE	246	2.140E-08	1.984E-08	1.837E-08	1.707E-08	1.584E-08	1.129E-08	8.616E-09	5.740E-09
SE	251	2.532E-08	2.279E-08	2.059E-08	1.871E-08	1.706E-08	1.153E-08	8.507E-09	5.419E-09
SSE	166	3.421E-08	2.916E-08	2.527E-08	2.216E-08	1.965E-08	1.229E-08	8.747E-09	5.863E-09
S	103	2.326E-08	1.855E-08	1.528E-08	1.288E-08	1.106E-08	6.289E-09	4.248E-09	2.457E-09
SSW	77	2.543E-08	2.024E-08	1.664E-08	1.399E-08	1.200E-08	6.801E-09	4.577E-09	2.628E-09
SW	61	1.923E-08	1.572E-08	1.318E-08	1.125E-08	9.758E-09	5.695E-09	3.851E-09	2.189E-09
WSW	48	1.418E-08	1.185E-08	1.011E-08	8.758E-09	7.692E-09	4.679E-09	3.274E-09	1.966E-09
W	75	2.154E-08	1.827E-08	1.574E-08	1.374E-08	1.211E-08	8.785E-09	5.933E-09	3.407E-09
WNW	91	2.342E-08	2.045E-08	1.804E-08	1.606E-08	1.440E-08	8.905E-09	7.141E-09	4.345E-09
NW	122	1.398E-08	1.292E-08	1.191E-08	1.016E-08	1.016E-08	9.524E-09	6.874E-09	4.823E-09
NNW	58	5.139E-09	4.832E-09	4.514E-09	4.218E-09	3.934E-09	2.836E-09	2.371E-09	3.125E-09
AVERAGE	2120	1.948E-08	1.708E-08	1.516E-08	1.359E-08	1.228E-08	8.320E-09	6.112E-09	4.001E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	74	1.898E-09	1.499E-09	1.233E-09	1.047E-09	9.045E-10	1.060E-09	9.335E-10	
NNE	157	2.767E-09	2.136E-09	1.729E-09	1.447E-09	1.236E-09	1.079E-09	9.545E-10	
NE	170	3.324E-09	2.610E-09	2.139E-09	1.810E-09	1.560E-09	1.372E-09	1.222E-09	
ENE	168	3.505E-09	2.864E-09	2.608E-09	2.197E-09	1.887E-09	1.654E-09	1.469E-09	
E	253	4.715E-09	3.695E-09	3.696E-09	3.093E-09	2.640E-09	2.304E-09	2.037E-09	
ESE	246	4.267E-09	3.876E-09	3.168E-09	2.673E-09	2.299E-09	2.018E-09	1.794E-09	
SE	251	3.926E-09	3.777E-09	3.037E-09	2.528E-09	2.149E-09	1.868E-09	1.646E-09	
SSE	166	4.106E-09	3.125E-09	2.512E-09	2.091E-09	1.776E-09	1.543E-09	1.359E-09	
S	103	1.685E-09	1.266E-09	1.009E-09	8.349E-10	7.060E-10	6.116E-10	5.374E-10	
SSW	77	1.794E-09	1.343E-09	1.067E-09	8.809E-10	7.433E-10	6.428E-10	5.639E-10	
SW	61	1.483E-09	1.101E-09	8.688E-10	7.121E-10	6.086E-10	5.227E-10	4.559E-10	
WSW	48	1.375E-09	1.059E-09	9.219E-10	7.612E-10	6.420E-10	5.622E-10	4.917E-10	
W	75	2.320E-09	1.731E-09	1.372E-09	1.130E-09	9.805E-10	8.459E-10	7.402E-10	
WNW	91	3.056E-09	2.459E-09	2.138E-09	1.818E-09	1.528E-09	1.317E-09	1.151E-09	
NW	122	3.401E-09	2.699E-09	2.208E-09	2.123E-09	1.791E-09	1.548E-09	1.357E-09	
NNW	58	2.167E-09	1.638E-09	1.311E-09	1.088E-09	9.210E-10	7.975E-10	7.004E-10	
AVERAGE	2120	2.862E-09	2.305E-09	1.939E-09	1.640E-09	1.398E-09	1.234E-09	1.088E-09	

Table B-1
Undepleted χ/Q Factors for Main Stack

PNPS 2ND QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	137	1.348E-09	3.927E-08	2.174E-08	1.528E-08	1.497E-08	1.704E-08	1.771E-08	1.710E-08
NNE	287	1.647E-09	4.469E-08	2.160E-08	1.585E-08	1.969E-08	2.820E-08	3.069E-08	2.992E-08
NE	164	8.983E-10	2.595E-08	1.458E-08	1.037E-08	1.083E-08	1.386E-08	1.529E-08	1.525E-08
ENE	142	8.346E-10	3.005E-08	1.710E-08	1.230E-08	1.209E-08	1.420E-08	1.547E-08	1.548E-08
E	140	1.132E-09	3.717E-08	2.425E-08	1.602E-08	1.400E-08	1.494E-08	1.603E-08	1.594E-08
ESE	89	6.732E-10	2.389E-08	1.218E-08	7.799E-09	7.563E-09	9.208E-09	1.009E-08	1.007E-08
SE	123	1.366E-09	4.398E-08	3.177E-08	1.867E-08	1.489E-08	1.864E-08	1.477E-08	1.472E-08
SSE	163	5.050E-09	1.406E-07	9.053E-08	7.331E-08	8.386E-08	7.371E-08	6.249E-08	5.278E-08
S	90	4.340E-09	6.908E-08	5.291E-08	8.217E-08	6.987E-08	7.068E-08	6.040E-08	4.690E-08
SSW	118	1.047E-08	1.763E-07	1.291E-07	1.273E-07	1.894E-07	1.646E-07	1.057E-07	7.570E-08
SW	102	1.910E-08	1.437E-07	9.521E-08	9.813E-08	8.743E-08	6.891E-08	5.124E-08	3.968E-08
WSW	87	1.717E-08	1.475E-07	8.283E-08	6.959E-08	8.653E-08	7.931E-08	6.053E-08	4.768E-08
W	135	1.204E-08	1.516E-07	1.145E-07	8.655E-08	8.810E-08	7.851E-08	5.974E-08	5.008E-08
WNW	138	4.296E-09	6.083E-08	5.272E-08	4.988E-08	6.345E-08	6.818E-08	5.768E-08	5.091E-08
NW	137	2.205E-09	3.836E-08	2.615E-08	1.933E-08	1.893E-08	2.148E-08	2.218E-08	2.131E-08
NNW	60	2.448E-10	8.327E-09	8.634E-09	7.635E-09	7.355E-09	8.261E-09	8.872E-09	8.841E-09
AVERAGE	2112	5.177E-09	7.384E-08	4.974E-08	4.438E-08	4.931E-08	4.686E-08	3.806E-08	3.202E-08

DOWNWIND SECTOR	NO. OBS	3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	137	1.591E-08	1.465E-08	1.347E-08	1.243E-08	1.146E-08	8.022E-09	6.050E-09	3.962E-09
NNE	287	2.782E-08	2.556E-08	2.343E-08	2.155E-08	1.983E-08	1.375E-08	1.028E-08	6.647E-09
NE	164	1.443E-08	1.349E-08	1.256E-08	1.172E-08	1.090E-08	7.828E-09	5.983E-09	3.988E-09
ENE	142	1.474E-08	1.387E-08	1.299E-08	1.220E-08	1.141E-08	8.341E-09	6.458E-09	4.383E-09
E	140	1.511E-08	1.416E-08	1.321E-08	1.236E-08	1.152E-08	8.305E-09	6.354E-09	4.233E-09
ESE	89	9.582E-09	9.020E-09	8.459E-09	7.945E-09	7.440E-09	5.471E-09	4.267E-09	2.934E-09
SE	123	1.392E-08	1.303E-08	1.215E-08	1.135E-08	1.058E-08	7.642E-09	5.877E-09	3.960E-09
SSE	163	4.494E-08	3.881E-08	3.396E-08	3.002E-08	2.679E-08	1.707E-08	1.229E-08	8.393E-09
S	90	3.662E-08	2.971E-08	2.481E-08	2.116E-08	1.836E-08	1.079E-08	7.439E-09	4.416E-09
SSW	118	5.815E-08	4.664E-08	3.861E-08	3.267E-08	2.815E-08	1.625E-08	1.111E-08	6.523E-09
SW	102	3.181E-08	2.625E-08	2.218E-08	1.908E-08	1.663E-08	9.873E-09	6.788E-09	3.973E-09
WSW	87	3.868E-08	3.221E-08	2.741E-08	2.370E-08	2.076E-08	1.250E-08	8.675E-09	5.148E-09
W	135	4.241E-08	3.650E-08	3.188E-08	2.817E-08	2.512E-08	2.089E-08	1.441E-08	8.506E-09
WNW	138	4.453E-08	3.926E-08	3.202E-08	2.872E-08	2.592E-08	1.817E-08	1.350E-08	8.376E-09
NW	137	1.976E-08	1.823E-08	1.684E-08	1.562E-08	1.448E-08	1.482E-08	1.096E-08	8.181E-09
NNW	60	8.410E-09	7.919E-09	7.431E-09	6.990E-09	6.559E-09	4.847E-09	4.155E-09	5.409E-09
AVERAGE	2112	2.730E-08	2.371E-08	2.071E-08	1.848E-08	1.662E-08	1.154E-08	8.412E-09	5.564E-09

DOWNWIND SECTOR	NO. OBS	20.00	25.00	30.00	35.00	40.00	45.00	50.00
N	137	2.917E-09	2.293E-09	1.881E-09	1.593E-09	1.375E-09	1.651E-09	1.453E-09
NNE	287	4.857E-09	3.798E-09	3.103E-09	2.620E-09	2.255E-09	1.983E-09	1.765E-09
NE	164	2.970E-09	2.353E-09	1.941E-09	1.652E-09	1.432E-09	1.266E-09	1.133E-09
ENE	142	3.297E-09	2.735E-09	2.575E-09	2.184E-09	1.887E-09	1.663E-09	1.483E-09
E	140	3.142E-09	2.483E-09	2.561E-09	2.157E-09	1.852E-09	1.624E-09	1.442E-09
ESE	89	2.229E-09	2.150E-09	1.775E-09	1.511E-09	1.309E-09	1.156E-09	1.033E-09
SE	123	2.963E-09	3.236E-09	2.633E-09	2.213E-09	1.896E-09	1.659E-09	1.470E-09
SSE	163	5.908E-09	4.509E-09	3.631E-09	3.026E-09	2.572E-09	2.233E-09	1.966E-09
S	90	3.066E-09	2.323E-09	1.865E-09	1.550E-09	1.315E-09	1.140E-09	1.003E-09
SSW	118	4.511E-09	3.408E-09	2.729E-09	2.264E-09	1.919E-09	1.663E-09	1.462E-09
SW	102	2.747E-09	2.073E-09	1.655E-09	1.372E-09	1.175E-09	1.019E-09	8.957E-10
WSW	87	3.579E-09	2.735E-09	2.321E-09	1.916E-09	1.617E-09	1.416E-09	1.241E-09
W	135	5.893E-09	4.452E-09	3.560E-09	2.951E-09	2.629E-09	2.269E-09	1.987E-09
WNW	138	5.964E-09	4.898E-09	4.368E-09	3.762E-09	3.168E-09	2.731E-09	2.388E-09
NW	137	5.864E-09	4.737E-09	3.911E-09	3.949E-09	3.334E-09	2.878E-09	2.521E-09
NNW	60	3.765E-09	2.852E-09	2.286E-09	1.897E-09	1.607E-09	1.392E-09	1.222E-09
AVERAGE	2112	3.979E-09	3.190E-09	2.675E-09	2.289E-09	1.959E-09	1.734E-09	1.529E-09

Table B-1
Undepleted χ/Q Factors for Main Stack

PNPS 3RD QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	313	1.378E-09	4.744E-08	3.856E-08	3.155E-08	3.280E-08	4.090E-08	4.453E-08	4.396E-08
NNE	299	1.827E-09	6.126E-08	3.118E-08	2.201E-08	2.414E-08	3.066E-08	3.273E-08	3.191E-08
NE	120	5.418E-10	2.026E-08	1.514E-08	1.088E-08	1.103E-08	1.390E-08	1.498E-08	1.465E-08
ENE	143	9.089E-10	3.411E-08	2.819E-08	1.866E-08	1.511E-08	1.464E-08	1.540E-08	1.530E-08
E	144	1.103E-09	3.960E-08	2.481E-08	2.021E-08	1.889E-08	1.799E-08	1.738E-08	1.636E-08
ESE	70	8.025E-10	2.944E-08	1.885E-08	1.203E-08	9.814E-09	9.549E-09	9.895E-09	9.660E-09
SE	94	1.657E-09	6.381E-08	3.664E-08	1.557E-08	1.069E-08	1.306E-08	1.030E-08	1.072E-08
SSE	41	2.103E-09	7.575E-08	2.453E-08	2.027E-08	2.644E-08	2.361E-08	1.925E-08	1.576E-08
S	19	6.550E-10	1.449E-08	1.151E-08	2.890E-08	2.481E-08	2.214E-08	1.758E-08	1.335E-08
SSW	77	6.639E-09	1.293E-07	7.028E-08	9.979E-08	1.816E-07	1.764E-07	1.146E-07	8.252E-08
SW	27	5.093E-09	4.104E-08	2.016E-08	2.883E-08	2.984E-08	2.730E-08	2.120E-08	1.685E-08
WSW	61	1.486E-08	1.350E-07	5.170E-08	4.230E-08	6.143E-08	6.426E-08	5.138E-08	4.156E-08
W	134	9.044E-09	1.141E-07	9.369E-08	7.617E-08	8.562E-08	9.176E-08	7.644E-08	6.724E-08
WNW	158	4.716E-09	6.240E-08	5.368E-08	4.943E-08	6.531E-08	7.557E-08	6.668E-08	6.027E-08
NW	140	1.117E-09	2.311E-08	1.476E-08	1.098E-08	1.250E-08	1.867E-08	2.210E-08	2.278E-08
NNW	140	4.710E-10	1.669E-08	1.330E-08	9.443E-09	1.085E-08	1.727E-08	2.085E-08	2.163E-08
AVERAGE	1980	3.307E-09	5.673E-08	3.419E-08	3.107E-08	3.881E-08	4.111E-08	3.471E-08	3.028E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	313	4.124E-08	3.821E-08	3.528E-08	3.267E-08	3.022E-08	2.116E-08	1.586E-08	1.024E-08
NNE	299	2.978E-08	2.751E-08	2.536E-08	2.346E-08	2.169E-08	1.526E-08	1.153E-08	7.560E-09
NE	120	1.372E-08	1.268E-08	1.169E-08	1.080E-08	9.981E-09	7.052E-09	5.361E-09	3.556E-09
ENE	143	1.458E-08	1.378E-08	1.298E-08	1.225E-08	1.152E-08	8.581E-09	6.726E-09	4.642E-09
E	144	1.507E-08	1.390E-08	1.285E-08	1.196E-08	1.111E-08	8.010E-09	6.192E-09	4.218E-09
ESE	70	9.064E-09	8.443E-09	7.848E-09	7.317E-09	6.802E-09	4.860E-09	3.706E-09	2.461E-09
SE	94	1.042E-08	9.971E-09	9.467E-09	8.977E-09	8.464E-09	6.313E-09	4.946E-09	3.413E-09
SSE	41	1.319E-08	1.127E-08	9.798E-09	8.619E-09	7.661E-09	4.859E-09	3.497E-09	2.459E-09
S	19	1.036E-08	8.353E-09	6.930E-09	5.863E-09	5.052E-09	2.895E-09	1.969E-09	1.153E-09
SSW	77	6.349E-08	5.093E-08	4.214E-08	3.563E-08	3.068E-08	1.762E-08	1.198E-08	6.987E-09
SW	27	1.382E-08	1.163E-08	9.999E-09	8.716E-09	7.692E-09	4.778E-09	3.392E-09	2.077E-09
WSW	61	3.430E-08	2.892E-08	2.482E-08	2.161E-08	1.903E-08	1.163E-08	8.137E-09	4.873E-09
W	134	5.866E-08	5.166E-08	4.594E-08	4.119E-08	3.717E-08	3.682E-08	2.592E-08	1.575E-08
WNW	158	5.349E-08	4.769E-08	3.924E-08	3.546E-08	3.220E-08	2.336E-08	1.782E-08	1.135E-08
NW	140	2.193E-08	2.079E-08	1.957E-08	1.842E-08	1.727E-08	1.815E-08	1.338E-08	9.859E-09
NNW	140	2.085E-08	1.969E-08	1.844E-08	1.727E-08	1.611E-08	1.158E-08	9.451E-09	1.062E-08
AVERAGE	1980	2.650E-08	2.346E-08	2.077E-08	1.876E-08	1.704E-08	1.268E-08	9.366E-09	6.326E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	313	7.437E-09	5.785E-09	4.711E-09	3.963E-09	3.399E-09	3.952E-09	3.477E-09	
NNE	299	5.573E-09	4.385E-09	3.600E-09	3.050E-09	2.634E-09	2.321E-09	2.072E-09	
NE	120	2.648E-09	2.099E-09	1.731E-09	1.474E-09	1.278E-09	1.130E-09	1.012E-09	
ENE	143	3.525E-09	2.946E-09	2.778E-09	2.359E-09	2.040E-09	1.799E-09	1.605E-09	
E	144	3.185E-09	2.547E-09	2.782E-09	2.358E-09	2.036E-09	1.793E-09	1.599E-09	
ESE	70	1.821E-09	1.599E-09	1.304E-09	1.098E-09	9.427E-10	8.266E-10	7.338E-10	
SE	94	2.591E-09	3.038E-09	2.488E-09	2.103E-09	1.811E-09	1.591E-09	1.415E-09	
SSE	41	1.748E-09	1.344E-09	1.087E-09	9.106E-10	7.781E-10	6.797E-10	6.016E-10	
S	19	7.938E-10	5.978E-10	4.775E-10	3.957E-10	3.351E-10	2.907E-10	2.557E-10	
SSW	77	4.803E-09	3.614E-09	2.885E-09	2.388E-09	2.019E-09	1.748E-09	1.535E-09	
SW	27	1.476E-09	1.135E-09	9.175E-10	7.682E-10	7.042E-10	6.149E-10	5.441E-10	
WSW	61	3.400E-09	2.608E-09	2.237E-09	1.848E-09	1.559E-09	1.368E-09	1.198E-09	
W	134	1.108E-08	8.456E-09	6.811E-09	5.679E-09	5.503E-09	4.765E-09	4.183E-09	
WNW	158	8.238E-09	7.201E-09	7.324E-09	6.839E-09	5.787E-09	5.007E-09	4.395E-09	
NW	140	7.033E-09	5.654E-09	4.655E-09	4.656E-09	3.930E-09	3.395E-09	2.974E-09	
NNW	140	7.359E-09	5.558E-09	4.445E-09	3.684E-09	3.119E-09	2.703E-09	2.375E-09	
AVERAGE	1980	4.545E-09	3.660E-09	3.140E-09	2.723E-09	2.367E-09	2.124E-09	1.873E-09	

Table B-1
Undepleted χ/Q Factors for Main Stack

PNPS 4TH QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	179	1.002E-09	3.043E-08	1.873E-08	1.569E-08	1.793E-08	2.421E-08	2.661E-08	2.624E-08
NNE	230	1.559E-09	4.946E-08	2.935E-08	2.162E-08	2.271E-08	2.888E-08	3.161E-08	3.128E-08
NE	144	1.291E-09	4.474E-08	2.398E-08	1.481E-08	1.379E-08	1.572E-08	1.687E-08	1.665E-08
ENE	155	8.777E-10	3.230E-08	1.900E-08	1.114E-08	1.064E-08	1.425E-08	1.665E-08	1.715E-08
E	264	3.294E-09	1.149E-07	5.698E-08	3.249E-08	2.882E-08	3.013E-08	3.100E-08	3.001E-08
ESE	157	2.564E-09	8.668E-08	3.892E-08	2.403E-08	2.254E-08	2.275E-08	2.178E-08	2.006E-08
SE	94	1.633E-09	5.514E-08	3.739E-08	2.072E-08	1.744E-08	1.948E-08	1.507E-08	1.411E-08
SSE	43	4.801E-10	2.076E-08	1.663E-08	2.394E-08	3.008E-08	2.683E-08	2.232E-08	1.852E-08
S	15	3.864E-10	9.541E-09	2.510E-08	2.735E-08	2.004E-08	1.644E-08	1.308E-08	9.853E-09
SSW	31	7.492E-10	1.047E-08	4.355E-08	5.051E-08	6.991E-08	5.695E-08	3.617E-08	2.562E-08
SW	36	5.695E-09	4.862E-08	3.780E-08	3.469E-08	3.026E-08	2.595E-08	2.095E-08	1.728E-08
WSW	64	7.796E-09	7.188E-08	4.495E-08	3.675E-08	4.452E-08	4.147E-08	3.253E-08	2.620E-08
W	64	7.109E-09	8.860E-08	6.936E-08	4.308E-08	3.765E-08	3.073E-08	2.358E-08	2.014E-08
WNW	63	2.540E-09	3.822E-08	2.592E-08	1.697E-08	2.003E-08	2.225E-08	1.949E-08	1.762E-08
NW	90	9.651E-10	1.897E-08	1.183E-08	7.549E-09	7.613E-09	9.864E-09	1.093E-08	1.097E-08
NNW	115	5.951E-10	1.868E-08	1.257E-08	8.950E-09	9.035E-09	1.235E-08	1.462E-08	1.520E-08
AVERAGE	1744	2.409E-09	4.621E-08	3.200E-08	2.439E-08	2.519E-08	2.489E-08	2.208E-08	1.981E-08

DOWNWIND SECTOR	NO. OBS	3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	179	2.457E-08	2.270E-08	2.090E-08	1.929E-08	1.779E-08	1.235E-08	9.215E-09	5.912E-09
NNE	230	2.941E-08	2.731E-08	2.528E-08	2.346E-08	2.173E-08	1.534E-08	1.157E-08	7.560E-09
NE	144	1.569E-08	1.462E-08	1.359E-08	1.266E-08	1.176E-08	8.391E-09	6.387E-09	4.231E-09
ENE	155	1.658E-08	1.576E-08	1.489E-08	1.406E-08	1.322E-08	9.791E-09	7.627E-09	5.213E-09
E	264	2.801E-08	2.596E-08	2.403E-08	2.233E-08	2.070E-08	1.468E-08	1.116E-08	7.390E-09
ESE	157	1.816E-08	1.645E-08	1.496E-08	1.369E-08	1.254E-08	8.630E-09	6.477E-09	4.240E-09
SE	94	1.280E-08	1.157E-08	1.048E-08	9.555E-09	8.719E-09	5.892E-09	4.339E-09	2.749E-09
SSE	43	1.556E-08	1.331E-08	1.155E-08	1.013E-08	8.985E-09	5.601E-09	3.977E-09	2.621E-09
S	15	7.602E-09	6.119E-09	5.081E-09	4.316E-09	3.733E-09	2.181E-09	1.492E-09	8.699E-10
SSW	31	1.947E-08	1.547E-08	1.269E-08	1.066E-08	9.127E-09	5.161E-09	3.477E-09	2.001E-09
SW	36	1.459E-08	1.256E-08	1.099E-08	9.724E-09	8.691E-09	5.621E-09	4.105E-09	2.613E-09
WSW	64	2.163E-08	1.827E-08	1.572E-08	1.371E-08	1.211E-08	7.474E-09	5.277E-09	3.208E-09
W	64	1.736E-08	1.519E-08	1.345E-08	1.204E-08	1.084E-08	9.893E-09	6.943E-09	4.209E-09
WNW	63	1.565E-08	1.397E-08	1.254E-08	1.133E-08	1.027E-08	6.611E-09	5.430E-09	3.407E-09
NW	90	1.049E-08	9.941E-09	9.384E-09	8.865E-09	8.353E-09	1.007E-08	7.633E-09	6.129E-09
NNW	115	1.476E-08	1.404E-08	1.322E-08	1.244E-08	1.165E-08	8.490E-09	7.079E-09	8.255E-09
AVERAGE	1744	1.765E-08	1.583E-08	1.430E-08	1.302E-08	1.189E-08	8.511E-09	6.387E-09	4.413E-09

DOWNWIND SECTOR	NO. OBS	20.00	25.00	30.00	35.00	40.00	45.00	50.00
N	179	4.283E-09	3.325E-09	2.704E-09	2.272E-09	1.947E-09	2.202E-09	1.934E-09
NNE	230	5.542E-09	4.339E-09	3.550E-09	2.998E-09	2.580E-09	2.268E-09	2.018E-09
NE	144	3.132E-09	2.470E-09	2.031E-09	1.723E-09	1.488E-09	1.312E-09	1.171E-09
ENE	155	3.933E-09	3.271E-09	3.062E-09	2.591E-09	2.234E-09	1.965E-09	1.749E-09
E	264	5.472E-09	4.318E-09	4.349E-09	3.660E-09	3.141E-09	2.753E-09	2.444E-09
ESE	157	3.129E-09	2.770E-09	2.266E-09	1.915E-09	1.649E-09	1.449E-09	1.290E-09
SE	94	1.981E-09	1.784E-09	1.433E-09	1.192E-09	1.013E-09	8.804E-10	7.759E-10
SSE	43	1.829E-09	1.388E-09	1.113E-09	9.241E-10	7.835E-10	6.796E-10	5.974E-10
S	15	5.997E-10	4.519E-10	3.610E-10	2.990E-10	2.528E-10	2.185E-10	1.918E-10
SSW	31	1.365E-09	1.021E-09	8.114E-10	6.689E-10	5.635E-10	4.862E-10	4.256E-10
SW	36	1.895E-09	1.476E-09	1.205E-09	1.016E-09	9.362E-10	8.185E-10	7.251E-10
WSW	64	2.259E-09	1.748E-09	1.529E-09	1.266E-09	1.070E-09	9.420E-10	8.254E-10
W	64	2.961E-09	2.260E-09	1.822E-09	1.519E-09	1.373E-09	1.189E-09	1.044E-09
WNW	63	2.437E-09	1.992E-09	1.754E-09	1.500E-09	1.268E-09	1.097E-09	9.624E-10
NW	90	4.446E-09	3.661E-09	3.052E-09	3.196E-09	2.699E-09	2.329E-09	2.039E-09
NNW	115	5.714E-09	4.312E-09	3.447E-09	2.855E-09	2.415E-09	2.090E-09	1.834E-09
AVERAGE	1744	3.186E-09	2.537E-09	2.155E-09	1.850E-09	1.588E-09	1.417E-09	1.252E-09

Table B-1
Undepleted χ/Q Factors for Main Stack

PNPS ANNUAL 1999 GENERAL χ/Q S: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	703	9.950E-10	3.264E-08	2.310E-08	1.773E-08	1.824E-08	2.238E-08	2.415E-08	2.376E-08
NNE	973	1.306E-09	4.015E-08	2.164E-08	1.616E-08	1.865E-08	2.543E-08	2.781E-08	2.733E-08
NE	598	7.048E-10	2.328E-08	1.498E-08	1.111E-08	1.159E-08	1.480E-08	1.623E-08	1.610E-08
ENE	608	7.499E-10	2.815E-08	2.017E-08	1.396E-08	1.287E-08	1.484E-08	1.632E-08	1.640E-08
E	801	1.562E-09	5.359E-08	3.190E-08	2.162E-08	2.022E-08	2.199E-08	2.286E-08	2.220E-08
ESE	562	1.474E-09	4.745E-08	2.432E-08	1.551E-08	1.446E-08	1.575E-08	1.619E-08	1.558E-08
SE	562	1.383E-09	4.656E-08	3.426E-08	2.063E-08	1.822E-08	2.206E-08	1.782E-08	1.714E-08
SSE	413	2.128E-09	6.305E-08	3.758E-08	4.642E-08	5.463E-08	4.764E-08	3.957E-08	3.290E-08
S	227	2.023E-09	3.395E-08	3.976E-08	5.988E-08	4.837E-08	4.296E-08	3.438E-08	2.605E-08
SSW	303	5.134E-09	8.898E-08	7.927E-08	8.985E-08	1.383E-07	1.198E-07	7.705E-08	5.515E-08
SW	226	7.509E-09	5.849E-08	4.513E-08	5.738E-08	5.215E-08	4.232E-08	3.192E-08	2.498E-08
WSW	260	9.358E-09	8.281E-08	4.945E-08	4.424E-08	5.654E-08	5.379E-08	4.185E-08	3.338E-08
W	408	7.892E-09	9.832E-08	7.312E-08	6.028E-08	6.404E-08	6.127E-08	4.837E-08	4.133E-08
WNW	450	3.087E-09	4.488E-08	3.761E-08	3.419E-08	4.413E-08	4.886E-08	4.179E-08	3.721E-08
NW	489	1.309E-09	2.405E-08	1.586E-08	1.177E-08	1.244E-08	1.617E-08	1.783E-08	1.772E-08
NNW	373	3.257E-10	1.085E-08	8.637E-09	6.730E-09	7.283E-09	1.037E-08	1.215E-08	1.249E-08
AVERAGE	7956	2.934E-09	4.858E-08	3.480E-08	3.297E-08	3.701E-08	3.628E-08	3.039E-08	2.623E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	703	2.227E-08	2.062E-08	1.904E-08	1.763E-08	1.630E-08	1.144E-08	8.595E-09	5.576E-09
NNE	973	2.557E-08	2.362E-08	2.176E-08	2.011E-08	1.857E-08	1.299E-08	9.750E-09	6.329E-09
NE	598	1.518E-08	1.414E-08	1.312E-08	1.220E-08	1.133E-08	8.076E-09	6.148E-09	4.073E-09
ENE	608	1.565E-08	1.476E-08	1.385E-08	1.302E-08	1.221E-08	8.957E-09	6.945E-09	4.719E-09
E	801	2.074E-08	1.922E-08	1.779E-08	1.652E-08	1.532E-08	1.090E-08	8.298E-09	5.505E-09
ESE	562	1.448E-08	1.339E-08	1.237E-08	1.148E-08	1.064E-08	7.563E-09	5.771E-09	3.851E-09
SE	562	1.584E-08	1.455E-08	1.337E-08	1.233E-08	1.137E-08	7.963E-09	6.009E-09	3.947E-09
SSE	413	2.774E-08	2.380E-08	2.072E-08	1.824E-08	1.623E-08	1.024E-08	7.335E-09	4.977E-09
S	227	2.016E-08	1.625E-08	1.350E-08	1.145E-08	9.894E-09	5.739E-09	3.924E-09	2.305E-09
SSW	303	4.228E-08	3.384E-08	2.795E-08	2.360E-08	2.031E-08	1.164E-08	7.911E-09	4.609E-09
SW	226	2.020E-08	1.681E-08	1.430E-08	1.236E-08	1.083E-08	6.560E-09	4.572E-09	2.728E-09
WSW	260	2.732E-08	2.291E-08	1.959E-08	1.701E-08	1.495E-08	9.098E-09	6.357E-09	3.806E-09
W	408	3.540E-08	3.075E-08	2.704E-08	2.403E-08	2.152E-08	1.922E-08	1.338E-08	8.009E-09
WNW	450	3.271E-08	2.895E-08	2.582E-08	2.321E-08	2.098E-08	1.349E-08	1.111E-08	6.952E-09
NW	489	1.673E-08	1.563E-08	1.457E-08	1.360E-08	1.268E-08	1.320E-08	9.744E-09	7.254E-09
NNW	373	1.203E-08	1.137E-08	1.066E-08	1.000E-08	9.355E-09	6.784E-09	5.639E-09	6.722E-09
AVERAGE	7956	2.277E-08	2.004E-08	1.784E-08	1.605E-08	1.453E-08	1.024E-08	7.593E-09	5.085E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	703	4.070E-09	3.177E-09	2.593E-09	2.186E-09	1.879E-09	2.187E-09	1.924E-09	
NNE	973	4.629E-09	3.620E-09	2.958E-09	2.498E-09	2.149E-09	1.889E-09	1.681E-09	
NE	598	3.019E-09	2.384E-09	1.961E-09	1.665E-09	1.440E-09	1.271E-09	1.135E-09	
ENE	608	3.549E-09	2.939E-09	2.741E-09	2.321E-09	2.001E-09	1.761E-09	1.568E-09	
E	801	4.083E-09	3.224E-09	3.310E-09	2.786E-09	2.390E-09	2.095E-09	1.859E-09	
ESE	562	2.868E-09	2.609E-09	2.136E-09	1.806E-09	1.556E-09	1.368E-09	1.218E-09	
SE	562	2.912E-09	3.013E-09	2.441E-09	2.046E-09	1.749E-09	1.527E-09	1.351E-09	
SSE	413	3.499E-09	2.668E-09	2.148E-09	1.790E-09	1.521E-09	1.322E-09	1.165E-09	
S	227	1.592E-09	1.202E-09	9.618E-10	7.979E-10	6.760E-10	5.859E-10	5.150E-10	
SSW	303	3.170E-09	2.386E-09	1.904E-09	1.577E-09	1.334E-09	1.154E-09	1.014E-09	
SW	226	1.907E-09	1.449E-09	1.163E-09	9.677E-10	8.546E-10	7.421E-10	6.536E-10	
WSW	260	2.658E-09	2.040E-09	1.754E-09	1.449E-09	1.223E-09	1.073E-09	9.395E-10	
W	408	5.589E-09	4.243E-09	3.405E-09	2.831E-09	2.630E-09	2.274E-09	1.994E-09	
WNW	450	4.982E-09	4.184E-09	3.936E-09	3.514E-09	2.966E-09	2.562E-09	2.246E-09	
NW	489	5.188E-09	4.186E-09	3.454E-09	3.473E-09	2.932E-09	2.532E-09	2.218E-09	
NNW	373	4.661E-09	3.522E-09	2.818E-09	2.336E-09	1.978E-09	1.713E-09	1.504E-09	
AVERAGE	7956	3.648E-09	2.928E-09	2.480E-09	2.128E-09	1.830E-09	1.628E-09	1.436E-09	

Table B-2
Depleted χ/Q Factors for Main Stack

PNPS 1ST QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL

STACK RELEASE

GROUND-LEVEL AVERAGE χ/Q AFTER DEPLETION (MET. AND ATOMIC ENERGY 1968 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	74	2.805E-10	1.404E-08	1.348E-08	8.851E-09	8.060E-09	8.793E-09	9.409E-09	9.335E-09
NNE	157	2.718E-10	8.264E-09	6.402E-09	6.488E-09	9.147E-09	1.489E-08	1.712E-08	1.709E-08
NE	170	1.820E-10	5.811E-09	7.807E-09	8.982E-09	1.103E-08	1.575E-08	1.772E-08	1.770E-08
ENE	168	4.119E-10	1.727E-08	1.666E-08	1.350E-08	1.332E-08	1.608E-08	1.764E-08	1.756E-08
E	253	9.929E-10	3.254E-08	2.544E-08	1.952E-08	2.050E-08	2.596E-08	2.792E-08	2.720E-08
ESE	246	2.002E-09	5.544E-08	2.944E-08	1.938E-08	1.897E-08	2.223E-08	2.342E-08	2.272E-08
SE	251	2.025E-09	6.507E-08	4.613E-08	3.176E-08	3.153E-08	3.882E-08	2.996E-08	2.779E-08
SSE	166	3.198E-09	8.814E-08	4.942E-08	6.244E-08	7.188E-08	6.093E-08	4.942E-08	4.033E-08
S	103	2.985E-09	4.817E-08	6.501E-08	9.322E-08	7.206E-08	5.615E-08	4.102E-08	2.981E-08
SSW	77	3.054E-09	4.743E-08	6.725E-08	7.545E-08	1.028E-07	7.264E-08	4.560E-08	3.196E-08
SW	61	1.406E-09	1.095E-08	3.405E-08	6.205E-08	5.567E-08	4.289E-08	3.110E-08	2.353E-08
WSW	48	3.196E-09	2.699E-08	2.777E-08	2.687E-08	3.183E-08	2.845E-08	2.167E-08	1.705E-08
W	75	3.326E-09	3.843E-08	3.007E-08	3.525E-08	4.154E-08	4.048E-08	3.081E-08	2.529E-08
WNW	91	8.108E-10	1.810E-08	2.498E-08	2.641E-08	3.437E-08	3.700E-08	3.072E-08	2.665E-08
NW	122	8.792E-10	1.485E-08	9.940E-09	8.412E-09	9.860E-09	1.368E-08	1.508E-08	1.480E-08
NNW	58	4.894E-11	1.483E-09	1.049E-09	1.467E-09	2.435E-09	4.385E-09	5.205E-09	5.309E-09
AVERAGE	2120	1.567E-09	3.081E-08	2.843E-08	3.125E-08	3.344E-08	3.120E-08	2.586E-08	2.213E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	74	8.815E-09	8.230E-09	7.649E-09	7.122E-09	6.602E-09	4.588E-09	3.366E-09	2.053E-09
NNE	157	1.603E-08	1.478E-08	1.355E-08	1.245E-08	1.143E-08	7.725E-09	5.596E-09	3.392E-09
NE	170	1.668E-08	1.550E-08	1.433E-08	1.328E-08	1.228E-08	8.539E-09	6.317E-09	3.950E-09
ENE	168	1.658E-08	1.547E-08	1.436E-08	1.337E-08	1.241E-08	8.721E-09	6.501E-09	4.110E-09
E	253	2.528E-08	2.323E-08	2.129E-08	1.957E-08	1.799E-08	1.228E-08	8.995E-09	5.559E-09
ESE	246	2.114E-08	1.952E-08	1.799E-08	1.664E-08	1.536E-08	1.066E-08	7.915E-09	4.995E-09
SE	251	2.500E-08	2.243E-08	2.018E-08	1.827E-08	1.659E-08	1.097E-08	7.929E-09	4.842E-09
SSE	166	3.351E-08	2.840E-08	2.445E-08	2.131E-08	1.877E-08	1.137E-08	7.846E-09	4.906E-09
S	103	2.261E-08	1.792E-08	1.468E-08	1.230E-08	1.050E-08	5.820E-09	3.840E-09	2.130E-09
SSW	77	2.402E-08	1.887E-08	1.533E-08	1.274E-08	1.080E-08	5.815E-09	3.741E-09	1.989E-09
SW	61	1.843E-08	1.488E-08	1.231E-08	1.038E-08	8.887E-09	4.871E-09	3.102E-09	1.578E-09
WSW	48	1.379E-08	1.145E-08	9.695E-09	8.341E-09	7.271E-09	4.251E-09	2.855E-09	1.579E-09
W	75	2.089E-08	1.755E-08	1.497E-08	1.294E-08	1.130E-08	7.572E-09	4.866E-09	2.559E-09
WNW	91	2.290E-08	1.985E-08	1.738E-08	1.536E-08	1.367E-08	8.089E-09	6.204E-09	3.472E-09
NW	122	1.375E-08	1.264E-08	1.158E-08	1.063E-08	9.750E-09	8.650E-09	5.994E-09	3.846E-09
NNW	58	5.059E-09	4.733E-09	4.399E-09	4.090E-09	3.794E-09	2.664E-09	2.164E-09	2.578E-09
AVERAGE	2120	1.903E-08	1.659E-08	1.463E-08	1.305E-08	1.171E-08	7.662E-09	5.452E-09	3.346E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	74	1.391E-09	1.004E-09	7.574E-10	5.918E-10	4.718E-10	3.980E-10	3.268E-10	
NNE	157	2.330E-09	1.721E-09	1.335E-09	1.072E-09	8.783E-10	7.368E-10	6.269E-10	
NE	170	2.762E-09	2.060E-09	1.604E-09	1.290E-09	1.057E-09	8.856E-10	7.516E-10	
ENE	168	2.894E-09	2.228E-09	1.869E-09	1.489E-09	1.209E-09	1.005E-09	8.463E-10	
E	253	3.871E-09	2.883E-09	2.584E-09	2.044E-09	1.650E-09	1.365E-09	1.146E-09	
ESE	246	3.522E-09	2.949E-09	2.279E-09	1.823E-09	1.487E-09	1.240E-09	1.049E-09	
SE	251	3.363E-09	2.920E-09	2.228E-09	1.764E-09	1.427E-09	1.184E-09	9.972E-10	
SSE	166	3.246E-09	2.342E-09	1.790E-09	1.421E-09	1.152E-09	9.580E-10	8.091E-10	
S	103	1.406E-09	1.020E-09	7.874E-10	6.317E-10	5.185E-10	4.364E-10	3.731E-10	
SSW	77	1.273E-09	9.009E-10	6.805E-10	5.363E-10	4.333E-10	3.598E-10	3.040E-10	
SW	61	9.693E-10	6.606E-10	4.832E-10	3.709E-10	2.907E-10	2.372E-10	1.978E-10	
WSW	48	1.019E-09	7.214E-10	5.314E-10	4.100E-10	3.248E-10	2.543E-10	2.117E-10	
W	75	1.613E-09	1.122E-09	8.323E-10	6.447E-10	4.821E-10	3.615E-10	2.993E-10	
WNW	91	2.251E-09	1.620E-09	1.189E-09	7.938E-10	5.993E-10	4.830E-10	3.967E-10	
NW	122	2.531E-09	1.873E-09	1.438E-09	9.066E-10	7.134E-10	5.782E-10	4.770E-10	
NNW	58	1.674E-09	1.187E-09	8.927E-10	6.974E-10	5.563E-10	4.547E-10	3.774E-10	
AVERAGE	2120	2.257E-09	1.701E-09	1.330E-09	1.030E-09	8.282E-10	6.836E-10	5.744E-10	

Table B-2
Depleted χ/Q Factors for Main Stack

PNPS 2ND QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
GROUND-LEVEL AVERAGE CHI/Q AFTER DEPLETION (MET. AND ATOMIC ENERGY 1968 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	137	1.348E-09	3.925E-08	2.169E-08	1.523E-08	1.492E-08	1.696E-08	1.757E-08	1.688E-08
NNE	287	1.647E-09	4.467E-08	2.155E-08	1.581E-08	1.965E-08	2.811E-08	3.051E-08	2.964E-08
NE	164	8.982E-10	2.593E-08	1.454E-08	1.034E-08	1.079E-08	1.380E-08	1.519E-08	1.509E-08
ENE	142	8.346E-10	3.002E-08	1.704E-08	1.224E-08	1.201E-08	1.409E-08	1.531E-08	1.526E-08
E	140	1.132E-09	3.714E-08	2.417E-08	1.592E-08	1.390E-08	1.483E-08	1.589E-08	1.574E-08
ESE	89	6.732E-10	2.387E-08	1.214E-08	7.760E-09	7.524E-09	9.155E-09	9.999E-09	9.937E-09
SE	123	1.366E-09	4.395E-08	3.168E-08	1.856E-08	1.480E-08	1.852E-08	1.464E-08	1.453E-08
SSE	163	5.050E-09	1.405E-07	9.023E-08	7.306E-08	8.351E-08	7.316E-08	6.175E-08	5.188E-08
S	90	4.340E-09	6.902E-08	5.281E-08	8.201E-08	6.963E-08	7.010E-08	5.942E-08	4.572E-08
SSW	118	1.047E-08	1.761E-07	1.285E-07	1.267E-07	1.883E-07	1.616E-07	1.024E-07	7.213E-08
SW	102	1.910E-08	1.436E-07	9.485E-08	9.778E-08	8.698E-08	6.802E-08	5.002E-08	3.825E-08
WSW	87	1.717E-08	1.473E-07	8.252E-08	6.932E-08	8.609E-08	7.832E-08	5.916E-08	4.606E-08
W	135	1.204E-08	1.515E-07	1.141E-07	8.623E-08	8.768E-08	7.774E-08	5.869E-08	4.876E-08
WNW	138	4.296E-09	6.078E-08	5.254E-08	4.972E-08	6.323E-08	6.772E-08	5.696E-08	4.991E-08
NW	137	2.205E-09	3.833E-08	2.608E-08	1.924E-08	1.884E-08	2.135E-08	2.198E-08	2.101E-08
NNW	60	2.448E-10	8.322E-09	8.615E-09	7.604E-09	7.315E-09	8.202E-09	8.784E-09	8.715E-09
AVERAGE	2112	5.177E-09	7.377E-08	4.957E-08	4.422E-08	4.908E-08	4.636E-08	3.739E-08	3.122E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	137	1.561E-08	1.428E-08	1.304E-08	1.195E-08	1.095E-08	7.394E-09	5.390E-09	3.310E-09
NNE	287	2.744E-08	2.510E-08	2.290E-08	2.097E-08	1.920E-08	1.298E-08	9.468E-09	5.824E-09
NE	164	1.423E-08	1.323E-08	1.226E-08	1.137E-08	1.052E-08	7.326E-09	5.430E-09	3.413E-09
ENE	142	1.446E-08	1.353E-08	1.260E-08	1.176E-08	1.093E-08	7.719E-09	5.774E-09	3.670E-09
E	140	1.485E-08	1.385E-08	1.285E-08	1.195E-08	1.107E-08	7.705E-09	5.689E-09	3.540E-09
ESE	89	9.405E-09	8.801E-09	8.203E-09	7.655E-09	7.122E-09	5.060E-09	3.809E-09	2.436E-09
SE	123	1.368E-08	1.273E-08	1.181E-08	1.097E-08	1.016E-08	7.109E-09	5.295E-09	3.348E-09
SSE	163	4.390E-08	3.767E-08	3.273E-08	2.872E-08	2.543E-08	1.552E-08	1.068E-08	6.417E-09
S	90	3.537E-08	2.842E-08	2.350E-08	1.984E-08	1.703E-08	9.484E-09	6.168E-09	3.245E-09
SSW	118	5.449E-08	4.295E-08	3.494E-08	2.907E-08	2.462E-08	1.308E-08	8.274E-09	4.239E-09
SW	102	3.026E-08	2.465E-08	2.056E-08	1.746E-08	1.502E-08	8.407E-09	5.482E-09	2.936E-09
WSW	87	3.689E-08	3.032E-08	2.545E-08	2.170E-08	1.874E-08	1.051E-08	6.803E-09	3.533E-09
W	135	4.090E-08	3.485E-08	3.013E-08	2.635E-08	2.324E-08	1.744E-08	1.118E-08	5.744E-09
WNW	138	4.332E-08	3.788E-08	3.062E-08	2.723E-08	2.435E-08	1.619E-08	1.139E-08	6.371E-09
NW	137	1.938E-08	1.777E-08	1.631E-08	1.502E-08	1.383E-08	1.334E-08	9.387E-09	6.098E-09
NNW	60	8.243E-09	7.712E-09	7.187E-09	6.711E-09	6.248E-09	4.426E-09	3.603E-09	3.468E-09
AVERAGE	2112	2.640E-08	2.273E-08	1.969E-08	1.742E-08	1.553E-08	1.023E-08	7.114E-09	4.224E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	137	2.288E-09	1.689E-09	1.304E-09	1.041E-09	8.476E-10	7.545E-10	6.254E-10	
NNE	287	4.052E-09	3.019E-09	2.354E-09	1.900E-09	1.565E-09	1.319E-09	1.127E-09	
NE	164	2.406E-09	1.810E-09	1.420E-09	1.153E-09	9.536E-10	8.068E-10	6.918E-10	
ENE	142	2.592E-09	2.010E-09	1.733E-09	1.383E-09	1.126E-09	9.376E-10	7.919E-10	
E	140	2.464E-09	1.832E-09	1.696E-09	1.345E-09	1.090E-09	9.046E-10	7.620E-10	
ESE	89	1.717E-09	1.462E-09	1.115E-09	8.827E-10	7.134E-10	5.909E-10	4.970E-10	
SE	123	2.350E-09	2.212E-09	1.663E-09	1.297E-09	1.032E-09	8.422E-10	6.978E-10	
SSE	163	4.083E-09	2.835E-09	2.090E-09	1.604E-09	1.261E-09	1.018E-09	8.368E-10	
S	90	2.001E-09	1.356E-09	9.825E-10	7.459E-10	5.827E-10	4.698E-10	3.873E-10	
SSW	118	2.613E-09	1.790E-09	1.316E-09	1.015E-09	8.054E-10	6.593E-10	5.511E-10	
SW	102	1.883E-09	1.331E-09	1.003E-09	7.891E-10	6.330E-10	5.253E-10	4.441E-10	
WSW	87	2.176E-09	1.472E-09	1.014E-09	7.709E-10	6.051E-10	4.747E-10	3.951E-10	
W	135	3.504E-09	2.359E-09	1.700E-09	1.284E-09	8.910E-10	6.563E-10	5.458E-10	
WNW	138	4.095E-09	2.908E-09	2.068E-09	1.305E-09	9.705E-10	7.784E-10	6.378E-10	
NW	137	3.904E-09	2.755E-09	2.015E-09	9.713E-10	7.566E-10	6.096E-10	5.016E-10	
NNW	60	2.062E-09	1.352E-09	9.507E-10	7.011E-10	5.318E-10	4.168E-10	3.337E-10	
AVERAGE	2112	2.762E-09	2.012E-09	1.526E-09	1.137E-09	8.978E-10	7.352E-10	6.142E-10	

Table B-2
Depleted χ/Q Factors for Main Stack

PNPS 3RD QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL

STACK RELEASE

GROUND-LEVEL AVERAGE χ/Q AFTER DEPLETION (MET. AND ATOMIC ENERGY 1968 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	313	1.378E-09	4.741E-08	3.847E-08	3.144E-08	3.266E-08	4.069E-08	4.419E-08	4.347E-08
NNE	299	1.827E-09	6.122E-08	3.108E-08	2.192E-08	2.403E-08	3.050E-08	3.248E-08	3.156E-08
NE	120	5.418E-10	2.025E-08	1.510E-08	1.084E-08	1.099E-08	1.383E-08	1.485E-08	1.444E-08
ENE	143	9.089E-10	3.409E-08	2.809E-08	1.854E-08	1.499E-08	1.452E-08	1.526E-08	1.511E-08
E	144	1.103E-09	3.957E-08	2.473E-08	2.011E-08	1.873E-08	1.775E-08	1.710E-08	1.606E-08
ESE	70	8.025E-10	2.942E-08	1.877E-08	1.194E-08	9.729E-09	9.465E-09	9.790E-09	9.523E-09
SE	94	1.657E-09	6.376E-08	3.649E-08	1.544E-08	1.059E-08	1.298E-08	1.023E-08	1.061E-08
SSE	41	2.103E-09	7.567E-08	2.438E-08	2.023E-08	2.638E-08	2.347E-08	1.902E-08	1.546E-08
S	19	6.550E-10	1.447E-08	1.149E-08	2.887E-08	2.475E-08	2.192E-08	1.720E-08	1.291E-08
SSW	77	6.639E-09	1.291E-07	6.998E-08	9.950E-08	1.807E-07	1.729E-07	1.104E-07	7.795E-08
SW	27	5.093E-09	4.098E-08	2.008E-08	2.876E-08	2.973E-08	2.699E-08	2.071E-08	1.622E-08
WSW	61	1.486E-08	1.348E-07	5.142E-08	4.213E-08	6.118E-08	6.347E-08	5.012E-08	3.993E-08
W	134	9.044E-09	1.139E-07	9.335E-08	7.590E-08	8.530E-08	9.108E-08	7.529E-08	6.553E-08
WNW	158	4.716E-09	6.235E-08	5.352E-08	4.929E-08	6.512E-08	7.514E-08	6.593E-08	5.915E-08
NW	140	1.117E-09	2.309E-08	1.471E-08	1.093E-08	1.245E-08	1.858E-08	2.194E-08	2.252E-08
NNW	140	4.710E-10	1.668E-08	1.325E-08	9.377E-09	1.079E-08	1.720E-08	2.070E-08	2.137E-08
AVERAGE	1980	3.307E-09	5.668E-08	3.406E-08	3.095E-08	3.863E-08	4.066E-08	3.408E-08	2.949E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	313	4.059E-08	3.742E-08	3.437E-08	3.164E-08	2.908E-08	1.971E-08	1.428E-08	8.624E-09
NNE	299	2.934E-08	2.699E-08	2.477E-08	2.281E-08	2.098E-08	1.438E-08	1.058E-08	6.591E-09
NE	120	1.343E-08	1.232E-08	1.128E-08	1.034E-08	9.495E-09	6.485E-09	4.782E-09	3.007E-09
ENE	143	1.433E-08	1.347E-08	1.261E-08	1.182E-08	1.104E-08	7.905E-09	5.956E-09	3.820E-09
E	144	1.475E-08	1.355E-08	1.247E-08	1.155E-08	1.068E-08	7.478E-09	5.602E-09	3.577E-09
ESE	70	8.892E-09	8.238E-09	7.612E-09	7.052E-09	6.511E-09	4.488E-09	3.300E-09	2.045E-09
SE	94	1.027E-08	9.787E-09	9.245E-09	8.720E-09	8.176E-09	5.916E-09	4.491E-09	2.908E-09
SSE	41	1.284E-08	1.088E-08	9.382E-09	8.185E-09	7.215E-09	4.394E-09	3.042E-09	1.959E-09
S	19	9.907E-09	7.898E-09	6.480E-09	5.424E-09	4.624E-09	2.519E-09	1.634E-09	8.768E-10
SSW	77	5.874E-08	4.614E-08	3.736E-08	3.092E-08	2.607E-08	1.348E-08	8.303E-09	4.057E-09
SW	27	1.309E-08	1.084E-08	9.161E-09	7.855E-09	6.819E-09	3.921E-09	2.595E-09	1.399E-09
WSW	61	3.243E-08	2.688E-08	2.268E-08	1.940E-08	1.679E-08	9.398E-09	6.046E-09	3.101E-09
W	134	5.646E-08	4.904E-08	4.297E-08	3.793E-08	3.368E-08	2.881E-08	1.826E-08	9.126E-09
WNW	158	5.207E-08	4.602E-08	3.751E-08	3.357E-08	3.019E-08	2.071E-08	1.494E-08	8.560E-09
NW	140	2.155E-08	2.028E-08	1.895E-08	1.768E-08	1.643E-08	1.610E-08	1.123E-08	7.286E-09
NNW	140	2.048E-08	1.920E-08	1.785E-08	1.657E-08	1.533E-08	1.050E-08	8.099E-09	7.513E-09
AVERAGE	1980	2.557E-08	2.243E-08	1.967E-08	1.759E-08	1.582E-08	1.101E-08	7.696E-09	4.653E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	313	5.886E-09	4.313E-09	3.317E-09	2.644E-09	2.150E-09	2.038E-09	1.690E-09	
NNE	299	4.630E-09	3.479E-09	2.731E-09	2.218E-09	1.837E-09	1.555E-09	1.335E-09	
NE	120	2.131E-09	1.609E-09	1.264E-09	1.027E-09	8.490E-10	7.168E-10	6.130E-10	
ENE	143	2.713E-09	2.115E-09	1.824E-09	1.458E-09	1.188E-09	9.903E-10	8.370E-10	
E	144	2.531E-09	1.900E-09	1.824E-09	1.455E-09	1.186E-09	9.895E-10	8.380E-10	
ESE	70	1.419E-09	1.137E-09	8.712E-10	6.920E-10	5.609E-10	4.656E-10	3.921E-10	
SE	94	2.070E-09	2.119E-09	1.607E-09	1.262E-09	1.010E-09	8.273E-10	6.875E-10	
SSE	41	1.287E-09	9.140E-10	6.839E-10	5.309E-10	4.205E-10	3.413E-10	2.813E-10	
S	19	5.561E-10	3.875E-10	2.873E-10	2.219E-10	1.753E-10	1.423E-10	1.174E-10	
SSW	77	2.391E-09	1.573E-09	1.116E-09	8.339E-10	6.435E-10	5.144E-10	4.209E-10	
SW	27	8.851E-10	6.081E-10	4.409E-10	3.328E-10	2.547E-10	2.000E-10	1.604E-10	
WSW	61	1.882E-09	1.255E-09	8.429E-10	6.299E-10	4.866E-10	3.717E-10	3.061E-10	
W	134	5.409E-09	3.546E-09	2.490E-09	1.834E-09	1.091E-09	6.931E-10	5.626E-10	
WNW	158	5.604E-09	4.251E-09	3.218E-09	1.647E-09	1.167E-09	9.199E-10	7.428E-10	
NW	140	4.689E-09	3.365E-09	2.494E-09	1.181E-09	9.018E-10	7.129E-10	5.757E-10	
NNW	140	4.668E-09	3.178E-09	2.302E-09	1.738E-09	1.343E-09	1.068E-09	8.639E-10	
AVERAGE	1980	3.047E-09	2.234E-09	1.707E-09	1.232E-09	9.540E-10	7.841E-10	6.515E-10	

Table B-2
Depleted χ/Q Factors for Main Stack

PNPS 4TH QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
GROUND-LEVEL AVERAGE CHI/Q AFTER DEPLETION (MET. AND ATOMIC ENERGY 1968 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	179	1.002E-09	3.042E-08	1.869E-08	1.565E-08	1.787E-08	2.411E-08	2.642E-08	2.595E-08
NNE	230	1.559E-09	4.943E-08	2.927E-08	2.154E-08	2.262E-08	2.875E-08	3.139E-08	3.097E-08
NE	144	1.291E-09	4.470E-08	2.390E-08	1.476E-08	1.373E-08	1.564E-08	1.676E-08	1.650E-08
ENE	155	8.776E-10	3.227E-08	1.891E-08	1.105E-08	1.057E-08	1.417E-08	1.654E-08	1.699E-08
E	264	3.294E-09	1.148E-07	5.677E-08	3.233E-08	2.866E-08	2.997E-08	3.080E-08	2.974E-08
ESE	157	2.564E-09	8.662E-08	3.878E-08	2.392E-08	2.243E-08	2.262E-08	2.161E-08	1.985E-08
SE	94	1.633E-09	5.510E-08	3.724E-08	2.055E-08	1.731E-08	1.938E-08	1.496E-08	1.396E-08
SSE	43	4.801E-10	2.074E-08	1.656E-08	2.390E-08	3.002E-08	2.671E-08	2.213E-08	1.826E-08
S	15	3.864E-10	9.531E-09	2.495E-08	2.716E-08	1.987E-08	1.625E-08	1.285E-08	9.577E-09
SSW	31	7.492E-10	1.047E-08	4.347E-08	5.035E-08	6.955E-08	5.600E-08	3.510E-08	2.448E-08
SW	36	5.695E-09	4.857E-08	3.761E-08	3.448E-08	3.004E-08	2.567E-08	2.062E-08	1.691E-08
WSW	64	7.796E-09	7.180E-08	4.478E-08	3.662E-08	4.438E-08	4.122E-08	3.218E-08	2.577E-08
W	64	7.109E-09	8.852E-08	6.907E-08	4.281E-08	3.732E-08	3.031E-08	2.313E-08	1.963E-08
WNW	63	2.540E-09	3.818E-08	2.580E-08	1.689E-08	1.996E-08	2.215E-08	1.934E-08	1.740E-08
NW	90	9.651E-10	1.896E-08	1.180E-08	7.518E-09	7.585E-09	9.824E-09	1.086E-08	1.085E-08
NNW	115	5.951E-10	1.867E-08	1.254E-08	8.920E-09	9.003E-09	1.230E-08	1.452E-08	1.502E-08
AVERAGE	1744	2.409E-09	4.618E-08	3.189E-08	2.428E-08	2.506E-08	2.469E-08	2.183E-08	1.949E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	179	2.419E-08	2.223E-08	2.035E-08	1.868E-08	1.713E-08	1.157E-08	8.395E-09	5.116E-09
NNE	230	2.900E-08	2.682E-08	2.472E-08	2.283E-08	2.105E-08	1.448E-08	1.065E-08	6.603E-09
NE	144	1.549E-08	1.438E-08	1.332E-08	1.236E-08	1.143E-08	7.976E-09	5.937E-09	3.766E-09
ENE	155	1.636E-08	1.550E-08	1.458E-08	1.371E-08	1.284E-08	9.305E-09	7.090E-09	4.638E-09
E	264	2.768E-08	2.556E-08	2.357E-08	2.182E-08	2.013E-08	1.397E-08	1.037E-08	6.564E-09
ESE	157	1.791E-08	1.616E-08	1.463E-08	1.334E-08	1.217E-08	8.187E-09	6.004E-09	3.752E-09
SE	94	1.262E-08	1.137E-08	1.026E-08	9.307E-09	8.454E-09	5.575E-09	4.004E-09	2.416E-09
SSE	43	1.525E-08	1.296E-08	1.117E-08	9.727E-09	8.562E-09	5.129E-09	3.493E-09	2.055E-09
S	15	7.312E-09	5.817E-09	4.769E-09	3.998E-09	3.412E-09	1.856E-09	1.180E-09	5.976E-10
SSW	31	1.829E-08	1.426E-08	1.148E-08	9.454E-09	7.939E-09	4.064E-09	2.490E-09	1.210E-09
SW	36	1.418E-08	1.213E-08	1.054E-08	9.252E-09	8.204E-09	5.081E-09	3.540E-09	2.041E-09
WSW	64	2.113E-08	1.772E-08	1.513E-08	1.309E-08	1.145E-08	6.737E-09	4.515E-09	2.464E-09
W	64	1.680E-08	1.459E-08	1.282E-08	1.138E-08	1.016E-08	8.339E-09	5.422E-09	2.836E-09
WNW	63	1.537E-08	1.363E-08	1.215E-08	1.090E-08	9.812E-09	6.046E-09	4.752E-09	2.750E-09
NW	90	1.033E-08	9.742E-09	9.152E-09	8.602E-09	8.064E-09	9.319E-09	6.785E-09	4.808E-09
NNW	115	1.449E-08	1.368E-08	1.278E-08	1.192E-08	1.107E-08	7.712E-09	6.135E-09	6.001E-09
AVERAGE	1744	1.728E-08	1.541E-08	1.384E-08	1.252E-08	1.137E-08	7.834E-09	5.673E-09	3.601E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	179	3.531E-09	2.616E-09	2.033E-09	1.636E-09	1.342E-09	1.255E-09	1.046E-09	
NNE	230	4.597E-09	3.420E-09	2.661E-09	2.142E-09	1.758E-09	1.476E-09	1.256E-09	
NE	144	2.673E-09	2.023E-09	1.597E-09	1.303E-09	1.082E-09	9.177E-10	7.885E-10	
ENE	155	3.347E-09	2.646E-09	2.303E-09	1.852E-09	1.515E-09	1.266E-09	1.071E-09	
E	264	4.654E-09	3.520E-09	3.256E-09	2.619E-09	2.149E-09	1.803E-09	1.535E-09	
ESE	157	2.642E-09	2.163E-09	1.681E-09	1.353E-09	1.111E-09	9.333E-10	7.958E-10	
SE	94	1.660E-09	1.353E-09	1.031E-09	8.163E-10	6.606E-10	5.483E-10	4.622E-10	
SSE	43	1.310E-09	9.111E-10	6.733E-10	5.181E-10	4.081E-10	3.307E-10	2.726E-10	
S	15	3.637E-10	2.457E-10	1.784E-10	1.361E-10	1.071E-10	8.707E-11	7.238E-11	
SSW	31	7.203E-10	4.817E-10	3.486E-10	2.659E-10	2.093E-10	1.705E-10	1.417E-10	
SW	36	1.337E-09	9.408E-10	6.952E-10	5.330E-10	4.145E-10	3.300E-10	2.677E-10	
WSW	64	1.563E-09	1.083E-09	7.636E-10	5.837E-10	4.595E-10	3.586E-10	2.987E-10	
W	64	1.744E-09	1.181E-09	8.566E-10	6.517E-10	4.561E-10	3.439E-10	2.901E-10	
WNW	63	1.821E-09	1.341E-09	1.005E-09	6.756E-10	5.128E-10	4.159E-10	3.438E-10	
NW	90	3.144E-09	2.284E-09	1.702E-09	8.087E-10	6.230E-10	4.955E-10	4.024E-10	
NNW	115	3.762E-09	2.592E-09	1.903E-09	1.457E-09	1.143E-09	9.219E-10	7.567E-10	
AVERAGE	1744	2.429E-09	1.800E-09	1.418E-09	1.084E-09	8.719E-10	7.284E-10	6.125E-10	

Table B-2
Depleted χ/Q Factors for Main Stack

PNPS ANNUAL 1999 GENERALX/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
GROUND-LEVEL AVERAGE χ/Q AFTER DEPLETION (MET. AND ATOMIC ENERGY 1968 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	703	9.950E-10	3.262E-08	2.302E-08	1.766E-08	1.815E-08	2.226E-08	2.396E-08	2.348E-08
NNE	973	1.306E-09	4.013E-08	2.158E-08	1.610E-08	1.859E-08	2.532E-08	2.763E-08	2.707E-08
NE	598	7.048E-10	2.327E-08	1.494E-08	1.107E-08	1.155E-08	1.473E-08	1.612E-08	1.593E-08
ENE	608	7.499E-10	2.813E-08	2.010E-08	1.388E-08	1.279E-08	1.474E-08	1.619E-08	1.621E-08
E	801	1.562E-09	5.355E-08	3.180E-08	2.152E-08	2.010E-08	2.184E-08	2.266E-08	2.194E-08
ESE	562	1.474E-09	4.742E-08	2.424E-08	1.544E-08	1.439E-08	1.567E-08	1.607E-08	1.542E-08
SE	562	1.383E-09	4.653E-08	3.414E-08	2.052E-08	1.813E-08	2.196E-08	1.770E-08	1.696E-08
SSE	413	2.128E-09	6.300E-08	3.745E-08	4.631E-08	5.447E-08	4.735E-08	3.915E-08	3.237E-08
S	227	2.023E-09	3.392E-08	3.967E-08	5.975E-08	4.820E-08	4.259E-08	3.380E-08	2.539E-08
SSW	303	5.134E-09	8.888E-08	7.899E-08	8.954E-08	1.376E-07	1.176E-07	7.450E-08	5.243E-08
SW	226	7.509E-09	5.842E-08	4.498E-08	5.721E-08	5.191E-08	4.183E-08	3.124E-08	2.417E-08
WSW	260	9.357E-09	8.271E-08	4.925E-08	4.407E-08	5.629E-08	5.321E-08	4.101E-08	3.236E-08
W	408	7.892E-09	9.821E-08	7.286E-08	6.006E-08	6.375E-08	6.073E-08	4.760E-08	4.029E-08
WNW	450	3.087E-09	4.484E-08	3.748E-08	3.409E-08	4.399E-08	4.857E-08	4.133E-08	3.656E-08
NW	489	1.309E-09	2.403E-08	1.582E-08	1.172E-08	1.239E-08	1.609E-08	1.769E-08	1.750E-08
NNW	373	3.257E-10	1.085E-08	8.613E-09	6.698E-09	7.249E-09	1.032E-08	1.205E-08	1.234E-08
AVERAGE	7956	2.934E-09	4.853E-08	3.468E-08	3.285E-08	3.685E-08	3.592E-08	2.992E-08	2.565E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	703	2.190E-08	2.017E-08	1.852E-08	1.704E-08	1.566E-08	1.063E-08	7.721E-09	4.693E-09
NNE	973	2.522E-08	2.320E-08	2.127E-08	1.956E-08	1.798E-08	1.226E-08	8.970E-09	5.538E-09
NE	598	1.496E-08	1.386E-08	1.280E-08	1.184E-08	1.094E-08	7.582E-09	5.616E-09	3.532E-09
ENE	608	1.541E-08	1.446E-08	1.351E-08	1.263E-08	1.177E-08	8.380E-09	6.302E-09	4.037E-09
E	801	2.042E-08	1.884E-08	1.736E-08	1.604E-08	1.480E-08	1.024E-08	7.575E-09	4.750E-09
ESE	562	1.427E-08	1.313E-08	1.207E-08	1.115E-08	1.027E-08	7.096E-09	5.257E-09	3.309E-09
SE	562	1.562E-08	1.428E-08	1.306E-08	1.199E-08	1.101E-08	7.506E-09	5.514E-09	3.432E-09
SSE	413	2.712E-08	2.311E-08	1.999E-08	1.747E-08	1.543E-08	9.368E-09	6.447E-09	3.949E-09
S	227	1.948E-08	1.556E-08	1.281E-08	1.077E-08	9.219E-09	5.102E-09	3.326E-09	1.778E-09
SSW	303	3.949E-08	3.104E-08	2.518E-08	2.088E-08	1.764E-08	9.268E-09	5.805E-09	2.930E-09
SW	226	1.931E-08	1.586E-08	1.333E-08	1.138E-08	9.852E-09	5.619E-09	3.704E-09	1.995E-09
WSW	260	2.617E-08	2.167E-08	1.830E-08	1.568E-08	1.360E-08	7.739E-09	5.061E-09	2.671E-09
W	408	3.416E-08	2.933E-08	2.549E-08	2.238E-08	1.979E-08	1.565E-08	9.998E-09	5.099E-09
WNW	450	3.189E-08	2.799E-08	2.476E-08	2.207E-08	1.977E-08	1.207E-08	9.437E-09	5.349E-09
NW	489	1.643E-08	1.527E-08	1.413E-08	1.311E-08	1.213E-08	1.189E-08	8.372E-09	5.511E-09
NNW	373	1.181E-08	1.109E-08	1.032E-08	9.609E-09	8.912E-09	6.188E-09	4.893E-09	4.793E-09
AVERAGE	7956	2.210E-08	1.930E-08	1.706E-08	1.522E-08	1.367E-08	9.162E-09	6.500E-09	3.960E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	703	3.217E-09	2.363E-09	1.819E-09	1.451E-09	1.180E-09	1.089E-09	9.029E-10	
NNE	973	3.857E-09	2.875E-09	2.244E-09	1.812E-09	1.492E-09	1.257E-09	1.074E-09	
NE	598	2.491E-09	1.873E-09	1.469E-09	1.191E-09	9.833E-10	8.297E-10	7.093E-10	
ENE	608	2.868E-09	2.234E-09	1.917E-09	1.533E-09	1.249E-09	1.041E-09	8.788E-10	
E	801	3.336E-09	2.499E-09	2.306E-09	1.838E-09	1.495E-09	1.245E-09	1.053E-09	
ESE	562	2.326E-09	1.931E-09	1.489E-09	1.189E-09	9.686E-10	8.078E-10	6.835E-10	
SE	562	2.399E-09	2.189E-09	1.661E-09	1.307E-09	1.050E-09	8.651E-10	7.234E-10	
SSE	413	2.556E-09	1.804E-09	1.349E-09	1.050E-09	8.358E-10	6.830E-10	5.675E-10	
S	227	1.124E-09	7.821E-10	5.812E-10	4.514E-10	3.599E-10	2.955E-10	2.473E-10	
SSW	303	1.786E-09	1.212E-09	8.848E-10	6.781E-10	5.353E-10	4.363E-10	3.631E-10	
SW	226	1.272E-09	8.869E-10	6.571E-10	5.080E-10	3.997E-10	3.248E-10	2.692E-10	
WSW	260	1.660E-09	1.133E-09	7.879E-10	5.986E-10	4.690E-10	3.649E-10	3.029E-10	
W	408	3.088E-09	2.067E-09	1.480E-09	1.112E-09	7.364E-10	5.184E-10	4.282E-10	
WNW	450	3.481E-09	2.555E-09	1.887E-09	1.116E-09	8.201E-10	6.555E-10	5.353E-10	
NW	489	3.567E-09	2.569E-09	1.912E-09	9.705E-10	7.519E-10	6.019E-10	4.918E-10	
NNW	373	2.980E-09	2.034E-09	1.480E-09	1.124E-09	8.742E-10	6.996E-10	5.700E-10	
AVERAGE	7956	2.625E-09	1.938E-09	1.495E-09	1.121E-09	8.875E-10	7.321E-10	6.125E-10	

Table B-3
Gamma χ /Q Factors for Main Stack

PNPS 1ST QUARTER 1999 GENERAL X/QS: ELEVATED

STACK RELEASE

AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	74	2.503E-07	1.318E-07	6.537E-08	4.019E-08	3.049E-08	2.094E-08	1.612E-08	1.318E-08
NNE	157	3.512E-07	1.793E-07	9.022E-08	6.059E-08	4.677E-08	3.294E-08	2.565E-08	2.102E-08
NE	170	4.253E-07	2.160E-07	1.098E-07	7.433E-08	5.714E-08	3.985E-08	3.084E-08	2.519E-08
ENE	168	4.608E-07	2.374E-07	1.186E-07	7.781E-08	5.921E-08	4.072E-08	3.132E-08	2.556E-08
E	253	6.553E-07	3.392E-07	1.677E-07	1.089E-07	8.300E-08	5.728E-08	4.412E-08	3.601E-08
ESE	246	5.906E-07	3.116E-07	1.466E-07	9.390E-08	7.122E-08	4.888E-08	3.755E-08	3.062E-08
SE	251	8.257E-07	4.337E-07	2.498E-07	1.405E-07	9.300E-08	6.424E-08	3.789E-08	3.074E-08
SSE	166	7.353E-07	3.925E-07	2.040E-07	9.339E-08	7.324E-08	4.873E-08	3.605E-08	2.839E-08
S	103	3.048E-07	1.646E-07	8.332E-08	5.759E-08	4.196E-08	2.820E-08	2.038E-08	1.546E-08
SSW	77	3.585E-07	1.918E-07	9.201E-08	6.004E-08	5.103E-08	3.315E-08	2.269E-08	1.707E-08
SW	61	2.748E-07	1.409E-07	8.193E-08	5.625E-08	4.240E-08	2.835E-08	2.048E-08	1.578E-08
WSW	48	2.784E-07	1.458E-07	6.693E-08	3.934E-08	2.963E-08	2.039E-08	1.478E-08	1.147E-08
W	75	4.275E-07	2.235E-07	1.208E-07	6.653E-08	5.124E-08	3.496E-08	2.379E-08	1.880E-08
WNW	91	3.233E-07	1.676E-07	1.226E-07	7.378E-08	6.147E-08	4.195E-08	2.905E-08	2.323E-08
NW	122	3.372E-07	1.734E-07	8.569E-08	5.635E-08	4.315E-08	2.997E-08	2.314E-08	1.887E-08
NNW	58	1.427E-07	7.220E-08	3.646E-08	2.469E-08	1.902E-08	1.334E-08	1.037E-08	8.491E-09
AVERAGE	2120	4.213E-07	2.201E-07	1.151E-07	7.026E-08	5.337E-08	3.649E-08	2.651E-08	2.124E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	74	1.112E-08	9.615E-09	8.462E-09	7.551E-09	6.808E-09	4.514E-09	3.337E-09	2.154E-09
NNE	157	1.773E-08	1.529E-08	1.341E-08	1.192E-08	1.070E-08	6.981E-09	5.085E-09	3.198E-09
NE	170	2.122E-08	1.830E-08	1.607E-08	1.430E-08	1.286E-08	8.454E-09	6.208E-09	3.966E-09
ENE	168	2.155E-08	1.860E-08	1.634E-08	1.456E-08	1.311E-08	8.654E-09	6.379E-09	4.101E-09
E	253	3.032E-08	2.613E-08	2.292E-08	2.037E-08	1.831E-08	1.200E-08	8.785E-09	5.583E-09
ESE	246	2.579E-08	2.225E-08	1.954E-08	1.740E-08	1.566E-08	1.033E-08	7.619E-09	4.905E-09
SE	251	2.574E-08	2.206E-08	1.926E-08	1.704E-08	1.525E-08	9.869E-09	7.166E-09	4.499E-09
SSE	166	2.327E-08	1.962E-08	1.689E-08	1.478E-08	1.310E-08	8.246E-09	5.913E-09	3.822E-09
S	103	1.226E-08	1.008E-08	8.503E-09	7.311E-09	6.391E-09	3.843E-09	2.675E-09	1.598E-09
SSW	77	1.354E-08	1.114E-08	9.401E-09	8.085E-09	7.068E-09	4.256E-09	2.964E-09	1.770E-09
SW	61	1.267E-08	1.050E-08	8.906E-09	7.692E-09	6.745E-09	4.085E-09	2.835E-09	1.666E-09
WSW	48	9.279E-09	7.744E-09	6.614E-09	5.747E-09	5.066E-09	3.129E-09	2.213E-09	1.347E-09
W	75	1.540E-08	1.296E-08	1.114E-08	9.722E-09	8.598E-09	5.854E-09	4.084E-09	2.439E-09
WNW	91	1.923E-08	1.633E-08	1.414E-08	1.243E-08	1.106E-08	6.558E-09	5.224E-09	3.220E-09
NW	122	1.588E-08	1.368E-08	1.199E-08	1.066E-08	9.580E-09	7.292E-09	5.258E-09	3.479E-09
NNW	58	7.171E-09	6.198E-09	5.450E-09	4.858E-09	4.375E-09	2.893E-09	2.234E-09	1.940E-09
AVERAGE	2120	1.764E-08	1.503E-08	1.306E-08	1.153E-08	1.029E-08	6.685E-09	4.874E-09	3.105E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	74	1.573E-09	1.231E-09	1.009E-09	8.531E-10	7.350E-10	7.615E-10	6.736E-10	
NNE	157	2.294E-09	1.771E-09	1.435E-09	1.203E-09	1.028E-09	8.971E-10	7.932E-10	
NE	170	2.878E-09	2.242E-09	1.831E-09	1.544E-09	1.327E-09	1.164E-09	1.033E-09	
ENE	168	2.989E-09	2.381E-09	2.063E-09	1.738E-09	1.492E-09	1.307E-09	1.160E-09	
E	253	4.040E-09	3.140E-09	2.855E-09	2.393E-09	2.046E-09	1.786E-09	1.580E-09	
ESE	246	3.579E-09	3.019E-09	2.464E-09	2.077E-09	1.785E-09	1.565E-09	1.390E-09	
SE	251	3.232E-09	2.797E-09	2.259E-09	1.887E-09	1.608E-09	1.401E-09	1.236E-09	
SSE	166	2.721E-09	2.094E-09	1.697E-09	1.422E-09	1.215E-09	1.061E-09	9.383E-10	
S	103	1.116E-09	8.471E-10	6.805E-10	5.662E-10	4.810E-10	4.179E-10	3.681E-10	
SSW	77	1.235E-09	9.369E-10	7.513E-10	6.242E-10	5.295E-10	4.595E-10	4.043E-10	
SW	61	1.150E-09	8.638E-10	6.870E-10	5.665E-10	4.819E-10	4.153E-10	3.629E-10	
WSW	48	9.512E-10	7.325E-10	6.162E-10	5.134E-10	4.365E-10	3.821E-10	3.363E-10	
W	75	1.699E-09	1.287E-09	1.030E-09	8.548E-10	7.353E-10	6.373E-10	5.598E-10	
WNW	91	2.286E-09	1.807E-09	1.522E-09	1.288E-09	1.093E-09	9.492E-10	8.352E-10	
NW	122	2.479E-09	1.940E-09	1.582E-09	1.408E-09	1.199E-09	1.044E-09	9.214E-10	
NNW	58	1.376E-09	1.056E-09	8.545E-10	7.150E-10	6.102E-10	5.320E-10	4.700E-10	
AVERAGE	2120	2.225E-09	1.759E-09	1.459E-09	1.228E-09	1.050E-09	9.237E-10	8.164E-10	

Table B-3
Gamma χ /Q Factors for Main Stack

PNPS 2ND QUARTER 1999 GENERAL X/QS: Elevated
STACK RELEASE

AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	137	4.336E-07	2.288E-07	1.083E-07	6.720E-08	5.126E-08	3.542E-08	2.727E-08	2.223E-08
NNE	287	7.013E-07	3.647E-07	1.760E-07	1.128E-07	8.669E-08	6.064E-08	4.700E-08	3.841E-08
NE	164	4.541E-07	2.353E-07	1.141E-07	7.323E-08	5.583E-08	3.855E-08	2.971E-08	2.424E-08
ENE	142	4.749E-07	2.473E-07	1.194E-07	7.598E-08	5.789E-08	3.990E-08	3.072E-08	2.507E-08
E	140	4.586E-07	2.412E-07	1.156E-07	7.191E-08	5.425E-08	3.691E-08	2.828E-08	2.309E-08
ESE	89	3.164E-07	1.656E-07	7.873E-08	5.122E-08	3.891E-08	2.676E-08	2.060E-08	1.682E-08
SE	123	8.405E-07	4.352E-07	2.133E-07	1.137E-07	7.101E-08	4.866E-08	2.670E-08	2.178E-08
SSE	163	1.464E-06	7.741E-07	3.845E-07	1.267E-07	9.922E-08	6.618E-08	4.919E-08	3.889E-08
S	90	4.278E-07	2.307E-07	9.892E-08	6.935E-08	5.166E-08	3.719E-08	2.828E-08	2.193E-08
SSW	118	9.060E-07	4.975E-07	1.959E-07	1.197E-07	1.038E-07	7.104E-08	4.909E-08	3.709E-08
SW	102	7.057E-07	3.817E-07	1.773E-07	9.439E-08	6.995E-08	4.605E-08	3.312E-08	2.559E-08
WSW	87	1.001E-06	5.329E-07	2.070E-07	1.077E-07	8.118E-08	5.613E-08	4.079E-08	3.168E-08
W	135	1.075E-06	5.743E-07	3.110E-07	1.497E-07	1.135E-07	7.615E-08	5.150E-08	4.069E-08
WNW	138	6.409E-07	3.362E-07	2.509E-07	1.473E-07	1.222E-07	8.376E-08	5.860E-08	4.697E-08
NW	137	5.779E-07	3.001E-07	1.458E-07	9.331E-08	7.074E-08	4.833E-08	3.696E-08	3.004E-08
NNW	60	2.660E-07	1.364E-07	6.839E-08	4.523E-08	3.441E-08	2.361E-08	1.813E-08	1.478E-08
AVERAGE	2112	6.716E-07	3.551E-07	1.728E-07	9.497E-08	7.265E-08	4.970E-08	3.600E-08	2.871E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	137	1.871E-08	1.611E-08	1.412E-08	1.255E-08	1.127E-08	7.377E-09	5.401E-09	3.432E-09
NNE	287	3.235E-08	2.787E-08	2.443E-08	2.171E-08	1.949E-08	1.275E-08	9.321E-09	5.905E-09
NE	164	2.044E-08	1.765E-08	1.551E-08	1.382E-08	1.245E-08	8.243E-09	6.095E-09	3.938E-09
ENE	142	2.114E-08	1.826E-08	1.606E-08	1.433E-08	1.291E-08	8.571E-09	6.350E-09	4.119E-09
E	140	1.948E-08	1.683E-08	1.481E-08	1.321E-08	1.190E-08	7.885E-09	5.828E-09	3.762E-09
ESE	89	1.420E-08	1.228E-08	1.081E-08	9.642E-09	8.697E-09	5.792E-09	4.306E-09	2.809E-09
SE	123	1.836E-08	1.585E-08	1.394E-08	1.242E-08	1.119E-08	7.405E-09	5.478E-09	3.548E-09
SSE	163	3.198E-08	2.703E-08	2.334E-08	2.046E-08	1.818E-08	1.151E-08	8.296E-09	5.427E-09
S	90	1.759E-08	1.460E-08	1.242E-08	1.076E-08	9.475E-09	5.840E-09	4.142E-09	2.546E-09
SSW	118	2.956E-08	2.440E-08	2.066E-08	1.783E-08	1.564E-08	9.517E-09	6.695E-09	4.068E-09
SW	102	2.063E-08	1.715E-08	1.459E-08	1.263E-08	1.110E-08	6.778E-09	4.741E-09	2.830E-09
WSW	87	2.564E-08	2.140E-08	1.826E-08	1.586E-08	1.397E-08	8.594E-09	6.053E-09	3.657E-09
W	135	3.337E-08	2.814E-08	2.423E-08	2.120E-08	1.879E-08	1.334E-08	9.387E-09	5.679E-09
WNW	138	3.895E-08	3.315E-08	2.636E-08	2.322E-08	2.069E-08	1.363E-08	9.940E-09	6.178E-09
NW	137	2.524E-08	2.173E-08	1.906E-08	1.695E-08	1.524E-08	1.189E-08	8.644E-09	5.867E-09
NNW	60	1.245E-08	1.075E-08	9.457E-09	8.434E-09	7.602E-09	5.044E-09	3.916E-09	3.437E-09
AVERAGE	2112	2.376E-08	2.020E-08	1.738E-08	1.531E-08	1.366E-08	9.010E-09	6.537E-09	4.200E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	137	2.485E-09	1.932E-09	1.577E-09	1.329E-09	1.141E-09	1.185E-09	1.046E-09	
NNE	287	4.265E-09	3.311E-09	2.696E-09	2.268E-09	1.945E-09	1.703E-09	1.510E-09	
NE	164	2.883E-09	2.262E-09	1.856E-09	1.572E-09	1.357E-09	1.194E-09	1.064E-09	
ENE	142	3.022E-09	2.428E-09	2.138E-09	1.808E-09	1.557E-09	1.369E-09	1.218E-09	
E	140	2.750E-09	2.154E-09	2.003E-09	1.687E-09	1.449E-09	1.271E-09	1.128E-09	
ESE	89	2.070E-09	1.794E-09	1.472E-09	1.247E-09	1.076E-09	9.461E-10	8.428E-10	
SE	123	2.600E-09	2.397E-09	1.955E-09	1.647E-09	1.414E-09	1.239E-09	1.100E-09	
SSE	163	3.880E-09	2.995E-09	2.434E-09	2.044E-09	1.750E-09	1.529E-09	1.354E-09	
S	90	1.808E-09	1.391E-09	1.127E-09	9.448E-10	8.076E-10	7.047E-10	6.232E-10	
SSW	118	2.871E-09	2.197E-09	1.776E-09	1.485E-09	1.266E-09	1.104E-09	9.748E-10	
SW	102	1.974E-09	1.496E-09	1.199E-09	9.957E-10	8.503E-10	7.371E-10	6.478E-10	
WSW	87	2.569E-09	1.967E-09	1.634E-09	1.358E-09	1.153E-09	1.008E-09	8.862E-10	
W	135	3.995E-09	3.048E-09	2.456E-09	2.048E-09	1.791E-09	1.555E-09	1.369E-09	
WNW	138	4.412E-09	3.522E-09	3.004E-09	2.560E-09	2.177E-09	1.892E-09	1.667E-09	
NW	137	4.215E-09	3.333E-09	2.735E-09	2.499E-09	2.132E-09	1.857E-09	1.640E-09	
NNW	60	2.444E-09	1.879E-09	1.523E-09	1.276E-09	1.090E-09	9.508E-10	8.405E-10	
AVERAGE	2112	3.015E-09	2.382E-09	1.974E-09	1.673E-09	1.435E-09	1.265E-09	1.119E-09	

Table B-3
Gamma χ/Q Factors for Main Stack

PNPS 3RD QUARTER 1999 GENERAL X/QS: ELEVATED

STACK RELEASE

AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	313	1.020E-06	5.272E-07	2.613E-07	1.705E-07	1.301E-07	8.991E-08	6.926E-08	5.649E-08
NNE	299	8.427E-07	4.406E-07	2.107E-07	1.328E-07	1.015E-07	7.039E-08	5.427E-08	4.424E-08
NE	120	4.051E-07	2.095E-07	1.031E-07	6.660E-08	5.060E-08	3.479E-08	2.674E-08	2.192E-08
ENE	143	5.049E-07	2.639E-07	1.287E-07	8.088E-08	6.050E-08	4.058E-08	3.088E-08	2.517E-08
E	144	4.976E-07	2.616E-07	1.253E-07	7.859E-08	5.974E-08	4.066E-08	3.090E-08	2.496E-08
ESE	70	2.546E-07	1.364E-07	6.363E-08	3.919E-08	2.927E-08	1.966E-08	1.496E-08	1.218E-08
SE	94	9.052E-07	4.726E-07	2.092E-07	1.045E-07	6.544E-08	4.442E-08	2.272E-08	1.859E-08
SSE	41	5.501E-07	2.965E-07	1.354E-07	3.672E-08	2.916E-08	1.974E-08	1.474E-08	1.167E-08
S	19	1.224E-07	6.494E-08	2.810E-08	2.088E-08	1.563E-08	1.114E-08	8.332E-09	6.431E-09
SSW	77	7.867E-07	4.259E-07	1.728E-07	1.120E-07	1.024E-07	7.386E-08	5.176E-08	3.930E-08
SW	27	2.723E-07	1.445E-07	7.011E-08	3.977E-08	3.034E-08	2.095E-08	1.546E-08	1.212E-08
WSW	61	9.006E-07	4.784E-07	1.730E-07	8.937E-08	6.791E-08	4.794E-08	3.529E-08	2.770E-08
W	134	1.438E-06	7.475E-07	4.333E-07	2.254E-07	1.669E-07	1.135E-07	7.793E-08	6.239E-08
WNW	158	8.432E-07	4.372E-07	3.320E-07	1.976E-07	1.634E-07	1.121E-07	7.869E-08	6.336E-08
NW	140	6.271E-07	3.209E-07	1.587E-07	1.043E-07	7.960E-08	5.510E-08	4.260E-08	3.487E-08
NNW	140	5.580E-07	2.855E-07	1.427E-07	9.419E-08	7.183E-08	4.982E-08	3.866E-08	3.176E-08
AVERAGE	1980	6.580E-07	3.446E-07	1.717E-07	9.958E-08	7.653E-08	5.278E-08	3.832E-08	3.082E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	313	4.755E-08	4.097E-08	3.592E-08	3.193E-08	2.869E-08	1.877E-08	1.372E-08	8.698E-09
NNE	299	3.723E-08	3.208E-08	2.813E-08	2.502E-08	2.249E-08	1.478E-08	1.086E-08	6.946E-09
NE	120	1.838E-08	1.585E-08	1.391E-08	1.237E-08	1.112E-08	7.311E-09	5.375E-09	3.439E-09
ENE	143	2.124E-08	1.837E-08	1.618E-08	1.445E-08	1.304E-08	8.701E-09	6.473E-09	4.226E-09
E	144	2.089E-08	1.794E-08	1.570E-08	1.396E-08	1.254E-08	8.249E-09	6.089E-09	3.943E-09
ESE	70	1.027E-08	8.861E-09	7.787E-09	6.938E-09	6.248E-09	4.125E-09	3.043E-09	1.960E-09
SE	94	1.573E-08	1.364E-08	1.203E-08	1.076E-08	9.728E-09	6.524E-09	4.875E-09	3.206E-09
SSE	41	9.603E-09	8.127E-09	7.021E-09	6.158E-09	5.473E-09	3.474E-09	2.508E-09	1.651E-09
S	19	5.158E-09	4.275E-09	3.632E-09	3.138E-09	2.755E-09	1.680E-09	1.184E-09	7.233E-10
SSW	77	3.141E-08	2.598E-08	2.203E-08	1.903E-08	1.670E-08	1.018E-08	7.164E-09	4.352E-09
SW	27	9.895E-09	8.316E-09	7.144E-09	6.235E-09	5.517E-09	3.452E-09	2.464E-09	1.522E-09
WSW	61	2.262E-08	1.900E-08	1.631E-08	1.423E-08	1.258E-08	7.845E-09	5.576E-09	3.413E-09
W	134	5.178E-08	4.411E-08	3.833E-08	3.379E-08	3.015E-08	2.295E-08	1.640E-08	1.019E-08
WNW	158	5.280E-08	4.513E-08	3.604E-08	3.186E-08	2.849E-08	1.912E-08	1.414E-08	8.937E-09
NW	140	2.946E-08	2.549E-08	2.245E-08	2.004E-08	1.807E-08	1.426E-08	1.040E-08	7.065E-09
NNW	140	2.690E-08	2.330E-08	2.052E-08	1.831E-08	1.651E-08	1.094E-08	8.399E-09	6.966E-09
AVERAGE	1980	2.568E-08	2.196E-08	1.895E-08	1.676E-08	1.501E-08	1.015E-08	7.417E-09	4.827E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	313	6.277E-09	4.869E-09	3.965E-09	3.335E-09	2.859E-09	2.920E-09	2.578E-09	
NNE	299	5.051E-09	3.941E-09	3.223E-09	2.721E-09	2.341E-09	2.056E-09	1.828E-09	
NE	120	2.503E-09	1.955E-09	1.599E-09	1.351E-09	1.163E-09	1.021E-09	9.079E-10	
ENE	143	3.114E-09	2.508E-09	2.211E-09	1.871E-09	1.613E-09	1.419E-09	1.263E-09	
E	144	2.894E-09	2.275E-09	2.168E-09	1.834E-09	1.581E-09	1.390E-09	1.237E-09	
ESE	70	1.429E-09	1.191E-09	9.719E-10	8.192E-10	7.037E-10	6.171E-10	5.480E-10	
SE	94	2.373E-09	2.256E-09	1.848E-09	1.563E-09	1.347E-09	1.184E-09	1.054E-09	
SSE	41	1.184E-09	9.158E-10	7.445E-10	6.258E-10	5.364E-10	4.697E-10	4.165E-10	
S	19	5.109E-10	3.913E-10	3.158E-10	2.639E-10	2.250E-10	1.963E-10	1.734E-10	
SSW	77	3.068E-09	2.345E-09	1.892E-09	1.579E-09	1.345E-09	1.171E-09	1.033E-09	
SW	27	1.085E-09	8.352E-10	6.767E-10	5.672E-10	4.974E-10	4.345E-10	3.845E-10	
WSW	61	2.415E-09	1.860E-09	1.555E-09	1.295E-09	1.100E-09	9.643E-10	8.488E-10	
W	134	7.272E-09	5.609E-09	4.553E-09	3.821E-09	3.444E-09	3.006E-09	2.658E-09	
WNW	158	6.454E-09	5.277E-09	4.694E-09	4.107E-09	3.508E-09	3.060E-09	2.705E-09	
NW	140	5.079E-09	4.013E-09	3.291E-09	2.989E-09	2.551E-09	2.224E-09	1.965E-09	
NNW	140	4.929E-09	3.777E-09	3.050E-09	2.548E-09	2.172E-09	1.893E-09	1.671E-09	
AVERAGE	1980	3.477E-09	2.751E-09	2.297E-09	1.956E-09	1.687E-09	1.501E-09	1.329E-09	

Table B-3
Gamma γ /Q Factors for Main Stack

PNPS 4TH QUARTER 1999 GENERAL X/QS: ELEVATED
STACK RELEASE

AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	179	5.863E-07	3.034E-07	1.487E-07	9.670E-08	7.430E-08	5.188E-08	4.016E-08	3.278E-08
NNE	230	7.658E-07	3.987E-07	1.930E-07	1.232E-07	9.416E-08	6.525E-08	5.036E-08	4.111E-08
NE	144	4.636E-07	2.452E-07	1.150E-07	7.018E-08	5.320E-08	3.651E-08	2.806E-08	2.290E-08
ENE	155	5.254E-07	2.732E-07	1.321E-07	8.357E-08	6.332E-08	4.349E-08	3.357E-08	2.752E-08
E	264	8.559E-07	4.614E-07	2.088E-07	1.208E-07	9.113E-08	6.217E-08	4.763E-08	3.883E-08
ESE	157	5.197E-07	2.845E-07	1.245E-07	7.172E-08	5.436E-08	3.719E-08	2.838E-08	2.298E-08
SE	94	4.380E-07	2.355E-07	1.304E-07	6.816E-08	4.445E-08	3.016E-08	1.768E-08	1.437E-08
SSE	43	2.964E-07	1.550E-07	8.600E-08	4.099E-08	3.218E-08	2.147E-08	1.595E-08	1.262E-08
S	15	9.912E-08	5.290E-08	2.920E-08	1.971E-08	1.379E-08	8.903E-09	6.408E-09	4.911E-09
SSW	31	2.165E-07	1.120E-07	6.095E-08	4.253E-08	3.687E-08	2.493E-08	1.715E-08	1.286E-08
SW	36	3.020E-07	1.612E-07	7.808E-08	4.632E-08	3.395E-08	2.246E-08	1.635E-08	1.285E-08
WSW	64	4.681E-07	2.488E-07	1.055E-07	5.869E-08	4.357E-08	2.993E-08	2.180E-08	1.708E-08
W	64	5.280E-07	2.845E-07	1.395E-07	6.925E-08	5.075E-08	3.269E-08	2.176E-08	1.722E-08
WNW	63	2.661E-07	1.424E-07	9.179E-08	5.025E-08	4.146E-08	2.819E-08	1.960E-08	1.578E-08
NW	90	3.765E-07	1.937E-07	9.463E-08	6.109E-08	4.623E-08	3.159E-08	2.425E-08	1.979E-08
NNW	115	4.285E-07	2.206E-07	1.086E-07	7.073E-08	5.391E-08	3.733E-08	2.892E-08	2.374E-08
AVERAGE	1744	4.460E-07	2.358E-07	1.154E-07	6.837E-08	5.173E-08	3.526E-08	2.613E-08	2.108E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	179	2.760E-08	2.376E-08	2.082E-08	1.850E-08	1.660E-08	1.083E-08	7.897E-09	4.983E-09
NNE	230	3.463E-08	2.986E-08	2.620E-08	2.331E-08	2.096E-08	1.376E-08	1.009E-08	6.435E-09
NE	144	1.930E-08	1.666E-08	1.464E-08	1.304E-08	1.174E-08	7.755E-09	5.721E-09	3.683E-09
ENE	155	2.330E-08	2.020E-08	1.781E-08	1.592E-08	1.437E-08	9.597E-09	7.135E-09	4.645E-09
E	264	3.272E-08	2.823E-08	2.480E-08	2.209E-08	1.989E-08	1.314E-08	9.694E-09	6.243E-09
ESE	157	1.924E-08	1.651E-08	1.444E-08	1.280E-08	1.148E-08	7.495E-09	5.491E-09	3.504E-09
SE	94	1.206E-08	1.036E-08	9.053E-09	8.024E-09	7.191E-09	4.669E-09	3.397E-09	2.137E-09
SSE	43	1.038E-08	8.781E-09	7.580E-09	6.642E-09	5.897E-09	3.725E-09	2.680E-09	1.736E-09
S	15	3.919E-09	3.239E-09	2.747E-09	2.375E-09	2.086E-09	1.278E-09	8.990E-10	5.428E-10
SSW	31	1.018E-08	8.351E-09	7.036E-09	6.043E-09	5.276E-09	3.161E-09	2.197E-09	1.311E-09
SW	36	1.054E-08	8.903E-09	7.683E-09	6.736E-09	5.987E-09	3.805E-09	2.754E-09	1.742E-09
WSW	64	1.395E-08	1.173E-08	1.008E-08	8.805E-09	7.798E-09	4.891E-09	3.499E-09	2.167E-09
W	64	1.418E-08	1.201E-08	1.039E-08	9.125E-09	8.120E-09	5.968E-09	4.251E-09	2.628E-09
WNW	63	1.316E-08	1.125E-08	9.803E-09	8.664E-09	7.748E-09	4.689E-09	3.794E-09	2.395E-09
NW	90	1.670E-08	1.444E-08	1.272E-08	1.136E-08	1.025E-08	8.349E-09	6.142E-09	4.301E-09
NNW	115	2.010E-08	1.742E-08	1.535E-08	1.371E-08	1.236E-08	8.206E-09	6.331E-09	5.312E-09
AVERAGE	1744	1.762E-08	1.511E-08	1.320E-08	1.170E-08	1.049E-08	6.957E-09	5.123E-09	3.360E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	179	3.586E-09	2.776E-09	2.256E-09	1.895E-09	1.623E-09	1.636E-09	1.443E-09	
NNE	230	4.664E-09	3.629E-09	2.961E-09	2.496E-09	2.144E-09	1.879E-09	1.668E-09	
NE	144	2.687E-09	2.102E-09	1.722E-09	1.456E-09	1.254E-09	1.102E-09	9.812E-10	
ENE	155	3.414E-09	2.742E-09	2.403E-09	2.029E-09	1.746E-09	1.533E-09	1.363E-09	
E	264	4.558E-09	3.567E-09	3.277E-09	2.760E-09	2.369E-09	2.076E-09	1.843E-09	
ESE	157	2.546E-09	2.126E-09	1.735E-09	1.462E-09	1.256E-09	1.102E-09	9.785E-10	
SE	94	1.536E-09	1.299E-09	1.049E-09	8.760E-10	7.466E-10	6.505E-10	5.743E-10	
SSE	43	1.238E-09	9.539E-10	7.731E-10	6.480E-10	5.538E-10	4.836E-10	4.277E-10	
S	15	3.818E-10	2.914E-10	2.346E-10	1.955E-10	1.662E-10	1.444E-10	1.271E-10	
SSW	31	9.144E-10	6.938E-10	5.577E-10	4.642E-10	3.943E-10	3.424E-10	3.014E-10	
SW	36	1.260E-09	9.813E-10	8.029E-10	6.783E-10	6.012E-10	5.273E-10	4.686E-10	
WSW	64	1.545E-09	1.198E-09	1.013E-09	8.462E-10	7.212E-10	6.339E-10	5.592E-10	
W	64	1.873E-09	1.444E-09	1.173E-09	9.853E-10	8.715E-10	7.603E-10	6.723E-10	
WNW	63	1.726E-09	1.383E-09	1.179E-09	1.005E-09	8.575E-10	7.481E-10	6.612E-10	
NW	90	3.119E-09	2.493E-09	2.058E-09	1.912E-09	1.635E-09	1.426E-09	1.261E-09	
NNW	115	3.762E-09	2.884E-09	2.331E-09	1.948E-09	1.661E-09	1.447E-09	1.278E-09	
AVERAGE	1744	2.426E-09	1.910E-09	1.595E-09	1.354E-09	1.163E-09	1.031E-09	9.130E-10	

Table B-3
Gamma χ /Q Factors for Main Stack

PNPS ANNUAL 1999 GENERAL X/QS: ELEVATED
STACK RELEASE

AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	703	5.642E-07	2.936E-07	1.438E-07	9.217E-08	7.040E-08	4.872E-08	3.757E-08	3.066E-08
NNE	973	6.577E-07	3.418E-07	1.656E-07	1.062E-07	8.141E-08	5.670E-08	4.385E-08	3.581E-08
NE	598	4.368E-07	2.261E-07	1.105E-07	7.126E-08	5.434E-08	3.753E-08	2.892E-08	2.360E-08
ENE	608	4.902E-07	2.547E-07	1.244E-07	7.941E-08	6.012E-08	4.109E-08	3.155E-08	2.577E-08
E	801	6.083E-07	3.209E-07	1.524E-07	9.422E-08	7.140E-08	4.883E-08	3.740E-08	3.045E-08
ESE	562	4.192E-07	2.235E-07	1.032E-07	6.416E-08	4.855E-08	3.320E-08	2.543E-08	2.070E-08
SE	562	5.991E-07	3.142E-07	1.807E-07	1.008E-07	6.619E-08	4.532E-08	2.672E-08	2.175E-08
SSE	413	5.933E-07	3.149E-07	1.660E-07	7.655E-08	6.007E-08	4.010E-08	2.977E-08	2.352E-08
S	227	2.278E-07	1.225E-07	6.176E-08	4.316E-08	3.172E-08	2.204E-08	1.636E-08	1.258E-08
SSW	303	5.525E-07	2.989E-07	1.327E-07	8.484E-08	7.458E-08	5.145E-08	3.566E-08	2.695E-08
SW	226	3.766E-07	2.004E-07	9.800E-08	6.001E-08	4.479E-08	2.986E-08	2.165E-08	1.680E-08
WSW	260	5.802E-07	3.078E-07	1.314E-07	7.411E-08	5.584E-08	3.878E-08	2.829E-08	2.208E-08
W	408	8.734E-07	4.604E-07	2.394E-07	1.272E-07	9.639E-08	6.490E-08	4.414E-08	3.509E-08
WNW	450	5.248E-07	2.740E-07	1.905E-07	1.116E-07	9.290E-08	6.359E-08	4.422E-08	3.551E-08
NW	489	4.822E-07	2.483E-07	1.218E-07	7.917E-08	6.024E-08	4.145E-08	3.189E-08	2.601E-08
NNW	373	3.414E-07	1.749E-07	8.718E-08	5.753E-08	4.389E-08	3.040E-08	2.353E-08	1.929E-08
AVERAGE	7956	5.205E-07	2.736E-07	1.381E-07	8.264E-08	6.330E-08	4.337E-08	3.169E-08	2.541E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	703	2.581E-08	2.224E-08	1.951E-08	1.734E-08	1.558E-08	1.020E-08	7.468E-09	4.742E-09
NNE	973	3.016E-08	2.599E-08	2.280E-08	2.027E-08	1.821E-08	1.193E-08	8.742E-09	5.557E-09
NE	598	1.988E-08	1.716E-08	1.507E-08	1.341E-08	1.207E-08	7.958E-09	5.862E-09	3.764E-09
ENE	608	2.175E-08	1.880E-08	1.655E-08	1.477E-08	1.332E-08	8.848E-09	6.559E-09	4.255E-09
E	801	2.562E-08	2.208E-08	1.938E-08	1.725E-08	1.552E-08	1.022E-08	7.526E-09	4.835E-09
ESE	562	1.742E-08	1.501E-08	1.318E-08	1.173E-08	1.055E-08	6.959E-09	5.133E-09	3.307E-09
SE	562	1.829E-08	1.575E-08	1.381E-08	1.227E-08	1.103E-08	7.239E-09	5.319E-09	3.405E-09
SSE	413	1.932E-08	1.632E-08	1.408E-08	1.234E-08	1.095E-08	6.922E-09	4.982E-09	3.245E-09
S	227	1.005E-08	8.312E-09	7.050E-09	6.092E-09	5.347E-09	3.265E-09	2.299E-09	1.398E-09
SSW	303	2.147E-08	1.772E-08	1.500E-08	1.293E-08	1.133E-08	6.879E-09	4.827E-09	2.919E-09
SW	226	1.361E-08	1.135E-08	9.696E-09	8.422E-09	7.422E-09	4.576E-09	3.228E-09	1.955E-09
WSW	260	1.795E-08	1.503E-08	1.287E-08	1.120E-08	9.890E-09	6.134E-09	4.348E-09	2.652E-09
W	408	2.894E-08	2.452E-08	2.120E-08	1.861E-08	1.655E-08	1.211E-08	8.590E-09	5.266E-09
WNW	450	2.951E-08	2.516E-08	2.187E-08	1.929E-08	1.722E-08	1.038E-08	8.375E-09	5.244E-09
NW	489	2.192E-08	1.892E-08	1.662E-08	1.481E-08	1.334E-08	1.047E-08	7.625E-09	5.182E-09
NNW	373	1.632E-08	1.412E-08	1.243E-08	1.109E-08	1.000E-08	6.630E-09	5.112E-09	4.326E-09
AVERAGE	7956	2.113E-08	1.803E-08	1.569E-08	1.386E-08	1.240E-08	8.171E-09	6.000E-09	3.878E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	703	3.427E-09	2.661E-09	2.168E-09	1.825E-09	1.566E-09	1.603E-09	1.415E-09	
NNE	973	4.021E-09	3.126E-09	2.549E-09	2.146E-09	1.842E-09	1.614E-09	1.432E-09	
NE	598	2.743E-09	2.144E-09	1.755E-09	1.484E-09	1.278E-09	1.122E-09	9.985E-10	
ENE	608	3.121E-09	2.503E-09	2.193E-09	1.853E-09	1.595E-09	1.400E-09	1.245E-09	
E	801	3.525E-09	2.756E-09	2.549E-09	2.146E-09	1.842E-09	1.614E-09	1.432E-09	
ESE	562	2.416E-09	2.042E-09	1.668E-09	1.408E-09	1.211E-09	1.063E-09	9.443E-10	
SE	562	2.477E-09	2.226E-09	1.809E-09	1.520E-09	1.302E-09	1.138E-09	1.009E-09	
SSE	413	2.317E-09	1.787E-09	1.451E-09	1.217E-09	1.042E-09	9.101E-10	8.056E-10	
S	227	9.862E-10	7.547E-10	6.095E-10	5.093E-10	4.342E-10	3.783E-10	3.340E-10	
SSW	303	2.053E-09	1.567E-09	1.264E-09	1.054E-09	8.978E-10	7.814E-10	6.893E-10	
SW	226	1.376E-09	1.050E-09	8.455E-10	7.049E-10	6.095E-10	5.299E-10	4.669E-10	
WSW	260	1.874E-09	1.442E-09	1.206E-09	1.005E-09	8.537E-10	7.479E-10	6.583E-10	
W	408	3.732E-09	2.864E-09	2.316E-09	1.938E-09	1.719E-09	1.497E-09	1.321E-09	
WNW	450	3.763E-09	3.031E-09	2.628E-09	2.264E-09	1.929E-09	1.680E-09	1.483E-09	
NW	489	3.725E-09	2.945E-09	2.416E-09	2.200E-09	1.877E-09	1.636E-09	1.445E-09	
NNW	373	3.066E-09	2.352E-09	1.901E-09	1.590E-09	1.356E-09	1.182E-09	1.044E-09	
AVERAGE	7956	2.789E-09	2.203E-09	1.833E-09	1.554E-09	1.335E-09	1.181E-09	1.045E-09	

Table B-4
Deposition D/Q Factors for Main Stack

PNPS 1ST QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
AVERAGE DEPOSITION RATES (DEPLETED CHI/Q * DEP. VELOCITY MODEL -- MET. AND ATOMIC ENERGY 1968) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	74	2.805E-12	1.404E-10	1.348E-10	8.851E-11	8.060E-11	8.793E-11	9.409E-11	9.335E-11
NNE	157	2.718E-12	8.264E-11	6.402E-11	6.488E-11	9.147E-11	1.489E-10	1.712E-10	1.709E-10
NE	170	1.820E-12	5.811E-11	7.807E-11	8.982E-11	1.103E-10	1.575E-10	1.772E-10	1.770E-10
ENE	168	4.119E-12	1.727E-10	1.666E-10	1.350E-10	1.332E-10	1.608E-10	1.764E-10	1.756E-10
E	253	9.929E-12	3.254E-10	2.544E-10	1.952E-10	2.050E-10	2.596E-10	2.792E-10	2.720E-10
ESE	246	2.002E-11	5.544E-10	2.944E-10	1.938E-10	1.897E-10	2.223E-10	2.342E-10	2.272E-10
SE	251	2.025E-11	6.507E-10	4.613E-10	3.176E-10	3.153E-10	3.882E-10	2.996E-10	2.779E-10
SSE	166	3.198E-11	8.814E-10	4.942E-10	6.244E-10	7.188E-10	6.093E-10	4.942E-10	4.033E-10
S	103	2.985E-11	4.817E-10	6.501E-10	9.322E-10	7.206E-10	5.615E-10	4.102E-10	2.981E-10
SSW	77	3.054E-11	4.743E-10	6.725E-10	7.545E-10	1.028E-09	7.264E-10	4.560E-10	3.196E-10
SW	61	1.406E-11	1.095E-10	3.405E-10	6.205E-10	5.567E-10	4.289E-10	3.110E-10	2.353E-10
WSW	48	3.196E-11	2.699E-10	2.777E-10	2.687E-10	3.183E-10	2.845E-10	2.167E-10	1.705E-10
W	75	3.328E-11	3.843E-10	3.007E-10	3.525E-10	4.154E-10	4.048E-10	3.081E-10	2.529E-10
WNW	91	8.108E-12	1.810E-10	2.498E-10	2.641E-10	3.437E-10	3.700E-10	3.072E-10	2.665E-10
NW	122	8.792E-12	1.485E-10	9.940E-11	8.412E-11	9.860E-11	1.368E-10	1.508E-10	1.480E-10
NNW	58	4.894E-13	1.483E-11	1.049E-11	1.467E-11	2.435E-11	4.385E-11	5.205E-11	5.309E-11
AVERAGE	2120	1.567E-11	3.081E-10	2.843E-10	3.125E-10	3.344E-10	3.120E-10	2.586E-10	2.213E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	74	8.815E-11	8.230E-11	7.649E-11	7.122E-11	6.602E-11	4.588E-11	3.366E-11	2.053E-11
NNE	157	1.603E-10	1.478E-10	1.355E-10	1.245E-10	1.143E-10	7.725E-11	5.596E-11	3.392E-11
NE	170	1.668E-10	1.550E-10	1.433E-10	1.328E-10	1.228E-10	8.539E-11	6.317E-11	3.950E-11
ENE	168	1.658E-10	1.547E-10	1.436E-10	1.337E-10	1.241E-10	8.721E-11	6.501E-11	4.110E-11
E	253	2.528E-10	2.323E-10	2.129E-10	1.957E-10	1.799E-10	1.228E-10	8.995E-11	5.559E-11
ESE	246	2.114E-10	1.952E-10	1.799E-10	1.664E-10	1.536E-10	1.066E-10	7.915E-11	4.995E-11
SE	251	2.500E-10	2.243E-10	2.018E-10	1.827E-10	1.659E-10	1.097E-10	7.929E-11	4.842E-11
SSE	166	3.351E-10	2.840E-10	2.445E-10	2.131E-10	1.877E-10	1.137E-10	7.846E-11	4.906E-11
S	103	2.261E-10	1.792E-10	1.468E-10	1.230E-10	1.050E-10	5.820E-11	3.840E-11	2.130E-11
SSW	77	2.402E-10	1.887E-10	1.533E-10	1.274E-10	1.080E-10	5.815E-11	3.741E-11	1.989E-11
SW	61	1.843E-10	1.488E-10	1.231E-10	1.038E-10	8.887E-11	4.871E-11	3.102E-11	1.578E-11
WSW	48	1.379E-10	1.145E-10	9.695E-11	8.341E-11	7.271E-11	4.251E-11	2.855E-11	1.579E-11
W	75	2.089E-10	1.755E-10	1.497E-10	1.294E-10	1.130E-10	7.572E-11	4.866E-11	2.559E-11
WNW	91	2.290E-10	1.985E-10	1.738E-10	1.536E-10	1.367E-10	8.089E-11	6.204E-11	3.472E-11
NW	122	1.375E-10	1.264E-10	1.158E-10	1.063E-10	9.750E-11	8.650E-11	5.994E-11	3.846E-11
NNW	58	5.059E-11	4.733E-11	4.399E-11	4.090E-11	3.794E-11	2.664E-11	2.164E-11	2.578E-11
AVERAGE	2120	1.903E-10	1.659E-10	1.463E-10	1.305E-10	1.171E-10	7.662E-11	5.452E-11	3.346E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	74	1.391E-11	1.004E-11	7.574E-12	5.918E-12	4.718E-12	3.980E-12	3.268E-12	
NNE	157	2.330E-11	1.721E-11	1.335E-11	1.072E-11	8.783E-12	7.368E-12	6.269E-12	
NE	170	2.762E-11	2.060E-11	1.604E-11	1.290E-11	1.057E-11	8.856E-12	7.516E-12	
ENE	168	2.894E-11	2.228E-11	1.869E-11	1.489E-11	1.209E-11	1.005E-11	8.463E-12	
E	253	3.871E-11	2.883E-11	2.584E-11	2.044E-11	1.650E-11	1.365E-11	1.146E-11	
ESE	246	3.522E-11	2.949E-11	2.279E-11	1.823E-11	1.487E-11	1.240E-11	1.049E-11	
SE	251	3.363E-11	2.920E-11	2.228E-11	1.764E-11	1.427E-11	1.184E-11	9.972E-12	
SSE	166	3.246E-11	2.342E-11	1.790E-11	1.421E-11	1.152E-11	9.580E-12	8.091E-12	
S	103	1.406E-11	1.020E-11	7.874E-12	6.317E-12	5.185E-12	4.364E-12	3.731E-12	
SSW	77	1.273E-11	9.009E-12	6.805E-12	5.363E-12	4.333E-12	3.598E-12	3.040E-12	
SW	61	9.693E-12	6.606E-12	4.832E-12	3.709E-12	2.907E-12	2.372E-12	1.978E-12	
WSW	48	1.019E-11	7.214E-12	5.314E-12	4.100E-12	3.248E-12	2.543E-12	2.117E-12	
W	75	1.613E-11	1.122E-11	8.323E-12	6.447E-12	4.821E-12	3.615E-12	2.993E-12	
WNW	91	2.251E-11	1.620E-11	1.189E-11	7.938E-12	5.993E-12	4.830E-12	3.967E-12	
NW	122	2.531E-11	1.873E-11	1.438E-11	9.066E-12	7.134E-12	5.782E-12	4.770E-12	
NNW	58	1.674E-11	1.187E-11	8.927E-12	6.974E-12	5.563E-12	4.547E-12	3.774E-12	
AVERAGE	2120	2.257E-11	1.701E-11	1.330E-11	1.030E-11	8.282E-12	6.836E-12	5.744E-12	

Table B-4
Deposition D/Q Factors for Main Stack

PNPS 2ND QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
AVERAGE DEPOSITION RATES (DEPLETED CHI/Q * DEP. VELOCITY MODEL -- MET. AND ATOMIC ENERGY 1968) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	137	1.348E-11	3.925E-10	2.169E-10	1.523E-10	1.492E-10	1.696E-10	1.757E-10	1.688E-10
NNE	287	1.647E-11	4.467E-10	2.155E-10	1.581E-10	1.965E-10	2.811E-10	3.051E-10	2.964E-10
NE	164	8.982E-12	2.593E-10	1.454E-10	1.034E-10	1.079E-10	1.380E-10	1.519E-10	1.509E-10
ENE	142	8.346E-12	3.002E-10	1.704E-10	1.224E-10	1.201E-10	1.409E-10	1.531E-10	1.526E-10
E	140	1.132E-11	3.714E-10	2.417E-10	1.592E-10	1.390E-10	1.483E-10	1.589E-10	1.574E-10
ESE	89	6.732E-12	2.387E-10	1.214E-10	7.760E-11	7.524E-11	9.155E-11	9.999E-11	9.937E-11
SE	123	1.366E-11	4.395E-10	3.168E-10	1.856E-10	1.480E-10	1.852E-10	1.464E-10	1.453E-10
SSE	163	5.050E-11	1.405E-09	9.023E-10	7.306E-10	8.351E-10	7.316E-10	6.175E-10	5.188E-10
S	90	4.340E-11	6.902E-10	5.281E-10	8.201E-10	6.963E-10	7.010E-10	5.942E-10	4.572E-10
SSW	118	1.047E-10	1.761E-09	1.285E-09	1.267E-09	1.883E-09	1.616E-09	1.024E-09	7.213E-10
SW	102	1.910E-10	1.436E-09	9.485E-10	9.778E-10	8.698E-10	6.802E-10	5.002E-10	3.825E-10
WSW	87	1.717E-10	1.473E-09	8.252E-10	6.932E-10	8.609E-10	7.832E-10	5.916E-10	4.606E-10
W	135	1.204E-10	1.515E-09	1.141E-09	8.623E-10	8.768E-10	7.774E-10	5.869E-10	4.876E-10
WNW	138	4.296E-11	6.078E-10	5.254E-10	4.972E-10	6.323E-10	6.772E-10	5.696E-10	4.991E-10
NW	137	2.205E-11	3.833E-10	2.608E-10	1.924E-10	1.884E-10	2.135E-10	2.198E-10	2.101E-10
NNW	60	2.448E-12	8.322E-11	8.615E-11	7.604E-11	7.315E-11	8.202E-11	8.784E-11	8.715E-11
AVERAGE	2112	5.177E-11	7.377E-10	4.957E-10	4.422E-10	4.908E-10	4.636E-10	3.739E-10	3.122E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	137	1.561E-10	1.428E-10	1.304E-10	1.195E-10	1.095E-10	7.394E-11	5.390E-11	3.310E-11
NNE	287	2.744E-10	2.510E-10	2.290E-10	2.097E-10	1.920E-10	1.298E-10	9.468E-11	5.824E-11
NE	164	1.423E-10	1.323E-10	1.226E-10	1.137E-10	1.052E-10	7.326E-11	5.430E-11	3.413E-11
ENE	142	1.446E-10	1.353E-10	1.260E-10	1.176E-10	1.093E-10	7.719E-11	5.774E-11	3.670E-11
E	140	1.485E-10	1.385E-10	1.285E-10	1.195E-10	1.107E-10	7.705E-11	5.689E-11	3.540E-11
ESE	89	9.405E-11	8.801E-11	8.203E-11	7.655E-11	7.122E-11	5.060E-11	3.809E-11	2.436E-11
SE	123	1.368E-10	1.273E-10	1.181E-10	1.097E-10	1.016E-10	7.109E-11	5.295E-11	3.348E-11
SSE	163	4.390E-10	3.767E-10	3.273E-10	2.872E-10	2.543E-10	1.552E-10	1.068E-10	6.417E-11
S	90	3.537E-10	2.842E-10	2.350E-10	1.984E-10	1.703E-10	9.484E-11	6.168E-11	3.245E-11
SSW	118	5.449E-10	4.295E-10	3.494E-10	2.907E-10	2.462E-10	1.308E-10	8.274E-11	4.239E-11
SW	102	3.026E-10	2.465E-10	2.056E-10	1.746E-10	1.502E-10	8.407E-11	5.482E-11	2.936E-11
WSW	87	3.689E-10	3.032E-10	2.545E-10	2.170E-10	1.874E-10	1.051E-10	6.803E-11	3.533E-11
W	135	4.090E-10	3.485E-10	3.013E-10	2.635E-10	2.324E-10	1.744E-10	1.118E-10	5.744E-11
WNW	138	4.332E-10	3.788E-10	3.062E-10	2.723E-10	2.435E-10	1.619E-10	1.139E-10	6.371E-11
NW	137	1.938E-10	1.777E-10	1.631E-10	1.502E-10	1.383E-10	1.334E-10	9.387E-11	6.098E-11
NNW	60	8.243E-11	7.712E-11	7.187E-11	6.711E-11	6.248E-11	4.426E-11	3.603E-11	3.468E-11
AVERAGE	2112	2.640E-10	2.273E-10	1.969E-10	1.742E-10	1.553E-10	1.023E-10	7.114E-11	4.224E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	137	2.288E-11	1.689E-11	1.304E-11	1.041E-11	8.476E-12	7.545E-12	6.254E-12	
NNE	287	4.052E-11	3.019E-11	2.354E-11	1.900E-11	1.565E-11	1.319E-11	1.127E-11	
NE	164	2.406E-11	1.810E-11	1.420E-11	1.153E-11	9.536E-12	8.068E-12	6.918E-12	
ENE	142	2.592E-11	2.010E-11	1.733E-11	1.383E-11	1.126E-11	9.376E-12	7.919E-12	
E	140	2.464E-11	1.832E-11	1.696E-11	1.345E-11	1.090E-11	9.046E-12	7.620E-12	
ESE	89	1.717E-11	1.462E-11	1.115E-11	8.827E-12	7.134E-12	5.909E-12	4.970E-12	
SE	123	2.350E-11	2.212E-11	1.663E-11	1.297E-11	1.032E-11	8.422E-12	6.978E-12	
SSE	163	4.083E-11	2.835E-11	2.090E-11	1.604E-11	1.261E-11	1.018E-11	8.368E-12	
S	90	2.001E-11	1.356E-11	9.825E-12	7.459E-12	5.827E-12	4.698E-12	3.873E-12	
SSW	118	2.613E-11	1.790E-11	1.316E-11	1.015E-11	8.054E-12	6.593E-12	5.511E-12	
SW	102	1.883E-11	1.331E-11	1.003E-11	7.891E-12	6.330E-12	5.253E-12	4.441E-12	
WSW	87	2.176E-11	1.472E-11	1.014E-11	7.709E-12	6.051E-12	4.747E-12	3.951E-12	
W	135	3.504E-11	2.359E-11	1.700E-11	1.284E-11	8.910E-12	6.563E-12	5.458E-12	
WNW	138	4.095E-11	2.908E-11	2.068E-11	1.305E-11	9.705E-12	7.784E-12	6.378E-12	
NW	137	3.904E-11	2.755E-11	2.015E-11	9.713E-12	7.566E-12	6.096E-12	5.016E-12	
NNW	60	2.062E-11	1.352E-11	9.507E-12	7.011E-12	5.318E-12	4.168E-12	3.337E-12	
AVERAGE	2112	2.762E-11	2.012E-11	1.526E-11	1.137E-11	8.978E-12	7.352E-12	6.142E-12	

Table B-4
Deposition D/Q Factors for Main Stack

PNPS 3RD QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE

AVERAGE DEPOSITION RATES (DEPLETED CHI/Q * DEP. VELOCITY MODEL -- MET. AND ATOMIC ENERGY 1968) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	313	1.378E-11	4.741E-10	3.847E-10	3.144E-10	3.266E-10	4.069E-10	4.419E-10	4.347E-10
NNE	299	1.827E-11	6.122E-10	3.108E-10	2.192E-10	2.403E-10	3.050E-10	3.248E-10	3.156E-10
NE	120	5.418E-12	2.025E-10	1.510E-10	1.084E-10	1.099E-10	1.383E-10	1.485E-10	1.444E-10
ENE	143	9.089E-12	3.409E-10	2.809E-10	1.854E-10	1.499E-10	1.452E-10	1.526E-10	1.511E-10
E	144	1.103E-11	3.957E-10	2.473E-10	2.011E-10	1.873E-10	1.775E-10	1.710E-10	1.606E-10
ESE	70	8.025E-12	2.942E-10	1.877E-10	1.194E-10	9.729E-11	9.465E-11	9.790E-11	9.523E-11
SE	94	1.657E-11	6.376E-10	3.649E-10	1.544E-10	1.059E-10	1.298E-10	1.023E-10	1.061E-10
SSE	41	2.103E-11	7.567E-10	2.438E-10	2.023E-10	2.638E-10	2.347E-10	1.902E-10	1.546E-10
S	19	6.550E-12	1.447E-10	1.149E-10	2.887E-10	2.475E-10	2.192E-10	1.720E-10	1.291E-10
SSW	77	6.639E-11	1.291E-09	6.998E-10	9.950E-10	1.807E-09	1.729E-09	1.104E-09	7.795E-10
SW	27	5.093E-11	4.098E-10	2.008E-10	2.876E-10	2.973E-10	2.699E-10	2.071E-10	1.622E-10
WSW	61	1.486E-10	1.348E-09	5.142E-10	4.213E-10	6.118E-10	6.347E-10	5.012E-10	3.993E-10
W	134	9.044E-11	1.139E-09	9.335E-10	7.590E-10	8.530E-10	9.108E-10	7.529E-10	6.553E-10
WNW	158	4.716E-11	6.235E-10	5.352E-10	4.929E-10	6.512E-10	7.514E-10	6.593E-10	5.915E-10
NW	140	1.117E-11	2.309E-10	1.471E-10	1.093E-10	1.245E-10	1.858E-10	2.194E-10	2.252E-10
NNW	140	4.710E-12	1.668E-10	1.325E-10	9.377E-11	1.079E-10	1.720E-10	2.070E-10	2.137E-10
AVERAGE	1980	3.307E-11	5.668E-10	3.406E-10	3.095E-10	3.863E-10	4.066E-10	3.408E-10	2.949E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	313	4.059E-10	3.742E-10	3.437E-10	3.164E-10	2.908E-10	1.971E-10	1.428E-10	8.624E-11
NNE	299	2.934E-10	2.699E-10	2.477E-10	2.281E-10	2.098E-10	1.438E-10	1.058E-10	6.591E-11
NE	120	1.343E-10	1.232E-10	1.128E-10	1.034E-10	9.495E-11	6.485E-11	4.782E-11	3.007E-11
ENE	143	1.433E-10	1.347E-10	1.261E-10	1.182E-10	1.104E-10	7.905E-11	5.956E-11	3.820E-11
E	144	1.475E-10	1.355E-10	1.247E-10	1.155E-10	1.068E-10	7.478E-11	5.602E-11	3.577E-11
ESE	70	8.892E-11	8.238E-11	7.612E-11	7.052E-11	6.511E-11	4.488E-11	3.300E-11	2.045E-11
SE	94	1.027E-10	9.787E-11	9.245E-11	8.720E-11	8.176E-11	5.916E-11	4.491E-11	2.908E-11
SSE	41	1.284E-10	1.088E-10	9.382E-11	8.185E-11	7.215E-11	4.394E-11	3.042E-11	1.959E-11
S	19	9.907E-11	7.898E-11	6.480E-11	5.424E-11	4.624E-11	2.519E-11	1.634E-11	8.768E-12
SSW	77	5.874E-10	4.614E-10	3.736E-10	3.092E-10	2.607E-10	1.348E-10	8.303E-11	4.057E-11
SW	27	1.309E-10	1.084E-10	9.161E-11	7.855E-11	6.819E-11	3.921E-11	2.595E-11	1.399E-11
WSW	61	3.243E-10	2.688E-10	2.268E-10	1.940E-10	1.679E-10	9.398E-11	6.046E-11	3.101E-11
W	134	5.646E-10	4.904E-10	4.297E-10	3.793E-10	3.368E-10	2.881E-10	1.826E-10	9.126E-11
WNW	158	5.207E-10	4.602E-10	3.751E-10	3.357E-10	3.019E-10	2.071E-10	1.494E-10	8.560E-11
NW	140	2.155E-10	2.028E-10	1.895E-10	1.768E-10	1.643E-10	1.610E-10	1.123E-10	7.286E-11
NNW	140	2.048E-10	1.920E-10	1.785E-10	1.657E-10	1.533E-10	1.050E-10	8.099E-11	7.513E-11
AVERAGE	1980	2.557E-10	2.243E-10	1.967E-10	1.759E-10	1.582E-10	1.101E-10	7.696E-11	4.653E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	313	5.886E-11	4.313E-11	3.317E-11	2.644E-11	2.150E-11	2.038E-11	1.690E-11	
NNE	299	4.630E-11	3.479E-11	2.731E-11	2.218E-11	1.837E-11	1.555E-11	1.335E-11	
NE	120	2.131E-11	1.609E-11	1.264E-11	1.027E-11	8.490E-12	7.168E-12	6.130E-12	
ENE	143	2.713E-11	2.115E-11	1.824E-11	1.458E-11	1.188E-11	9.903E-12	8.370E-12	
E	144	2.531E-11	1.900E-11	1.824E-11	1.455E-11	1.186E-11	9.895E-12	8.380E-12	
ESE	70	1.419E-11	1.137E-11	8.712E-12	6.920E-12	5.609E-12	4.656E-12	3.921E-12	
SE	94	2.070E-11	2.119E-11	1.607E-11	1.262E-11	1.010E-11	8.273E-12	6.875E-12	
SSE	41	1.287E-11	9.140E-12	6.839E-12	5.309E-12	4.205E-12	3.413E-12	2.813E-12	
S	19	5.561E-12	3.875E-12	2.873E-12	2.219E-12	1.753E-12	1.423E-12	1.174E-12	
SSW	77	2.391E-11	1.573E-11	1.116E-11	8.339E-12	6.435E-12	5.144E-12	4.209E-12	
SW	27	8.851E-12	6.081E-12	4.409E-12	3.328E-12	2.547E-12	2.000E-12	1.604E-12	
WSW	61	1.882E-11	1.255E-11	8.429E-12	6.299E-12	4.866E-12	3.717E-12	3.061E-12	
W	134	5.409E-11	3.546E-11	2.490E-11	1.834E-11	1.091E-11	6.931E-12	5.626E-12	
WNW	158	5.604E-11	4.251E-11	3.218E-11	1.647E-11	1.167E-11	9.199E-12	7.428E-12	
NW	140	4.689E-11	3.365E-11	2.494E-11	1.181E-11	9.018E-12	7.129E-12	5.757E-12	
NNW	140	4.668E-11	3.178E-11	2.302E-11	1.738E-11	1.343E-11	1.068E-11	8.639E-12	
AVERAGE	1980	3.047E-11	2.234E-11	1.707E-11	1.232E-11	9.540E-12	7.841E-12	6.515E-12	

Table B-4
Deposition D/Q Factors for Main Stack

PNPS 4TH QUARTER 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
AVERAGE DEPOSITION RATES (DEPLETED CHI/Q * DEP. VELOCITY MODEL -- MET. AND ATOMIC ENERGY 1968) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	179	1.002E-11	3.042E-10	1.869E-10	1.565E-10	1.787E-10	2.411E-10	2.642E-10	2.595E-10
NNE	230	1.559E-11	4.943E-10	2.927E-10	2.154E-10	2.262E-10	2.875E-10	3.139E-10	3.097E-10
NE	144	1.291E-11	4.470E-10	2.390E-10	1.476E-10	1.373E-10	1.564E-10	1.676E-10	1.650E-10
ENE	155	8.776E-12	3.227E-10	1.891E-10	1.105E-10	1.057E-10	1.417E-10	1.654E-10	1.699E-10
E	264	3.294E-11	1.148E-09	5.677E-10	3.233E-10	2.866E-10	2.997E-10	3.080E-10	2.974E-10
ESE	157	2.564E-11	8.662E-10	3.878E-10	2.392E-10	2.243E-10	2.262E-10	2.161E-10	1.985E-10
SE	94	1.633E-11	5.510E-10	3.724E-10	2.055E-10	1.731E-10	1.938E-10	1.496E-10	1.396E-10
SSE	43	4.801E-12	2.074E-10	1.656E-10	2.390E-10	3.002E-10	2.671E-10	2.213E-10	1.826E-10
S	15	3.864E-12	9.531E-11	2.495E-10	2.716E-10	1.987E-10	1.625E-10	1.285E-10	9.577E-11
SSW	31	7.492E-12	1.047E-10	4.347E-10	5.035E-10	6.955E-10	5.600E-10	3.510E-10	2.448E-10
SW	36	5.695E-11	4.857E-10	3.761E-10	3.448E-10	3.004E-10	2.567E-10	2.062E-10	1.691E-10
WSW	64	7.796E-11	7.180E-10	4.478E-10	3.662E-10	4.438E-10	4.122E-10	3.218E-10	2.577E-10
W	64	7.109E-11	8.852E-10	6.907E-10	4.281E-10	3.732E-10	3.031E-10	2.313E-10	1.963E-10
WNW	63	2.540E-11	3.818E-10	2.580E-10	1.689E-10	1.996E-10	2.215E-10	1.934E-10	1.740E-10
NW	90	9.651E-12	1.896E-10	1.180E-10	7.518E-11	7.585E-11	9.824E-11	1.086E-10	1.085E-10
NNW	115	5.951E-12	1.867E-10	1.254E-10	8.920E-11	9.003E-11	1.230E-10	1.452E-10	1.502E-10
AVERAGE	1744	2.409E-11	4.618E-10	3.189E-10	2.428E-10	2.506E-10	2.469E-10	2.183E-10	1.949E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	179	2.419E-10	2.223E-10	2.035E-10	1.868E-10	1.713E-10	1.157E-10	8.395E-11	5.116E-11
NNE	230	2.900E-10	2.682E-10	2.472E-10	2.283E-10	2.105E-10	1.448E-10	1.065E-10	6.603E-11
NE	144	1.549E-10	1.438E-10	1.332E-10	1.236E-10	1.143E-10	7.976E-11	5.937E-11	3.766E-11
ENE	155	1.636E-10	1.550E-10	1.458E-10	1.371E-10	1.284E-10	9.305E-11	7.090E-11	4.638E-11
E	264	2.768E-10	2.556E-10	2.357E-10	2.182E-10	2.013E-10	1.397E-10	1.037E-10	6.564E-11
ESE	157	1.791E-10	1.616E-10	1.463E-10	1.334E-10	1.217E-10	8.187E-11	6.004E-11	3.752E-11
SE	94	1.262E-10	1.137E-10	1.026E-10	9.307E-11	8.454E-11	5.575E-11	4.004E-11	2.416E-11
SSE	43	1.525E-10	1.296E-10	1.117E-10	9.727E-11	8.562E-11	5.129E-11	3.493E-11	2.055E-11
S	15	7.312E-11	5.817E-11	4.769E-11	3.998E-11	3.412E-11	1.856E-11	1.180E-11	5.976E-12
SSW	31	1.829E-10	1.426E-10	1.148E-10	9.454E-11	7.939E-11	4.064E-11	2.490E-11	1.210E-11
SW	36	2.418E-10	1.213E-10	1.054E-10	9.252E-11	8.204E-11	5.081E-11	3.540E-11	2.041E-11
WSW	64	2.113E-10	1.772E-10	1.513E-10	1.309E-10	1.145E-10	6.737E-11	4.515E-11	2.464E-11
W	64	1.680E-10	1.459E-10	1.282E-10	1.138E-10	1.016E-10	8.339E-11	5.422E-11	2.836E-11
WNW	63	1.537E-10	1.363E-10	1.215E-10	1.090E-10	9.812E-11	6.046E-11	4.752E-11	2.750E-11
NW	90	1.033E-10	9.742E-11	9.152E-11	8.602E-11	8.064E-11	9.319E-11	6.785E-11	4.808E-11
NNW	115	1.449E-10	1.368E-10	1.278E-10	1.192E-10	1.107E-10	7.712E-11	6.135E-11	6.001E-11
AVERAGE	1744	1.728E-10	1.541E-10	1.384E-10	1.252E-10	1.137E-10	7.834E-11	5.673E-11	3.601E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	179	3.531E-11	2.616E-11	2.033E-11	1.636E-11	1.342E-11	1.255E-11	1.046E-11	
NNE	230	4.597E-11	3.420E-11	2.661E-11	2.142E-11	1.758E-11	1.476E-11	1.256E-11	
NE	144	2.673E-11	2.023E-11	1.597E-11	1.303E-11	1.082E-11	9.177E-12	7.885E-12	
ENE	155	3.347E-11	2.646E-11	2.303E-11	1.852E-11	1.515E-11	1.266E-11	1.071E-11	
E	264	4.654E-11	3.520E-11	3.256E-11	2.619E-11	2.149E-11	1.803E-11	1.535E-11	
ESE	157	2.642E-11	2.163E-11	1.681E-11	1.353E-11	1.111E-11	9.333E-12	7.958E-12	
SE	94	1.660E-11	1.353E-11	1.031E-11	8.163E-12	6.606E-12	5.483E-12	4.622E-12	
SSE	43	1.310E-11	9.111E-12	6.733E-12	5.181E-12	4.081E-12	3.307E-12	2.726E-12	
S	15	3.637E-12	2.457E-12	1.784E-12	1.361E-12	1.071E-12	8.707E-13	7.238E-13	
SSW	31	7.203E-12	4.817E-12	3.486E-12	2.659E-12	2.093E-12	1.705E-12	1.417E-12	
SW	36	1.337E-11	9.408E-12	6.952E-12	5.330E-12	4.145E-12	3.300E-12	2.677E-12	
WSW	64	1.563E-11	1.083E-11	7.636E-12	5.837E-12	4.595E-12	3.586E-12	2.987E-12	
W	64	1.744E-11	1.181E-11	8.566E-12	6.517E-12	4.561E-12	3.439E-12	2.901E-12	
WNW	63	1.821E-11	1.341E-11	1.005E-11	6.756E-12	5.128E-12	4.159E-12	3.438E-12	
NW	90	3.144E-11	2.284E-11	1.702E-11	8.087E-12	6.230E-12	4.955E-12	4.024E-12	
NNW	115	3.762E-11	2.592E-11	1.903E-11	1.457E-11	1.143E-11	9.219E-12	7.567E-12	
AVERAGE	1744	2.429E-11	1.800E-11	1.418E-11	1.084E-11	8.719E-12	7.284E-12	6.125E-12	

Table B-4
Deposition D/Q Factors for Main Stack

PNPS ANNUAL 1999 GENERAL X/QS: ELEVATED -- SECTOR AVERAGE MODEL
STACK RELEASE
AVERAGE DEPOSITION RATES (DEPLETED CHI/Q * DEP. VELOCITY MODEL -- MET. AND ATOMIC ENERGY 1968) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	703	9.950E-12	3.262E-10	2.302E-10	1.766E-10	1.815E-10	2.226E-10	2.396E-10	2.348E-10
NNE	973	1.306E-11	4.013E-10	2.158E-10	1.610E-10	1.859E-10	2.532E-10	2.763E-10	2.707E-10
NE	598	7.048E-12	2.327E-10	1.494E-10	1.107E-10	1.155E-10	1.473E-10	1.612E-10	1.593E-10
ENE	608	7.499E-12	2.813E-10	2.010E-10	1.388E-10	1.279E-10	1.474E-10	1.619E-10	1.621E-10
E	801	1.562E-11	5.355E-10	3.180E-10	2.152E-10	2.010E-10	2.184E-10	2.266E-10	2.194E-10
ESE	562	1.474E-11	4.742E-10	2.424E-10	1.544E-10	1.439E-10	1.567E-10	1.607E-10	1.542E-10
SE	562	1.383E-11	4.653E-10	3.414E-10	2.052E-10	1.813E-10	2.196E-10	1.770E-10	1.696E-10
SSE	413	2.128E-11	6.300E-10	3.745E-10	4.631E-10	5.447E-10	4.735E-10	3.915E-10	3.237E-10
S	227	2.023E-11	3.392E-10	3.967E-10	5.975E-10	4.820E-10	4.259E-10	3.380E-10	2.539E-10
SSW	303	5.134E-11	8.888E-10	7.899E-10	8.954E-10	1.376E-09	1.176E-09	7.450E-10	5.243E-10
SW	226	7.509E-11	5.842E-10	4.498E-10	5.721E-10	5.191E-10	4.183E-10	3.124E-10	2.417E-10
WSW	260	9.357E-11	8.271E-10	4.925E-10	4.407E-10	5.629E-10	5.321E-10	4.101E-10	3.236E-10
W	408	7.827E-11	9.821E-10	7.286E-10	6.006E-10	6.375E-10	6.073E-10	4.760E-10	4.029E-10
WNW	450	3.087E-11	4.484E-10	3.748E-10	3.409E-10	4.399E-10	4.857E-10	4.133E-10	3.656E-10
NW	489	1.309E-11	2.403E-10	1.582E-10	1.172E-10	1.239E-10	1.609E-10	1.769E-10	1.750E-10
NNW	373	3.257E-12	1.085E-10	8.613E-11	6.698E-11	7.249E-11	1.032E-10	1.205E-10	1.234E-10
AVERAGE	7956	2.934E-11	4.853E-10	3.468E-10	3.285E-10	3.685E-10	3.592E-10	2.992E-10	2.565E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	703	2.190E-10	2.017E-10	1.852E-10	1.704E-10	1.566E-10	1.063E-10	7.721E-11	4.693E-11
NNE	973	2.522E-10	2.320E-10	2.127E-10	1.956E-10	1.798E-10	1.226E-10	8.970E-11	5.538E-11
NE	598	1.496E-10	1.386E-10	1.280E-10	1.184E-10	1.094E-10	7.582E-11	5.616E-11	3.532E-11
ENE	608	1.541E-10	1.446E-10	1.351E-10	1.263E-10	1.177E-10	8.380E-11	6.302E-11	4.037E-11
E	801	2.042E-10	1.884E-10	1.736E-10	1.604E-10	1.480E-10	1.024E-10	7.575E-11	4.750E-11
ESE	562	1.427E-10	1.313E-10	1.207E-10	1.115E-10	1.027E-10	7.096E-11	5.257E-11	3.309E-11
SE	562	1.562E-10	1.428E-10	1.306E-10	1.199E-10	1.101E-10	7.506E-11	5.514E-11	3.432E-11
SSE	413	2.712E-10	2.311E-10	1.999E-10	1.747E-10	1.543E-10	9.368E-11	6.447E-11	3.949E-11
S	227	1.948E-10	1.556E-10	1.281E-10	1.077E-10	9.219E-11	5.102E-11	3.326E-11	1.778E-11
SSW	303	3.949E-10	3.104E-10	2.518E-10	2.088E-10	1.764E-10	9.268E-11	5.805E-11	2.930E-11
SW	226	1.931E-10	1.586E-10	1.333E-10	1.138E-10	9.852E-11	5.619E-11	3.704E-11	1.995E-11
WSW	260	2.617E-10	2.167E-10	1.830E-10	1.568E-10	1.360E-10	7.739E-11	5.061E-11	2.671E-11
W	408	3.416E-10	2.933E-10	2.549E-10	2.238E-10	1.979E-10	1.565E-10	9.998E-11	5.099E-11
WNW	450	3.189E-10	2.799E-10	2.476E-10	2.207E-10	1.977E-10	1.207E-10	9.437E-11	5.349E-11
NW	489	1.643E-10	1.527E-10	1.413E-10	1.311E-10	1.213E-10	1.189E-10	8.372E-11	5.511E-11
NNW	373	1.181E-10	1.109E-10	1.032E-10	9.609E-11	8.912E-11	6.188E-11	4.893E-11	4.793E-11
AVERAGE	7956	2.210E-10	1.930E-10	1.706E-10	1.522E-10	1.367E-10	9.162E-11	6.500E-11	3.960E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	703	3.217E-11	2.363E-11	1.819E-11	1.451E-11	1.180E-11	1.089E-11	9.029E-12	
NNE	973	3.857E-11	2.875E-11	2.244E-11	1.812E-11	1.492E-11	1.257E-11	1.074E-11	
NE	598	2.491E-11	1.873E-11	1.469E-11	1.191E-11	9.833E-12	8.297E-12	7.093E-12	
ENE	608	2.868E-11	2.234E-11	1.917E-11	1.533E-11	1.249E-11	1.041E-11	8.788E-12	
E	801	3.336E-11	2.499E-11	2.306E-11	1.838E-11	1.495E-11	1.245E-11	1.053E-11	
ESE	562	2.326E-11	1.931E-11	1.489E-11	1.189E-11	9.686E-12	8.078E-12	6.835E-12	
SE	562	2.399E-11	2.189E-11	1.661E-11	1.307E-11	1.050E-11	8.651E-12	7.234E-12	
SSE	413	2.556E-11	1.804E-11	1.349E-11	1.050E-11	8.358E-12	6.830E-12	5.675E-12	
S	227	1.124E-11	7.821E-12	5.812E-12	4.514E-12	3.599E-12	2.955E-12	2.473E-12	
SSW	303	1.786E-11	1.212E-11	8.848E-12	6.781E-12	5.353E-12	4.363E-12	3.631E-12	
SW	226	1.272E-11	8.869E-12	6.571E-12	5.080E-12	3.997E-12	3.248E-12	2.692E-12	
WSW	260	1.660E-11	1.133E-11	7.879E-12	5.986E-12	4.690E-12	3.649E-12	3.029E-12	
W	408	3.088E-11	2.067E-11	1.480E-11	1.112E-11	7.364E-12	5.184E-12	4.282E-12	
WNW	450	3.481E-11	2.555E-11	1.887E-11	1.116E-11	8.201E-12	6.555E-12	5.353E-12	
NW	489	3.567E-11	2.569E-11	1.912E-11	9.705E-12	7.519E-12	6.019E-12	4.918E-12	
NNW	373	2.980E-11	2.034E-11	1.480E-11	1.124E-11	8.742E-12	6.996E-12	5.700E-12	
AVERAGE	7956	2.625E-11	1.938E-11	1.495E-11	1.121E-11	8.875E-12	7.321E-12	6.125E-12	

Table B-5
Undepleted χ/Q Factors for Reactor Building Vent

PNPS 1ST QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
GROUND-LEVEL AVERAGE CHI/Q BEFORE DEPLETION (SPLIT-H MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	146	2.003E-05	5.924E-06	2.076E-06	1.146E-06	7.473E-07	4.046E-07	2.622E-07	1.883E-07
NNE	168	2.528E-05	7.420E-06	2.640E-06	1.463E-06	9.557E-07	5.172E-07	3.349E-07	2.405E-07
NE	204	3.925E-05	1.162E-05	3.865E-06	2.155E-06	1.421E-06	7.820E-07	5.103E-07	3.683E-07
ENE	217	4.029E-05	1.191E-05	4.083E-06	2.274E-06	1.495E-06	8.136E-07	5.278E-07	3.795E-07
E	240	3.265E-05	9.731E-06	3.387E-06	1.846E-06	1.196E-06	6.456E-07	4.186E-07	3.007E-07
ESE	201	2.518E-05	7.522E-06	2.601E-06	1.414E-06	9.165E-07	4.933E-07	3.195E-07	2.294E-07
SE	191	2.419E-05	7.233E-06	2.534E-06	1.387E-06	9.008E-07	4.847E-07	3.135E-07	2.247E-07
SSE	104	1.341E-05	3.952E-06	1.333E-06	7.260E-07	4.724E-07	2.578E-07	1.685E-07	1.217E-07
S	84	9.034E-06	2.701E-06	8.489E-07	4.583E-07	2.956E-07	1.591E-07	1.033E-07	7.428E-08
SSW	100	7.904E-06	2.423E-06	7.324E-07	3.875E-07	2.483E-07	1.329E-07	8.623E-08	6.190E-08
SW	76	6.902E-06	2.209E-06	7.148E-07	3.817E-07	2.430E-07	1.269E-07	8.079E-08	5.708E-08
WSW	60	7.789E-06	2.375E-06	7.587E-07	4.140E-07	2.682E-07	1.432E-07	9.209E-08	6.567E-08
W	67	9.399E-06	2.895E-06	9.285E-07	5.458E-07	3.483E-07	1.846E-07	1.080E-07	7.702E-08
WNW	85	1.446E-05	4.255E-06	1.514E-06	8.382E-07	5.472E-07	2.951E-07	2.099E-07	1.507E-07
NW	110	2.111E-05	6.234E-06	2.158E-06	1.179E-06	7.644E-07	4.168E-07	2.721E-07	1.963E-07
NNW	67	1.462E-05	4.255E-06	1.401E-06	7.741E-07	5.096E-07	2.824E-07	1.856E-07	1.347E-07
AVERAGE	2120	1.947E-05	5.791E-06	1.973E-06	1.087E-06	7.081E-07	3.837E-07	2.496E-07	1.794E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	146	1.447E-07	1.159E-07	9.568E-08	8.064E-08	6.930E-08	3.949E-08	2.671E-08	1.547E-08
NNE	168	1.849E-07	1.481E-07	1.222E-07	1.029E-07	8.842E-08	5.027E-08	3.397E-08	1.965E-08
NE	204	2.841E-07	2.284E-07	1.892E-07	1.601E-07	1.382E-07	7.986E-08	5.451E-08	3.191E-08
ENE	217	2.922E-07	2.344E-07	1.938E-07	1.636E-07	1.408E-07	8.076E-08	5.487E-08	3.192E-08
E	240	2.308E-07	1.848E-07	1.525E-07	1.285E-07	1.105E-07	6.294E-08	4.256E-08	2.464E-08
ESE	201	1.761E-07	1.410E-07	1.164E-07	9.812E-08	8.433E-08	4.810E-08	3.254E-08	1.883E-08
SE	191	1.723E-07	1.378E-07	1.250E-07	1.053E-07	9.038E-08	4.672E-08	3.150E-08	1.812E-08
SSE	104	9.395E-08	7.552E-08	6.258E-08	5.296E-08	4.566E-08	2.630E-08	1.792E-08	1.050E-08
S	84	5.703E-08	4.566E-08	3.770E-08	3.181E-08	2.734E-08	1.560E-08	1.055E-08	6.106E-09
SSW	100	4.735E-08	3.785E-08	3.124E-08	2.639E-08	2.271E-08	1.301E-08	8.804E-09	5.087E-09
SW	76	4.300E-08	3.393E-08	2.769E-08	2.315E-08	1.975E-08	1.100E-08	7.253E-09	4.004E-09
WSW	60	5.008E-08	3.988E-08	3.606E-08	3.030E-08	2.597E-08	1.335E-08	8.949E-09	5.093E-09
W	67	5.860E-08	4.658E-08	3.823E-08	3.210E-08	2.748E-08	1.547E-08	1.034E-08	5.881E-09
WNW	85	1.158E-07	9.277E-08	6.961E-08	5.862E-08	5.034E-08	2.862E-08	1.933E-08	1.116E-08
NW	110	1.511E-07	1.212E-07	1.002E-07	8.460E-08	7.282E-08	4.166E-08	2.826E-08	1.646E-08
NNW	67	1.044E-07	8.422E-08	6.999E-08	5.940E-08	5.134E-08	2.982E-08	2.045E-08	1.207E-08
AVERAGE	2120	1.379E-07	1.105E-07	9.175E-08	7.741E-08	6.658E-08	3.769E-08	2.553E-08	1.481E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	146	1.056E-08	7.901E-09	6.279E-09	5.177E-09	4.362E-09	3.765E-09	3.296E-09	
NNE	168	1.340E-08	1.002E-08	7.954E-09	6.554E-09	5.519E-09	4.762E-09	4.167E-09	
NE	204	2.191E-08	1.646E-08	1.312E-08	1.084E-08	9.146E-09	7.889E-09	6.902E-09	
ENE	217	2.185E-08	1.637E-08	1.303E-08	1.075E-08	9.055E-09	7.810E-09	6.831E-09	
E	240	1.685E-08	1.262E-08	1.004E-08	8.286E-09	6.990E-09	6.040E-09	5.294E-09	
ESE	201	1.288E-08	9.652E-09	7.679E-09	6.340E-09	5.350E-09	4.624E-09	4.054E-09	
SE	191	1.235E-08	9.227E-09	7.324E-09	6.034E-09	5.082E-09	4.386E-09	3.840E-09	
SSE	104	7.224E-09	5.438E-09	4.343E-09	3.596E-09	3.041E-09	2.633E-09	2.311E-09	
S	84	4.179E-09	3.134E-09	2.495E-09	2.061E-09	1.741E-09	1.506E-09	1.321E-09	
SSW	100	3.492E-09	2.625E-09	2.094E-09	1.733E-09	1.466E-09	1.270E-09	1.116E-09	
SW	76	2.674E-09	1.969E-09	1.544E-09	1.261E-09	1.054E-09	9.046E-10	7.886E-10	
WSW	60	3.453E-09	2.570E-09	2.034E-09	1.671E-09	1.405E-09	1.210E-09	1.058E-09	
W	67	3.990E-09	2.973E-09	2.355E-09	1.938E-09	1.632E-09	1.409E-09	1.235E-09	
WNW	85	7.612E-09	5.687E-09	4.514E-09	3.718E-09	3.130E-09	2.701E-09	2.363E-09	
NW	110	1.127E-08	8.458E-09	6.739E-09	5.569E-09	4.702E-09	4.065E-09	3.564E-09	
NNW	67	8.335E-09	6.288E-09	5.031E-09	4.170E-09	3.528E-09	3.052E-09	2.678E-09	
AVERAGE	2120	1.013E-08	7.587E-09	6.036E-09	4.981E-09	4.200E-09	3.627E-09	3.176E-09	

Table B-5
Undepleted χ/Q Factors for Reactor Building Vent

PNPS 2ND QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
GROUND-LEVEL AVERAGE CHI/Q BEFORE DEPLETION (SPLIT-H MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	163	2.709E-05	8.066E-06	2.771E-06	1.526E-06	9.971E-07	5.389E-07	3.487E-07	2.502E-07
NNE	307	4.484E-05	1.339E-05	4.490E-06	2.480E-06	1.627E-06	8.891E-07	5.790E-07	4.171E-07
NE	198	4.449E-05	1.299E-05	4.094E-06	2.218E-06	1.446E-06	8.166E-07	5.453E-07	3.998E-07
ENE	160	4.306E-05	1.265E-05	4.153E-06	2.281E-06	1.493E-06	8.271E-07	5.444E-07	3.953E-07
E	111	2.447E-05	7.165E-06	2.345E-06	1.311E-06	8.694E-07	4.809E-07	3.147E-07	2.278E-07
ESE	88	2.485E-05	7.278E-06	2.470E-06	1.376E-06	9.063E-07	4.960E-07	3.229E-07	2.329E-07
SE	84	1.937E-05	5.683E-06	2.071E-06	1.138E-06	7.451E-07	4.102E-07	2.445E-07	1.772E-07
SSE	94	2.045E-05	6.081E-06	2.036E-06	1.027E-06	6.763E-07	3.692E-07	2.400E-07	1.728E-07
S	47	6.339E-06	1.903E-06	5.342E-07	2.924E-07	1.913E-07	1.036E-07	6.709E-08	4.815E-08
SSW	122	1.443E-05	4.359E-06	1.323E-06	7.081E-07	4.584E-07	2.455E-07	1.584E-07	1.134E-07
SW	127	2.108E-05	6.327E-06	1.895E-06	1.019E-06	6.604E-07	3.584E-07	2.339E-07	1.688E-07
WSW	167	3.235E-05	9.779E-06	3.064E-06	1.666E-06	1.080E-06	5.799E-07	3.745E-07	2.681E-07
W	124	2.139E-05	6.477E-06	1.993E-06	1.187E-06	7.687E-07	4.131E-07	2.428E-07	1.741E-07
WNW	89	1.879E-05	5.580E-06	1.936E-06	1.067E-06	6.973E-07	3.768E-07	2.683E-07	1.926E-07
NW	84	1.821E-05	5.485E-06	1.957E-06	1.072E-06	6.943E-07	3.705E-07	2.382E-07	1.700E-07
NNW	55	1.935E-05	5.677E-06	1.910E-06	1.066E-06	7.033E-07	3.867E-07	2.522E-07	1.821E-07
AVERAGE	2020	2.503E-05	7.431E-06	2.440E-06	1.340E-06	8.758E-07	4.789E-07	3.109E-07	2.244E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	163	1.922E-07	1.540E-07	1.272E-07	1.073E-07	9.223E-08	5.273E-08	3.575E-08	2.074E-08
NNE	307	3.210E-07	2.576E-07	2.131E-07	1.802E-07	1.553E-07	8.948E-08	6.086E-08	3.541E-08
NE	198	3.110E-07	2.518E-07	2.100E-07	1.790E-07	1.554E-07	9.124E-08	6.304E-08	3.768E-08
ENE	160	3.060E-07	2.466E-07	2.049E-07	1.738E-07	1.503E-07	8.727E-08	5.982E-08	3.531E-08
E	111	1.763E-07	1.421E-07	1.180E-07	1.001E-07	8.649E-08	5.026E-08	3.445E-08	2.028E-08
ESE	88	1.798E-07	1.445E-07	1.197E-07	1.012E-07	8.723E-08	5.022E-08	3.424E-08	2.003E-08
SE	84	1.371E-07	1.104E-07	1.008E-07	8.546E-08	7.381E-08	4.276E-08	2.927E-08	1.725E-08
SSE	94	1.331E-07	1.068E-07	8.844E-08	7.479E-08	6.446E-08	3.716E-08	2.530E-08	1.475E-08
S	47	3.694E-08	2.958E-08	2.444E-08	2.064E-08	1.776E-08	1.018E-08	6.900E-09	3.989E-09
SSW	122	8.678E-08	6.939E-08	5.728E-08	4.836E-08	4.156E-08	2.377E-08	1.611E-08	9.344E-09
SW	127	1.299E-07	1.044E-07	8.645E-08	7.323E-08	6.316E-08	3.647E-08	2.484E-08	1.450E-08
WSW	167	2.052E-07	1.639E-07	1.486E-07	1.252E-07	1.075E-07	5.563E-08	3.753E-08	2.159E-08
W	124	1.334E-07	1.066E-07	8.798E-08	7.421E-08	6.380E-08	3.647E-08	2.470E-08	1.431E-08
WNW	89	1.480E-07	1.186E-07	8.901E-08	7.507E-08	6.453E-08	3.685E-08	2.494E-08	1.442E-08
NW	84	1.299E-07	1.036E-07	8.516E-08	7.152E-08	6.128E-08	3.459E-08	2.322E-08	1.328E-08
NNW	55	1.406E-07	1.131E-07	9.371E-08	7.930E-08	6.839E-08	3.946E-08	2.694E-08	1.578E-08
AVERAGE	2020	1.730E-07	1.389E-07	1.159E-07	9.809E-08	8.457E-08	4.841E-08	3.299E-08	1.929E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	163	1.420E-08	1.064E-08	8.466E-09	6.987E-09	5.890E-09	5.085E-09	4.453E-09	
NNE	307	2.426E-08	1.819E-08	1.449E-08	1.196E-08	1.009E-08	8.701E-09	7.615E-09	
NE	198	2.619E-08	1.987E-08	1.597E-08	1.329E-08	1.128E-08	9.782E-09	8.603E-09	
ENE	160	2.437E-08	1.838E-08	1.471E-08	1.219E-08	1.032E-08	8.923E-09	7.829E-09	
E	111	1.398E-08	1.053E-08	8.412E-09	6.961E-09	5.880E-09	5.078E-09	4.448E-09	
ESE	88	1.375E-08	1.033E-08	8.235E-09	6.804E-09	5.741E-09	4.957E-09	4.341E-09	
SE	84	1.190E-08	8.973E-09	7.176E-09	5.945E-09	5.029E-09	4.351E-09	3.817E-09	
SSE	94	1.011E-08	7.588E-09	6.044E-09	4.991E-09	4.208E-09	3.630E-09	3.176E-09	
S	47	2.731E-09	2.047E-09	1.629E-09	1.345E-09	1.135E-09	9.797E-10	8.584E-10	
SSW	122	6.429E-09	4.841E-09	3.864E-09	3.200E-09	2.709E-09	2.348E-09	2.065E-09	
SW	127	9.987E-09	7.523E-09	6.010E-09	4.979E-09	4.214E-09	3.649E-09	3.206E-09	
WSW	167	1.473E-08	1.102E-08	8.755E-09	7.219E-09	6.084E-09	5.253E-09	4.601E-09	
W	124	9.803E-09	7.355E-09	5.857E-09	4.839E-09	4.085E-09	3.530E-09	3.095E-09	
WNW	89	9.849E-09	7.370E-09	5.857E-09	4.829E-09	4.068E-09	3.511E-09	3.073E-09	
NW	84	9.015E-09	6.716E-09	5.318E-09	4.373E-09	3.677E-09	3.170E-09	2.772E-09	
NNW	55	1.084E-08	8.146E-09	6.496E-09	5.369E-09	4.530E-09	3.910E-09	3.423E-09	
AVERAGE	2020	1.326E-08	9.970E-09	7.956E-09	6.580E-09	5.558E-09	4.804E-09	4.211E-09	

Table B-5
Undepleted χ/Q Factors for Reactor Building Vent

PNPS 3RD QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
GROUND-LEVEL AVERAGE CHI/Q BEFORE DEPLETION (SPLIT-H MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	275	6.510E-05	1.932E-05	6.501E-06	3.609E-06	2.372E-06	1.298E-06	8.447E-07	6.086E-07
NNE	419	7.466E-05	2.206E-05	7.496E-06	4.096E-06	2.663E-06	1.457E-06	9.523E-07	6.881E-07
NE	244	6.931E-05	2.028E-05	6.383E-06	3.462E-06	2.259E-06	1.276E-06	8.515E-07	6.241E-07
ENE	168	5.954E-05	1.740E-05	5.573E-06	3.019E-06	1.963E-06	1.102E-06	7.338E-07	5.370E-07
E	141	4.006E-05	1.171E-05	3.761E-06	2.020E-06	1.306E-06	7.314E-07	4.872E-07	3.566E-07
ESE	65	1.619E-05	4.688E-06	1.593E-06	8.747E-07	5.715E-07	3.125E-07	2.041E-07	1.477E-07
SE	50	1.111E-05	3.186E-06	1.177E-06	6.518E-07	4.299E-07	2.356E-07	1.397E-07	1.010E-07
SSE	48	1.136E-05	3.311E-06	1.197E-06	5.962E-07	3.866E-07	2.079E-07	1.346E-07	9.669E-08
S	24	4.445E-06	1.285E-06	3.859E-07	2.118E-07	1.376E-07	7.390E-08	4.784E-08	3.439E-08
SSW	63	1.013E-05	2.932E-06	9.436E-07	5.128E-07	3.329E-07	1.786E-07	1.153E-07	8.276E-08
SW	65	1.044E-05	3.111E-06	9.801E-07	5.296E-07	3.435E-07	1.840E-07	1.189E-07	8.522E-08
WSW	121	2.793E-05	8.250E-06	2.571E-06	1.396E-06	9.046E-07	4.914E-07	3.205E-07	2.312E-07
W	103	1.874E-05	5.591E-06	1.801E-06	1.079E-06	6.976E-07	3.723E-07	2.182E-07	1.561E-07
WNW	105	2.604E-05	7.612E-06	2.648E-06	1.459E-06	9.538E-07	5.172E-07	3.690E-07	2.654E-07
NW	87	3.311E-05	9.585E-06	3.400E-06	1.896E-06	1.245E-06	6.757E-07	4.382E-07	3.152E-07
NNW	97	2.973E-05	8.775E-06	3.043E-06	1.691E-06	1.108E-06	6.012E-07	3.897E-07	2.801E-07
AVERAGE	2075	3.174E-05	9.318E-06	3.091E-06	1.694E-06	1.105E-06	6.071E-07	3.978E-07	2.881E-07
DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	275	4.689E-07	3.765E-07	3.116E-07	2.635E-07	2.271E-07	1.308E-07	8.907E-08	5.194E-08
NNE	419	5.306E-07	4.262E-07	3.528E-07	2.984E-07	2.572E-07	1.478E-07	1.006E-07	5.883E-08
NE	244	4.854E-07	3.929E-07	3.276E-07	2.793E-07	2.424E-07	1.424E-07	9.831E-08	5.870E-08
ENE	168	4.173E-07	3.375E-07	2.811E-07	2.393E-07	2.074E-07	1.214E-07	8.366E-08	4.987E-08
E	141	2.771E-07	2.240E-07	1.866E-07	1.588E-07	1.377E-07	8.045E-08	5.544E-08	3.307E-08
ESE	65	1.143E-07	9.205E-08	7.635E-08	6.462E-08	5.572E-08	3.210E-08	2.194E-08	1.294E-08
SE	50	7.836E-08	6.322E-08	5.777E-08	4.895E-08	4.223E-08	2.442E-08	1.674E-08	9.904E-09
SSE	48	7.437E-08	5.956E-08	4.915E-08	4.137E-08	3.549E-08	2.010E-08	1.356E-08	7.840E-09
S	24	2.652E-08	2.128E-08	1.759E-08	1.481E-08	1.272E-08	7.223E-09	4.885E-09	2.836E-09
SSW	63	6.373E-08	5.111E-08	4.223E-08	3.559E-08	3.054E-08	1.735E-08	1.175E-08	6.854E-09
SW	65	6.534E-08	5.228E-08	4.315E-08	3.638E-08	3.124E-08	1.779E-08	1.200E-08	6.906E-09
WSW	121	1.781E-07	1.430E-07	1.301E-07	1.100E-07	9.469E-08	4.935E-08	3.352E-08	1.954E-08
W	103	1.197E-07	9.562E-08	7.880E-08	6.629E-08	5.686E-08	3.221E-08	2.169E-08	1.248E-08
WNW	105	2.045E-07	1.641E-07	1.234E-07	1.041E-07	8.952E-08	5.116E-08	3.473E-08	2.024E-08
NW	87	2.432E-07	1.952E-07	1.614E-07	1.361E-07	1.170E-07	6.675E-08	4.527E-08	2.634E-08
NNW	97	2.156E-07	1.729E-07	1.429E-07	1.205E-07	1.037E-07	5.931E-08	4.023E-08	2.337E-08
AVERAGE	2075	2.227E-07	1.792E-07	1.489E-07	1.261E-07	1.088E-07	6.254E-08	4.271E-08	2.510E-08
DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	275	3.562E-08	2.672E-08	2.129E-08	1.758E-08	1.482E-08	1.279E-08	1.119E-08	
NNE	419	4.041E-08	3.037E-08	2.423E-08	2.005E-08	1.694E-08	1.465E-08	1.285E-08	
NE	244	4.078E-08	3.091E-08	2.484E-08	2.066E-08	1.754E-08	1.520E-08	1.337E-08	
ENE	168	3.461E-08	2.621E-08	2.105E-08	1.751E-08	1.485E-08	1.288E-08	1.132E-08	
E	141	2.298E-08	1.742E-08	1.400E-08	1.165E-08	9.894E-09	8.586E-09	7.557E-09	
ESE	65	8.930E-09	6.735E-09	5.386E-09	4.464E-09	3.778E-09	3.273E-09	2.875E-09	
SE	50	6.852E-09	5.175E-09	4.142E-09	3.435E-09	2.909E-09	2.521E-09	2.214E-09	
SSE	48	5.352E-09	4.005E-09	3.182E-09	2.625E-09	2.214E-09	1.915E-09	1.679E-09	
S	24	1.941E-09	1.455E-09	1.157E-09	9.553E-10	8.063E-10	6.980E-10	6.123E-10	
SSW	63	4.714E-09	3.547E-09	2.829E-09	2.343E-09	1.983E-09	1.721E-09	1.513E-09	
SW	65	4.723E-09	3.540E-09	2.816E-09	2.325E-09	1.964E-09	1.700E-09	1.493E-09	
WSW	121	1.341E-08	1.008E-08	8.040E-09	6.651E-09	5.622E-09	4.866E-09	4.272E-09	
W	103	8.510E-09	6.362E-09	5.050E-09	4.162E-09	3.508E-09	3.031E-09	2.656E-09	
WNW	105	1.388E-08	1.042E-08	8.302E-09	6.860E-09	5.791E-09	5.008E-09	4.391E-09	
NW	87	1.802E-08	1.350E-08	1.073E-08	8.856E-09	7.464E-09	6.446E-09	5.643E-09	
NNW	97	1.598E-08	1.196E-08	9.513E-09	7.845E-09	6.609E-09	5.701E-09	4.987E-09	
AVERAGE	2075	1.729E-08	1.303E-08	1.041E-08	8.623E-09	7.294E-09	6.311E-09	5.538E-09	

Table B-5
Undepleted χ/Q Factors for Reactor Building Vent

PNPS 4TH QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
GROUND-LEVEL AVERAGE CHI/Q BEFORE DEPLETION (SPLIT-H MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	254	4.867E-05	1.433E-05	4.859E-06	2.687E-06	1.761E-06	9.644E-07	6.289E-07	4.538E-07
NNE	268	4.747E-05	1.407E-05	4.692E-06	2.594E-06	1.702E-06	9.334E-07	6.091E-07	4.396E-07
NE	270	5.714E-05	1.684E-05	5.451E-06	3.020E-06	1.990E-06	1.106E-06	7.279E-07	5.285E-07
ENE	245	4.908E-05	1.443E-05	4.878E-06	2.696E-06	1.767E-06	9.696E-07	6.335E-07	4.577E-07
E	273	3.238E-05	9.537E-06	3.277E-06	1.795E-06	1.171E-06	6.329E-07	4.102E-07	2.949E-07
ESE	152	1.539E-05	4.591E-06	1.601E-06	8.643E-07	5.579E-07	2.975E-07	1.919E-07	1.375E-07
SE	126	1.528E-05	4.557E-06	1.610E-06	8.755E-07	5.669E-07	3.030E-07	1.956E-07	1.401E-07
SSE	18	2.194E-06	6.231E-07	2.174E-07	1.181E-07	7.695E-08	4.159E-08	2.708E-08	1.957E-08
S	33	2.967E-06	8.982E-07	2.816E-07	1.510E-07	9.769E-08	5.216E-08	3.364E-08	2.405E-08
SSW	61	5.112E-06	1.647E-06	5.281E-07	2.805E-07	1.783E-07	9.294E-08	5.911E-08	4.170E-08
SW	43	7.400E-06	2.200E-06	6.681E-07	3.549E-07	2.273E-07	1.233E-07	8.084E-08	5.857E-08
WSW	65	6.401E-06	1.935E-06	6.053E-07	3.215E-07	2.057E-07	1.087E-07	6.988E-08	4.994E-08
W	54	8.943E-06	2.625E-06	7.838E-07	4.509E-07	2.873E-07	1.560E-07	9.345E-08	6.801E-08
WNW	47	6.705E-06	1.977E-06	7.108E-07	3.856E-07	2.488E-07	1.324E-07	9.393E-08	6.731E-08
NW	57	1.280E-05	3.770E-06	1.343E-06	7.423E-07	4.841E-07	2.607E-07	1.685E-07	1.208E-07
NNW	121	3.025E-05	8.831E-06	3.033E-06	1.688E-06	1.109E-06	6.066E-07	3.953E-07	2.852E-07
AVERAGE	2087	2.176E-05	6.429E-06	2.159E-06	1.189E-06	7.770E-07	4.238E-07	2.762E-07	1.992E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	254	3.500E-07	2.812E-07	2.328E-07	1.969E-07	1.697E-07	9.763E-08	6.651E-08	3.888E-08
NNE	268	3.390E-07	2.724E-07	2.257E-07	1.910E-07	1.647E-07	9.509E-08	6.489E-08	3.799E-08
NE	270	4.092E-07	3.299E-07	2.742E-07	2.328E-07	2.014E-07	1.174E-07	8.056E-08	4.753E-08
ENE	245	3.533E-07	2.840E-07	2.353E-07	1.991E-07	1.717E-07	9.893E-08	6.744E-08	3.946E-08
E	273	2.271E-07	1.822E-07	1.507E-07	1.273E-07	1.095E-07	6.267E-08	4.255E-08	2.477E-08
ESE	152	1.054E-07	8.434E-08	6.957E-08	5.860E-08	5.030E-08	2.858E-08	1.930E-08	1.116E-08
SE	126	1.074E-07	8.583E-08	7.784E-08	6.553E-08	5.623E-08	2.899E-08	1.952E-08	1.120E-08
SSE	18	1.517E-08	1.224E-08	1.016E-08	8.592E-09	7.397E-09	4.243E-09	2.891E-09	1.699E-09
S	33	1.837E-08	1.466E-08	1.208E-08	1.018E-08	8.738E-09	4.964E-09	3.332E-09	1.898E-09
SSW	61	3.135E-08	2.471E-08	2.015E-08	1.685E-08	1.437E-08	8.000E-09	5.269E-09	2.901E-09
SW	43	4.521E-08	3.636E-08	3.014E-08	2.553E-08	2.203E-08	1.270E-08	8.671E-09	5.099E-09
WSW	65	3.820E-08	3.050E-08	2.765E-08	2.328E-08	1.997E-08	1.030E-08	6.955E-09	4.023E-09
W	54	5.271E-08	4.254E-08	3.537E-08	3.003E-08	2.595E-08	1.504E-08	1.033E-08	6.143E-09
WNW	47	5.168E-08	4.134E-08	3.099E-08	2.607E-08	2.235E-08	1.264E-08	8.512E-09	4.905E-09
NW	57	9.286E-08	7.433E-08	6.132E-08	5.163E-08	4.432E-08	2.517E-08	1.699E-08	9.802E-09
NNW	121	2.202E-07	1.770E-07	1.466E-07	1.239E-07	1.067E-07	6.132E-08	4.175E-08	2.441E-08
AVERAGE	2087	1.536E-07	1.233E-07	1.025E-07	8.670E-08	7.471E-08	4.273E-08	2.909E-08	1.699E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	254	2.669E-08	2.005E-08	1.599E-08	1.321E-08	1.115E-08	9.635E-09	8.441E-09	
NNE	268	2.611E-08	1.963E-08	1.566E-08	1.295E-08	1.093E-08	9.438E-09	8.266E-09	
NE	270	3.279E-08	2.472E-08	1.977E-08	1.637E-08	1.384E-08	1.196E-08	1.048E-08	
ENE	245	2.710E-08	2.037E-08	1.624E-08	1.343E-08	1.134E-08	9.797E-09	8.584E-09	
E	273	1.701E-08	1.277E-08	1.018E-08	8.416E-09	7.108E-09	6.149E-09	5.395E-09	
ESE	152	7.640E-09	5.731E-09	4.561E-09	3.768E-09	3.182E-09	2.755E-09	2.419E-09	
SE	126	7.635E-09	5.706E-09	4.528E-09	3.732E-09	3.145E-09	2.718E-09	2.382E-09	
SSE	18	1.173E-09	8.858E-10	7.083E-10	5.877E-10	4.983E-10	4.331E-10	3.814E-10	
S	33	1.293E-09	9.664E-10	7.669E-10	6.324E-10	5.335E-10	4.615E-10	4.051E-10	
SSW	61	1.938E-09	1.427E-09	1.120E-09	9.143E-10	7.647E-10	6.567E-10	5.729E-10	
SW	43	3.523E-09	2.661E-09	2.131E-09	1.769E-09	1.500E-09	1.302E-09	1.146E-09	
WSW	65	2.763E-09	2.077E-09	1.656E-09	1.370E-09	1.160E-09	1.006E-09	8.850E-10	
W	54	4.278E-09	3.251E-09	2.615E-09	2.180E-09	1.856E-09	1.617E-09	1.428E-09	
WNW	47	3.348E-09	2.505E-09	1.989E-09	1.641E-09	1.384E-09	1.198E-09	1.051E-09	
NW	57	6.680E-09	4.991E-09	3.960E-09	3.262E-09	2.746E-09	2.370E-09	2.074E-09	
NNW	121	1.675E-08	1.257E-08	1.002E-08	8.278E-09	6.984E-09	6.031E-09	5.281E-09	
AVERAGE	2087	1.167E-08	8.769E-09	6.994E-09	5.782E-09	4.883E-09	4.220E-09	3.699E-09	

Table B-5
Undepleted χ/Q Factors for Reactor Building Vent

PNPS ANNUAL 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION (SPLIT-H MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	838	4.021E-05	1.191E-05	4.050E-06	2.241E-06	1.469E-06	8.012E-07	5.210E-07	3.752E-07
NNE	1162	4.796E-05	1.420E-05	4.820E-06	2.653E-06	1.733E-06	9.471E-07	6.175E-07	4.454E-07
NE	916	5.254E-05	1.543E-05	4.949E-06	2.714E-06	1.780E-06	9.953E-07	6.588E-07	4.801E-07
ENE	790	4.799E-05	1.409E-05	4.672E-06	2.568E-06	1.680E-06	9.282E-07	6.099E-07	4.423E-07
E	765	3.244E-05	9.552E-06	3.199E-06	1.747E-06	1.138E-06	6.238E-07	4.084E-07	2.955E-07
ESE	506	2.039E-05	6.017E-06	2.066E-06	1.132E-06	7.376E-07	3.995E-07	2.594E-07	1.867E-07
SE	451	1.751E-05	5.172E-06	1.777E-06	9.740E-07	6.350E-07	3.442E-07	2.236E-07	1.610E-07
SSE	264	1.108E-05	3.263E-06	1.117E-06	6.141E-07	4.011E-07	2.181E-07	1.419E-07	1.022E-07
S	188	5.485E-06	1.635E-06	5.140E-07	2.791E-07	1.810E-07	9.742E-08	6.312E-08	4.533E-08
SSW	346	9.345E-06	2.826E-06	8.775E-07	4.699E-07	3.030E-07	1.617E-07	1.042E-07	7.456E-08
SW	311	1.136E-05	3.434E-06	1.056E-06	5.669E-07	3.657E-07	1.966E-07	1.276E-07	9.167E-08
WSW	413	1.845E-05	5.534E-06	1.734E-06	9.408E-07	6.092E-07	3.278E-07	2.123E-07	1.524E-07
W	348	1.454E-05	4.372E-06	1.369E-06	8.112E-07	5.226E-07	2.799E-07	1.647E-07	1.181E-07
WNW	326	1.646E-05	4.844E-06	1.698E-06	9.354E-07	6.103E-07	3.296E-07	2.348E-07	1.686E-07
NW	338	2.131E-05	6.270E-06	2.215E-06	1.222E-06	7.969E-07	4.310E-07	2.793E-07	2.007E-07
NNW	340	2.348E-05	6.881E-06	2.346E-06	1.304E-06	8.569E-07	4.690E-07	3.056E-07	2.204E-07
AVERAGE	8302	2.441E-05	7.215E-06	2.404E-06	1.323E-06	8.637E-07	4.719E-07	3.083E-07	2.225E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	838	2.889E-07	2.318E-07	1.918E-07	1.620E-07	1.396E-07	8.015E-08	5.450E-08	3.175E-08
NNE	1162	3.432E-07	2.755E-07	2.280E-07	1.927E-07	1.661E-07	9.547E-08	6.495E-08	3.789E-08
NE	916	3.724E-07	3.007E-07	2.502E-07	2.128E-07	1.843E-07	1.077E-07	7.408E-08	4.393E-08
ENE	790	3.422E-07	2.756E-07	2.287E-07	1.939E-07	1.675E-07	9.706E-08	6.643E-08	3.913E-08
E	765	2.282E-07	1.836E-07	1.522E-07	1.289E-07	1.112E-07	6.416E-08	4.381E-08	2.572E-08
ESE	506	1.438E-07	1.154E-07	9.541E-08	8.057E-08	6.933E-08	3.971E-08	2.698E-08	1.572E-08
SE	451	1.239E-07	9.942E-08	9.044E-08	7.638E-08	6.573E-08	3.423E-08	2.323E-08	1.351E-08
SSE	264	7.877E-08	6.324E-08	5.234E-08	4.422E-08	3.807E-08	2.185E-08	1.485E-08	8.654E-09
S	188	3.480E-08	2.786E-08	2.301E-08	1.941E-08	1.668E-08	9.515E-09	6.431E-09	3.716E-09
SSW	346	5.702E-08	4.553E-08	3.753E-08	3.163E-08	2.716E-08	1.545E-08	1.043E-08	6.015E-09
SW	311	7.029E-08	5.626E-08	4.647E-08	3.924E-08	3.376E-08	1.932E-08	1.308E-08	7.559E-09
WSW	413	1.168E-07	9.346E-08	8.484E-08	7.153E-08	6.147E-08	3.187E-08	2.154E-08	1.245E-08
W	348	9.057E-08	7.243E-08	5.976E-08	5.037E-08	4.328E-08	2.466E-08	1.667E-08	9.647E-09
WNW	326	1.297E-07	1.039E-07	7.805E-08	6.580E-08	5.655E-08	3.224E-08	2.182E-08	1.265E-08
NW	338	1.543E-07	1.236E-07	1.021E-07	8.600E-08	7.389E-08	4.207E-08	2.845E-08	1.648E-08
NNW	340	1.701E-07	1.367E-07	1.132E-07	9.572E-08	8.249E-08	4.746E-08	3.233E-08	1.890E-08
AVERAGE	8302	1.716E-07	1.378E-07	1.146E-07	9.695E-08	8.356E-08	4.768E-08	3.247E-08	1.898E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	838	2.176E-08	1.633E-08	1.300E-08	1.074E-08	9.056E-09	7.817E-09	6.844E-09	
NNE	1162	2.599E-08	1.951E-08	1.555E-08	1.285E-08	1.084E-08	9.367E-09	8.206E-09	
NE	916	3.041E-08	2.298E-08	1.842E-08	1.528E-08	1.294E-08	1.120E-08	9.831E-09	
ENE	790	2.697E-08	2.033E-08	1.625E-08	1.346E-08	1.139E-08	9.847E-09	8.637E-09	
E	765	1.772E-08	1.335E-08	1.067E-08	8.837E-09	7.476E-09	6.470E-09	5.679E-09	
ESE	506	1.079E-08	8.102E-09	6.457E-09	5.337E-09	4.507E-09	3.898E-09	3.418E-09	
SE	451	9.262E-09	6.951E-09	5.537E-09	4.575E-09	3.862E-09	3.338E-09	2.927E-09	
SSE	264	5.938E-09	4.459E-09	3.553E-09	2.936E-09	2.479E-09	2.143E-09	1.879E-09	
S	188	2.542E-09	1.905E-09	1.516E-09	1.251E-09	1.056E-09	9.134E-10	8.012E-10	
SSW	346	4.121E-09	3.093E-09	2.463E-09	2.037E-09	1.721E-09	1.491E-09	1.310E-09	
SW	311	5.179E-09	3.887E-09	3.096E-09	2.559E-09	2.162E-09	1.871E-09	1.643E-09	
WSW	413	8.514E-09	6.379E-09	5.075E-09	4.190E-09	3.536E-09	3.056E-09	2.680E-09	
W	348	6.606E-09	4.956E-09	3.946E-09	3.261E-09	2.754E-09	2.383E-09	2.091E-09	
WNW	326	8.651E-09	6.480E-09	5.153E-09	4.251E-09	3.585E-09	3.097E-09	2.713E-09	
NW	338	1.126E-08	8.422E-09	6.693E-09	5.520E-09	4.651E-09	4.016E-09	3.516E-09	
NNW	340	1.297E-08	9.739E-09	7.762E-09	6.413E-09	5.411E-09	4.672E-09	4.091E-09	
AVERAGE	8302	1.304E-08	9.804E-09	7.821E-09	6.469E-09	5.464E-09	4.724E-09	4.142E-09	

Table B-6
Depleted χ/Q Factors for Reactor Building Vent

PNPS 1ST QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL

GROUND RELEASE

GROUND-LEVEL AVERAGE χ/Q AFTER DEPLETION (REGULATORY GUIDE 1.111 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	146	1.931E-05	5.627E-06	1.897E-06	1.021E-06	6.552E-07	3.449E-07	2.172E-07	1.525E-07
NNE	168	2.438E-05	7.048E-06	2.413E-06	1.304E-06	8.379E-07	4.409E-07	2.774E-07	1.947E-07
NE	204	3.785E-05	1.104E-05	3.533E-06	1.921E-06	1.246E-06	6.667E-07	4.227E-07	2.981E-07
ENE	217	3.886E-05	1.131E-05	3.732E-06	2.026E-06	1.310E-06	6.936E-07	4.372E-07	3.072E-07
E	240	3.149E-05	9.243E-06	3.095E-06	1.645E-06	1.049E-06	5.504E-07	3.467E-07	2.434E-07
ESE	201	2.428E-05	7.144E-06	2.377E-06	1.260E-06	8.035E-07	4.205E-07	2.647E-07	1.857E-07
SE	191	2.333E-05	6.871E-06	2.316E-06	1.236E-06	7.897E-07	4.132E-07	2.597E-07	1.819E-07
SSE	104	1.293E-05	3.754E-06	1.218E-06	6.470E-07	4.141E-07	2.198E-07	1.395E-07	9.856E-08
S	84	8.712E-06	2.566E-06	7.759E-07	4.084E-07	2.592E-07	1.357E-07	8.558E-08	6.014E-08
SSW	100	7.622E-06	2.301E-06	6.694E-07	3.453E-07	2.177E-07	1.133E-07	7.142E-08	5.011E-08
SW	76	6.656E-06	2.099E-06	6.533E-07	3.401E-07	2.131E-07	1.081E-07	6.692E-08	4.621E-08
WSW	60	7.512E-06	2.256E-06	6.934E-07	3.689E-07	2.352E-07	1.221E-07	7.628E-08	5.317E-08
W	67	9.064E-06	2.750E-06	8.486E-07	4.864E-07	3.054E-07	1.574E-07	8.946E-08	6.235E-08
WNW	85	1.395E-05	4.042E-06	1.384E-06	7.469E-07	4.797E-07	2.515E-07	1.739E-07	1.220E-07
NW	110	2.035E-05	5.922E-06	1.972E-06	1.050E-06	6.702E-07	3.553E-07	2.254E-07	1.589E-07
NNW	67	1.410E-05	4.042E-06	1.280E-06	6.898E-07	4.467E-07	2.408E-07	1.538E-07	1.091E-07
AVERAGE	2120	1.877E-05	5.501E-06	1.804E-06	9.685E-07	6.208E-07	3.271E-07	2.067E-07	1.453E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	146	1.151E-07	9.067E-08	7.375E-08	6.138E-08	5.210E-08	2.790E-08	1.797E-08	9.660E-09
NNE	168	1.470E-07	1.159E-07	9.423E-08	7.837E-08	6.648E-08	3.552E-08	2.285E-08	1.227E-08
NE	204	2.259E-07	1.787E-07	1.458E-07	1.219E-07	1.039E-07	5.642E-08	3.667E-08	1.993E-08
ENE	217	2.323E-07	1.834E-07	1.494E-07	1.245E-07	1.059E-07	5.706E-08	3.691E-08	1.994E-08
E	240	1.836E-07	1.445E-07	1.175E-07	9.784E-08	8.305E-08	4.447E-08	2.863E-08	1.539E-08
ESE	201	1.400E-07	1.103E-07	8.970E-08	7.469E-08	6.341E-08	3.399E-08	2.189E-08	1.176E-08
SE	191	1.370E-07	1.078E-07	9.632E-08	8.012E-08	6.796E-08	3.301E-08	2.119E-08	1.132E-08
SSE	104	7.470E-08	5.909E-08	4.824E-08	4.031E-08	3.433E-08	1.858E-08	1.206E-08	6.556E-09
S	84	4.535E-08	3.572E-08	2.906E-08	2.421E-08	2.056E-08	1.102E-08	7.097E-09	3.814E-09
SSW	100	3.765E-08	2.961E-08	2.408E-08	2.009E-08	1.707E-08	9.192E-09	5.922E-09	3.178E-09
SW	76	3.419E-08	2.654E-08	2.135E-08	1.762E-08	1.485E-08	7.772E-09	4.880E-09	2.501E-09
WSW	60	3.982E-08	3.120E-08	2.780E-08	2.307E-08	1.953E-08	9.432E-09	6.020E-09	3.182E-09
W	67	4.659E-08	3.644E-08	2.947E-08	2.443E-08	2.066E-08	1.093E-08	6.959E-09	3.674E-09
WNW	85	9.211E-08	7.258E-08	5.366E-08	4.462E-08	3.785E-08	2.022E-08	1.300E-08	6.974E-09
NW	110	1.202E-07	9.482E-08	7.723E-08	6.440E-08	5.475E-08	2.944E-08	1.901E-08	1.028E-08
NNW	67	8.302E-08	6.589E-08	5.395E-08	4.522E-08	3.860E-08	2.107E-08	1.376E-08	7.540E-09
AVERAGE	2120	1.097E-07	8.644E-08	7.073E-08	5.893E-08	5.006E-08	2.663E-08	1.718E-08	9.249E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	146	6.147E-09	4.339E-09	3.281E-09	2.592E-09	2.100E-09	1.752E-09	1.485E-09	
NNE	168	7.801E-09	5.501E-09	4.157E-09	3.281E-09	2.657E-09	2.216E-09	1.878E-09	
NE	204	1.275E-08	9.038E-09	6.858E-09	5.428E-09	4.402E-09	3.671E-09	3.111E-09	
ENE	217	1.272E-08	8.992E-09	6.808E-09	5.380E-09	4.359E-09	3.634E-09	3.079E-09	
E	240	9.807E-09	6.931E-09	5.246E-09	4.148E-09	3.365E-09	2.810E-09	2.386E-09	
ESE	201	7.497E-09	5.300E-09	4.013E-09	3.174E-09	2.575E-09	2.152E-09	1.828E-09	
SE	191	7.188E-09	5.067E-09	3.827E-09	3.021E-09	2.446E-09	2.041E-09	1.731E-09	
SSE	104	4.205E-09	2.986E-09	2.270E-09	1.800E-09	1.464E-09	1.225E-09	1.042E-09	
S	84	2.433E-09	1.721E-09	1.304E-09	1.032E-09	8.379E-10	7.007E-10	5.957E-10	
SSW	100	2.033E-09	1.442E-09	1.094E-09	8.676E-10	7.058E-10	5.910E-10	5.033E-10	
SW	76	1.557E-09	1.081E-09	8.071E-10	6.311E-10	5.073E-10	4.209E-10	3.554E-10	
WSW	60	2.010E-09	1.411E-09	1.063E-09	8.367E-10	6.762E-10	5.631E-10	4.769E-10	
W	67	2.322E-09	1.633E-09	1.231E-09	9.703E-10	7.856E-10	6.557E-10	5.566E-10	
WNW	85	4.431E-09	3.123E-09	2.359E-09	1.861E-09	1.507E-09	1.257E-09	1.065E-09	
NW	110	6.562E-09	4.645E-09	3.522E-09	2.788E-09	2.263E-09	1.892E-09	1.607E-09	
NNW	67	4.852E-09	3.453E-09	2.629E-09	2.087E-09	1.698E-09	1.420E-09	1.207E-09	
AVERAGE	2120	5.895E-09	4.166E-09	3.154E-09	2.494E-09	2.022E-09	1.688E-09	1.432E-09	

Table B-6
Depleted χ/Q Factors for Reactor Building Vent

PNPS 2ND QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL

GROUND RELEASE

GROUND-LEVEL AVERAGE χ/Q AFTER DEPLETION (REGULATORY GUIDE 1.111 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	163	2.613E-05	7.661E-06	2.532E-06	1.360E-06	8.741E-07	4.594E-07	2.888E-07	2.026E-07
NNE	307	4.325E-05	1.272E-05	4.104E-06	2.210E-06	1.426E-06	7.579E-07	4.796E-07	3.377E-07
NE	198	4.291E-05	1.234E-05	3.742E-06	1.976E-06	1.268E-06	6.961E-07	4.517E-07	3.236E-07
ENE	160	4.153E-05	1.202E-05	3.796E-06	2.032E-06	1.309E-06	7.051E-07	4.509E-07	3.200E-07
E	111	2.360E-05	6.806E-06	2.144E-06	1.168E-06	7.622E-07	4.100E-07	2.607E-07	1.844E-07
ESE	88	2.396E-05	6.913E-06	2.258E-06	1.226E-06	7.945E-07	4.228E-07	2.675E-07	1.885E-07
SE	84	1.868E-05	5.398E-06	1.892E-06	1.014E-06	6.532E-07	3.497E-07	2.025E-07	1.434E-07
SSE	94	1.972E-05	5.776E-06	1.860E-06	9.156E-07	5.929E-07	3.147E-07	1.988E-07	1.399E-07
S	47	6.113E-06	1.808E-06	4.883E-07	2.606E-07	1.677E-07	8.831E-08	5.557E-08	3.898E-08
SSW	122	1.392E-05	4.141E-06	1.209E-06	6.310E-07	4.019E-07	2.093E-07	1.312E-07	9.178E-08
SW	127	2.033E-05	6.010E-06	1.732E-06	9.078E-07	5.789E-07	3.055E-07	1.937E-07	1.367E-07
WSW	167	3.120E-05	9.288E-06	2.800E-06	1.485E-06	9.471E-07	4.944E-07	3.102E-07	2.170E-07
W	124	2.063E-05	6.152E-06	1.822E-06	1.058E-06	6.739E-07	3.521E-07	2.011E-07	1.409E-07
WNW	89	1.812E-05	5.301E-06	1.769E-06	9.511E-07	6.114E-07	3.212E-07	2.223E-07	1.559E-07
NW	84	1.756E-05	5.210E-06	1.789E-06	9.553E-07	6.087E-07	3.158E-07	1.973E-07	1.376E-07
NNW	55	1.866E-05	5.392E-06	1.746E-06	9.502E-07	6.166E-07	3.297E-07	2.089E-07	1.474E-07
AVERAGE	2020	2.414E-05	7.058E-06	2.230E-06	1.194E-06	7.679E-07	4.083E-07	2.576E-07	1.817E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	163	1.529E-07	1.205E-07	9.803E-08	8.165E-08	6.934E-08	3.725E-08	2.405E-08	1.296E-08
NNE	307	2.553E-07	2.015E-07	1.643E-07	1.372E-07	1.168E-07	6.322E-08	4.094E-08	2.212E-08
NE	198	2.473E-07	1.970E-07	1.619E-07	1.363E-07	1.168E-07	6.447E-08	4.241E-08	2.354E-08
ENE	160	2.433E-07	1.930E-07	1.579E-07	1.323E-07	1.130E-07	6.166E-08	4.025E-08	2.206E-08
E	111	1.402E-07	1.112E-07	9.097E-08	7.620E-08	6.503E-08	3.551E-08	2.318E-08	1.267E-08
ESE	88	1.429E-07	1.130E-07	9.227E-08	7.705E-08	6.558E-08	3.548E-08	2.303E-08	1.251E-08
SE	84	1.090E-07	8.638E-08	7.771E-08	6.505E-08	5.549E-08	3.021E-08	1.969E-08	1.078E-08
SSE	94	1.058E-07	8.359E-08	6.817E-08	5.693E-08	4.847E-08	2.625E-08	1.702E-08	9.211E-09
S	47	2.937E-08	2.314E-08	1.884E-08	1.571E-08	1.335E-08	7.195E-09	4.642E-09	2.492E-09
SSW	122	6.900E-08	5.429E-08	4.415E-08	3.681E-08	3.125E-08	1.680E-08	1.084E-08	5.837E-09
SW	127	1.033E-07	8.164E-08	6.664E-08	5.575E-08	4.749E-08	2.577E-08	1.671E-08	9.058E-09
WSW	167	1.631E-07	1.282E-07	1.145E-07	9.528E-08	8.082E-08	3.930E-08	2.525E-08	1.349E-08
W	124	1.060E-07	8.342E-08	6.782E-08	5.649E-08	4.797E-08	2.577E-08	1.662E-08	8.937E-09
WNW	89	1.177E-07	9.276E-08	6.862E-08	5.714E-08	4.852E-08	2.604E-08	1.678E-08	9.007E-09
NW	84	1.033E-07	8.102E-08	6.565E-08	5.445E-08	4.607E-08	2.444E-08	1.562E-08	8.295E-09
NNW	55	1.118E-07	8.847E-08	7.224E-08	6.036E-08	5.142E-08	2.788E-08	1.812E-08	9.858E-09
AVERAGE	2020	1.375E-07	1.087E-07	8.936E-08	7.467E-08	6.359E-08	3.420E-08	2.220E-08	1.205E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	163	8.265E-09	5.843E-09	4.424E-09	3.498E-09	2.836E-09	2.366E-09	2.007E-09	
NNE	307	1.412E-08	9.991E-09	7.572E-09	5.989E-09	4.856E-09	4.049E-09	3.433E-09	
NE	198	1.525E-08	1.091E-08	8.346E-09	6.653E-09	5.431E-09	4.552E-09	3.878E-09	
ENE	160	1.419E-08	1.010E-08	7.687E-09	6.104E-09	4.966E-09	4.152E-09	3.529E-09	
E	111	8.138E-09	5.782E-09	4.396E-09	3.485E-09	2.831E-09	2.363E-09	2.005E-09	
ESE	88	8.006E-09	5.673E-09	4.303E-09	3.406E-09	2.764E-09	2.307E-09	1.957E-09	
SE	84	6.928E-09	4.927E-09	3.750E-09	2.976E-09	2.421E-09	2.024E-09	1.721E-09	
SSE	94	5.886E-09	4.167E-09	3.159E-09	2.498E-09	2.026E-09	1.689E-09	1.432E-09	
S	47	1.590E-09	1.124E-09	8.514E-10	6.733E-10	5.461E-10	4.559E-10	3.869E-10	
SSW	122	3.742E-09	2.658E-09	2.019E-09	1.602E-09	1.304E-09	1.093E-09	9.307E-10	
SW	127	5.813E-09	4.131E-09	3.141E-09	2.493E-09	2.029E-09	1.698E-09	1.445E-09	
WSW	167	8.576E-09	6.052E-09	4.575E-09	3.614E-09	2.929E-09	2.444E-09	2.074E-09	
W	124	5.706E-09	4.039E-09	3.061E-09	2.422E-09	1.966E-09	1.643E-09	1.395E-09	
WNW	89	5.733E-09	4.047E-09	3.060E-09	2.417E-09	1.958E-09	1.634E-09	1.385E-09	
NW	84	5.247E-09	3.688E-09	2.779E-09	2.189E-09	1.770E-09	1.475E-09	1.249E-09	
NNW	55	6.311E-09	4.473E-09	3.395E-09	2.688E-09	2.181E-09	1.819E-09	1.543E-09	
AVERAGE	2020	7.719E-09	5.475E-09	4.157E-09	3.294E-09	2.676E-09	2.235E-09	1.898E-09	

Table B-6
Depleted χ/Q Factors for Reactor Building Vent

PNPS 3RD QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL

GROUND RELEASE

GROUND-LEVEL AVERAGE CHI/Q AFTER DEPLETION (REGULATORY GUIDE 1.111 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	275	6.278E-05	1.835E-05	5.941E-06	3.216E-06	2.080E-06	1.106E-06	6.997E-07	4.927E-07
NNE	419	7.200E-05	2.095E-05	6.852E-06	3.650E-06	2.335E-06	1.242E-06	7.888E-07	5.571E-07
NE	244	6.685E-05	1.926E-05	5.834E-06	3.085E-06	1.980E-06	1.087E-06	7.053E-07	5.052E-07
ENE	168	5.742E-05	1.653E-05	5.093E-06	2.690E-06	1.721E-06	9.395E-07	6.078E-07	4.347E-07
E	141	3.863E-05	1.112E-05	3.437E-06	1.800E-06	1.145E-06	6.236E-07	4.036E-07	2.887E-07
ESE	65	1.561E-05	4.453E-06	1.456E-06	7.795E-07	5.010E-07	2.664E-07	1.691E-07	1.195E-07
SE	50	1.071E-05	3.026E-06	1.076E-06	5.808E-07	3.769E-07	2.008E-07	1.157E-07	8.180E-08
SSE	48	1.096E-05	3.145E-06	1.094E-06	5.313E-07	3.389E-07	1.773E-07	1.115E-07	7.828E-08
S	24	4.287E-06	1.221E-06	3.527E-07	1.887E-07	1.207E-07	6.300E-08	3.963E-08	2.784E-08
SSW	63	9.766E-06	2.785E-06	8.624E-07	4.570E-07	2.919E-07	1.522E-07	9.551E-08	6.700E-08
SW	65	1.007E-05	2.955E-06	8.958E-07	4.719E-07	3.011E-07	1.569E-07	9.848E-08	6.899E-08
WSW	121	2.694E-05	7.836E-06	2.350E-06	1.244E-06	7.931E-07	4.189E-07	2.655E-07	1.872E-07
W	103	1.807E-05	5.311E-06	1.646E-06	9.612E-07	6.116E-07	3.174E-07	1.807E-07	1.264E-07
WNW	105	2.511E-05	7.231E-06	2.420E-06	1.300E-06	8.362E-07	4.409E-07	3.057E-07	2.149E-07
NW	87	3.193E-05	9.105E-06	3.108E-06	1.690E-06	1.091E-06	5.760E-07	3.630E-07	2.552E-07
NNW	97	2.867E-05	8.335E-06	2.781E-06	1.507E-06	9.716E-07	5.125E-07	3.228E-07	2.267E-07
AVERAGE	2075	3.061E-05	8.851E-06	2.825E-06	1.510E-06	9.685E-07	5.175E-07	3.295E-07	2.333E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	275	3.728E-07	2.945E-07	2.402E-07	2.006E-07	1.708E-07	9.242E-08	5.992E-08	3.245E-08
NNE	419	4.219E-07	3.334E-07	2.720E-07	2.271E-07	1.933E-07	1.045E-07	6.770E-08	3.675E-08
NE	244	3.859E-07	3.074E-07	2.525E-07	2.126E-07	1.822E-07	1.006E-07	6.614E-08	3.667E-08
ENE	168	3.318E-07	2.640E-07	2.167E-07	1.822E-07	1.560E-07	8.575E-08	5.628E-08	3.115E-08
E	141	2.203E-07	1.753E-07	1.438E-07	1.209E-07	1.035E-07	5.684E-08	3.730E-08	2.066E-08
ESE	65	9.088E-08	7.201E-08	5.885E-08	4.919E-08	4.189E-08	2.268E-08	1.476E-08	8.081E-09
SE	50	6.231E-08	4.946E-08	4.453E-08	3.726E-08	3.175E-08	1.725E-08	1.126E-08	6.186E-09
SSE	48	5.913E-08	4.660E-08	3.789E-08	3.149E-08	2.669E-08	1.420E-08	9.120E-09	4.897E-09
S	24	2.109E-08	1.665E-08	1.356E-08	1.128E-08	9.563E-09	5.103E-09	3.286E-09	1.772E-09
SSW	63	5.068E-08	3.999E-08	3.255E-08	2.709E-08	2.297E-08	1.226E-08	7.906E-09	4.281E-09
SW	65	5.196E-08	4.090E-08	3.326E-08	2.770E-08	2.349E-08	1.257E-08	8.070E-09	4.314E-09
WSW	121	1.416E-07	1.119E-07	1.003E-07	8.372E-08	7.120E-08	3.487E-08	2.255E-08	1.220E-08
W	103	9.515E-08	7.481E-08	6.074E-08	5.046E-08	4.275E-08	2.276E-08	1.459E-08	7.797E-09
WNW	105	1.626E-07	1.284E-07	9.509E-08	7.924E-08	6.731E-08	3.615E-08	2.336E-08	1.264E-08
NW	87	1.934E-07	1.527E-07	1.244E-07	1.036E-07	8.797E-08	4.716E-08	3.045E-08	1.645E-08
NNW	97	1.714E-07	1.353E-07	1.101E-07	9.175E-08	7.795E-08	4.190E-08	2.707E-08	1.460E-08
AVERAGE	2075	1.771E-07	1.402E-07	1.148E-07	9.601E-08	8.183E-08	4.418E-08	2.874E-08	1.568E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	275	2.073E-08	1.467E-08	1.112E-08	8.800E-09	7.135E-09	5.950E-09	5.044E-09	
NNE	419	2.352E-08	1.668E-08	1.266E-08	1.004E-08	8.154E-09	6.816E-09	5.791E-09	
NE	244	2.374E-08	1.698E-08	1.298E-08	1.035E-08	8.443E-09	7.074E-09	6.025E-09	
ENE	168	2.015E-08	1.440E-08	1.100E-08	8.763E-09	7.150E-09	5.991E-09	5.103E-09	
E	141	1.337E-08	9.565E-09	7.316E-09	5.832E-09	4.763E-09	3.995E-09	3.406E-09	
ESE	65	5.198E-09	3.698E-09	2.814E-09	2.235E-09	1.819E-09	1.523E-09	1.296E-09	
SE	50	3.988E-09	2.842E-09	2.165E-09	1.720E-09	1.400E-09	1.173E-09	9.980E-10	
SSE	48	3.115E-09	2.199E-09	1.663E-09	1.314E-09	1.066E-09	8.912E-10	7.570E-10	
S	24	1.130E-09	7.989E-10	6.047E-10	4.783E-10	3.881E-10	3.248E-10	2.760E-10	
SSW	63	2.744E-09	1.948E-09	1.479E-09	1.173E-09	9.544E-10	8.006E-10	6.822E-10	
SW	65	2.749E-09	1.944E-09	1.471E-09	1.164E-09	9.453E-10	7.910E-10	6.729E-10	
WSW	121	7.808E-09	5.536E-09	4.201E-09	3.330E-09	2.706E-09	2.264E-09	1.926E-09	
W	103	4.954E-09	3.493E-09	2.639E-09	2.084E-09	1.688E-09	1.410E-09	1.197E-09	
WNW	105	8.081E-09	5.723E-09	4.338E-09	3.434E-09	2.788E-09	2.330E-09	1.979E-09	
NW	87	1.049E-08	7.413E-09	5.610E-09	4.433E-09	3.593E-09	2.999E-09	2.544E-09	
NNW	97	9.301E-09	6.570E-09	4.971E-09	3.927E-09	3.181E-09	2.653E-09	2.248E-09	
AVERAGE	2075	1.007E-08	7.153E-09	5.440E-09	4.317E-09	3.511E-09	2.937E-09	2.496E-09	

Table B-6
Depleted χ/Q Factors for Reactor Building Vent

PNPS 4TH QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL

GROUND RELEASE

GROUND-LEVEL AVERAGE CHI/Q AFTER DEPLETION (REGULATORY GUIDE 1.111 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	254	4.694E-05	1.361E-05	4.441E-06	2.394E-06	1.544E-06	8.221E-07	5.209E-07	3.673E-07
NNE	268	4.578E-05	1.337E-05	4.289E-06	2.312E-06	1.492E-06	7.957E-07	5.045E-07	3.559E-07
NE	270	5.510E-05	1.600E-05	4.983E-06	2.691E-06	1.745E-06	9.431E-07	6.030E-07	4.278E-07
ENE	245	4.733E-05	1.370E-05	4.458E-06	2.402E-06	1.549E-06	8.266E-07	5.247E-07	3.705E-07
E	273	3.123E-05	9.059E-06	2.995E-06	1.599E-06	1.027E-06	5.395E-07	3.398E-07	2.388E-07
ESE	152	1.484E-05	4.360E-06	1.464E-06	7.702E-07	4.892E-07	2.536E-07	1.590E-07	1.113E-07
SE	126	1.474E-05	4.329E-06	1.472E-06	7.802E-07	4.970E-07	2.583E-07	1.620E-07	1.134E-07
SSE	18	2.116E-06	5.919E-07	1.987E-07	1.052E-07	6.747E-08	3.545E-08	2.243E-08	1.585E-08
S	33	2.861E-06	8.532E-07	2.573E-07	1.346E-07	8.565E-08	4.446E-08	2.786E-08	1.947E-08
SSW	61	4.930E-06	1.565E-06	4.826E-07	2.499E-07	1.563E-07	7.923E-08	4.896E-08	3.376E-08
SW	43	7.136E-06	2.090E-06	6.106E-07	3.163E-07	1.993E-07	1.051E-07	6.696E-08	4.742E-08
WSW	65	6.173E-06	1.838E-06	5.532E-07	2.865E-07	1.804E-07	9.266E-08	5.789E-08	4.043E-08
W	54	8.624E-06	2.493E-06	7.164E-07	4.018E-07	2.519E-07	1.330E-07	7.740E-08	5.506E-08
WNW	47	6.466E-06	1.878E-06	6.497E-07	3.436E-07	2.181E-07	1.129E-07	7.781E-08	5.449E-08
NW	57	1.234E-05	3.581E-06	1.228E-06	6.615E-07	4.244E-07	2.222E-07	1.396E-07	9.783E-08
NNW	121	2.917E-05	8.388E-06	2.772E-06	1.504E-06	9.719E-07	5.172E-07	3.274E-07	2.309E-07
AVERAGE	2087	2.099E-05	6.107E-06	1.973E-06	1.060E-06	6.812E-07	3.613E-07	2.288E-07	1.613E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	254	2.783E-07	2.200E-07	1.795E-07	1.499E-07	1.276E-07	6.898E-08	4.474E-08	2.429E-08
NNE	268	2.696E-07	2.131E-07	1.740E-07	1.454E-07	1.239E-07	6.719E-08	4.365E-08	2.373E-08
NE	270	3.253E-07	2.581E-07	2.114E-07	1.772E-07	1.515E-07	8.293E-08	5.419E-08	2.969E-08
ENE	245	2.809E-07	2.222E-07	1.814E-07	1.516E-07	1.291E-07	6.990E-08	4.537E-08	2.465E-08
E	273	1.806E-07	1.426E-07	1.162E-07	9.687E-08	8.230E-08	4.428E-08	2.863E-08	1.548E-08
ESE	152	8.384E-08	6.598E-08	5.363E-08	4.461E-08	3.782E-08	2.020E-08	1.299E-08	6.970E-09
SE	126	8.537E-08	6.715E-08	6.000E-08	4.988E-08	4.227E-08	2.049E-08	1.313E-08	6.999E-09
SSE	18	1.207E-08	9.572E-09	7.829E-09	6.541E-09	5.562E-09	2.997E-09	1.945E-09	1.061E-09
S	33	1.461E-08	1.147E-08	9.313E-09	7.752E-09	6.570E-09	3.508E-09	2.242E-09	1.186E-09
SSW	61	2.493E-08	1.933E-08	1.553E-08	1.282E-08	1.080E-08	5.652E-09	3.545E-09	1.812E-09
SW	43	3.595E-08	2.845E-08	2.324E-08	1.944E-08	1.656E-08	8.975E-09	5.833E-09	3.185E-09
WSW	65	3.038E-08	2.386E-08	2.131E-08	1.772E-08	1.501E-08	7.279E-09	4.679E-09	2.513E-09
W	54	4.191E-08	3.328E-08	2.726E-08	2.286E-08	1.951E-08	1.063E-08	6.947E-09	3.837E-09
WNW	47	4.109E-08	3.235E-08	2.389E-08	1.985E-08	1.681E-08	8.932E-09	5.727E-09	3.064E-09
NW	57	7.383E-08	5.815E-08	4.727E-08	3.930E-08	3.332E-08	1.778E-08	1.143E-08	6.123E-09
NNW	121	1.751E-07	1.385E-07	1.130E-07	9.429E-08	8.023E-08	4.332E-08	2.809E-08	1.525E-08
AVERAGE	2087	1.221E-07	9.650E-08	7.904E-08	6.600E-08	5.617E-08	3.019E-08	1.957E-08	1.061E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	254	1.554E-08	1.101E-08	8.355E-09	6.616E-09	5.370E-09	4.483E-09	3.805E-09	
NNE	268	1.520E-08	1.078E-08	8.183E-09	6.481E-09	5.261E-09	4.391E-09	3.726E-09	
NE	270	1.909E-08	1.357E-08	1.033E-08	8.197E-09	6.663E-09	5.564E-09	4.724E-09	
ENE	245	1.578E-08	1.118E-08	8.489E-09	6.724E-09	5.459E-09	4.559E-09	3.869E-09	
E	273	9.899E-09	7.015E-09	5.320E-09	4.213E-09	3.422E-09	2.861E-09	2.432E-09	
ESE	152	4.447E-09	3.147E-09	2.383E-09	1.886E-09	1.532E-09	1.282E-09	1.090E-09	
SE	126	4.444E-09	3.133E-09	2.366E-09	1.868E-09	1.514E-09	1.265E-09	1.074E-09	
SSE	18	6.830E-10	4.864E-10	3.701E-10	2.942E-10	2.399E-10	2.015E-10	1.719E-10	
S	33	7.525E-10	5.307E-10	4.008E-10	3.166E-10	2.568E-10	2.147E-10	1.826E-10	
SSW	61	1.128E-09	7.836E-10	5.851E-10	4.577E-10	3.681E-10	3.056E-10	2.582E-10	
SW	43	2.051E-09	1.461E-09	1.114E-09	8.856E-10	7.222E-10	6.059E-10	5.166E-10	
WSW	65	1.608E-09	1.141E-09	8.653E-10	6.861E-10	5.583E-10	4.681E-10	3.989E-10	
W	54	2.490E-09	1.785E-09	1.367E-09	1.091E-09	8.935E-10	7.524E-10	6.437E-10	
WNW	47	1.949E-09	1.376E-09	1.040E-09	8.215E-10	6.664E-10	5.575E-10	4.739E-10	
NW	57	3.889E-09	2.741E-09	2.070E-09	1.633E-09	1.322E-09	1.103E-09	9.348E-10	
NNW	121	9.750E-09	6.905E-09	5.236E-09	4.144E-09	3.362E-09	2.806E-09	2.381E-09	
AVERAGE	2087	6.793E-09	4.816E-09	3.655E-09	2.895E-09	2.351E-09	1.964E-09	1.668E-09	

Table B-6
Depleted χ/Q Factors for Reactor Building Vent

PNPS ANNUAL 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL

GROUND RELEASE

GROUND-LEVEL AVERAGE CHI/Q AFTER DEPLETION (REGULATORY GUIDE 1.111 DEPLETION MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	838	3.878E-05	1.131E-05	3.702E-06	1.997E-06	1.288E-06	6.830E-07	4.316E-07	3.037E-07
NNE	1162	4.625E-05	1.349E-05	4.405E-06	2.364E-06	1.520E-06	8.074E-07	5.115E-07	3.606E-07
NE	916	5.067E-05	1.466E-05	4.523E-06	2.419E-06	1.560E-06	8.485E-07	5.457E-07	3.887E-07
ENE	790	4.628E-05	1.339E-05	4.270E-06	2.288E-06	1.473E-06	7.913E-07	5.052E-07	3.581E-07
E	765	3.129E-05	9.073E-06	2.924E-06	1.556E-06	9.977E-07	5.318E-07	3.383E-07	2.392E-07
ESE	506	1.966E-05	5.716E-06	1.888E-06	1.009E-06	6.467E-07	3.406E-07	2.149E-07	1.511E-07
SE	451	1.688E-05	4.912E-06	1.625E-06	8.680E-07	5.567E-07	2.934E-07	1.852E-07	1.303E-07
SSE	264	1.068E-05	3.100E-06	1.021E-06	5.472E-07	3.517E-07	1.859E-07	1.175E-07	8.275E-08
S	188	5.290E-06	1.553E-06	4.698E-07	2.487E-07	1.587E-07	8.305E-08	5.228E-08	3.669E-08
SSW	346	9.012E-06	2.685E-06	8.020E-07	4.188E-07	2.656E-07	1.378E-07	8.634E-08	6.036E-08
SW	311	1.096E-05	3.262E-06	9.656E-07	5.052E-07	3.206E-07	1.676E-07	1.057E-07	7.421E-08
WSW	413	1.779E-05	5.257E-06	1.585E-06	8.384E-07	5.341E-07	2.795E-07	1.759E-07	1.233E-07
W	348	1.402E-05	4.153E-06	1.251E-06	7.229E-07	4.581E-07	2.386E-07	1.364E-07	9.564E-08
WNW	326	1.587E-05	4.601E-06	1.552E-06	8.336E-07	5.351E-07	2.810E-07	1.945E-07	1.365E-07
NW	338	2.055E-05	5.956E-06	2.024E-06	1.089E-06	6.987E-07	3.674E-07	2.314E-07	1.624E-07
NNW	340	2.264E-05	6.536E-06	2.144E-06	1.162E-06	7.513E-07	3.998E-07	2.531E-07	1.784E-07
AVERAGE	8302	2.354E-05	6.853E-06	2.197E-06	1.179E-06	7.572E-07	4.023E-07	2.553E-07	1.801E-07
DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	838	2.297E-07	1.814E-07	1.478E-07	1.233E-07	1.049E-07	5.663E-08	3.666E-08	1.983E-08
NNE	1162	2.729E-07	2.155E-07	1.757E-07	1.467E-07	1.249E-07	6.745E-08	4.369E-08	2.367E-08
NE	916	2.961E-07	2.353E-07	1.929E-07	1.620E-07	1.386E-07	7.608E-08	4.984E-08	2.744E-08
ENE	790	2.721E-07	2.156E-07	1.763E-07	1.476E-07	1.260E-07	6.858E-08	4.469E-08	2.444E-08
E	765	1.814E-07	1.436E-07	1.173E-07	9.810E-08	8.359E-08	4.533E-08	2.947E-08	1.607E-08
ESE	506	1.143E-07	9.025E-08	7.355E-08	6.133E-08	5.213E-08	2.806E-08	1.815E-08	9.819E-09
SE	451	9.854E-08	7.778E-08	6.972E-08	5.814E-08	4.942E-08	2.418E-08	1.563E-08	8.439E-09
SSE	264	6.264E-08	4.948E-08	4.034E-08	3.366E-08	2.863E-08	1.544E-08	9.989E-09	5.406E-09
S	188	2.767E-08	2.180E-08	1.773E-08	1.477E-08	1.254E-08	6.723E-09	4.327E-09	2.321E-09
SSW	346	4.534E-08	3.562E-08	2.893E-08	2.408E-08	2.042E-08	1.092E-08	7.016E-09	3.757E-09
SW	311	5.589E-08	4.402E-08	3.582E-08	2.987E-08	2.538E-08	1.365E-08	8.796E-09	4.722E-09
WSW	413	9.290E-08	7.312E-08	6.540E-08	5.445E-08	4.622E-08	2.252E-08	1.449E-08	7.776E-09
W	348	7.202E-08	5.667E-08	4.606E-08	3.834E-08	3.254E-08	1.742E-08	1.121E-08	6.026E-09
WNW	326	1.031E-07	8.132E-08	6.017E-08	5.009E-08	4.252E-08	2.278E-08	1.468E-08	7.902E-09
NW	338	1.227E-07	9.672E-08	7.868E-08	6.547E-08	5.556E-08	2.972E-08	1.914E-08	1.029E-08
NNW	340	1.353E-07	1.070E-07	8.728E-08	7.287E-08	6.202E-08	3.353E-08	2.175E-08	1.181E-08
AVERAGE	8302	1.364E-07	1.078E-07	8.836E-08	7.380E-08	6.283E-08	3.369E-08	2.185E-08	1.186E-08
DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	838	1.267E-08	8.966E-09	6.795E-09	5.375E-09	4.359E-09	3.637E-09	3.085E-09	
NNE	1162	1.513E-08	1.071E-08	8.126E-09	6.433E-09	5.220E-09	4.358E-09	3.699E-09	
NE	916	1.770E-08	1.262E-08	9.624E-09	7.651E-09	6.231E-09	5.212E-09	4.431E-09	
ENE	790	1.570E-08	1.116E-08	8.493E-09	6.740E-09	5.481E-09	4.582E-09	3.893E-09	
E	765	1.032E-08	7.331E-09	5.575E-09	4.424E-09	3.598E-09	3.010E-09	2.560E-09	
ESE	506	6.280E-09	4.449E-09	3.374E-09	2.672E-09	2.170E-09	1.814E-09	1.541E-09	
SE	451	5.392E-09	3.817E-09	2.893E-09	2.290E-09	1.859E-09	1.553E-09	1.319E-09	
SSE	264	3.456E-09	2.448E-09	1.857E-09	1.470E-09	1.193E-09	9.972E-10	8.468E-10	
S	188	1.480E-09	1.046E-09	7.920E-10	6.265E-10	5.084E-10	4.250E-10	3.611E-10	
SSW	346	2.399E-09	1.699E-09	1.287E-09	1.020E-09	8.286E-10	6.937E-10	5.904E-10	
SW	311	3.015E-09	2.135E-09	1.618E-09	1.281E-09	1.041E-09	8.706E-10	7.404E-10	
WSW	413	4.956E-09	3.503E-09	2.652E-09	2.098E-09	1.702E-09	1.422E-09	1.208E-09	
W	348	3.846E-09	2.722E-09	2.062E-09	1.632E-09	1.326E-09	1.109E-09	9.427E-10	
WNW	326	5.036E-09	3.558E-09	2.693E-09	2.128E-09	1.726E-09	1.441E-09	1.223E-09	
NW	338	6.552E-09	4.625E-09	3.498E-09	2.763E-09	2.239E-09	1.869E-09	1.585E-09	
NNW	340	7.550E-09	5.348E-09	4.056E-09	3.210E-09	2.604E-09	2.174E-09	1.844E-09	
AVERAGE	8302	7.592E-09	5.384E-09	4.087E-09	3.238E-09	2.630E-09	2.198E-09	1.867E-09	

Table B-7
Gamma χ /Q Factors for Reactor Building Vent

PNPS 1ST QUARTER 1999 GENERAL X/QS: GROUND-LEVEL

GROUND RELEASE

AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	146	4.367E-06	1.846E-06	8.026E-07	4.908E-07	3.460E-07	2.087E-07	1.452E-07	1.096E-07
NNE	168	5.388E-06	2.285E-06	1.010E-06	6.229E-07	4.400E-07	2.659E-07	1.853E-07	1.400E-07
NE	204	7.545E-06	3.233E-06	1.411E-06	8.745E-07	6.205E-07	3.782E-07	2.648E-07	2.009E-07
ENE	217	8.429E-06	3.580E-06	1.556E-06	9.570E-07	6.760E-07	4.088E-07	2.848E-07	2.154E-07
E	240	7.527E-06	3.159E-06	1.344E-06	8.085E-07	5.663E-07	3.392E-07	2.351E-07	1.770E-07
ESE	201	6.257E-06	2.590E-06	1.069E-06	6.311E-07	4.410E-07	2.632E-07	1.820E-07	1.370E-07
SE	191	5.863E-06	2.442E-06	1.027E-06	6.138E-07	4.307E-07	2.581E-07	1.789E-07	1.347E-07
SSE	104	3.081E-06	1.273E-06	5.229E-07	3.095E-07	2.173E-07	1.310E-07	9.122E-08	6.902E-08
S	84	2.268E-06	9.359E-07	3.491E-07	2.049E-07	1.429E-07	8.515E-08	5.890E-08	4.433E-08
SSW	100	2.313E-06	9.356E-07	3.265E-07	1.831E-07	1.265E-07	7.454E-08	5.117E-08	3.829E-08
SW	76	1.968E-06	8.318E-07	3.174E-07	1.870E-07	1.290E-07	7.530E-08	5.129E-08	3.809E-08
WSW	60	1.985E-06	8.300E-07	3.167E-07	1.888E-07	1.322E-07	7.879E-08	5.437E-08	4.073E-08
W	67	2.456E-06	1.030E-06	3.933E-07	2.555E-07	1.771E-07	1.044E-07	6.505E-08	4.857E-08
WNW	85	3.247E-06	1.367E-06	5.938E-07	3.623E-07	2.550E-07	1.534E-07	1.173E-07	8.856E-08
NW	110	4.297E-06	1.828E-06	8.023E-07	4.926E-07	3.472E-07	2.102E-07	1.467E-07	1.109E-07
NNW	67	2.984E-06	1.239E-06	5.145E-07	3.101E-07	2.204E-07	1.351E-07	9.503E-08	7.233E-08
AVERAGE	2120	4.373E-06	1.838E-06	7.723E-07	4.683E-07	3.293E-07	1.981E-07	1.379E-07	1.041E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	146	8.720E-08	7.182E-08	6.068E-08	5.220E-08	4.564E-08	2.745E-08	1.916E-08	1.151E-08
NNE	168	1.115E-07	9.194E-08	7.772E-08	6.687E-08	5.847E-08	3.519E-08	2.457E-08	1.479E-08
NE	204	1.605E-07	1.327E-07	1.126E-07	9.721E-08	8.530E-08	5.200E-08	3.665E-08	2.233E-08
ENE	217	1.718E-07	1.418E-07	1.201E-07	1.035E-07	9.061E-08	5.486E-08	3.848E-08	2.329E-08
E	240	1.406E-07	1.156E-07	9.754E-08	8.381E-08	7.320E-08	4.389E-08	3.054E-08	1.826E-08
ESE	201	1.087E-07	8.931E-08	7.532E-08	6.470E-08	5.649E-08	3.385E-08	2.352E-08	1.403E-08
SE	191	1.069E-07	8.782E-08	8.145E-08	6.995E-08	6.107E-08	3.324E-08	2.307E-08	1.373E-08
SSE	104	5.503E-08	4.540E-08	3.842E-08	3.311E-08	2.900E-08	1.755E-08	1.230E-08	7.440E-09
S	84	3.517E-08	2.889E-08	2.436E-08	2.092E-08	1.827E-08	1.094E-08	7.595E-09	4.524E-09
SSW	100	3.018E-08	2.467E-08	2.072E-08	1.775E-08	1.547E-08	9.200E-09	6.340E-09	3.722E-09
SW	76	2.978E-08	2.417E-08	2.018E-08	1.718E-08	1.489E-08	8.691E-09	5.882E-09	3.338E-09
WSW	60	3.216E-08	2.632E-08	2.433E-08	2.084E-08	1.815E-08	9.798E-09	6.751E-09	3.964E-09
W	67	3.822E-08	3.119E-08	2.615E-08	2.235E-08	1.943E-08	1.146E-08	7.849E-09	4.570E-09
WNW	85	7.056E-08	5.816E-08	4.469E-08	3.844E-08	3.361E-08	2.022E-08	1.411E-08	8.482E-09
NW	110	8.837E-08	7.286E-08	6.161E-08	5.305E-08	4.642E-08	2.800E-08	1.958E-08	1.181E-08
NNW	67	5.798E-08	4.806E-08	4.083E-08	3.532E-08	3.103E-08	1.900E-08	1.344E-08	8.243E-09
AVERAGE	2120	8.279E-08	6.817E-08	5.792E-08	4.982E-08	4.357E-08	2.596E-08	1.811E-08	1.088E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)						
		20.00	25.00	30.00	35.00	40.00	45.00	50.00
N	146	8.041E-09	6.108E-09	4.903E-09	4.076E-09	3.459E-09	3.003E-09	2.642E-09
NNE	168	1.034E-08	7.854E-09	6.305E-09	5.241E-09	4.448E-09	3.862E-09	3.399E-09
NE	204	1.574E-08	1.203E-08	9.707E-09	8.102E-09	6.897E-09	5.998E-09	5.286E-09
ENE	217	1.635E-08	1.245E-08	1.002E-08	8.349E-09	7.096E-09	6.165E-09	5.428E-09
E	240	1.273E-08	9.656E-09	7.745E-09	6.436E-09	5.459E-09	4.738E-09	4.168E-09
ESE	201	9.771E-09	7.405E-09	5.935E-09	4.929E-09	4.179E-09	3.625E-09	3.188E-09
SE	191	9.543E-09	7.221E-09	5.779E-09	4.792E-09	4.058E-09	3.517E-09	3.090E-09
SSE	104	5.224E-09	3.984E-09	3.208E-09	2.674E-09	2.275E-09	1.979E-09	1.744E-09
S	84	3.149E-09	2.385E-09	1.911E-09	1.587E-09	1.345E-09	1.167E-09	1.026E-09
SSW	100	2.574E-09	1.941E-09	1.551E-09	1.285E-09	1.087E-09	9.415E-10	8.268E-10
SW	76	2.258E-09	1.673E-09	1.318E-09	1.078E-09	9.022E-10	7.738E-10	6.734E-10
WSW	60	2.735E-09	2.058E-09	1.640E-09	1.356E-09	1.145E-09	9.893E-10	8.670E-10
W	67	3.139E-09	2.355E-09	1.873E-09	1.547E-09	1.305E-09	1.127E-09	9.877E-10
WNW	85	5.926E-09	4.499E-09	3.609E-09	2.999E-09	2.543E-09	2.208E-09	1.942E-09
NW	110	8.270E-09	6.295E-09	5.061E-09	4.214E-09	3.581E-09	3.113E-09	2.742E-09
NNW	67	5.834E-09	4.474E-09	3.617E-09	3.025E-09	2.580E-09	2.248E-09	1.985E-09
AVERAGE	2120	7.601E-09	5.775E-09	4.637E-09	3.856E-09	3.272E-09	2.841E-09	2.500E-09

Table B-7
Gamma χ /Q Factors for Reactor Building Vent

PNPS 2ND QUARTER 1999 GENERAL X/QS: GROUND-LEVEL
GROUND RELEASE
AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	163	6.817E-06	2.862E-06	1.204E-06	7.227E-07	5.068E-07	3.031E-07	2.095E-07	1.575E-07
NNE	307	1.027E-05	4.360E-06	1.855E-06	1.128E-06	7.954E-07	4.804E-07	3.343E-07	2.523E-07
NE	198	7.921E-06	3.401E-06	1.457E-06	8.947E-07	6.353E-07	3.924E-07	2.778E-07	2.124E-07
ENE	160	8.727E-06	3.731E-06	1.606E-06	9.843E-07	6.960E-07	4.240E-07	2.972E-07	2.257E-07
E	111	5.361E-06	2.251E-06	9.415E-07	5.723E-07	4.070E-07	2.488E-07	1.744E-07	1.324E-07
ESE	88	5.601E-06	2.367E-06	1.013E-06	6.188E-07	4.379E-07	2.655E-07	1.851E-07	1.400E-07
SE	84	4.278E-06	1.803E-06	8.354E-07	5.049E-07	3.558E-07	2.155E-07	1.367E-07	1.036E-07
SSE	94	4.826E-06	2.035E-06	8.554E-07	4.701E-07	3.315E-07	2.000E-07	1.390E-07	1.049E-07
S	47	1.803E-06	7.350E-07	2.424E-07	1.410E-07	9.911E-08	5.944E-08	4.113E-08	3.086E-08
SSW	122	4.870E-06	1.936E-06	6.567E-07	3.650E-07	2.536E-07	1.498E-07	1.026E-07	7.639E-08
SW	127	6.070E-06	2.458E-06	8.634E-07	4.918E-07	3.423E-07	2.036E-07	1.406E-07	1.057E-07
WSW	167	8.916E-06	3.704E-06	1.383E-06	8.152E-07	5.691E-07	3.382E-07	2.328E-07	1.742E-07
W	124	5.879E-06	2.443E-06	9.037E-07	5.823E-07	4.047E-07	2.394E-07	1.495E-07	1.118E-07
WNW	89	4.783E-06	2.000E-06	8.405E-07	5.043E-07	3.542E-07	2.123E-07	1.617E-07	1.217E-07
NW	84	4.699E-06	1.998E-06	8.650E-07	5.236E-07	3.655E-07	2.169E-07	1.491E-07	1.116E-07
NNW	55	4.066E-06	1.741E-06	7.595E-07	4.698E-07	3.335E-07	2.031E-07	1.420E-07	1.076E-07
AVERAGE	2020	5.930E-06	2.489E-06	1.018E-06	6.117E-07	4.305E-07	2.595E-07	1.796E-07	1.355E-07

DOWNWIND SECTOR	NO. OBS	3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	163	1.249E-07	1.026E-07	8.648E-08	7.425E-08	6.481E-08	3.878E-08	2.696E-08	1.611E-08
NNE	307	2.006E-07	1.652E-07	1.395E-07	1.201E-07	1.051E-07	6.340E-08	4.430E-08	2.662E-08
NE	198	1.707E-07	1.419E-07	1.209E-07	1.048E-07	9.234E-08	5.701E-08	4.057E-08	2.513E-08
ENE	160	1.805E-07	1.493E-07	1.267E-07	1.094E-07	9.605E-08	5.857E-08	4.131E-08	2.524E-08
E	111	1.059E-07	8.764E-08	7.437E-08	6.425E-08	5.639E-08	3.442E-08	2.428E-08	1.483E-08
ESE	88	1.117E-07	9.224E-08	7.809E-08	6.728E-08	5.892E-08	3.565E-08	2.501E-08	1.515E-08
SE	84	8.277E-08	6.840E-08	6.377E-08	5.502E-08	4.824E-08	2.931E-08	2.062E-08	1.256E-08
SSE	94	8.350E-08	6.879E-08	5.815E-08	5.006E-08	4.381E-08	2.646E-08	1.851E-08	1.115E-08
S	47	2.440E-08	1.999E-08	1.682E-08	1.443E-08	1.258E-08	7.510E-09	5.199E-09	3.079E-09
SSW	122	6.002E-08	4.892E-08	4.099E-08	3.502E-08	3.044E-08	1.796E-08	1.233E-08	7.215E-09
SW	127	8.369E-08	6.868E-08	5.787E-08	4.970E-08	4.340E-08	2.603E-08	1.808E-08	1.077E-08
WSW	167	1.375E-07	1.125E-07	1.039E-07	8.899E-08	7.749E-08	4.181E-08	2.883E-08	1.698E-08
W	124	8.827E-08	7.223E-08	6.071E-08	5.201E-08	4.532E-08	2.695E-08	1.862E-08	1.102E-08
WNW	89	9.657E-08	7.935E-08	6.083E-08	5.223E-08	4.559E-08	2.729E-08	1.896E-08	1.131E-08
NW	84	8.810E-08	7.207E-08	6.054E-08	5.180E-08	4.507E-08	2.667E-08	1.837E-08	1.081E-08
NNW	55	8.590E-08	7.097E-08	6.013E-08	5.186E-08	4.545E-08	2.758E-08	1.939E-08	1.178E-08
AVERAGE	2020	1.078E-07	8.879E-08	7.561E-08	6.508E-08	5.694E-08	3.409E-08	2.383E-08	1.436E-08

DOWNWIND SECTOR	NO. OBS	20.00	25.00	30.00	35.00	40.00	45.00	50.00
N	163	1.122E-08	8.507E-09	6.822E-09	5.667E-09	4.805E-09	4.168E-09	3.664E-09
NNE	307	1.862E-08	1.415E-08	1.137E-08	9.456E-09	8.025E-09	6.962E-09	6.122E-09
NE	198	1.790E-08	1.379E-08	1.120E-08	9.395E-09	8.037E-09	7.016E-09	6.207E-09
ENE	160	1.782E-08	1.364E-08	1.102E-08	9.204E-09	7.844E-09	6.828E-09	6.024E-09
E	111	1.046E-08	8.004E-09	6.461E-09	5.395E-09	4.593E-09	3.995E-09	3.521E-09
ESE	88	1.064E-08	8.110E-09	6.529E-09	5.439E-09	4.624E-09	4.018E-09	3.538E-09
SE	84	8.848E-09	6.763E-09	5.457E-09	4.556E-09	3.880E-09	3.376E-09	2.977E-09
SSE	94	7.807E-09	5.939E-09	4.774E-09	3.973E-09	3.373E-09	2.927E-09	2.574E-09
S	47	2.137E-09	1.615E-09	1.292E-09	1.071E-09	9.068E-10	7.852E-10	6.894E-10
SSW	122	4.978E-09	3.749E-09	2.996E-09	2.482E-09	2.100E-09	1.819E-09	1.597E-09
SW	127	7.504E-09	5.692E-09	4.565E-09	3.794E-09	3.218E-09	2.792E-09	2.456E-09
WSW	167	1.174E-08	8.856E-09	7.073E-09	5.856E-09	4.952E-09	4.286E-09	3.760E-09
W	124	7.640E-09	5.774E-09	4.622E-09	3.834E-09	3.248E-09	2.814E-09	2.472E-09
WNW	89	7.873E-09	5.963E-09	4.775E-09	3.962E-09	3.356E-09	2.909E-09	2.556E-09
NW	84	7.462E-09	5.618E-09	4.482E-09	3.707E-09	3.131E-09	2.709E-09	2.376E-09
NNW	55	8.288E-09	6.325E-09	5.097E-09	4.250E-09	3.615E-09	3.142E-09	2.768E-09
AVERAGE	2020	1.006E-08	7.656E-09	6.158E-09	5.128E-09	4.357E-09	3.784E-09	3.331E-09

Table B-7
Gamma χ /Q Factors for Reactor Building Vent

PNPS 3RD QUARTER 1999 GENERAL X/QS: GROUND-LEVEL
GROUND RELEASE

AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	275	1.445E-05	6.166E-06	2.657E-06	1.627E-06	1.150E-06	6.953E-07	4.842E-07	3.658E-07
NNE	419	1.656E-05	7.044E-06	3.037E-06	1.849E-06	1.301E-06	7.851E-07	5.466E-07	4.129E-07
NE	244	1.240E-05	5.324E-06	2.277E-06	1.398E-06	9.929E-07	6.134E-07	4.343E-07	3.321E-07
ENE	168	1.078E-05	4.646E-06	2.015E-06	1.240E-06	8.777E-07	5.390E-07	3.803E-07	2.903E-07
E	141	7.722E-06	3.286E-06	1.395E-06	8.456E-07	5.956E-07	3.638E-07	2.559E-07	1.950E-07
ESE	65	3.888E-06	1.611E-06	6.679E-07	3.986E-07	2.803E-07	1.690E-07	1.176E-07	8.894E-08
SE	50	2.897E-06	1.172E-06	5.111E-07	2.989E-07	2.110E-07	1.277E-07	8.089E-08	6.123E-08
SSE	48	2.926E-06	1.217E-06	5.184E-07	2.834E-07	1.990E-07	1.192E-07	8.259E-08	6.214E-08
S	24	1.209E-06	4.961E-07	1.717E-07	1.017E-07	7.113E-08	4.244E-08	2.936E-08	2.212E-08
SSW	63	3.130E-06	1.250E-06	4.448E-07	2.547E-07	1.782E-07	1.062E-07	7.319E-08	5.486E-08
SW	65	3.402E-06	1.355E-06	4.717E-07	2.666E-07	1.864E-07	1.109E-07	7.640E-08	5.717E-08
WSW	121	7.082E-06	2.935E-06	1.102E-06	6.527E-07	4.573E-07	2.743E-07	1.902E-07	1.433E-07
W	103	5.243E-06	2.174E-06	8.196E-07	5.324E-07	3.705E-07	2.192E-07	1.370E-07	1.026E-07
WNW	105	6.577E-06	2.729E-06	1.141E-06	6.829E-07	4.808E-07	2.893E-07	2.208E-07	1.663E-07
NW	87	7.643E-06	3.228E-06	1.411E-06	8.668E-07	6.129E-07	3.706E-07	2.581E-07	1.950E-07
NNW	97	6.822E-06	2.911E-06	1.269E-06	7.785E-07	5.481E-07	3.297E-07	2.289E-07	1.726E-07
AVERAGE	2075	7.046E-06	2.972E-06	1.244E-06	7.548E-07	5.320E-07	3.222E-07	2.248E-07	1.702E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	275	2.913E-07	2.402E-07	2.031E-07	1.749E-07	1.531E-07	9.256E-08	6.481E-08	3.911E-08
NNE	419	3.287E-07	2.708E-07	2.289E-07	1.970E-07	1.724E-07	1.039E-07	7.265E-08	4.380E-08
NE	244	2.669E-07	2.217E-07	1.889E-07	1.638E-07	1.443E-07	8.909E-08	6.338E-08	3.922E-08
ENE	168	2.331E-07	1.935E-07	1.646E-07	1.426E-07	1.255E-07	7.719E-08	5.479E-08	3.382E-08
E	141	1.563E-07	1.296E-07	1.102E-07	9.534E-08	8.381E-08	5.138E-08	3.639E-08	2.240E-08
ESE	65	7.101E-08	5.863E-08	4.964E-08	4.277E-08	3.745E-08	2.263E-08	1.588E-08	9.654E-09
SE	50	4.895E-08	4.046E-08	3.772E-08	3.252E-08	2.849E-08	1.726E-08	1.214E-08	7.404E-09
SSE	48	4.935E-08	4.055E-08	3.418E-08	2.931E-08	2.556E-08	1.521E-08	1.055E-08	6.287E-09
S	24	1.760E-08	1.449E-08	1.223E-08	1.050E-08	9.163E-09	5.472E-09	3.804E-09	2.279E-09
SSW	63	4.345E-08	3.563E-08	2.998E-08	2.567E-08	2.236E-08	1.325E-08	9.167E-09	5.455E-09
SW	65	4.510E-08	3.688E-08	3.096E-08	2.649E-08	2.305E-08	1.364E-08	9.381E-09	5.504E-09
WSW	121	1.138E-07	9.361E-08	8.688E-08	7.465E-08	6.520E-08	3.554E-08	2.473E-08	1.481E-08
W	103	8.114E-08	6.646E-08	5.588E-08	4.784E-08	4.166E-08	2.470E-08	1.704E-08	1.006E-08
WNW	105	1.122E-07	1.088E-07	8.349E-08	7.173E-08	6.265E-08	3.754E-08	2.615E-08	1.570E-08
NW	87	1.556E-07	1.284E-07	1.086E-07	9.340E-08	8.167E-08	4.912E-08	3.434E-08	2.073E-08
NNW	97	1.374E-07	1.132E-07	9.564E-08	8.226E-08	7.191E-08	4.325E-08	3.020E-08	1.816E-08
AVERAGE	2075	1.358E-07	1.121E-07	9.505E-08	8.193E-08	7.176E-08	4.323E-08	3.034E-08	1.840E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	275	2.741E-08	2.087E-08	1.678E-08	1.397E-08	1.187E-08	1.030E-08	9.064E-09	
NNE	419	3.068E-08	2.335E-08	1.878E-08	1.564E-08	1.329E-08	1.155E-08	1.017E-08	
NE	244	2.792E-08	2.150E-08	1.745E-08	1.464E-08	1.252E-08	1.092E-08	9.662E-09	
ENE	168	2.403E-08	1.849E-08	1.499E-08	1.257E-08	1.074E-08	9.373E-09	8.289E-09	
E	141	1.590E-08	1.222E-08	9.905E-09	8.302E-09	7.096E-09	6.193E-09	5.478E-09	
ESE	65	6.791E-09	5.185E-09	4.180E-09	3.489E-09	2.970E-09	2.586E-09	2.281E-09	
SE	50	5.219E-09	3.990E-09	3.220E-09	2.689E-09	2.291E-09	1.995E-09	1.761E-09	
SSE	48	4.370E-09	3.306E-09	2.646E-09	2.195E-09	1.859E-09	1.613E-09	1.419E-09	
S	24	1.588E-09	1.204E-09	9.643E-10	8.006E-10	6.788E-10	5.894E-10	5.186E-10	
SSW	63	3.790E-09	2.869E-09	2.298E-09	1.909E-09	1.619E-09	1.406E-09	1.238E-09	
SW	65	3.798E-09	2.859E-09	2.280E-09	1.885E-09	1.593E-09	1.379E-09	1.210E-09	
WSW	121	1.033E-08	7.843E-09	6.293E-09	5.232E-09	4.440E-09	3.856E-09	3.393E-09	
W	103	6.963E-09	5.252E-09	4.194E-09	3.472E-09	2.936E-09	2.543E-09	2.232E-09	
WNW	105	1.097E-08	8.328E-09	6.686E-09	5.560E-09	4.720E-09	4.099E-09	3.608E-09	
NW	87	1.451E-08	1.103E-08	8.860E-09	7.369E-09	6.255E-09	5.434E-09	4.783E-09	
NNW	97	1.270E-08	9.645E-09	7.743E-09	6.437E-09	5.462E-09	4.740E-09	4.169E-09	
AVERAGE	2075	1.293E-08	9.871E-09	7.955E-09	6.635E-09	5.646E-09	4.911E-09	4.330E-09	

Table B-7
Gamma χ /Q Factors for Reactor Building Vent

PNPS 4TH QUARTER 1999 GENERAL X/QS: GROUND-LEVEL
GROUND RELEASE

AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	254	1.075E-05	4.570E-06	1.972E-06	1.207E-06	8.527E-07	5.166E-07	3.601E-07	2.722E-07
NNE	268	1.039E-05	4.434E-06	1.903E-06	1.163E-06	8.205E-07	4.964E-07	3.458E-07	2.613E-07
NE	270	1.132E-05	4.859E-06	2.090E-06	1.287E-06	9.135E-07	5.587E-07	3.923E-07	2.984E-07
ENE	245	1.074E-05	4.561E-06	1.963E-06	1.201E-06	8.495E-07	5.157E-07	3.601E-07	2.725E-07
E	273	8.993E-06	3.671E-06	1.475E-06	8.618E-07	6.037E-07	3.608E-07	2.495E-07	1.876E-07
ESE	152	4.700E-06	1.910E-06	7.577E-07	4.356E-07	3.020E-07	1.780E-07	1.220E-07	9.129E-08
SE	126	4.493E-06	1.837E-06	7.433E-07	4.334E-07	3.023E-07	1.794E-07	1.235E-07	9.260E-08
SSE	18	7.154E-07	2.786E-07	1.038E-07	5.780E-08	4.047E-08	2.422E-08	1.680E-08	1.267E-08
S	33	1.049E-06	4.140E-07	1.403E-07	7.795E-08	5.448E-08	3.237E-08	2.227E-08	1.661E-08
SSW	61	1.673E-06	7.002E-07	2.602E-07	1.510E-07	1.039E-07	6.030E-08	4.084E-08	3.013E-08
SW	43	1.952E-06	8.034E-07	2.927E-07	1.691E-07	1.167E-07	6.896E-08	4.754E-08	3.580E-08
WSW	65	2.150E-06	8.655E-07	3.025E-07	1.696E-07	1.164E-07	6.766E-08	4.598E-08	3.420E-08
W	54	2.642E-06	1.053E-06	3.604E-07	2.195E-07	1.506E-07	8.858E-08	5.539E-08	4.172E-08
WNW	47	1.974E-06	8.072E-07	3.294E-07	1.922E-07	1.335E-07	7.883E-08	5.959E-08	4.467E-08
NW	57	3.160E-06	1.333E-06	5.763E-07	3.503E-07	2.462E-07	1.475E-07	1.022E-07	7.688E-08
NNW	121	6.505E-06	2.778E-06	1.218E-06	7.525E-07	5.327E-07	3.233E-07	2.257E-07	1.708E-07
AVERAGE	2087	5.201E-06	2.180E-06	9.055E-07	5.455E-07	3.837E-07	2.311E-07	1.606E-07	1.212E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	254	2.169E-07	1.789E-07	1.513E-07	1.303E-07	1.141E-07	6.891E-08	4.827E-08	2.918E-08
NNE	268	2.082E-07	1.717E-07	1.453E-07	1.252E-07	1.096E-07	6.637E-08	4.653E-08	2.816E-08
NE	270	2.389E-07	1.979E-07	1.681E-07	1.453E-07	1.277E-07	7.820E-08	5.528E-08	3.385E-08
ENE	245	2.174E-07	1.794E-07	1.519E-07	1.309E-07	1.146E-07	6.936E-08	4.863E-08	2.944E-08
E	273	1.489E-07	1.224E-07	1.032E-07	8.859E-08	7.733E-08	4.626E-08	3.216E-08	1.923E-08
ESE	152	7.209E-08	5.899E-08	4.956E-08	4.242E-08	3.692E-08	2.186E-08	1.506E-08	8.887E-09
SE	126	7.320E-08	5.995E-08	5.544E-08	4.746E-08	4.132E-08	2.227E-08	1.535E-08	9.044E-09
SSE	18	1.010E-08	8.321E-09	7.029E-09	6.040E-09	5.275E-09	3.160E-09	2.202E-09	1.324E-09
S	33	1.305E-08	1.063E-08	8.899E-09	7.597E-09	6.597E-09	3.880E-09	2.650E-09	1.532E-09
SSW	61	2.341E-08	1.890E-08	1.571E-08	1.333E-08	1.152E-08	6.645E-09	4.456E-09	2.493E-09
SW	43	2.843E-08	2.338E-08	1.973E-08	1.696E-08	1.482E-08	8.899E-09	6.202E-09	3.724E-09
WSW	65	2.688E-08	2.191E-08	2.018E-08	1.722E-08	1.496E-08	7.986E-09	5.469E-09	3.196E-09
W	54	3.315E-08	2.727E-08	2.302E-08	1.979E-08	1.730E-08	1.039E-08	7.255E-09	4.376E-09
WNW	47	3.537E-08	2.900E-08	2.217E-08	1.899E-08	1.653E-08	9.793E-09	6.758E-09	3.996E-09
NW	57	6.107E-08	5.020E-08	4.233E-08	3.634E-08	3.170E-08	1.894E-08	1.315E-08	7.846E-09
NNW	121	1.364E-07	1.127E-07	9.539E-08	8.220E-08	7.198E-08	4.354E-08	3.054E-08	1.852E-08
AVERAGE	2087	9.647E-08	7.947E-08	6.745E-08	5.804E-08	5.076E-08	3.040E-08	2.125E-08	1.280E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	254	2.046E-08	1.559E-08	1.254E-08	1.045E-08	8.880E-09	7.715E-09	6.794E-09	
NNE	268	1.977E-08	1.507E-08	1.214E-08	1.012E-08	8.600E-09	7.472E-09	6.580E-09	
NE	270	2.393E-08	1.833E-08	1.481E-08	1.238E-08	1.055E-08	9.180E-09	8.096E-09	
ENE	245	2.067E-08	1.575E-08	1.268E-08	1.056E-08	8.981E-09	7.805E-09	6.874E-09	
E	273	1.340E-08	1.016E-08	8.151E-09	6.772E-09	5.744E-09	4.986E-09	4.385E-09	
ESE	152	6.148E-09	4.638E-09	3.706E-09	3.070E-09	2.598E-09	2.251E-09	1.977E-09	
SE	126	6.249E-09	4.709E-09	3.755E-09	3.106E-09	2.624E-09	2.271E-09	1.993E-09	
SSE	18	9.259E-10	7.038E-10	5.650E-10	4.700E-10	3.993E-10	3.473E-10	3.061E-10	
S	33	1.049E-09	7.849E-10	6.228E-10	5.129E-10	4.318E-10	3.726E-10	3.260E-10	
SSW	61	1.673E-09	1.233E-09	9.675E-10	7.892E-10	6.586E-10	5.637E-10	4.896E-10	
SW	43	2.606E-09	1.983E-09	1.595E-09	1.329E-09	1.130E-09	9.827E-10	8.663E-10	
WSW	65	2.201E-09	1.655E-09	1.321E-09	1.093E-09	9.244E-10	8.008E-10	7.033E-10	
W	54	3.072E-09	2.344E-09	1.890E-09	1.578E-09	1.345E-09	1.173E-09	1.036E-09	
WNW	47	2.766E-09	2.087E-09	1.666E-09	1.379E-09	1.166E-09	1.011E-09	8.880E-10	
NW	57	5.457E-09	4.130E-09	3.306E-09	2.742E-09	2.322E-09	2.013E-09	1.769E-09	
NNW	121	1.300E-08	9.913E-09	7.979E-09	6.648E-09	5.651E-09	4.912E-09	4.326E-09	
AVERAGE	2087	8.961E-09	6.818E-09	5.481E-09	4.562E-09	3.875E-09	3.366E-09	2.963E-09	

Table B-7
Gamma γ/Q Factors for Reactor Building Vent

PNPS ANNUAL 1999 GENERAL X/QS: GROUND-LEVEL
GROUND RELEASE
AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1968 FINITE CLOUD SECTOR AVERAGE MODEL) -- (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	838	8.526E-06	3.602E-06	1.546E-06	9.428E-07	6.655E-07	4.026E-07	2.807E-07	2.123E-07
NNE	1162	9.978E-06	4.223E-06	1.817E-06	1.108E-06	7.819E-07	4.733E-07	3.302E-07	2.499E-07
NE	916	9.277E-06	3.959E-06	1.698E-06	1.045E-06	7.418E-07	4.561E-07	3.218E-07	2.456E-07
ENE	790	9.159E-06	3.891E-06	1.679E-06	1.030E-06	7.284E-07	4.441E-07	3.116E-07	2.368E-07
E	765	7.032E-06	2.929E-06	1.221E-06	7.304E-07	5.140E-07	3.109E-07	2.170E-07	1.644E-07
ESE	506	4.862E-06	2.010E-06	8.314E-07	4.935E-07	3.461E-07	2.077E-07	1.442E-07	1.088E-07
SE	451	4.184E-06	1.728E-06	7.136E-07	4.234E-07	2.974E-07	1.788E-07	1.243E-07	9.384E-08
SSE	264	2.562E-06	1.061E-06	4.414E-07	2.634E-07	1.854E-07	1.118E-07	7.782E-08	5.883E-08
S	188	1.452E-06	5.921E-07	2.163E-07	1.257E-07	8.796E-08	5.260E-08	3.643E-08	2.742E-08
SSW	346	2.799E-06	1.127E-06	3.955E-07	2.231E-07	1.552E-07	9.187E-08	6.314E-08	4.722E-08
SW	311	3.113E-06	1.267E-06	4.537E-07	2.597E-07	1.806E-07	1.072E-07	7.399E-08	5.558E-08
WSW	413	4.660E-06	1.925E-06	7.174E-07	4.218E-07	2.949E-07	1.760E-07	1.217E-07	9.151E-08
W	348	3.782E-06	1.560E-06	5.777E-07	3.706E-07	2.574E-07	1.525E-07	9.543E-08	7.164E-08
WNW	326	3.894E-06	1.617E-06	6.807E-07	4.081E-07	2.869E-07	1.725E-07	1.318E-07	9.943E-08
NW	338	4.670E-06	1.970E-06	8.579E-07	5.244E-07	3.694E-07	2.226E-07	1.549E-07	1.169E-07
NNW	340	4.790E-06	2.025E-06	8.767E-07	5.385E-07	3.812E-07	2.316E-07	1.619E-07	1.227E-07
AVERAGE	8302	5.296E-06	2.218E-06	9.201E-07	5.568E-07	3.921E-07	2.370E-07	1.654E-07	1.252E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	838	1.692E-07	1.396E-07	1.182E-07	1.018E-07	8.917E-08	5.398E-08	3.784E-08	2.288E-08
NNE	1162	1.993E-07	1.644E-07	1.392E-07	1.200E-07	1.051E-07	6.365E-08	4.463E-08	2.700E-08
NE	916	1.971E-07	1.636E-07	1.392E-07	1.207E-07	1.062E-07	6.541E-08	4.645E-08	2.865E-08
ENE	790	1.896E-07	1.570E-07	1.333E-07	1.152E-07	1.011E-07	6.179E-08	4.362E-08	2.669E-08
E	765	1.312E-07	1.083E-07	9.178E-08	7.916E-08	6.937E-08	4.210E-08	2.958E-08	1.796E-08
ESE	506	8.662E-08	7.137E-08	6.032E-08	5.191E-08	4.540E-08	2.736E-08	1.912E-08	1.151E-08
SE	451	7.470E-08	6.155E-08	5.722E-08	4.925E-08	4.307E-08	2.360E-08	1.648E-08	9.914E-09
SSE	264	4.689E-08	3.867E-08	3.272E-08	2.818E-08	2.466E-08	1.490E-08	1.043E-08	6.295E-09
S	188	2.175E-08	1.786E-08	1.506E-08	1.293E-08	1.129E-08	6.757E-09	4.690E-09	2.790E-09
SSW	346	3.722E-08	3.043E-08	2.555E-08	2.187E-08	1.904E-08	1.128E-08	7.769E-09	4.564E-09
SW	311	4.399E-08	3.607E-08	3.038E-08	2.607E-08	2.275E-08	1.360E-08	9.420E-09	5.579E-09
WSW	413	7.252E-08	5.953E-08	5.518E-08	4.737E-08	4.134E-08	2.248E-08	1.559E-08	9.273E-09
W	348	5.671E-08	4.651E-08	3.917E-08	3.360E-08	2.931E-08	1.749E-08	1.212E-08	7.195E-09
WNW	326	7.915E-08	6.520E-08	5.008E-08	4.307E-08	3.766E-08	2.264E-08	1.580E-08	9.493E-09
NW	338	9.314E-08	7.676E-08	6.488E-08	5.581E-08	4.880E-08	2.936E-08	2.050E-08	1.233E-08
NNW	340	9.812E-08	8.112E-08	6.877E-08	5.934E-08	5.203E-08	3.162E-08	2.224E-08	1.353E-08
AVERAGE	8302	9.982E-08	8.238E-08	7.006E-08	6.039E-08	5.289E-08	3.175E-08	2.227E-08	1.348E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	838	1.606E-08	1.223E-08	9.846E-09	8.203E-09	6.972E-09	6.058E-09	5.335E-09	
NNE	1162	1.896E-08	1.445E-08	1.163E-08	9.692E-09	8.241E-09	7.163E-09	6.310E-09	
NE	916	2.035E-08	1.565E-08	1.268E-08	1.062E-08	9.076E-09	7.914E-09	6.994E-09	
ENE	790	1.886E-08	1.445E-08	1.167E-08	9.758E-09	8.319E-09	7.245E-09	6.395E-09	
E	765	1.264E-08	9.653E-09	7.783E-09	6.495E-09	5.531E-09	4.813E-09	4.245E-09	
ESE	506	8.060E-09	6.133E-09	4.930E-09	4.104E-09	3.487E-09	3.031E-09	2.669E-09	
SE	451	6.937E-09	5.275E-09	4.237E-09	3.525E-09	2.994E-09	2.600E-09	2.289E-09	
SSE	264	4.413E-09	3.360E-09	2.702E-09	2.250E-09	1.912E-09	1.662E-09	1.463E-09	
S	188	1.940E-09	1.469E-09	1.176E-09	9.758E-10	8.267E-10	7.169E-10	6.301E-10	
SSW	346	3.154E-09	2.377E-09	1.899E-09	1.573E-09	1.331E-09	1.153E-09	1.012E-09	
SW	311	3.873E-09	2.929E-09	2.344E-09	1.944E-09	1.646E-09	1.427E-09	1.253E-09	
WSW	413	6.448E-09	4.882E-09	3.910E-09	3.245E-09	2.750E-09	2.385E-09	2.096E-09	
W	348	5.000E-09	3.783E-09	3.030E-09	2.515E-09	2.132E-09	1.849E-09	1.626E-09	
WNW	326	6.634E-09	5.039E-09	4.045E-09	3.363E-09	2.854E-09	2.479E-09	2.181E-09	
NW	338	8.621E-09	6.551E-09	5.259E-09	4.373E-09	3.712E-09	3.224E-09	2.837E-09	
NNW	340	9.526E-09	7.275E-09	5.864E-09	4.891E-09	4.162E-09	3.620E-09	3.191E-09	
AVERAGE	8302	9.466E-09	7.219E-09	5.813E-09	4.846E-09	4.122E-09	3.584E-09	3.158E-09	

Table B-8
Deposition D/Q Factors for Reactor Building Vent

PNPS 1ST QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
AVERAGE DEPOSITION RATES (REGULATORY GUIDE 1.111 MODEL) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	146	1.165E-07	3.917E-08	1.323E-08	6.981E-09	4.319E-09	2.089E-09	1.274E-09	8.684E-10
NNE	168	1.340E-07	4.508E-08	1.522E-08	8.033E-09	4.970E-09	2.403E-09	1.466E-09	9.992E-10
NE	204	1.628E-07	5.474E-08	1.848E-08	9.754E-09	6.035E-09	2.918E-09	1.781E-09	1.213E-09
ENE	217	1.731E-07	5.822E-08	1.966E-08	1.038E-08	6.420E-09	3.104E-09	1.894E-09	1.291E-09
E	240	1.915E-07	6.440E-08	2.175E-08	1.148E-08	7.100E-09	3.433E-09	2.095E-09	1.427E-09
ESE	201	1.604E-07	5.393E-08	1.821E-08	9.611E-09	5.946E-09	2.875E-09	1.754E-09	1.195E-09
SE	191	1.524E-07	5.125E-08	1.731E-08	9.133E-09	5.650E-09	2.732E-09	1.667E-09	1.136E-09
SSE	104	8.298E-08	2.790E-08	9.424E-09	4.973E-09	3.077E-09	1.488E-09	9.077E-10	6.186E-10
S	84	7.372E-08	2.479E-08	7.611E-09	4.016E-09	2.485E-09	1.202E-09	7.332E-10	4.996E-10
SSW	100	8.777E-08	2.951E-08	9.061E-09	4.781E-09	2.958E-09	1.431E-09	8.728E-10	5.948E-10
SW	76	6.670E-08	2.243E-08	6.886E-09	3.634E-09	2.248E-09	1.087E-09	6.633E-10	4.520E-10
WSW	60	5.266E-08	1.771E-08	5.437E-09	2.869E-09	1.775E-09	8.584E-10	5.237E-10	3.569E-10
W	67	5.880E-08	1.977E-08	6.071E-09	3.524E-09	2.180E-09	1.054E-09	5.848E-10	3.985E-10
WNW	85	6.782E-08	2.281E-08	7.702E-09	4.064E-09	2.515E-09	1.216E-09	8.161E-10	5.561E-10
NW	110	8.777E-08	2.951E-08	9.967E-09	5.260E-09	3.254E-09	1.574E-09	9.601E-10	6.542E-10
NNW	67	5.346E-08	1.798E-08	6.071E-09	3.204E-09	1.982E-09	9.585E-10	5.848E-10	3.985E-10
AVERAGE	2120	1.076E-07	3.620E-08	1.201E-08	6.355E-09	3.932E-09	1.902E-09	1.161E-09	7.912E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	146	6.354E-10	4.860E-10	3.843E-10	3.088E-10	2.548E-10	1.278E-10	7.856E-11	3.876E-11
NNE	168	7.311E-10	5.592E-10	4.422E-10	3.554E-10	2.932E-10	1.470E-10	9.039E-11	4.460E-11
NE	204	8.878E-10	6.791E-10	5.370E-10	4.315E-10	3.560E-10	1.785E-10	1.098E-10	5.416E-11
ENE	217	9.444E-10	7.223E-10	5.712E-10	4.590E-10	3.787E-10	1.899E-10	1.168E-10	5.761E-11
E	240	1.044E-09	7.989E-10	6.317E-10	5.076E-10	4.188E-10	2.100E-10	1.291E-10	6.371E-11
ESE	201	8.748E-10	6.691E-10	5.291E-10	4.252E-10	3.508E-10	1.759E-10	1.081E-10	5.336E-11
SE	191	8.312E-10	6.358E-10	5.530E-10	4.444E-10	3.667E-10	1.671E-10	1.028E-10	5.071E-11
SSE	104	4.526E-10	3.462E-10	2.737E-10	2.200E-10	1.815E-10	9.100E-11	5.596E-11	2.761E-11
S	84	3.656E-10	2.796E-10	2.211E-10	1.777E-10	1.466E-10	7.350E-11	4.520E-11	2.230E-11
SSW	100	4.352E-10	3.329E-10	2.632E-10	2.115E-10	1.745E-10	8.750E-11	5.381E-11	2.655E-11
SW	76	3.308E-10	2.530E-10	2.000E-10	1.608E-10	1.326E-10	6.650E-11	4.089E-11	2.018E-11
WSW	60	2.611E-10	1.997E-10	1.737E-10	1.396E-10	1.152E-10	5.250E-11	3.228E-11	1.593E-11
W	67	2.916E-10	2.230E-10	1.764E-10	1.417E-10	1.169E-10	5.863E-11	3.605E-11	1.779E-11
WNW	85	4.069E-10	3.112E-10	2.237E-10	1.798E-10	1.483E-10	7.438E-11	4.573E-11	2.257E-11
NW	110	4.787E-10	3.662E-10	2.895E-10	2.327E-10	1.920E-10	9.625E-11	5.919E-11	2.920E-11
NNW	67	2.916E-10	2.230E-10	1.764E-10	1.417E-10	1.169E-10	5.863E-11	3.605E-11	1.779E-11
AVERAGE	2120	5.790E-10	4.428E-10	3.529E-10	2.836E-10	2.340E-10	1.159E-10	7.129E-11	3.518E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	146	2.382E-11	1.604E-11	1.130E-11	8.474E-12	6.592E-12	5.391E-12	4.476E-12	
NNE	168	2.741E-11	1.846E-11	1.300E-11	9.751E-12	7.585E-12	6.203E-12	5.151E-12	
NE	204	3.329E-11	2.241E-11	1.579E-11	1.184E-11	9.210E-12	7.533E-12	6.255E-12	
ENE	217	3.541E-11	2.384E-11	1.680E-11	1.259E-11	9.797E-12	8.013E-12	6.653E-12	
E	240	3.916E-11	2.637E-11	1.858E-11	1.393E-11	1.084E-11	8.862E-12	7.358E-12	
ESE	201	3.280E-11	2.208E-11	1.556E-11	1.167E-11	9.075E-12	7.422E-12	6.163E-12	
SE	191	3.117E-11	2.098E-11	1.478E-11	1.109E-11	8.624E-12	7.053E-12	5.856E-12	
SSE	104	1.697E-11	1.143E-11	8.050E-12	6.036E-12	4.696E-12	3.840E-12	3.189E-12	
S	84	1.371E-11	9.228E-12	6.502E-12	4.875E-12	3.793E-12	3.102E-12	2.575E-12	
SSW	100	1.632E-11	1.099E-11	7.741E-12	5.804E-12	4.515E-12	3.692E-12	3.066E-12	
SW	76	1.240E-11	8.349E-12	5.883E-12	4.411E-12	3.431E-12	2.806E-12	2.330E-12	
WSW	60	9.790E-12	6.591E-12	4.644E-12	3.482E-12	2.709E-12	2.215E-12	1.840E-12	
W	67	1.093E-11	7.360E-12	5.186E-12	3.889E-12	3.025E-12	2.474E-12	2.054E-12	
WNW	85	1.387E-11	9.338E-12	6.580E-12	4.933E-12	3.838E-12	3.139E-12	2.606E-12	
NW	110	1.795E-11	1.208E-11	8.515E-12	6.385E-12	4.966E-12	4.062E-12	3.373E-12	
NNW	67	1.093E-11	7.360E-12	5.186E-12	3.889E-12	3.025E-12	2.474E-12	2.054E-12	
AVERAGE	2120	2.162E-11	1.456E-11	1.026E-11	7.690E-12	5.982E-12	4.892E-12	4.062E-12	

Table B-8
Deposition D/Q Factors for Reactor Building Vent

PNPS 2ND QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
AVERAGE DEPOSITION RATES (REGULATORY GUIDE 1.111 MODEL) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	163	1.365E-07	4.590E-08	1.550E-08	8.180E-09	5.061E-09	2.447E-09	1.493E-09	1.017E-09
NNE	307	2.571E-07	8.645E-08	2.919E-08	1.541E-08	9.532E-09	4.609E-09	2.812E-09	1.916E-09
NE	198	1.658E-07	5.576E-08	1.883E-08	9.936E-09	6.148E-09	2.973E-09	1.814E-09	1.236E-09
ENE	160	1.340E-07	4.506E-08	1.522E-08	8.029E-09	4.968E-09	2.402E-09	1.466E-09	9.987E-10
E	111	9.295E-08	3.126E-08	1.056E-08	5.570E-09	3.446E-09	1.667E-09	1.017E-09	6.929E-10
ESE	88	7.369E-08	2.478E-08	8.369E-09	4.416E-09	2.732E-09	1.321E-09	8.061E-10	5.493E-10
SE	84	7.034E-08	2.365E-08	8.787E-09	4.637E-09	2.869E-09	1.387E-09	7.695E-10	5.243E-10
SSE	94	8.658E-08	2.912E-08	9.833E-09	4.717E-09	2.919E-09	1.411E-09	8.611E-10	5.868E-10
S	47	4.723E-08	1.588E-08	4.470E-09	2.359E-09	1.459E-09	7.057E-10	4.305E-10	2.934E-10
SSW	122	1.124E-07	3.779E-08	1.160E-08	6.122E-09	3.788E-09	1.832E-09	1.118E-09	7.615E-10
SW	127	1.170E-07	3.934E-08	1.208E-08	6.373E-09	3.943E-09	1.907E-09	1.163E-09	7.927E-10
WSW	167	1.538E-07	5.173E-08	1.588E-08	8.380E-09	5.185E-09	2.507E-09	1.530E-09	1.042E-09
W	124	1.142E-07	3.841E-08	1.179E-08	6.845E-09	4.235E-09	2.048E-09	1.136E-09	7.740E-10
WNW	89	7.453E-08	2.506E-08	8.464E-09	4.466E-09	2.763E-09	1.336E-09	8.968E-10	6.111E-10
NW	84	7.034E-08	2.365E-08	7.988E-09	4.215E-09	2.608E-09	1.261E-09	7.695E-10	5.243E-10
NNW	55	4.606E-08	1.549E-08	5.230E-09	2.760E-09	1.708E-09	8.258E-10	5.038E-10	3.433E-10
AVERAGE	2020	1.095E-07	3.683E-08	1.211E-08	6.401E-09	3.960E-09	1.915E-09	1.162E-09	7.915E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	163	7.445E-10	5.695E-10	4.503E-10	3.618E-10	2.985E-10	1.497E-10	9.205E-11	4.541E-11
NNE	307	1.402E-09	1.073E-09	8.481E-10	6.815E-10	5.623E-10	2.819E-10	1.734E-10	8.554E-11
NE	198	9.044E-10	6.917E-10	5.470E-10	4.395E-10	3.627E-10	1.818E-10	1.118E-10	5.517E-11
ENE	160	7.308E-10	5.590E-10	4.420E-10	3.552E-10	2.931E-10	1.469E-10	9.035E-11	4.458E-11
E	111	5.070E-10	3.878E-10	3.066E-10	2.464E-10	2.033E-10	1.019E-10	6.268E-11	3.093E-11
ESE	88	4.019E-10	3.074E-10	2.431E-10	1.954E-10	1.612E-10	8.081E-11	4.969E-11	2.452E-11
SE	84	3.837E-10	2.935E-10	2.552E-10	2.051E-10	1.692E-10	8.485E-11	5.218E-11	2.574E-11
SSE	94	4.293E-10	3.284E-10	2.597E-10	2.087E-10	1.722E-10	8.632E-11	5.308E-11	2.619E-11
S	47	2.147E-10	1.642E-10	1.298E-10	1.043E-10	8.608E-11	4.316E-11	2.654E-11	1.310E-11
SSW	122	5.572E-10	4.262E-10	3.370E-10	2.708E-10	2.235E-10	1.120E-10	6.889E-11	3.399E-11
SW	127	5.801E-10	4.437E-10	3.508E-10	2.819E-10	2.326E-10	1.166E-10	7.172E-11	3.538E-11
WSW	167	7.628E-10	5.834E-10	5.075E-10	4.078E-10	3.365E-10	1.534E-10	9.430E-11	4.653E-11
W	124	5.664E-10	4.332E-10	3.425E-10	2.753E-10	2.271E-10	1.139E-10	7.002E-11	3.455E-11
WNW	89	4.472E-10	3.420E-10	2.459E-10	1.976E-10	1.630E-10	8.173E-11	5.026E-11	2.480E-11
NW	84	3.837E-10	2.935E-10	2.320E-10	1.865E-10	1.539E-10	7.714E-11	4.743E-11	2.340E-11
NNW	55	2.512E-10	1.921E-10	1.519E-10	1.221E-10	1.007E-10	5.051E-11	3.106E-11	1.532E-11
AVERAGE	2020	5.792E-10	4.430E-10	3.531E-10	2.837E-10	2.341E-10	1.164E-10	7.159E-11	3.532E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	163	2.791E-11	1.879E-11	1.324E-11	9.929E-12	7.724E-12	6.317E-12	5.245E-12	
NNE	307	5.257E-11	3.540E-11	2.494E-11	1.870E-11	1.455E-11	1.190E-11	9.878E-12	
NE	198	3.391E-11	2.283E-11	1.609E-11	1.206E-11	9.382E-12	7.673E-12	6.371E-12	
ENE	160	2.740E-11	1.845E-11	1.300E-11	9.746E-12	7.582E-12	6.200E-12	5.148E-12	
E	111	1.901E-11	1.280E-11	9.017E-12	6.761E-12	5.260E-12	4.302E-12	3.572E-12	
ESE	88	1.507E-11	1.015E-11	7.149E-12	5.360E-12	4.170E-12	3.410E-12	2.832E-12	
SE	84	1.582E-11	1.065E-11	7.506E-12	5.628E-12	4.378E-12	3.581E-12	2.973E-12	
SSE	94	1.610E-11	1.084E-11	7.636E-12	5.726E-12	4.454E-12	3.643E-12	3.025E-12	
S	47	8.049E-12	5.419E-12	3.818E-12	2.863E-12	2.227E-12	1.821E-12	1.512E-12	
SSW	122	2.089E-11	1.407E-11	9.911E-12	7.432E-12	5.781E-12	4.728E-12	3.926E-12	
SW	127	2.175E-11	1.464E-11	1.032E-11	7.736E-12	6.018E-12	4.922E-12	4.087E-12	
WSW	167	2.860E-11	1.925E-11	1.357E-11	1.017E-11	7.913E-12	6.472E-12	5.374E-12	
W	124	2.123E-11	1.430E-11	1.007E-11	7.553E-12	5.876E-12	4.805E-12	3.990E-12	
WNW	89	1.524E-11	1.026E-11	7.230E-12	5.421E-12	4.217E-12	3.449E-12	2.864E-12	
NW	84	1.438E-11	9.685E-12	6.824E-12	5.117E-12	3.980E-12	3.255E-12	2.703E-12	
NNW	55	9.419E-12	6.341E-12	4.468E-12	3.350E-12	2.606E-12	2.131E-12	1.770E-12	
AVERAGE	2020	2.171E-11	1.462E-11	1.030E-11	7.722E-12	6.007E-12	4.913E-12	4.079E-12	

Table B-8
Deposition D/Q Factors for Reactor Building Vent

PNPS 3RD QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
AVERAGE DEPOSITION RATES (REGULATORY GUIDE 1.111 MODEL) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	275	2.242E-07	7.539E-08	2.546E-08	1.343E-08	8.312E-09	4.019E-09	2.452E-09	1.671E-09
NNE	419	3.416E-07	1.149E-07	3.879E-08	2.047E-08	1.266E-08	6.124E-09	3.736E-09	2.546E-09
NE	244	1.989E-07	6.689E-08	2.259E-08	1.192E-08	7.375E-09	3.566E-09	2.176E-09	1.483E-09
ENE	168	1.369E-07	4.605E-08	1.555E-08	8.207E-09	5.078E-09	2.456E-09	1.498E-09	1.021E-09
E	141	1.149E-07	3.865E-08	1.305E-08	6.888E-09	4.262E-09	2.061E-09	1.257E-09	8.568E-10
ESE	65	5.299E-08	1.782E-08	6.017E-09	3.175E-09	1.965E-09	9.501E-10	5.796E-10	3.950E-10
SE	50	4.076E-08	1.371E-08	5.092E-09	2.687E-09	1.662E-09	8.039E-10	4.459E-10	3.038E-10
SSE	48	4.304E-08	1.447E-08	4.888E-09	2.345E-09	1.451E-09	7.016E-10	4.280E-10	2.917E-10
S	24	2.348E-08	7.895E-09	2.222E-09	1.172E-09	7.254E-10	3.508E-10	2.140E-10	1.458E-10
SSW	63	5.649E-08	1.900E-08	5.832E-09	3.078E-09	1.904E-09	9.208E-10	5.618E-10	3.828E-10
SW	65	5.828E-08	1.960E-08	6.017E-09	3.175E-09	1.965E-09	9.501E-10	5.796E-10	3.950E-10
WSW	121	1.085E-07	3.649E-08	1.120E-08	5.911E-09	3.657E-09	1.769E-09	1.077E-09	7.353E-10
W	103	9.236E-08	3.106E-08	9.535E-09	5.535E-09	3.425E-09	1.656E-09	9.185E-10	6.259E-10
WNW	105	8.559E-08	2.878E-08	9.721E-09	5.129E-09	3.174E-09	1.535E-09	1.030E-09	7.019E-10
NW	87	7.092E-08	2.385E-08	8.054E-09	4.250E-09	2.630E-09	1.272E-09	7.758E-10	5.287E-10
NNW	97	7.907E-08	2.659E-08	8.980E-09	4.739E-09	2.932E-09	1.418E-09	8.650E-10	5.894E-10
AVERAGE	2075	1.080E-07	3.632E-08	1.206E-08	6.382E-09	3.949E-09	1.910E-09	1.162E-09	7.921E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	275	1.223E-09	9.353E-10	7.395E-10	5.943E-10	4.903E-10	2.458E-10	1.512E-10	7.459E-11
NNE	419	1.863E-09	1.425E-09	1.127E-09	9.055E-10	7.471E-10	3.746E-10	2.303E-10	1.136E-10
NE	244	1.085E-09	8.298E-10	6.562E-10	5.273E-10	4.351E-10	2.181E-10	1.341E-10	6.618E-11
ENE	168	7.470E-10	5.714E-10	4.518E-10	3.631E-10	2.996E-10	1.502E-10	9.235E-11	4.557E-11
E	141	6.269E-10	4.795E-10	3.792E-10	3.047E-10	2.514E-10	1.261E-10	7.751E-11	3.824E-11
ESE	65	2.890E-10	2.211E-10	1.748E-10	1.405E-10	1.159E-10	5.811E-11	3.573E-11	1.763E-11
SE	50	2.223E-10	1.700E-10	1.479E-10	1.189E-10	9.807E-11	4.917E-11	3.024E-11	1.492E-11
SSE	48	2.134E-10	1.632E-10	1.291E-10	1.037E-10	8.559E-11	4.291E-11	2.639E-11	1.302E-11
S	24	1.067E-10	8.162E-11	6.454E-11	5.187E-11	4.279E-11	2.146E-11	1.319E-11	6.510E-12
SSW	63	2.801E-10	2.143E-10	1.694E-10	1.361E-10	1.123E-10	5.632E-11	3.463E-11	1.709E-11
SW	65	2.890E-10	2.211E-10	1.748E-10	1.405E-10	1.159E-10	5.811E-11	3.573E-11	1.763E-11
WSW	121	5.380E-10	4.115E-10	3.579E-10	2.876E-10	2.373E-10	1.082E-10	6.652E-11	3.282E-11
W	103	4.580E-10	3.503E-10	2.770E-10	2.226E-10	1.837E-10	9.208E-11	5.662E-11	2.794E-11
WNW	105	5.136E-10	3.928E-10	2.824E-10	2.269E-10	1.872E-10	9.387E-11	5.772E-11	2.848E-11
NW	87	3.868E-10	2.959E-10	2.340E-10	1.880E-10	1.551E-10	7.778E-11	4.783E-11	2.360E-11
NNW	97	4.313E-10	3.299E-10	2.609E-10	2.096E-10	1.730E-10	8.672E-11	5.332E-11	2.631E-11
AVERAGE	2075	5.796E-10	4.433E-10	3.516E-10	2.826E-10	2.331E-10	1.162E-10	7.146E-11	3.526E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	275	4.585E-11	3.087E-11	2.175E-11	1.631E-11	1.269E-11	1.037E-11	8.614E-12	
NNE	419	6.985E-11	4.703E-11	3.314E-11	2.485E-11	1.933E-11	1.581E-11	1.312E-11	
NE	244	4.068E-11	2.739E-11	1.930E-11	1.447E-11	1.126E-11	9.205E-12	7.643E-12	
ENE	168	2.801E-11	1.886E-11	1.329E-11	9.962E-12	7.750E-12	6.338E-12	5.263E-12	
E	141	2.351E-11	1.583E-11	1.115E-11	8.361E-12	6.504E-12	5.319E-12	4.417E-12	
ESE	65	1.084E-11	7.296E-12	5.141E-12	3.854E-12	2.998E-12	2.452E-12	2.036E-12	
SE	50	9.169E-12	6.173E-12	4.350E-12	3.261E-12	2.537E-12	2.075E-12	1.723E-12	
SSE	48	8.002E-12	5.388E-12	3.796E-12	2.846E-12	2.214E-12	1.811E-12	1.504E-12	
S	24	4.001E-12	2.694E-12	1.898E-12	1.423E-12	1.107E-12	9.054E-13	7.518E-13	
SSW	63	1.050E-11	7.071E-12	4.982E-12	3.736E-12	2.906E-12	2.377E-12	1.973E-12	
SW	65	1.084E-11	7.296E-12	5.141E-12	3.854E-12	2.998E-12	2.452E-12	2.036E-12	
WSW	121	2.017E-11	1.358E-11	9.569E-12	7.175E-12	5.582E-12	4.565E-12	3.790E-12	
W	103	1.717E-11	1.156E-11	8.146E-12	6.108E-12	4.751E-12	3.886E-12	3.226E-12	
WNW	105	1.750E-11	1.179E-11	8.304E-12	6.226E-12	4.844E-12	3.961E-12	3.289E-12	
NW	87	1.450E-11	9.765E-12	6.880E-12	5.159E-12	4.013E-12	3.282E-12	2.725E-12	
NNW	97	1.617E-11	1.089E-11	7.671E-12	5.752E-12	4.474E-12	3.659E-12	3.038E-12	
AVERAGE	2075	2.167E-11	1.459E-11	1.028E-11	7.709E-12	5.997E-12	4.904E-12	4.072E-12	

Table B-8
Deposition D/Q Factors for Reactor Building Vent

PNPS 4TH QUARTER 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
AVERAGE DEPOSITION RATES (REGULATORY GUIDE 1.111 MODEL) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	254	2.059E-07	6.923E-08	2.338E-08	1.234E-08	7.633E-09	3.691E-09	2.252E-09	1.535E-09
NNE	268	2.172E-07	7.305E-08	2.467E-08	1.302E-08	8.054E-09	3.895E-09	2.376E-09	1.619E-09
NE	270	2.188E-07	7.359E-08	2.485E-08	1.311E-08	8.114E-09	3.924E-09	2.394E-09	1.631E-09
ENE	245	1.986E-07	6.678E-08	2.255E-08	1.190E-08	7.363E-09	3.560E-09	2.172E-09	1.480E-09
E	273	2.213E-07	7.441E-08	2.513E-08	1.326E-08	8.204E-09	3.967E-09	2.420E-09	1.649E-09
ESE	152	1.232E-07	4.143E-08	1.399E-08	7.383E-09	4.568E-09	2.209E-09	1.348E-09	9.183E-10
SE	126	1.021E-07	3.434E-08	1.160E-08	6.120E-09	3.786E-09	1.831E-09	1.117E-09	7.613E-10
SSE	18	1.459E-08	4.906E-09	1.657E-09	8.743E-10	5.409E-10	2.616E-10	1.596E-10	1.088E-10
S	33	2.942E-08	9.894E-09	3.037E-09	1.603E-09	9.917E-10	4.796E-10	2.926E-10	1.994E-10
SSW	61	5.438E-08	1.829E-08	5.615E-09	2.963E-09	1.833E-09	8.865E-10	5.408E-10	3.685E-10
SW	43	3.834E-08	1.289E-08	3.958E-09	2.089E-09	1.292E-09	6.249E-10	3.812E-10	2.598E-10
WSW	65	5.795E-08	1.949E-08	5.983E-09	3.157E-09	1.953E-09	9.446E-10	5.763E-10	3.927E-10
W	54	4.814E-08	1.619E-08	4.970E-09	2.885E-09	1.785E-09	8.632E-10	4.788E-10	3.263E-10
WNW	47	3.809E-08	1.281E-08	4.326E-09	2.283E-09	1.412E-09	6.830E-10	4.584E-10	3.124E-10
NW	57	4.620E-08	1.554E-08	5.247E-09	2.769E-09	1.713E-09	8.283E-10	5.054E-10	3.444E-10
NNW	121	9.807E-08	3.298E-08	1.114E-08	5.877E-09	3.636E-09	1.758E-09	1.073E-09	7.310E-10
AVERAGE	2087	1.070E-07	3.599E-08	1.201E-08	6.352E-09	3.930E-09	1.900E-09	1.159E-09	7.898E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	254	1.123E-09	8.589E-10	6.791E-10	5.458E-10	4.503E-10	2.258E-10	1.388E-10	6.850E-11
NNE	268	1.185E-09	9.062E-10	7.166E-10	5.758E-10	4.751E-10	2.382E-10	1.465E-10	7.227E-11
NE	270	1.194E-09	9.130E-10	7.219E-10	5.801E-10	4.787E-10	2.400E-10	1.476E-10	7.281E-11
ENE	245	1.083E-09	8.285E-10	6.551E-10	5.264E-10	4.343E-10	2.178E-10	1.339E-10	6.607E-11
E	273	1.207E-09	9.231E-10	7.299E-10	5.866E-10	4.840E-10	2.427E-10	1.492E-10	7.362E-11
ESE	152	6.720E-10	5.140E-10	4.064E-10	3.266E-10	2.695E-10	1.351E-10	8.308E-11	4.099E-11
SE	126	5.570E-10	4.261E-10	3.706E-10	2.978E-10	2.457E-10	1.120E-10	6.887E-11	3.398E-11
SSE	18	7.957E-11	6.087E-11	4.813E-11	3.868E-11	3.191E-11	1.600E-11	9.838E-12	4.854E-12
S	33	1.459E-10	1.116E-10	8.823E-11	7.091E-11	5.850E-11	2.933E-11	1.804E-11	8.899E-12
SSW	61	2.697E-10	2.063E-10	1.631E-10	1.311E-10	1.081E-10	5.422E-11	3.334E-11	1.645E-11
SW	43	1.901E-10	1.454E-10	1.150E-10	9.239E-11	7.623E-11	3.822E-11	2.350E-11	1.160E-11
WSW	65	2.874E-10	2.198E-10	1.912E-10	1.536E-10	1.268E-10	5.778E-11	3.553E-11	1.753E-11
W	54	2.387E-10	1.826E-10	1.444E-10	1.160E-10	9.573E-11	4.800E-11	2.951E-11	1.456E-11
WNW	47	2.286E-10	1.748E-10	1.257E-10	1.010E-10	8.332E-11	4.178E-11	2.569E-11	1.267E-11
NW	57	2.520E-10	1.927E-10	1.524E-10	1.225E-10	1.010E-10	5.066E-11	3.115E-11	1.537E-11
NNW	121	5.349E-10	4.092E-10	3.235E-10	2.600E-10	2.145E-10	1.076E-10	6.613E-11	3.263E-11
AVERAGE	2087	5.779E-10	4.421E-10	3.519E-10	2.828E-10	2.334E-10	1.159E-10	7.129E-11	3.518E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	254	4.210E-11	2.835E-11	1.997E-11	1.498E-11	1.165E-11	9.527E-12	7.911E-12	
NNE	268	4.442E-11	2.991E-11	2.107E-11	1.580E-11	1.229E-11	1.005E-11	8.347E-12	
NE	270	4.475E-11	3.013E-11	2.123E-11	1.592E-11	1.238E-11	1.013E-11	8.409E-12	
ENE	245	4.061E-11	2.734E-11	1.926E-11	1.444E-11	1.124E-11	9.190E-12	7.630E-12	
E	273	4.525E-11	3.047E-11	2.147E-11	1.610E-11	1.252E-11	1.024E-11	8.502E-12	
ESE	152	2.519E-11	1.696E-11	1.195E-11	8.962E-12	6.971E-12	5.701E-12	4.734E-12	
SE	126	2.088E-11	1.406E-11	9.907E-12	7.429E-12	5.779E-12	4.726E-12	3.924E-12	
SSE	18	2.984E-12	2.009E-12	1.415E-12	1.061E-12	8.255E-13	6.751E-13	5.606E-13	
S	33	5.470E-12	3.683E-12	2.595E-12	1.946E-12	1.513E-12	1.238E-12	1.028E-12	
SSW	61	1.011E-11	6.807E-12	4.796E-12	3.596E-12	2.798E-12	2.288E-12	1.900E-12	
SW	43	7.127E-12	4.799E-12	3.381E-12	2.535E-12	1.972E-12	1.613E-12	1.339E-12	
WSW	65	1.077E-11	7.254E-12	5.111E-12	3.832E-12	2.981E-12	2.438E-12	2.024E-12	
W	54	8.951E-12	6.026E-12	4.246E-12	3.184E-12	2.477E-12	2.025E-12	1.682E-12	
WNW	47	7.790E-12	5.245E-12	3.696E-12	2.771E-12	2.156E-12	1.763E-12	1.464E-12	
NW	57	9.448E-12	6.361E-12	4.482E-12	3.361E-12	2.614E-12	2.138E-12	1.775E-12	
NNW	121	2.006E-11	1.350E-11	9.514E-12	7.134E-12	5.549E-12	4.539E-12	3.768E-12	
AVERAGE	2087	2.162E-11	1.456E-11	1.026E-11	7.690E-12	5.982E-12	4.892E-12	4.062E-12	

Table B-8
Deposition D/Q Factors for Reactor Building Vent

PNPS ANNUAL 1999 GENERAL X/QS: GROUND-LEVEL -- SECTOR AVERAGE MODEL
GROUND RELEASE
AVERAGE DEPOSITION RATES (REGULATORY GUIDE 1.111 MODEL) -- (1/M2)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	838	1.707E-07	5.742E-08	1.939E-08	1.023E-08	6.331E-09	3.061E-09	1.868E-09	1.273E-09
NNE	1162	2.367E-07	7.962E-08	2.689E-08	1.419E-08	8.778E-09	4.245E-09	2.590E-09	1.765E-09
NE	916	1.866E-07	6.276E-08	2.119E-08	1.118E-08	6.920E-09	3.346E-09	2.042E-09	1.391E-09
ENE	790	1.610E-07	5.413E-08	1.828E-08	9.646E-09	5.968E-09	2.886E-09	1.761E-09	1.200E-09
E	765	1.559E-07	5.242E-08	1.770E-08	9.341E-09	5.779E-09	2.795E-09	1.705E-09	1.162E-09
ESE	506	1.031E-07	3.467E-08	1.171E-08	6.178E-09	3.923E-09	1.849E-09	1.128E-09	7.685E-10
SE	451	9.189E-08	3.090E-08	1.044E-08	5.507E-09	3.407E-09	1.648E-09	1.005E-09	6.850E-10
SSE	264	5.379E-08	1.809E-08	6.109E-09	3.223E-09	1.994E-09	9.644E-10	5.884E-10	4.010E-10
S	188	4.213E-08	1.417E-08	4.350E-09	2.295E-09	1.420E-09	6.868E-10	4.190E-10	2.855E-10
SSW	346	7.754E-08	2.608E-08	8.006E-09	4.225E-09	2.614E-09	1.264E-09	7.712E-10	5.255E-10
SW	311	6.970E-08	2.344E-08	7.196E-09	3.797E-09	2.349E-09	1.136E-09	6.932E-10	4.723E-10
WSW	413	9.256E-08	3.113E-08	9.556E-09	5.043E-09	3.120E-09	1.509E-09	9.205E-10	6.273E-10
W	348	7.799E-08	2.623E-08	8.052E-09	4.674E-09	2.892E-09	1.398E-09	7.756E-10	5.285E-10
WNW	326	6.642E-08	2.234E-08	7.543E-09	3.980E-09	2.463E-09	1.191E-09	7.992E-10	5.446E-10
NW	338	6.887E-08	2.316E-08	7.821E-09	4.127E-09	2.553E-09	1.235E-09	7.533E-10	5.134E-10
NNW	340	6.927E-08	2.330E-08	7.867E-09	4.151E-09	2.569E-09	1.242E-09	7.578E-10	5.164E-10
AVERAGE	8302	1.078E-07	3.624E-08	1.201E-08	6.362E-09	3.936E-09	1.903E-09	1.161E-09	7.912E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	838	9.313E-10	7.123E-10	5.633E-10	4.526E-10	3.735E-10	1.872E-10	1.151E-10	5.681E-11
NNE	1162	1.291E-09	9.877E-10	7.810E-10	6.276E-10	5.178E-10	2.596E-10	1.597E-10	7.877E-11
NE	916	1.018E-09	7.786E-10	6.157E-10	4.948E-10	4.082E-10	2.047E-10	1.259E-10	6.210E-11
ENE	790	8.780E-10	6.715E-10	5.310E-10	4.267E-10	3.521E-10	1.765E-10	1.085E-10	5.356E-11
E	765	8.502E-10	6.503E-10	5.142E-10	4.132E-10	3.409E-10	1.709E-10	1.051E-10	5.186E-11
ESE	506	5.623E-10	4.301E-10	3.401E-10	2.733E-10	2.255E-10	1.131E-10	6.952E-11	3.430E-11
SE	451	5.012E-10	3.834E-10	3.335E-10	2.680E-10	2.211E-10	1.008E-10	6.197E-11	3.057E-11
SSE	264	2.934E-10	2.244E-10	1.774E-10	1.426E-10	1.177E-10	5.899E-11	3.627E-11	1.790E-11
S	188	2.089E-10	1.598E-10	1.264E-10	1.015E-10	8.378E-11	4.201E-11	2.583E-11	1.274E-11
SSW	346	3.845E-10	2.941E-10	2.326E-10	1.869E-10	1.542E-10	7.731E-11	4.754E-11	2.346E-11
SW	311	3.456E-10	2.644E-10	2.090E-10	1.680E-10	1.386E-10	6.949E-11	4.273E-11	2.108E-11
WSW	413	4.590E-10	3.511E-10	3.054E-10	2.454E-10	2.025E-10	9.228E-11	5.675E-11	2.800E-11
W	348	3.867E-10	2.958E-10	2.339E-10	1.880E-10	1.551E-10	7.776E-11	4.781E-11	2.359E-11
WNW	326	3.985E-10	3.048E-10	2.191E-10	1.761E-10	1.453E-10	7.284E-11	4.479E-11	2.210E-11
NW	338	3.756E-10	2.873E-10	2.272E-10	1.826E-10	1.506E-10	7.552E-11	4.644E-11	2.291E-11
NNW	340	3.779E-10	2.890E-10	2.285E-10	1.836E-10	1.515E-10	7.597E-11	4.672E-11	2.305E-11
AVERAGE	8302	5.789E-10	4.428E-10	3.524E-10	2.832E-10	2.336E-10	1.159E-10	7.129E-11	3.518E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	35.00	40.00	45.00	50.00	
N	838	3.492E-11	2.351E-11	1.656E-11	1.242E-11	9.662E-12	7.902E-12	6.561E-12	
NNE	1162	4.842E-11	3.260E-11	2.297E-11	1.722E-11	1.340E-11	1.096E-11	9.098E-12	
NE	916	3.817E-11	2.570E-11	1.811E-11	1.358E-11	1.056E-11	8.637E-12	7.172E-12	
ENE	790	3.292E-11	2.216E-11	1.562E-11	1.171E-11	9.108E-12	7.449E-12	6.185E-12	
E	765	3.188E-11	2.146E-11	1.512E-11	1.134E-11	8.820E-12	7.213E-12	5.989E-12	
ESE	506	2.108E-11	1.420E-11	1.000E-11	7.500E-12	5.834E-12	4.771E-12	3.962E-12	
SE	451	1.879E-11	1.265E-11	8.915E-12	6.684E-12	5.200E-12	4.252E-12	3.531E-12	
SSE	264	1.100E-11	7.406E-12	5.218E-12	3.913E-12	3.044E-12	2.489E-12	2.067E-12	
S	188	7.833E-12	5.274E-12	3.716E-12	2.786E-12	2.168E-12	1.773E-12	1.472E-12	
SSW	346	1.442E-11	9.706E-12	6.839E-12	5.128E-12	3.989E-12	3.262E-12	2.709E-12	
SW	311	1.296E-11	8.725E-12	6.147E-12	4.609E-12	3.586E-12	2.932E-12	2.435E-12	
WSW	413	1.721E-11	1.159E-11	8.164E-12	6.121E-12	4.762E-12	3.894E-12	3.233E-12	
W	348	1.450E-11	9.763E-12	6.879E-12	5.158E-12	4.012E-12	3.281E-12	2.725E-12	
WNW	326	1.358E-11	9.145E-12	6.444E-12	4.832E-12	3.759E-12	3.074E-12	2.552E-12	
NW	338	1.408E-11	9.482E-12	6.681E-12	5.010E-12	3.897E-12	3.187E-12	2.646E-12	
NNW	340	1.417E-11	9.538E-12	6.721E-12	5.039E-12	3.920E-12	3.206E-12	2.662E-12	
AVERAGE	8302	2.162E-11	1.456E-11	1.026E-11	7.690E-12	5.982E-12	4.892E-12	4.062E-12	

APPENDIX C

PILGRIM NUCLEAR POWER STATION OFFSITE DOSE CALCULATION MANUAL

The PNPS Offsite Dose Calculation Manual (ODCM) was not revised during calendar year 1999.