PNPS TS Section 6.9.C.1.a
Reg. Guide 1.21

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March 28, 1996
BECo Ltr. #96-028

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Docket No. 50-293
License No. DPR-35

The enclosed "Annual Dose Assessment to the General Public from Radioactive Effluents for 1995" is submitted in accordance with Pilgrim Nuclear Power Station Technical Specification 6.9.C.1.a.

Please do not hesitate to contact me if there are any questions regarding this report.

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RLC/dmc/dose/compmgt

Attachment

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PILGRIM NUCLEAR POWER STATION

Annual Dose Assessment to the General Public

January 1 through December 31, 1995

Boston Edison

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION
ANNUAL DOSE ASSESSMENT TO THE GENERAL PUBLIC
FROM RADIOACTIVE EFFLUENTS

January 1 through December 31, 1995

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EXECUTIVE SUMMARY

Pilgrim Nuclear Power Station
Annual Dose Assessment To The General Public
From Radioactive Effluents
January 1 Through December 31, 1995

Introduction

This report quantifies the dose impact to the general public from the operation of Pilgrim Nuclear Power Station (PNPS) during the period of January 1 through December 31, 1995. The information presented in this report is prepared under Technical Specification 6.9.C.1.a as supplemental information to radioactive effluent release data submitted on a semiannual basis in accordance with NRC Regulatory Guide 1.21.

This report contains an assessment of radiological impact on humans resulting from releases of radioactivity in liquid and gaseous effluents and direct radiation exposure. Doses from radioactive effluents to a maximum exposed hypothetical individual were calculated for all major exposure pathways. In addition to maximum individual doses, cumulative population doses and average individual doses were calculated from the effluent release information. Direct radiation exposures as measured with environmental thermoluminescent dosimeters (TLDs) were also assessed.

The maximum individual doses calculated were used to determine the percent of Technical Specifications limit or objective which the doses represented. Liquid Effluent concentrations were also used to determine percent of Technical Specification concentration limits. These percentage values are the final supplemental data necessary to complete the two semiannual Radioactive Effluent and Waste Disposal Reports prepared during the reporting period.

Radiological Impact on Humans

The release of radioactivity in liquid effluents from PNPS during 1995 resulted in a total body dose of about 0.004 mrem to the maximum-exposed hypothetical individual. The maximum hypothetical dose to any organ from liquid effluents was about 0.01 mrem. The total body dose from liquid effluents to the entire population within 50 miles of PNPS was about 0.03 person-rem. The average individual living within 50 miles of PNPS received a total body dose of about 0.000008 mrem from liquid effluents released during 1995.

The release of radioactivity in gaseous effluents from PNPS during 1995 resulted in a total body dose to the maximum-exposed hypothetical individual of about 0.36 mrem from radioactive particulates, iodines and tritium. The maximum hypothetical dose to any organ from radioactive particulates, iodines and tritium was about 0.83 mrem. Noble gases released in gaseous effluents resulted in a maximum total body dose of 0.54 mrem, with a corresponding skin dose of 3.5 mrem. All of these maximum doses occurred to a hypothetical individual located on property under Boston Edison's (BECo) control. The maximum, hypothetical total body dose from the release of radioactivity in gaseous effluents was 0.9 mrem. The total body dose from gaseous effluents to the entire population within 50 miles of PNPS was about 1.7 person-rem. The average individual living within 50 miles of PNPS received a total body dose of less than 0.0004 mrem from gaseous effluents released during 1995.

Ambient radiation exposure was evaluated to complete the assessment of radiological impact on humans. A small number of TLDs on BECo property in close proximity to the station indicated ambient radiation exposure. However, the dose to a hypothetical member of the public accessing such areas on BECo property during 1995 was estimated as being about 1.8 mrem. There was no measurable increase during 1995 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 liquids, gases, and ambient exposure resulting from PNPS operations during 1995 was calculated as being 2.7 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.

Percent of Technical Specifications

The maximum individual doses from radioactive effluents were compared to the applicable Technical Specifications dose limits and objectives. All doses from liquid effluents were less than 0.4% of their corresponding limit or objective. In addition, all quarterly average concentrations of liquids released to Cape Cod Bay were less than 1.2% of the corresponding limits. Maximum doses resulting from releases of particulates, iodines and tritium in gaseous effluents were less than 6% of corresponding 10CFR50 objectives. Noble gas doses were less than 23% of the corresponding 10CFR50 dose objectives.

Conclusion

None of the PNPS Technical Specification limits and objectives associated with liquid and gaseous effluents were exceeded during 1995. Compliance with these limits and objectives ensured that the radiological impact from PNPS operation was kept as low as is reasonably achievable, in accordance with 10CFR50 Appendix I. Furthermore, conformance with PNPS Technical Specifications demonstrated compliance with the Environmental Protection Agency's regulations for environmental radiation under 40CFR190. Based on the dose assessment results for 1995, there was no significant impact on the general public from Pilgrim Station's operation.

1.0 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, Ref. 1), NRC Regulatory Guide 1.109 (Ref. 2), NRC Regulatory Guide 1.111 (Ref. 3) and the Pilgrim Station Unit I Appendix I Evaluation (Ref. 4). Maximum individual doses are calculated separately for: (1) liquid effluents; (2) particulates, iodines and tritium in gaseous effluents; and, (3) noble gases in gaseous 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 in two semiannual Radioactive Effluent and Waste Disposal Reports (Ref. 5 and 6). Copies of this information are included as Appendix A of this report. These effluent release data were used as input to computer programs to calculate the resulting doses. The Yankee Atomic Electric Company "YODA"-series of computer programs was used to compile the dose contributions to the various organs in each age class from major exposure pathways (Ref. 7).

1.1 Doses From Liquid Effluent Releases

Liquid effluent release data presented in Tables 2A and 2B from the semiannual effluent release reports were used as input to the Yankee Atomic "YODA" computer programs to calculate radiation doses. The maximum individual doses resulting from radionuclides released in liquid effluents are presented in Tables 1.1-1 through 1.1-5. These tables cover the individual calendar quarters and total calendar year, respectively.

Tables 1.1-1 through 1.1-5 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. Due to the refueling outage, concentrations and resulting doses for the second quarter were elevated relative to the remainder of the year. In the case of the annual dose, the radionuclide activities for the second quarter were totaled with those of the other three quarters, and divided by the total volume of waste and dilution flow for the entire year. This yielded a lower concentration of radionuclides for the entire year, and also resulted in the calculated dose for the entire year actually being less than the sum of the four individual quarters.

Radioactivity released in liquid effluents from PNPS during 1995 resulted in a maximum total body dose (teen age class) of 4.37E-03 mrem. The maximum organ dose (adult age class, GI-LLI) was 1.27E-02 mrem.

Table 1.1-1

MAXIMUM INDIVIDUAL ORGAN DOSES BY EXPOSURE PATHWAY -- mrem
From Liquid Release Period: January-March 1995

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	5.88E-06	1.32E-05	1.04E-06	2.38E-09	2.01E-05
Liver	5.41E-06	9.20E-06	1.04E-06	2.38E-09	1.56E-05
Kidney	8.67E-07	2.43E-07	1.04E-06	2.38E-09	2.15E-06
Lung	1.81E-06	4.43E-06	1.04E-06	2.38E-09	7.28E-06
GI-LLI	5.68E-06	1.83E-05	1.04E-06	2.38E-09	2.50E-05
Thyroid	4.07E-08	1.80E-08	1.04E-06	2.38E-09	1.10E-06
Total Body	2.61E-06	4.15E-06	1.04E-06	2.38E-09	7.80E-06
Age Class: Teen					
Bone	6.13E-06	1.18E-05	5.79E-06	2.38E-09	2.37E-05
Liver	5.69E-06	8.58E-06	5.79E-06	2.38E-09	2.01E-05
Kidney	8.89E-07	2.16E-07	5.79E-06	2.38E-09	6.90E-06
Lung	2.19E-06	4.73E-06	5.79E-06	2.38E-09	1.27E-05
GI-LLI	4.10E-06	1.16E-05	5.79E-06	2.38E-09	2.15E-05
Thyroid	3.13E-08	1.21E-08	5.79E-06	2.38E-09	5.84E-06
Total Body	2.01E-06	3.58E-06	5.79E-06	2.38E-09	1.14E-05
Age Class: Child					
Bone	7.85E-06	1.75E-05	1.21E-06	1.33E-09	2.66E-05
Liver	5.32E-06	9.57E-06	1.21E-06	1.33E-09	1.61E-05
Kidney	7.59E-07	2.14E-07	1.21E-06	1.33E-09	2.18E-06
Lung	1.90E-06	4.79E-06	1.21E-06	1.33E-09	7.90E-06
GI-LLI	1.51E-06	4.92E-06	1.21E-06	1.33E-09	7.64E-06
Thyroid	2.59E-08	1.16E-08	1.21E-06	1.33E-09	1.25E-06
Total Body	1.74E-06	4.70E-06	1.21E-06	1.33E-09	7.65E-06

Table 1.1-2

MAXIMUM INDIVIDUAL ORGAN DOSES BY EXPOSURE PATHWAY -- mrem
From Liquid Release Period: April-June 1995

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	8.97E-04	1.17E-03	5.47E-04	1.42E-06	2.42E-03
Liver	1.52E-03	3.43E-03	5.47E-04	1.42E-06	5.50E-03
Kidney	4.46E-04	1.41E-03	5.47E-04	1.42E-06	2.40E-03
Lung	1.68E-04	2.61E-04	5.47E-04	1.42E-06	9.77E-04
GI-LLI	3.84E-03	1.20E-02	5.47E-04	1.42E-06	1.64E-02
Thyroid	8.36E-06	3.79E-06	5.47E-04	1.42E-06	5.61E-04
Total Body	9.16E-04	2.26E-03	5.47E-04	1.42E-06	3.72E-03
Age Class: Teen					
Bone	7.32E-04	9.93E-04	3.05E-03	1.42E-06	4.78E-03
Liver	1.55E-03	3.01E-03	3.05E-03	1.42E-06	7.61E-03
Kidney	4.46E-04	1.17E-03	3.05E-03	1.42E-06	4.67E-03
Lung	1.97E-04	2.67E-04	3.05E-03	1.42E-06	3.52E-03
GI-LLI	2.66E-03	7.33E-03	3.05E-03	1.42E-06	1.30E-02
Thyroid	6.44E-06	2.57E-06	3.05E-03	1.42E-06	3.06E-03
Total Body	7.24E-04	1.98E-03	3.05E-03	1.42E-06	5.76E-03
Age Class: Child					
Bone	9.06E-04	1.31E-03	6.39E-04	7.89E-07	2.86E-03
Liver	1.32E-03	2.83E-03	6.39E-04	7.89E-07	4.79E-03
Kidney	3.65E-04	1.06E-03	6.39E-04	7.89E-07	2.06E-03
Lung	1.58E-04	2.47E-04	6.39E-04	7.89E-07	1.04E-03
GI-LLI	9.20E-04	2.96E-03	6.39E-04	7.89E-07	4.52E-03
Thyroid	5.33E-06	2.48E-06	6.39E-04	7.89E-07	6.48E-04
Total Body	6.01E-04	2.39E-03	6.39E-04	7.89E-07	3.63E-03

Table 1.1-3

MAXIMUM INDIVIDUAL ORGAN DOSES BY EXPOSURE PATHWAY -- mrem
From Liquid Release Period: July-September 1995

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	1.17E-04	3.36E-04	1.90E-05	5.77E-08	4.72E-04
Liver	1.05E-04	2.65E-04	1.90E-05	5.77E-08	3.89E-04
Kidney	1.01E-05	6.37E-06	1.90E-05	5.77E-08	3.55E-05
Lung	5.10E-05	1.30E-04	1.90E-05	5.77E-08	2.00E-04
GI-LLI	2.51E-04	6.34E-04	1.90E-05	5.77E-08	9.04E-04
Thyroid	6.66E-06	3.57E-06	1.90E-05	5.77E-08	2.93E-05
Total Body	3.87E-05	1.02E-04	1.90E-05	5.77E-08	1.60E-04
Age Class: Teen					
Bone	1.23E-04	3.08E-04	1.06E-04	5.77E-08	5.37E-04
Liver	1.09E-04	2.46E-04	1.06E-04	5.77E-08	4.61E-04
Kidney	8.63E-06	4.89E-06	1.06E-04	5.77E-08	1.19E-04
Lung	5.93E-05	1.37E-04	1.06E-04	5.77E-08	3.02E-04
GI-LLI	1.80E-04	4.07E-04	1.06E-04	5.77E-08	6.93E-04
Thyroid	5.18E-06	2.51E-06	1.06E-04	5.77E-08	1.14E-04
Total Body	3.84E-05	9.26E-05	1.06E-04	5.77E-08	2.37E-04
Age Class: Child					
Bone	1.61E-04	4.66E-04	2.21E-05	3.22E-08	6.49E-04
Liver	1.03E-04	2.72E-04	2.21E-05	3.22E-08	3.97E-04
Kidney	6.89E-06	4.49E-06	2.21E-05	3.22E-08	3.35E-05
Lung	5.14E-05	1.39E-04	2.21E-05	3.22E-08	2.13E-04
GI-LLI	6.73E-05	1.78E-04	2.21E-05	3.22E-08	2.67E-04
Thyroid	4.35E-06	2.56E-06	2.21E-05	3.22E-08	2.91E-05
Total Body	4.39E-05	1.27E-04	2.21E-05	3.22E-08	1.93E-04

Table 1.1-4

MAXIMUM INDIVIDUAL ORGAN DOSES BY EXPOSURE PATHWAY -- mrem
From Liquid Release Period: October-December 1995

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	1.57E-05	4.28E-05	6.85E-07	1.71E-09	5.92E-05
Liver	1.19E-05	3.00E-05	6.85E-07	1.71E-09	4.26E-05
Kidney	5.53E-07	1.57E-07	6.85E-07	1.71E-09	1.40E-06
Lung	5.80E-06	1.62E-05	6.85E-07	1.71E-09	2.27E-05
GI-LLI	9.66E-06	2.65E-05	6.85E-07	1.71E-09	3.68E-05
Thyroid	1.09E-08	4.81E-09	6.85E-07	1.71E-09	7.02E-07
Total Body	3.51E-06	8.23E-06	6.85E-07	1.71E-09	1.24E-05
Age Class: Teen					
Bone	1.64E-05	3.91E-05	3.82E-06	1.71E-09	5.93E-05
Liver	1.27E-05	2.81E-05	3.82E-06	1.71E-09	4.46E-05
Kidney	5.65E-07	1.40E-07	3.82E-06	1.71E-09	4.53E-06
Lung	7.09E-06	1.73E-05	3.82E-06	1.71E-09	2.82E-05
GI-LLI	7.33E-06	1.78E-05	3.82E-06	1.71E-09	2.90E-05
Thyroid	8.36E-09	3.24E-09	3.82E-06	1.71E-09	3.84E-06
Total Body	3.36E-06	7.57E-06	3.82E-06	1.71E-09	1.48E-05
Age Class: Child					
Bone	2.14E-05	5.93E-05	7.99E-07	9.55E-10	8.15E-05
Liver	1.23E-05	3.19E-05	7.99E-07	9.55E-10	4.50E-05
Kidney	4.69E-07	1.34E-07	7.99E-07	9.55E-10	1.40E-06
Lung	6.19E-06	1.76E-05	7.99E-07	9.55E-10	2.46E-05
GI-LLI	2.86E-06	8.14E-06	7.99E-07	9.55E-10	1.18E-05
Thyroid	6.90E-09	3.10E-09	7.99E-07	9.55E-10	8.10E-07
Total Body	3.89E-06	1.10E-05	7.99E-07	9.55E-10	1.57E-05

Table 1.1-5

MAXIMUM INDIVIDUAL ORGAN DOSES BY EXPOSURE PATHWAY -- mrem
From Liquid Release Period: January-December 1995

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	6.57E-04	1.29E-03	4.10E-04	1.07E-06	2.36E-03
Liver	1.22E-03	2.78E-03	4.10E-04	1.07E-06	4.41E-03
Kidney	3.28E-04	9.98E-04	4.10E-04	1.07E-06	1.74E-03
Lung	1.88E-04	3.63E-04	4.10E-04	1.07E-06	9.62E-04
GI-LLI	3.02E-03	9.28E-03	4.10E-04	1.07E-06	1.27E-02
Thyroid	1.39E-05	6.97E-06	4.10E-04	1.07E-06	4.32E-04
Total Body	6.99E-04	1.73E-03	4.10E-04	1.07E-06	2.84E-03
Age Class: Teen					
Bone	6.89E-04	1.13E-03	2.29E-03	1.07E-06	4.11E-03
Liver	1.24E-03	2.45E-03	2.29E-03	1.07E-06	5.98E-03
Kidney	3.26E-04	8.30E-04	2.29E-03	1.07E-06	3.45E-03
Lung	2.21E-04	3.78E-04	2.29E-03	1.07E-06	2.89E-03
GI-LLI	2.10E-03	5.68E-03	2.29E-03	1.07E-06	1.01E-02
Thyroid	1.08E-05	4.83E-06	2.29E-03	1.07E-06	2.30E-03
Total Body	5.63E-04	1.52E-03	2.29E-03	1.07E-06	4.37E-03
Age Class: Child					
Bone	8.65E-04	1.57E-03	4.79E-04	5.97E-07	2.91E-03
Liver	1.07E-03	2.37E-03	4.79E-04	5.97E-07	3.92E-03
Kidney	2.67E-04	7.50E-04	4.79E-04	5.97E-07	1.50E-03
Lung	1.82E-04	3.66E-04	4.79E-04	5.97E-07	1.03E-03
GI-LLI	7.34E-04	2.31E-03	4.79E-04	5.97E-07	3.52E-03
Thyroid	9.00E-06	4.83E-06	4.79E-04	5.97E-07	4.93E-04
Total Body	4.82E-04	1.85E-03	4.79E-04	5.97E-07	2.81E-03

1.2 Doses From Gaseous Effluent Releases

Gaseous effluent release data presented in Tables 1A, 1B, and 1C from the semiannual effluent release reports were used as input to the Yankee Atomic "YODA" computer programs to calculate radiation doses. These data include gaseous releases from the PNPS main stack, reactor building vent, turbine building roof exhausters, and tool decontamination facility. Meteorological data obtained from the PNPS 220-foot meteorological tower during 1995 were also used as input to the Yankee Atomic Electric Company's "AEOLUS" computer program (Ref. 8). This computer 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 of this report.

The maximum individual doses resulting from radioactive particulates, iodines and tritium released in gaseous effluents are presented in Tables 1.2-1 through 1.2-5. These tables cover the individual calendar quarters and total calendar year, respectively. Doses resulting from releases of noble gases are addressed independently in the PNPS Technical Specifications. Therefore, none of these tables for maximum individual doses include any dose contributions from noble gases. The presentation and analysis of doses resulting from noble gases are addressed in Section 1.3 of this report.

Tables 1.2-1 through 1.2-5 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 individual 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 effectively controlled by Boston Edison Company, the other pathways of garden vegetable production, milk production and meat production are assumed not to occur. Doses for other offsite locations not under Boston Edison 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 the individual quarters. Doses from gaseous effluents are largely dependent on the meteorological conditions during the release period, as prescribed by the NRC in Regulatory Guide 1.109. Meteorological conditions change throughout the year, and result in differences in the amount of dispersion of gaseous effluents and the resulting dose. For example, a release of gaseous radioactivity 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 activities from the four quarters are summed for the entire year and doses are calculated using annual-average meteorological conditions.

Radioactivity released in gaseous effluents from PNPS during 1995 resulted in a maximum total body dose (teen age class) of 3.56E-01 mrem. The maximum organ dose (child age class, thyroid) was 8.34E-01 mrem. Both of these doses occurred to hypothetical individuals at the shoreline 80 meters north of the PNPS Reactor Building, an area effectively under Boston Edison Control. For the more "realistic" individuals at offsite locations, the maximum total body dose was 1.96E-02 mrem (child age class at a location 820 meters [0.5 miles] southeast of the Reactor Building yielding garden vegetables), while the maximum organ dose was 1.41E-01 mrem (infant thyroid at a location 3970 meters [2.5 miles] west-southwest, yielding vegetables and cow and goat milk).

Table 1.2-1

MAXIMUM INDIVIDUAL ORGAN DOSE AT RECEPTOR LOCATION -- mrem
From Gaseous Release Period: January-March 1995

Receptor:	Bound	Cow/Goat	Garden	Cow/Meat	Resident	Meat
Direction:	N	WSW	SE	W	ESE	S
Distance:	80m	3970m	820m	5770m	800m	3800m
Pathway*:	DI	DIVCG	DIV	DIVCM	DI	DIVM
Age Class: Adult						
Bone	2.10E-03	9.80E-05	1.41E-03	1.75E-05	3.68E-05	1.46E-04
Liver	9.28E-02	2.01E-04	3.80E-03	4.97E-05	1.20E-03	3.70E-04
Kidney	9.34E-02	2.19E-04	3.84E-03	5.30E-05	1.20E-03	3.75E-04
Lung	9.72E-02	1.75E-04	3.81E-03	4.48E-05	1.25E-03	3.66E-04
GI-LLI	9.34E-02	1.95E-04	4.03E-03	4.86E-05	1.20E-03	3.91E-04
Thyroid	2.70E-01	8.52E-03	1.75E-02	1.61E-03	3.32E-03	2.74E-03
Total Body	9.23E-02	1.91E-04	3.82E-03	4.77E-05	1.19E-03	3.70E-04
Age Class: Teen						
Bone	2.61E-03	1.62E-04	2.11E-03	2.71E-05	4.29E-05	2.11E-04
Liver	9.37E-02	2.54E-04	4.20E-03	5.76E-05	1.21E-03	3.91E-04
Kidney	9.45E-02	2.85E-04	4.24E-03	6.29E-05	1.22E-03	3.96E-04
Lung	1.01E-01	2.09E-04	4.25E-03	4.97E-05	1.30E-03	3.90E-04
GI-LLI	9.41E-02	2.33E-04	4.45E-03	5.36E-05	1.21E-03	4.12E-04
Thyroid	3.20E-01	1.30E-02	1.64E-02	2.32E-03	3.93E-03	2.42E-03
Total Body	9.30E-02	2.34E-04	4.24E-03	5.38E-05	1.20E-03	3.92E-04
Age Class: Child						
Bone	3.25E-03	3.90E-04	4.95E-03	6.36E-05	5.05E-05	4.89E-04
Liver	8.30E-02	3.86E-04	5.79E-03	8.37E-05	1.07E-03	5.34E-04
Kidney	8.38E-02	4.32E-04	5.82E-03	9.16E-05	1.08E-03	5.39E-04
Lung	8.96E-02	3.05E-04	5.81E-03	6.97E-05	1.15E-03	5.29E-04
GI-LLI	8.27E-02	3.24E-04	5.94E-03	7.25E-05	1.07E-03	5.44E-04
Thyroid	3.55E-01	2.53E-02	2.36E-02	4.45E-03	4.34E-03	3.54E-03
Total Body	8.25E-02	3.55E-04	5.90E-03	7.80E-05	1.07E-03	5.41E-04
Age Class: Infant						
Bone	2.59E-03	4.28E-04	3.71E-05	4.69E-05	4.27E-05	5.49E-06
Liver	4.85E-02	4.37E-04	5.65E-04	6.20E-05	6.31E-04	5.13E-05
Kidney	4.87E-02	4.61E-04	5.67E-04	6.60E-05	6.33E-04	5.15E-05
Lung	5.47E-02	2.46E-04	6.30E-04	3.07E-05	7.03E-04	5.64E-05
GI-LLI	4.78E-02	2.57E-04	5.56E-04	3.17E-05	6.22E-04	5.03E-05
Thyroid	2.99E-01	5.91E-02	3.25E-03	9.83E-03	3.63E-03	3.56E-04
Total Body	4.79E-02	3.31E-04	5.58E-04	4.37E-05	6.23E-04	5.05E-05

* Pathway designations are as follows:

D = Deposition (Ground Plane) I = Inhalation V = Vegetable Garden
C = Cow Milk G = Goat Milk M = Meat

Table 1.2-2

MAXIMUM INDIVIDUAL ORGAN DOSE AT RECEPTOR LOCATION -- mrem
From Gaseous Release Period: April-June 1995

Receptor:	Bound	Cow/Goat	Cow/Meat	Garden	Resident	Meat
Direction:	NNE	WSW	W	SE	NW	S
Distance:	100m	3970m	5770m	820m	740m	3800m
Pathway*:	DI	DIVCG	DIVCM	DIV	DI	DIVM
Age Class: Adult						
Bone	4.36E-02	6.74E-05	3.69E-05	9.03E-04	6.11E-04	7.18E-05
Liver	6.31E-02	1.07E-04	7.52E-05	1.47E-03	9.48E-04	1.13E-04
Kidney	6.31E-02	1.06E-04	7.51E-05	1.46E-03	9.48E-04	1.11E-04
Lung	6.63E-02	9.51E-05	7.23E-05	1.48E-03	1.00E-03	1.12E-04
GI-LLI	6.34E-02	1.05E-04	7.88E-05	1.58E-03	9.52E-04	1.24E-04
Thyroid	7.28E-02	1.95E-03	7.41E-04	2.55E-03	1.13E-03	3.32E-04
Total Body	6.31E-02	1.03E-04	7.41E-05	1.48E-03	9.48E-04	1.13E-04
Age Class: Teen						
Bone	4.36E-02	9.33E-05	4.69E-05	1.04E-03	6.13E-04	8.46E-05
Liver	6.33E-02	1.30E-04	8.33E-05	1.58E-03	9.51E-04	1.17E-04
Kidney	6.33E-02	1.28E-04	8.32E-05	1.55E-03	9.51E-04	1.15E-04
Lung	6.81E-02	1.09E-04	7.86E-05	1.59E-03	1.03E-03	1.17E-04
GI-LLI	6.35E-02	1.19E-04	8.40E-05	1.67E-03	9.54E-04	1.27E-04
Thyroid	7.53E-02	2.95E-03	1.05E-03	2.50E-03	1.17E-03	3.06E-04
Total Body	6.32E-02	1.17E-04	8.01E-05	1.57E-03	9.50E-04	1.17E-04
Age Class: Child						
Bone	4.37E-02	1.84E-04	8.48E-05	1.61E-03	6.14E-04	1.38E-04
Liver	6.10E-02	1.85E-04	1.12E-04	1.95E-03	9.11E-04	1.45E-04
Kidney	6.10E-02	1.78E-04	1.11E-04	1.90E-03	9.11E-04	1.41E-04
Lung	6.50E-02	1.45E-04	1.02E-04	1.92E-03	9.76E-04	1.42E-04
GI-LLI	6.10E-02	1.51E-04	1.05E-04	1.97E-03	9.12E-04	1.47E-04
Thyroid	7.46E-02	5.75E-03	1.98E-03	3.29E-03	1.17E-03	4.25E-04
Total Body	6.09E-02	1.59E-04	1.06E-04	1.94E-03	9.11E-04	1.45E-04
Age Class: Infant						
Bone	4.36E-02	1.97E-04	5.81E-05	6.33E-04	6.12E-04	4.52E-05
Liver	5.35E-02	2.05E-04	7.46E-05	7.48E-04	7.83E-04	5.34E-05
Kidney	5.35E-02	1.80E-04	7.14E-05	7.48E-04	7.83E-04	5.35E-05
Lung	5.64E-02	1.25E-04	5.58E-05	7.78E-04	8.29E-04	5.56E-05
GI-LLI	5.35E-02	1.23E-04	5.51E-05	7.47E-04	7.83E-04	5.33E-05
Thyroid	6.60E-02	1.33E-02	4.25E-03	8.96E-04	1.02E-03	8.86E-05
Total Body	5.35E-02	1.43E-04	6.07E-05	7.47E-04	7.82E-04	5.33E-05

* Pathway designations are as follows:
D = Deposition (Ground Plane) I = Inhalation V = Vegetable Garden
C = Cow Milk G = Goat Milk M = Meat

Table 1.2-3

MAXIMUM INDIVIDUAL ORGAN DOSE AT RECEPTOR LOCATION -- mrem
From Gaseous Release Period: July-September 1995

Receptor:	Bound	Cow/Goat	Cow/Meat	Garden	Resident	Meat
Direction:	NNE	WSW	W	SE	ESE	S
Distance:	100m	3970m	5770m	820m	800m	3800m
Pathway*:	DI	DIVCG	DIVCM	DIV	DI	DIVM
Age Class: Adult						
Bone	1.01E-03	1.17E-04	2.57E-05	8.57E-04	1.16E-05	8.88E-05
Liver	6.51E-02	2.54E-04	7.51E-05	2.46E-03	7.99E-04	2.08E-04
Kidney	6.53E-02	2.65E-04	7.73E-05	2.47E-03	8.01E-04	2.09E-04
Lung	6.83E-02	2.41E-04	7.29E-05	2.49E-03	8.36E-04	2.09E-04
GI-LLI	6.58E-02	2.63E-04	7.76E-05	2.61E-03	8.07E-04	2.23E-04
Thyroid	1.03E-01	4.85E-03	1.01E-03	3.84E-03	1.23E-03	8.13E-04
Total Body	6.50E-02	2.51E-04	7.44E-05	2.49E-03	7.98E-04	2.09E-04
Age Class: Teen						
Bone	1.35E-03	1.93E-04	3.98E-05	1.30E-03	1.54E-05	1.31E-04
Liver	6.56E-02	3.10E-04	8.44E-05	2.73E-03	8.05E-04	2.20E-04
Kidney	6.58E-02	3.29E-04	8.79E-05	2.73E-03	8.08E-04	2.21E-04
Lung	7.12E-02	2.88E-04	8.08E-05	2.78E-03	8.69E-04	2.22E-04
GI-LLI	6.63E-02	3.14E-04	8.57E-05	2.89E-03	8.13E-04	2.36E-04
Thyroid	1.15E-01	7.33E-03	1.43E-03	4.05E-03	1.37E-03	7.42E-04
Total Body	6.55E-02	3.03E-04	8.30E-05	2.76E-03	8.03E-04	2.22E-04
Age Class: Child						
Bone	1.77E-03	4.66E-04	9.41E-05	3.06E-03	2.02E-05	3.06E-04
Liver	5.81E-02	4.63E-04	1.21E-04	3.76E-03	7.13E-04	3.01E-04
Kidney	5.83E-02	4.91E-04	1.26E-04	3.76E-03	7.15E-04	3.02E-04
Lung	6.30E-02	4.22E-04	1.14E-04	3.80E-03	7.69E-04	3.02E-04
GI-LLI	5.82E-02	4.42E-04	1.17E-04	3.88E-03	7.15E-04	3.11E-04
Thyroid	1.20E-01	1.43E-02	2.73E-03	5.67E-03	1.43E-03	1.08E-03
Total Body	5.79E-02	4.55E-04	1.19E-04	3.84E-03	7.11E-04	3.08E-04
Age Class: Infant						
Bone	1.29E-03	4.51E-04	4.99E-05	1.29E-05	1.47E-05	1.70E-06
Liver	3.36E-02	4.40E-04	6.69E-05	3.56E-04	4.12E-04	2.78E-05
Kidney	3.36E-02	4.58E-04	7.00E-05	3.57E-04	4.13E-04	2.78E-05
Lung	3.82E-02	3.40E-04	4.95E-05	4.02E-04	4.65E-04	3.12E-05
GI-LLI	3.35E-02	3.50E-04	5.01E-05	3.55E-04	4.11E-04	2.75E-05
Thyroid	9.07E-02	3.29E-02	5.89E-03	9.35E-04	1.07E-03	1.21E-04
Total Body	3.34E-02	3.92E-04	5.73E-05	3.55E-04	4.10E-04	2.75E-05

* Pathway designations are as follows:
D = Deposition (Ground Plane) I = Inhalation V = Vegetable Garden
C = Cow Milk G = Goat Milk M = Meat

Table 1.2-4

MAXIMUM INDIVIDUAL ORGAN DOSE AT RECEPTOR LOCATION – mrem
From Gaseous Release Period: October-December 1995

Receptor:	Bound	Cow/Goat	Garden	Resident	Cow/Meat	Meat
Direction:	NE	WSW	SE	ESE	W	S
Distance:	110m	3970m	820m	800m	5770m	3800m
Pathway*:	DI	DIVCG	DIV	DI	DIVCM	DIVM
Age Class: Adult						
Bone	1.46E-03	2.53E-05	6.91E-04	2.98E-05	8.02E-06	4.16E-05
Liver	1.78E-01	1.53E-04	5.39E-03	2.39E-03	6.55E-05	3.42E-04
Kidney	1.78E-01	1.59E-04	5.40E-03	2.40E-03	6.69E-05	3.44E-04
Lung	1.81E-01	1.46E-04	5.40E-03	2.43E-03	6.39E-05	3.42E-04
GI-LLI	1.78E-01	1.51E-04	5.51E-03	2.40E-03	6.56E-05	3.49E-04
Thyroid	3.06E-01	2.62E-03	1.07E-02	4.02E-03	6.41E-04	9.18E-04
Total Body	1.77E-01	1.50E-04	5.39E-03	2.39E-03	6.49E-05	3.43E-04
Age Class: Teen						
Bone	1.84E-03	4.20E-05	1.03E-03	3.46E-05	1.24E-05	6.06E-05
Liver	1.79E-01	1.86E-04	5.96E-03	2.41E-03	7.32E-05	3.62E-04
Kidney	1.80E-01	1.96E-04	5.97E-03	2.42E-03	7.54E-05	3.64E-04
Lung	1.84E-01	1.74E-04	5.99E-03	2.48E-03	7.06E-05	3.63E-04
GI-LLI	1.79E-01	1.80E-04	6.08E-03	2.42E-03	7.24E-05	3.69E-04
Thyroid	3.47E-01	3.95E-03	1.08E-02	4.54E-03	9.08E-04	8.66E-04
Total Body	1.78E-01	1.81E-04	5.97E-03	2.40E-03	7.20E-05	3.63E-04
Age Class: Child						
Bone	2.32E-03	1.01E-04	2.42E-03	4.07E-05	2.93E-05	1.41E-04
Liver	1.58E-01	2.78E-04	8.21E-03	2.14E-03	1.04E-04	4.96E-04
Kidney	1.59E-01	2.93E-04	8.23E-03	2.14E-03	1.08E-04	4.98E-04
Lung	1.63E-01	2.55E-04	8.23E-03	2.20E-03	9.96E-05	4.96E-04
GI-LLI	1.58E-01	2.60E-04	8.29E-03	2.13E-03	1.01E-04	5.00E-04
Thyroid	3.68E-01	7.68E-03	1.54E-02	4.79E-03	1.72E-03	1.24E-03
Total Body	1.58E-01	2.69E-04	8.27E-03	2.13E-03	1.03E-04	4.99E-04
Age Class: Infant						
Bone	1.84E-03	1.13E-04	1.98E-05	3.46E-05	1.94E-05	1.38E-06
Liver	9.16E-02	2.60E-04	7.82E-04	1.24E-03	5.41E-05	4.53E-05
Kidney	9.18E-02	2.69E-04	7.84E-04	1.24E-03	5.60E-05	4.53E-05
Lung	9.60E-02	2.05E-04	8.17E-04	1.30E-03	4.30E-05	4.70E-05
GI-LLI	9.10E-02	2.09E-04	7.77E-04	1.23E-03	4.35E-05	4.49E-05
Thyroid	2.84E-01	1.76E-02	2.32E-03	3.68E-03	3.65E-03	1.51E-04
Total Body	9.11E-02	2.30E-04	7.78E-04	1.23E-03	4.78E-05	4.49E-05

* Pathway designations are as follows:

D = Deposition (Ground Plane) I = Inhalation V = Vegetable Garden
C = Cow Milk G = Goat Milk M = Meat

Table 1.2-5

MAXIMUM INDIVIDUAL ORGAN DOSE AT RECEPTOR LOCATION -- mrem
From Gaseous Release Period: January-December 1995

Receptor:	Bound	Cow/Goat	Garden	Cow/Meat	Resident	Meat
Direction:	N	WSW	SE	W	ESE	S
Distance:	80m	3970m	820m	5770m	800m	3800m
Pathway*:	DI	DIVCG	DIV	DIVCM	DI	DIVM
Age Class: Adult						
Bone	3.55E-02	3.04E-04	3.64E-03	9.26E-05	8.83E-04	3.32E-04
Liver	3.54E-01	9.04E-04	1.29E-02	3.90E-04	5.37E-03	1.09E-03
Kidney	3.56E-01	9.43E-04	1.29E-02	4.00E-04	5.38E-03	1.10E-03
Lung	3.68E-01	8.37E-04	1.29E-02	3.76E-04	5.54E-03	1.09E-03
GI-LLI	3.56E-01	8.96E-04	1.34E-02	3.94E-04	5.39E-03	1.15E-03
Thyroid	6.80E-01	2.06E-02	3.18E-02	5.19E-03	9.66E-03	4.47E-03
Total Body	3.54E-01	8.79E-04	1.29E-02	3.85E-04	5.36E-03	1.10E-03
Age Class: Teen						
Bone	3.66E-02	4.88E-04	5.17E-03	1.38E-04	8.99E-04	4.63E-04
Liver	3.57E-01	1.11E-03	1.42E-02	4.38E-04	5.41E-03	1.16E-03
Kidney	3.59E-01	1.18E-03	1.42E-02	4.54E-04	5.43E-03	1.16E-03
Lung	3.79E-01	9.94E-04	1.43E-02	4.16E-04	5.70E-03	1.16E-03
GI-LLI	3.59E-01	1.06E-03	1.48E-02	4.33E-04	5.43E-03	1.21E-03
Thyroid	7.78E-01	3.12E-02	3.14E-02	7.40E-03	1.10E-02	4.07E-03
Total Body	3.56E-01	1.06E-03	1.43E-02	4.27E-04	5.39E-03	1.16E-03
Age Class: Child						
Bone	3.81E-02	1.14E-03	1.14E-02	3.13E-04	9.18E-04	1.02E-03
Liver	3.20E-01	1.65E-03	1.93E-02	6.24E-04	4.88E-03	1.57E-03
Kidney	3.21E-01	1.75E-03	1.94E-02	6.47E-04	4.90E-03	1.57E-03
Lung	3.39E-01	1.45E-03	1.94E-02	5.81E-04	5.13E-03	1.56E-03
GI-LLI	3.19E-01	1.50E-03	1.97E-02	5.93E-04	4.87E-03	1.59E-03
Thyroid	8.34E-01	6.09E-02	4.44E-02	1.41E-02	1.17E-02	5.88E-03
Total Body	3.19E-01	1.57E-03	1.96E-02	6.08E-04	4.87E-03	1.58E-03
Age Class: Infant						
Bone	3.66E-02	1.21E-03	6.54E-04	1.98E-04	8.98E-04	5.51E-05
Liver	1.99E-01	1.65E-03	2.38E-03	3.55E-04	3.18E-03	1.87E-04
Kidney	1.99E-01	1.69E-03	2.38E-03	3.66E-04	3.18E-03	1.87E-04
Lung	2.15E-01	1.17E-03	2.54E-03	2.58E-04	3.40E-03	1.99E-04
GI-LLI	1.97E-01	1.20E-03	2.36E-03	2.61E-04	3.16E-03	1.85E-04
Thyroid	6.71E-01	1.41E-01	7.08E-03	3.03E-02	9.41E-03	7.01E-04
Total Body	1.97E-01	1.37E-03	2.36E-03	2.98E-04	3.16E-03	1.86E-04

* Pathway designations are as follows:
D = Deposition (Ground Plane) I = Inhalation V = Vegetable Garden
C = Cow Milk G = Goat Milk M = Meat

1.3 Doses From Noble Gas Releases

Noble gas release data presented in Tables 1A, 1B, and 1C from the semiannual effluent release reports were used as input to the Yankee Atomic "YODA" computer programs to calculate radiation doses. Doses resulting from noble gas releases were calculated using 1995 meteorological data, as described in Section 1.2 of this report. The various dispersion (χ/Q) factors calculated with the "AEOLUS" computer program and used to estimate doses from noble gases are presented in Appendix B of this report.

The maximum individual doses resulting from radioactive noble gases released in gaseous effluents are presented in Table 1.3-1 according to specific receptor location. This table includes all noble gas doses for the individual calendar quarters and total calendar year.

It should be noted that the noble gas doses calculated for the entire year (January-December) may not equal the sum of the doses for the individual quarters. As was the case with particulate, iodine, and tritium doses described on page 13, quarterly doses are calculated using the meteorological conditions observed during the quarterly period. Annual doses 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 on Page 13.

Noble gases released in gaseous effluents from PNPS during 1995 resulted in a maximum total body dose of 5.43E-01 mrem. The maximum skin dose was 3.54E+00 mrem. Both of these doses occurred to a hypothetical individual. The maximum total body dose occurred at the shoreline 100 meters (0.1 miles) north-northeast of the PNPS Reactor Building. The maximum skin dose occurred at the shoreline 80 meters (0.05 miles) north of the PNPS Reactor Building. Both of these areas are effectively under Boston Edison control. Doses to more "realistic" individuals at offsite locations would be lower than the doses for these hypothetical site boundary individuals.

Table 1.3-1

Maximum Doses From Noble Gas Releases During 1995

Release Period	Gamma Air Dose (location)	Beta Air Dose (location)	Total Body Dose (location)	Skin Dose (location)
Jan-Mar	4.87E-01 mrad (0.08 km N)	2.22E+00 mrad (0.08 km N)	3.26E-01 mrem (0.08 km N)	2.12E+00 mrem (0.08 km N)
Apr-Jun	4.95E-02 mrad (0.08 km N)	3.81E-03 mrad (0.44 km SSE)	3.35E-02 mrem (0.08 km N)	3.85E-02 mrem (0.08 km N)
Jul-Sep	1.00E-01 mrad (0.10 km NNE)	1.12E-02 mrad (1.23 km SSW)	6.76E-02 mrem (0.10 km NNE)	7.78E-02 mrem (0.10 km NNE)
Oct-Dec	2.27E-01 mrad (0.11 km NE)	1.86E+00 mrad (0.11 km NE)	1.51E-01 mrem (0.11 km NE)	1.62E+00mrem (0.11 km NE)
Jan-Dec	8.13E-01 mrad (0.10 km NNE)	3.76E+00 mrad (0.08 km N)	5.43E-01 mrem (0.10 km NNE)	3.54E+00 mrem (0.08 km N)

2.0 POPULATION AND AVERAGE INDIVIDUAL DOSES

PNPS Technical Specifications do not contain any limits or operational objectives related to population doses. However, NRC Regulatory Guide 1.21 (Ref. 9) 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 rem/person * 4.18 million people = 1.46 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 listed in Table 2.0-1. The values presented in this table are 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 Pilgrim Station Unit 1 Appendix I Evaluation. Population doses were calculated separately for: (1) liquid effluents; and, (2) gaseous effluents. Unlike the Technical Specification addressing doses to maximum exposed individuals resulting from the three types of releases addressed in Section 1 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 population doses, <u>average</u> consumption and use factors for various pathways from Table E-4 of the PNPS ODCM are assumed, rather than the <u>maximum</u> use factors assumed for the maximum exposed individual.

Information related to liquid and gaseous effluent releases were obtained from the two semiannual Radioactive Effluent and Waste Disposal Reports (Ref. 5 and 6). These effluent release data were used as input to computer programs to calculate the resulting total body doses. The Yankee Atomic Electric Company "YODA"-series of computer programs was used to compile the dose contributions to the total body in each age class from major exposure pathways (Ref. 7).

In addition to 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.

TABLE 2.0-1

POPULATION DISTRIBUTION BY DISTANCE AND DIRECTION

	Distance Interval from Pilgrim Station - miles										
SECTOR	0-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	0-50
N	0	0	0	0	0	0	0	0	0	3.09E4	3.09E4
NNE	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	5.30E2	3.48E3	0	0	4.01E3
E	0	0	0	0	0	0	0	3.29E3	3.41E2	0	3.63E3
ESE	0	0	1.50E1	0	0	0	0	5.88E3	1.31E4	0	1.90E4
SE	5.70E2	1.76E2	4.76E2	0	0	0	1.24E3	4.02E4	5.91E3	0	4.86E4
SSE	1.90E1	2.10E2	5.30E2	2.03E3	8.19E2	1.39E3	1.32E4	1.95E4	0	7.12E2	3.84E4
S	0	3.90E1	2.08E2	5.30E1	2.20E1	2.39E3	1.66E4	2.52E4	7.80E3	7.12E2	5.30E4
SSW	1.90E1	0	2.30E1	0	0	9.98E2	1.58E4	7.80E3	3.16E2	3.59E2	2.53E4
SW	0	3.90E1	1.23E2	6.50E1	3.49E2	4.97E2	1.28E4	1.42E5	4.64E4	4.65E4	2.49E5
WSW	0	7.70E1	2.36E2	3.00E0	2.17E2	2.52E3	1.18E4	5.04E4	1.37E5	1.85E5	3.87E5
W	5.80E1	9.50E1	4.75E2	1.25E3	4.52E3	9.56E3	1.76E4	6.05E4	1.42E5	3.78E5	6.14E5
WNW	1.17E2	0	0	0	7.11E2	1.03E4	2.83E4	1.65E5	1.13E5	1.08E5	4.25E5
NW	1.90E1	0	0	0	8.00E0	5.65E3	3.96E4	2.07E5	8.21E5	6.36E5	1.71E6
NNW	0	0	0	0	1.30E1	1.55E3	2.66E4	2.83E4	1.04E5	4.14E5	5.74E5
TOTAL	8.02E2	6.36E2	2.09E3	3.40E3	6.66E3	3.49E4	1.84E5	7.59E5	1.39E6	1.80E6	4.18E6

* Population distribution data based on 1980 Census Data

2.1 Doses From Liquid Effluent Releases

Population total body doses (person-rem) resulting from releases of radionuclides in liquid effluents are presented in Table 2.1-1. These population doses represent the collective sum of doses received by the entire population living within 50 miles 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 2.1-2.

Radioactivity released in liquid effluents from PNPS during 1995 resulted in a population total body dose of 3.41E-02 person-rem. The corresponding average individual total body dose was 8.14E-06 mrem.

Again, it should be noted that the calculated dose for the entire year is different than the sum of the individual four quarters. This difference is due to the methods and equations used to calculate dose from liquid effluents, as recommended by the NRC in Regulatory Guide 1.109 (Reference 2). A more detailed description of the difference can be found on Page 7, in the discussion of maximum individual doses from liquid effluent releases.

Table 2.1-1

Population Doses From Liquid Effluent Releases During 1995

Exposure Pathway	Population Total Body Dose : person-rem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Fish	4.20E-05	1.48E-02	6.99E-04	6.27E-05	1.14E-02
Shellfish	4.39E-05	2.36E-02	1.10E-03	9.08E-05	1.81E-02
Swimming	2.38E-08	1.42E-05	5.78E-07	1.71E-08	1.07E-05
Shoreline Deposition	1.07E-05	6.13E-03	2.24E-04	7.55E-06	4.61E-03
Total	9.66E-05	4.45E-02	2.02E-03	1.61E-04	3.41E-02

Table 2.1-2

Average Individual Doses From Liquid Effluent Releases During 1995

Exposure Pathway	Average Individual Total Body Dose : mrem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Fish	1.01E-08	3.54E-06	1.67E-07	1.50E-08	2.72E-06
Shellfish	1.05E-08	5.64E-06	2.64E-07	2.17E-08	4.32E-06
Swimming	5.70E-12	3.39E-09	1.38E-10	4.10E-12	2.56E-09
Shoreline Deposition	2.57E-09	1.46E-06	5.35E-08	1.81E-09	1.10E-06
Total	2.32E-08	1.06E-05	4.85E-07	3.85E-08	8.14E-06

2.2 Doses From Gaseous Effluent Releases

Population total body doses (person-rem) resulting from releases of radionuclides in gaseous effluents are presented in Table 2.2-1. These population doses represent the collective sum of doses received by the entire population living within 50 miles 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 2.2-2.

Radioactivity released in gaseous effluents from PNPS during 1995 resulted in a population total body dose of 1.65E+00 person-rem. The corresponding average individual total body dose was 3.94E-04 mrem.

Again, it should be noted that the calculated dose for the entire year is different than the sum of the individual four quarters. This difference is due to the methods and equations used to calculate dose from gaseous effluents, as recommended by the NRC in Regulatory Guide 1.109 (Reference 2). A more detailed description of the difference can be found on Page 13, in the discussion of maximum individual doses from gaseous effluent releases.

Table 2.2-1
Population Doses From Gaseous Effluent Releases During 1995

Exposure Pathway	Population Total Body Dose : person-rem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Noble Gas	7.64E-01	2.42E-01	2.95E-01	5.98E-02	1.61E+00
Ground Deposition	1.06E-04	2.70E-03	2.44E-05	2.29E-05	2.14E-03
Inhalation	6.76E-03	3.57E-03	4.90E-03	7.60E-03	2.98E-02
Vegetables	4.94E-04	2.70E-04	5.54E-04	5.14E-04	2.45E-03
Milk	3.00E-04	2.05E-04	3.66E-04	3.07E-04	1.64E-03
Meat	1.82E-05	1.14E-05	2.28E-05	1.94E-05	9.82E-05
Total	7.72E-01	2.49E-01	3.01E-01	6.83E-02	1.65E+00

Table 2.2-2
Average Individual Doses From Gaseous Effluent Releases During 1995

Exposure Pathway	Average Individual Total Body Dose : mrem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Noble Gas	1.83E-04	5.79E-05	7.05E-05	1.43E-05	3.86E-04
Ground Deposition	2.53E-08	6.46E-07	5.83E-09	5.48E-09	5.12E-07
Inhalation	1.62E-06	8.54E-07	1.17E-06	1.82E-06	7.13E-06
Vegetables	1.18E-07	6.46E-08	1.32E-07	1.23E-07	5.86E-07
Milk	7.17E-08	4.90E-08	8.75E-08	7.34E-08	3.92E-07
Meat	4.35E-09	2.73E-09	5.45E-09	4.64E-09	2.35E-08
Total	1.85E-04	5.95E-05	7.19E-05	1.63E-05	3.95E-04

3.0 OFFSITE AMBIENT RADIATION MEASUREMENTS

PNPS Technical Specifications do not contain any limits or operational objectives related specifically to offsite ambient (direct) radiation exposure. However, NRC Regulatory Guide 1.21 (Ref. 9) 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 actually located on Boston Edison 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 3.0-1.

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 - 70 mrem/yr. As calculated in Sections 1.2 and 1.3 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 nitrogen-16 gamma rays emitted from the turbine building. Although this material is enclosed in the process lines and not released into the environment, the ambient radiation exposure and sky shine from this contained source accounts for the majority of the ambient radiation dose, especially in close proximity to the station. Other sources of ambient radiation exposure include radiation emitted from contained radioactive sources 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 Boston Edison controlled property.

The average exposure values presented in Table 3.0-1 appear to indicate an elevation in ambient radiation exposure in TLD Zone 1; those TLDs within 2 miles of PNPS. Most of this apparent elevation is due to increases in exposure levels measured at the TLD locations on Boston Edison 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 I&S Building, was 462 mR for the entire year. This location is immediately adjacent to the station proper and overlooks the turbine building, therefore receiving the highest direct radiation and sky shine exposure.

Although the annual exposure at TLD location OA was 402 mR/yr 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 800 meters (0.5 miles) southeast of the PNPS Reactor Building, the annual exposure was 63.4 ± 4.9 mR, which compares quite well to the Zone 4 annual average of 59.5 ± 7.0 mR.

3.0 OFFSITE AMBIENT RADIATION MEASUREMENTS (continued)

In December of 1994, Boston Edison Company contracted with the Plymouth Athletic Club to provide health club services in the old training facility (I&S Building) overlooking the plant. This site is immediately adjacent to the protected area boundary near monitoring location OA and receives appreciable amounts of sky-shine from the Turbine Building. Although the personnel assigned to this facility are contractors of Boston Edison Company, and have received Level 1 general employee training, they are considered to be members of the public. Due to their extended presence in the facility (2000 hr) during 1995, these personnel represent the worst-case in regards to ambient radiation exposure to a member of the public. Their annual incremental radiation dose above background during 1995 is estimated as being about 33 mrem, based on the average exposure measured by three TLDs in the building.

Again, it must be emphasized that this exposure was received by personnel who are contractors of Boston Edison Company working in a facility on property under the ownership and control of Boston Edison. 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 40 CFR 190. 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 any elevation in ambient radiation levels resulting from the operation of Pilgrim Nuclear Power 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 Boston Edison control. For members of the general public who are not employed or contracted with Boston Edison and are accessing Boston Edison controlled areas (e.g., Shorefront Recreation Area, I&S Building, Parking Lots, etc.), such increases in dose from ambient radiation exposure are estimated as being less than 2 mrem/yr.

Table 3.0-1

AVERAGE TLD EXPOSURES BY DISTANCE ZONE DURING 1995

Exposure Period	Average Exposure ± 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	23.5 ± 18.8	15.7 ± 2.9	15.2 ± 1.5	16.0 ± 1.6
Apr-Jun	17.8 ± 7.0	13.5 ± 2.5	13.2 ± 1.8	13.9 ± 1.6
Jul-Sep	22.8 ± 20.4	14.3 ± 2.5	14.0 ± 1.4	14.7 ± 1.6
Oct-Dec	23.9 ± 22.7	14.1 ± 3.0	14.0 ± 2.3	14.8 ± 1.9
Jan-Dec	87.8 ± 72.8	57.6 ± 11.2	56.4 ± 7.4	59.5 ± 7.0

* Zone 1 extends from the PNPS restricted/protected area boundary outward to 3 kilometers (2 miles).

4.0 PERCENT OF TECHNICAL SPECIFICATIONS LIMITS/OBJECTIVES

The PNPS Technical Specifications contain dose and concentration limits for radioactive effluents. In addition, operational objectives are also specified which, if met, ensure that radioactive releases are maintained as low as is reasonably achievable. The percentages of the PNPS Technical Specifications were determined from the doses calculated in Section 1, the liquid concentrations listed in the 1995 semiannual Effluent Release and Waste Disposal Reports, and the Technical Specification limits/objectives listed in Tables 4.1-1 and 4.2-1.

The percent of applicable limits are provided as a supplement to the information provided in the two semiannual Radioactive Effluent and Waste Disposal Reports. The format for the percent applicable limits is modified from that prescribed in Regulatory Guide 1.21 (Ref. 9) to accommodate the Radioactive Effluents Technical Specifications (RETS) which became effective March 1, 1986. The percentages have been grouped according to whether the releases were via liquid or gaseous effluent pathways.

4.1 Liquid Effluent Releases

Liquid effluent concentration limits and dose objectives from PNPS Technical Specifications are shown in Table 4.1-1. The quarterly average concentrations from the 1995 semiannual Radioactive Effluent and Waste Disposal reports were used to calculate the percent concentration limits. The maximum quarterly and annual whole body and organ doses from Tables 1.1-1 through 1.1-5 were used to calculate the corresponding percentages shown in Table 4.1-1. The resulting concentrations and doses from Pilgrim Station's liquid releases during 1995 were a very small percentage of the corresponding limits and objectives.

Table 4.1-1

Percent of Technical Specification Limits/Objectives
for Liquid Effluent Releases During 1995

A. Fission and Activation Product Effluent Concentration Limit
PNPS Technical Specification 3.8.A.1
Limit: 10CFR20 Appendix B, Table II, Column 2 Value

Period	Value (μCi/ml)	Fraction of Limit
Jan-Mar	9.71E-11	4.08E-03%
Apr-Jun	2.94E-08	1.18E+00%
Jul-Sep	2.13E-09	3.69E-02%
Oct-Dec	4.39E-10	7.55E-03%

B. Tritium Average Concentration Limit
PNPS Technical Specification 3.8.A.1
Limit: 1.0E-03 μCi/ml

Period	Value (μCi/ml)	Fraction of Limit
Jan-Mar	2.15E-08	2.15E-03%
Apr-Jun	3.26E-06	3.26E-01%
Jul-Sep	3.09E-06	3.09E-01%
Oct-Dec	1.80E-08	1.80E-03%

C. Dissolved and Entrained Gases Average Concentration Limit
PNPS Technical Specification 3.8.A.1
Limit: 2.0E-04 μCi/ml

Period	Value (μCi/ml)	Fraction of Limit
Jan-Mar	NDA	--
Apr-Jun	NDA	--
Jul-Sep	2.81E-12	1.40E-06%
Oct-Dec	NDA	--

D. Quarterly Total Body Dose Objective
PNPS Technical Specification 7.2.A.1
Objective: 1.5 mrem Total Body Dose

Period	Value (mrem)	Fraction of Limit
Jan-Mar	1.14E-05	7.60E-04%
Apr-Jun	5.76E-03	3.84E-01%
Jul-Sep	2.37E-04	1.58E-02%
Oct-Dec	1.57E-05	1.05E-03%

Table 4.1-1 (continued)

Percent of Technical Specification Limits/Objectives
for Liquid Effluent Releases During 1995

E. Annual Total Body Dose Objective
PNPS Technical Specification 7.2.A.2
Objective: 3 mrem Total Body Dose

Period	Value (mrem)	Fraction of Limit
Jan-Dec	4.37E-03	1.46E-01%

F. Quarterly Organ Dose Objective
PNPS Technical Specification 7.2.A.1
Objective: 5 mrem Organ Dose

Period	Value (mrem)	Fraction of Limit
Jan-Mar	2.66E-05	5.32E-04%
Apr-Jun	1.64E-02	3.28E-01%
Jul-Sep	9.04E-04	1.81E-02%
Oct-Dec	8.15E-05	1.63E-03%

G. Annual Organ Dose Objective
PNPS Technical Specification 7.2.A.2
Objective: 10 mrem Organ Dose

Period	Value (mrem)	Fraction of Limit
Jan-Dec	1.27E-02	1.27E-01%

4.2 Gaseous Effluent Releases

Organ dose limits and objectives for the maximum individual from radioactive iodines, particulates, and tritium from PNPS Technical Specifications are shown in Table 4.2-1. The maximum quarterly and annual organ doses from Tables 1.2-1 through 1.2-5 were used to calculate the percentages shown in Table 4.2-1. The resulting organ doses from Pilgrim Station's gaseous releases during 1995 were a small percentage of the corresponding limits and objectives.

Dose limits and objectives for exposures arising from noble gases are also presented in Table 4.2-1. The maximum quarterly air doses and annual whole body and skin doses listed in Table 1.3-1 were used to calculate the percentage values shown in Table 4.2-1. All doses resulting from noble gas exposure were a small percentage of the applicable limits and objectives.

Table 4.2-1

Percent of Technical Specification Limits/Objectives
for Gaseous Effluent Releases During 1995

A. Annual Dose Rate Limit - Noble Gases
PNPS Technical Specification 3.8.D.1.a
Limit: 500 mrem/yr Total Body Dose

Period	Value (mrem/yr)	Fraction of Limit
Jan-Dec	5.43E-01	1.09E-01%

B. Annual Dose Rate Limit - Noble Gases
PNPS Technical Specification 3.8.D.1.a
Limit: 3000 mrem/yr Skin Dose

Period	Value (mrem/yr)	Fraction of Limit
Jan-Dec	3.54E+00	1.18E-01%

C. Annual Dose Rate Limit - Particulates, Iodines, & Tritium
PNPS Technical Specification 3.8.D.1.b
Limit: 1500 mrem/yr Organ Dose

Period	Value (mrem/yr)	Fraction of Limit
Jan-Dec	8.34E-01	5.56E-02%

D. Quarterly Dose Objective - Noble Gas Gamma Air Dose
PNPS Technical Specification 7.3.A.1
Objective: 5 mrad Gamma Air Dose

Period	Value (mrad)	Fraction of Limit
Jan-Mar	4.87E-01	9.74E+00%
Apr-Jun	4.95E-02	9.90E-01%
Jul-Sep	1.00E-01	2.00E+00%
Oct-Dec	2.27E-01	4.53E+00%

E. Annual Dose Objective - Noble Gas Gamma Air Dose
PNPS Technical Specification 7.3.A.2
Objective: 10 mrad Gamma Air Dose

Period	Value (mrad)	Fraction of Limit
Jan-Dec	8.13E-01	8.13E+00%

Table 4.2-1 (continued)

Percent of Technical Specification Limits/Objectives
for Gaseous Effluent Releases During 1995

F. Quarterly Dose Objective - Noble Gas Beta Air Dose
PNPS Technical Specification 7.3.A.1
Objective: 10 mrad Beta Air Dose

Period	Value (mrad)	Fraction of Limit
Jan-Mar	2.22E+00	2.22E+01%
Apr-Jun	3.81E-03	3.81E-02%
Jul-Sep	1.12E-02	1.12E-01%
Oct-Dec	1.86E+00	1.86E+01%

G. Annual Dose Objective - Noble Gas Beta Air Dose
PNPS Technical Specification 7.3.A.2
Objective: 20 mrad Beta Air Dose

Period	Value (mrad)	Fraction of Limit
Jan-Dec	3.76E+00	1.88E+01%

H. Quarterly Dose Objective - Particulates, Iodines, & Tritium
PNPS Technical Specification 7.4.A.1
Objective: 7.5 mrem Organ Dose

Period	Value (mrem)	Fraction of Limit
Jan-Mar	3.55E-01	4.73E+00%
Apr-Jun	7.53E-02	1.00E+00%
Jul-Sep	1.20E-01	1.60E+00%
Oct-Dec	3.68E-01	4.91E+00%

I. Annual Dose Objective - Particulates, Iodines, & Tritium
PNPS Technical Specification 7.4.A.2
Objective: 15 mrem Organ Dose

Period	Value (mrem)	Fraction of Limit
Jan-Dec	8.34E-01	5.56E+00%

5.0 REFERENCES

1. Boston Edison Company, "Pilgrim Nuclear Power Station Off-site Dose Calculation Manual," Revision 7, November 1995.

2. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.109, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10CFR50, Appendix I," Revision 1, October 1977.

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4. Boston Edison Company, "Pilgrim Station Unit 1 Appendix I Evaluation," April 1977.

5. Boston Edison Company, Pilgrim Nuclear Power Station, "Radioactive Effluent and Waste Disposal Report including Meteorological Data for January 1 through June 30, 1995," August 1995.

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9. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.21, "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," June 1974.

APPENDIX A

Effluent Release Information

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Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Supplemental Information
January-June 1995

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 μCi/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:
b. Iodines:
c. Particulates:
d. Liquid effluents:

High purity germanium gamma spectroscopy for all gamma emitters; radiochemistry analysis for H-3, Fe-55 (liquid effluents), Sr-89, and Sr-90

5. BATCH RELEASES

	Jan-Mar 1995	Apr-Jun 1995
a. Liquid Effluents		
1. Total number of releases:	3.40E+01	6.30E+01
2. Total time period (minutes):	2.51E+03	3.37E+03
3. Maximum time period (minutes):	3.49E+02	1.80E+02
4. Average time period (minutes):	7.38E+01	5.35E+01
5. Minimum time period (minutes):	2.50E+01	1.30E+01
6. Average stream flow (Liters/min): during periods of release of effluents into a flowing stream	1.11E+06	6.95E+05
b. Gaseous Effluents	None	None

6. ABNORMAL RELEASES

a. Liquid Effluents	None	None
b. Gaseous Effluents	None	None

Table 1A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Summation of All Releases
January-June 1995

	Period: Jan-Mar 1995	Period: Apr-Jun 1995	Estimated Total Error
A. FISSION AND ACTIVATION GASES			
	1.58E+03	1.67E+02	22%
Average Release Rate During Period: μCi/sec	2.00E+02	2.12E+01	
Percent of Technical Specification Limit	*	*	
B. IODINES			
Total Iodine-131 Release: Ci	3.29E-03	5.10E-04	20%
Average Release Rate During Period: μCi/sec	4.17E-04	6.47E-05	
Percent of Technical Specification Limit	*	*	
C. PARTICULATES			
Total Release: Ci	8.54E-04	3.82E-04	21%
Average Release Rate During Period: μCi/sec	1.08E-04	4.85E-05	
Percent of Technical Specification Limit	*	*	
Gross Alpha Radioactivity: Ci	NDA	NDA	
D. TRITIUM			
Total Release: Ci	1.28E+01	3.46E+00	20%
Average Release Rate During Period: μCi/sec	1.62E+00	4.39E-01	
Percent of Technical Specification Limit	*	*	

Notes for Table 1A:

* Percent of Technical Specification limit values in above sections are based on dose assessments not performed as part of this report. These will be provided in the annual supplemental dose assessment report to be issued prior to April 1, 1996.

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

Table 1B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Elevated Release
January-June 1995

Nuclide Released	Continuous Mode		Batch Mode	
	Jan-Mar 1995	Apr-Jun 1995	Jan-Mar 1995	Apr-Jun 1995
1. FISSION AND ACTIVATION GASES - Ci				
N-13	NDA	NDA	N/A	N/A
Kr-85m	2.07E+02	4.33E+01	N/A	N/A
Kr-87	2.55E+02	2.45E+01	N/A	N/A
Kr-88	5.16E+02	8.77E+01	N/A	N/A
Xe-133	1.51E+02	9.77E+00	N/A	N/A
Xe-135	2.87E+02	1.67E+00	N/A	N/A
Xe-135m	NDA	NDA	N/A	N/A
Xe-138	2.10E+01	NDA	N/A	N/A
Total for period	1.44E+03	1.67E+02	N/A	N/A
2. IODINES - CI				
I-131	1.78E-03	3.57E-04	N/A	N/A
I-133	5.92E-03	4.54E-03	N/A	N/A
Total for period	7.70E-03	4.90E-03	N/A	N/A
3. PARTICULATES - Ci				
Sr-89	3.83E-05	4.72E-05	N/A	N/A
Sr-90	NDA	NDA	N/A	N/A
Cs-134	NDA	NDA	N/A	N/A
Cs-137	4.79E-06	2.73E-06	N/A	N/A
Ba/La-140	1.31E-04	1.32E-04	N/A	N/A
Total for period	1.74E-04	1.82E-04	N/A	N/A
4. TRITIUM - Ci				
H-3	4.59E-01	3.42E-01	N/A	N/A

Notes for Table 1B:

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 1C
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Ground Level Release
January-June 1995

Nuclide Released	Continuous Mode		Batch Mode	
	Jan-Mar 1995	Apr-Jun 1995	Jan-Mar 1995	Apr-Jun 1995
1. FISSION AND ACTIVATION GASES - Ci				
N-13	NDA	NDA	N/A	N/A
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	1.16E+02	NDA	N/A	N/A
Xe-135m	NDA	NDA	N/A	N/A
Xe-138	1.96E+01	NDA	N/A	N/A
Total for period	1.36E+02	NDA	N/A	N/A
2. IODINES - Ci				
I-131	1.51E-03	1.53E-04	N/A	N/A
I-133	5.94E-03	8.10E-05	N/A	N/A
Total for period	7.45E-03	2.34E-04	N/A	N/A
3. PARTICULATES - Ci				
Co-60	NDA	8.67E-05	N/A	N/A
Sr-89	3.58E-04	7.99E-05	N/A	N/A
Sr-90	NDA	NDA	N/A	N/A
Cs-134	NDA	NDA	N/A	N/A
Cs-137	NDA	7.26E-06	N/A	N/A
Ba/La-140	3.22E-04	2.64E-05	N/A	N/A
Total for period	6.80E-04	2.00E-04	N/A	N/A
4. TRITIUM - Ci				
H-3	1.23E+01	3.12E+00	N/A	N/A

Notes for Table 1C:

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 2A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents - Summation of All Releases
January-June 1995

	Period: Jan-Mar 1995	Period: Apr-Jun 1995	Estimated Total Error
A. FISSION AND ACTIVATION PRODUCTS			
Total Release (not including H-3, noble gas, or alpha): Ci	2.71E-04	6.89E-02	12%
Average Diluted Concentration During Period: µCi/mL	9.71E-11	2.94E-08	
Percent of Effluent Concentration Limit*	4.08E-03	1.18E+00	
B. TRITIUM			
Total Release: Ci	5.99E-02	7.65E+00	9.4%
Average Diluted Concentration During Period: µCi/mL	2.15E-08	3.26E-06	
Percent of Effluent Concentration Limit*	2.15E-03	3.26E-01	
C. DISSOLVED AND ENTRAINED GASES			
Total Release: Ci	NDA	NDA	16%
Average Diluted Concentration During Period: µCi/mL	NDA	NDA	
Percent of Effluent Concentration Limit*	NDA	NDA	
D. GROSS ALPHA RADIOACTIVITY			
Total Release: Ci	NDA	NDA	34%
E. VOLUME OF WASTE RELEASED PRIOR TO DILUTION			
Waste Volume: Liters	3.56E+05	1.22E+06	5.7%
F. VOLUME OF DILUTION WATER USED DURING PERIOD			
Dilution Volume: Liters	2.79E+09	2.34E+09	10%

Notes for Table 2A:

* Additional percent of Technical Specification limit values based on dose assessments will be provided in the annual supplemental dose assessment report to be issued prior to April 1, 1996.

1. NDA stands for No Detectable Activity.
2. LLD for dissolved and entrained gases listed as NDA is 1E-05 µCi/mL.
2. LLD for liquid gross alpha activity listed as NDA is 1E-07 µCi/mL.

Table 2B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents
January-June 1995

Nuclide Released	Continuous Mode		Batch Mode	
	Jan-Mar 1995	Apr-Jun 1995	Jan-Mar 1995	Apr-Jun 1995
1. FISSION AND ACTIVATION PRODUCTS - Ci				
Cr-51	N/A	N/A	NDA	7.97E-04
Mn-54	N/A	N/A	1.58E-05	9.64E-03
Fe-55	N/A	N/A	6.66E-05	4.93E-04
Fe-59	N/A	N/A	NDA	6.71E-04
Co-58	N/A	N/A	NDA	3.02E-03
Co-60	N/A	N/A	1.09E-04	4.02E-02
Zn-65	N/A	N/A	NDA	5.19E-04
Sr-89	N/A	N/A	7.11E-06	7.80E-06
Sr-90	N/A	N/A	2.81E-06	4.91E-06
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	NDA	6.40E-05
Sb-124	N/A	N/A	NDA	9.78E-07
I-131	N/A	N/A	NDA	2.17E-07
I-133	N/A	N/A	NDA	NDA
Cs-134	N/A	N/A	NDA	3.15E-04
Cs-137	N/A	N/A	6.97E-05	1.32E-02
Ba/La-140	N/A	N/A	NDA	NDA
Ce-141	N/A	N/A	NDA	1.37E-05
Total for period	N/A	N/A	2.71E-04	6.89E-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 2B:

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 µCi/mL
   - Iodines: 1E-06 µCi/mL
   - Noble Gases: 1E-05 µCi/mL
   - All Others: 5E-07 µCi/mL

Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Supplemental Information
July-December 1995

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 µCi/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:
b. Iodines:
c. Particulates:
d. Liquid effluents:

High purity germanium gamma spectroscopy for all gamma emitters; radiochemistry analysis for H-3, Fe-55 (liquid effluents), Sr-89, and Sr-90

5. BATCH RELEASES

	Jul-Sep 1995	Oct-Dec 1995
a. Liquid Effluents		
1. Total number of releases:	3.30E+01	1.60E+01
2. Total time period (minutes):	2.70E+03	8.00E+02
3. Maximum time period (minutes):	2.35E+02	1.50E+02
4. Average time period (minutes):	8.17E+01	5.00E+01
5. Minimum time period (minutes):	2.00E+01	5.00E+00
6. Average stream flow (Liters/min): during periods of release of effluents into a flowing stream	1.17E+06	1.17E+06
b. Gaseous Effluents	None	None

6. ABNORMAL RELEASES

a. Liquid Effluents	None	None
b. Gaseous Effluents	None	None

Table 1A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Summation of All Releases
July-December 1995

	Period: Jul-Sep 1995	Period: Oct-Dec 1995	Estimated Total Error
A. FISSION AND ACTIVATION GASES			
Total Release: Ci	3.85E+02	2.09E+02	22%
Average Release Rate During Period: μCi/sec	4.88E+01	2.65E+01	
Percent of Technical Specification Limit	*	*	
B. IODINES			
Total Iodine-131 Release: Ci	9.11E-04	1.42E-03	20%
Average Release Rate During Period: μCi/sec	1.16E-04	1.80E-04	
Percent of Technical Specification Limit	*	*	
C. PARTICULATES			
Total Release: Ci	5.77E-04	5.44E-04	21%
Average Release Rate During Period: μCi/sec	7.32E-05	6.90E-05	
Percent of Technical Specification Limit	*	*	
Gross Alpha Radioactivity: Ci	NDA	NDA	
D. TRITIUM			
Total Release: Ci	8.51E+00	2.32E+01	20%
Average Release Rate During Period: μCi/sec	1.08E+00	2.94E+00	
Percent of Technical Specification Limit	*	*	

Notes for Table 1A:

* Percent of Technical Specification limit values in above sections are based on dose assessments not performed as part of this report. These will be provided in the annual supplemental dose assessment report to be issued prior to April 1, 1996.

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

Table 1B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Elevated Release
July-December 1995

Nuclide Released	Continuous Mode		Batch Mode	
	Jul-Sep 1995	Oct-Dec 1995	Jul-Sep 1995	Oct-Dec 1995
1. FISSION AND ACTIVATION GASES - Ci				
N-13	NDA	NDA	N/A	N/A
Ar-41	NDA	9.40E-01	N/A	N/A
Kr-85m	1.01E+02	1.80E+01	N/A	N/A
Kr-87	2.94E+01	1.69E+00	N/A	N/A
Kr-88	1.71E+02	1.79E+01	N/A	N/A
Xe-133	7.00E+01	3.34E+01	N/A	N/A
Xe-135	2.57E+00	2.70E+00	N/A	N/A
Xe-135m	NDA	NDA	N/A	N/A
Xe-138	1.09E+01	1.78E+01	N/A	N/A
Total for period	3.85E+02	9.24E+01	N/A	N/A
2. IODINES - Ci				
I-131	7.57E-04	7.44E-04	N/A	N/A
I-133	3.32E-03	2.58E-03	N/A	N/A
Total for period	4.08E-03	3.33E-03	N/A	N/A
3. PARTICULATES - Ci				
Sr-89	3.40E-05	2.00E-05	N/A	N/A
Sr-90	NDA	NDA	N/A	N/A
Cs-134	NDA	NDA	N/A	N/A
Cs-137	NDA	NDA	N/A	N/A
Ba/La-140	1.58E-04	3.53E-05	N/A	N/A
Total for period	1.92E-04	5.53E-05	N/A	N/A
4. TRITIUM - Ci				
H-3	7.04E-01	5.38E-01	N/A	N/A

Notes for Table 1B:

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 1C
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Ground Level Release
July-December 1995

Nuclide Released	Continuous Mode		Batch Mode	
	Jul-Sep 1995	Oct-Dec 1995	Jul-Sep 1995	Oct-Dec 1995
1. FISSION AND ACTIVATION GASES - Ci				
N-13	NDA	6.20E-01	N/A	N/A
Ar-41	NDA	NDA	N/A	N/A
Kr-85m	NDA	2.50E-01	N/A	N/A
Kr-87	NDA	1.12E+00	N/A	N/A
Kr-88	NDA	7.40E-01	N/A	N/A
Xe-133	NDA	1.20E-01	N/A	N/A
Xe-135	NDA	1.06E+02	N/A	N/A
Xe-135m	NDA	2.11E+00	N/A	N/A
Xe-138	NDA	5.58E+00	N/A	N/A
Total for period	NDA	1.17E+02	N/A	N/A
2. IODINES - Ci				
I-131	1.54E-04	6.80E-04	N/A	N/A
I-133	1.87E-03	6.23E-03	N/A	N/A
Total for period	2.02E-03	6.91E-03	N/A	N/A
3. PARTICULATES - Ci				
Co-60	NDA	NDA	N/A	N/A
Sr-89	3.29E-04	2.34E-04	N/A	N/A
Sr-90	NDA	NDA	N/A	N/A
Cs-134	NDA	NDA	N/A	N/A
Cs-137	NDA	NDA	N/A	N/A
Ba/La-140	5.55E-05	2.55E-04	N/A	N/A
Total for period	3.85E-04	4.89E-04	N/A	N/A
4. TRITIUM - Ci				
H-3	7.81E+00	2.27E+01	N/A	N/A

Notes for Table 1C:

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 2A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents - Summation of All Releases
July-December 1995

	Period: Jul-Sep 1995	Period: Oct-Dec 1995	Estimated Total Error
A. FISSION AND ACTIVATION PRODUCTS			
Total Release (not including H-3, noble gas, or alpha): Ci	6.78E-03	4.12E-04	12%
Average Diluted Concentration During Period: µCi/mL	2.13E-09	4.39E-10	
Percent of Effluent Concentration Limit*	3.69E-02	7.55E-03	
B. TRITIUM			
Total Release: Ci	9.84E+00	1.69E-02	9.4%
Average Diluted Concentration During Period: µCi/mL	3.09E-06	1.80E-08	
Percent of Effluent Concentration Limit*	3.09E-01	1.80E-03	
C. DISSOLVED AND ENTRAINED GASES			
Total Release: Ci	8.92E-06	NDA	16%
Average Diluted Concentration During Period: µCi/mL	2.81E-12	NDA	
Percent of Effluent Concentration Limit*	1.40E-06	--	
D. GROSS ALPHA RADIOACTIVITY			
Total Release: Ci	NDA	NDA	34%
E. VOLUME OF WASTE RELEASED PRIOR TO DILUTION			
Waste Volume: Liters	1.08E+06	1.34E+05	5.7%
F. VOLUME OF DILUTION WATER USED DURING PERIOD			
Dilution Volume: Liters	3.18E+09	9.39E+08	10%

Notes for Table 2A:

* Additional percent of Technical Specification limit values based on dose assessments will be provided in the annual supplemental dose assessment report to be issued prior to April 1, 1996.

1. NDA stands for No Detectable Activity.
2. LLD for dissolved and entrained gases listed as NDA is 1E-05 µCi/mL.
2. LLD for liquid gross alpha activity listed as NDA is 1E-07 µCi/mL.

Table 2B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents
July-December 1995

Nuclide Released	Continuous Mode		Batch Mode	
	Jul-Sep 1995	Oct-Dec 1995	Jul-Sep 1995	Oct-Dec 1995
1. FISSION AND ACTIVATION PRODUCTS - Ci				
Cr-51	N/A	N/A	1.72E-04	NDA
Mn-54	N/A	N/A	5.26E-04	3.09E-05
Fe-55	N/A	N/A	1.97E-03	2.62E-04
Fe-59	N/A	N/A	3.59E-05	NDA
Co-58	N/A	N/A	9.38E-06	NDA
Co-60	N/A	N/A	2.71E-03	7.98E-05
Zn-65	N/A	N/A	1.64E-06	NDA
Sr-89	N/A	N/A	4.71E-04	NDA
Sr-90	N/A	N/A	1.41E-06	1.24E-06
Zr/Nb-95	N/A	N/A	7.42E-07	NDA
Mo-99/Tc-99m	N/A	N/A	NDA	NDA
Ag-110m	N/A	N/A	5.15E-05	NDA
Sb-124	N/A	N/A	8.75E-07	NDA
I-131	N/A	N/A	2.99E-06	NDA
I-133	N/A	N/A	NDA	NDA
Cs-134	N/A	N/A	NDA	NDA
Cs-137	N/A	N/A	5.93E-05	3.82E-05
Ba/La-140	N/A	N/A	7.72E-04	NDA
Ce-141	N/A	N/A	NDA	NDA
Total for period	N/A	N/A	6.78E-03	4.12E-04
2. DISSOLVED AND ENTRAINED GASES - Ci				
Xe-133	N/A	N/A	NDA	NDA
Xe-135	N/A	N/A	8.92E-06	NDA
Total for period	N/A	N/A	8.92E-06	NDA

Notes for Table 2B:

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 μCi/mL
   - Iodines: 1E-06 μCi/mL
   - Noble Gases: 1E-05 μCi/mL
   - All Others: 5E-07 μCi/mL

APPENDIX B

Atmospheric Dispersion and Deposition Factors

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Table B-1

Undepleted χ/Q Factors for Reactor Building Vent

BECo 1st Quarter 1995 General Ground Level X/Q's — SECTOR AVERAGE MODEL
GROUND 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	207	3.422E-05	1.018E-05	3.628E-06	1.994E-06	1.295E-06	6.981E-07	4.518E-07	3.240E-07
NNE	219	3.303E-05	9.814E-06	3.447E-06	1.897E-06	1.235E-06	6.677E-07	4.327E-07	3.107E-07
NE	176	3.432E-05	1.032E-05	3.522E-06	1.923E-06	1.248E-06	6.797E-07	4.430E-07	3.190E-07
ENE	207	3.058E-05	9.139E-06	3.221E-06	1.759E-06	1.139E-06	6.131E-07	3.967E-07	2.844E-07
E	203	2.397E-05	7.459E-06	2.585E-06	1.409E-06	9.117E-07	4.861E-07	3.120E-07	2.220E-07
ESE	151	2.236E-05	6.728E-06	2.339E-06	1.272E-06	8.231E-07	4.426E-07	2.865E-07	2.054E-07
SE	133	1.997E-05	6.009E-06	2.179E-06	1.191E-06	7.697E-07	4.093E-07	2.627E-07	1.873E-07
SSE	112	1.518E-05	4.553E-06	1.648E-06	8.989E-07	5.809E-07	3.090E-07	1.985E-07	1.416E-07
S	159	1.992E-05	6.115E-06	1.986E-06	1.070E-06	6.864E-07	3.634E-07	2.331E-07	1.659E-07
SSW	119	1.286E-05	3.895E-06	1.256E-06	6.771E-07	4.360E-07	2.321E-07	1.494E-07	1.067E-07
SW	102	1.125E-05	3.530E-06	1.134E-06	5.909E-07	3.754E-07	1.974E-07	1.265E-07	8.993E-08
WSW	63	6.628E-06	2.085E-06	6.658E-07	3.554E-07	2.274E-07	1.196E-07	7.643E-08	5.418E-08
W	24	3.693E-06	1.165E-06	3.588E-07	2.126E-07	1.367E-07	7.319E-08	4.302E-08	3.074E-08
WNW	23	3.041E-06	9.234E-07	3.401E-07	1.854E-07	1.193E-07	6.300E-08	4.423E-08	3.138E-08
NW	56	1.227E-05	3.584E-06	1.310E-06	7.251E-07	4.718E-07	2.536E-07	1.638E-07	1.174E-07
NNW	78	1.765E-05	5.193E-06	1.910E-06	1.049E-06	6.792E-07	3.646E-07	2.355E-07	1.687E-07
AVERAGE	2032	1.881E-05	5.669E-06	1.969E-06	1.076E-06	6.959E-07	3.733E-07	2.410E-07	1.725E-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	207	2.484E-07	1.985E-07	1.636E-07	1.377E-07	1.181E-07	6.698E-08	4.510E-08	2.592E-08
NNE	219	2.385E-07	1.909E-07	1.575E-07	1.327E-07	1.140E-07	6.487E-08	4.382E-08	2.531E-08
NE	176	2.449E-07	1.961E-07	1.619E-07	1.367E-07	1.177E-07	6.742E-08	4.567E-08	2.645E-08
ENE	207	2.180E-07	1.742E-07	1.436E-07	1.209E-07	1.038E-07	5.890E-08	3.970E-08	2.287E-08
E	203	1.687E-07	1.340E-07	1.100E-07	9.240E-08	7.918E-08	4.477E-08	2.996E-08	1.696E-08
ESE	151	1.574E-07	1.258E-07	1.037E-07	8.738E-08	7.505E-08	4.270E-08	2.880E-08	1.658E-08
SE	133	1.430E-07	1.139E-07	1.029E-07	8.631E-08	7.387E-08	3.773E-08	2.525E-08	1.438E-08
SSE	112	1.081E-07	8.615E-08	7.081E-08	5.942E-08	5.086E-08	2.860E-08	1.914E-08	1.090E-08
S	159	1.261E-07	1.002E-07	8.216E-08	6.891E-08	5.894E-08	3.308E-08	2.205E-08	1.245E-08
SSW	119	8.138E-08	6.483E-08	5.331E-08	4.480E-08	3.838E-08	2.165E-08	1.449E-08	8.247E-09
SW	102	6.820E-08	5.409E-08	4.433E-08	3.719E-08	3.183E-08	1.792E-08	1.197E-08	6.783E-09
WSW	63	4.098E-08	3.244E-08	2.922E-08	2.449E-08	2.093E-08	1.067E-08	7.077E-09	3.948E-09
W	24	2.336E-08	1.858E-08	1.527E-08	1.286E-08	1.104E-08	6.287E-09	4.214E-09	2.387E-09
WNW	23	2.385E-08	1.892E-08	1.408E-08	1.178E-08	1.005E-08	5.596E-09	3.722E-09	2.104E-09
NW	56	9.022E-08	7.218E-08	5.949E-08	5.001E-08	4.288E-08	2.422E-08	1.630E-08	9.389E-09
NNW	78	1.293E-07	1.033E-07	8.503E-08	7.142E-08	6.119E-08	3.445E-08	2.311E-08	1.325E-08
AVERAGE	2032	1.319E-07	1.052E-07	8.731E-08	7.343E-08	6.299E-08	3.526E-08	2.377E-08	1.362E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	207	1.763E-08	1.315E-08	1.043E-08	8.585E-09	7.224E-09	6.232E-09	5.452E-09
NNE	219	1.726E-08	1.291E-08	1.025E-08	8.448E-09	7.116E-09	6.140E-09	5.373E-09
NE	176	1.808E-08	1.354E-08	1.077E-08	8.888E-09	7.493E-09	6.467E-09	5.662E-09
ENE	207	1.559E-08	1.165E-08	9.250E-09	7.624E-09	6.423E-09	5.546E-09	4.856E-09
E	203	1.146E-08	8.512E-09	6.725E-09	5.518E-09	4.629E-09	3.980E-09	3.473E-09
ESE	151	1.131E-08	8.455E-09	6.716E-09	5.537E-09	4.666E-09	4.029E-09	3.530E-09
SE	133	9.734E-09	7.239E-09	5.723E-09	4.701E-09	3.950E-09	3.405E-09	2.978E-09
SSE	112	7.387E-09	5.498E-09	4.349E-09	3.575E-09	3.006E-09	2.593E-09	2.269E-09
S	159	8.415E-09	6.251E-09	4.939E-09	4.056E-09	3.409E-09	2.940E-09	2.573E-09
SSW	119	5.598E-09	4.173E-09	3.306E-09	2.721E-09	2.291E-09	1.979E-09	1.735E-09
SW	102	4.600E-09	3.427E-09	2.714E-09	2.233E-09	1.880E-09	1.622E-09	1.421E-09
WSW	63	2.657E-09	1.968E-09	1.550E-09	1.271E-09	1.066E-09	9.183E-10	8.030E-10
W	24	1.614E-09	1.199E-09	9.486E-10	7.790E-10	6.540E-10	5.621E-10	4.907E-10
WNW	23	1.419E-09	1.052E-09	8.299E-10	6.805E-10	5.711E-10	4.921E-10	4.301E-10
NW	56	6.386E-09	4.764E-09	3.776E-09	3.107E-09	2.615E-09	2.257E-09	1.975E-09
NNW	78	8.991E-09	6.698E-09	5.304E-09	4.363E-09	3.670E-09	3.168E-09	2.773E-09
AVERAGE	2032	9.258E-09	6.905E-09	5.474E-09	4.505E-09	3.791E-09	3.271E-09	2.862E-09

Table B-1

Undepleted χ/Q Factors for Reactor Building Vent

BECo 2nd Quarter 1995 General X/Q's - Ground Level — SECTOR AVERAGE MODEL
GROUND 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	182	3.563E-05	1.060E-05	3.563E-06	1.902E-06	1.220E-06	6.693E-07	4.410E-07	3.201E-07
NNE	346	4.463E-05	1.326E-05	4.510E-06	2.436E-06	1.573E-06	8.572E-07	5.606E-07	4.050E-07
NE	188	3.926E-05	1.147E-05	3.543E-06	1.874E-06	1.206E-06	6.867E-07	4.633E-07	3.419E-07
ENE	131	2.768E-05	8.135E-06	2.609E-06	1.422E-06	9.296E-07	5.185E-07	3.432E-07	2.501E-07
E	168	2.625E-05	7.777E-06	2.541E-06	1.396E-06	9.162E-07	5.042E-07	3.301E-07	2.389E-07
ESE	119	2.116E-05	6.395E-06	2.256E-06	1.230E-06	8.047E-07	4.313E-07	2.777E-07	1.983E-07
SE	106	1.543E-05	4.646E-06	1.870E-06	1.021E-06	6.586E-07	3.493E-07	2.035E-07	1.449E-07
SSE	122	1.563E-05	4.763E-06	1.665E-06	8.150E-07	5.253E-07	2.790E-07	1.793E-07	1.279E-07
S	110	1.502E-05	4.588E-06	1.353E-06	7.329E-07	4.731E-07	2.515E-07	1.615E-07	1.151E-07
SSW	94	1.147E-05	3.463E-06	1.084E-06	5.800E-07	3.746E-07	1.997E-07	1.286E-07	9.198E-08
SW	88	9.704E-06	2.913E-06	8.570E-07	4.521E-07	2.924E-07	1.569E-07	1.017E-07	7.309E-08
WSW	76	1.021E-05	3.018E-06	8.706E-07	4.555E-07	2.940E-07	1.595E-07	1.047E-07	7.600E-08
W	96	1.671E-05	4.899E-06	1.515E-06	9.089E-07	5.948E-07	3.225E-07	1.904E-07	1.371E-07
WNW	95	1.849E-05	5.416E-06	1.829E-06	9.969E-07	6.507E-07	3.550E-07	2.548E-07	1.840E-07
NW	95	2.286E-05	6.862E-06	2.370E-06	1.310E-06	8.566E-07	4.632E-07	2.995E-07	2.147E-07
NNW	111	3.996E-05	1.167E-05	3.741E-06	1.970E-06	1.258E-06	7.109E-07	4.785E-07	3.524E-07
AVERAGE	2127	2.313E-05	6.868E-06	2.261E-06	1.219E-06	7.892E-07	4.322E-07	2.824E-07	2.045E-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	182	2.468E-07	1.983E-07	1.643E-07	1.392E-07	1.201E-07	6.918E-08	4.711E-08	2.759E-08
NNE	346	3.118E-07	2.502E-07	2.070E-07	1.750E-07	1.508E-07	8.654E-08	5.882E-08	3.435E-08
NE	188	2.666E-07	2.163E-07	1.807E-07	1.545E-07	1.343E-07	7.929E-08	5.498E-08	3.310E-08
ENE	131	1.939E-07	1.566E-07	1.303E-07	1.108E-07	9.596E-08	5.604E-08	3.854E-08	2.284E-08
E	168	1.845E-07	1.485E-07	1.232E-07	1.045E-07	9.026E-08	5.237E-08	3.582E-08	2.103E-08
ESE	119	1.515E-07	1.208E-07	9.942E-08	8.360E-08	7.168E-08	4.058E-08	2.724E-08	1.555E-08
SE	106	1.105E-07	8.789E-08	7.935E-08	6.650E-08	5.685E-08	3.184E-08	2.125E-08	1.205E-08
SSE	122	9.750E-08	7.766E-08	6.386E-08	5.369E-08	4.601E-08	2.601E-08	1.744E-08	9.941E-09
S	110	8.770E-08	6.979E-08	5.734E-08	4.816E-08	4.125E-08	2.326E-08	1.555E-08	8.808E-09
SSW	94	7.028E-08	5.610E-08	4.623E-08	3.896E-08	3.343E-08	1.899E-08	1.277E-08	7.313E-09
SW	88	5.615E-08	4.505E-08	3.732E-08	3.163E-08	2.725E-08	1.573E-08	1.072E-08	6.275E-09
WSW	76	5.882E-08	4.748E-08	4.349E-08	3.702E-08	3.201E-08	1.698E-08	1.165E-08	6.890E-09
W	96	1.057E-07	8.487E-08	7.028E-08	5.944E-08	5.117E-08	2.938E-08	1.995E-08	1.161E-08
WNW	95	1.420E-07	1.142E-07	8.602E-08	7.280E-08	6.275E-08	3.612E-08	2.461E-08	1.441E-08
NW	95	1.646E-07	1.316E-07	1.086E-07	9.152E-08	7.866E-08	4.489E-08	3.032E-08	1.745E-08
NNW	111	2.741E-07	2.219E-07	1.849E-07	1.577E-07	1.368E-07	9.007E-08	5.521E-08	3.304E-08
AVERAGE	2127	1.577E-07	1.267E-07	1.052E-07	8.906E-08	7.683E-08	4.420E-08	3.012E-08	1.764E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	182	1.900E-08	1.431E-08	1.145E-08	9.491E-09	8.040E-09	6.969E-09	6.127E-09
NNE	346	2.360E-08	1.775E-08	1.417E-08	1.173E-08	9.920E-09	8.588E-09	7.541E-09
NE	188	2.312E-08	1.760E-08	1.420E-08	1.185E-08	1.009E-08	8.772E-09	7.734E-09
ENE	131	1.582E-08	1.196E-08	9.588E-09	7.961E-09	6.747E-09	5.843E-09	5.133E-09
E	168	1.449E-08	1.092E-08	8.726E-09	7.226E-09	6.110E-09	5.282E-09	4.633E-09
ESE	119	1.055E-08	7.858E-09	6.220E-09	5.113E-09	4.298E-09	3.703E-09	3.237E-09
SE	106	8.148E-09	6.052E-09	4.780E-09	3.924E-09	3.295E-09	2.841E-09	2.485E-09
SSE	122	6.760E-09	5.045E-09	3.999E-09	3.294E-09	2.775E-09	2.397E-09	2.101E-09
S	110	5.962E-09	4.433E-09	3.505E-09	2.880E-09	2.420E-09	2.087E-09	1.825E-09
SSW	94	4.995E-09	3.742E-09	2.975E-09	2.456E-09	2.074E-09	1.796E-09	1.578E-09
SW	88	4.350E-09	3.294E-09	2.641E-09	2.196E-09	1.866E-09	1.622E-09	1.431E-09
WSW	76	4.801E-09	3.650E-09	2.935E-09	2.447E-09	2.084E-09	1.815E-09	1.604E-09
W	96	7.982E-09	6.004E-09	4.789E-09	3.963E-09	3.351E-09	2.902E-09	2.549E-09
WNW	95	9.929E-09	7.480E-09	5.976E-09	4.950E-09	4.189E-09	3.629E-09	3.188E-09
NW	95	1.189E-08	8.876E-09	7.043E-09	5.798E-09	4.878E-09	4.203E-09	3.674E-09
NNW	111	2.300E-08	1.747E-08	1.406E-08	1.173E-08	9.979E-09	8.676E-09	7.650E-09
AVERAGE	2127	1.215E-08	9.153E-09	7.316E-09	6.063E-09	5.132E-09	4.445E-09	3.906E-09

Table B-1

Undepleted χ/Q Factors for Reactor Building Vent

BECo 3rd Quarter 1995 General X/Q's - Ground Level — SECTOR AVERAGE MODEL
GROUND 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	218	3.571E-05	1.085E-05	3.814E-06	2.093E-06	1.359E-06	7.273E-07	4.681E-07	3.342E-07
NNE	421	5.832E-05	1.763E-05	6.197E-06	3.383E-06	2.189E-06	1.174E-06	7.580E-07	5.423E-07
NE	266	5.895E-05	1.746E-05	5.645E-06	3.064E-06	1.992E-06	1.110E-06	7.344E-07	5.348E-07
ENE	126	3.988E-05	1.178E-05	3.889E-06	2.152E-06	1.413E-06	7.815E-07	5.128E-07	3.715E-07
E	114	2.879E-05	8.629E-06	2.961E-06	1.643E-06	1.078E-06	5.845E-07	3.783E-07	2.713E-07
ESE	102	2.545E-05	7.550E-06	2.512E-06	1.395E-06	9.189E-07	5.033E-07	3.277E-07	2.362E-07
SE	86	1.971E-05	5.834E-06	2.254E-06	1.232E-06	7.987E-07	4.308E-07	2.538E-07	1.823E-07
SSE	89	1.790E-05	5.372E-06	1.849E-06	9.210E-07	5.999E-07	3.231E-07	2.090E-07	1.499E-07
S	111	1.924E-05	5.827E-06	1.707E-06	9.228E-07	5.958E-07	3.170E-07	2.038E-07	1.455E-07
SSW	161	2.130E-05	6.531E-06	2.071E-06	1.111E-06	7.141E-07	3.782E-07	2.427E-07	1.728E-07
SW	174	2.319E-05	7.106E-06	2.306E-06	1.241E-06	7.957E-07	4.195E-07	2.683E-07	1.907E-07
WSW	94	1.417E-05	4.334E-06	1.362E-06	7.312E-07	4.700E-07	2.502E-07	1.611E-07	1.151E-07
W	49	9.232E-06	2.845E-06	8.983E-07	5.395E-07	3.496E-07	1.868E-07	1.091E-07	7.771E-08
WNW	19	4.552E-06	1.371E-06	4.747E-07	2.600E-07	1.688E-07	9.055E-08	6.423E-08	4.596E-08
NW	40	1.043E-05	3.095E-06	1.125E-06	6.207E-07	4.032E-07	2.158E-07	1.390E-07	9.933E-08
NNW	39	1.208E-05	3.581E-06	1.286E-06	7.138E-07	4.659E-07	2.508E-07	1.617E-07	1.157E-07
AVERAGE	2109	2.493E-05	7.487E-06	2.522E-06	1.376E-06	8.945E-07	4.840E-07	3.120E-07	2.241E-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	218	2.552E-07	2.034E-07	1.673E-07	1.406E-07	1.206E-07	6.829E-08	4.589E-08	2.622E-08
NNE	421	4.146E-07	3.308E-07	2.723E-07	2.290E-07	1.965E-07	1.113E-07	7.490E-08	4.297E-08
NE	266	4.139E-07	3.357E-07	2.773E-07	2.356E-07	2.032E-07	1.188E-07	8.152E-08	4.822E-08
ENE	126	2.871E-07	2.311E-07	1.917E-07	1.625E-07	1.404E-07	8.139E-08	5.567E-08	3.270E-08
E	114	2.082E-07	1.666E-07	1.375E-07	1.159E-07	9.970E-08	5.702E-08	3.859E-08	2.229E-08
ESE	102	1.821E-07	1.463E-07	1.212E-07	1.025E-07	8.842E-08	5.105E-08	3.483E-08	2.036E-08
SE	86	1.400E-07	1.121E-07	1.018E-07	8.574E-08	7.366E-08	4.191E-08	2.833E-08	1.641E-08
SSE	89	1.150E-07	9.199E-08	7.592E-08	6.402E-08	5.503E-08	3.142E-08	2.124E-08	1.225E-08
S	111	1.110E-07	8.849E-08	7.279E-08	6.120E-08	5.245E-08	2.965E-08	1.989E-08	1.135E-08
SSW	161	1.316E-07	1.047E-07	8.600E-08	7.227E-08	6.190E-08	3.494E-08	2.340E-08	1.330E-08
SW	174	1.450E-07	1.151E-07	9.442E-08	7.914E-08	6.766E-08	3.793E-08	2.532E-08	1.435E-08
WSW	94	8.776E-08	6.993E-08	6.328E-08	5.324E-08	4.566E-08	2.352E-08	1.581E-08	9.050E-09
W	49	5.917E-08	4.707E-08	3.867E-08	3.250E-08	2.786E-08	1.577E-08	1.058E-08	6.017E-09
WNW	19	3.521E-08	2.814E-08	2.108E-08	1.775E-08	1.524E-08	8.675E-09	5.863E-09	3.388E-09
NW	40	7.607E-08	6.072E-08	4.997E-08	4.196E-08	3.595E-08	2.027E-08	1.361E-08	7.793E-09
NNW	39	8.870E-08	7.086E-08	5.836E-08	4.907E-08	4.208E-08	2.381E-08	1.602E-08	9.192E-09
AVERAGE	2109	1.719E-07	1.376E-07	1.143E-07	9.645E-08	8.294E-08	4.723E-08	3.197E-08	1.849E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	218	1.779E-08	1.325E-08	1.049E-08	8.621E-09	7.243E-09	6.237E-09	5.449E-09
NNE	421	2.923E-08	2.181E-08	1.729E-08	1.424E-08	1.198E-08	1.033E-08	9.039E-09
NE	266	3.333E-08	2.517E-08	2.017E-08	1.674E-08	1.418E-08	1.227E-08	1.078E-08
ENE	126	2.250E-08	1.693E-08	1.352E-08	1.118E-08	9.446E-09	8.157E-09	7.145E-09
E	114	1.521E-08	1.136E-08	9.025E-09	7.433E-09	6.254E-09	5.388E-09	4.708E-09
ESE	102	1.398E-08	1.051E-08	8.377E-09	6.922E-09	5.840E-09	5.040E-09	4.412E-09
SE	86	1.122E-08	8.402E-09	6.683E-09	5.516E-09	4.653E-09	4.022E-09	3.526E-09
SSE	89	8.366E-09	6.259E-09	4.973E-09	4.100E-09	3.454E-09	2.981E-09	2.609E-09
S	111	7.720E-09	5.762E-09	4.568E-09	3.762E-09	3.169E-09	2.737E-09	2.399E-09
SSW	161	9.042E-09	6.746E-09	5.347E-09	4.403E-09	3.709E-09	3.204E-09	2.809E-09
SW	174	9.724E-09	7.238E-09	5.725E-09	4.707E-09	3.960E-09	3.418E-09	2.994E-09
WSW	94	6.167E-09	4.610E-09	3.660E-09	3.018E-09	2.544E-09	2.199E-09	1.928E-09
W	49	4.077E-09	3.033E-09	2.400E-09	1.972E-09	1.656E-09	1.425E-09	1.245E-09
WNW	19	2.314E-09	1.731E-09	1.376E-09	1.134E-09	9.556E-10	8.246E-10	7.217E-10
NW	40	5.287E-09	3.937E-09	3.116E-09	2.561E-09	2.152E-09	1.855E-09	1.622E-09
NNW	39	6.242E-09	4.650E-09	3.682E-09	3.027E-09	2.544E-09	2.192E-09	1.915E-09
AVERAGE	2109	1.264E-08	9.462E-09	7.525E-09	6.208E-09	5.234E-09	4.518E-09	3.956E-09

Table B-1

Undepleted χ/Q Factors for Reactor Building Vent

BECo 4th Quarter 1995 General X/Q's - Ground Level — SECTOR AVERAGE MODEL
GROUND 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	131	2.513E-05	7.521E-06	2.601E-06	1.447E-06	9.497E-07	5.152E-07	3.333E-07	2.390E-07
NNE	238	3.998E-05	1.201E-05	4.058E-06	2.244E-06	1.470E-06	8.022E-07	5.217E-07	3.752E-07
NE	304	6.481E-05	1.912E-05	6.259E-06	3.469E-06	2.283E-06	1.266E-06	8.315E-07	6.028E-07
ENE	368	6.022E-05	1.791E-05	6.199E-06	3.416E-06	2.227E-06	1.210E-06	7.854E-07	5.647E-07
E	349	4.151E-05	1.267E-05	4.510E-06	2.435E-06	1.561E-06	8.319E-07	5.359E-07	3.826E-07
ESE	199	2.337E-05	7.260E-06	2.576E-06	1.393E-06	8.954E-07	4.732E-07	3.032E-07	2.155E-07
SE	107	1.530E-05	4.715E-06	1.692E-06	9.208E-07	5.938E-07	3.147E-07	2.015E-07	1.432E-07
SSE	54	6.834E-06	2.127E-06	7.646E-07	4.116E-07	2.636E-07	1.386E-07	8.840E-08	6.262E-08
S	75	1.015E-05	3.148E-06	1.037E-06	5.603E-07	3.592E-07	1.890E-07	1.208E-07	8.566E-08
SSW	83	8.923E-06	2.881E-06	9.332E-07	4.960E-07	3.146E-07	1.634E-07	1.039E-07	7.334E-08
SW	73	6.073E-06	1.938E-06	6.459E-07	3.417E-07	2.156E-07	1.111E-07	6.994E-08	4.893E-08
WSW	24	2.843E-06	9.111E-07	3.037E-07	1.640E-07	1.048E-07	5.480E-08	3.478E-08	2.449E-08
W	20	2.859E-06	8.986E-07	2.904E-07	1.743E-07	1.125E-07	5.967E-08	3.469E-08	2.459E-08
WNW	37	4.399E-06	1.377E-06	4.965E-07	2.709E-07	1.746E-07	9.233E-08	6.485E-08	4.593E-08
NW	50	7.129E-06	2.164E-06	7.988E-07	4.390E-07	2.839E-07	1.508E-07	9.661E-08	6.870E-08
NNW	67	1.111E-05	3.392E-06	1.205E-06	6.642E-07	4.318E-07	2.312E-07	1.487E-07	1.060E-07
AVERAGE	2179	2.067E-05	6.256E-06	2.148E-06	1.178E-06	7.651E-07	4.127E-07	2.672E-07	1.915E-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	131	1.833E-07	1.467E-07	1.210E-07	1.020E-07	8.770E-08	5.008E-08	3.387E-08	1.954E-08
NNE	238	2.883E-07	2.309E-07	1.908E-07	1.612E-07	1.388E-07	7.973E-08	5.410E-08	3.137E-08
NE	304	4.661E-07	3.754E-07	3.116E-07	2.643E-07	2.285E-07	1.327E-07	9.091E-08	5.352E-08
ENE	368	4.339E-07	3.476E-07	2.870E-07	2.421E-07	2.082E-07	1.190E-07	8.060E-08	4.673E-08
E	349	2.917E-07	2.321E-07	1.907E-07	1.601E-07	1.372E-07	7.728E-08	5.172E-08	2.943E-08
ESE	199	1.637E-07	1.299E-07	1.065E-07	8.932E-08	7.642E-08	4.295E-08	2.861E-08	1.610E-08
SE	107	1.087E-07	8.630E-08	7.781E-08	6.520E-08	5.575E-08	2.842E-08	1.891E-08	1.064E-08
SSE	54	4.740E-08	3.753E-08	3.070E-08	2.568E-08	2.192E-08	1.223E-08	8.110E-09	4.541E-09
S	75	6.494E-08	5.146E-08	4.212E-08	3.525E-08	3.010E-08	1.680E-08	1.114E-08	6.226E-09
SSW	83	5.515E-08	4.346E-08	3.543E-08	2.959E-08	2.523E-08	1.402E-08	9.223E-09	5.065E-09
SW	73	3.651E-08	2.858E-08	2.317E-08	1.926E-08	1.636E-08	8.985E-09	5.880E-09	3.216E-09
WSW	24	1.840E-08	1.447E-08	1.295E-08	1.080E-08	9.188E-09	4.609E-09	3.015E-09	1.642E-09
W	20	1.861E-08	1.473E-08	1.205E-08	1.009E-08	8.628E-09	4.836E-09	3.208E-09	1.789E-09
WNW	37	3.474E-08	2.749E-08	2.043E-08	1.709E-08	1.459E-08	8.146E-09	5.395E-09	3.006E-09
NW	50	5.227E-08	4.152E-08	3.403E-08	2.849E-08	2.434E-08	1.360E-08	9.040E-09	5.084E-09
NNW	67	8.083E-08	6.434E-08	5.286E-08	4.440E-08	3.804E-08	2.148E-08	1.438E-08	8.147E-09
AVERAGE	2179	1.465E-07	1.170E-07	9.683E-08	8.156E-08	7.006E-08	3.968E-08	2.676E-08	1.538E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	131	1.331E-08	9.940E-09	7.887E-09	6.492E-09	5.459E-09	4.701E-09	4.106E-09
NNE	238	2.144E-08	1.605E-08	1.276E-08	1.053E-08	8.866E-09	7.641E-09	6.681E-09
NE	304	3.688E-08	2.777E-08	2.219E-08	1.837E-08	1.552E-08	1.341E-08	1.175E-08
ENE	368	3.194E-08	2.391E-08	1.901E-08	1.568E-08	1.322E-08	1.140E-08	9.981E-09
E	349	1.995E-08	1.485E-08	1.175E-08	9.663E-09	8.127E-09	7.010E-09	6.135E-09
ESE	199	1.085E-08	8.042E-09	6.342E-09	5.198E-09	4.359E-09	3.750E-09	3.274E-09
SE	107	7.169E-09	5.310E-09	4.185E-09	3.429E-09	2.875E-09	2.473E-09	2.159E-09
SSE	54	3.055E-09	2.261E-09	1.781E-09	1.459E-09	1.224E-09	1.054E-09	9.207E-10
S	75	4.180E-09	3.090E-09	2.431E-09	1.990E-09	1.667E-09	1.434E-09	1.252E-09
SSW	83	3.374E-09	2.479E-09	1.942E-09	1.583E-09	1.322E-09	1.134E-09	9.882E-10
SW	73	2.140E-09	1.571E-09	1.230E-09	1.002E-09	8.365E-10	7.171E-10	6.247E-10
WSW	24	1.086E-09	7.934E-10	6.185E-10	5.022E-10	4.177E-10	3.572E-10	3.102E-10
W	20	1.198E-09	8.834E-10	6.941E-10	5.670E-10	4.738E-10	4.062E-10	3.536E-10
WNW	37	2.011E-09	1.482E-09	1.164E-09	9.504E-10	7.941E-10	6.810E-10	5.929E-10
NW	50	3.415E-09	2.524E-09	1.986E-09	1.625E-09	1.360E-09	1.169E-09	1.020E-09
NNW	67	5.499E-09	4.079E-09	3.219E-09	2.639E-09	2.212E-09	1.900E-09	1.657E-09
AVERAGE	2179	1.047E-08	7.814E-09	6.200E-09	5.105E-09	4.296E-09	3.702E-09	3.238E-09

Table B-1

Undepleted χ/Q Factors for Reactor Building Vent

BECo 1995 General X/Q's - Ground Level — SECTOR AVERAGE MODEL

GROUND 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	738	3.260E-05	9.769E-06	3.393E-06	1.855E-06	1.203E-06	6.510E-07	4.226E-07	3.036E-07
NNE	1224	4.406E-05	1.320E-05	4.559E-06	2.493E-06	1.619E-06	8.766E-07	5.691E-07	4.089E-07
NE	934	4.958E-05	1.466E-05	4.763E-06	2.594E-06	1.690E-06	9.401E-07	6.211E-07	4.518E-07
ENE	832	3.982E-05	1.181E-05	4.002E-06	2.199E-06	1.436E-06	7.852E-07	5.125E-07	3.698E-07
E	834	3.027E-05	9.176E-06	3.164E-06	1.729E-06	1.122E-06	6.044E-07	3.909E-07	2.800E-07
ESE	571	2.309E-05	6.986E-06	2.423E-06	1.325E-06	8.610E-07	4.628E-07	2.989E-07	2.139E-07
SE	432	1.756E-05	5.288E-06	1.900E-06	1.037E-06	6.704E-07	3.574E-07	2.298E-07	1.640E-07
SSE	377	1.305E-05	3.954E-06	1.394E-06	7.576E-07	4.898E-07	2.610E-07	1.679E-07	1.198E-07
S	455	1.528E-05	4.676E-06	1.512E-06	8.168E-07	5.256E-07	2.786E-07	1.788E-07	1.273E-07
SSW	457	1.360E-05	4.183E-06	1.333E-06	7.142E-07	4.586E-07	2.427E-07	1.557E-07	1.109E-07
SW	437	1.251E-05	3.872E-06	1.226E-06	6.539E-07	4.182E-07	2.204E-07	1.411E-07	1.003E-07
WSW	257	8.436E-06	2.579E-06	7.979E-07	4.251E-07	2.731E-07	1.455E-07	9.395E-08	6.722E-08
W	189	8.140E-06	2.456E-06	7.669E-07	4.597E-07	2.990E-07	1.608E-07	9.448E-08	6.767E-08
WNW	174	7.660E-06	2.284E-06	7.889E-07	4.304E-07	2.797E-07	1.510E-07	1.076E-07	7.720E-08
NW	241	1.315E-05	3.921E-06	1.399E-06	7.724E-07	5.031E-07	2.704E-07	1.745E-07	1.248E-07
NNW	295	2.019E-05	5.957E-06	2.033E-06	1.098E-06	7.078E-07	3.890E-07	2.559E-07	1.856E-07
AVERAGE	8447	2.181E-05	6.548E-06	2.216E-06	1.210E-06	7.847E-07	4.248E-07	2.759E-07	1.983E-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	738	2.329E-07	1.863E-07	1.537E-07	1.296E-07	1.114E-07	6.350E-08	4.290E-08	2.477E-08
NNE	1224	3.138E-07	2.511E-07	2.072E-07	1.747E-07	1.503E-07	8.576E-08	5.801E-08	3.356E-08
NE	934	3.496E-07	2.816E-07	2.341E-07	1.988E-07	1.720E-07	1.001E-07	6.863E-08	4.054E-08
ENE	832	2.849E-07	2.287E-07	1.893E-07	1.600E-07	1.379E-07	7.929E-08	5.394E-08	3.147E-08
E	834	2.142E-07	1.711E-07	1.410E-07	1.188E-07	1.021E-07	5.813E-08	3.920E-08	2.253E-08
ESE	571	1.637E-07	1.307E-07	1.077E-07	9.071E-08	7.789E-08	4.432E-08	2.986E-08	1.714E-08
SE	432	1.252E-07	9.977E-08	9.021E-08	7.574E-08	6.486E-08	3.321E-08	2.225E-08	1.269E-08
SSE	377	9.150E-08	7.293E-08	5.999E-08	5.042E-08	4.322E-08	2.443E-08	1.639E-08	9.356E-09
S	455	9.689E-08	7.703E-08	6.324E-08	5.308E-08	4.542E-08	2.555E-08	1.706E-08	9.654E-09
SSW	457	8.435E-08	6.706E-08	5.508E-08	4.627E-08	3.961E-08	2.233E-08	1.492E-08	8.454E-09
SW	437	7.616E-08	6.047E-08	4.961E-08	4.164E-08	3.563E-08	2.006E-08	1.342E-08	7.625E-09
WSW	257	5.133E-08	4.095E-08	3.712E-08	3.129E-08	2.687E-08	1.390E-08	9.362E-09	5.368E-09
W	189	5.180E-08	4.139E-08	3.414E-08	2.878E-08	2.472E-08	1.409E-08	9.506E-09	5.462E-09
WNW	174	5.925E-08	4.742E-08	3.558E-08	3.001E-08	2.579E-08	1.471E-08	9.949E-09	5.757E-09
NW	241	9.562E-08	7.637E-08	6.291E-08	5.290E-08	4.538E-08	2.570E-08	1.729E-08	9.909E-09
NNW	295	1.431E-07	1.150E-07	9.523E-08	8.058E-08	6.949E-08	3.994E-08	2.717E-08	1.590E-08
AVERAGE	8447	1.522E-07	1.218E-07	1.010E-07	8.521E-08	7.328E-08	4.156E-08	2.812E-08	1.626E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	738	1.690E-08	1.264E-08	1.004E-08	8.282E-09	6.979E-09	6.024E-09	5.274E-09
NNE	1224	2.292E-08	1.716E-08	1.364E-08	1.126E-08	9.488E-09	8.190E-09	7.172E-09
NE	934	2.801E-08	2.114E-08	1.693E-08	1.404E-08	1.189E-08	1.029E-08	9.030E-09
ENE	832	2.159E-08	1.621E-08	1.292E-08	1.068E-08	9.012E-09	7.784E-09	6.820E-09
E	834	1.535E-08	1.146E-08	9.100E-09	7.495E-09	6.310E-09	5.441E-09	4.760E-09
ESE	571	1.167E-08	8.710E-09	6.909E-09	5.689E-09	4.787E-09	4.127E-09	3.610E-09
SE	432	8.602E-09	6.404E-09	5.067E-09	4.166E-09	3.502E-09	3.020E-09	2.642E-09
SSE	377	6.356E-09	4.739E-09	3.754E-09	3.089E-09	2.600E-09	2.243E-09	1.964E-09
S	455	6.531E-09	4.856E-09	3.838E-09	3.153E-09	2.651E-09	2.286E-09	2.000E-09
SSW	457	5.732E-09	4.270E-09	3.380E-09	2.781E-09	2.341E-09	2.021E-09	1.771E-09
SW	437	5.182E-09	3.866E-09	3.064E-09	2.524E-09	2.126E-09	1.837E-09	1.611E-09
WSW	257	3.668E-09	2.748E-09	2.185E-09	1.805E-09	1.524E-09	1.319E-09	1.158E-09
W	189	3.725E-09	2.786E-09	2.212E-09	1.824E-09	1.537E-09	1.327E-09	1.162E-09
WNW	174	3.938E-09	2.951E-09	2.348E-09	1.939E-09	1.636E-09	1.414E-09	1.239E-09
NW	241	6.730E-09	5.015E-09	3.972E-09	3.266E-09	2.746E-09	2.366E-09	2.068E-09
NNW	295	1.093E-08	8.223E-09	6.567E-09	5.439E-09	4.601E-09	3.984E-09	3.499E-09
AVERAGE	8447	1.111E-08	8.324E-09	6.621E-09	5.464E-09	4.608E-09	3.979E-09	3.486E-09

Table B-2

Depleted χ/Q Factors for Reactor Building Vent

BECo 1st Quarter 1995 General Ground Level X/Q's — 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	207	3.300E-05	9.674E-06	3.316E-06	1.777E-06	1.135E-06	5.951E-07	3.743E-07	2.623E-07
NNE	219	3.185E-05	9.322E-06	3.151E-06	1.691E-06	1.082E-06	5.692E-07	3.584E-07	2.515E-07
NE	176	3.310E-05	9.804E-06	3.219E-06	1.714E-06	1.094E-06	5.794E-07	3.669E-07	2.582E-07
ENE	207	2.949E-05	8.681E-06	2.944E-06	1.568E-06	9.988E-07	5.227E-07	3.286E-07	2.303E-07
E	203	2.312E-05	7.085E-06	2.363E-06	1.255E-06	7.993E-07	4.144E-07	2.585E-07	1.797E-07
ESE	151	2.156E-05	6.390E-06	2.138E-06	1.133E-06	7.216E-07	3.773E-07	2.373E-07	1.663E-07
SE	133	1.926E-05	5.707E-06	1.991E-06	1.062E-06	6.748E-07	3.489E-07	2.176E-07	1.516E-07
SSE	112	1.463E-05	4.325E-06	1.506E-06	8.010E-07	5.093E-07	2.634E-07	1.644E-07	1.146E-07
S	159	1.921E-05	5.809E-06	1.815E-06	9.532E-07	6.017E-07	3.098E-07	1.931E-07	1.343E-07
SSW	119	1.240E-05	3.700E-06	1.148E-06	6.034E-07	3.823E-07	1.979E-07	1.238E-07	8.636E-08
SW	102	1.084E-05	3.353E-06	1.019E-06	5.266E-07	3.291E-07	1.682E-07	1.048E-07	7.280E-08
WSW	63	6.392E-06	1.981E-06	6.085E-07	3.167E-07	1.994E-07	1.019E-07	6.331E-08	4.386E-08
W	24	3.561E-06	1.106E-06	3.279E-07	1.895E-07	1.198E-07	6.240E-08	3.563E-08	2.488E-08
WNW	23	2.933E-06	8.771E-07	3.108E-07	1.652E-07	1.046E-07	5.371E-08	3.664E-08	2.541E-08
NW	56	1.183E-05	3.404E-06	1.197E-06	6.461E-07	4.136E-07	2.162E-07	1.357E-07	9.506E-08
NNW	78	1.702E-05	4.933E-06	1.746E-06	9.352E-07	5.955E-07	3.108E-07	1.951E-07	1.366E-07
AVERAGE	2032	1.814E-05	5.384E-06	1.800E-06	9.585E-07	6.101E-07	3.182E-07	1.996E-07	1.396E-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	207	1.975E-07	1.553E-07	1.261E-07	1.048E-07	8.883E-08	4.732E-08	3.034E-08	1.619E-08
NNE	219	1.897E-07	1.493E-07	1.214E-07	1.010E-07	8.570E-08	4.583E-08	2.948E-08	1.581E-08
NE	176	1.947E-07	1.534E-07	1.248E-07	1.041E-07	8.850E-08	4.763E-08	3.072E-08	1.652E-08
ENE	207	1.733E-07	1.363E-07	1.107E-07	9.202E-08	7.802E-08	4.161E-08	2.671E-08	1.429E-08
E	203	1.341E-07	1.049E-07	8.480E-08	7.034E-08	5.953E-08	3.163E-08	2.015E-08	1.059E-08
ESE	151	1.251E-07	9.841E-08	7.995E-08	6.651E-08	5.643E-08	3.017E-08	1.938E-08	1.036E-08
SE	133	1.137E-07	8.909E-08	7.932E-08	6.571E-08	5.554E-08	2.666E-08	1.698E-08	8.979E-09
SSE	112	8.598E-08	6.740E-08	5.458E-08	4.524E-08	3.824E-08	2.021E-08	1.287E-08	6.808E-09
S	159	1.003E-07	7.836E-08	6.333E-08	5.245E-08	4.431E-08	2.337E-08	1.483E-08	7.778E-09
SSW	119	6.471E-08	5.072E-08	4.109E-08	3.410E-08	2.885E-08	1.529E-08	9.748E-09	5.151E-09
SW	102	5.423E-08	4.232E-08	3.418E-08	2.831E-08	2.393E-08	1.266E-08	8.052E-09	4.237E-09
WSW	63	3.258E-08	2.538E-08	2.252E-08	1.864E-08	1.574E-08	7.539E-09	4.761E-09	2.466E-09
W	24	1.858E-08	1.454E-08	1.177E-08	9.788E-09	8.303E-09	4.442E-09	2.835E-09	1.491E-09
WNW	23	1.896E-08	1.480E-08	1.086E-08	8.965E-09	7.557E-09	3.954E-09	2.504E-09	1.314E-09
NW	56	7.174E-08	5.647E-08	4.586E-08	3.807E-08	3.224E-08	1.712E-08	1.097E-08	5.865E-09
NNW	78	1.028E-07	8.081E-08	6.555E-08	5.436E-08	4.600E-08	2.434E-08	1.555E-08	8.276E-09
AVERAGE	2032	1.049E-07	8.234E-08	6.730E-08	5.590E-08	4.736E-08	2.499E-08	1.599E-08	8.508E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	207	1.026E-08	7.223E-09	5.450E-09	4.298E-09	3.478E-09	2.900E-09	2.457E-09
NNE	219	1.005E-08	7.087E-09	5.357E-09	4.229E-09	3.425E-09	2.857E-09	2.422E-09
NE	176	1.052E-08	7.423E-09	5.628E-09	4.449E-09	3.607E-09	3.009E-09	2.552E-09
ENE	207	9.074E-09	6.398E-09	4.834E-09	3.817E-09	3.092E-09	2.580E-09	2.189E-09
E	203	6.672E-09	4.674E-09	3.514E-09	2.762E-09	2.228E-09	1.852E-09	1.565E-09
ESE	151	6.582E-09	4.643E-09	3.510E-09	2.772E-09	2.246E-09	1.875E-09	1.591E-09
SE	133	5.666E-09	3.975E-09	2.991E-09	2.354E-09	1.901E-09	1.585E-09	1.342E-09
SSE	112	4.300E-09	3.019E-09	2.273E-09	1.790E-09	1.447E-09	1.207E-09	1.023E-09
S	159	4.898E-09	3.433E-09	2.581E-09	2.031E-09	1.641E-09	1.368E-09	1.160E-09
SSW	119	3.259E-09	2.292E-09	1.727E-09	1.362E-09	1.103E-09	9.209E-10	7.818E-10
SW	102	2.678E-09	1.882E-09	1.418E-09	1.118E-09	9.049E-10	7.549E-10	6.406E-10
WSW	63	1.546E-09	1.080E-09	8.102E-10	6.362E-10	5.133E-10	4.273E-10	3.620E-10
W	24	9.396E-10	6.587E-10	4.957E-10	3.900E-10	3.148E-10	2.615E-10	2.212E-10
WNW	23	8.259E-10	5.778E-10	4.337E-10	3.407E-10	2.749E-10	2.290E-10	1.939E-10
NW	56	3.717E-09	2.616E-09	1.973E-09	1.556E-09	1.259E-09	1.050E-09	8.900E-10
NNW	78	5.234E-09	3.678E-09	2.772E-09	2.184E-09	1.767E-09	1.474E-09	1.250E-09
AVERAGE	2032	5.389E-09	3.792E-09	2.860E-09	2.255E-09	1.825E-09	1.522E-09	1.290E-09

Table B-2

Depleted χ/Q Factors for Reactor Building Vent

BECo 2nd Quarter 1995 General X/Q's - 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	182	3.436E-05	1.007E-05	3.257E-06	1.695E-06	1.069E-06	5.706E-07	3.653E-07	2.591E-07
NNE	346	4.304E-05	1.259E-05	4.122E-06	2.171E-06	1.379E-06	7.308E-07	4.644E-07	3.279E-07
NE	188	3.786E-05	1.090E-05	3.238E-06	1.670E-06	1.057E-06	5.854E-07	3.838E-07	2.768E-07
ENE	131	2.670E-05	7.728E-06	2.385E-06	1.267E-06	8.150E-07	4.421E-07	2.842E-07	2.025E-07
E	168	2.531E-05	7.387E-06	2.323E-06	1.244E-06	8.033E-07	4.299E-07	2.735E-07	1.934E-07
ESE	119	2.041E-05	6.074E-06	2.062E-06	1.103E-06	7.055E-07	3.677E-07	2.300E-07	1.606E-07
SE	106	1.488E-05	4.413E-06	1.709E-06	9.097E-07	5.774E-07	2.978E-07	1.686E-07	1.173E-07
SSE	122	1.507E-05	4.525E-06	1.521E-06	7.263E-07	4.603E-07	2.379E-07	1.485E-07	1.035E-07
S	110	1.448E-05	4.358E-06	1.236E-06	6.531E-07	4.148E-07	2.144E-07	1.338E-07	9.321E-08
SSW	94	1.106E-05	3.290E-06	9.904E-07	5.169E-07	3.284E-07	1.702E-07	1.066E-07	7.446E-08
SW	88	9.359E-06	2.767E-06	7.832E-07	4.029E-07	2.563E-07	1.338E-07	8.422E-08	5.917E-08
WSW	76	9.847E-06	2.866E-06	7.958E-07	4.059E-07	2.578E-07	1.360E-07	8.671E-08	6.152E-08
W	96	1.612E-05	4.653E-06	1.384E-06	8.100E-07	5.215E-07	2.750E-07	1.577E-07	1.110E-07
WNW	95	1.784E-05	5.145E-06	1.672E-06	8.884E-07	5.704E-07	3.026E-07	2.110E-07	1.489E-07
NW	85	2.204E-05	6.518E-06	2.166E-06	1.167E-06	7.510E-07	3.948E-07	2.481E-07	1.738E-07
NNW	111	3.854E-05	1.109E-05	3.419E-06	1.756E-06	1.103E-06	6.060E-07	3.964E-07	2.853E-07
AVERAGE	2127	2.231E-05	6.524E-06	2.066E-06	1.087E-06	6.919E-07	3.684E-07	2.339E-07	1.655E-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	182	1.962E-07	1.551E-07	1.266E-07	1.059E-07	9.028E-08	4.888E-08	3.169E-08	1.724E-08
NNE	346	2.480E-07	1.958E-07	1.596E-07	1.332E-07	1.134E-07	6.114E-08	3.957E-08	2.146E-08
NE	188	2.120E-07	1.692E-07	1.393E-07	1.176E-07	1.010E-07	5.602E-08	3.699E-08	2.068E-08
ENE	131	1.542E-07	1.225E-07	1.004E-07	8.436E-08	7.215E-08	3.960E-08	2.593E-08	1.427E-08
E	168	1.467E-07	1.162E-07	9.490E-08	7.955E-08	6.786E-08	3.700E-08	2.410E-08	1.313E-08
ESE	119	1.205E-07	9.453E-08	7.664E-08	6.364E-08	5.389E-08	2.867E-08	1.833E-08	9.715E-09
SE	106	8.785E-08	6.876E-08	6.117E-08	5.062E-08	4.274E-08	2.249E-08	1.429E-08	7.529E-09
SSE	122	7.753E-08	6.076E-08	4.923E-08	4.087E-08	3.459E-08	1.838E-08	1.173E-08	6.209E-09
S	110	6.973E-08	5.460E-08	4.420E-08	3.666E-08	3.101E-08	1.643E-08	1.046E-08	5.502E-09
SSW	94	5.588E-08	4.389E-08	3.564E-08	2.966E-08	2.513E-08	1.342E-08	8.592E-09	4.568E-09
SW	88	4.464E-08	3.525E-08	2.877E-08	2.408E-08	2.049E-08	1.111E-08	7.213E-09	3.919E-09
WSW	76	4.677E-08	3.715E-08	3.0[illegible]	2.818E-08	2.407E-08	1.199E-08	7.839E-09	4.304E-09
W	96	8.402E-08	6.640E-08	5.418E-08	4.525E-08	3.847E-08	2.076E-08	1.342E-08	7.253E-09
WNW	95	1.129E-07	8.932E-08	6.631E-08	5.542E-08	4.718E-08	2.552E-08	1.656E-08	9.003E-09
NW	95	1.309E-07	1.030E-07	8.369E-08	6.967E-08	5.914E-08	3.171E-08	2.040E-08	1.090E-08
NNW	111	2.179E-07	1.736E-07	1.426E-07	1.200E-07	1.029E-07	5.657E-08	3.714E-08	2.064E-08
AVERAGE	2127	1.256E-07	9.913E-08	8.106E-08	6.780E-08	5.777E-08	3.123E-08	2.027E-08	1.102E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	182	1.106E-08	7.861E-09	5.982E-09	4.751E-09	3.870E-09	3.243E-09	2.762E-09
NNE	346	1.374E-08	9.748E-09	7.405E-09	5.872E-09	4.775E-09	3.996E-09	3.399E-09
NE	188	1.346E-08	9.667E-09	7.420E-09	5.933E-09	4.858E-09	4.082E-09	3.486E-09
ENE	131	9.206E-09	6.567E-09	5.010E-09	3.986E-09	3.248E-09	2.719E-09	2.314E-09
E	168	8.436E-09	5.996E-09	4.560E-09	3.618E-09	2.941E-09	2.458E-09	2.088E-09
ESE	119	6.142E-09	4.315E-09	3.251E-09	2.560E-09	2.069E-09	1.723E-09	1.459E-09
SE	106	4.743E-09	3.323E-09	2.498E-09	1.964E-09	1.586E-09	1.322E-09	1.120E-09
SSE	122	3.935E-09	2.770E-09	2.090E-09	1.649E-09	1.336E-09	1.115E-09	9.469E-10
S	110	3.470E-09	2.435E-09	1.832E-09	1.442E-09	1.165E-09	9.709E-10	8.228E-10
SSW	94	2.908E-09	2.055E-09	1.554E-09	1.230E-09	9.986E-10	8.359E-10	7.114E-10
SW	88	2.532E-09	1.809E-09	1.380E-09	1.099E-09	8.980E-10	7.549E-10	6.451E-10
WSW	76	2.795E-09	2.004E-09	1.534E-09	1.225E-09	1.003E-09	8.446E-10	7.229E-10
W	96	4.646E-09	3.297E-09	2.502E-09	1.984E-09	1.613E-09	1.350E-09	1.149E-09
WNW	95	5.780E-09	4.108E-09	3.123E-09	2.478E-09	2.017E-09	1.689E-09	1.437E-09
NW	95	6.919E-09	4.874E-09	3.680E-09	2.903E-09	2.348E-09	1.956E-09	1.656E-09
NNW	111	1.339E-08	9.592E-09	7.349E-09	5.870E-09	4.804E-09	4.037E-09	3.448E-09
AVERAGE	2127	7.072E-09	5.026E-09	3.823E-09	3.035E-09	2.471E-09	2.068E-09	1.760E-09

Table B-2

Depleted χ/Q Factors for Reactor Building Vent

BECo 3rd Quarter 1995 General X/Q's - 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	218	3.443E-05	1.030E-05	3.486E-06	1.866E-06	1.191E-06	6.200E-07	3.877E-07	2.705E-07
NNE	421	5.625E-05	1.674E-05	5.664E-06	3.035E-06	1.919E-06	1.001E-06	6.279E-07	4.390E-07
NE	266	5.685E-05	1.659E-05	5.159E-06	2.731E-06	1.747E-06	9.460E-07	6.083E-07	4.330E-07
ENE	126	3.846E-05	1.119E-05	3.554E-06	1.917E-06	1.239E-06	6.662E-07	4.248E-07	3.008E-07
E	114	2.776E-05	8.197E-06	2.706E-06	1.464E-06	9.447E-07	4.983E-07	3.133E-07	2.196E-07
ESE	102	2.454E-05	7.171E-06	2.296E-06	1.243E-06	8.056E-07	4.291E-07	2.715E-07	1.912E-07
SE	86	1.900E-05	5.542E-06	2.060E-06	1.098E-06	7.002E-07	3.673E-07	2.102E-07	1.476E-07
SSE	89	1.726E-05	5.102E-06	1.690E-06	8.208E-07	5.260E-07	2.755E-07	1.731E-07	1.213E-07
S	111	1.855E-05	5.535E-06	1.560E-06	8.223E-07	5.223E-07	2.702E-07	1.688E-07	1.178E-07
SSW	161	2.054E-05	6.204E-06	1.892E-06	9.896E-07	6.260E-07	3.224E-07	2.010E-07	1.399E-07
SW	174	2.237E-05	6.750E-06	2.108E-06	1.106E-06	6.976E-07	3.576E-07	2.223E-07	1.544E-07
WSW	94	1.366E-05	4.117E-06	1.245E-06	6.516E-07	4.121E-07	2.133E-07	1.335E-07	9.315E-08
W	49	8.903E-06	2.702E-06	8.210E-07	4.808E-07	3.065E-07	1.592E-07	9.036E-08	6.291E-08
WNW	19	4.390E-06	1.303E-06	4.338E-07	2.317E-07	1.480E-07	7.719E-08	5.320E-08	3.721E-08
NW	40	1.006E-05	2.940E-06	1.028E-06	5.531E-07	3.535E-07	1.840E-07	1.151E-07	8.041E-08
NNW	39	1.165E-05	3.402E-06	1.176E-06	6.361E-07	4.085E-07	2.138E-07	1.340E-07	9.368E-08
AVERAGE	2109	2.404E-05	7.112E-06	2.305E-06	1.227E-06	7.842E-07	4.126E-07	2.584E-07	1.814E-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	218	2.029E-07	1.591E-07	1.290E-07	1.071E-07	9.068E-08	4.825E-08	3.087E-08	1.638E-08
NNE	421	3.297E-07	2.588E-07	2.099E-07	1.743E-07	1.477E-07	7.866E-08	5.039E-08	2.684E-08
NE	266	3.291E-07	2.611E-07	2.138E-07	1.794E-07	1.533E-07	8.391E-08	5.484E-08	3.012E-08
ENE	126	2.283E-07	1.808E-07	1.478E-07	1.237E-07	1.056E-07	5.751E-08	3.745E-08	2.042E-08
E	114	1.655E-07	1.303E-07	1.060E-07	8.826E-08	7.496E-08	4.028E-08	2.596E-08	1.392E-08
ESE	102	1.448E-07	1.145E-07	9.341E-08	7.805E-08	6.648E-08	3.607E-08	2.343E-08	1.272E-08
SE	86	1.113E-07	8.770E-08	7.844E-08	6.527E-08	5.538E-08	2.961E-08	1.906E-08	1.025E-08
SSE	89	9.141E-08	7.197E-08	5.852E-08	4.873E-08	4.137E-08	2.220E-08	1.429E-08	7.654E-09
S	111	8.828E-08	6.923E-08	5.611E-08	4.659E-08	3.943E-08	2.095E-08	1.338E-08	7.091E-09
SSW	161	1.046E-07	8.189E-08	6.629E-08	5.501E-08	4.654E-08	2.469E-08	1.574E-08	8.311E-09
SW	174	1.153E-07	9.008E-08	7.278E-08	6.025E-08	5.087E-08	2.680E-08	1.703E-08	8.966E-09
WSW	94	6.979E-08	5.471E-08	4.878E-08	4.053E-08	3.433E-08	1.662E-08	1.064E-08	5.653E-09
W	49	4.705E-08	3.683E-08	2.981E-08	2.474E-08	2.095E-08	1.114E-08	7.115E-09	3.758E-09
WNW	19	2.800E-08	2.201E-08	1.625E-08	1.351E-08	1.146E-08	6.129E-09	3.944E-09	2.116E-09
NW	40	6.049E-08	4.751E-08	3.852E-08	3.194E-08	2.703E-08	1.432E-08	9.156E-09	4.868E-09
NNW	39	7.053E-08	5.544E-08	4.499E-08	3.735E-08	3.164E-08	1.682E-08	1.078E-08	5.742E-09
AVERAGE	2109	1.367E-07	1.076E-07	8.814E-08	7.342E-08	6.236E-08	3.337E-08	2.150E-08	1.155E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	218	1.036E-08	7.276E-09	5.481E-09	4.316E-09	3.487E-09	2.902E-09	2.456E-09
NNE	421	1.701E-08	1.198E-08	9.037E-09	7.127E-09	5.767E-09	4.807E-09	4.074E-09
NE	266	1.940E-08	1.382E-08	1.054E-08	8.380E-09	6.826E-09	5.711E-09	4.858E-09
ENE	126	1.310E-08	9.295E-09	7.064E-09	5.599E-09	4.547E-09	3.796E-09	3.221E-09
E	114	8.851E-09	6.241E-09	4.716E-09	3.721E-09	3.011E-09	2.507E-09	2.122E-09
ESE	102	8.140E-09	5.769E-09	4.377E-09	3.465E-09	2.811E-09	2.345E-09	1.989E-09
SE	86	6.530E-09	4.614E-09	3.492E-09	2.761E-09	2.240E-09	1.871E-09	1.589E-09
SSE	89	4.870E-09	3.437E-09	2.599E-09	2.052E-09	1.663E-09	1.387E-09	1.176E-09
S	111	4.494E-09	3.164E-09	2.387E-09	1.883E-09	1.525E-09	1.274E-09	1.081E-09
SSW	161	5.263E-09	3.705E-09	2.794E-09	2.204E-09	1.785E-09	1.491E-09	1.266E-09
SW	174	5.660E-09	3.975E-09	2.992E-09	2.356E-09	1.906E-09	1.591E-09	1.349E-09
WSW	94	3.590E-09	2.532E-09	1.913E-09	1.511E-09	1.225E-09	1.023E-09	8.689E-10
W	49	2.373E-09	1.666E-09	1.254E-09	9.870E-10	7.971E-10	6.631E-10	5.610E-10
WNW	19	1.347E-09	9.508E-10	7.190E-10	5.678E-10	4.600E-10	3.837E-10	3.253E-10
NW	40	3.078E-09	2.162E-09	1.628E-09	1.282E-09	1.036E-09	8.634E-10	7.311E-10
NNW	39	3.633E-09	2.554E-09	1.924E-09	1.516E-09	1.225E-09	1.020E-09	8.633E-10
AVERAGE	2109	7.356E-09	5.196E-09	3.932E-09	3.108E-09	2.519E-09	2.102E-09	1.783E-09

Table B-2

Depleted χ/Q Factors for Reactor Building Vent

BECo 4th Quarter 1995 General X/Q's - 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	131	2.424E-05	7.144E-06	2.377E-06	1.290E-06	8.326E-07	4.392E-07	2.761E-07	1.935E-07
NNE	238	3.855E-05	1.140E-05	3.709E-06	2.000E-06	1.288E-06	6.839E-07	4.321E-07	3.038E-07
NE	304	6.250E-05	1.816E-05	5.720E-06	3.091E-06	2.001E-06	1.079E-06	6.887E-07	4.880E-07
ENE	368	5.808E-05	1.701E-05	5.665E-06	3.044E-06	1.953E-06	1.031E-06	6.506E-07	4.571E-07
E	349	4.003E-05	1.204E-05	4.122E-06	2.170E-06	1.370E-06	7.092E-07	4.439E-07	3.097E-07
ESE	199	2.254E-05	6.896E-06	2.355E-06	1.242E-06	7.850E-07	4.034E-07	2.512E-07	1.745E-07
SE	107	1.476E-05	4.478E-06	1.546E-06	8.206E-07	5.206E-07	2.683E-07	1.669E-07	1.159E-07
SSE	54	6.590E-06	2.020E-06	6.988E-07	3.668E-07	2.311E-07	1.181E-07	7.323E-08	5.069E-08
S	75	9.792E-06	2.990E-06	9.483E-07	4.993E-07	3.149E-07	1.611E-07	1.000E-07	6.935E-08
SSW	83	8.605E-06	2.736E-06	8.530E-07	4.420E-07	2.758E-07	1.393E-07	8.609E-08	5.937E-08
SW	73	5.857E-06	1.897E-06	5.903E-07	3.045E-07	1.890E-07	9.472E-08	5.794E-08	3.961E-08
WSW	24	2.742E-06	8.655E-07	2.775E-07	1.461E-07	9.190E-08	4.672E-08	2.881E-08	1.983E-08
W	20	2.757E-06	8.535E-07	2.654E-07	1.553E-07	9.863E-08	5.087E-08	2.873E-08	1.991E-08
WNW	37	4.242E-06	1.308E-06	4.538E-07	2.414E-07	1.530E-07	7.871E-08	5.371E-08	3.718E-08
NW	50	6.875E-06	2.055E-06	7.300E-07	3.912E-07	2.489E-07	1.286E-07	8.003E-08	5.561E-08
NNW	67	1.071E-05	3.222E-06	1.102E-06	5.919E-07	3.785E-07	1.971E-07	1.232E-07	8.584E-08
AVERAGE	2179	1.993E-05	5.943E-06	1.963E-06	1.050E-06	6.708E-07	3.519E-07	2.213E-07	1.550E-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	131	1.458E-07	1.148E-07	9.330E-08	7.766E-08	6.594E-08	3.538E-08	2.278E-08	1.220E-08
NNE	238	2.292E-07	1.807E-07	1.471E-07	1.227E-07	1.044E-07	5.633E-08	3.640E-08	1.959E-08
NE	304	3.706E-07	2.937E-07	2.402E-07	2.012E-07	1.718E-07	9.375E-08	6.115E-08	3.343E-08
ENE	368	3.450E-07	2.719E-07	2.213E-07	1.843E-07	1.566E-07	8.406E-08	5.422E-08	2.919E-08
E	349	2.319E-07	1.816E-07	1.470E-07	1.219E-07	1.031E-07	5.460E-08	3.479E-08	1.839E-08
ESE	199	1.301E-07	1.016E-07	8.211E-08	6.799E-08	5.745E-08	3.034E-08	1.925E-08	1.006E-08
SE	107	8.647E-08	6.752E-08	5.998E-08	4.963E-08	4.192E-08	2.008E-08	1.272E-08	6.649E-09
SSE	54	3.769E-08	2.936E-08	2.366E-08	1.955E-08	1.648E-08	8.640E-09	5.456E-09	2.837E-09
S	75	5.164E-08	4.026E-08	3.247E-08	2.683E-08	2.263E-08	1.187E-08	7.491E-09	3.889E-09
SSW	83	4.386E-08	3.400E-08	2.731E-08	2.253E-08	1.897E-08	9.909E-09	6.205E-09	3.164E-09
SW	73	2.903E-08	2.236E-08	1.786E-08	1.466E-08	1.230E-08	6.348E-09	3.956E-09	2.009E-09
WSW	24	1.463E-08	1.132E-08	9.986E-09	8.218E-09	6.908E-09	3.256E-09	2.028E-09	1.026E-09
W	20	1.480E-08	1.152E-08	9.290E-09	7.684E-09	6.487E-09	3.416E-09	2.158E-09	1.117E-09
WNW	37	2.763E-08	2.151E-08	1.575E-08	1.301E-08	1.097E-08	5.756E-09	3.630E-09	1.878E-09
NW	50	4.157E-08	3.248E-08	2.623E-08	2.169E-08	1.830E-08	9.610E-09	6.082E-09	3.176E-09
NNW	67	6.427E-08	5.034E-08	4.075E-08	3.380E-08	2.860E-08	1.518E-08	9.671E-09	5.089E-09
AVERAGE	2179	1.165E-07	9.156E-08	7.464E-08	6.209E-08	5.268E-08	2.803E-08	1.800E-08	9.606E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	131	7.749E-09	5.458E-09	4.122E-09	3.250E-09	2.628E-09	2.187E-09	1.851E-09
NNE	238	1.248E-08	8.813E-09	6.670E-09	5.270E-09	4.268E-09	3.555E-09	3.011E-09
NE	304	2.147E-08	1.525E-08	1.160E-08	9.197E-09	7.472E-09	6.238E-09	5.294E-09
ENE	368	1.859E-08	1.313E-08	9.935E-09	7.851E-09	6.362E-09	5.307E-09	4.499E-09
E	349	1.161E-08	8.153E-09	6.141E-09	4.837E-09	3.912E-09	3.262E-09	2.765E-09
ESE	199	6.316E-09	4.416E-09	3.314E-09	2.602E-09	2.098E-09	1.745E-09	1.476E-09
SE	107	4.173E-09	2.916E-09	2.187E-09	1.717E-09	1.384E-09	1.151E-09	9.730E-10
SSE	54	1.778E-09	1.242E-09	9.308E-10	7.306E-10	5.891E-10	4.903E-10	4.150E-10
S	75	2.433E-09	1.697E-09	1.271E-09	9.962E-10	8.025E-10	6.674E-10	5.645E-10
SSW	83	1.964E-09	1.362E-09	1.015E-09	7.926E-10	6.365E-10	5.277E-10	4.454E-10
SW	73	1.245E-09	8.627E-10	6.426E-10	5.016E-10	4.027E-10	3.337E-10	2.816E-10
WSW	24	6.322E-10	4.357E-10	3.232E-10	2.514E-10	2.011E-10	1.662E-10	1.398E-10
W	20	6.973E-10	4.851E-10	3.627E-10	2.838E-10	2.281E-10	1.890E-10	1.594E-10
WNW	37	1.171E-09	8.141E-10	6.083E-10	4.758E-10	3.823E-10	3.169E-10	2.672E-10
NW	50	1.988E-09	1.386E-09	1.038E-09	8.135E-10	6.548E-10	5.441E-10	4.596E-10
NNW	67	3.201E-09	2.240E-09	1.682E-09	1.321E-09	1.065E-09	8.843E-10	7.470E-10
AVERAGE	2179	6.093E-09	4.291E-09	3.240E-09	2.556E-09	2.068E-09	1.723E-09	1.459E-09

Table B-2

Depleted χ/Q Factors for Reactor Building Vent

BECo 1995 General X/Q's - 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	738	3.144E-05	9.279E-06	3.101E-06	1.653E-06	1.055E-06	5.549E-07	3.500E-07	2.458E-07
NNE	1224	4.249E-05	1.254E-05	4.167E-06	2.222E-06	1.419E-06	7.473E-07	4.714E-07	3.310E-07
NE	934	4.781E-05	1.393E-05	4.353E-06	2.312E-06	1.482E-06	8.014E-07	5.145E-07	3.658E-07
ENE	832	3.840E-05	1.122E-05	3.657E-06	1.960E-06	1.259E-06	6.694E-07	4.245E-07	2.994E-07
E	834	2.919E-05	8.716E-06	2.892E-06	1.541E-06	9.838E-07	5.153E-07	3.238E-07	2.267E-07
ESE	571	2.227E-05	6.636E-06	2.214E-06	1.181E-06	7.549E-07	3.945E-07	2.476E-07	1.732E-07
SE	432	1.693E-05	5.023E-06	1.737E-06	9.264E-07	5.877E-07	3.047E-07	1.903E-07	1.328E-07
SSE	377	1.259E-05	3.755E-06	1.274E-06	6.751E-07	4.294E-07	2.225E-07	1.391E-07	9.701E-08
S	455	1.474E-05	4.441E-06	1.382E-06	7.279E-07	4.608E-07	2.375E-07	1.481E-07	1.031E-07
SSW	457	1.312E-05	3.973E-06	1.218E-06	6.364E-07	4.021E-07	2.069E-07	1.290E-07	8.977E-08
SW	437	1.206E-05	3.678E-06	1.121E-06	5.828E-07	3.667E-07	1.879E-07	1.168E-07	8.117E-08
WSW	257	8.136E-06	2.449E-06	7.293E-07	3.788E-07	2.395E-07	1.241E-07	7.782E-08	5.442E-08
W	189	7.850E-06	2.333E-06	7.009E-07	4.096E-07	2.621E-07	1.371E-07	7.826E-08	5.478E-08
WNW	174	7.387E-06	2.169E-06	7.211E-07	3.835E-07	2.452E-07	1.287E-07	8.909E-08	6.250E-08
NW	241	1.268E-05	3.724E-06	1.278E-06	6.883E-07	4.411E-07	2.305E-07	1.445E-07	1.011E-07
NNW	295	1.947E-05	5.659E-06	1.859E-06	9.785E-07	6.205E-07	3.316E-07	2.120E-07	1.502E-07
AVERAGE	8447	2.103E-05	6.220E-06	2.025E-06	1.078E-06	6.880E-07	3.622E-07	2.285E-07	1.605E-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	738	1.852E-07	1.458E-07	1.185E-07	9.865E-08	8.375E-08	4.487E-08	2.886E-08	1.547E-08
NNE	1224	2.495E-07	1.964E-07	1.597E-07	1.330E-07	1.130E-07	6.059E-08	3.903E-08	2.096E-08
NE	934	2.780E-07	2.205E-07	1.805E-07	1.513E-07	1.293E-07	7.070E-08	4.617E-08	2.532E-08
ENE	832	2.265E-07	1.789E-07	1.459E-07	1.218E-07	1.037E-07	5.602E-08	3.629E-08	1.966E-08
E	834	1.704E-07	1.339E-07	1.087E-07	9.043E-08	7.673E-08	4.107E-08	2.637E-08	1.407E-08
ESE	571	1.302E-07	1.023E-07	8.303E-08	6.905E-08	5.857E-08	3.131E-08	2.009E-08	1.071E-08
SE	432	9.958E-08	7.806E-08	6.954E-08	5.765E-08	4.876E-08	2.346E-08	1.497E-08	7.925E-09
SSE	377	7.275E-08	5.705E-08	4.624E-08	3.838E-08	3.249E-08	1.726E-08	1.103E-08	5.844E-09
S	455	7.704E-08	6.027E-08	4.875E-08	4.040E-08	3.415E-08	1.805E-08	1.147E-08	6.030E-09
SSW	457	6.707E-08	5.247E-08	4.246E-08	3.522E-08	2.978E-08	1.578E-08	1.004E-08	5.281E-09
SW	437	6.055E-08	4.731E-08	3.824E-08	3.170E-08	2.679E-08	1.417E-08	9.026E-09	4.763E-09
WSW	257	4.081E-08	3.204E-08	2.861E-08	2.382E-08	2.020E-08	9.823E-09	6.298E-09	3.353E-09
W	189	4.119E-08	3.238E-08	2.631E-08	2.191E-08	1.859E-08	9.958E-09	6.395E-09	3.412E-09
WNW	174	4.711E-08	3.710E-08	2.743E-08	2.284E-08	1.939E-08	1.039E-08	6.693E-09	3.596E-09
NW	241	7.603E-08	5.975E-08	4.849E-08	4.027E-08	3.412E-08	1.816E-08	1.163E-08	6.190E-09
NNW	295	1.138E-07	8.997E-08	7.341E-08	6.134E-08	5.225E-08	2.822E-08	1.828E-08	9.934E-09
AVERAGE	8447	1.210E-07	9.526E-08	7.786E-08	6.486E-08	5.510E-08	2.936E-08	1.892E-08	1.016E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	738	9.838E-09	6.941E-09	5.249E-09	4.146E-09	3.360E-09	2.803E-09	2.377E-09
NNE	1224	1.334E-08	9.423E-09	7.130E-09	5.635E-09	4.567E-09	3.811E-09	3.233E-09
NE	934	1.630E-08	1.161E-08	8.846E-09	7.029E-09	5.723E-09	4.787E-09	4.070E-09
ENE	832	1.257E-08	8.900E-09	6.751E-09	5.345E-09	4.338E-09	3.622E-09	3.074E-09
E	834	8.934E-09	6.296E-09	4.755E-09	3.752E-09	3.037E-09	2.532E-09	2.146E-09
ESE	571	6.792E-09	4.783E-09	3.611E-09	2.848E-09	2.304E-09	1.921E-09	1.627E-09
SE	432	5.007E-09	3.517E-09	2.648E-09	2.085E-09	1.686E-09	1.405E-09	1.191E-09
SSE	377	3.700E-09	2.602E-09	1.962E-09	1.547E-09	1.251E-09	1.044E-09	8.852E-10
S	455	3.802E-09	2.667E-09	2.006E-09	1.579E-09	1.276E-09	1.064E-09	9.017E-10
SSW	457	3.337E-09	2.345E-09	1.766E-09	1.392E-09	1.127E-09	9.404E-10	7.983E-10
SW	437	3.016E-09	2.123E-09	1.601E-09	1.263E-09	1.024E-09	8.549E-10	7.261E-10
WSW	257	2.135E-09	1.509E-09	1.142E-09	9.036E-10	7.337E-10	6.138E-10	5.221E-10
W	189	2.168E-09	1.530E-09	1.156E-09	9.130E-10	7.397E-10	6.173E-10	5.237E-10
WNW	174	2.292E-09	1.621E-09	1.227E-09	9.705E-10	7.874E-10	6.578E-10	5.586E-10
NW	241	3.918E-09	2.754E-09	2.076E-09	1.635E-09	1.322E-09	1.101E-09	9.322E-10
NNW	295	6.362E-09	4.515E-09	3.432E-09	2.723E-09	2.215E-09	1.854E-09	1.577E-09
AVERAGE	8447	6.470E-09	4.571E-09	3.460E-09	2.735E-09	2.218E-09	1.852E-09	1.571E-09

Table B-3

Gamma χ/Q Factors for Reactor Building Vent

BECo 1st Quarter 1995 General Ground Level X/Q's
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	207	7.247E-06	3.102E-06	1.374E-06	8.455E-07	5.956E-07	3.587E-07	2.493E-07	1.878E-07
NNE	219	6.917E-06	2.958E-06	1.301E-06	7.992E-07	5.630E-07	3.391E-07	2.357E-07	1.778E-07
NE	176	6.796E-06	2.934E-06	1.292E-06	7.946E 07	5.596E-07	3.379E-07	2.353E-07	1.776E-07
ENE	207	6.836E-06	2.898E-06	1.252E-06	7.589E-07	5.324E-07	3.190E-07	2.210E-07	1.663E-07
E	203	5.781E-06	2.468E-06	1.053E-06	6.336E-07	4.427E-07	2.630E-07	1.809E-07	1.352E-07
ESE	151	5.293E-06	2.220E-06	9.332E-07	5.564E-07	3.892E-07	2.324E-07	1.608E-07	1.209E-07
SE	133	4.781E-06	2.027E-06	8.799E-07	5.325E-07	3.723E-07	2.214E-07	1.526E-07	1.144E-07
SSE	112	3.836E-06	1.602E-06	6.781E-07	4.046E-07	2.832E-07	1.687E-07	1.163E-07	8.721E-08
S	159	5.315E-06	2.217E-06	8.390E-07	4.942E-07	3.443E-07	2.038E-07	1.400E-07	1.045E-07
SSW	119	3.523E-06	1.446E-06	5.335E-07	3.101E-07	2.167E-07	1.289E-07	8.886E-08	6.651E-08
SW	102	3.024E-06	1.275E-06	4.810E-07	2.811E-07	1.930E-07	1.123E-07	7.638E-08	5.679E-08
WSW	63	1.993E-06	8.199E-07	2.979E-07	1.710E-07	1.186E-07	6.97/E-08	4.772E-08	3.548E-08
W	24	8.388E-07	3.630E-07	1.420E-07	9.413E-08	6.543E-08	3.f/3E-08	2.423E-08	1.814E-08
WNW	23	7.427E-07	3.168E-07	1.393E-07	8.463E-08	5.913E-08	3.508E-08	2.650E-08	1.978E-08
NW	56	2.628E-06	1.119E-06	4.991E-07	3.080E-07	2.171E-07	1.307E-07	9.086E-08	6.857E-08
NNW	78	3.792E-06	1.619E-06	7.262E-07	4.483E-07	3.159E-07	\.902E-07	1.321E-07	9.953E-08
AVERAGE	2032	4.334E-06	1.837E-06	7.764E-07	4.698E-07	3.293E-07	1.969E-07	1.362E-07	1.023E-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	207	1.492E-07	1.226E-07	1.035E-07	8.887E-08	7.760E-08	4.647E-08	3.230E-08	1.927E-08
NNE	219	1.413E-07	1.163E-07	9.822E-08	8.444E-08	7.379E-08	4.432E-08	3.088E-08	1.851E-08
NE	176	1.411E-07	1.161E-07	9.807E-08	8.438E-08	7.380E-08	4.447E-08	3.102E-08	1.860E-08
ENE	207	1.319E-07	1.083E-07	9.130E-08	7.838E-08	6.841E-08	4.090E-08	2.839E-08	1.691E-08
E	203	1.064E-07	8.690E-08	7.291E-08	6.239E-08	5.430E-08	3.218E-08	2.212E-08	1.291E-08
ESE	151	9.577E-08	7.861E-08	6.623E-08	5.685E-08	4.961E-08	2.966E-08	2.057E-08	1.222E-08
SE	133	9.046E-08	7.410E-08	6.854E-08	5.870E-08	5.112E-08	2.756E-08	1.901E-08	1.121E-08
SSE	112	6.895E-08	5.647E-08	4.748E-08	4.065E-08	3.539E-08	2.099E-08	1.447E-08	8.519E-09
S	159	8.224E-08	6.709E-08	5.623E-08	4.804E-08	4.175E-08	2.460E-08	1.684E-08	9.781E-09
SSW	119	5.245E-08	4.288E-08	3.600E-08	3.080E-08	2.680E-08	1.586E-08	1.090E-08	6.374E-09
SW	102	4.453E-08	3.623E-08	3.031E-08	2.587E-08	2.246E-08	1.319E-08	8.999E-09	5.204E-09
WSW	63	2.778E-08	2.257E-08	2.074E-08	1.768E-08	1.534E-08	8.166E-09	5.547E-09	3.171E-09
W	24	1.428E-08	1.167E-08	9.800E-09	8.397E-09	7.317E-09	4.358E-09	2.999E-09	1.750E-09
WNW	23	1.557E-08	1.271E-08	9.686E-09	8.272E-09	7.186E-09	4.223E-09	2.892E-09	1.688E-09
NW	56	5.460E-08	4.497E-08	3.798E-08	3.264E-08	2.851E-08	1.708E-08	1.190E-08	7.136E-09
NNW	78	7.907E-08	6.500E-08	5.482E-08	4.704E-08	4.104E-08	2.449E-08	1.699E-08	1.012E-08
AVERAGE	2032	8.098E-08	6.641E-08	5.636E-08	4.834E-08	4.215E-08	2.491E-08	1.724E-08	1.021E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	207	1.341E-08	1.016E-08	8.136E-09	6.751E-09	5.719E-09	4.959E-09	4.359E-09
NNE	219	1.292E-08	9.805E-09	7.866E-09	6.536E-09	5.544E-09	4.812E-09	4.232E-09
NE	176	1.299E-08	9.869E-09	7.923E-09	6.588E-09	5.591E-09	4.852E-09	4.268E-09
ENE	207	1.177E-08	8.910E-09	7.136E-09	5.923E-09	5.019E-09	4.353E-09	3.827E-09
E	203	8.881E-09	6.669E-09	5.309E-09	4.382E-09	3.695E-09	3.188E-09	2.790E-09
ESE	151	8.493E-09	6.426E-09	5.144E-09	4.266E-09	3.613E-09	3.132E-09	2.752E-09
SE	133	7.749E-09	5.839E-09	4.658E-09	3.854E-09	3.256E-09	2.818E-09	2.473E-09
SSE	112	5.885E-09	4.432E-09	3.534E-09	2.923E-09	2.469E-09	2.137E-09	1.875E-09
S	159	6.708E-09	5.026E-09	3.993E-09	3.292E-09	2.773E-09	2.394E-09	2.095E-09
SSW	119	4.390E-09	3.300E-09	2.627E-09	2.170E-09	1.831E-09	1.583E-09	1.388E-09
SW	102	3.563E-09	2.667E-09	2.120E-09	1.748E-09	1.473E-09	1.272E-09	1.113E-09
WSW	63	2.155E-09	1.604E-09	1.267E-09	1.040E-09	8.725E-10	7.502E-10	6.544E-10
W	24	1.205E-09	9.053E-10	7.205E-10	5.945E-10	5.011E-10	4.321E-10	3.779E-10
WNW	23	1.159E-09	8.696E-10	6.920E-10	5.712E-10	4.818E-10	4.165E-10	3.649E-10
NW	56	4.977E-09	3.775E-09	3.026E-09	2.513E-09	2.130E-09	1.849E-09	1.627E-09
NNW	78	7.036E-09	5.323E-09	4.258E-09	3.530E-09	2.989E-09	2.593E-09	2.279E-09
AVERAGE	2032	7.081E-09	5.349E-09	4.276E-09	3.543E-09	2.997E-09	2.596E-09	2.280E-09

Table B-3

Gamma χ/Q Factors for Reactor Building Vent

BECo 2nd Quarter 1995 General X/Q's - 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	182	7.991E-06	3.376E-06	1.430E-06	8.571E-07	6.000E-07	3.613E-07	2.516E-07	1.900E-07
NNE	346	1.045E-05	4.409E-06	1.868E-06	1.121E-06	7.853E-07	4.714E-07	3.272E-07	2.465E-07
NE	188	6.936E-06	2.951E-06	1.233E-06	7.428E-07	5.243E-07	3.237E-07	2.296E-07	1.760E-07
ENE	131	5.026E-06	2.444E-06	1.010E-06	6.071E-07	4.298E-07	2.629E-07	1.847E-07	1.405E-07
E	168	6.322E-06	2.620E-06	1.062E-06	6.296E-07	4.442E-07	2.690E-07	1.877E-07	1.419E-07
ESE	119	5.590E-06	2.353E-06	9.988E-07	6.006E-07	4.213E-07	2.515E-07	1.735E-07	1.299E-07
SE	106	4.219E-06	1.779E-06	8.435E-07	5.080E-07	3.546E-07	2.102E-07	1.312E-07	9.795E-08
SSE	122	4.912E-06	2.004E-06	7.966E-07	4.170E-07	2.898E-07	1.709E-07	1.170E-07	8.718E-08
S	110	4.490E-06	1.854E-06	6.312E-07	3.697E-07	2.578E-07	1.526E-07	1.047E-07	7.812E-08
SSW	94	4.017E-06	1.589E-06	5.411E-07	3.009E-07	2.096E-07	1.241E-07	8.512E-08	6.344E-08
SW	88	3.715E-06	1.434E-06	4.534E-07	2.398E-07	1.659E-07	9.759E-08	6.674E-08	4.972E-08
WSW	76	3.859E-06	1.472E-06	4.530E-07	2.348E-07	1.621E-07	9.567E-08	6.583E-08	4.940E-08
W	96	5.196E-06	2.058E-06	7.089E-07	4.412E-07	3.106E-07	1.868E-07	1.178E-07	8.859E-08
WNW	95	5.025E-06	2.035E-06	8.041E-07	4.670E-07	3.287E-07	1.982E-07	1.516E-07	1.143E-07
NW	95	5.658E-06	2.391E-06	1.018E-06	6.165E-07	4.341E-07	2.607E-07	1.806E-07	1.357E-07
NNW	111	6.872E-06	2.967E-06	1.294E-06	7.924E-07	5.589E-07	3.441E-07	2.437E-07	1.862E-07
AVERAGE	2127	5.693E-06	2.358E-06	9.467E-07	5.591E-07	3.923E-07	2.363E-07	1.637E-07	1.235E-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	182	1.510E-07	1.242E-07	1.049E-07	9.022E-08	7.889E-08	4.747E-08	3.310E-08	1.987E-08
NNE	346	1.957E-07	1.609E-07	1.357E-07	1.167E-07	1.019E-07	6.115E-08	4.258E-08	2.552E-08
NE	188	1.415E-07	1.177E-07	1.003E-07	8.711E-08	7.680E-08	4.757E-08	3.392E-08	2.109E-08
ENE	131	1.124E-07	9.308E-08	7.902E-08	6.833E-08	6.003E-08	3.673E-08	2.595E-08	1.588E-08
E	168	1.131E-07	9.324E-08	7.890E-08	6.801E-08	5.958E-08	3.613E-08	2.535E-08	1.533E-08
ESE	119	1.025E-07	8.384E-08	7.042E-08	6.027E-08	5.246E-08	3.108E-08	2.140E-08	1.257E-08
SE	106	7.718E-08	6.302E-08	5.812E-08	4.963E-08	4.311E-08	2.533E-08	1.735E-08	1.012E-08
SSE	122	6.849E-08	5.580E-08	4.672E-08	3.988E-08	3.463E-08	2.035E-08	1.391E-08	8.076E-09
S	110	6.141E-08	5.006E-08	4.193E-08	3.580E-08	3.109E-08	1.829E-08	1.250E-08	7.249E-09
SSW	94	4.982E-08	4.059E-08	3.398E-08	2.900E-08	2.518E-08	1.480E-08	1.011E-08	5.865E-09
SW	88	3.905E-08	3.183E-08	2.667E-08	2.280E-08	1.983E-08	1.172E-08	8.049E-09	4.715E-09
WSW	76	3.905E-08	3.201E-08	2.964E-08	2.543E-08	2.219E-08	1.207E-08	8.372E-09	4.976E-09
W	96	7.023E-08	5.766E-08	4.859E-08	4.170E-08	3.638E-08	2.175E-08	1.509E-08	8.980E-09
WNW	95	9.080E-08	7.471E-08	5.734E-08	4.929E-08	4.308E-08	2.588E-08	1.804E-08	1.083E-08
NW	95	1.075E-07	8.823E-08	7.433E-08	6.379E-08	5.566E-08	3.327E-08	2.308E-08	1.371E-08
NNW	111	1.494E-07	1.239E-07	1.054E-07	9.128E-08	8.030E-08	4.931E-08	3.495E-08	2.155E-08
AVERAGE	2127	9.807E-08	8.067E-08	6.825E-08	5.870E-08	5.132E-08	3.081E-08	2.148E-08	1.290E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	182	1.390E-08	1.058E-08	8.503E-09	7.081E-09	6.019E-09	5.233E-09	4.612E-09
NNE	346	1.782E-08	1.354E-08	1.088E-08	9.050E-09	7.687E-09	6.678E-09	5.880E-09
NE	188	1.507E-08	1.164E-08	9.473E-09	7.966E-09	6.829E-09	5.972E-09	5.293E-09
ENE	131	1.124E-08	8.614E-09	6.966E-09	5.826E-09	4.970E-09	4.329E-09	3.822E-09
E	168	1.077E-08	8.214E-09	6.616E-09	5.515E-09	4.690E-09	4.075E-09	3.590E-09
ESE	119	8.673E-09	6.527E-09	5.202E-09	4.299E-09	3.629E-09	3.137E-09	2.749E-09
SE	106	6.951E-09	5.212E-09	4.144E-09	3.418E-09	2.881E-09	2.489E-09	2.180E-09
SSE	122	5.538E-09	4.150E-09	3.299E-09	2.721E-09	2.293E-09	1.980E-09	1.734E-09
S	110	4.965E-09	3.717E-09	2.951E-09	2.431E-09	2.046E-09	1.765E-09	1.544E-09
SSW	94	4.022E-09	3.015E-09	2.397E-09	1.977E-09	1.667E-09	1.440E-09	1.262E-09
SW	88	3.259E-09	2.459E-09	1.967E-09	1.631E-09	1.382E-09	1.198E-09	1.053E-09
WSW	76	3.469E-09	2.634E-09	2.114E-09	1.759E-09	1.495E-09	1.299E-09	1.145E-09
W	96	6.248E-09	4.732E-09	3.790E-09	3.146E-09	2.666E-09	2.313E-09	2.033E-09
WNW	95	7.576E-09	5.760E-09	4.628E-09	3.852E-09	3.272E-09	2.843E-09	2.504E-09
NW	95	9.517E-09	7.196E-09	5.756E-09	4.770E-09	4.036E-09	3.494E-09	3.067E-09
NNW	111	1.532E-08	1.179E-08	9.570E-09	8.031E-09	6.873E-09	6.006E-09	5.320E-09
AVERAGE	2127	9.021E-09	6.861E-09	5.516E-09	4.592E-09	3.902E-09	3.391E-09	2.987E-09

Table B-3

Gamma χ/Q Factors for Reactor Building Vent

BECo 3rd Quarter 1995 General X/Q's - 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	218	8.919E-06	3.824E-06	1.665E-06	1.013E-06	7.079E-07	4.207E-07	2.896E-07	2.167E-07
NNE	421	1.434E-05	6.138E-06	2.674E-06	1.625E-06	1.136E-06	6.761E-07	4.658E-07	3.489E-07
NE	266	1.117E-05	4.841E-06	2.109E-06	1.299E-06	9.171E-07	5.595E-07	3.927E-07	2.904E-07
ENE	126	7.871E-06	3.407E-06	1.496E-06	9.285E-07	6.582E-07	4.014E-07	2.813E-07	2.135E-07
E	114	6.685E-06	2.862E-06	1.243E-06	7.617E-07	5.371E-07	3.233E-07	2.242E-07	1.687E-07
ESE	102	5.799E-06	2.454E-06	1.038E-06	6.304E-07	4.454E-07	2.694E-07	1.876E-07	1.417E-07
SE	86	4.929E-06	2.071E-06	9.701E-07	5.838E-07	4.090E-07	2.446E-07	1.538E-07	1.156E-07
SSE	89	4.765E-06	1.985E-06	8.210E-07	4.430E-07	3.099E-07	1.847E-07	1.275E-07	9.574E-08
S	111	5.891E-06	2.409E-06	8.061E-07	4.673E-07	3.254E-07	1.924E-07	1.320E-07	9.847E-08
SSW	161	6.875E-06	2.800E-06	1.005E-06	5.758E-07	3.992E-07	2.347E-07	1.603E-07	1.192E-07
SW	174	7.058E-06	2.930E-06	1.097E-06	6.417E-07	4.443E-07	2.605E-07	1.776E-07	1.320E-07
WSW	94	4.213E-06	1.739E-06	6.383E-07	3.705E-07	2.568E-07	1.511E-07	1.034E-07	7.705E-08
W	49	2.433E-06	1.036E-06	4.015E-07	2.656E-07	1.854E-07	1.099E-07	6.861E-08	5.119E-08
WNW	19	1.145E-06	4.873E-07	2.085E-07	1.257E-07	8.752E-08	5.186E-08	3.921E-08	2.937E-08
NW	40	2.555E-06	1.091E-06	4.836E-07	2.968E-07	2.083E-07	1.244E-07	8.593E-08	6.449E-08
NNW	39	2.844E-06	1.219E-06	5.427E-07	3.353E-07	2.364E-07	1.421E-07	9.846E-08	7.400E-08
AVERAGE	2109	6.093E-06	2.581E-06	1.075E-06	6.477E-07	4.540E-07	2.717E-07	1.868E-07	1.403E-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	218	1.711E-07	1.400E-07	1.176E-07	1.007E-07	8.767E-08	5.200E-08	3.584E-08	2.110E-08
NNE	421	2.756E-07	2.255E-07	1.896E-07	1.623E-07	1.414E-07	8.386E-08	5.785E-08	3.413E-08
NE	266	2.385E-07	1.972E-07	1.673E-07	1.446E-07	1.270E-07	7.756E-08	5.473E-08	3.344E-08
ENE	126	1.706E-07	1.411E-07	1.196E-07	1.033E-07	9.063E-08	5.523E-08	3.890E-08	2.369E-08
E	114	1.338E-07	1.100E-07	9.272E-08	7.965E-08	6.956E-08	4.172E-08	2.902E-08	1.732E-08
ESE	102	1.129E-07	9.304E-08	7.870E-08	6.780E-08	5.936E-08	3.592E-08	2.517E-08	1.521E-08
SE	86	9.164E-08	7.523E-08	6.971E-08	5.980E-08	5.215E-08	3.110E-08	2.156E-08	1.285E-08
SSE	89	7.580E-08	6.217E-08	5.235E-08	4.490E-08	3.917E-08	2.338E-08	1.620E-08	9.610E-09
S	111	7.747E-08	6.319E-08	5.296E-08	4.523E-08	3.930E-08	2.313E-08	1.584E-08	9.231E-09
SSW	161	9.347E-08	7.604E-08	6.358E-08	5.422E-08	4.704E-08	2.755E-08	1.878E-08	1.085E-08
SW	174	1.035E-07	8.418E-08	7.037E-08	5.997E-08	5.199E-08	3.037E-08	2.068E-08	1.195E-08
WSW	94	6.054E-08	4.934E-08	4.546E-08	3.883E-08	3.373E-08	1.805E-08	1.236E-08	7.199E-09
W	49	4.026E-08	3.294E-08	2.753E-08	2.353E-08	2.046E-08	1.208E-08	8.291E-09	4.838E-09
WNW	19	2.323E-08	1.904E-08	1.456E-08	1.248E-08	1.088E-08	6.478E-09	4.485E-09	2.664E-09
NW	40	5.109E-08	4.190E-08	3.526E-08	3.021E-08	2.631E-08	1.562E-08	1.079E-08	6.391E-09
NNW	39	5.868E-08	4.817E-08	4.058E-08	3.480E-08	3.034E-08	1.807E-08	1.252E-08	7.439E-09
AVERAGE	2109	1.111E-07	9.118E-08	7.737E-08	6.640E-08	5.793E-08	3.451E-08	2.394E-08	1.424E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	218	1.457E-08	1.098E-08	8.756E-09	7.242E-09	6.117E-09	5.289E-09	4.636E-09
NNE	421	2.360E-08	1.779E-08	1.421E-08	1.177E-08	9.947E-09	8.610E-09	7.554E-09
NE	266	2.363E-08	1.810E-08	1.464E-08	1.224E-08	1.044E-08	9.090E-09	8.024E-09
ENE	126	1.670E-08	1.276E-08	1.029E-08	8.591E-09	7.313E-09	6.359E-09	5.604E-09
E	114	1.206E-08	9.139E-09	7.324E-09	6.079E-09	5.150E-09	4.462E-09	3.919E-09
ESE	102	1.067E-08	8.131E-09	6.544E-09	5.451E-09	4.633E-09	4.023E-09	3.541E-09
SE	86	8.932E-09	6.762E-09	5.416E-09	4.495E-09	3.810E-09	3.305E-09	2.906E-09
SSE	89	6.671E-09	5.043E-09	4.034E-09	3.344E-09	2.830E-09	2.451E-09	2.152E-09
S	111	6.341E-09	4.758E-09	3.785E-09	3.124E-09	2.635E-09	2.277E-09	1.994E-09
SSW	161	7.418E-09	5.549E-09	4.405E-09	3.630E-09	3.057E-09	2.638E-09	2.308E-09
SW	174	8.164E-09	6.102E-09	4.843E-09	3.989E-09	3.359E-09	2.899E-09	2.537E-09
WSW	94	4.947E-09	3.714E-09	2.957E-09	2.443E-09	2.062E-09	1.782E-09	1.562E-09
W	49	3.326E-09	2.497E-09	1.988E-09	1.642E-09	1.384E-09	1.195E-09	1.046E-09
WNW	19	1.849E-09	1.398E-09	1.120E-09	9.289E-10	7.868E-10	6.819E-10	5.990E-10
NW	40	4.424E-09	3.337E-09	2.664E-09	2.205E-09	1.864E-09	1.614E-09	1.416E-09
NNW	39	5.160E-09	3.898E-09	3.116E-09	2.581E-09	2.183E-09	1.891E-09	1.660E-09
AVERAGE	2109	9.904E-09	7.498E-09	6.006E-09	4.984E-09	4.223E-09	3.660E-09	3.216E-09

Table B-3

Gamma χ/Q Factors for Reactor Building Vent

BECo 4th Quarter 1995 General X/Q's - 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	131	5.387E-06	2.323E-06	1.027E-06	6.354E-07	4.489E-07	2.709E-07	1.882E-07	1.418E-07
NNE	238	8.266E-06	3.572E-06	1.569E-06	9.689E-07	6.843E-07	4.137E-07	2.880E-07	2.173E-07
NE	304	1.200E-05	5.192E-06	2.276E-06	1.414E-06	1.005E-06	6.146E-07	4.315E-07	3.278E-07
ENE	368	1.286E-05	5.523E-06	2.431E-06	1.496E-06	1.054E-06	6.348E-07	4.410E-07	3.325E-07
E	349	1.041E-05	4.426E-06	1.908E-06	1.147E-06	7.978E-07	4.719E-07	3.241E-07	2.423E-07
ESE	199	6.318E-06	2.674E-06	1.133E-06	6.747E-07	4.679E-07	2.751E-07	1.882E-07	1.403E-07
SE	107	4.032E-06	1.709E-06	7.331E-07	4.406E-07	3.075E-07	1.821E-07	1.250E-07	9.320E-08
SSE	54	1.963E-06	8.237E-07	3.454E-07	2.040E-07	1.415E-07	8.312E-08	5.673E-08	4.212E-08
S	75	2.841E-06	1.197E-06	4.617E-07	2.745E-07	1.906E-07	1.121E-07	7.665E-08	5.705E-08
SSW	83	2.665E-06	1.132E-06	4.322E-07	2.539E-07	1.742E-07	1.008E-07	6.825E-08	5.049E-08
SW	73	1.777E-06	7.708E-07	3.021E-07	1.797E-07	1.229E-07	7.066E-08	4.745E-08	3.480E-08
WSW	24	7.803E-07	3.368E-07	1.344E-07	8.139E-08	5.662E-08	3.329E-08	2.271E-08	1.682E-08
W	20	7.219E-07	3.115E-07	1.239E-07	8.296E-08	5.800E-08	3.440E-08	2.147E-08	1.598E-08
WNW	37	1.101E-06	4.772E-07	2.116E-07	1.294E-07	9.040E-08	5.354E-08	4.039E-08	3.006E-08
NW	50	1.728E-06	7.432E-07	3.328E-07	2.049E-07	1.437E-07	8.571E-08	5.908E-08	4.419E-08
NNW	67	2.582E-06	1.115E-06	4.942E-07	3.040E-07	2.135E-07	1.276E-07	8.814E-08	6.605E-08
AVERAGE	2179	4.715E-06	2.020E-06	8.697E-07	5.307E-07	3.723E-07	2.228E-07	1.542E-07	1.158E-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	131	1.126E-07	9.262E-08	7.818E-08	6.720E-08	5.873E-08	3.529E-08	2.459E-08	1.472E-08
NNE	238	1.727E-07	1.421E-07	1.201E-07	1.033E-07	9.039E-08	5.453E-08	3.808E-08	2.287E-08
NE	304	2.623E-07	2.171E-07	1.843E-07	1.593E-07	1.399E-07	8.552E-08	6.040E-08	3.694E-08
ENE	368	2.643E-07	2.174E-07	1.836E-07	1.578E-07	1.380E-07	8.290E-08	5.780E-08	3.469E-08
E	349	1.909E-07	1.560E-07	1.309E-07	1.119E-07	9.732E-08	5.748E-08	3.947E-08	2.309E-08
ESE	199	1.102E-07	8.984E-08	7.523E-08	6.424E-08	5.580E-08	3.284E-08	2.244E-08	1.299E-08
SE	107	7.326E-08	5.971E-08	5.501E-08	4.697E-08	4.080E-08	2.181E-08	1.491E-08	8.644E-09
SSE	54	3.298E-08	2.679E-08	2.238E-08	1.906E-08	1.652E-08	9.635E-09	6.543E-09	3.754E-09
S	75	4.476E-08	3.643E-08	3.047E-08	2.598E-08	2.253E-08	1.319E-08	8.979E-09	5.168E-09
SSW	83	3.934E-08	3.184E-08	2.651E-08	2.253E-08	1.949E-08	1.131E-08	7.615E-09	4.288E-09
SW	73	2.691E-08	2.164E-08	1.792E-08	1.517E-08	1.307E-08	7.466E-09	4.974E-09	2.760E-09
WSW	24	1.311E-08	1.061E-08	9.722E-09	8.261E-09	7.145E-09	3.762E-09	2.532E-09	1.425E-09
W	20	1.253E-08	1.020E-08	8.530E-09	7.278E-09	6.318E-09	3.711E-09	2.529E-09	1.455E-09
WNW	37	2.357E-08	1.917E-08	1.458E-08	1.243E-08	1.079E-08	6.321E-09	4.304E-09	2.477E-09
NW	50	3.485E-08	2.848E-08	2.389E-08	2.042E-08	1.775E-08	1.047E-08	7.178E-09	4.188E-09
NNW	67	5.216E-08	4.269E-08	3.588E-08	3.073E-08	2.677E-08	1.590E-08	1.096E-08	6.437E-09
AVERAGE	2179	9.166E-08	7.517E-08	6.357E-08	5.454E-08	4.758E-08	2.826E-08	1.958E-08	1.162E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	131	1.027E-08	7.786E-09	6.243E-09	5.185E-09	4.394E-09	3.809E-09	3.346E-09
NNE	238	1.599E-08	1.215E-08	9.758E-09	8.114E-09	6.885E-09	5.972E-09	5.251E-09
NE	304	2.610E-08	1.999E-08	1.615E-08	1.350E-08	1.150E-08	1.001E-08	8.829E-09
ENE	368	2.423E-08	1.840E-08	1.477E-08	1.228E-08	1.042E-08	9.044E-09	7.956E-09
E	349	1.589E-08	1.194E-08	9.512E-09	7.857E-09	6.631E-09	5.733E-09	5.024E-09
ESE	199	8.893E-09	6.652E-09	5.277E-09	4.344E-09	3.655E-09	3.150E-09	2.753E-09
SE	107	5.918E-09	4.428E-09	3.514E-09	2.893E-09	2.435E-09	2.099E-09	1.836E-09
SSE	54	2.554E-09	1.903E-09	1.506E-09	1.237E-09	1.039E-09	8.951E-10	7.817E-10
S	75	3.523E-09	2.627E-09	2.079E-09	1.708E-09	1.434E-09	1.235E-09	1.079E-09
SSW	83	2.887E-09	2.133E-09	1.676E-09	1.369E-09	1.143E-09	9.790E-10	8.508E-10
SW	73	1.842E-09	1.352E-09	1.061E-09	8.652E-10	7.218E-10	6.175E-10	5.362E-10
WSW	24	9.582E-10	7.071E-10	5.549E-10	4.525E-10	3.775E-10	3.231E-10	2.805E-10
W	20	9.921E-10	7.399E-10	5.856E-10	4.810E-10	4.038E-10	3.472E-10	3.029E-10
WNW	37	1.688E-09	1.258E-09	9.957E-10	8.178E-10	6.866E-10	5.906E-10	5.153E-10
NW	50	2.875E-09	2.155E-09	1.711E-09	1.410E-09	1.187E-09	1.024E-09	8.963E-10
NNW	67	4.440E-09	3.340E-09	2.660E-09	2.197E-09	1.853E-09	1.600E-09	1.401E-09
AVERAGE	2179	8.065E-09	6.098E-09	4.878E-09	4.044E-09	3.423E-09	2.964E-09	2.602E-09

Table B-3

Gamma χ/Q Factors for Reactor Building Vent

BECo 1995 General X/Q's - 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	738	7.050E-06	3.012E-06	1.313E-06	8.008E-07	5.626E-07	3.380E-07	2.346E-07	1.767E-07
NNE	1224	9.513E-06	4.064E-06	1.765E-06	1.076E-06	7.559E-07	4.540E-07	3.150E-07	2.372E-07
NE	934	8.872E-06	3.825E-06	1.661E-06	1.022E-06	7.231E-07	4.419E-07	3.105E-07	2.361E-07
ENE	832	8.073E-06	3.449E-06	1.497E-06	9.168E-07	6.469E-07	3.917E-07	2.732E-07	2.067E-07
E	834	7.041E-06	2.985E-06	1.271E-06	7.658E-07	5.366E-07	3.208E-07	2.218E-07	1.666E-07
ESE	571	5.522E-06	2.329E-06	9.858E-07	5.915E-07	4.143E-07	2.474E-07	1.710E-07	1.284E-07
SE	432	4.304E-06	1.818E-06	7.824E-07	4.716E-07	3.298E-07	1.963E-07	1.353E-07	1.014E-07
SSE	377	3.474E-06	1.441E-06	5.952E-07	3.505E-07	2.446E-07	1.452E-07	9.997E-08	7.484E-08
S	455	4.222E-06	1.751E-06	6.559E-07	3.847E-07	2.680E-07	1.586E-07	1.090E-07	8.136E-08
SSW	457	4.054E-06	1.657E-06	5.993E-07	3.437E-07	2.387E-07	1.407E-07	9.644E-08	7.190E-08
SW	437	3.681E-06	1.518E-06	5.543E-07	3.189E-07	2.202E-07	1.289E-07	8.787E-08	6.532E-08
WSW	257	2.556E-06	1.032E-06	3.614E-07	2.033E-07	1.410E-07	8.319E-08	5.708E-08	4.263E-08
W	189	2.158E-06	8.865E-07	3.248E-07	2.085E-07	1.462E-07	8.748E-08	5.500E-08	4.127E-08
WNW	174	1.893E-06	7.842E-07	3.234E-07	1.913E-07	1.343E-07	8.050E-08	6.133E-08	4.611E-08
NW	241	2.986E-06	1.269E-06	5.549E-07	3.393E-07	2.388E-07	1.434E-07	9.939E-08	7.477E-08
NNW	295	3.838E-06	1.649E-06	7.287E-07	4.482E-07	3.159E-07	1.919E-07	1.343E-07	1.017E-07
AVERAGE	8447	4.952E-06	2.092E-06	8.733E-07	5.271E-07	3.698E-07	2.219E-07	1.539E-07	1.158E-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	738	1.402E-07	1.152E-07	9.720E-08	8.351E-08	7.294E-08	4.374E-08	3.041E-08	1.816E-08
NNE	1224	1.883E-07	1.548E-07	1.306E-07	1.122E-07	9.801E-08	5.880E-08	4.092E-08	2.446E-08
NE	934	1.889E-07	1.564E-07	1.327E-07	1.148E-07	1.008E-07	6.169E-08	4.358E-08	2.667E-08
ENE	832	1.647E-07	1.358E-07	1.149E-07	9.902E-08	8.670E-08	5.246E-08	3.676E-08	2.222E-08
E	834	1.318E-07	1.081E-07	9.103E-08	7.812E-08	6.815E-08	4.073E-08	2.822E-08	1.674E-08
ESE	571	1.016E-07	8.333E-08	7.016E-08	6.019E-08	5.251E-08	3.136E-08	2.172E-08	1.287E-08
SE	432	8.014E-08	6.561E-08	6.067E-08	5.194E-08	4.523E-08	2.438E-08	1.680E-08	9.900E-09
SSE	377	5.907E-08	4.832E-08	4.059E-08	3.475E-08	3.025E-08	1.793E-08	1.235E-08	7.256E-09
S	455	6.403E-08	5.225E-08	4.380E-08	3.743E-08	3.253E-08	1.918E-08	1.314E-08	7.643E-09
SSW	457	5.648E-08	4.603E-08	3.854E-08	3.291E-08	2.859E-08	1.682E-08	1.150E-08	6.662E-09
SW	437	5.121E-08	4.166E-08	3.484E-08	2.972E-08	2.580E-08	1.512E-08	1.032E-08	5.971E-09
WSW	257	3.355E-08	2.739E-08	2.527E-08	2.161E-08	1.880E-08	1.012E-08	6.946E-09	4.056E-09
W	189	3.263E-08	2.674E-08	2.250E-08	1.929E-08	1.682E-08	1.004E-08	6.942E-09	4.103E-09
WNW	174	3.655E-08	3.000E-08	2.299E-08	1.973E-08	1.722E-08	1.030E-08	7.150E-09	4.260E-09
NW	241	5.932E-08	4.873E-08	4.108E-08	3.525E-08	3.076E-08	1.838E-08	1.275E-08	7.588E-09
NNW	295	8.111E-08	6.691E-08	5.662E-08	4.879E-08	4.273E-08	2.584E-08	1.810E-08	1.095E-08
AVERAGE	8447	9.185E-08	7.546E-08	6.397E-08	5.495E-08	4.799E-08	2.856E-08	1.985E-08	1.184E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	738	1.265E-08	9.588E-09	7.685E-09	6.382E-09	5.410E-09	4.692E-09	4.125E-09
NNE	1224	1.706E-08	1.294E-08	1.038E-08	8.624E-09	7.315E-09	6.346E-09	5.581E-09
NE	934	1.886E-08	1.446E-08	1.170E-08	9.784E-09	8.346E-09	7.271E-09	6.420E-09
ENE	832	1.559E-08	1.188E-08	9.563E-09	7.967E-09	6.773E-09	5.887E-09	5.185E-09
E	834	1.162E-08	8.785E-09	7.029E-09	5.828E-09	4.933E-09	4.272E-09	3.751E-09
ESE	571	8.932E-09	6.750E-09	5.398E-09	4.474E-09	3.786E-09	3.278E-09	2.877E-09
SE	432	6.840E-09	5.152E-09	4.110E-09	3.406E-09	2.873E-09	2.486E-09	2.181E-09
SSE	377	5.008E-09	3.771E-09	3.007E-09	2.481E-09	2.100E-09	1.817E-09	1.593E-09
S	455	5.246E-09	3.933E-09	3.126E-09	2.577E-09	2.172E-09	1.875E-09	1.642E-09
SSW	457	4.565E-09	3.418E-09	2.715E-09	2.231E-09	1.885E-09	1.626E-09	1.423E-09
SW	437	4.089E-09	3.061E-09	2.433E-09	2.008E-09	1.692E-09	1.462E-09	1.280E-09
WSW	257	2.794E-09	2.101E-09	1.675E-09	1.385E-09	1.169E-09	1.011E-09	8.869E-10
W	189	2.843E-09	2.147E-09	1.716E-09	1.421E-09	1.202E-09	1.041E-09	9.137E-10
WNW	174	2.965E-09	2.247E-09	1.801E-09	1.495E-09	1.268E-09	1.100E-09	9.670E-10
NW	241	5.271E-09	3.987E-09	3.189E-09	2.643E-09	2.237E-09	1.938E-09	1.702E-09
NNW	295	7.685E-09	5.861E-09	4.719E-09	3.934E-09	3.348E-09	2.913E-09	2.568E-09
AVERAGE	8447	8.251E-09	6.255E-09	5.015E-09	4.165E-09	3.532E-09	3.063E-09	2.694E-09

Table B-4

Deposition D/Q Factors for Reactor Building Vent

BECo 1st Quarter 1995 General Ground Level X/Q's — 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	207	1.723E-07	5.795E-08	1.957E-08	1.033E-08	6.389E-09	3.090E-09	1.885E-09	1.284E-09
NNE	219	1.823E-07	6.131E-08	2.070E-08	1.092E-08	6.759E-09	3.269E-09	1.994E-09	1.359E-09
NE	176	1.465E-07	4.927E-08	1.664E-08	8.780E-09	5.432E-09	2.627E-09	1.603E-09	1.092E-09
ENE	207	1.723E-07	5.795E-08	1.957E-08	1.033E-08	6.389E-09	3.090E-09	1.885E-09	1.284E-09
E	203	1.690E-07	5.683E-08	1.919E-08	1.013E-08	6.266E-09	3.030E-09	1.849E-09	1.260E-09
ESE	151	1.257E-07	4.227E-08	1.427E-08	7.533E-09	4.661E-09	2.254E-09	1.375E-09	9.370E-10
SE	133	1.107E-07	3.723E-08	1.257E-08	6.635E-09	4.105E-09	1.985E-09	1.211E-09	8.253E-10
SSE	112	9.323E-08	3.135E-08	1.059E-08	5.587E-09	3.457E-09	1.672E-09	1.020E-09	6.950E-10
S	159	1.456E-07	4.896E-08	1.503E-08	7.932E-09	4.907E-09	2.373E-09	1.448E-09	9.866E-10
SSW	119	1.090E-07	3.664E-08	1.125E-08	5.936E-09	3.673E-09	1.776E-09	1.084E-09	7.384E-10
SW	102	9.340E-08	3.141E-08	9.643E-09	5.088E-09	3.148E-09	1.522E-09	9.286E-10	6.329E-10
WSW	63	5.769E-08	1.940E-08	5.956E-09	3.143E-09	1.944E-09	9.403E-10	5.737E-10	3.909E-10
W	24	2.198E-08	7.390E-09	2.269E-09	1.317E-09	8.148E-10	3.940E-10	2.185E-10	1.489E-10
WNW	23	1.915E-08	6.438E-09	2.174E-09	1.147E-09	7.099E-10	3.433E-10	2.304E-10	1.570E-10
NW	56	4.662E-08	1.568E-08	5.294E-09	2.794E-09	1.728E-09	8.358E-10	5.099E-10	3.475E-10
NNW	78	6.493E-08	2.183E-08	7.374E-09	3.891E-09	2.407E-09	1.164E-09	7.103E-10	4.840E-10
AVERAGE	2032	1.081E-07	3.637E-08	1.201E-08	6.343E-09	3.924E-09	1.898E-09	1.158E-09	7.890E-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	207	9.399E-10	7.189E-10	5.684E-10	4.568E-10	3.769E-10	1.890E-10	1.162E-10	5.733E-11
NNE	219	9.944E-10	7.606E-10	6.014E-10	4.833E-10	3.987E-10	1.999E-10	1.229E-10	6.066E-11
NE	176	7.991E-10	6.112E-10	4.833E-10	3.884E-10	3.205E-10	1.607E-10	9.880E-11	4.875E-11
ENE	207	9.399E-10	7.189E-10	5.684E-10	4.568E-10	3.769E-10	1.890E-10	1.162E-10	5.733E-11
E	203	9.217E-10	7.050E-10	5.575E-10	4.480E-10	3.696E-10	1.853E-10	1.140E-10	5.623E-11
ESE	151	6.856E-10	5.244E-10	4.147E-10	3.332E-10	2.749E-10	1.378E-10	8.477E-11	4.182E-11
SE	133	6.039E-10	4.619E-10	4.018E-10	3.229E-10	2.664E-10	1.214E-10	7.466E-11	3.684E-11
SSE	112	5.085E-10	3.890E-10	3.076E-10	2.472E-10	2.039E-10	1.022E-10	6.287E-11	3.102E-11
S	159	7.219E-10	5.522E-10	4.366E-10	3.509E-10	2.895E-10	1.452E-10	8.926E-11	4.404E-11
SSW	119	5.403E-10	4.133E-10	3.268E-10	2.626E-10	2.167E-10	1.086E-10	6.680E-11	3.296E-11
SW	102	4.631E-10	3.542E-10	2.801E-10	2.251E-10	1.857E-10	9.312E-11	5.726E-11	2.825E-11
WSW	63	2.861E-10	2.188E-10	1.903E-10	1.529E-10	1.262E-10	5.751E-11	3.537E-11	1.745E-11
W	24	1.090E-10	8.335E-11	6.591E-11	5.296E-11	4.370E-11	2.191E-11	1.347E-11	6.647E-12
WNW	23	1.149E-10	8.787E-11	6.316E-11	5.076E-11	4.188E-11	2.100E-11	1.291E-11	6.370E-12
NW	56	2.543E-10	1.945E-10	1.538E-10	1.236E-10	1.020E-10	5.112E-11	3.144E-11	1.551E-11
NNW	78	3.542E-10	2.709E-10	2.142E-10	1.721E-10	1.420E-10	7.121E-11	4.379E-11	2.160E-11
AVERAGE	2032	5.773E-10	4.416E-10	3.521E-10	2.830E-10	2.335E-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	34.95	40.00	45.00	50.00
N	207	3.524E-11	2.373E-11	1.672E-11	1.253E-11	9.751E-12	7.974E-12	6.621E-12
NNE	219	3.728E-11	2.510E-11	1.769E-11	1.326E-11	1.032E-11	8.437E-12	7.005E-12
NE	176	2.996E-11	2.017E-11	1.421E-11	1.066E-11	8.290E-12	6.780E-12	5.630E-12
ENE	207	3.524E-11	2.373E-11	1.672E-11	1.253E-11	9.751E-12	7.974E-12	6.621E-12
E	203	3.456E-11	2.327E-11	1.639E-11	1.229E-11	9.562E-12	7.820E-12	6.493E-12
ESE	151	2.571E-11	1.731E-11	1.219E-11	9.144E-12	7.113E-12	5.817E-12	4.830E-12
SE	133	2.264E-11	1.524E-11	1.074E-11	8.054E-12	6.265E-12	5.124E-12	4.254E-12
SSE	112	1.907E-11	1.284E-11	9.045E-12	6.782E-12	5.276E-12	4.315E-12	3.583E-12
S	159	2.707E-11	1.822E-11	1.284E-11	9.628E-12	7.490E-12	6.125E-12	5.086E-12
SSW	119	2.026E-11	1.364E-11	9.610E-12	7.206E-12	5.605E-12	4.584E-12	3.807E-12
SW	102	1.736E-11	1.169E-11	8.237E-12	6.177E-12	4.805E-12	3.929E-12	3.263E-12
WSW	63	1.072E-11	7.221E-12	5.088E-12	3.815E-12	2.968E-12	2.427E-12	2.015E-12
W	24	4.086E-12	2.751E-12	1.938E-12	1.453E-12	1.131E-12	9.246E-13	7.677E-13
WNW	23	3.915E-12	2.636E-12	1.857E-12	1.393E-12	1.083E-12	8.860E-13	7.357E-13
NW	56	9.533E-12	6.418E-12	4.522E-12	3.391E-12	2.638E-12	2.157E-12	1.791E-12
NNW	78	1.328E-11	8.940E-12	6.299E-12	4.723E-12	3.674E-12	3.005E-12	2.495E-12
AVERAGE	2032	2.162E-11	1.456E-11	1.026E-11	7.690E-12	5.982E-12	4.892E-12	4.062E-12

Table B-4

Deposition D/Q Fuctors for Reactor Building Vent

BECo 2nd Quarter 1995 General X/Q's - 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	182	1.447E-07	4.867E-08	1.644E-08	8.674E-09	5.366E-09	2.595E-09	1.583E-09	1.079E-09
NNE	346	2.752E-07	9.253E-08	3.125E-08	1.649E-08	1.020E-08	4.934E-09	3.010E-09	2.051E-09
NE	188	1.495E-07	5.028E-08	1.698E-08	8.960E-09	5.543E-09	2.681E-09	1.635E-09	1.114E-09
ENE	131	1.042E-07	3.503E-08	1.183E-08	6.243E-09	3.863E-09	1.868E-09	1.140E-09	7.766E-10
E	168	1.336E-07	4.493E-08	1.517E-08	8.006E-09	4.954E-09	2.395E-09	1.461E-09	9.959E-10
ESE	119	9.463E-08	3.182E-08	1.075E-08	5.671E-09	3.509E-09	1.697E-09	1.035E-09	7.054E-10
SE	106	8.430E-08	2.835E-08	1.053E-08	5.557E-09	3.438E-09	1.663E-09	9.221E-10	6.284E-10
SSE	122	1.067E-07	3.589E-08	1.212E-08	5.814E-09	3.597E-09	1.740E-09	1.061E-09	7.232E-10
S	110	1.050E-07	3.530E-08	9.934E-09	5.242E-09	3.243E-09	1.568E-09	9.569E-10	6.521E-10
SSW	94	8.223E-08	2.765E-08	8.489E-09	4.480E-09	2.772E-09	1.340E-09	8.177E-10	5.572E-10
SW	88	7.698E-08	2.589E-08	7.948E-09	4.194E-09	2.595E-09	1.255E-09	7.655E-10	5.217E-10
WSW	76	6.648E-08	2.236E-08	6.864E-09	3.622E-09	2.241E-09	1.084E-09	6.611E-10	4.505E-10
W	96	8.398E-08	2.824E-08	8.670E-09	5.033E-09	3.114E-09	1.506E-09	8.351E-10	5.691E-10
WNW	95	7.555E-08	2.541E-08	8.580E-09	4.527E-09	2.801E-09	1.355E-09	9.091E-10	6.195E-10
NW	95	7.555E-08	2.541E-08	8.580E-09	4.527E-09	2.801E-09	1.355E-09	8.264E-10	5.632E-10
NNW	111	8.827E-08	2.968E-08	1.002E-08	5.290E-09	3.273E-09	1.583E-09	9.656E-10	6.580E-10
AVERAGE	2127	1.092E-07	3.671E-08	1.213E-08	6.396E-09	3.957E-09	1.914E-09	1.162E-09	7.916E-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	182	7.895E-10	6.038E-10	4.775E-10	3.837E-10	3.166E-10	1.587E-10	9.760E-11	4.816E-11
NNE	346	1.501E-09	1.148E-09	9.077E-10	7.294E-10	6.018E-10	3.018E-10	1.856E-10	9.155E-11
NE	188	8.155E-10	6.238E-10	4.932E-10	3.963E-10	3.270E-10	1.640E-10	1.008E-10	4.975E-11
ENE	131	5.682E-10	4.346E-10	3.437E-10	2.762E-10	2.279E-10	1.142E-10	7.025E-11	3.466E-11
E	168	7.287E-10	5.574E-10	4.407E-10	3.542E-10	2.922E-10	1.465E-10	9.010E-11	4.445E-11
ESE	119	5.162E-10	3.948E-10	3.122E-10	2.509E-10	2.070E-10	1.038E-10	6.382E-11	3.149E-11
SE	106	4.598E-10	3.517E-10	3.059E-10	2.458E-10	2.028E-10	1.017E-10	6.253E-11	3.085E-11
SSE	122	5.292E-10	4.048E-10	3.201E-10	2.572E-10	2.122E-10	1.064E-10	6.543E-11	3.228E-11
S	110	4.771E-10	3.650E-10	2.884E-10	2.319E-10	1.913E-10	9.593E-11	5.899E-11	2.911E-11
SSW	94	4.077E-10	3.119E-10	2.466E-10	1.982E-10	1.635E-10	8.198E-11	5.041E-11	2.487E-11
SW	88	3.817E-10	2.920E-10	2.309E-10	1.855E-10	1.531E-10	7.675E-11	4.719E-11	2.328E-11
WSW	76	3.297E-10	2.522E-10	2.193E-10	1.762E-10	1.454E-10	6.628E-11	4.076E-11	2.011E-11
W	96	4.164E-10	3.185E-10	2.519E-10	2.024E-10	1.670E-10	8.372E-11	5.148E-11	2.540E-11
WNW	95	4.533E-10	3.467E-10	2.492E-10	2.003E-10	1.652E-10	8.285E-11	5.095E-11	2.514E-11
NW	95	4.121E-10	3.152E-10	2.492E-10	2.003E-10	1.652E-10	8.285E-11	5.095E-11	2.514E-11
NNW	111	4.815E-10	3.683E-10	2.912E-10	2.340E-10	1.931E-10	9.681E-11	5.953E-11	2.937E-11
AVERAGE	2127	5.792E-10	4.430E-10	3.517E-10	2.827E-10	2.332E-10	1.165E-10	7.165E-11	3.535E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	182	2.960E-11	1.993E-11	1.404E-11	1.053E-11	8.190E-12	6.698E-12	5.562E-12
NNE	346	5.627E-11	3.789E-11	2.669E-11	2.002E-11	1.557E-11	1.273E-11	1.057E-11
NE	188	3.058E-11	2.059E-11	1.450E-11	1.088E-11	8.460E-12	6.919E-12	5.745E-12
ENE	131	2.131E-11	1.434E-11	1.011E-11	7.578E-12	5.895E-12	4.821E-12	4.003E-12
E	168	2.732E-11	1.840E-11	1.296E-11	9.719E-12	7.560E-12	6.183E-12	5.134E-12
ESE	119	1.935E-11	1.303E-11	9.181E-12	6.884E-12	5.355E-12	4.380E-12	3.636E-12
SE	106	1.896E-11	1.277E-11	8.996E-12	6.745E-12	5.247E-12	4.291E-12	3.563E-12
SSE	122	1.984E-11	1.336E-11	9.412E-12	7.058E-12	5.490E-12	4.490E-12	3.728E-12
S	110	1.789E-11	1.204E-11	8.487E-12	6.363E-12	4.950E-12	4.048E-12	3.361E-12
SSW	94	1.529E-11	1.029E-11	7.252E-12	5.438E-12	4.230E-12	3.459E-12	2.873E-12
SW	88	1.431E-11	9.636E-12	6.789E-12	5.091E-12	3.960E-12	3.239E-12	2.689E-12
WSW	76	1.236E-11	8.322E-12	5.864E-12	4.397E-12	3.420E-12	2.797E-12	2.322E-12
W	96	1.561E-11	1.051E-11	7.407E-12	5.554E-12	4.320E-12	3.533E-12	2.934E-12
WNW	95	1.545E-11	1.040E-11	7.329E-12	5.496E-12	4.275E-12	3.496E-12	2.903E-12
NW	95	1.545E-11	1.040E-11	7.329E-12	5.496E-12	4.275E-12	3.496E-12	2.903E-12
NNW	111	1.805E-11	1.215E-11	8.564E-12	6.421E-12	4.995E-12	4.085E-12	3.392E-12
AVERAGE	2127	2.173E-11	1.463E-11	1.031E-11	7.729E-12	6.012E-12	4.917E-12	4.083E-12

Table B-4

Deposition D/Q Factors for Reactor Building Vent

BECo 3rd Quarter 1995 General X/Q's - 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	218	1.748E-07	5.880E-08	1.986E-08	1.048E-08	6.483E-09	3.135E-09	1.913E-09	1.303E-09
NNE	421	3.377E-07	1.135E-07	3.835E-08	2.023E-08	1.252E-08	6.054E-09	3.694E-09	2.517E-09
NE	266	2.133E-07	7.174E-08	2.423E-08	1.278E-08	7.910E-09	3.825E-09	2.334E-09	1.590E-09
ENE	126	1.011E-07	3.398E-08	1.148E-08	6.056E-09	3.747E-09	1.812E-09	1.105E-09	7.533E-10
E	114	9.143E-08	3.075E-08	1.038E-08	5.479E-09	3.390E-09	1.639E-09	1.000E-09	6.816E-10
ESE	102	8.181E-08	2.751E-08	9.291E-09	4.903E-09	3.033E-09	1.467E-09	8.949E-10	6.098E-10
SE	86	6.897E-08	2.320E-08	8.617E-09	4.547E-09	2.813E-09	1.360E-09	7.545E-10	5.142E-10
SSE	89	7.852E-08	2.640E-08	8.917E-09	4.278E-09	2.647E-09	1.280E-09	7.808E-10	5.321E-10
S	111	1.068E-07	3.593E-08	1.011E-08	5.335E-09	3.301E-09	1.596E-09	9.739E-10	6.636E-10
SSW	161	1.420E-07	4.777E-08	1.466E-08	7.738E-09	4.788E-09	2.315E-09	1.413E-09	9.626E-10
SW	174	1.535E-07	5.162E-08	1.585E-08	8.363E-09	5.174E-09	2.502E-09	1.527E-09	1.040E-09
WSW	94	8.293E-08	2.789E-08	8.562E-09	4.518E-09	2.795E-09	1.352E-09	8.247E-10	5.620E-10
W	49	4.323E-08	1.454E-08	4.463E-09	2.591E-09	1.603E-09	7.751E-10	4.299E-10	2.930E-10
WNW	19	1.524E-08	5.125E-09	1.731E-09	9.132E-10	5.650E-10	2.732E-10	1.834E-10	1.250E-10
NW	40	3.208E-08	1.079E-08	3.643E-09	1.923E-09	1.190E-09	5.752E-10	3.509E-10	2.391E-10
NNW	39	3.128E-08	1.052E-08	3.552E-09	1.874E-09	1.160E-09	5.608E-10	3.422E-10	2.332E-10
AVERAGE	2109	1.097E-07	3.688E-08	1.211E-08	6.376E-09	3.945E-09	1.908E-09	1.158E-09	7.888E-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	218	9.537E-10	7.295E-10	5.768E-10	4.635E-10	3.824E-10	1.917E-10	1.179E-10	5.818E-11
NNE	421	1.842E-09	1.409E-09	1.114E-09	8.951E-10	7.386E-10	3.703E-10	2.277E-10	1.123E-10
NE	266	1.164E-09	8.901E-10	7.038E-10	5.656E-10	4.666E-10	2.340E-10	1.439E-10	7.098E-11
ENE	126	5.512E-10	4.216E-10	3.334E-10	2.679E-10	2.210E-10	1.108E-10	6.815E-11	3.362E-11
E	114	4.987E-10	3.815E-10	3.016E-10	2.424E-10	2.000E-10	1.003E-10	6.166E-11	3.042E-11
ESE	102	4.462E-10	3.413E-10	2.699E-10	2.169E-10	1.789E-10	8.972E-11	5.517E-11	2.722E-11
SE	86	3.762E-10	2.878E-10	2.503E-10	2.011E-10	1.660E-10	8.321E-11	5.117E-11	2.524E-11
SSE	89	3.893E-10	2.978E-10	2.355E-10	1.892E-10	1.561E-10	7.828E-11	4.814E-11	2.375E-11
S	111	4.856E-10	3.714E-10	2.937E-10	2.360E-10	1.947E-10	9.763E-11	6.004E-11	2.962E-11
SSW	161	7.043E-10	5.387E-10	4.260E-10	3.423E-10	2.824E-10	1.416E-10	8.708E-11	4.296E-11
SW	174	7.612E-10	5.822E-10	4.604E-10	3.700E-10	3.052E-10	1.530E-10	9.411E-11	4.643E-11
WSW	94	4.112E-10	3.145E-10	2.736E-10	2.199E-10	1.814E-10	8.268E-11	5.084E-11	2.508E-11
W	49	2.144E-10	1.640E-10	1.296E-10	1.042E-10	8.596E-11	4.310E-11	2.650E-11	1.308E-11
WNW	19	9.143E-11	6.993E-11	5.027E-11	4.040E-11	3.333E-11	1.671E-11	1.028E-11	5.070E-12
NW	40	1.750E-10	1.338E-10	1.058E-10	8.505E-11	7.017E-11	3.518E-11	2.163E-11	1.067E-11
NNW	39	1.706E-10	1.305E-10	1.032E-10	8.292E-11	6.842E-11	3.430E-11	2.109E-11	1.041E-11
AVERAGE	2109	5.772E-10	4.415E-10	3.517E-10	2.827E-10	2.332E-10	1.164E-10	7.158E-11	3.532E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	218	3.576E-11	2.407E-11	1.696E-11	1.272E-11	9.894E-12	8.092E-12	6.719E-12
NNE	421	6.905E-11	4.649E-11	3.276E-11	2.456E-11	1.911E-11	1.563E-11	1.298E-11
NE	266	4.363E-11	2.937E-11	2.070E-11	1.552E-11	1.207E-11	9.873E-12	8.198E-12
ENE	126	2.067E-11	1.391E-11	9.804E-12	7.351E-12	5.719E-12	4.677E-12	3.883E-12
E	114	1.870E-11	1.259E-11	8.870E-12	6.651E-12	5.174E-12	4.231E-12	3.513E-12
ESE	102	1.673E-11	1.126E-11	7.937E-12	5.951E-12	4.629E-12	3.786E-12	3.144E-12
SE	86	1.552E-11	1.045E-11	7.361E-12	5.519E-12	4.293E-12	3.511E-12	2.916E-12
SSE	89	1.460E-11	9.828E-12	6.925E-12	5.193E-12	4.039E-12	3.303E-12	2.743E-12
S	111	1.821E-11	1.226E-11	8.637E-12	6.476E-12	5.038E-12	4.120E-12	3.421E-12
SSW	161	2.641E-11	1.778E-11	1.253E-11	9.393E-12	7.307E-12	5.976E-12	4.962E-12
SW	174	2.854E-11	1.922E-11	1.354E-11	1.015E-11	7.897E-12	6.458E-12	5.363E-12
WSW	94	1.542E-11	1.038E-11	7.314E-12	5.484E-12	4.266E-12	3.489E-12	2.897E-12
W	49	8.037E-12	5.411E-12	3.813E-12	2.859E-12	2.224E-12	1.819E-12	1.510E-12
WNW	19	3.116E-12	2.098E-12	1.478E-12	1.109E-12	8.623E-13	7.052E-13	5.856E-13
NW	40	6.561E-12	4.417E-12	3.112E-12	2.334E-12	1.815E-12	1.485E-12	1.233E-12
NNW	39	6.397E-12	4.307E-12	3.035E-12	2.275E-12	1.770E-12	1.448E-12	1.202E-12
AVERAGE	2109	2.171E-11	1.462E-11	1.030E-11	7.722E-12	6.007E-12	4.912E-12	4.079E-12

Table B-4

Deposition D/Q Factors for Reactor Building Vent

BECo 4th Quarter 1995 General X/Q's - 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	131	1.017E-07	3.420E-08	1.155E-08	6.094E-09	3.771E-09	1.823E-09	1.112E-09	7.580E-10
NNE	238	1.848E-07	6.213E-08	2.098E-08	1.107E-08	6.850E-09	3.313E-09	2.021E-09	1.377E-09
NE	304	2.360E-07	7.936E-08	2.680E-08	1.414E-08	8.750E-09	4.231E-09	2.581E-09	1.759E-09
ENE	368	2.857E-07	9.607E-08	3.244E-08	1.712E-08	1.059E-08	5.122E-09	3.125E-09	2.129E-09
E	349	2.709E-07	9.111E-08	3.077E-08	1.624E-08	1.005E-08	4.858E-09	2.964E-09	2.020E-09
ESE	199	1.545E-07	5.195E-08	1.754E-08	9.257E-09	5.728E-09	2.770E-09	1.690E-09	1.152E-09
SE	107	8.306E-08	2.793E-08	9.433E-09	4.978E-09	3.080E-09	1.489E-09	9.086E-10	6.192E-10
SSE	54	4.192E-08	1.410E-08	4.761E-09	2.512E-09	1.554E-09	7.516E-10	4.586E-10	3.125E-10
S	75	6.404E-08	2.154E-08	6.612E-09	3.489E-09	2.159E-09	1.044E-09	6.369E-10	4.340E-10
SSW	83	7.087E-08	2.383E-08	7.317E-09	3.861E-09	2.389E-09	1.155E-09	7.048E-10	4.803E-10
SW	73	6.233E-08	2.096E-08	6.436E-09	3.396E-09	2.101E-09	1.016E-09	6.199E-10	4.224E-10
WSW	24	2.049E-08	6.892E-09	2.116E-09	1.116E-09	6.908E-10	3.340E-10	2.038E-10	1.389E-10
W	20	1.708E-08	5.743E-09	1.763E-09	1.023E-09	6.332E-10	3.062E-10	1.698E-10	1.157E-10
WNW	37	2.872E-08	9.659E-09	3.262E-09	1.721E-09	1.065E-09	5.150E-10	3.456E-10	2.355E-10
NW	50	3.881E-08	1.305E-08	4.408E-09	2.326E-09	1.439E-09	6.959E-10	4.246E-10	2.893E-10
NNW	67	5.201E-08	1.749E-08	5.907E-09	3.117E-09	1.928E-09	9.325E-10	5.689E-10	3.877E-10
AVERAGE	2179	1.071E-07	3.600E-08	1.201E-08	6.341E-09	3.923E-09	1.897E-09	1.158E-09	7.894E-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	131	5.547E-10	4.243E-10	3.355E-10	2.696E-10	2.224E-10	1.115E-10	6.858E-11	3.384E-11
NNE	238	1.008E-09	7.708E-10	6.095E-10	4.898E-10	4.041E-10	2.026E-10	1.246E-10	6.147E-11
NE	304	1.287E-09	9.846E-10	7.785E-10	6.256E-10	5.162E-10	2.588E-10	1.591E-10	7.852E-11
ENE	368	1.558E-09	1.192E-09	9.424E-10	7.573E-10	6.248E-10	3.133E-10	1.926E-10	9.505E-11
E	349	1.478E-09	1.130E-09	8.937E-10	7.182E-10	5.926E-10	2.971E-10	1.827E-10	9.014E-11
ESE	199	8.426E-10	6.445E-10	5.096E-10	4.095E-10	3.379E-10	1.694E-10	1.042E-10	5.140E-11
SE	107	4.531E-10	3.465E-10	3.014E-10	2.422E-10	1.998E-10	9.109E-11	5.601E-11	2.764E-11
SSE	54	2.286E-10	1.749E-10	1.383E-10	1.111E-10	9.169E-11	4.597E-11	2.827E-11	1.395E-11
S	75	3.176E-10	2.429E-10	1.921E-10	1.543E-10	1.273E-10	6.385E-11	3.926E-11	1.937E-11
SSW	83	3.514E-10	2.688E-10	2.126E-10	1.708E-10	1.409E-10	7.066E-11	4.345E-11	2.144E-11
SW	73	3.091E-10	2.364E-10	1.869E-10	1.502E-10	1.239E-10	6.215E-11	3.821E-11	1.885E-11
WSW	24	1.016E-10	7.773E-11	6.761E-11	5.433E-11	4.483E-11	2.043E-11	1.256E-11	6.199E-12
W	20	8.468E-11	6.477E-11	5.122E-11	4.116E-11	3.396E-11	1.703E-11	1.047E-11	5.166E-12
WNW	37	1.723E-10	1.318E-10	9.475E-11	7.614E-11	6.282E-11	3.150E-11	1.937E-11	9.557E-12
NW	50	2.117E-10	1.619E-10	1.280E-10	1.029E-10	8.490E-11	4.257E-11	2.617E-11	1.291E-11
NNW	67	2.837E-10	2.170E-10	1.716E-10	1.379E-10	1.138E-10	5.704E-11	3.507E-11	1.731E-11
AVERAGE	2179	5.776E-10	4.418E-10	3.509E-10	2.819E-10	2.326E-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	34.95	40.00	45.00	50.00
N	131	2.080E-11	1.400E-11	9.866E-12	7.397E-12	5.754E-12	4.706E-12	3.908E-12
NNE	238	3.778E-11	2.544E-11	1.792E-11	1.344E-11	1.045E-11	8.550E-12	7.099E-12
NE	304	4.826E-11	3.249E-11	2.289E-11	1.717E-11	1.335E-11	1.092E-11	9.068E-12
ENE	368	5.842E-11	3.933E-11	2.771E-11	2.078E-11	1.617E-11	1.322E-11	1.098E-11
E	349	5.540E-11	3.730E-11	2.628E-11	1.971E-11	1.533E-11	1.254E-11	1.041E-11
ESE	199	3.159E-11	2.127E-11	1.499E-11	1.124E-11	8.741E-12	7.149E-12	5.936E-12
SE	107	1.699E-11	1.144E-11	8.058E-12	6.042E-12	4.700E-12	3.844E-12	3.192E-12
SSE	54	8.573E-12	5.772E-12	4.067E-12	3.049E-12	2.372E-12	1.940E-12	1.611E-12
S	75	1.191E-11	8.016E-12	5.648E-12	4.235E-12	3.295E-12	2.694E-12	2.237E-12
SSW	83	1.318E-11	8.871E-12	6.251E-12	4.687E-12	3.646E-12	2.982E-12	2.476E-12
SW	73	1.159E-11	7.803E-12	5.498E-12	4.122E-12	3.207E-12	2.622E-12	2.178E-12
WSW	24	3.810E-12	2.565E-12	1.807E-12	1.355E-12	1.054E-12	8.622E-13	7.159E-13
W	20	3.175E-12	2.138E-12	1.506E-12	1.129E-12	8.785E-13	7.185E-13	5.966E-13
WNW	37	5.874E-12	3.955E-12	2.786E-12	2.089E-12	1.625E-12	1.329E-12	1.104E-12
NW	50	7.938E-12	5.344E-12	3.766E-12	2.823E-12	2.196E-12	1.796E-12	1.491E-12
NNW	67	1.064E-11	7.161E-12	5.046E-12	3.783E-12	2.943E-12	2.407E-12	1.999E-12
AVERAGE	2179	2.162E-11	1.456E-11	1.026E-11	7.690E-12	5.982E-12	4.892E-12	4.062E-12

Table B-4

Deposition D/Q Factors for Reactor Building Vent

BECo 1995 General X/Q's - Ground Level
GROUND RELEASE: AVERAGE DEPOSITION RATES (REGULATORY GUIDE 1.111 MODEL) - (1/M2)

SECTOR AVERAGE MODEL

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) .12	.25	.50	.75	1.00	1.50	2.00	2.50
N	738	1.478E-07	4.970E-08	1.678E-08	8.856E-09	5.479E-09	2.650E-09	1.617E-09	1.102E-09
NNE	1224	2.451E-07	8.242E-08	2.784E-08	1.469E-08	9.088E-09	4.395E-09	2.681E-09	1.827E-09
NE	934	1.870E-07	6.290E-08	2.124E-08	1.121E-08	6.935E-09	3.353E-09	2.046E-09	1.394E-09
ENE	832	1.666E-07	5.603E-08	1.892E-08	9.984E-09	6.177E-09	2.987E-09	1.823E-09	1.242E-09
E	834	1.670E-07	5.616E-08	1.897E-08	1.001E-08	6.192E-09	2.994E-09	1.827E-09	1.245E-09
ESE	571	1.143E-07	3.845E-08	1.299E-08	6.852E-09	4.240E-09	2.050E-09	1.251E-09	8.523E-10
SE	432	8.651E-08	2.909E-08	9.824E-09	5.184E-09	3.208E-09	1.551E-09	9.463E-10	6.449E-10
SSE	377	7.549E-08	2.539E-08	8.574E-09	4.524E-09	2.799E-09	1.354E-09	8.258E-10	5.628E-10
S	455	1.002E-07	3.370E-08	1.035E-08	5.460E-09	3.378E-09	1.634E-09	9.967E-10	6.792E-10
SSW	457	1.007E-07	3.385E-08	1.039E-08	5.484E-09	3.393E-09	1.641E-09	1.001E-09	6.822E-10
SW	437	9.626E-08	3.237E-08	9.938E-09	5.244E-09	3.245E-09	1.569E-09	9.573E-10	6.523E-10
WSW	257	5.661E-08	1.904E-08	5.845E-09	3.084E-09	1.909E-09	9.227E-10	5.630E-10	3.836E-10
W	189	4.163E-08	1.400E-08	4.298E-09	2.495E-09	1.544E-09	7.465E-10	4.140E-10	2.821E-10
WNW	174	3.484E-08	1.172E-08	3.957E-09	2.088E-09	1.292E-09	6.247E-10	4.193E-10	2.857E-10
NW	241	4.826E-08	1.623E-08	5.481E-09	2.892E-09	1.789E-09	8.653E-10	5.279E-10	3.597E-10
NNW	295	5.907E-08	1.987E-08	6.709E-09	3.540E-09	2.190E-09	1.059E-09	6.462E-10	4.404E-10
AVERAGE	8447	1.080E-07	3.631E-08	1.201E-08	6.350E-09	3.929E-09	1.900E-09	1.159E-09	7.897E-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	738	8.061E-10	6.166E-10	4.875E-10	3.918E-10	3.232E-10	1.621E-10	9.966E-11	4.917E-11
NNE	1224	1.337E-09	1.023E-09	8.086E-10	6.498E-10	5.361E-10	2.688E-10	1.653E-10	8.155E-11
NE	934	1.020E-09	7.803E-10	6.170E-10	4.958E-10	4.091E-10	2.051E-10	1.261E-10	6.223E-11
ENE	832	9.088E-10	6.951E-10	5.496E-10	4.417E-10	3.644E-10	1.827E-10	1.124E-10	5.543E-11
E	834	9.109E-10	6.968E-10	5.509E-10	4.427E-10	3.653E-10	1.832E-10	1.126E-10	5.557E-11
ESE	571	6.237E-10	4.770E-10	3.772E-10	3.031E-10	2.501E-10	1.254E-10	7.711E-11	3.804E-11
SE	432	4.719E-10	3.609E-10	3.139E-10	2.523E-10	2.081E-10	9.487E-11	5.834E-11	2.878E-11
SSE	377	4.118E-10	3.150E-10	2.490E-10	2.001E-10	1.651E-10	8.279E-11	5.091E-11	2.512E-11
S	455	4.970E-10	3.801E-10	3.006E-10	2.415E-10	1.993E-10	9.992E-11	6.144E-11	3.032E-11
SSW	457	4.992E-10	3.818E-10	3.019E-10	2.426E-10	2.002E-10	1.004E-10	6.171E-11	3.045E-11
SW	437	4.773E-10	3.651E-10	2.887E-10	2.320E-10	1.914E-10	9.597E-11	5.901E-11	2.912E-11
WSW	257	2.807E-10	2.147E-10	1.868E-10	1.501E-10	1.238E-10	5.644E-11	3.471E-11	1.712E-11
W	189	2.064E-10	1.579E-10	1.249E-10	1.003E-10	8.278E-11	4.151E-11	2.552E-11	1.259E-11
WNW	174	2.091E-10	1.599E-10	1.149E-10	9.237E-11	7.621E-11	3.821E-11	2.350E-11	1.159E-11
NW	241	2.632E-10	2.013E-10	1.592E-10	1.279E-10	1.056E-10	5.293E-11	3.254E-11	1.606E-11
NNW	295	3.222E-10	2.465E-10	1.949E-10	1.566E-10	1.292E-10	6.478E-11	3.984E-11	1.966E-11
AVERAGE	8447	5.778E-10	4.420E-10	3.516E-10	2.825E-10	2.331E-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	34.95	40.00	45.00	50.00
N	738	3.022E-11	2.035E-11	1.434E-11	1.075E-11	8.363E-12	6.839E-12	5.679E-12
NNE	1224	5.013E-11	3.375E-11	2.378E-11	1.783E-11	1.387E-11	1.134E-11	9.419E-12
NE	934	3.825E-11	2.575E-11	1.814E-11	1.361E-11	1.058E-11	8.656E-12	7.187E-12
ENE	832	3.407E-11	2.294E-11	1.616E-11	1.212E-11	9.428E-12	7.710E-12	6.402E-12
E	834	3.415E-11	2.299E-11	1.620E-11	1.215E-11	9.450E-12	7.729E-12	6.418E-12
ESE	571	2.338E-11	1.574E-11	1.109E-11	8.318E-12	6.470E-12	5.292E-12	4.394E-12
SE	432	1.769E-11	1.191E-11	8.393E-12	6.293E-12	4.895E-12	4.003E-12	3.324E-12
SSE	377	1.544E-11	1.039E-11	7.324E-12	5.492E-12	4.272E-12	3.494E-12	2.901E-12
S	455	1.863E-11	1.255E-11	8.839E-12	6.628E-12	5.156E-12	4.217E-12	3.501E-12
SSW	457	1.872E-11	1.260E-11	8.878E-12	6.657E-12	5.178E-12	4.235E-12	3.517E-12
SW	437	1.790E-11	1.205E-11	8.490E-12	6.366E-12	4.952E-12	4.050E-12	3.363E-12
WSW	257	1.052E-11	7.086E-12	4.993E-12	3.744E-12	2.912E-12	2.382E-12	1.978E-12
W	189	7.740E-12	5.211E-12	3.672E-12	2.753E-12	2.142E-12	1.751E-12	1.454E-12
WNW	174	7.126E-12	4.798E-12	3.380E-12	2.535E-12	1.972E-12	1.612E-12	1.339E-12
NW	241	9.869E-12	6.645E-12	4.682E-12	3.511E-12	2.731E-12	2.233E-12	1.854E-12
NNW	295	1.208E-11	8.134E-12	5.731E-12	4.297E-12	3.343E-12	2.734E-12	2.270E-12
AVERAGE	8447	2.162E-11	1.456E-11	1.026E-11	7.690E-12	5.982E-12	4.892E-12	4.062E-12

Table B-5

Undepleted χ/Q Factors for Main Stack

BECo 1st Quarter 1995 General X/Q's - 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	175	2.847E-10	9.539E-09	6.824E-09	7.051E-09	1.143E-08	2.022E-08	2.343E-08	2.340E-08
NNE	187	2.795E-10	8.310E-09	6.770E-09	8.529E-09	1.292E-08	2.157E-08	2.496E-08	2.509E-08
NE	163	2.800E-10	9.578E-09	1.006E-08	9.798E-09	1.284E-08	1.938E-08	2.145E-08	2.102E-08
ENE	187	6.261E-10	2.248E-08	2.105E-08	1.725E-08	1.881E-08	2.431E-08	2.580E-08	2.483E-08
E	243	1.483E-09	4.039E-08	2.390E-08	1.959E-08	2.303E-08	2.968E-08	3.052E-08	2.875E-08
ESE	162	1.269E-09	3.705E-08	2.740E-08	2.190E-08	2.143E-08	2.365E-08	2.367E-08	2.216E-08
SE	180	9.308E-10	2.640E-08	2.268E-08	2.188E-08	2.597E-08	3.573E-08	2.820E-08	2.630E-08
SSE	167	3.086E-09	8.097E-08	5.718E-08	9.529E-08	1.049E-07	8.370E-08	6.543E-08	5.228E-08
S	148	4.724E-09	7.586E-08	1.234E-07	2.091E-07	1.680E-07	1.322E-07	9.516E-08	6.923E-08
SSW	102	4.316E-09	6.254E-08	8.708E-08	1.126E-07	1.689E-07	1.283E-07	8.177E-08	5.811E-08
SW	74	4.529E-09	4.241E-08	5.783E-08	7.856E-08	7.010E-08	5.552E-08	4.136E-08	3.208E-08
WSW	45	3.770E-09	3.806E-08	2.809E-08	3.328E-08	4.166E-08	3.427E-08	2.454E-08	1.850E-08
W	60	3.587E-09	4.076E-08	3.242E-08	3.155E-08	3.405E-08	3.094E-08	2.308E-08	1.884E-08
WNW	64	3.196E-10	4.287E-09	1.378E-08	2.306E-08	3.184E-08	3.337E-08	2.664E-08	2.248E-08
NW	68	3.249E-10	5.921E-09	3.853E-09	3.677E-09	5.946E-09	1.079E-08	1.268E-08	1.269E-08
NNW	68	1.028E-10	4.027E-09	1.474E-09	1.665E-09	3.692E-09	7.939E-09	9.840E-09	1.022E-08
AVERAGE	2093	1.869E-09	3.116E-08	3.274E-08	4.342E-08	4.722E-08	4.322E-08	3.491E-08	2.912E-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	175	2.196E-08	2.025E-08	1.856E-08	1.705E-08	1.566E-08	1.070E-08	7.869E-09	4.923E-09
NNE	187	2.369E-08	2.198E-08	2.030E-08	1.877E-08	1.734E-08	1.208E-08	9.008E-09	5.758E-09
NE	163	1.956E-08	1.795E-08	1.643E-08	1.508E-08	1.386E-08	9.557E-09	7.108E-09	4.549E-09
ENE	187	2.289E-08	2.087E-08	1.901E-08	1.739E-08	1.593E-08	1.088E-08	8.052E-09	5.122E-09
E	243	2.616E-08	2.357E-08	2.123E-08	1.922E-08	1.745E-08	1.157E-08	8.396E-09	5.179E-09
ESE	162	2.013E-08	1.819E-08	1.647E-08	1.499E-08	1.368E-08	9.247E-09	6.818E-09	4.327E-09
SE	180	2.365E-08	2.115E-08	1.896E-08	1.709E-08	1.547E-08	1.015E-08	7.311E-09	4.467E-09
SSE	167	4.280E-08	3.590E-08	3.071E-08	2.665E-08	2.343E-08	1.422E-08	9.915E-09	6.250E-09
S	148	5.279E-08	4.203E-08	3.453E-08	2.900E-08	2.483E-08	1.398E-08	9.349E-09	5.310E-09
SSW	102	4.431E-08	3.527E-08	2.898E-08	2.433E-08	2.082E-08	1.173E-08	7.870E-09	4.507E-09
SW	74	2.573E-08	2.124E-08	1.795E-08	1.542E-08	1.345E-08	7.986E-09	5.491E-09	3.215E-09
WSW	45	1.452E-08	1.179E-08	9.827E-09	8.353E-09	7.218E-09	4.164E-09	2.795E-09	1.573E-09
W	60	1.559E-08	1.316E-08	1.130E-08	9.842E-09	8.669E-09	6.513E-09	4.420E-09	2.554E-09
WNW	64	1.895E-08	1.619E-08	1.402E-08	1.229E-08	1.088E-08	6.367E-09	4.940E-09	2.892E-09
NW	68	1.189E-08	1.095E-08	1.005E-08	9.233E-09	8.479E-09	7.263E-09	5.113E-09	3.301E-09
NNW	68	9.835E-09	9.255E-09	8.636E-09	8.056E-09	7.497E-09	5.345E-09	4.364E-09	4.461E-09
AVERAGE	2093	2.465E-08	2.124E-08	1.856E-08	1.642E-08	1.467E-08	9.485E-09	6.801E-09	4.274E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	175	3.508E-09	2.691E-09	2.169E-09	1.810E-09	1.541E-09	1.735E-09	1.522E-09
NNE	187	4.157E-09	3.217E-09	2.610E-09	2.189E-09	1.872E-09	1.636E-09	1.449E-09
NE	163	3.301E-09	2.568E-09	2.091E-09	1.760E-09	1.510E-09	1.325E-09	1.177E-09
ENE	187	3.702E-09	2.951E-09	2.613E-09	2.186E-09	1.866E-09	1.629E-09	1.442E-09
E	243	3.669E-09	2.806E-09	2.541E-09	2.104E-09	1.780E-09	1.543E-09	1.357E-09
ESE	162	3.122E-09	2.655E-09	2.146E-09	1.795E-09	1.532E-09	1.337E-09	1.182E-09
SE	180	3.145E-09	2.786E-09	2.219E-09	1.834E-09	1.549E-09	1.341E-09	1.178E-09
SSE	167	4.317E-09	3.253E-09	2.595E-09	2.147E-09	1.815E-09	1.571E-09	1.380E-09
S	148	3.600E-09	2.680E-09	2.121E-09	1.744E-09	1.467E-09	1.266E-09	1.108E-09
SSW	102	3.067E-09	2.290E-09	1.816E-09	1.496E-09	1.261E-09	1.089E-09	9.545E-10
SW	74	2.218E-09	1.669E-09	1.330E-09	1.100E-09	9.480E-10	8.194E-10	7.186E-10
WSW	45	1.061E-09	7.903E-10	6.444E-10	5.267E-10	4.408E-10	3.807E-10	3.321E-10
W	60	1.748E-09	1.311E-09	1.042E-09	8.606E-10	7.603E-10	6.569E-10	5.758E-10
WNW	64	1.989E-09	1.553E-09	1.311E-09	1.099E-09	9.203E-10	7.910E-10	6.900E-10
NW	68	2.279E-09	1.755E-09	1.411E-09	1.282E-09	1.077E-09	9.296E-10	8.133E-10
NNW	68	3.050E-09	2.282E-09	1.812E-09	1.493E-09	1.256E-09	1.083E-09	9.473E-10
AVERAGE	2093	2.996E-09	2.329E-09	1.904E-09	1.589E-09	1.350E-09	1.196E-09	1.052E-09

Table B-5

Undepleted χ/Q Factors for Main Stack

BECo 2nd Quarter 1995 General X/Q's - 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	179	1.337E-09	4.530E-08	2.394E-08	1.513E-08	1.639E-08	2.321E-08	2.714E-08	2.811E-08
NNE	299	2.161E-09	5.907E-08	2.958E-08	2.030E-08	2.204E-08	2.896E-08	3.152E-08	3.092E-08
NE	192	1.176E-09	3.578E-08	1.898E-08	1.251E-08	1.369E-08	1.325E-08	1.443E-08	1.457E-08
ENE	117	1.969E-09	6.537E-08	2.701E-08	1.406E-08	1.266E-08	1.309E-08	1.328E-08	1.295E-08
E	149	2.240E-09	6.832E-08	2.734E-08	1.497E-08	1.405E-08	1.494E-08	1.512E-08	1.450E-08
ESE	128	1.261E-09	3.836E-08	1.864E-08	1.275E-08	1.244E-08	1.403E-08	1.457E-08	1.412E-08
SE	144	7.872E-10	3.129E-08	2.545E-08	2.196E-08	2.173E-08	2.849E-08	2.130E-08	2.031E-08
SSE	135	4.711E-09	1.394E-07	8.031E-08	8.259E-08	9.413E-08	7.822E-08	6.218E-08	5.010E-08
S	88	5.456E-09	1.028E-07	6.719E-08	1.089E-07	9.052E-08	7.472E-08	5.474E-08	4.023E-08
SSW	82	7.617E-09	1.419E-07	7.943E-08	8.949E-08	1.250E-07	1.148E-07	7.548E-08	5.476E-08
SW	74	1.363E-08	1.291E-07	8.964E-08	8.041E-08	7.807E-08	5.938E-08	4.327E-08	3.321E-08
WSW	91	2.267E-08	2.763E-07	1.018E-07	5.946E-08	6.618E-08	5.968E-08	4.562E-08	3.622E-08
W	110	9.489E-09	1.565E-07	8.579E-08	6.348E-08	6.600E-08	5.921E-08	4.502E-08	3.773E-08
WNW	115	7.146E-09	1.090E-07	7.345E-08	5.172E-08	5.731E-08	5.386E-08	4.266E-08	3.604E-08
NW	125	3.147E-09	5.707E-08	2.418E-08	1.901E-08	2.301E-08	2.845E-08	2.833E-08	2.633E-08
NNW	99	5.917E-10	2.116E-08	9.420E-09	5.808E-09	6.793E-09	1.095E-08	1.405E-08	1.543E-08
AVERAGE	2127	5.337E-09	9.229E-08	4.889E-08	4.253E-08	4.487E-08	4.220E-08	3.429E-08	2.910E-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	2.725E-08	2.588E-08	2.436E-08	2.294E-08	2.149E-08	1.563E-08	1.191E-08	7.800E-09
NNE	299	2.888E-08	2.660E-08	2.442E-08	2.247E-08	2.067E-08	1.422E-08	1.055E-08	6.704E-09
NE	192	1.408E-08	1.344E-08	1.275E-08	1.211E-08	1.144E-08	8.631E-09	6.828E-09	4.746E-09
ENE	117	1.226E-08	1.150E-08	1.077E-08	1.011E-08	9.456E-09	6.920E-09	5.353E-09	3.611E-09
E	149	1.348E-08	1.243E-08	1.144E-08	1.057E-08	9.742E-09	6.784E-09	5.094E-09	3.312E-09
ESE	128	1.319E-08	1.222E-08	1.130E-08	1.048E-08	9.700E-09	6.872E-09	5.229E-09	3.468E-09
SE	144	1.862E-08	1.697E-08	1.547E-08	1.416E-08	1.299E-08	8.944E-09	6.679E-09	4.324E-09
SSE	135	4.125E-08	3.473E-08	2.979E-08	2.592E-08	2.283E-08	1.398E-08	9.789E-09	6.304E-09
S	88	3.097E-08	2.485E-08	2.056E-08	1.736E-08	1.493E-08	8.528E-09	5.772E-09	3.342E-09
SSW	82	4.221E-08	3.394E-08	2.816E-08	2.390E-08	2.064E-08	1.194E-08	8.158E-09	4.809E-09
SW	74	2.658E-08	2.197E-08	1.861E-08	1.606E-08	1.403E-08	8.449E-09	5.8J3E-09	3.515E-09
WSW	91	2.990E-08	2.542E-08	2.209E-08	1.948E-08	1.735E-08	1.128E-08	8.308E-09	5.357E-09
W	110	3.199E-08	2.761E-08	2.420E-08	2.147E-08	1.922E-08	2.010E-08	1.449E-08	9.044E-09
WNW	115	3.060E-08	2.635E-08	2.109E-08	1.864E-08	1.660E-08	1.104E-08	8.143E-09	5.100E-09
NW	125	2.383E-08	2.149E-08	1.944E-08	1.771E-08	1.618E-08	1.443E-08	1.050E-08	7.552E-09
NNW	99	1.550E-08	1.515E-08	1.460E-08	1.403E-08	1.336E-08	1.017E-08	8.628E-09	1.243E-08
AVERAGE	2127	2.504E-08	2.191E-08	1.932E-08	1.734E-08	1.566E-08	1.112E-08	8.207E-09	5.714E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	179	5.707E-09	4.456E-09	3.637E-09	3.064E-09	2.631E-09	3.160E-09	2.783E-09
NNE	299	4.829E-09	3.734E-09	3.028E-09	2.539E-09	2.171E-09	1.898E-09	1.681E-09
NE	192	3.614E-09	2.905E-09	2.419E-09	2.074E-09	1.811E-09	1.611E-09	1.449E-09
ENE	117	2.705E-09	2.223E-09	2.052E-09	1.740E-09	1.503E-09	1.324E-09	1.181E-09
E	149	2.424E-09	1.898E-09	1.828E-09	1.535E-09	1.314E-09	1.150E-09	1.019E-09
ESE	128	2.572E-09	2.325E-09	1.899E-09	1.603E-09	1.378E-09	1.209E-09	1.075E-09
SE	144	3.166E-09	3.361E-09	2.725E-09	2.286E-09	1.955E-09	1.710E-09	1.514E-09
SSE	135	4.376E-09	3.309E-09	2.646E-09	2.194E-09	1.859E-09	1.612E-09	1.417E-09
S	88	2.294E-09	1.724E-09	1.373E-09	1.136E-09	9.608E-10	8.328E-10	7.321E-10
SSW	82	3.333E-09	2.526E-09	2.028E-09	1.688E-09	1.435E-09	1.248E-09	1.101E-09
SW	74	2.471E-09	1.888E-09	1.522E-09	1.272E-09	1.116E-09	9.731E-10	8.610E-10
WSW	91	3.950E-09	3.232E-09	3.603E-09	3.032E-09	2.603E-09	2.549E-09	2.256E-09
W	110	6.502E-09	5.037E-09	4.098E-09	3.447E-09	3.858E-09	3.372E-09	2.971E-09
WNW	115	3.710E-09	3.317E-09	3.804E-09	4.125E-09	3.513E-09	3.057E-09	2.699E-09
NW	125	5.395E-09	4.350E-09	3.589E-09	3.742E-09	3.156E-09	2.724E-09	2.385E-09
NNW	99	8.822E-09	6.774E-09	5.479E-09	4.585E-09	3.915E-09	3.418E-09	3.023E-09
AVERAGE	2127	4.117E-09	3.316E-09	2.858E-09	2.504E-09	2.199E-09	1.990E-09	1.759E-09

Table B-5

Undepleted χ/Q Factors for Main Stack

BECo 3rd Quarter 1995 General X/Q's - 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	122	5.016E-10	1.967E-08	2.821E-08	2.166E-08	1.831E-08	1.740E-08	1.715E-08	1.613E-08
NNE	415	6.630E-10	2.350E-08	3.418E-08	3.426E-08	3.993E-08	5.295E-08	5.619E-08	5.392E-08
NE	213	1.456E-10	6.526E-09	1.142E-08	1.145E-08	1.380E-08	2.006E-08	2.252E-08	2.242E-08
ENE	88	5.419E-11	3.411E-09	6.325E-09	5.711E-09	5.694E-09	7.475E-09	8.915E-09	9.414E-09
E	100	9.702E-11	4.107E-09	4.368E-09	4.583E-09	5.678E-09	8.671E-09	1.017E-08	1.044E-08
ESE	90	5.700E-10	2.004E-08	1.089E-08	8.249E-09	8.780E-09	1.133E-08	1.254E-08	1.256E-08
SE	104	1.574E-09	6.524E-08	3.592E-08	1.880E-08	1.614E-08	2.176E-08	1.642E-08	1.649E-08
SSE	120	5.724E-09	1.766E-07	8.686E-08	6.464E-08	7.311E-08	6.108E-08	4.923E-08	4.013E-08
S	93	6.002E-09	1.153E-07	7.461E-08	1.375E-07	1.225E-07	1.251E-07	1.041E-07	7.939E-08
SSW	145	1.123E-08	1.531E-07	1.389E-07	1.705E-07	2.405E-07	1.822E-07	1.163E-07	8.269E-08
SW	140	1.053E-08	7.501E-08	1.185E-07	1.582E-07	1.435E-07	1.143E-07	8.433E-08	6.479E-08
WSW	115	1.768E-08	1.285E-07	9.215E-08	8.477E-08	1.064E-07	9.432E-08	7.026E-08	5.437E-08
W	94	3.953E-09	4.976E-08	7.581E-08	6.936E-08	6.876E-08	5.917E-08	4.342E-08	3.527E-08
WNW	106	1.354E-09	2.087E-08	3.623E-08	4.026E-08	5.146E-08	5.463E-08	4.593E-08	4.035E-08
NW	78	6.905E-10	1.310E-08	1.124E-08	1.144E-08	1.320E-08	1.656E-08	1.716E-08	1.629E-08
NNW	63	9.219E-11	3.978E-09	6.594E-09	5.294E-09	5.815E-09	8.749E-09	1.036E-08	1.065E-08
AVERAGE	2086	3.804E-09	5.492E-08	4.826E-08	5.291E-08	5.834E-08	5.348E-08	4.281E-08	3.533E-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	122	1.473E-08	1.341E-08	1.223E-08	1.121E-08	1.030E-08	7.103E-09	5.301E-09	3.417E-09
NNE	415	4.951E-08	4.499E-08	4.084E-08	3.723E-08	3.401E-08	2.295E-08	1.682E-08	1.052E-08
NE	213	2.114E-08	1.964E-08	1.818E-08	1.687E-08	1.565E-08	1.111E-08	8.432E-09	5.558E-09
ENE	88	9.245E-09	8.907E-09	8.499E-09	8.099E-09	7.673E-09	5.787E-09	4.535E-09	3.108E-09
E	100	1.005E-08	9.499E-09	8.920E-09	8.377E-09	7.848E-09	5.748E-09	4.451E-09	3.018E-09
ESE	90	1.194E-08	1.120E-08	1.047E-08	9.793E-09	9.139E-09	6.616E-09	5.083E-09	3.409E-09
SE	104	1.565E-08	1.463E-08	1.360E-08	1.266E-08	1.175E-08	8.346E-09	6.322E-09	4.151E-09
SSE	120	3.334E-08	2.825E-08	2.435E-08	2.128E-08	1.880E-08	1.162E-08	8.187E-09	5.316E-09
S	93	6.154E-08	4.964E-08	4.125E-08	3.503E-08	3.027E-08	1.758E-08	1.201E-08	7.012E-09
SSW	145	6.297E-08	5.012E-08	4.121E-08	3.465E-08	2.970E-08	1.682E-08	1.131E-08	6.473E-09
SW	140	5.157E-08	4.231E-08	3.555E-08	3.040E-08	2.639E-08	1.543E-08	1.051E-08	6.069E-09
WSW	115	4.351E-08	3.586E-08	3.025E-08	2.596E-08	2.261E-08	1.337E-08	9.149E-09	5.310E-09
W	94	2.911E-08	2.452E-08	2.103E-08	1.830E-08	1.611E-08	1.188E-08	8.029E-09	4.604E-09
WNW	106	3.515E-08	3.089E-08	2.511E-08	2.248E-08	2.025E-08	1.415E-08	1.048E-08	6.462E-09
NW	78	1.487E-08	1.349E-08	1.224E-08	1.116E-08	1.020E-08	8.697E-09	6.145E-09	3.985E-09
NNW	63	1.022E-08	9.623E-09	8.991E-09	8.405E-09	7.837E-09	5.625E-09	4.604E-09	4.649E-09
AVERAGE	2086	2.966E-08	2.544E-08	2.204E-08	1.949E-08	1.741E-08	1.143E-08	8.210E-09	5.191E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	122	2.486E-09	1.936E-09	1.579E-09	1.330E-09	1.142E-09	1.277E-09	1.124E-09
NNE	415	7.502E-09	5.761E-09	4.649E-09	3.882E-09	3.308E-09	2.884E-09	2.548E-09
NE	213	4.110E-09	3.238E-09	2.660E-09	2.256E-09	1.948E-09	1.718E-09	1.533E-09
ENE	88	2.345E-09	1.954E-09	1.864E-09	1.582E-09	1.367E-09	1.206E-09	1.076E-09
E	100	2.272E-09	1.812E-09	2.052E-09	1.735E-09	1.494E-09	1.313E-09	1.168E-09
ESE	90	2.545E-09	2.370E-09	1.943E-09	1.645E-09	1.418E-09	1.248E-09	1.112E-09
SE	104	3.051E-09	3.016E-09	2.433E-09	2.031E-09	1.730E-09	1.507E-09	1.330E-09
SSE	120	3.697E-09	2.799E-09	2.241E-09	1.859E-09	1.575E-09	1.366E-09	1.201E-09
S	93	4.826E-09	3.631E-09	2.899E-09	2.399E-09	2.027E-09	1.752E-09	1.537E-09
SSW	145	4.413E-09	3.300E-09	2.621E-09	2.161E-09	1.822E-09	1.575E-09	1.381E-09
SW	140	4.150E-09	3.105E-09	2.464E-09	2.030E-09	1.731E-09	1.495E-09	1.309E-09
WSW	115	3.646E-09	2.759E-09	2.323E-09	1.911E-09	1.608E-09	1.408E-09	1.232E-09
W	94	3.139E-09	2.344E-09	1.859E-09	1.531E-09	1.328E-09	1.143E-09	9.990E-10
WNW	106	4.583E-09	3.760E-09	3.356E-09	2.885E-09	2.425E-09	2.087E-09	1.823E-09
NW	78	2.759E-09	2.119E-09	1.701E-09	1.494E-09	1.256E-09	1.083E-09	9.466E-10
NNW	63	3.185E-09	2.386E-09	1.897E-09	1.564E-09	1.318E-09	1.137E-09	9.955E-10
AVERAGE	2086	3.669E-09	2.893E-09	2.409E-09	2.018E-09	1.719E-09	1.512E-09	1.332E-09

Table B-5

Undepleted χ/Q Factors for Main Stack

BECo 4th Quarter 1995 General X/Q's - 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	102	3.869E-11	1.642E-09	4.785E-09	6.241E-09	8.086E-09	1.121E-08	1.201E-08	1.169E-08
NNE	171	9.130E-14	3.699E-10	3.879E-09	6.914E-09	1.101E-08	1.832E-08	2.090E-08	2.086E-08
NE	189	4.594E-11	3.605E-09	7.550E-09	9.723E-09	1.248E-08	1.818E-08	2.039E-08	2.038E-08
ENE	209	2.177E-13	1.298E-09	8.860E-09	1.127E-08	1.460E-08	2.190E-08	2.465E-08	2.454E-08
E	420	6.689E-10	2.326E-08	3.062E-08	2.690E-08	2.964E-08	4.028E-08	4.471E-08	4.425E-08
ESE	371	1.655E-09	5.335E-08	3.982E-08	3.345E-08	3.797E-08	4.780E-08	4.875E-08	4.568E-08
SE	152	5.064E-10	2.251E-08	2.375E-08	2.055E-08	2.356E-08	3.353E-08	2.723E-08	2.586E-08
SSE	66	1.063E-09	3.317E-08	2.675E-08	4.811E-08	5.423E-08	4.418E-08	3.449E-08	2.740E-08
S	79	1.494E-09	3.010E-08	7.929E-08	1.301E-07	1.034E-07	8.181E-08	6.038E-08	4.426E-08
SSW	70	1.544E-09	3.113E-08	9.343E-08	1.045E-07	1.209E-07	7.783E-08	4.900E-08	3.440E-08
SW	45	7.805E-12	2.225E-09	5.298E-08	4.633E-08	3.857E-08	2.707E-08	1.878E-08	1.387E-08
WSW	51	6.343E-10	7.426E-09	2.559E-08	3.406E-08	4.606E-08	4.109E-08	3.034E-08	2.333E-08
W	39	3.311E-10	5.762E-09	1.788E-08	2.518E-08	2.882E-08	2.702E-08	2.041E-08	1.678E-08
WNW	75	3.829E-17	5.534E-11	9.677E-09	2.196E-08	3.191E-08	3.417E-08	2.739E-08	2.312E-08
NW	97	5.023E-13	5.773E-10	2.501E-09	5.461E-09	9.351E-09	1.402E-08	1.447E-08	1.353E-08
NNW	61	4.898E-19	1.444E-11	5.866E-10	1.953E-09	4.154E-09	7.938E-09	9.219E-09	9.225E-09
AVERAGE	2197	4.994E-10	1.353E-08	2.550E-08	3.329E-08	3.592E-08	3.415E-08	2.895E-08	2.495E-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	102	1.090E-08	1.008E-08	9.310E-09	8.637E-09	8.022E-09	5.771E-09	4.441E-09	2.998E-09
NNE	171	1.964E-08	1.821E-08	1.680E-08	1.555E-08	1.438E-08	1.010E-08	7.588E-09	4.918E-09
NE	189	1.929E-08	1.799E-08	1.672E-08	1.557E-08	1.448E-08	1.038E-08	7.921E-09	5.261E-09
ENE	209	2.311E-08	2.145E-08	1.983E-08	1.837E-08	1.702E-08	1.204E-08	9.108E-09	5.973E-09
E	420	4.149E-08	3.839E-08	3.541E-08	3.274E-08	3.026E-08	2.121E-08	1.593E-08	1.034E-08
ESE	371	4.144E-08	3.738E-08	3.379E-08	3.072E-08	2.802E-08	1.897E-08	1.402E-08	8.937E-09
SE	152	2.357E-08	2.129E-08	1.925E-08	1.749E-08	1.594E-08	1.071E-08	7.838E-09	4.914E-09
SSE	66	2.231E-08	1.863E-08	1.588E-08	1.374E-08	1.205E-08	7.278E-09	5.047E-09	3.178E-09
S	79	3.369E-08	2.679E-08	2.200E-08	1.849E-08	1.584E-08	8.952E-09	5.974E-09	3.362E-09
SSW	70	2.581E-08	2.031E-08	1.654E-08	1.381E-08	1.177E-08	6.536E-09	4.321E-09	2.405E-09
SW	45	1.071E-08	8.578E-09	7.071E-09	5.954E-09	5.106E-09	2.878E-09	1.909E-09	1.058E-09
WSW	51	1.862E-08	1.534E-08	1.295E-08	1.112E-08	9.703E-09	5.805E-09	4.005E-09	2.348E-09
W	39	1.391E-08	1.174E-08	1.008E-08	8.773E-09	7.725E-09	5.559E-09	3.725E-09	2.103E-09
WNW	75	1.948E-08	1.662E-08	1.437E-08	1.258E-08	1.112E-08	6.455E-09	4.969E-09	2.876E-09
NW	97	1.222E-08	1.098E-08	9.898E-09	8.975E-09	8.176E-09	7.497E-09	5.376E-09	3.733E-09
NNW	61	8.688E-09	8.019E-09	7.358E-09	6.759E-09	6.213E-09	4.270E-09	3.369E-09	3.143E-09
AVERAGE	2197	2.155E-08	1.886E-08	1.670E-08	1.495E-08	1.349E-08	9.025E-09	6.596E-09	4.221E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	102	2.255E-09	1.799E-09	1.490E-09	1.272E-09	1.106E-09	1.546E-09	1.361E-09
NNE	171	3.591E-09	2.803E-09	2.288E-09	1.929E-09	1.657E-09	1.455E-09	1.293E-09
NE	189	3.904E-09	3.082E-09	2.535E-09	2.152E-09	1.860E-09	1.640E-09	1.465E-09
ENE	209	4.396E-09	3.573E-09	3.251E-09	2.730E-09	2.338E-09	2.046E-09	1.813E-09
E	420	7.552E-09	5.901E-09	5.939E-09	4.971E-09	4.245E-09	3.706E-09	3.279E-09
ESE	371	6.484E-09	5.690E-09	4.611E-09	3.865E-09	3.305E-09	2.889E-09	2.558E-09
SE	152	3.522E-09	3.389E-09	2.720E-09	2.262E-09	1.921E-09	1.669E-09	1.471E-09
SSE	66	2.191E-09	1.649E-09	1.314E-09	1.087E-09	9.188E-10	7.960E-10	6.994E-10
S	79	2.268E-09	1.682E-09	1.327E-09	1.088E-09	9.129E-10	7.852E-10	6.856E-10
SSW	70	1.617E-09	1.197E-09	9.426E-10	7.724E-10	6.480E-10	5.579E-10	4.878E-10
SW	45	7.081E-10	5.215E-10	4.089E-10	3.336E-10	2.803E-10	2.404E-10	2.094E-10
WSW	51	1.626E-09	1.254E-09	1.186E-09	9.788E-10	8.257E-10	7.534E-10	6.600E-10
W	39	1.417E-09	1.049E-09	8.260E-10	6.761E-10	5.822E-10	4.997E-10	4.353E-10
WNW	75	1.963E-09	1.512E-09	1.252E-09	1.040E-09	8.684E-10	7.447E-10	6.482E-10
NW	97	2.611E-09	2.051E-09	1.665E-09	1.559E-09	1.307E-09	1.122E-09	9.776E-10
NNW	61	2.131E-09	1.584E-09	1.252E-09	1.027E-09	8.616E-10	7.409E-10	6.464E-10
AVERAGE	2197	3.015E-09	2.421E-09	2.063E-09	1.734E-09	1.477E-09	1.324E-09	1.168E-09

Table B-5

Undepleted χ/Q Factors for Main Stack

BECo 1995 General X/Q's - 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	578	5.377E-10	1.893E-08	1.583E-08	1.245E-08	1.349E-08	1.795E-08	1.987E-08	1.977E-08
NNE	1072	7.720E-10	2.268E-08	1.845E-08	1.737E-08	2.133E-08	3.028E-08	3.321E-08	3.253E-08
NE	757	4.106E-10	1.384E-08	1.198E-08	1.086E-08	1.269E-08	1.770E-08	1.969E-08	1.959E-08
ENE	601	6.599E-10	2.306E-08	1.578E-08	1.208E-08	1.297E-08	1.675E-08	1.823E-08	1.800E-08
E	912	1.122E-09	3.405E-08	2.170E-08	1.664E-08	1.824E-08	2.358E-08	2.534E-08	2.470E-08
ESE	751	1.195E-09	3.742E-08	2.437E-08	1.925E-08	2.035E-08	2.446E-08	2.514E-08	2.387E-08
SE	580	7.169E-10	2.689E-08	2.354E-08	1.938E-08	2.096E-08	2.870E-08	2.333E-08	2.228E-08
SSE	488	2.591E-09	7.556E-08	4.815E-08	7.240E-08	8.131E-08	6.657E-08	5.265E-08	4.232E-08
S	408	3.956E-09	7.224E-08	8.597E-08	1.460E-07	1.208E-07	1.031E-07	7.825E-08	5.802E-08
SSW	399	5.830E-09	9.193E-08	9.951E-08	1.189E-07	1.631E-07	1.251E-07	8.020E-08	5.717E-08
SW	333	6.683E-09	5.808E-08	6.995E-08	9.223E-08	8.195E-08	6.355E-08	4.655E-08	3.568E-08
WSW	302	9.338E-09	9.225E-08	5.790E-08	5.266E-08	6.480E-08	5.712E-08	4.253E-08	3.298E-08
W	303	4.312E-09	6.287E-08	4.980E-08	4.671E-08	4.920E-08	4.393E-08	3.287E-08	2.706E-08
WNW	360	2.198E-09	3.346E-08	3.106E-08	3.226E-08	4.097E-08	4.185E-08	3.374E-08	2.885E-08
NW	368	1.037E-09	1.910E-08	1.040E-08	9.878E-09	1.287E-08	1.746E-08	1.816E-08	1.720E-08
NNW	291	1.959E-10	7.263E-09	4.489E-09	3.666E-09	5.108E-09	8.891E-09	1.086E-08	1.137E-08
AVERAGE	8503	2.597E-09	4.310E-08	3.680E-08	4.267E-08	4.625E-08	4.293E-08	3.504E-08	2.946E-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	578	1.865E-08	1.735E-08	1.607E-08	1.492E-08	1.383E-08	9.777E-09	7.364E-09	4.776E-09
NNE	1072	3.027E-08	2.781E-08	2.546E-08	2.339E-08	2.150E-08	1.477E-08	1.094E-08	6.945E-09
NE	757	1.850E-08	1.725E-08	1.602E-08	1.490E-08	1.385E-08	9.918E-09	7.573E-09	5.030E-09
ENE	601	1.694E-08	1.574E-08	1.458E-08	1.354E-08	1.257E-08	8.939E-09	6.787E-09	4.470E-09
E	912	2.299E-08	2.116E-08	1.943E-08	1.789E-08	1.648E-08	1.144E-08	8.550E-09	5.514E-09
ESE	751	2.189E-08	1.994E-08	1.818E-08	1.665E-08	1.528E-08	1.052E-08	7.856E-09	5.078E-09
SE	580	2.041E-08	1.854E-08	1.685E-08	1.537E-08	1.406E-08	9.550E-09	7.046E-09	4.469E-09
SSE	488	3.480E-08	2.927E-08	2.509E-08	2.182E-08	1.920E-08	1.173E-08	8.202E-09	5.241E-09
S	408	4.455E-08	3.566E-08	2.945E-08	2.485E-08	2.136E-08	1.220E-08	8.234E-09	4.732E-09
SSW	399	4.358E-08	3.472E-08	2.856E-08	2.404E-08	2.062E-08	1.169E-08	7.868E-09	4.522E-09
SW	333	2.840E-08	2.332E-08	1.962E-08	1.681E-08	1.462E-08	8.609E-09	5.894E-09	3.433E-09
WSW	302	2.654E-08	2.202E-08	1.871E-08	1.617E-08	1.417E-08	8.627E-09	6.045E-09	3.636E-09
W	303	2.258E-08	1.919E-08	1.660E-08	1.455E-08	1.289E-08	1.098E-08	7.646E-09	4.564E-09
WNW	360	2.462E-08	2.127E-08	1.860E-08	1.645E-08	1.468E-08	8.901E-09	7.109E-09	4.316E-09
NW	368	1.569E-08	1.422E-08	1.290E-08	1.176E-08	1.075E-08	9.468E-09	6.782E-09	4.644E-09
NNW	291	1.105E-08	1.050E-08	9.885E-09	9.302E-09	8.716E-09	6.342E-09	5.233E-09	6.160E-09
AVERAGE	8503	2.509E-08	2.175E-08	1.912E-08	1.703E-08	1.528E-08	1.022E-08	7.446E-09	4.846E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	578	3.483E-09	2.717E-09	2.216E-09	1.867E-09	1.603E-09	1.931E-09	1.698E-09
NNE	1072	4.999E-09	3.864E-09	3.131E-09	2.625E-09	2.244E-09	1.961E-09	1.736E-09
NE	757	3.734E-09	2.950E-09	2.427E-09	2.061E-09	1.783E-09	1.574E-09	1.407E-09
ENE	601	3.299E-09	2.685E-09	2.454E-09	2.067E-09	1.775E-09	1.557E-09	1.383E-09
E	912	4.018E-09	3.135E-09	3.121E-09	2.612E-09	2.230E-09	1.947E-09	1.723E-09
ESE	751	3.712E-09	3.287E-09	2.671E-09	2.245E-09	1.924E-09	1.684E-09	1.494E-09
SE	580	3.225E-09	3.142E-09	2.527E-09	2.106E-09	1.791E-09	1.559E-09	1.375E-09
SSE	488	3.630E-09	2.741E-09	2.190E-09	1.814E-09	1.536E-09	1.331E-09	1.169E-09
S	408	3.230E-09	2.416E-09	1.920E-09	1.583E-09	1.335E-09	1.153E-09	1.010E-09
SSW	399	3.089E-09	2.314E-09	1.841E-09	1.520E-09	1.284E-09	1.111E-09	9.753E-10
SW	333	2.365E-09	1.780E-09	1.418E-09	1.173E-09	1.010E-09	8.739E-10	7.676E-10
WSW	302	2.564E-09	2.004E-09	1.936E-09	1.610E-09	1.367E-09	1.271E-09	1.119E-09
W	303	3.193E-09	2.429E-09	1.951E-09	1.624E-09	1.628E-09	1.415E-09	1.242E-09
WNW	360	3.049E-09	2.525E-09	2.421E-09	2.279E-09	1.925E-09	1.664E-09	1.460E-09
NW	368	3.262E-09	2.570E-09	2.093E-09	2.021E-09	1.700E-09	1.466E-09	1.282E-09
NNW	291	4.289E-09	3.251E-09	2.605E-09	2.163E-09	1.835E-09	1.592E-09	1.401E-09
AVERAGE	8503	3.446E-09	2.738E-09	2.308E-09	1.961E-09	1.686E-09	1.506E-09	1.328E-09

Table B-6

Depleted χ/Q Factors for Main Stack

BECo 1st Quarter 1995 General X/Q's - 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	175	2.847E-10	9.533E-09	6.809E-09	7.036E-09	1.141E-08	2.016E-08	2.328E-08	2.316E-08
NNE	187	2.795E-10	8.305E-09	6.758E-09	8.510E-09	1.289E-08	2.149E-08	2.479E-08	2.463E-08
NE	163	2.800E-10	9.573E-09	1.004E-08	9.771E-09	1.281E-08	1.931E-08	2.130E-08	2.078E-08
ENE	187	6.261E-10	2.246E-08	2.101E-08	1.720E-08	1.875E-08	2.421E-08	2.562E-08	2.454E-08
E	243	1.483E-09	4.037E-08	2.385E-08	1.954E-08	2.297E-08	2.956E-08	3.032E-08	2.845E-08
ESE	162	1.269E-09	3.703E-08	2.735E-08	2.182E-08	2.134E-08	2.351E-08	2.346E-08	2.187E-08
SE	180	9.308E-10	2.638E-08	2.262E-08	2.180E-08	2.591E-08	3.561E-08	2.803E-08	2.604E-08
SSE	167	3.086E-09	8.091E-08	5.705E-08	9.514E-08	1.046E-07	8.315E-08	6.461E-08	5.124E-08
S	148	4.724E-09	7.580E-08	1.232E-07	2.087E-07	1.674E-07	1.305E-07	9.252E-08	6.627E-08
SSW	102	4.316E-09	6.249E-08	8.695E-08	1.124E-07	1.682E-07	1.256E-07	7.859E-08	5.477E-08
SW	74	4.529E-09	4.236E-08	5.771E-08	7.840E-08	6.984E-08	5.497E-08	4.060E-08	3.119E-08
WSW	45	3.770E-09	2.803E-08	2.803E-08	3.323E-08	4.153E-08	3.392E-08	2.408E-08	1.798E-08
W	60	3.587E-09	4.072E-08	3.234E-08	3.148E-08	3.395E-08	3.072E-08	2.275E-08	1.842E-08
WNW	64	3.196E-10	4.283E-09	1.376E-08	2.303E-08	3.177E-08	3.317E-08	2.633E-08	2.207E-08
NW	68	3.249E-10	5.918E-09	3.843E-09	3.668E-09	5.936E-09	1.075E-08	1.258E-08	1.253E-08
NNW	68	1.028E-10	4.023E-09	1.467E-09	1.660E-09	3.687E-09	7.912E-09	9.766E-09	1.009E-08
AVERAGE	2093	1.869E-09	3.114E-08	3.268E-08	4.333E-08	4.706E-08	4.278E-08	3.429E-08	2.839E-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	175	2.162E-08	1.982E-08	1.808E-08	1.651E-08	1.507E-08	9.998E-09	7.136E-09	4.223E-09
NNE	187	2.332E-08	2.154E-08	1.978E-08	1.819E-08	1.671E-08	1.131E-08	8.182E-09	4.937E-09
NE	163	1.925E-08	1.757E-08	1.600E-08	1.461E-08	1.336E-08	8.959E-09	6.485E-09	3.939E-09
ENE	187	2.251E-08	2.042E-08	1.850E-08	1.682E-08	1.532E-08	1.016E-08	7.311E-09	4.409E-09
E	243	2.575E-08	2.308E-08	2.067E-08	1.861E-08	1.679E-08	1.080E-08	7.614E-09	4.462E-09
ESE	162	1.976E-08	1.775E-08	1.597E-08	1.444E-08	1.309E-08	8.559E-09	6.110E-09	3.649E-09
SE	180	2.331E-08	2.074E-08	1.849E-08	1.657E-08	1.492E-08	9.501E-09	6.636E-09	3.824E-09
SSE	167	4.160E-08	3.458E-08	2.930E-08	2.517E-08	2.190E-08	1.261E-08	8.330E-09	4.584E-09
S	148	4.982E-08	3.910E-08	3.169E-08	2.625E-08	2.218E-08	1.175E-08	7.446E-09	3.855E-09
SSW	102	4.094E-08	3.194E-08	2.574E-08	2.119E-08	1.780E-08	9.187E-09	5.702E-09	2.854E-09
SW	74	2.475E-08	2.022E-08	1.690E-08	1.436E-08	1.238E-08	6.951E-09	4.574E-09	2.387E-09
WSW	45	1.398E-08	1.124E-08	9.278E-09	7.813E-09	6.690E-09	3.700E-09	2.392E-09	1.261E-09
W	60	1.510E-08	1.263E-08	1.075E-08	9.272E-09	8.091E-09	5.684E-09	3.695E-09	1.982E-09
WNW	64	1.847E-08	1.566E-08	1.345E-08	1.170E-08	1.027E-08	5.752E-09	4.278E-09	2.325E-09
NW	68	1.166E-08	1.068E-08	9.723E-09	8.870E-09	8.086E-09	6.535E-09	4.407E-09	2.585E-09
NNW	68	9.648E-09	9.020E-09	8.359E-09	7.744E-09	7.155E-09	4.919E-09	3.857E-09	3.306E-09
AVERAGE	2093	2.384E-08	2.037E-08	1.767E-08	1.551E-08	1.374E-08	8.523E-09	5.882E-09	3.411E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	175	2.857E-09	2.086E-09	1.604E-09	1.279E-09	1.041E-09	1.010E-09	8.420E-10
NNE	187	3.372E-09	2.474E-09	1.904E-09	1.518E-09	1.235E-09	1.028E-09	8.679E-10
NE	163	2.716E-09	2.009E-09	1.556E-09	1.247E-09	1.020E-09	8.529E-10	7.234E-10
ENE	187	3.031E-09	2.290E-09	1.892E-09	1.507E-09	1.226E-09	1.022E-09	8.639E-10
E	243	3.020E-09	2.215E-09	1.857E-09	1.476E-09	1.200E-09	1.002E-09	8.491E-10
ESE	162	2.486E-09	1.937E-09	1.477E-09	1.169E-09	9.461E-10	7.851E-10	6.619E-10
SE	180	2.549E-09	2.046E-09	1.545E-09	1.214E-09	9.764E-10	8.070E-10	6.778E-10
SSE	167	2.870E-09	1.985E-09	1.469E-09	1.139E-09	9.069E-10	7.448E-10	6.234E-10
S	148	2.421E-09	1.688E-09	1.260E-09	9.837E-10	7.891E-10	6.522E-10	5.490E-10
SSW	102	1.740E-09	1.183E-09	8.654E-10	6.649E-10	5.262E-10	4.303E-10	3.591E-10
SW	74	1.496E-09	1.032E-09	7.595E-10	5.848E-10	4.577E-10	3.732E-10	3.103E-10
WSW	45	8.042E-10	5.680E-10	4.288E-10	3.353E-10	2.690E-10	2.171E-10	1.822E-10
W	60	1.272E-09	9.003E-10	6.788E-10	5.338E-10	4.145E-10	3.104E-10	2.590E-10
WNW	64	1.492E-09	1.070E-09	8.031E-10	5.592E-10	4.261E-10	3.447E-10	2.840E-10
NW	68	1.657E-09	1.181E-09	8.846E-10	5.407E-10	4.218E-10	3.396E-10	2.782E-10
NNW	68	2.048E-09	1.395E-09	1.013E-09	7.672E-10	5.946E-10	4.741E-10	3.847E-10
AVERAGE	2093	2.239E-09	1.629E-09	1.250E-09	9.700E-10	7.781E-10	6.495E-10	5.448E-10

Table B-6

Depleted χ/Q Factors for Main Stack

BECo 2nd Quarter 1995 General X/Q's - 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	1.337E-09	4.527E-08	2.386E-08	1.506E-08	1.632E-08	2.310E-08	2.689E-08	2.759E-08
NNE	299	2.161E-09	5.904E-08	2.952E-08	2.024E-08	2.197E-08	2.885E-08	3.131E-08	3.059E-08
NE	192	1.175E-09	3.576E-08	1.893E-08	1.247E-08	1.164E-08	1.318E-08	1.432E-08	1.440E-08
ENE	117	1.969E-09	6.532E-08	2.691E-08	1.398E-08	1.259E-08	1.301E-08	1.315E-08	1.272E-08
E	149	2.240E-09	6.827E-08	2.723E-08	1.490E-08	1.397E-08	1.485E-08	1.500E-08	1.433E-08
ESE	128	1.261E-09	3.834E-08	1.858E-08	1.270E-08	1.238E-08	1.395E-08	1.444E-08	1.392E-08
SE	144	7.872E-10	3.127E-08	2.537E-08	2.187E-08	2.163E-08	2.832E-08	2.110E-08	2.003E-08
SSE	135	4.711E-09	1.393E-07	8.002E-08	8.240E-08	9.381E-08	7.752E-08	6.108E-08	4.869E-08
S	88	5.456E-09	1.027E-07	6.700E-08	1.087E-07	9.019E-08	7.375E-08	5.319E-08	3.848E-08
SSW	82	7.617E-09	1.417E-07	7.910E-08	8.920E-08	1.242E-07	1.125E-07	7.297E-08	5.221E-08
SW	74	1.363E-08	1.289E-07	8.892E-08	8.776E-08	7.730E-08	5.822E-08	4.188E-08	3.169E-08
WSW	91	2.267E-08	2.759E-07	1.010E-07	5.898E-08	6.569E-08	5.889E-08	4.457E-08	3.497E-08
W	110	9.489E-09	1.562E-07	8.533E-08	6.324E-08	6.571E-08	5.870E-08	4.433E-08	3.684E-08
WNW	115	7.146E-09	1.089E-07	7.313E-08	5.150E-08	5.706E-08	5.345E-08	4.207E-08	3.525E-08
NW	125	3.147E-09	5.702E-08	2.408E-08	1.892E-08	2.291E-08	2.827E-08	2.801E-08	2.584E-08
NNW	99	5.917E-10	2.114E-08	9.384E-09	5.783E-09	6.767E-09	1.091E-08	1.393E-08	1.515E-08
AVERAGE	2127	5.337E-09	9.219E-08	4.865E-08	4.235E-08	4.463E-08	4.172E-08	3.364E-08	2.829E-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	2.638E-08	2.460E-08	2.265E-08	2.078E-08	1.892E-08	1.182E-08	7.897E-09	4.335E-09
NNE	299	2.843E-08	2.605E-08	2.377E-08	2.175E-08	1.989E-08	1.329E-08	9.590E-09	5.806E-09
NE	192	1.384E-08	1.312E-08	1.237E-08	1.165E-08	1.092E-08	7.866E-09	5.919E-09	3.759E-09
ENE	117	1.191E-08	1.102E-08	1.014E-08	9.332E-09	8.531E-09	5.334E-09	3.854E-09	2.265E-09
E	149	1.326E-08	1.216E-08	1.113E-08	1.022E-08	9.359E-09	6.319E-09	4.609E-09	2.848E-09
ESE	128	1.293E-08	1.190E-08	1.092E-08	1.005E-08	9.236E-09	6.303E-09	4.631E-09	2.889E-09
SE	144	1.827E-08	1.654E-08	1.499E-08	1.364E-08	1.244E-08	8.290E-09	5.994E-09	3.642E-09
SSE	135	3.963E-08	3.296E-08	2.793E-08	2.400E-08	2.088E-08	1.205E-08	7.991E-09	4.581E-09
S	88	2.921E-08	2.312E-08	1.887E-08	1.573E-08	1.336E-08	7.207E-09	4.640E-09	2.470E-09
SSW	82	3.969E-08	3.147E-08	2.575E-08	2.157E-08	1.837E-08	9.903E-09	6.294E-09	3.221E-09
SW	74	2.501E-08	2.038E-08	1.703E-08	1.450E-08	1.251E-08	7.100E-09	4.691E-09	2.560E-09
WSW	91	2.851E-08	2.394E-08	2.055E-08	1.792E-08	1.578E-08	9.736E-09	6.791E-09	3.860E-09
W	110	3.095E-08	2.646E-08	2.296E-08	2.018E-08	1.788E-08	1.716E-08	1.136E-08	5.785E-09
WNW	115	2.966E-08	2.528E-08	2.003E-08	1.752E-08	1.543E-08	9.677E-09	6.788E-09	3.895E-09
NW	125	2.314E-08	2.061E-08	1.838E-08	1.647E-08	1.478E-08	1.121E-08	7.312E-09	4.081E-09
NNW	99	1.498E-08	1.435E-08	1.350E-08	1.261E-08	1.163E-08	7.499E-09	5.391E-09	5.990E-09
AVERAGE	2127	2.411E-08	2.087E-08	1.819E-08	1.612E-08	1.437E-08	9.635E-09	6.484E-09	3.874E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	179	2.859E-09	2.071E-09	1.587E-09	1.264E-09	1.030E-09	1.134E-09	9.489E-10
NNE	299	4.001E-09	2.969E-09	2.315E-09	1.871E-09	1.543E-09	1.303E-09	1.116E-09
NE	192	2.875E-09	2.034E-09	1.613E-09	1.324E-09	1.107E-09	9.448E-10	8.163E-10
ENE	117	1.568E-09	1.218E-09	1.074E-09	8.757E-10	7.286E-10	6.195E-10	5.342E-10
E	149	1.993E-09	1.496E-09	1.342E-09	1.081E-09	8.894E-10	7.490E-10	6.399E-10
ESE	128	2.025E-09	1.689E-09	1.302E-09	1.039E-09	8.461E-10	7.049E-10	5.958E-10
SE	144	2.504E-09	2.305E-09	1.730E-09	1.347E-09	1.071E-09	8.732E-10	7.230E-10
SSE	135	2.899E-09	2.013E-09	1.487E-09	1.146E-09	9.049E-10	7.351E-10	6.080E-10
S	88	1.579E-09	1.115E-09	8.398E-10	6.603E-10	5.325E-10	4.417E-10	3.728E-10
SSW	82	1.962E-09	1.327E-09	9.672E-10	7.428E-10	5.890E-10	4.828E-10	4.044E-10
SW	74	1.662E-09	1.182E-09	8.905E-10	6.993E-10	5.626E-10	4.630E-10	3.879E-10
WSW	91	2.452E-09	1.648E-09	1.079E-09	8.445E-10	6.817E-10	5.545E-10	4.688E-10
W	110	3.363E-09	2.157E-09	1.508E-09	1.125E-09	7.568E-10	5.484E-10	4.584E-10
WNW	115	2.600E-09	1.966E-09	1.360E-09	9.061E-10	7.196E-10	6.019E-10	5.128E-10
NW	125	2.580E-09	1.871E-09	1.424E-09	8.287E-10	6.582E-10	5.394E-10	4.509E-10
NNW	99	3.487E-09	2.264E-09	1.604E-09	1.206E-09	9.363E-10	7.496E-10	6.113E-10
AVERAGE	2127	2.513E-09	1.833E-09	1.383E-09	1.060E-09	8.473E-10	7.153E-10	6.031E-10

Table B-6

Depleted χ/Q Factors for Main Stack

BECo 3rd Quartwr 1995 General X/Q's - 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	122	5.016E-10	1.966E-08	2.816E-08	2.158E-08	1.821E-08	1.728E-08	1.700E-08	1.593E-08
NNE	415	6.630E-10	2.349E-08	3.413E-08	3.417E-08	3.981E-08	5.273E-08	5.580E-08	5.335E-08
NE	213	1.456E-10	6.523E-09	1.140E-08	1.141E-08	1.376E-08	1.997E-08	2.236E-08	2.216E-08
ENE	88	5.419E-11	3.409E-09	6.313E-09	5.691E-09	5.669E-09	7.435E-09	8.843E-09	9.290E-09
E	100	9.702E-11	4.104E-09	4.358E-09	4.567E-09	5.656E-09	8.627E-09	1.009E-08	1.031E-08
ESE	90	5.700E-10	2.002E-08	1.085E-08	8.202E-09	8.727E-09	1.125E-08	1.242E-08	1.237E-08
SE	104	1.574E-09	6.518E-08	3.577E-08	1.870E-08	1.606E-08	2.164E-08	1.627E-08	1.625E-08
SSE	120	5.724E-09	1.765E-07	8.652E-08	6.450E-08	7.286E-08	6.052E-08	4.838E-08	3.907E-08
S	93	6.002E-09	1.152E-07	7.441E-08	1.372E-07	1.219E-07	1.232E-07	1.008E-07	7.545E-08
SSW	145	1.123E-08	1.530E-07	1.386E-07	1.701E-07	2.391E-07	1.779E-07	1.115E-07	7.777E-08
SW	140	1.053E-08	7.495E-08	1.182E-07	1.577E-07	1.429E-07	1.130E-07	8.247E-08	6.257E-08
WSW	115	1.768E-08	1.283E-07	9.190E-08	8.455E-08	1.059E-07	9.326E-08	6.871E-08	5.247E-08
W	94	3.953E-09	4.971E-08	7.564E-08	6.917E-08	6.848E-08	5.865E-08	4.272E-08	3.442E-08
WNW	106	1.354E-09	2.086E-08	3.616E-08	4.018E-08	5.133E-08	5.430E-08	4.539E-08	3.961E-08
NW	78	6.905E-10	1.309E-08	1.121E-08	1.140E-08	1.314E-08	1.646E-08	1.699E-08	1.604E-08
NNW	63	9.219E-11	3.977E-09	6.576E-09	5.267E-09	5.789E-09	8.707E-09	1.028E-08	1.051E-08
AVERAGE	2086	3.804E-09	5.481E-08	4.814E-08	5.277E-08	5.808E-08	5.281E-08	4.188E-08	3.422E-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	122	1.450E-08	1.313E-08	1.192E-08	1.087E-08	9.927E-09	6.638E-09	4.799E-09	2.906E-09
NNE	415	4.878E-08	4.412E-08	3.986E-08	3.616E-08	3.286E-08	2.160E-08	1.542E-08	9.173E-09
NE	213	2.079E-08	1.922E-08	1.770E-08	1.633E-08	1.505E-08	1.038E-08	7.656E-09	4.786E-09
ENE	88	9.057E-09	8.648E-09	8.167E-09	7.694E-09	7.199E-09	5.072E-09	3.717E-09	2.270E-09
E	100	9.865E-09	9.271E-09	8.652E-09	8.074E-09	7.514E-09	5.324E-09	3.992E-09	2.547E-09
ESE	90	1.168E-08	1.088E-08	1.008E-08	9.352E-09	8.647E-09	5.958E-09	4.359E-09	2.674E-09
SE	104	1.530E-08	1.418E-08	1.307E-08	1.205E-08	1.108E-08	7.491E-09	5.406E-09	3.243E-09
SSE	120	3.213E-08	2.695E-08	2.299E-08	1.988E-08	1.738E-08	1.024E-08	6.913E-09	4.108E-09
S	93	5.742E-08	4.547E-08	3.708E-08	3.091E-08	2.623E-08	1.395E-08	8.775E-09	4.410E-09
SSW	145	5.807E-08	4.533E-08	3.656E-08	3.018E-08	2.540E-08	1.321E-08	8.238E-09	4.164E-09
SW	140	4.912E-08	3.972E-08	3.289E-08	2.772E-08	2.372E-08	1.293E-08	8.262E-09	4.281E-09
WSW	115	4.139E-08	3.360E-08	2.792E-08	2.360E-08	2.024E-08	1.113E-08	7.135E-09	3.700E-09
W	94	2.816E-08	2.351E-08	1.998E-08	1.722E-08	1.503E-08	1.027E-08	6.602E-09	3.455E-09
WNW	106	3.424E-08	2.985E-08	2.407E-08	2.136E-08	1.908E-08	1.268E-08	8.912E-09	4.969E-09
NW	78	1.456E-08	1.311E-08	1.182E-08	1.070E-08	9.703E-09	7.814E-09	5.285E-09	3.089E-09
NNW	63	1.002E-08	9.366E-09	8.685E-09	8.054E-09	7.446E-09	5.108E-09	3.962E-09	3.180E-09
AVERAGE	2086	2.044E-08	2.415E-08	2.071E-08	1.813E-08	1.603E-08	9.988E-09	6.839E-09	3.935E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	122	1.992E-09	1.467E-09	1.133E-09	9.077E-10	7.419E-10	6.744E-10	5.630E-10
NNE	415	6.246E-09	4.591E-09	3.553E-09	2.851E-09	2.337E-09	1.962E-09	1.672E-09
NE	213	3.369E-09	2.533E-09	1.989E-09	1.615E-09	1.336E-09	1.130E-09	9.689E-10
ENE	88	1.564E-09	1.205E-09	1.075E-09	8.616E-10	7.053E-10	5.910E-10	5.023E-10
E	100	1.807E-09	1.359E-09	1.379E-09	1.094E-09	8.847E-10	7.323E-10	6.149E-10
ESE	90	1.845E-09	1.567E-09	1.198E-09	9.498E-10	7.684E-10	6.364E-10	5.346E-10
SE	104	2.189E-09	1.826E-09	1.353E-09	1.045E-09	8.265E-10	6.725E-10	5.567E-10
SSE	120	2.660E-09	1.884E-09	1.417E-09	1.108E-09	8.871E-10	7.286E-10	6.065E-10
S	93	2.664E-09	1.780E-09	1.275E-09	9.583E-10	7.409E-10	5.915E-10	4.828E-10
SSW	145	2.575E-09	1.778E-09	1.321E-09	1.030E-09	8.269E-10	6.846E-10	5.780E-10
SW	140	2.675E-09	1.853E-09	1.373E-09	1.066E-09	8.436E-10	6.926E-10	5.793E-10
WSW	115	2.314E-09	1.605E-09	1.175E-09	9.046E-10	7.161E-10	5.621E-10	4.680E-10
W	94	2.169E-09	1.502E-09	1.109E-09	8.551E-10	6.263E-10	4.693E-10	3.890E-10
WNW	106	3.190E-09	2.273E-09	1.619E-09	9.942E-10	7.245E-10	5.734E-10	4.639E-10
NW	78	1.971E-09	1.384E-09	1.024E-09	6.197E-10	4.848E-10	3.913E-10	3.217E-10
NNW	63	1.933E-09	1.297E-09	9.317E-10	6.997E-10	5.390E-10	4.280E-10	3.462E-10
AVERAGE	2086	2.573E-09	1.869E-09	1.433E-09	1.097E-09	8.743E-10	7.200E-10	6.031E-10

Table B-6

Depleted χ/Q Factors for Main Stack

BECo 4th Quarter 1995 General X/Q's - 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	102	3.869E-11	1.642E-09	4.780E-09	6.227E-09	8.063E-09	1.117E-08	1.193E-08	1.157E-08
NNE	171	9.130E-14	3.699E-10	3.676E-09	6.903E-09	1.099E-08	1.826E-08	2.076E-08	2.064E-08
NE	189	4.594E-11	3.601E-09	7.537E-09	9.697E-09	1.243E-08	1.809E-08	2.024E-08	2.034E-08
ENE	209	2.177E-13	1.298E-09	8.846E-09	1.124E-08	1.456E-08	2.180E-08	2.446E-08	2.424E-08
E	420	6.689E-10	2.325E-08	3.056E-08	2.682E-08	2.954E-08	4.011E-08	4.442E-08	4.381E-08
ESE	371	1.655E-09	5.332E-08	3.972E-08	3.334E-08	3.787E-08	4.762E-08	4.842E-08	4.519E-08
SE	152	5.064E-10	2.249E-08	2.364E-08	2.043E-08	2.347E-08	3.337E-08	2.700E-08	2.550E-08
SSE	66	1.063E-09	3.314E-08	2.667E-08	4.803E-08	5.407E-08	4.379E-08	3.087E-08	2.658E-08
S	79	1.494E-09	3.007E-08	7.916E-08	1.298E-07	1.029E-07	8.055E-08	5.850E-08	4.216E-08
SSW	70	1.544E-09	3.111E-08	9.324E-08	1.042E-07	1.200E-07	7.584E-08	4.697E-08	3.244E-08
SW	45	7.805E-12	2.225E-09	3.296E-08	4.625E-08	3.843E-08	2.680E-08	1.846E-08	1.351E-08
WSW	51	6.343E-10	7.420E-09	2.556E-08	3.402E-08	4.593E-08	4.066E-08	2.969E-08	2.252E-08
W	39	3.311E-10	5.757E-09	1.785E-08	2.515E-08	2.876E-08	2.682E-08	2.008E-08	1.632E-08
WNW	75	3.829E-17	5.534E-11	9.674E-09	2.195E-08	3.187E-08	3.399E-08	2.709E-08	2.272E-08
NW	97	5.023E-13	5.772E-10	2.497E-09	5.452E-09	9.336E-09	1.397E-08	1.437E-08	1.337E-08
NNW	61	4.898E-19	1.444E-11	5.863E-10	1.951E-09	4.149E-09	7.912E-09	9.148E-09	9.096E-09
AVERAGE	2197	4.994E-10	1.352E-08	2.545E-08	3.322E-08	3.578E-08	3.380E-08	2.846E-08	2.436E-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	102	1.074E-08	9.877E-09	9.075E-09	8.368E-09	7.723E-09	5.365E-09	3.979E-09	2.492E-09
NNE	171	1.933E-08	1.783E-08	1.636E-08	1.505E-08	1.384E-08	9.415E-09	6.852E-09	4.174E-09
NE	189	1.895E-08	1.757E-08	1.623E-08	1.500E-08	1.386E-08	9.577E-09	7.056E-09	4.394E-09
ENE	209	2.271E-08	2.096E-08	1.927E-08	1.774E-08	1.634E-08	1.121E-08	8.239E-09	5.111E-09
E	420	4.091E-08	3.770E-08	3.460E-08	3.184E-08	2.929E-08	1.999E-08	1.462E-08	8.999E-09
ESE	371	4.079E-08	3.660E-08	3.291E-08	2.975E-08	2.698E-08	1.774E-08	1.273E-08	7.667E-09
SE	152	2.309E-08	2.073E-08	1.861E-08	1.679E-08	1.519E-08	9.828E-09	6.936E-09	4.055E-09
SSE	66	2.134E-08	1.757E-08	1.475E-08	1.257E-08	1.085E-08	6.082E-09	3.936E-09	2.161E-09
S	79	3.158E-08	2.469E-08	1.994E-08	1.647E-08	1.387E-08	7.203E-09	4.444E-09	2.186E-09
SSW	70	2.396E-08	1.856E-08	1.490E-08	1.226E-08	1.031E-08	5.395E-09	3.388E-09	1.735E-09
SW	45	1.035E-08	8.218E-09	6.718E-09	5.611E-09	4.775E-09	2.594E-09	1.666E-09	8.749E-10
WSW	51	1.770E-08	1.435E-08	1.192E-08	1.008E-08	8.655E-09	4.807E-09	3.097E-09	1.605E-09
W	39	1.335E-08	1.111E-08	9.395E-09	8.048E-09	6.974E-09	4.368E-09	2.695E-09	1.322E-09
WNW	75	1.899E-08	1.607E-08	1.379E-08	1.197E-08	1.049E-08	5.814E-09	4.281E-09	2.293E-09
NW	97	1.202E-08	1.074E-08	9.631E-09	8.685E-09	7.869E-09	6.920E-09	4.782E-09	2.962E-09
NNW	61	8.501E-09	7.781E-09	7.076E-09	6.442E-09	5.867E-09	3.849E-09	2.890E-09	2.254E-09
AVERAGE	2197	2.089E-08	1.815E-08	1.595E-08	1.417E-08	1.268E-08	8.135E-09	5.724E-09	3.393E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	102	1.739E-09	1.288E-09	9.933E-10	7.923E-10	6.440E-10	6.235E-10	5.068E-10
NNE	171	2.872E-09	2.117E-09	1.633E-09	1.304E-09	1.062E-09	8.850E-10	7.477E-10
NE	189	3.077E-09	2.301E-09	1.797E-09	1.451E-09	1.195E-09	1.005E-09	8.563E-10
ENE	209	3.567E-09	2.738E-09	2.306E-09	1.833E-09	1.485E-09	1.232E-09	1.035E-09
E	420	6.247E-09	4.644E-09	4.223E-09	3.353E-09	2.719E-09	2.259E-09	1.905E-09
ESE	371	5.266E-09	4.228E-09	3.232E-09	2.563E-09	2.076E-09	1.723E-09	1.452E-09
SE	152	2.719E-09	2.296E-09	1.713E-09	1.329E-09	1.055E-09	8.596E-10	7.119E-10
SSE	66	1.348E-09	9.293E-10	6.845E-10	5.273E-10	4.169E-10	3.393E-10	2.812E-10
S	79	1.326E-09	9.025E-10	6.627E-10	5.114E-10	4.064E-10	3.334E-10	2.788E-10
SSW	70	1.092E-09	7.651E-10	5.743E-10	4.509E-10	3.637E-10	3.019E-10	2.553E-10
SW	45	5.591E-10	3.955E-10	2.989E-10	2.359E-10	1.905E-10	1.587E-10	1.345E-10
WSW	51	9.963E-10	6.855E-10	4.811E-10	3.493E-10	2.621E-10	1.859E-10	1.511E-10
W	39	7.959E-10	5.358E-10	3.883E-10	2.954E-10	2.159E-10	1.634E-10	1.350E-10
WNW	75	1.457E-09	1.029E-09	7.569E-10	5.318E-10	4.080E-10	3.307E-10	2.731E-10
NW	97	1.883E-09	1.315E-09	9.607E-10	5.310E-10	4.145E-10	3.344E-10	2.753E-10
NNW	61	1.383E-09	9.366E-10	6.780E-10	5.124E-10	3.968E-10	3.163E-10	2.569E-10
AVERAGE	2197	2.271E-09	1.694E-09	1.336E-09	1.036E-09	8.319E-10	6.907E-10	5.785E-10

Table B-6

Depleted χ/Q Factors for Main Stack

BECo 1995 General X/Q's - 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	578	5.377E-10	1.892E-08	1.579E-08	1.240E-08	1.344E-08	1.787E-08	1.971E-08	1.950E-08
NNE	1072	7.720E-10	2.267E-08	1.842E-08	1.732E-08	2.127E-08	3.016E-08	3.299E-08	3.218E-08
NE	757	4.106E-10	1.383E-08	1.195E-08	1.083E-08	1.265E-08	1.762E-08	1.954E-08	1.936E-08
ENE	601	6.599E-10	2.304E-08	1.574E-08	1.203E-08	1.292E-08	1.667E-08	1.808E-08	1.776E-08
E	912	1.122E-09	3.403E-08	2.165E-08	1.659E-08	1.817E-08	2.347E-08	2.517E-08	2.444E-08
ESE	751	1.195E-09	3.739E-08	2.430E-08	1.917E-08	2.027E-08	2.434E-08	2.494E-08	2.358E-08
SE	580	7.169E-10	2.686E-08	2.345E-08	1.930E-08	2.088E-08	2.857E-08	2.314E-08	2.199E-08
SSE	488	2.591E-09	7.550E-08	4.800E-08	7.226E-08	8.106E-08	6.602E-08	5.180E-08	4.124E-08
S	408	3.956E-09	7.217E-08	8.580E-08	1.457E-07	1.202E-07	1.016E-07	7.592E-08	5.534E-08
SSW	399	5.830E-09	9.184E-08	9.927E-08	1.186E-07	1.621E-07	1.223E-07	7.710E-08	5.400E-08
SW	333	6.683E-09	5.801E-08	6.970E-08	9.190E-08	8.151E-08	6.273E-08	4.547E-08	3.444E-08
WSW	302	9.338E-09	9.212E-08	5.763E-08	5.246E-08	6.452E-08	5.646E-08	4.160E-08	3.186E-08
W	303	4.312E-09	6.279E-08	4.962E-08	4.658E-08	4.902E-08	4.356E-08	3.236E-08	2.641E-08
WNW	360	2.198E-09	3.343E-08	3.096E-08	3.219E-08	4.085E-08	4.159E-08	3.334E-08	2.829E-08
NW	368	1.037E-09	1.908E-08	1.036E-08	9.842E-09	1.283E-08	1.737E-08	1.798E-08	1.694E-08
NNW	291	1.959E-10	7.258E-09	4.473E-09	3.652E-09	5.092E-09	8.856E-09	1.077E-08	1.120E-08
AVERAGE	8503	2.597E-09	4.306E-08	3.670E-08	4.256E-08	4.605E-08	4.245E-08	3.437E-08	2.866E-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	578	1.825E-08	1.681E-08	1.538E-08	1.409E-08	1.287E-08	8.432E-09	5.937E-09	3.481E-09
NNE	1072	2.982E-08	2.725E-08	2.482E-08	2.268E-08	2.073E-08	1.384E-08	9.965E-09	5.997E-09
NE	757	1.820E-08	1.686E-08	1.557E-08	1.439E-08	1.329E-08	9.194E-09	6.778E-09	4.220E-09
ENE	601	1.661E-08	1.532E-08	1.407E-08	1.295E-08	1.189E-08	8.028E-09	5.804E-09	3.529E-09
E	912	2.265E-08	2.074E-08	1.894E-08	1.734E-08	1.588E-08	1.071E-08	7.784E-09	4.761E-09
ESE	751	2.150E-08	1.947E-08	1.764E-08	1.605E-08	1.463E-08	9.728E-09	7.021E-09	4.258E-09
SE	580	2.003E-08	1.808E-08	1.631E-08	1.479E-08	1.343E-08	8.789E-09	6.251E-09	3.696E-09
SSE	488	3.355E-08	2.791E-08	2.365E-08	2.033E-08	1.768E-08	1.020E-08	6.762E-09	3.841E-09
S	408	4.182E-08	3.294E-08	2.677E-08	2.224E-08	1.882E-08	9.980E-09	6.295E-09	3.216E-09
SSW	399	4.044E-08	3.165E-08	2.560E-08	2.118E-08	1.787E-08	9.373E-09	5.874E-09	2.978E-09
SW	333	2.707E-08	2.194E-08	1.822E-08	1.541E-08	1.323E-08	7.330E-09	4.744E-09	2.504E-09
WSW	302	2.530E-08	2.071E-08	1.735E-08	1.480E-08	1.280E-08	7.319E-09	4.838E-09	2.598E-09
W	303	2.182E-08	1.836E-08	1.572E-08	1.363E-08	1.195E-08	9.339E-09	6.067E-09	3.124E-09
WNW	360	2.395E-08	2.052E-08	1.779E-08	1.559E-08	1.378E-08	7.946E-09	6.044E-09	3.358E-09
NW	368	1.534E-08	1.378E-08	1.238E-08	1.117E-08	1.010E-08	8.117E-09	5.446E-09	3.180E-09
NNW	291	1.078E-08	1.012E-08	9.393E-09	8.700E-09	8.014E-09	5.334E-09	4.017E-09	3.675E-09
AVERAGE	8503	2.419E-08	2.078E-08	1.810E-08	1.596E-08	1.419E-08	8.979E-09	6.227E-09	3.651E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	578	2.356E-09	1.724E-09	1.326E-09	1.058E-09	8.623E-10	8.588E-10	7.137E-10
NNE	1072	4.105E-09	3.025E-09	2.341E-09	1.870E-09	1.538E-09	1.289E-09	1.096E-09
NE	757	2.959E-09	2.219E-09	1.739E-09	1.409E-09	1.164E-09	9.832E-10	8.412E-10
ENE	601	2.444E-09	1.872E-09	1.594E-09	1.275E-09	1.041E-09	8.696E-10	7.370E-10
E	912	3.299E-09	2.453E-09	2.222E-09	1.769E-09	1.437E-09	1.197E-09	1.012E-09
ESE	751	2.932E-09	2.376E-09	1.810E-09	1.443E-09	1.169E-09	9.709E-10	8.184E-10
SE	580	2.493E-09	2.122E-09	1.587E-09	1.236E-09	9.836E-10	8.042E-10	6.682E-10
SSE	488	2.433E-09	1.695E-09	1.258E-09	9.751E-10	7.749E-10	6.336E-10	5.275E-10
S	408	1.987E-09	1.364E-09	1.004E-09	7.746E-10	6.142E-10	5.023E-10	4.189E-10
SSW	399	1.833E-09	1.257E-09	9.274E-10	7.187E-10	5.737E-10	4.727E-10	3.973E-10
SW	333	1.585E-09	1.106E-09	8.239E-10	6.413E-10	5.096E-10	4.186E-10	3.503E-10
WSW	302	1.636E-09	1.123E-09	7.880E-10	6.060E-10	4.801E-10	3.781E-10	3.160E-10
W	303	1.892E-09	1.268E-09	9.168E-10	6.989E-10	5.008E-10	3.709E-10	3.087E-10
WNW	360	2.177E-09	1.579E-09	1.131E-09	7.456E-10	5.680E-10	4.615E-10	3.826E-10
NW	368	2.023E-09	1.438E-09	1.074E-09	6.296E-10	4.945E-10	4.009E-10	3.313E-10
NNW	291	2.208E-09	1.470E-09	1.054E-09	7.946E-10	6.153E-10	4.909E-10	3.989E-10
AVERAGE	8503	2.398E-09	1.756E-09	1.350E-09	1.041E-09	8.329E-10	6.939E-10	5.824E-10

Table B-7

Gamma χ/Q Factors for Main Stack

BECo 1st Quarter 1995 General X/Q's - 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	175	4.662E-07	2.376E-07	1.198E-07	8.068E-08	6.237E-08	4.407E-08	3.439E-08	2.820E-08
NNE	187	5.242E-07	2.665E-07	1.348E-07	9.133E-08	7.065E-08	4.986E-08	3.885E-08	3.183E-08
NE	163	4.592E-07	2.342E-07	1.186E-07	7.971E-08	6.124E-08	4.276E-08	3.310E-08	2.704E-08
ENE	187	5.381E-07	2.778E-07	1.389E-07	9.124E-08	6.962E-08	4.811E-08	3.702E-08	3.016E-08
E	243	5.600E-07	2.930E-07	1.419E-07	9.080E-08	6.987E-08	4.882E-08	3.769E-08	3.067E-08
ESE	162	4.605E-07	2.422E-07	1.173E-07	7.702E-08	5.837E-08	3.985E-08	3.039E-08	2.463E-08
SE	180	6.526E-07	3.363E-07	2.010E-07	1.193E-07	7.973E-08	5.575E-08	3.304E-08	2.682E-08
SSE	167	8.798E-07	4.640E-07	2.521E-07	1.201E-07	9.397E-08	6.212E-08	4.561E-08	3.564E-08
S	148	6.555E-07	3.476E-07	1.877E-07	1.366E-07	1.005E-07	6.844E-08	4.961E-08	3.766E-08
SSW	102	5.561E-07	2.940E-07	1.443E-07	9.787E-08	8.616E-08	5.809E-08	4.012E-08	3.020E-08
SW	74	4.214E-07	2.208E-07	1.187E-07	7.652E-08	5.692E-08	3.764E-08	2.712E-08	2.095E-08
WSW	45	2.865E-07	1.497E-07	6.919E-08	4.127E-08	3.133E-08	2.130E-08	1.528E-08	1.173E-08
W	60	3.455E-07	1.825E-07	9.562E-08	5.115E-08	3.894E-08	2.616E-08	1.764E-08	1.388E-08
WNW	64	2.286E-07	1.165E-07	8.961E-08	5.644E-08	4.766E-08	3.282E-08	2.266E-08	1.797E-08
NW	68	2.407E-07	1.227E-07	6.163E-08	4.142E-08	3.197E-08	2.255E-08	1.758E-08	1.441E-08
NNW	68	2.392E-07	1.215E-07	6.092E-08	4.100E-08	3.172E-08	2.247E-08	1.760E-08	1.449E-08
AVERAGE	2093	4.696E-07	2.442E-07	1.283E-07	8.077E-08	6.194E-08	4.255E-08	3.111E-08	2.477E-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	175	2.379E-08	2.051E-08	1.798E-08	1.597E-08	1.433E-08	9.317E-09	6.766E-09	4.227E-09
NNE	187	2.685E-08	2.315E-08	2.031E-08	1.806E-08	1.622E-08	1.059E-08	7.724E-09	4.865E-09
NE	163	2.276E-08	1.959E-08	1.716E-08	1.523E-08	1.367E-08	8.906E-09	6.491E-09	4.088E-09
ENE	187	2.534E-08	2.178E-08	1.905E-08	1.689E-08	1.514E-08	9.822E-09	7.137E-09	4.475E-09
E	243	2.571E-08	2.204E-08	1.921E-08	1.698E-08	1.517E-08	9.728E-09	6.994E-09	4.302E-09
ESE	162	2.062E-08	1.768E-08	1.542E-08	1.365E-08	1.221E-08	7.881E-09	5.709E-09	3.569E-09
SE	180	2.243E-08	1.919E-08	1.671E-08	1.475E-08	1.317E-08	8.428E-09	6.056E-09	3.729E-09
SSE	167	2.899E-08	2.428E-08	2.079E-08	1.810E-08	1.598E-08	9.895E-09	7.005E-09	4.388E-09
S	148	2.985E-08	2.451E-08	2.065E-08	1.773E-08	1.548E-08	9.256E-09	6.408E-09	3.788E-09
SSW	102	2.399E-08	1.973E-08	1.665E-08	1.431E-08	1.250E-08	7.507E-09	5.224E-09	3.121E-09
SW	74	1.690E-08	1.405E-08	1.196E-08	1.036E-08	9.106E-09	5.561E-09	3.895E-09	2.333E-09
WSW	45	9.388E-09	7.759E-09	6.570E-09	5.664E-09	4.959E-09	2.987E-09	2.064E-09	1.205E-09
W	60	1.134E-08	9.520E-09	8.166E-09	7.118E-09	6.288E-09	4.289E-09	2.990E-09	1.782E-09
WNW	64	1.475E-08	1.243E-08	1.069E-08	9.333E-09	8.257E-09	4.772E-09	3.730E-09	2.237E-09
NW	68	1.215E-08	1.048E-08	9.103E-09	8.156E-09	7.319E-09	5.407E-09	3.861E-09	2.472E-09
NNW	68	1.227E-08	1.062E-08	9.349E-09	8.335E-09	7.506E-09	4.949E-09	3.783E-09	3.017E-09
AVERAGE	2093	2.045E-08	1.733E-08	1.499E-08	1.316E-08	1.171E-08	7.456E-09	5.365E-09	3.350E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	175	3.020E-09	2.324E-09	1.879E-09	1.571E-09	1.340E-09	1.339E-09	1.177E-09
NNE	187	3.495E-09	2.700E-09	2.191E-09	1.838E-09	1.571E-09	1.372E-09	1.214E-09
NE	163	2.940E-09	2.276E-09	1.849E-09	1.552E-09	1.329E-09	1.162E-09	1.028E-09
ENE	187	3.210E-09	2.520E-09	2.147E-09	1.797E-09	1.533E-09	1.337E-09	1.181E-09
E	243	3.045E-09	2.328E-09	2.012E-09	1.671E-09	1.416E-09	1.228E-09	1.079E-09
ESE	162	2.556E-09	2.083E-09	1.685E-09	1.410E-09	1.204E-09	1.050E-09	9.275E-10
SE	180	2.642E-09	2.207E-09	1.770E-09	1.470E-09	1.246E-09	1.081E-09	9.502E-10
SSE	167	3.085E-09	2.352E-09	1.893E-09	1.577E-09	1.341E-09	1.166E-09	1.027E-09
S	148	2.625E-09	1.982E-09	1.583E-09	1.311E-09	1.109E-09	9.606E-10	8.433E-10
SSW	102	2.177E-09	1.651E-09	1.324E-09	1.100E-09	9.328E-10	8.099E-10	7.126E-10
SW	74	1.629E-09	1.236E-09	9.914E-10	8.236E-10	7.062E-10	6.122E-10	5.381E-10
WSW	45	8.281E-10	6.222E-10	5.020E-10	4.126E-10	3.466E-10	2.992E-10	2.611E-10
W	60	1.242E-09	9.406E-10	7.532E-10	6.251E-10	5.395E-10	4.675E-10	4.108E-10
WNW	64	1.562E-09	1.209E-09	9.988E-10	8.353E-10	7.050E-10	6.093E-10	5.339E-10
NW	68	1.741E-09	1.344E-09	1.085E-09	9.419E-10	7.985E-10	6.932E-10	6.097E-10
NNW	68	2.120E-09	1.616E-09	1.299E-09	1.081E-09	9.186E-10	7.979E-10	7.024E-10
AVERAGE	2093	2.370E-09	1.837E-09	1.498E-09	1.251E-09	1.065E-09	9.365E-10	8.248E-10

Table B-7

Gamma χ/Q Factors for Main Stack

BECo 2nd Quarter 1995 General X/Q's - 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	7.589E-07	3.938E-07	1.905E-07	1.215E-07	9.281E-08	6.461E-08	5.024E-08	4.131E-08
NNE	299	6.875E-07	3.607E-07	1.710E-07	1.069E-07	8.185E-08	5.705E-08	4.416E-08	3.608E-08
NE	192	6.252E-07	3.200E-07	1.538E-07	9.789E-08	7.422E-08	5.074E-08	3.891E-08	3.171E-08
ENE	117	4.380E-07	2.369E-07	1.046E-07	5.908E-08	4.476E-08	3.079E-08	2.373E-08	1.942E-08
E	149	3.969E-07	2.169E-07	9.385E-08	5.150E-08	3.925E-08	2.722E-08	2.100E-08	1.713E-08
ESE	128	3.688E-07	1.952E-07	9.066E-08	5.726E-08	4.357E-08	3.001E-08	2.307E-08	1.879E-08
SE	144	9.619E-07	4.931E-07	2.460E-07	1.349E-07	8.509E-08	5.886E-08	3.227E-08	2.618E-08
SSE	135	1.367E-06	7.238E-07	3.535E-07	1.161E-07	9.107E-08	6.064E-08	4.474E-08	3.508E-08
S	88	5.177E-07	2.834E-07	1.122E-07	7.452E-08	5.496E-08	3.776E-08	2.758E-08	2.109E-08
SSW	82	6.436E-07	3.556E-07	1.315E-07	7.863E-08	6.855E-08	4.784E-08	3.347E-08	2.542E-08
SW	74	6.407E-07	3.461E-07	1.600E-07	7.836E-08	5.850E-08	3.879E-08	2.800E-08	2.161E-08
WSW	91	1.182E-06	6.545E-07	2.185E-07	9.809E-08	7.237E-08	4.995E-08	3.661E-08	2.876E-08
W	110	9.952E-07	5.343E-07	2.758E-07	1.288E-07	9.772E-08	6.587E-08	4.482E-08	3.563E-08
WNW	115	5.911E-07	3.203E-07	2.107E-07	1.111E-07	9.085E-08	6.113E-08	4.224E-08	3.364E-08
NW	125	6.237E-07	3.271E-07	1.534E-07	9.573E-08	7.365E-08	5.131E-08	3.948E-08	3.203E-08
NNW	99	5.622E-07	2.880E-07	1.410E-07	9.176E-08	7.005E-08	4.860E-08	3.773E-08	3.101E-08
AVERAGE	2127	7.100E-07	3.781E-07	1.754E-07	9.388E-08	7.121E-08	4.882E-08	3.550E-08	2.843E-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	3.502E-08	3.036E-08	2.677E-08	2.392E-08	2.159E-08	1.435E-08	1.059E-08	6.785E-09
NNE	299	3.039E-08	2.617E-08	2.293E-08	2.036E-08	1.827E-08	1.190E-08	8.661E-09	5.443E-09
NE	192	2.679E-08	2.321E-08	2.048E-08	1.832E-08	1.656E-08	1.114E-08	8.352E-09	5.501E-09
ENE	117	1.641E-08	1.421E-08	1.251E-08	1.118E-08	1.009E-08	6.732E-09	4.999E-09	3.243E-09
E	149	1.443E-08	1.244E-08	1.091E-08	9.704E-09	8.723E-09	5.726E-09	4.201E-09	2.678E-09
ESE	128	1.581E-08	1.363E-08	1.196E-08	1.063E-08	9.561E-09	6.283E-09	4.619E-09	2.957E-09
SE	144	2.194E-08	1.884E-08	1.647E-08	1.460E-08	1.309E-08	8.524E-09	6.228E-09	3.953E-09
SSE	135	2.861E-08	2.401E-08	2.059E-08	1.794E-08	1.586E-08	9.855E-09	6.986E-09	4.391E-09
S	88	1.682E-08	1.388E-08	1.175E-08	1.013E-08	8.874E-09	5.374E-09	3.760E-09	2.261E-09
SSW	82	2.030E-08	1.678E-08	1.423E-08	1.229E-08	1.079E-08	6.588E-09	4.637E-09	2.816E-09
SW	74	1.740E-08	1.446E-08	1.231E-08	1.066E-08	9.376E-09	5.744E-09	4.032E-09	2.424E-09
WSW	91	2.359E-08	1.994E-08	1.720E-08	1.508E-08	1.341E-08	8.561E-09	6.211E-09	3.935E-09
W	110	2.940E-08	2.494E-08	2.160E-08	1.900E-08	1.693E-08	1.306E-08	9.385E-09	5.856E-09
WNW	115	2.778E-08	2.357E-08	1.871E-08	1.645E-08	1.465E-08	9.651E-09	7.073E-09	4.431E-09
NW	125	2.683E-08	2.302E-08	2.011E-08	1.782E-08	1.597E-08	1.197E-08	8.626E-09	5.710E-09
NNW	99	2.631E-08	2.286E-08	2.021E-08	1.811E-08	1.640E-08	1.104E-08	8.636E-09	7.958E-09
AVERAGE	2127	2.361E-08	2.014E-08	1.742E-08	1.539E-08	1.376E-08	9.156E-09	6.687E-09	4.396E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	179	4.926E-09	3.836E-09	3.129E-09	2.635E-09	2.262E-09	2.338E-09	2.065E-09
NNE	299	3.904E-09	3.015E-09	2.446E-09	2.050E-09	1.753E-09	1.530E-09	1.354E-09
NE	192	4.072E-09	3.218E-09	2.655E-09	2.258E-09	1.955E-09	1.725E-09	1.541E-09
ENE	117	2.378E-09	1.905E-09	1.662E-09	1.404E-09	1.209E-09	1.062E-09	9.445E-10
E	149	1.942E-09	1.512E-09	1.358E-09	1.140E-09	9.767E-10	8.543E-10	7.570E-10
ESE	128	2.151E-09	1.803E-09	1.470E-09	1.238E-09	1.063E-09	9.310E-10	8.261E-10
SE	144	2.862E-09	2.584E-09	2.099E-09	1.762E-09	1.509E-09	1.319E-09	1.168E-09
SSE	135	3.089E-09	2.357E-09	1.897E-09	1.581E-09	1.344E-09	1.168E-09	1.030E-09
S	88	1.584E-09	1.206E-09	9.687E-10	8.063E-10	6.851E-10	5.956E-10	5.248E-10
SSW	82	1.988E-09	1.522E-09	1.229E-09	1.028E-09	8.766E-10	7.643E-10	6.754E-10
SW	74	1.702E-09	1.297E-09	1.044E-09	8.708E-10	7.493E-10	6.518E-10	5.749E-10
WSW	91	2.855E-09	2.259E-09	2.054E-09	1.733E-09	1.491E-09	1.360E-09	1.209E-09
W	110	4.204E-09	3.257E-09	2.652E-09	2.232E-09	2.102E-09	1.840E-09	1.630E-09
WNW	115	3.193E-09	2.618E-09	2.394E-09	2.191E-09	1.876E-09	1.641E-09	1.454E-09
NW	125	4.071E-09	3.197E-09	2.612E-09	2.403E-09	2.044E-09	1.777E-09	1.566E-09
NNW	99	5.711E-09	4.422E-09	3.598E-09	3.027E-09	2.596E-09	2.274E-09	2.017E-09
AVERAGE	2127	3.165E-09	2.500E-09	2.079E-09	1.772E-09	1.531E-09	1.364E-09	1.209E-09

Table B-7

Gamma χ/Q Factors for Main Stack

BECo 3rd Quarter 1995 General X/Q's 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	122	3.700E-07	1.926E-07	9.770E-08	6.323E-08	4.708E-08	3.123E-08	2.349E-08	1.898E-08
NNE	415	1.036E-06	5.300E-07	2.704E-07	1.822E-07	1.397E-07	9.698E-08	7.466E-08	6.072E-08
NE	213	5.708E-07	2.895E-07	1.475E-07	9.969E-08	7.623E-08	5.278E-08	4.071E-08	3.322E-08
ENE	88	3.176E-07	1.609E-07	8.174E-08	5.496E-08	4.178E-08	2.869E-08	2.210E-08	1.808E-08
E	100	3.161E-07	1.605E-07	8.102E-08	5.451E-08	4.172E-08	2.894E-08	2.237E-08	1.828E-08
ESE	90	3.496E-07	1.812E-07	8.775E-08	5.854E-08	4.465E-08	3.084E-08	2.378E-08	1.941E-08
SE	104	9.943E-07	5.185E-07	2.310E-07	1.173E-07	7.449E-08	5.157E-08	2.659E-08	2.176E-08
SSE	120	1.362E-06	7.313E-07	3.420E-07	9.304E-08	7.298E-08	4.864E-08	3.598E-08	2.829E-08
S	93	7.888E-07	4.232E-07	1.716E-07	1.223E-07	9.176E-08	6.630E-08	5.009E-08	3.872E-08
SSW	145	9.653E-07	5.187E-07	2.184E-07	1.419E-07	1.235E-07	8.304E-08	5.738E-08	4.317E-08
SW	140	8.722E-07	4.537E-07	2.507E-07	1.504E-07	1.123E-07	7.440E-08	5.353E-08	4.126E-08
WSW	115	1.115E-06	5.848E-07	2.266E-07	1.220E-07	9.187E-08	6.302E-08	4.556E-08	3.526E-08
W	94	6.223E-07	3.248E-07	1.939E-07	1.018E-07	7.509E-08	4.995E-08	3.345E-08	2.619E-08
WNW	106	4.678E-07	2.403E-07	1.920E-07	1.177E-07	9.731E-08	6.632E-08	4.624E-08	3.701E-08
NW	78	3.143E-07	1.618E-07	8.069E-08	5.354E-08	4.121E-08	2.868E-08	2.205E-08	1.787E-08
NNW	63	2.581E-07	1.313E-07	6.692E-08	4.494E-08	3.423E-08	2.368E-08	1.834E-08	1.505E-08
AVERAGE	2086	6.701E-07	3.502E-07	1.712E-07	9.863E-08	7.537E-08	5.157E-08	3.727E-08	2.958E-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	122	1.589E-08	1.362E-08	1.190E-08	1.054E-08	9.447E-09	6.126E-09	4.457E-09	2.809E-09
NNE	415	5.092E-08	4.368E-08	3.813E-08	3.374E-08	3.019E-08	1.945E-08	1.405E-08	8.722E-09
NE	213	2.799E-08	2.413E-08	2.118E-08	1.884E-08	1.694E-08	1.114E-08	8.184E-09	5.232E-09
ENE	88	1.528E-08	1.324E-08	1.168E-08	1.044E-08	9.431E-09	6.307E-09	4.696E-09	3.064E-09
E	100	1.543E-08	1.334E-08	1.174E-08	1.047E-08	9.434E-09	6.262E-09	4.638E-09	3.004E-09
ESE	90	1.637E-08	1.414E-08	1.243E-08	1.108E-08	9.984E-09	6.613E-09	4.890E-09	3.159E-09
SE	104	1.838E-08	1.588E-08	1.396E-08	1.243E-08	1.119E-08	7.372E-09	5.421E-09	3.468E-09
SSE	120	2.311E-08	1.943E-08	1.668E-08	1.456E-08	1.288E-08	8.038E-09	5.713E-09	3.605E-09
S	93	3.098E-08	2.563E-08	2.176E-08	1.881E-08	1.652E-08	1.010E-08	7.114E-09	4.314E-09
SSW	145	3.421E-08	2.810E-08	2.370E-08	2.036E-08	1.779E-08	1.068E-08	7.420E-09	4.410E-09
SW	140	3.320E-08	2.755E-08	2.341E-08	2.024E-08	1.776E-08	1.077E-08	7.506E-09	4.462E-09
WSW	115	2.845E-08	2.367E-08	2.015E-08	1.745E-08	1.534E-08	9.366E-09	6.550E-09	3.907E-09
W	94	2.130E-08	1.783E-08	1.525E-08	1.327E-08	1.170E-08	7.902E-09	5.485E-09	3.246E-09
WNW	106	3.066E-08	2.607E-08	2.071E-08	1.822E-08	1.623E-08	1.067E-08	7.761E-09	4.805E-09
NW	78	1.495E-08	1.280E-08	1.116E-08	9.871E-09	8.828E-09	6.416E-09	4.562E-09	2.904E-09
NNW	63	1.273E-08	1.102E-08	9.695E-09	8.645E-09	7.788E-09	5.141E-09	3.930E-09	3.124E-09
AVERAGE	2086	2.437E-08	2.063E-08	1.772E-08	1.556E-08	1.384E-08	8.897E-09	6.398E-09	4.015E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	122	2.022E-09	1.566E-09	1.276E-09	1.073E-09	9.201E-10	9.259E-10	8.169E-10
NNE	415	6.210E-09	4.769E-09	3.855E-09	3.222E-09	2.746E-09	2.392E-09	2.112E-09
NE	213	3.802E-09	2.966E-09	2.424E-09	2.046E-09	1.759E-09	1.544E-09	1.372E-09
ENE	88	2.256E-09	1.818E-09	1.609E-09	1.362E-09	1.174E-09	1.032E-09	9.193E-10
E	100	2.202E-09	1.729E-09	1.655E-09	1.396E-09	1.200E-09	1.053E-09	9.355E-10
ESE	90	2.311E-09	1.972E-09	1.612E-09	1.362E-09	1.171E-09	1.028E-09	9.144E-10
SE	104	2.518E-09	2.220E-09	1.800E-09	1.509E-09	1.290E-09	1.127E-09	9.971E-10
SSE	120	2.541E-09	1.941E-09	1.563E-09	1.303E-09	1.109E-09	9.639E-10	8.494E-10
S	93	3.039E-09	2.322E-09	1.872E-09	1.562E-09	1.330E-09	1.157E-09	1.020E-09
SSW	145	3.069E-09	2.324E-09	1.862E-09	1.545E-09	1.310E-09	1.136E-09	9.986E-10
SW	140	3.101E-09	2.343E-09	1.874E-09	1.554E-09	1.326E-09	1.148E-09	1.008E-09
WSW	115	2.721E-09	2.069E-09	1.700E-09	1.408E-09	1.190E-09	1.036E-09	9.091E-10
W	94	2.252E-09	1.701E-09	1.360E-09	1.127E-09	9.694E-10	8.385E-10	7.355E-10
WNW	106	3.423E-09	2.726E-09	2.321E-09	1.975E-09	1.677E-09	1.456E-09	1.282E-09
NW	78	2.041E-09	1.572E-09	1.270E-09	1.095E-09	9.285E-10	8.057E-10	7.085E-10
NNW	63	2.198E-09	1.677E-09	1.350E-09	1.125E-09	9.564E-10	8.315E-10	7.325E-10
AVERAGE	2086	2.857E-09	2.232E-09	1.838E-09	1.542E-09	1.316E-09	1.155E-09	1.019E-09

Table B-7

Gamma χ/Q Factors for Main Stack

BECo 4th Quarter 1995 General X/Q's - 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	102	3.100E-07	1.569E-07	8.042E-08	5.492E-08	4.219E-08	2.933E-08	2.264E-08	1.846E-08
NNE	171	4.604E-07	2.324E-07	1.194E-07	8.219E-08	6.362E-08	4.487E-08	3.495E-08	2.862E-08
NE	189	5.158E-07	2.613E-07	1.336E-07	9.103E-08	7.008E-08	4.897E-08	3.795E-08	3.102E-08
ENE	209	5.659E-07	2.861E-07	1.475E-07	1.012E-07	7.790E-08	5.450E-08	4.227E-08	3.458E-08
E	420	1.029E-06	5.260E-07	2.674E-07	1.791E-07	1.368E-07	9.475E-08	7.315E-08	5.978E-08
ESE	371	9.343E-07	4.865E-07	2.395E-07	1.617E-07	1.235E-07	8.540E-08	6.560E-08	5.334E-08
SE	152	7.090E-07	3.647E-07	2.199E-07	1.311E-07	8.735E-08	6.097E-08	3.622E-08	2.952E-08
SSE	66	4.487E-07	2.356E-07	1.319E-07	6.450E-08	5.071E-08	3.365E-08	2.472E-08	1.930E-08
S	79	3.935E-07	2.065E-07	1.206E-07	8.991E-08	6.584E-08	4.469E-08	3.242E-08	2.461E-08
SSW	70	3.911E-07	2.064E-07	1.104E-07	7.498E-08	6.254E-08	3.964E-08	2.690E-08	1.998E-08
SW	45	1.619E-07	8.300E-08	5.187E-08	3.560E-08	2.635E-08	1.700E-08	1.199E-08	9.073E-09
WSW	51	3.325E-07	1.697E-07	8.664E-08	5.440E-08	4.181E-08	2.907E-08	2.110E-08	1.634E-08
W	39	2.520E-07	1.287E-07	7.762E-08	4.506E-08	3.464E-08	2.351E-08	1.594E-08	1.258E-08
WNW	75	2.205E-07	1.115E-07	8.845E-08	5.676E-08	4.820E-08	3.342E-08	2.316E-08	1.840E-08
NW	97	2.608E-07	1.318E-07	6.791E-08	4.689E-08	3.639E-08	2.563E-08	1.983E-08	1.612E-08
NNW	61	1.835E-07	9.260E-08	4.754E-08	3.283E-08	2.556E-08	1.824E-08	1.432E-08	1.177E-08
AVERAGE	2197	4.481E-07	2.300E-07	1.244E-07	8.139E-08	6.210E-08	4.273E-08	3.145E-08	2.522E-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	102	1.554E-08	1.340E-08	1.176E-08	1.046E-08	9.409E-09	6.202E-09	4.569E-09	2.936E-09
NNE	171	2.415E-08	2.083E-08	1.828E-08	1.625E-08	1.461E-08	9.566E-09	6.995E-09	4.428E-09
NE	189	2.616E-08	2.257E-08	1.983E-08	1.765E-08	1.588E-08	1.046E-08	7.691E-09	4.923E-09
ENE	209	2.916E-08	2.515E-08	2.207E-08	1.963E-08	1.764E-08	1.157E-08	8.471E-09	5.382E-09
E	420	5.039E-08	4.345E-08	3.812E-08	3.390E-08	3.047E-08	1.998E-08	1.463E-08	9.295E-09
ESE	371	4.473E-08	3.838E-08	3.352E-08	2.968E-08	2.658E-08	1.721E-08	1.250E-08	7.836E-09
SE	152	2.478E-08	2.128E-08	1.859E-08	1.646E-08	1.474E-08	9.529E-09	6.903E-09	4.308E-09
SSE	66	1.568E-08	1.312E-08	1.122E-08	9.756E-09	8.602E-09	5.306E-09	3.740E-09	2.326E-09
S	79	1.945E-08	1.594E-08	1.341E-08	1.151E-08	1.004E-08	5.995E-09	4.135E-09	2.420E-09
SSW	70	1.565E-08	1.273E-08	1.065E-08	9.087E-09	7.890E-09	4.633E-09	3.157E-09	1.814E-09
SW	45	7.181E-09	5.878E-09	4.937E-09	4.227E-09	3.678E-09	2.166E-09	1.473E-09	8.411E-10
WSW	51	1.319E-08	1.098E-08	9.360E-09	8.113E-09	7.137E-09	4.375E-09	3.069E-09	1.840E-09
W	39	1.028E-08	8.632E-09	7.403E-09	6.451E-09	5.697E-09	3.863E-09	2.678E-09	1.579E-09
WNW	75	1.511E-08	1.273E-08	1.095E-08	9.560E-09	8.455E-09	4.876E-09	3.800E-09	2.267E-09
NW	97	1.351E-08	1.158E-08	1.010E-08	8.936E-09	7.994E-09	5.982E-09	4.276E-09	2.784E-09
NNW	61	9.953E-09	8.590E-09	7.534E-09	6.692E-09	6.006E-09	3.908E-09	2.939E-09	2.237E-09
AVERAGE	2197	2.093E-08	1.783E-08	1.548E-08	1.365E-08	1.218E-08	7.851E-09	5.689E-09	3.576E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	102	2.143E-09	1.677E-09	1.374E-09	1.162E-09	1.002E-09	1.112E-09	9.829E-10
NNE	171	3.195E-09	2.477E-09	2.015E-09	1.694E-09	1.452E-09	1.270E-09	1.125E-09
NE	189	3.580E-09	2.793E-09	2.284E-09	1.928E-09	1.658E-09	1.456E-09	1.294E-09
ENE	209	3.893E-09	3.083E-09	2.661E-09	2.234E-09	1.911E-09	1.670E-09	1.478E-09
E	420	6.723E-09	5.225E-09	4.785E-09	4.012E-09	3.430E-09	2.996E-09	2.652E-09
ESE	371	5.625E-09	4.647E-09	3.763E-09	3.151E-09	2.690E-09	2.347E-09	2.074E-09
SE	152	3.081E-09	2.673E-09	2.154E-09	1.796E-09	1.529E-09	1.330E-09	1.172E-09
SSE	66	1.628E-09	1.237E-09	9.924E-10	8.249E-10	6.999E-10	6.078E-10	5.348E-10
S	79	1.668E-09	1.254E-09	9.978E-10	8.235E-10	6.943E-10	5.992E-10	5.244E-10
SSW	70	1.237E-09	9.229E-10	7.317E-10	6.020E-10	5.062E-10	4.360E-10	3.809E-10
SW	45	5.701E-10	4.228E-10	3.342E-10	2.741E-10	2.308E-10	1.981E-10	1.726E-10
WSW	51	1.286E-09	9.840E-10	8.355E-10	6.929E-10	5.867E-10	5.176E-10	4.547E-10
W	39	1.091E-09	8.212E-10	6.538E-10	5.397E-10	4.627E-10	3.993E-10	3.493E-10
WNW	75	1.576E-09	1.213E-09	9.947E-10	8.284E-10	6.974E-10	6.015E-10	5.260E-10
NW	97	1.965E-09	1.527E-09	1.237E-09	1.095E-09	9.276E-10	8.031E-10	7.051E-10
NNW	61	1.555E-09	1.176E-09	9.398E-10	7.783E-10	6.580E-10	5.692E-10	4.992E-10
AVERAGE	2197	2.551E-09	2.008E-09	1.672E-09	1.402E-09	1.196E-09	1.057E-09	9.329E-10

Gamma χ/Q Factors for Main Stack

BECo 1995 General X/Q's - Elevated
STACK RLLEASE: 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	578	4.753E-07	2.448E-07	1.219E-07	7.995E-08	6.102E-08	4.226E-08	3.266E-08	2.672E-08
NNE	1072	6.748E-07	3.464E-07	1.734E-07	1.153E-07	8.870E-08	6.202E-08	4.803E-08	3.921E-08
NE	757	5.430E-07	2.765E-07	1.384E-07	9.212E-08	7.046E-08	4.882E-08	3.766E-08	3.074E-08
ENE	601	4.668E-07	2.415E-07	1.187E-07	7.692E-08	5.873E-08	4.065E-08	3.136E-08	2.562E-08
E	912	5.823E-07	3.025E-07	1.476E-07	9.501E-08	7.266E-08	5.039E-08	3.887E-08	3.171E-08
ESE	751	5.341E-07	2.791E-07	1.352E-07	8.949E-08	6.814E-08	4.690E-08	3.598E-08	2.925E-08
SE	580	6.494E-07	3.349E-07	1.993E-07	1.171E-07	7.783E-08	5.411E-08	3.208E-08	2.611E-08
SSE	488	7.435E-07	3.942E-07	2.100E-07	9.825E-08	7.705E-08	5.118E-08	3.769E-08	2.952E-08
S	408	5.363E-07	2.869E-07	1.476E-07	1.054E-07	7.799E-08	5.410E-08	3.978E-08	3.041E-08
SSW	399	6.116E-07	3.290E-07	1.507E-07	9.806E-08	8.494E-08	5.699E-08	3.936E-08	2.961E-08
SW	333	4.936E-07	2.601E-07	1.362E-07	8.484E-08	6.324E-08	4.177E-08	3.002E-08	2.311E-08
WSW	302	6.252E-07	3.344E-07	1.416E-07	7.889E-08	5.932E-08	4.083E-08	2.963E-08	2.302E-08
W	303	5.523E-07	2.921E-07	1.523E-07	8.103E-08	6.160E-08	4.138E-08	2.797E-08	2.207E-08
WNW	360	3.762E-07	1.970E-07	1.374E-07	8.067E-08	6.731E-08	4.592E-08	3.169E-08	2.525E-08
NW	368	3.598E-07	1.860E-07	9.096E-08	5.943E-08	4.584E-08	3.207E-08	2.476E-08	2.013E-08
NNW	291	3.100E-07	1.580E-07	7.891E-08	5.252E-08	4.031E-08	2.820E-08	2.197E-08	1.806E-08
AVERAGE	8503	5.334E-07	2.790E-07	1.425E-07	8.781E-08	6.720E-08	4.610E-08	3.372E-08	2.691E-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	578	2.255E-08	1.947E-08	1.710E-08	1.522E-08	1.369E-08	9.000E-09	6.597E-09	4.191E-09
NNE	1072	3.299E-08	2.830E-08	2.485E-08	2.205E-08	1.977E-08	1.284E-08	9.332E-09	5.849E-09
NE	757	2.592E-08	2.237E-08	1.966E-08	1.751E-08	1.576E-08	1.041E-08	7.680E-09	4.937E-09
ENE	601	2.260E-08	1.863E-08	1.636E-08	1.456E-08	1.310E-08	8.623E-09	6.338E-09	4.049E-09
E	912	2.668E-08	2.298E-08	2.014E-08	1.789E-08	1.606E-08	1.049E-08	7.667E-09	4.853E-09
ESE	751	2.455E-08	2.110E-08	1.845E-08	1.637E-08	1.468E-08	9.557E-09	6.973E-09	4.408E-09
SE	580	2.191E-08	1.882E-08	1.645E-08	1.458E-08	1.306E-08	8.474E-09	6.160E-09	3.870E-09
SSE	488	2.405E-08	2.017E-08	1.729E-08	1.506E-08	1.330E-08	8.256E-09	5.848E-09	3.669E-09
S	408	2.419E-08	1.992E-08	1.683E-08	1.449E-08	1.268E-08	7.655E-09	5.335E-09	3.184E-09
SSW	399	2.347E-08	1.928E-08	1.626E-08	1.397E-08	1.221E-08	7.329E-09	5.093E-09	3.030E-09
SW	333	1.857E-08	1.540E-08	1.308E-08	1.131E-08	9.925E-09	6.025E-09	4.201E-09	2.498E-09
WSW	302	1.865E-08	1.558E-08	1.332E-08	1.158E-08	1.021E-08	6.322E-09	4.473E-09	2.722E-09
W	303	1.808E-08	1.523E-08	1.311E-08	1.146E-08	1.016E-08	7.294E-09	5.145E-09	3.122E-09
WNW	360	2.083E-08	1.764E-08	1.524E-08	1.337E-08	1.188E-08	7.021E-09	5.584E-09	3.431E-09
NW	368	1.688E-08	1.448E-08	1.265E-08	1.121E-08	1.004E-08	7.456E-09	5.340E-09	3.474E-09
NNW	291	1.530E-08	1.326E-08	1.159E-08	1.044E-08	9.419E-09	6.257E-09	4.823E-09	4.097E-09
AVERAGE	8503	2.226E-08	1.892E-08	1.640E-08	1.444E-08	1.287E-08	8.314E-09	6.037E-09	3.836E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	578	3.029E-09	2.352E-09	1.915E-09	1.611E-09	1.381E-09	1.430E-09	1.262E-09
NNE	1072	4.190E-09	3.252E-09	2.619E-09	2.195E-09	1.875E-09	1.637E-09	1.447E-09
NE	757	3.600E-09	2.814E-09	2.304E-09	1.947E-09	1.676E-09	1.472E-09	1.310E-09
ENE	601	2.940E-09	2.336E-09	2.024E-09	1.702E-09	1.460E-09	1.278E-09	1.133E-09
E	912	3.503E-09	2.718E-09	2.468E-09	2.069E-09	1.768E-09	1.543E-09	1.365E-09
ESE	751	3.181E-09	2.642E-09	2.146E-09	1.801E-09	1.542E-09	1.347E-09	1.193E-09
SE	580	2.780E-09	2.425E-09	1.959E-09	1.637E-09	1.396E-09	1.216E-09	1.074E-09
SSE	488	2.580E-09	1.967E-09	1.582E-09	1.318E-09	1.120E-09	9.739E-10	8.580E-10
S	408	2.221E-09	1.684E-09	1.350E-09	1.122E-09	9.510E-10	8.248E-10	7.252E-10
SSW	399	2.110E-09	1.599E-09	1.282E-09	1.065E-09	9.028E-10	7.834E-10	6.891E-10
SW	333	1.738E-09	1.315E-09	1.054E-09	8.742E-10	7.475E-10	6.478E-10	5.691E-10
WSW	302	1.923E-09	1.484E-09	1.275E-09	1.063E-09	9.049E-10	8.049E-10	7.099E-10
W	303	2.202E-09	1.683E-09	1.358E-09	1.133E-09	1.022E-09	8.894E-10	7.840E-10
WNW	360	2.435E-09	1.940E-09	1.677E-09	1.459E-09	1.240E-09	1.078E-09	9.498E-10
NW	368	2.459E-09	1.914E-09	1.554E-09	1.388E-09	1.178E-09	1.022E-09	8.996E-10
NNW	291	2.905E-09	2.229E-09	1.802E-09	1.507E-09	1.286E-09	1.121E-09	9.907E-10
AVERAGE	8503	2.737E-09	2.146E-09	1.773E-09	1.493E-09	1.278E-09	1.129E-09	9.974E-10

Table B-8

Deposition D/Q Factors for Main Stack

BECo 1st Quarter 1995 General X/Q's - 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	175	2.847E-12	9.533E-11	6.809E-11	7.036E-11	1.141E-10	2.016E-10	2.328E-10	2.316E-10
NNE	187	2.795E-12	8.305E-11	6.758E-11	8.510E-11	1.289E-10	2.149E-10	2.479E-10	2.483E-10
NE	163	2.800E-12	9.573E-11	1.004E-10	9.771E-11	1.281E-10	1.931E-10	2.130E-10	2.078E-10
ENE	187	6.261E-12	2.246E-10	2.101E-10	1.720E-10	1.875E-10	2.421E-10	2.562E-10	2.454E-10
E	243	1.483E-11	4.037E-10	2.385E-10	1.954E-10	2.297E-10	2.956E-10	3.032E-10	2.845E-10
ESE	162	1.269E-11	3.703E-10	2.735E-10	2.182E-10	2.134E-10	2.351E-10	2.346E-10	2.187E-10
SE	180	9.308E-12	2.638E-10	2.262E-10	2.180E-10	2.591E-10	3.561E-10	2.803E-10	2.604E-10
SSE	167	3.086E-11	8.091E-10	5.705E-10	9.514E-10	1.046E-09	8.315E-10	6.461E-10	5.124E-10
S	148	4.724E-11	7.580E-10	1.232E-09	2.087E-09	1.674E-09	1.305E-09	9.252E-10	6.627E-10
SSW	102	4.316E-11	6.249E-10	8.695E-10	1.124E-09	1.682E-09	1.256E-09	7.859E-10	5.477E-10
SW	74	4.529E-11	4.236E-10	5.771E-10	7.840E-10	6.984E-10	5.497E-10	4.060E-10	3.119E-10
WSW	45	3.770E-11	2.803E-10	2.803E-10	3.323E-10	4.153E-10	3.392E-10	2.408E-10	1.798E-10
W	60	3.587E-11	4.072E-10	3.234E-10	3.148E-10	3.395E-10	3.072E-10	2.275E-10	1.842E-10
WNW	64	3.196E-12	4.283E-11	1.376E-10	2.303E-10	3.177E-10	3.317E-10	2.633E-10	2.207E-10
NW	68	3.249E-12	5.918E-11	3.843E-11	3.668E-11	5.936E-11	1.075E-10	1.258E-10	1.253E-10
NNW	68	1.028E-12	4.023E-11	1.467E-11	1.660E-11	3.687E-11	7.912E-11	9.766E-11	1.009E-10
AVERAGE	2093	1.869E-11	3.114E-10	3.268E-10	4.333E-10	4.706E-10	4.278E-10	3.429E-10	2.839E-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	175	2.162E-10	1.982E-10	1.808E-10	1.651E-10	1.507E-10	9.998E-11	7.136E-11	4.223E-11
NNE	187	2.332E-10	2.154E-10	1.978E-10	1.819E-10	1.671E-10	1.131E-10	8.182E-11	4.937E-11
NE	163	1.925E-10	1.757E-10	1.600E-10	1.461E-10	1.336E-10	8.959E-11	6.485E-11	3.939E-11
ENE	187	2.251E-10	2.042E-10	1.850E-10	1.682E-10	1.532E-10	1.016E-10	7.311E-11	4.409E-11
E	243	2.575E-10	2.308E-10	2.067E-10	1.861E-10	1.679E-10	1.080E-10	7.614E-11	4.462E-11
ESE	162	1.976E-10	1.775E-10	1.597E-10	1.444E-10	1.309E-10	8.559E-11	6.110E-11	3.649E-11
SE	180	2.331E-10	2.074E-10	1.849E-10	1.657E-10	1.492E-10	9.501E-11	6.636E-11	3.824E-11
SSE	167	4.160E-10	3.458E-10	2.930E-10	2.517E-10	2.190E-10	1.261E-10	8.330E-11	4.584E-11
S	148	4.982E-10	3.910E-10	3.169E-10	2.625E-10	2.218E-10	1.175E-10	7.446E-11	3.855E-11
SSW	102	4.094E-10	3.194E-10	2.574E-10	2.119E-10	1.780E-10	9.187E-11	5.702E-11	2.854E-11
SW	74	2.475E-10	2.022E-10	1.690E-10	1.436E-10	1.238E-10	6.951E-11	4.524E-11	2.387E-11
WSW	45	1.398E-10	1.124E-10	9.278E-11	7.813E-11	6.690E-11	3.700E-11	2.392E-11	1.261E-11
W	60	1.510E-10	1.263E-10	1.075E-10	9.272E-11	8.091E-11	5.684E-11	3.695E-11	1.982E-11
WNW	64	1.847E-10	1.566E-10	1.345E-10	1.170E-10	1.027E-10	5.752E-11	4.278E-11	2.325E-11
NW	68	1.166E-10	1.068E-10	9.723E-11	8.870E-11	8.086E-11	6.535E-11	4.407E-11	2.585E-11
NNW	68	9.648E-11	9.020E-11	8.359E-11	7.744E-11	7.155E-11	4.919E-11	3.857E-11	3.306E-11
AVERAGE	2093	2.384E-10	2.037E-10	1.767E-10	1.551E-10	1.374E-10	8.523E-11	5.882E-11	3.411E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	175	2.857E-11	2.086E-11	1.604E-11	1.279E-11	1.041E-11	1.010E-11	8.420E-12
NNE	187	3.372E-11	2.474E-11	1.904E-11	1.518E-11	1.235E-11	1.028E-11	8.679E-12
NE	163	2.716E-11	2.009E-11	1.556E-11	1.247E-11	1.020E-11	8.529E-12	7.234E-12
ENE	187	3.031E-11	2.290E-11	1.892E-11	1.507E-11	1.226E-11	1.022E-11	8.639E-12
E	243	3.020E-11	2.215E-11	1.857E-11	1.476E-11	1.200E-11	1.002E-11	8.491E-12
ESE	162	2.486E-11	1.937E-11	1.477E-11	1.169E-11	9.461E-12	7.851E-12	6.619E-12
SE	180	2.549E-11	2.046E-11	1.545E-11	1.214E-11	9.764E-12	8.070E-12	6.778E-12
SSE	167	2.870E-11	1.985E-11	1.469E-11	1.139E-11	9.069E-12	7.448E-12	6.234E-12
S	148	2.421E-11	1.688E-11	1.260E-11	9.837E-12	7.891E-12	6.522E-12	5.490E-12
SSW	102	1.740E-11	1.183E-11	8.654E-12	6.649E-12	5.262E-12	4.303E-12	3.591E-12
SW	74	1.496E-11	1.032E-11	7.595E-12	5.848E-12	4.577E-12	3.732E-12	3.103E-12
WSW	45	8.042E-12	5.680E-12	4.288E-12	3.353E-12	2.690E-12	2.171E-12	1.822E-12
W	60	1.272E-11	9.003E-12	6.788E-12	5.338E-12	4.145E-12	3.104E-12	2.590E-12
WNW	64	1.492E-11	1.070E-11	8.031E-12	5.592E-12	4.261E-12	3.447E-12	2.840E-12
NW	68	1.657E-11	1.181E-11	8.846E-12	5.407E-12	4.218E-12	3.396E-12	2.782E-12
NNW	68	2.048E-11	1.395E-11	1.013E-11	7.672E-12	5.946E-12	4.741E-12	3.847E-12
AVERAGE	2093	2.239E-11	1.629E-11	1.250E-11	9.700E-12	7.781E-12	6.495E-12	5.448E-12

Table B-8

Deposition D/Q Factors for Main Stack

BECo 2nd Quarter 1995 General X/Q's - 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	1.337E-11	4.527E-10	2.386E-10	1.506E-10	1.632E-10	2.310E-10	2.689E-10	2.759E-10
NNE	299	2.161E-11	5.904E-10	2.952E-10	2.024E-10	2.197E-10	2.885E-10	3.131E-10	3.059E-10
NE	192	1.175E-11	3.576E-10	1.893E-10	1.247E-10	1.164E-10	1.318E-10	1.432E-10	1.440E-10
ENE	117	1.969E-11	6.532E-10	2.691E-10	1.398E-10	1.259E-10	1.301E-10	1.315E-10	1.272E-10
E	149	2.240E-11	6.827E-10	2.723E-10	1.490E-10	1.397E-10	1.485E-10	1.500E-10	1.433E-10
ESE	128	1.261E-11	3.834E-10	1.858E-10	1.270E-10	1.238E-10	1.395E-10	1.444E-10	1.392E-10
SE	144	7.872E-12	3.127E-10	2.537E-10	2.187E-10	2.163E-10	2.832E-10	2.110E-10	2.003E-10
SSE	135	4.711E-11	1.393E-09	8.002E-10	8.240E-10	9.381E-10	7.752E-10	6.108E-10	4.869E-10
S	88	5.456E-11	1.027E-09	6.700E-10	1.087E-09	9.019E-10	7.375E-10	5.319E-10	3.848E-10
SSW	82	7.617E-11	1.417E-09	7.910E-10	8.920E-10	1.242E-09	1.125E-09	7.297E-10	5.221E-10
SW	74	1.363E-10	1.289E-09	8.892E-10	8.776E-10	7.730E-10	5.822E-10	4.188E-10	3.169E-10
WSW	91	2.267E-10	2.759E-09	1.010E-09	5.898E-10	6.569E-10	5.889E-10	4.457E-10	3.497E-10
W	110	9.489E-11	1.562E-09	8.533E-10	6.324E-10	6.571E-10	5.870E-10	4.433E-10	3.684E-10
WNW	115	7.146E-11	1.089E-09	7.313E-10	5.150E-10	5.706E-10	5.345E-10	4.207E-10	3.525E-10
NW	125	3.147E-11	5.702E-10	2.408E-10	1.892E-10	2.291E-10	2.827E-10	2.801E-10	2.584E-10
NNW	99	5.917E-12	2.114E-10	9.384E-11	5.783E-11	6.767E-11	1.091E-10	1.393E-10	1.515E-10
AVERAGE	2127	5.337E-11	9.219E-10	4.865E-10	4.235E-10	4.463E-10	4.172E-10	3.364E-10	2.829E-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	2.638E-10	2.460E-10	2.265E-10	2.078E-10	1.892E-10	1.182E-10	7.897E-11	4.335E-11
NNE	299	2.843E-10	2.605E-10	2.377E-10	2.175E-10	1.989E-10	1.329E-10	9.590E-11	5.806E-11
NE	192	1.384E-10	1.312E-10	1.237E-10	1.165E-10	1.092E-10	7.866E-11	5.919E-11	3.759E-11
ENE	117	1.191E-10	1.102E-10	1.014E-10	9.332E-11	8.531E-11	5.534E-11	3.854E-11	2.265E-11
E	149	1.326E-10	1.216E-10	1.113E-10	1.022E-10	9.359E-11	6.319E-11	4.609E-11	2.848E-11
ESE	128	1.293E-10	1.190E-10	1.092E-10	1.005E-10	9.236E-11	6.303E-11	4.631E-11	2.889E-11
SE	144	1.827E-10	1.654E-10	1.499E-10	1.364E-10	1.244E-10	8.290E-11	5.994E-11	3.642E-11
SSE	135	3.963E-10	3.296E-10	2.793E-10	2.400E-10	2.088E-10	1.205E-10	7.991E-11	4.581E-11
S	88	2.921E-10	2.312E-10	1.887E-10	1.573E-10	1.336E-10	7.207E-11	4.640E-11	2.470E-11
SSW	82	3.969E-10	3.147E-10	2.575E-10	2.157E-10	1.837E-10	9.903E-11	6.294E-11	3.221E-11
SW	74	2.501E-10	2.038E-10	1.703E-10	1.450E-10	1.251E-10	7.100E-11	4.691E-11	2.560E-11
WSW	91	2.851E-10	2.394E-10	2.055E-10	1.792E-10	1.578E-10	9.736E-11	6.791E-11	3.860E-11
W	110	3.095E-10	2.646E-10	2.296E-10	2.018E-10	1.788E-10	1.716E-10	1.136E-10	5.785E-11
WNW	115	2.966E-10	2.528E-10	2.003E-10	1.752E-10	1.543E-10	9.677E-11	6.788E-11	3.895E-11
NW	125	2.314E-10	2.061E-10	1.838E-10	1.647E-10	1.478E-10	1.121E-10	7.312E-11	4.081E-11
NNW	99	1.498E-10	1.435E-10	1.350E-10	1.261E-10	1.163E-10	7.499E-11	5.391E-11	5.990E-11
AVERAGE	2127	2.411E-10	2.087E-10	1.819E-10	1.612E-10	1.437E-10	9.435E-11	6.484E-11	3.874E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	179	2.859E-11	2.071E-11	1.587E-11	1.264E-11	1.030E-11	1.134E-11	9.489E-12
NNE	299	4.001E-11	2.969E-11	2.315E-11	1.871E-11	1.543E-11	1.303E-11	1.116E-11
NE	192	2.673E-11	2.034E-11	1.613E-11	1.324E-11	1.107E-11	9.448E-12	8.163E-12
ENE	117	1.568E-11	1.218E-11	1.074E-11	8.757E-12	7.286E-12	6.195E-12	5.342E-12
E	149	1.993E-11	1.496E-11	1.342E-11	1.081E-11	8.894E-12	7.490E-12	6.399E-12
ESE	128	2.025E-11	1.689E-11	1.302E-11	1.039E-11	8.461E-12	7.049E-12	5.958E-12
SE	144	2.504E-11	2.305E-11	1.730E-11	1.347E-11	1.071E-11	8.732E-12	7.230E-12
SSE	135	2.899E-11	2.013E-11	1.487E-11	1.146E-11	9.049E-12	7.351E-12	6.080E-12
S	88	1.579E-11	1.115E-11	8.398E-12	6.603E-12	5.325E-12	4.417E-12	3.728E-12
SSW	82	1.962E-11	1.327E-11	9.672E-12	7.428E-12	5.890E-12	4.828E-12	4.044E-12
SW	74	1.662E-11	1.182E-11	8.905E-12	6.993E-12	5.626E-12	4.630E-12	3.879E-12
WSW	91	2.452E-11	1.648E-11	1.079E-11	8.445E-12	6.817E-12	5.545E-12	4.688E-12
W	110	3.363E-11	2.157E-11	1.508E-11	1.125E-11	7.568E-12	5.484E-12	4.584E-12
WNW	115	2.600E-11	1.966E-11	1.360E-11	9.061E-12	7.196E-12	6.019E-12	5.128E-12
NW	125	2.580E-11	1.871E-11	1.424E-11	8.287E-12	6.582E-12	5.394E-12	4.509E-12
NNW	99	3.487E-11	2.264E-11	1.604E-11	1.206E-11	9.363E-12	7.496E-12	6.113E-12
AVERAGE	2127	2.513E-11	1.833E-11	1.383E-11	1.060E-11	8.473E-12	7.153E-12	6.031E-12

Table B-8

Deposition D/Q Factors for Main Stack

BECo 3rd Quarter 1995 General X/Q's - 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	122	5.016E-12	1.966E-10	2.816E-10	2.158E-10	1.821E-10	1.728E-10	1.700E-10	1.593E-10
NNE	415	6.630E-12	2.349E-10	3.413E-10	3.417E-10	3.981E-10	5.273E-10	5.580E-10	5.335E-10
NE	213	1.456E-12	6.523E-11	1.140E-10	1.141E-10	1.376E-10	1.997E-10	2.236E-10	2.216E-10
ENE	88	5.419E-13	3.409E-11	6.313E-11	5.691E-11	5.669E-11	7.435E-11	8.843E-11	9.290E-11
E	100	9.702E-13	4.104E-11	4.358E-11	4.567E-11	5.656E-11	8.627E-11	1.009E-10	1.031E-10
ESE	90	5.700E-12	2.002E-10	1.085E-10	8.202E-11	8.727E-11	1.125E-10	1.242E-10	1.237E-10
SE	104	1.574E-11	6.518E-10	3.577E-10	1.870E-10	1.606E-10	2.164E-10	1.627E-10	1.625E-10
SSE	120	5.724E-11	1.765E-09	8.652E-10	6.450E-10	7.286E-10	6.052E-10	4.838E-10	3.907E-10
S	93	6.002E-11	1.152E-09	7.441E-10	1.372E-09	1.219E-09	1.232E-09	1.008E-09	7.545E-10
SSW	145	1.123E-10	1.530E-09	1.386E-09	1.701E-09	2.391E-09	1.779E-09	1.115E-09	7.777E-10
SW	140	1.053E-10	7.495E-10	1.182E-09	1.577E-09	1.429E-09	1.130E-09	8.247E-10	6.257E-10
WSW	115	1.768E-10	1.283E-09	9.190E-10	8.455E-10	1.059E-09	9.326E-10	6.871E-10	5.247E-10
W	94	3.953E-11	4.971E-10	7.564E-10	6.917E-10	6.848E-10	5.865E-10	4.272E-10	3.442E-10
WNW	106	1.354E-11	2.086E-10	3.616E-10	4.018E-10	5.133E-10	5.430E-10	4.539E-10	3.961E-10
NW	78	6.905E-12	1.309E-10	1.121E-10	1.140E-10	1.314E-10	1.646E-10	1.699E-10	1.604E-10
NNW	63	9.219E-13	3.977E-11	6.576E-11	5.267E-11	5.789E-11	8.707E-11	1.028E-10	1.051E-10
AVERAGE	2086	3.804E-11	5.487E-10	4.814E-10	5.277E-10	5.808E-10	5.281E-10	4.188E-10	3.422E-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	122	1.450E-10	1.313E-10	1.192E-10	1.087E-10	9.927E-11	6.638E-11	4.789E-11	2.906E-11
NNE	415	4.878E-10	4.412E-10	3.986E-10	3.616E-10	3.286E-10	2.160E-10	1.542E-10	9.173E-11
NE	213	2.079E-10	1.922E-10	1.770E-10	1.633E-10	1.505E-10	1.038E-10	7.656E-11	4.786E-11
ENE	88	9.057E-11	8.648E-11	8.167E-11	7.694E-11	7.199E-11	5.072E-11	3.717E-11	2.270E-11
E	100	9.865E-11	9.271E-11	8.652E-11	8.074E-11	7.514E-11	5.324E-11	3.992E-11	2.547E-11
ESE	90	1.168E-10	1.088E-10	1.008E-10	9.352E-11	8.647E-11	5.958E-11	4.359E-11	2.674E-11
SE	104	1.530E-10	1.418E-10	1.307E-10	1.205E-10	1.108E-10	7.491E-11	5.406E-11	3.243E-11
SSE	120	3.213E-10	2.695E-10	2.299E-10	1.988E-10	1.738E-10	1.024E-10	6.913E-11	4.108E-11
S	93	5.742E-10	4.547E-10	3.708E-10	3.091E-10	2.623E-10	1.395E-10	8.775E-11	4.418E-11
SSW	145	5.807E-10	4.533E-10	3.656E-10	3.018E-10	2.540E-10	1.321E-10	8.238E-11	4.164E-11
SW	140	4.912E-10	3.972E-10	3.289E-10	2.772E-10	2.372E-10	1.293E-10	8.262E-11	4.281E-11
WSW	115	4.139E-10	3.360E-10	2.792E-10	2.360E-10	2.024E-10	1.113E-10	7.135E-11	3.700E-11
W	94	2.816E-10	2.351E-10	1.998E-10	1.722E-10	1.503E-10	1.027E-10	6.602E-11	3.455E-11
WNW	106	3.424E-10	2.985E-10	2.407E-10	2.136E-10	1.908E-10	1.268E-10	8.912E-11	4.969E-11
NW	78	1.456E-10	1.311E-10	1.182E-10	1.070E-10	9.703E-11	7.814E-11	5.285E-11	3.089E-11
NNW	63	1.002E-10	9.366E-11	8.685E-11	8.054E-11	7.446E-11	5.108E-11	3.962E-11	3.180E-11
AVERAGE	2086	2.844E-10	2.415E-10	2.071E-10	1.813E-10	1.603E-10	9.988E-11	6.839E-11	3.935E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	122	1.992E-11	1.467E-11	1.133E-11	9.077E-12	7.419E-12	6.744E-12	5.630E-12
NNE	415	6.246E-11	4.591E-11	3.553E-11	2.851E-11	2.337E-11	1.962E-11	1.672E-11
NE	213	3.369E-11	2.533E-11	1.989E-11	1.615E-11	1.336E-11	1.130E-11	9.689E-12
ENE	88	1.564E-11	1.205E-11	1.075E-11	8.616E-12	7.053E-12	5.910E-12	5.023E-12
E	100	1.807E-11	1.359E-11	1.379E-11	1.094E-11	8.847E-12	7.323E-12	6.149E-12
ESE	90	1.845E-11	1.567E-11	1.198E-11	9.498E-12	7.684E-12	6.364E-12	5.346E-12
SE	104	2.189E-11	1.826E-11	1.353E-11	1.045E-11	8.265E-12	6.725E-12	5.567E-12
SSE	120	2.660E-11	1.884E-11	1.417E-11	1.108E-11	8.871E-12	7.286E-12	6.085E-12
S	93	2.664E-11	1.780E-11	1.275E-11	9.583E-12	7.409E-12	5.915E-12	4.828E-12
SSW	145	2.575E-11	1.778E-11	1.321E-11	1.030E-11	8.269E-12	6.846E-12	5.780E-12
SW	140	2.675E-11	1.853E-11	1.373E-11	1.066E-11	8.436E-12	6.926E-12	5.793E-12
WSW	115	2.314E-11	1.605E-11	1.175E-11	9.046E-12	7.161E-12	5.621E-12	4.680E-12
W	94	2.169E-11	1.502E-11	1.109E-11	8.551E-12	6.263E-12	4.693E-12	3.890E-12
WNW	106	3.190E-11	2.273E-11	1.619E-11	9.942E-12	7.245E-12	5.734E-12	4.639E-12
NW	78	1.971E-11	1.384E-11	1.024E-11	6.197E-12	4.848E-12	3.913E-12	3.217E-12
NNW	63	1.933E-11	1.297E-11	9.317E-12	6.997E-12	5.390E-12	4.280E-12	3.462E-12
AVERAGE	2086	2.573E-11	1.869E-11	1.433E-11	1.097E-11	8.743E-12	7.200E-12	6.031E-12

Table B-8

Deposition D/Q Factors for Main Stack

BECo 4th Quarter 1995 General X/Q's - 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	102	3.869E-13	1.642E-11	4.780E-11	6.227E-11	8.063E-11	1.117E-10	1.193E-10	1.157E-10
NNE	171	9.130E-16	3.699E-12	3.876E-11	6.903E-11	1.099E-10	1.826E-10	2.076E-10	2.064E-10
NE	189	4.594E-13	3.601E-11	7.537E-11	9.697E-11	1.243E-10	1.809E-10	2.024E-10	2.014E-10
ENE	209	2.177E-15	1.298E-11	8.846E-11	1.124E-10	1.456E-10	2.180E-10	2.446E-10	2.424E-10
E	420	6.689E-12	2.325E-10	3.056E-10	2.682E-10	2.954E-10	4.011E-10	4.442E-10	4.381E-10
ESE	371	1.655E-11	5.332E-10	3.972E-10	3.334E-10	3.787E-10	4.762E-10	4.842E-10	4.519E-10
SE	152	5.064E-12	2.249E-10	2.364E-10	2.043E-10	2.347E-10	3.337E-10	2.700E-10	2.550E-10
SSE	66	1.063E-11	3.314E-10	2.667E-10	4.803E-10	5.407E-10	4.379E-10	3.367E-10	2.658E-10
S	79	1.494E-11	3.007E-10	7.916E-10	1.298E-09	1.029E-09	8.055E-10	5.850E-10	4.216E-10
SSW	70	1.544E-11	3.111E-10	9.324E-10	1.042E-09	1.200E-09	7.584E-10	4.697E-10	3.244E-10
SW	45	7.805E-14	2.225E-11	3.296E-10	4.625E-10	3.843E-10	2.680E-10	1.846E-10	1.351E-10
WSW	51	6.343E-12	7.420E-11	2.556E-10	3.402E-10	4.593E-10	4.066E-10	2.969E-10	2.252E-10
W	39	3.311E-12	5.757E-11	1.785E-10	2.515E-10	2.876E-10	2.682E-10	2.008E-10	1.632E-10
WNW	75	3.829E-19	5.534E-13	9.674E-11	2.195E-10	3.187E-10	3.399E-10	2.709E-10	2.272E-10
NW	97	5.023E-15	5.772E-12	2.497E-11	5.452E-11	9.336E-11	1.397E-10	1.437E-10	1.337E-10
NNW	61	4.898E-21	1.444E-13	5.863E-12	1.951E-11	4.149E-11	7.912E-11	9.148E-11	9.096E-11
AVERAGE	2197	4.994E-12	1.352E-10	2.545E-10	3.322E-10	3.578E-10	3.380E-10	2.846E-10	2.436E-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	102	1.074E-10	9.877E-11	9.075E-11	8.368E-11	7.723E-11	5.365E-11	3.978E-11	2.492E-11
NNE	171	1.933E-10	1.783E-10	1.636E-10	1.505E-10	1.384E-10	9.415E-11	6.852E-11	4.174E-11
NE	189	1.895E-10	1.757E-10	1.623E-10	1.500E-10	1.386E-10	9.577E-11	7.056E-11	4.394E-11
ENE	209	2.271E-10	2.096E-10	1.927E-10	1.774E-10	1.634E-10	1.121E-10	8.239E-11	5.111E-11
E	420	4.091E-10	3.770E-10	3.460E-10	3.184E-10	2.929E-10	1.999E-10	1.462E-10	8.999E-11
ESE	371	4.079E-10	3.660E-10	3.291E-10	2.975E-10	2.698E-10	1.774E-10	1.273E-10	7.667E-11
SE	152	2.309E-10	2.073E-10	1.861E-10	1.679E-10	1.519E-10	9.828E-11	6.936E-11	4.055E-11
SSE	66	2.134E-10	1.757E-10	1.475E-10	1.257E-10	1.085E-10	6.082E-11	3.936E-11	2.161E-11
S	79	3.158E-10	2.469E-10	1.994E-10	1.647E-10	1.387E-10	7.203E-11	4.444E-11	2.186E-11
SSW	70	2.396E-10	1.856E-10	1.490E-10	1.226E-10	1.031E-10	5.395E-11	3.388E-11	1.735E-11
SW	45	1.035E-10	8.218E-11	6.718E-11	5.611E-11	4.775E-11	2.594E-11	1.666E-11	8.749E-12
WSW	51	1.770E-10	1.435E-10	1.192E-10	1.008E-10	8.655E-11	4.807E-11	3.097E-11	1.605E-11
W	39	1.335E-10	1.111E-10	9.395E-11	8.048E-11	6.974E-11	4.368E-11	2.695E-11	1.322E-11
WNW	75	1.899E-10	1.607E-10	1.379E-10	1.197E-10	1.049E-10	5.814E-11	4.281E-11	2.293E-11
NW	97	1.202E-10	1.074E-10	9.631E-11	8.685E-11	7.869E-11	6.920E-11	4.782E-11	2.962E-11
NNW	61	8.501E-11	7.781E-11	7.076E-11	6.442E-11	5.867E-11	3.849E-11	2.890E-11	2.254E-11
AVERAGE	2197	2.089E-10	1.815E-10	1.595E-10	1.417E-10	1.268E-10	8.135E-11	5.724E-11	3.393E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	102	1.739E-11	1.288E-11	9.933E-12	7.923E-12	6.440E-12	6.235E-12	5.068E-12
NNE	171	2.872E-11	2.117E-11	1.633E-11	1.304E-11	1.062E-11	8.850E-12	7.477E-12
NE	189	3.077E-11	2.301E-11	1.797E-11	1.451E-11	1.195E-11	1.005E-11	8.563E-12
ENE	209	3.567E-11	2.738E-11	2.306E-11	1.833E-11	1.485E-11	1.232E-11	1.035E-11
E	420	6.247E-11	4.644E-11	4.223E-11	3.353E-11	2.719E-11	2.259E-11	1.905E-11
ESE	371	5.266E-11	4.228E-11	3.232E-11	2.563E-11	2.076E-11	1.723E-11	1.452E-11
SE	152	2.719E-11	2.296E-11	1.713E-11	1.329E-11	1.055E-11	8.596E-12	7.119E-12
SSE	66	1.348E-11	9.293E-12	6.845E-12	5.273E-12	4.169E-12	3.393E-12	2.812E-12
S	79	1.326E-11	9.025E-12	6.627E-12	5.114E-12	4.064E-12	3.334E-12	2.788E-12
SSW	70	1.092E-11	7.651E-12	5.743E-12	4.509E-12	3.637E-12	3.019E-12	2.553E-12
SW	45	5.591E-12	3.955E-12	2.989E-12	2.359E-12	1.905E-12	1.587E-12	1.345E-12
WSW	51	9.963E-12	6.855E-12	4.811E-12	3.493E-12	2.621E-12	1.859E-12	1.511E-12
W	39	7.959E-12	5.358E-12	3.883E-12	2.954E-12	2.159E-12	1.634E-12	1.350E-12
WNW	75	1.457E-11	1.029E-11	7.569E-12	5.318E-12	4.080E-12	3.307E-12	2.731E-12
NW	97	1.883E-11	1.315E-11	9.607E-12	5.310E-12	4.145E-12	3.344E-12	2.753E-12
NNW	61	1.383E-11	9.366E-12	6.780E-12	5.124E-12	3.968E-12	3.163E-12	2.569E-12
AVERAGE	2197	2.271E-11	1.694E-11	1.336E-11	1.036E-11	8.319E-12	6.907E-12	5.785E-12

Table B-8

Deposition D/Q Factors for Main Stack

BECo 1995 General X/Q's - 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	578	5.377E-12	1.892E-10	1.579E-10	1.240E-10	1.344E-10	1.787E-10	1.971E-10	1.950E-10
NNE	1072	7.720E-12	2.267E-10	1.842E-10	1.732E-10	2.127E-10	3.016E-10	3.299E-10	3.218E-10
NE	757	4.106E-12	1.383E-10	1.195E-10	1.083E-10	1.265E-10	1.762E-10	1.954E-10	1.936E-10
ENE	601	6.599E-12	2.304E-10	1.574E-10	1.203E-10	1.292E-10	1.667E-10	1.808E-10	1.776E-10
E	912	1.122E-11	3.403E-10	2.165E-10	1.659E-10	1.817E-10	2.347E-10	2.517E-10	2.444E-10
ESE	751	1.195E-11	3.739E-10	2.430E-10	1.917E-10	2.027E-10	2.434E-10	2.494E-10	2.358E-10
SE	580	7.169E-12	2.686E-10	2.345E-10	1.930E-10	2.088E-10	2.857E-10	2.314E-10	2.199E-10
SSE	488	2.591E-11	7.550E-10	4.800E-10	7.226E-10	8.106E-10	6.602E-10	5.180E-10	4.124E-10
S	408	3.956E-11	7.217E-10	8.580E-10	1.457E-09	1.202E-09	1.016E-09	7.592E-10	5.534E-10
SSW	399	5.830E-11	9.184E-10	9.927E-10	1.186E-09	1.621E-09	1.223E-09	7.710E-10	5.400E-10
SW	333	6.683E-11	5.801E-10	6.970E-10	9.190E-10	8.151E-10	6.273E-10	4.547E-10	3.444E-10
WSW	302	9.338E-11	9.212E-10	5.763E-10	5.246E-10	6.452E-10	5.646E-10	4.160E-10	3.186E-10
W	303	4.312E-11	6.279E-10	4.962E-10	4.658E-10	4.902E-10	4.356E-10	3.236E-10	2.641E-10
WNW	360	2.198E-11	3.343E-10	3.096E-10	3.219E-10	4.085E-10	4.159E-10	3.334E-10	2.829E-10
NW	368	1.037E-11	1.908E-10	1.036E-10	9.842E-11	1.283E-10	1.737E-10	1.798E-10	1.694E-10
NNW	291	1.959E-12	7.258E-11	4.473E-11	3.652E-11	5.092E-11	8.856E-11	1.077E-10	1.120E-10
AVERAGE	8503	2.597E-11	4.306E-10	3.670E-10	4.256E-10	4.605E-10	4.245E-10	3.437E-10	2.866E-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	578	1.825E-10	1.681E-10	1.538E-10	1.409E-10	1.287E-10	8.432E-11	5.937E-11	3.481E-11
NNE	1072	2.982E-10	2.725E-10	2.482E-10	2.268E-10	2.073E-10	1.384E-10	9.965E-11	5.997E-11
NE	757	1.820E-10	1.686E-10	1.557E-10	1.439E-10	1.329E-10	9.194E-11	6.778E-11	4.220E-11
ENE	601	1.661E-10	1.532E-10	1.407E-10	1.295E-10	1.189E-10	8.028E-11	5.804E-11	3.529E-11
E	912	2.265E-10	2.074E-10	1.894E-10	1.734E-10	1.588E-10	1.071E-10	7.784E-11	4.761E-11
ESE	751	2.150E-10	1.947E-10	1.764E-10	1.605E-10	1.463E-10	9.728E-11	7.021E-11	4.258E-11
SE	580	2.003E-10	1.808E-10	1.631E-10	1.479E-10	1.343E-10	8.789E-11	6.251E-11	3.696E-11
SSE	488	3.355E-10	2.791E-10	2.365E-10	2.033E-10	1.768E-10	1.020E-10	6.762E-11	3.841E-11
S	408	4.182E-10	3.294E-10	2.677E-10	2.224E-10	1.882E-10	9.980E-11	6.295E-11	3.216E-11
SSW	399	4.044E-10	3.165E-10	2.560E-10	2.118E-10	1.787E-10	9.373E-11	5.874E-11	2.978E-11
SW	333	2.707E-10	2.194E-10	1.822E-10	1.541E-10	1.323E-10	7.330E-11	4.744E-11	2.504E-11
WSW	302	2.530E-10	2.071E-10	1.735E-10	1.480E-10	1.280E-10	7.319E-11	4.838E-11	2.598E-11
W	303	2.182E-10	1.836E-10	1.572E-10	1.363E-10	1.195E-10	9.339E-11	6.067E-11	3.124E-11
WNW	360	2.395E-10	2.052E-10	1.779E-10	1.559E-10	1.378E-10	7.946E-11	6.044E-11	3.358E-11
NW	368	1.534E-10	1.378E-10	1.238E-10	1.117E-10	1.010E-10	8.117E-11	5.446E-11	3.180E-11
NNW	291	1.078E-10	1.012E-10	9.393E-11	8.700E-11	8.014E-11	5.334E-11	4.017E-11	3.675E-11
AVERAGE	8503	2.419E-10	2.078E-10	1.810E-10	1.596E-10	1.419E-10	8.979E-11	6.227E-11	3.651E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES) 20.00	25.00	30.00	34.95	40.00	45.00	50.00
N	578	2.356E-11	1.724E-11	1.326E-11	1.058E-11	8.623E-12	8.588E-12	7.137E-12
NNE	1072	4.105E-11	3.025E-11	2.341E-11	1.878E-11	1.538E-11	1.289E-11	1.096E-11
NE	757	2.959E-11	2.219E-11	1.739E-11	1.409E-11	1.164E-11	9.832E-12	8.412E-12
ENE	601	2.444E-11	1.872E-11	1.594E-11	1.275E-11	1.041E-11	8.696E-12	7.370E-12
E	912	3.299E-11	2.453E-11	2.222E-11	1.769E-11	1.437E-11	1.197E-11	1.012E-11
ESE	751	2.932E-11	2.376E-11	1.818E-11	1.443E-11	1.169E-11	9.709E-12	8.184E-12
SE	580	2.493E-11	2.122E-11	1.587E-11	1.236E-11	9.836E-12	8.042E-12	6.682E-12
SSE	488	2.433E-11	1.695E-11	1.258E-11	9.751E-12	7.749E-12	6.336E-12	5.275E-12
S	408	1.987E-11	1.364E-11	1.004E-11	7.746E-12	6.142E-12	5.023E-12	4.189E-12
SSW	399	1.833E-11	1.257E-11	9.274E-12	7.187E-12	5.737E-12	4.727E-12	3.973E-12
SW	333	1.585E-11	1.106E-11	8.239E-12	6.413E-12	5.096E-12	4.186E-12	3.503E-12
WSW	302	1.636E-11	1.123E-11	7.880E-12	6.060E-12	4.801E-12	3.781E-12	3.160E-12
W	303	1.892E-11	1.268E-11	9.168E-12	6.989E-12	5.008E-12	3.709E-12	3.087E-12
WNW	360	2.177E-11	1.579E-11	1.131E-11	7.456E-12	5.680E-12	4.615E-12	3.826E-12
NW	368	2.023E-11	1.438E-11	1.074E-11	6.296E-12	4.945E-12	4.009E-12	3.313E-12
NNW	291	2.208E-11	1.470E-11	1.054E-11	7.946E-12	6.153E-12	4.909E-12	3.989E-12
AVERAGE	8503	2.398E-11	1.756E-11	1.350E-11	1.041E-11	8.329E-12	6.939E-12	5.824E-12