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The enclosed "Annual Dose Assessment to the General Public" from radioactive effluents for 1996 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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LJO/RLC/avf/dose-95

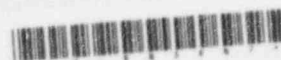
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PILGRIM NUCLEAR POWER STATION

ANNUAL DOSE ASSESSMENT TO THE GENERAL PUBLIC

January 01 through December 31, 1996



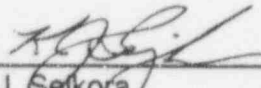


PILGRIM NUCLEAR POWER STATION

ANNUAL DOSE ASSESSMENT
TO THE GENERAL PUBLIC

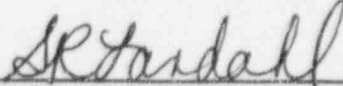
JANUARY 01 THROUGH DECEMBER 31, 1996

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Pilgrim Nuclear Power Station
Annual Dose Assessment to the General Public
January-December 1996

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EXECUTIVE SUMMARY

BOSTON EDISON COMPANY PILGRIM NUCLEAR POWER STATION ANNUAL DOSE ASSESSMENT TO THE GENERAL PUBLIC JANUARY 01 THROUGH DECEMBER 31, 1996

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 01 through December 31, 1996. The information presented in this report is prepared under Technical Specification 6.9.C.1 as supplemental information to radioactive effluent release data submitted on a semiannual basis in accordance with 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 ambient radiation exposure. Doses from radioactive effluents to a maximum exposed 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 Specification 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 for the year.

Radiological Impact on Humans

The release of radioactivity in liquid effluents from PNPS during 1996 resulted in a total body dose of about 0.00039 mrem to the maximum-exposed hypothetical individual. The maximum hypothetical dose to any organ from liquid effluents was about 0.0020 mrem. The cumulative total body dose from liquid effluents to the entire population within 50 miles of PNPS was about 0.0041 person-rem. The average individual living within 50 miles of PNPS received a total body dose of about 0.00000097 mrem from liquid effluents released during 1996.

The release of radioactivity in gaseous effluents from PNPS during 1996 resulted in a total body dose to the maximum-exposed hypothetical individual of about 0.52 mrem from radioactive particulates, iodines, and tritium. The maximum hypothetical dose to any organ from radioactive particulates, iodines, and tritium was about 1.2 mrem. Noble gases released in gaseous effluents resulted in a maximum total body dose of 0.19 mrem, with a corresponding skin dose of 1.7 mrem. All of these maximum doses occurred to a hypothetical individual located on property under Boston Edison (BEC) control. The maximum, hypothetical total body dose from the combined release of radioactivity in gaseous effluents was 0.71 mrem. The cumulative total body dose to the entire population within 50 miles of PNPS from combined gaseous effluents was about 0.22 person-rem. The average individual living within 50 miles of PNPS received a total body dose of about 0.000054 mrem from combined gaseous effluents released during 1996.

Ambient radiation exposure was evaluated to complete the assessment of radiological impact on humans. A small number of TLDs indicated an increase in ambient radiation exposure on BECo property in close proximity to the station. The dose to a hypothetical member of the public accessing such areas on BECo property during 1996 was estimated as being about 2.4 mrem. There was no measurable increase during 1996 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 operation during 1996 was calculated as being 3.1 mrem. This amount is about 0.9% 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 Specification Limits

The maximum individual doses from radioactive effluents were compared to the applicable Technical Specification dose limits and objectives. All doses from liquid effluents were less than 0.03% of their corresponding limit or objective. In addition, all quarterly average concentrations of radioactivity in liquids released to Cape Cod Bay were less than 0.6% of the corresponding limits. Maximum doses resulting from releases of particulates, iodines, and tritium in gaseous effluents were less than 9.4% of corresponding 10CFR50 objectives. Noble gas doses were less than 9.7% 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 1996. Compliance with these limits and objectives ensured that the radiological impact from PNPS operation was kept as low as 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 1996, there was no significant radiological impact on the general public from PNPS 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 1 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 the effluent release information from these reports are included in Appendix A. 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 (Ref. 7) was used to compile the dose contributions to the various organs in each age class from major exposure pathways.

1.1 Doses From Liquid Effluent Releases

Liquid effluent release data presented in Tables 2A and 2B from the semiannual effluent releases 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 the 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. If a larger proportion of activity is released with a relatively smaller volume of dilution water during a given quarter, the resulting concentration for that quarter will be higher than concentrations from other quarters. This will result in a proportionally higher dose for that quarter. However, when that quarter's activity values are included in the annual sum, and divided by the total annual dilution flow, the resulting dose contribution will be smaller. In such a situation, the annual dose will actually be less than the sum of the individual quarterly doses.

Radioactivity released in liquid effluents from PNPS during 1996 resulted in a maximum total body dose (child age class) of 0.00039 mrem. The maximum organ dose (child age class, bone) was 0.0020 mrem.

Table 1.1-1

Maximum Individual Organ Doses By Exposure Pathway -- mrem
From Liquid Release Period: January-March 1996

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	9.32E-06	2.43E-05	6.63E-07	1.62E-09	3.43E-05
Liver	7.66E-06	1.76E-05	6.63E-07	1.62E-09	2.69E-05
Kidney	5.90E-07	1.69E-07	6.63E-07	1.62E-09	1.42E-06
Lung	3.41E-06	9.31E-06	6.63E-07	1.62E-09	1.34E-05
GI-LLI	6.88E-06	1.88E-05	6.63E-07	1.62E-09	2.63E-05
Thyroid	5.02E-08	6.35E-08	6.63E-07	1.62E-09	7.78E-07
Total Body	2.53E-06	5.16E-06	6.63E-07	1.62E-09	8.35E-06
Age Class: Teen					
Bone	9.78E-06	2.22E-05	3.70E-06	1.62E-09	3.57E-05
Liver	8.14E-06	1.65E-05	3.70E-06	1.62E-09	2.83E-05
Kidney	6.01E-07	1.49E-07	3.70E-06	1.62E-09	4.45E-06
Lung	4.15E-06	9.95E-06	3.70E-06	1.62E-09	1.78E-05
GI-LLI	5.11E-06	1.24E-05	3.70E-06	1.62E-09	2.12E-05
Thyroid	4.26E-08	5.02E-08	3.70E-06	1.62E-09	3.79E-06
Total Body	2.27E-06	4.70E-06	3.70E-06	1.62E-09	1.07E-05
Age Class: Child					
Bone	1.28E-05	3.38E-05	7.73E-07	9.06E-10	4.74E-05
Liver	7.77E-06	1.86E-05	7.73E-07	9.06E-10	2.71E-05
Kidney	5.02E-07	1.44E-07	7.73E-07	9.06E-10	1.42E-06
Lung	3.62E-06	1.01E-05	7.73E-07	9.06E-10	1.45E-05
GI-LLI	1.95E-06	5.53E-06	7.73E-07	9.06E-10	8.25E-06
Thyroid	3.99E-08	5.82E-08	7.73E-07	9.06E-10	8.72E-07
Total Body	2.45E-06	6.73E-06	7.73E-07	9.06E-10	9.95E-06

Table 1.1-2

Maximum Individual Organ Doses By Exposure Pathway -- mrem
From Liquid Release Period: April-June 1996

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	7.55E-06	1.59E-05	1.79E-06	4.47E-09	2.52E-05
Liver	9.22E-06	1.77E-05	1.79E-06	4.47E-09	2.87E-05
Kidney	2.06E-06	4.36E-06	1.79E-06	4.47E-09	8.21E-06
Lung	2.16E-06	5.02E-06	1.79E-06	4.47E-09	8.97E-06
GI-LLI	1.26E-05	3.66E-05	1.79E-06	4.47E-09	5.10E-05
Thyroid	5.39E-08	1.03E-07	1.79E-06	4.47E-09	1.95E-06
Total Body	4.52E-06	8.61E-06	1.79E-06	4.47E-09	1.49E-05
Age Class: Teen					
Bone	7.90E-06	1.42E-05	9.99E-06	4.47E-09	3.21E-05
Liver	9.58E-06	1.61E-05	9.99E-06	4.47E-09	3.57E-05
Kidney	2.09E-06	3.64E-06	9.99E-06	4.47E-09	1.57E-05
Lung	2.63E-06	5.35E-06	9.99E-06	4.47E-09	1.80E-05
GI-LLI	8.82E-06	2.27E-05	9.99E-06	4.47E-09	4.15E-05
Thyroid	4.92E-08	8.40E-08	9.99E-06	4.47E-09	1.01E-05
Total Body	3.46E-06	7.48E-06	9.99E-06	4.47E-09	2.09E-05
Age Class: Child					
Bone	1.01E-05	2.07E-05	2.09E-06	2.49E-09	3.29E-05
Liver	8.64E-06	1.66E-05	2.09E-06	2.49E-09	2.73E-05
Kidney	1.73E-06	3.30E-06	2.09E-06	2.49E-09	7.12E-06
Lung	2.25E-06	5.38E-06	2.09E-06	2.49E-09	9.72E-06
GI-LLI	3.10E-06	9.41E-06	2.09E-06	2.49E-09	1.46E-05
Thyroid	4.96E-08	1.00E-07	2.09E-06	2.49E-09	2.24E-06
Total Body	2.89E-06	9.40E-06	2.09E-06	2.49E-09	1.44E-05

Table 1.1-3

Maximum Individual Organ Doses By Exposure Pathway -- mrem
From Liquid Release Period: July-September 1996

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	3.09E-04	8.49E-04	6.61E-06	1.59E-08	1.16E-03
Liver	2.34E-04	6.03E-04	6.61E-06	1.59E-08	8.44E-04
Kidney	1.36E-05	4.92E-06	6.61E-06	1.59E-08	2.51E-05
Lung	1.24E-04	3.30E-04	6.61E-06	1.59E-08	4.61E-04
GI-LLI	1.57E-04	4.66E-04	6.61E-06	1.59E-08	6.30E-04
Thyroid	7.18E-06	3.18E-06	6.61E-06	1.59E-08	1.70E-05
Total Body	7.02E-05	1.55E-04	6.61E-06	1.59E-08	2.32E-04
Age Class: Teen					
Bone	3.24E-04	7.78E-04	3.69E-05	1.59E-08	1.14E-03
Liver	2.48E-04	5.65E-04	3.69E-05	1.59E-08	8.50E-04
Kidney	1.22E-05	3.72E-06	3.69E-05	1.59E-08	5.28E-05
Lung	1.48E-04	3.52E-04	3.69E-05	1.59E-08	5.37E-04
GI-LLI	1.24E-04	3.20E-04	3.69E-05	1.59E-08	4.81E-04
Thyroid	5.52E-06	2.14E-06	3.69E-05	1.59E-08	4.46E-05
Total Body	6.68E-05	1.43E-04	3.69E-05	1.59E-08	2.47E-04
Age Class: Child					
Bone	4.24E-04	1.18E-03	7.71E-06	8.89E-09	1.61E-03
Liver	2.40E-04	6.40E-04	7.71E-06	8.89E-09	8.88E-04
Kidney	1.04E-05	3.63E-06	7.71E-06	8.89E-09	2.17E-05
Lung	1.29E-04	3.56E-04	7.71E-06	8.89E-09	4.93E-04
GI-LLI	5.27E-05	1.51E-04	7.71E-06	8.89E-09	2.11E-04
Thyroid	4.56E-06	2.05E-06	7.71E-06	8.89E-09	1.43E-05
Total Body	7.75E-05	2.10E-04	7.71E-06	8.89E-09	2.95E-04

Table 1.1-4

Maximum Individual Organ Doses By Exposure Pathway -- mrem
From Liquid Release Period: October-December 1996

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	6.16E-05	1.72E-04	4.66E-06	1.20E-08	2.38E-04
Liver	4.86E-05	1.23E-04	4.66E-06	1.20E-08	1.76E-04
Kidney	3.90E-06	1.51E-06	4.66E-06	1.20E-08	1.01E-05
Lung	2.56E-05	6.63E-05	4.66E-06	1.20E-08	9.66E-05
GI-LLI	4.91E-05	1.45E-04	4.66E-06	1.20E-08	1.99E-04
Thyroid	3.26E-06	2.71E-06	4.66E-06	1.20E-08	1.06E-05
Total Body	1.63E-05	3.84E-05	4.66E-06	1.20E-08	5.94E-05
Age Class: Teen					
Bone	6.44E-05	1.57E-04	2.60E-05	1.20E-08	2.47E-04
Liver	5.12E-05	1.15E-04	2.60E-05	1.20E-08	1.92E-04
Kidney	3.35E-06	1.11E-06	2.60E-05	1.20E-08	3.05E-05
Lung	3.01E-05	7.04E-05	2.60E-05	1.20E-08	1.27E-04
GI-LLI	3.68E-05	9.51E-05	2.60E-05	1.20E-08	1.58E-04
Thyroid	2.63E-06	2.05E-06	2.60E-05	1.20E-08	3.07E-05
Total Body	1.57E-05	3.50E-05	2.60E-05	1.20E-08	7.67E-05
Age Class: Child					
Bone	8.41E-05	2.38E-04	5.44E-06	6.68E-09	3.28E-04
Liver	4.92E-05	1.30E-04	5.44E-06	6.68E-09	1.85E-04
Kidney	2.76E-06	1.06E-06	5.44E-06	6.68E-09	9.27E-06
Lung	2.62E-05	7.14E-05	5.44E-06	6.68E-09	1.03E-04
GI-LLI	1.50E-05	4.26E-05	5.44E-06	6.68E-09	6.30E-05
Thyroid	2.31E-06	2.28E-06	5.44E-06	6.68E-09	1.00E-05
Total Body	1.80E-05	4.98E-05	5.44E-06	6.68E-09	7.32E-05

Table 1.1-5

Maximum Individual Organ Doses By Exposure Pathway -- mrem
From Liquid Release Period: January-December 1996

Exposure Pathway	Saltwater Fish	Saltwater Shellfish	Shoreline Deposits	Swimming/ Boating	Total
Age Class: Adult					
Bone	3.86E-04	1.06E-03	1.37E-05	3.39E-08	1.46E-03
Liver	2.98E-04	7.58E-04	1.37E-05	3.39E-08	1.07E-03
Kidney	2.00E-05	1.06E-05	1.37E-05	3.39E-08	4.44E-05
Lung	1.54E-04	4.10E-04	1.37E-05	3.39E-08	5.78E-04
GI-LLI	2.25E-04	6.64E-04	1.37E-05	3.39E-08	9.03E-04
Thyroid	1.06E-05	6.12E-06	1.37E-05	3.39E-08	3.05E-05
Total Body	9.31E-05	2.06E-04	1.37E-05	3.39E-08	3.13E-04
Age Class: Teen					
Bone	4.05E-04	9.68E-04	7.65E-05	3.39E-08	1.45E-03
Liver	3.16E-04	7.10E-04	7.65E-05	3.39E-08	1.10E-03
Kidney	1.81E-05	8.30E-06	7.65E-05	3.39E-08	1.03E-04
Lung	1.84E-04	4.36E-04	7.65E-05	3.39E-08	6.97E-04
GI-LLI	1.74E-04	4.48E-04	7.65E-05	3.39E-08	6.99E-04
Thyroid	8.30E-06	4.38E-06	7.65E-05	3.39E-08	8.92E-05
Total Body	8.79E-05	1.89E-04	7.65E-05	3.39E-08	3.53E-04
Age Class: Child					
Bone	5.29E-04	1.47E-03	1.60E-05	1.89E-08	2.02E-03
Liver	3.05E-04	8.02E-04	1.60E-05	1.89E-08	1.12E-03
Kidney	1.52E-05	7.84E-06	1.60E-05	1.89E-08	3.91E-05
Lung	1.54E-04	4.42E-04	1.60E-05	1.89E-08	6.18E-04
GI-LLI	7.25E-05	2.08E-04	1.60E-05	1.89E-08	2.97E-04
Thyroid	7.02E-06	4.54E-06	1.60E-05	1.89E-08	2.76E-05
Total Body	1.01E-04	2.75E-04	1.60E-05	1.89E-08	3.92E-04

1.2 Doses From Gaseous Effluent Releases

Gaseous effluent release data presented in Tables 1A, 1B, and 1C from the semiannual effluent releases 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, and turbine building roof exhausters. Meteorological data obtained from the PNPS 220-foot meteorological tower during 1996 were also used as input to the Yankee Atomic Company's "AEOLUS" computer program (Ref. 8). This program calculated the atmospheric dispersion and deposition factors used in the "YODA"-series of computer programs to calculate maximum individual doses. These various dispersion (χ/Q) and deposition (D/Q) factors are presented in Appendix B.

The maximum individual doses resulting from radioactive particulates, iodines, and tritium released in gaseous effluents are presented in Tables 1.2-1 through 1.2-5. These tables cover the individual calendar quarters and the total calendar year, respectively. Doses resulting from releases of noble gases are addressed independently in the PNPS Technical Specifications. Therefore, none of these tables for maximum individual doses include any dose contribution from noble gases. The presentation and analysis of doses resulting from noble gases are addressed in Section 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 at the most restrictive site boundary location, where only inhalation and ground deposition exposure pathways are assumed to occur. Since this is a shoreline location controlled by 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 individual quarters. Doses from gaseous effluents are largely dependent on the meteorological conditions during the release period, as prescribed by the NRC in regulatory guides 1.109 and 1.111. Changes in meteorological conditions throughout the year can affect the amount of dispersion of gaseous effluents and the resulting dose. For example, a release of gaseous effluent during a period when there is little mixing in the air will yield a higher dose than if the same amount of radioactivity is released during a period when atmospheric mixing is high. Quarterly dose values presented in the following tables were calculated using meteorological conditions observed during the applicable quarterly period. In the case of the annual dose values presented, the radionuclide activity from the four quarters were summed for the entire year and doses were calculated using annual-average meteorological conditions.

Radioactivity released in gaseous effluents from PNPS during 1996 resulted in a maximum total body dose (teen age class) of 0.52 mrem. The maximum organ dose (child age class, thyroid) was 1.2 mrem. Both of these doses occurred to hypothetical individuals at the shoreline 0.1 kilometers NNE of the PNPS Reactor Building, an area under Boston Edison Control. For the more "realistic" individuals at offsite locations, the maximum total body dose was 0.022 mrem (child age class at a location 0.8 kilometers SE from the Reactor Building), while the maximum organ dose was 0.19 mrem (infant thyroid at a location 3.97 kilometers 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 1996

Receptor: Direction: Distance: Pathway*:	Boundary NE 0.11 km DI	Cow/Goat WSW 3.97 km DIVCG	Garden SE 0.82 km DIV	Cow/Meat W 5.77 km DIVCM	Resident ESE 0.80 km DI	Meat S 3.80 km DIVM
Age Class: Adult						
Bone	7.94E-04	8.52E-05	2.25E-03	1.83E-05	2.64E-05	1.01E-04
Liver	5.99E-02	1.38E-04	3.74E-03	2.81E-05	1.60E-03	1.89E-04
Kidney	5.99E-02	1.42E-04	3.75E-03	2.90E-05	1.60E-03	1.90E-04
Lung	6.28E-02	1.33E-04	3.77E-03	2.70E-05	1.67E-03	1.90E-04
GI-LLI	6.05E-02	1.47E-04	4.11E-03	3.02E-05	1.61E-03	2.06E-04
Thyroid	8.78E-02	1.97E-03	7.76E-03	4.36E-04	2.31E-03	6.39E-04
Total Body	5.98E-02	1.38E-04	3.80E-03	2.80E-05	1.60E-03	1.91E-04
Age Class: Teen						
Bone	1.06E-03	1.40E-04	3.40E-03	2.83E-05	3.30E-05	1.49E-04
Liver	6.03E-02	1.67E-04	4.13E-03	3.16E-05	1.61E-03	2.00E-04
Kidney	6.04E-02	1.74E-04	4.14E-03	3.32E-05	1.61E-03	2.01E-04
Lung	6.53E-02	1.58E-04	4.20E-03	2.99E-05	1.73E-03	2.02E-04
GI-LLI	6.09E-02	1.76E-04	4.55E-03	3.34E-05	1.63E-03	2.18E-04
Thyroid	9.63E-02	2.97E-03	7.68E-03	6.23E-04	2.52E-03	5.82E-04
Total Body	6.02E-02	1.66E-04	4.22E-03	3.14E-05	1.61E-03	2.04E-04
Age Class: Child						
Bone	1.40E-03	3.39E-04	8.04E-03	6.73E-05	4.14E-05	3.51E-04
Liver	5.33E-02	2.48E-04	5.70E-03	4.53E-05	1.43E-03	2.74E-04
Kidney	5.35E-02	2.59E-04	5.71E-03	4.76E-05	1.43E-03	2.75E-04
Lung	5.78E-02	2.32E-04	5.76E-03	4.21E-05	1.54E-03	2.75E-04
GI-LLI	5.35E-02	2.46E-04	6.01E-03	4.48E-05	1.43E-03	2.87E-04
Thyroid	9.70E-02	5.75E-03	1.09E-02	1.19E-03	2.53E-03	8.41E-04
Total Body	5.33E-02	2.50E-04	5.92E-03	4.56E-05	1.42E-03	2.83E-04
Age Class: Infant						
Bone	1.01E-03	3.12E-04	2.02E-05	3.21E-05	3.17E-05	1.13E-06
Liver	3.08E-02	2.26E-04	5.41E-04	2.60E-05	8.26E-04	2.50E-05
Kidney	3.08E-02	2.33E-04	5.41E-04	2.73E-05	8.27E-04	2.50E-05
Lung	3.50E-02	1.87E-04	6.08E-04	1.83E-05	9.29E-04	2.76E-05
GI-LLI	3.08E-02	1.94E-04	5.40E-04	1.89E-05	8.25E-04	2.49E-05
Thyroid	7.09E-02	1.32E-02	1.21E-03	2.58E-03	1.84E-03	7.48E-05
Total Body	3.07E-02	2.11E-04	5.39E-04	2.22E-05	8.24E-04	2.49E-05

* Pathway designations are as follows:

D = Deposition (Ground Plane)

C = Cow Milk

I = Inhalation

G = Goat Milk

V = Vegetable Garden

M = Meat

Table 1.2-2

Maximum Individual Organ Dose At Receptor Location -- mrem
From Gaseous Release Period: April-June 1996

Receptor: Direction: Distance: Pathway*:	Boundary NNE 0.10 km DI	Cow/Goat WSW 3.97 km DIVCG	Cow/Meat W 5.77 km DIVCM	Garden SE 0.82 km DIV	Resident NW 0.74 km DI	Meat S 3.80 km DIVM
Age Class: Adult						
Bone	1.71E-03	1.32E-04	5.35E-05	6.70E-04	2.00E-05	2.97E-05
Liver	7.22E-02	4.20E-04	1.99E-04	2.36E-03	7.54E-04	2.80E-05
Kidney	7.27E-02	4.38E-04	2.05E-04	2.37E-03	7.58E-04	2.87E-05
Lung	7.57E-02	3.97E-04	1.91E-04	2.37E-03	7.88E-04	2.72E-05
GI-LLI	7.28E-02	4.23E-04	2.02E-04	2.47E-03	7.59E-04	3.27E-05
Thyroid	1.91E-01	8.37E-03	2.97E-03	7.78E-03	1.94E-03	3.50E-04
Total Body	7.19E-02	4.12E-04	1.96E-04	2.36E-03	7.50E-04	2.83E-05
Age Class: Teen						
Bone	2.08E-03	2.18E-04	8.24E-05	1.00E-03	2.37E-05	4.31E-05
Liver	7.29E-02	5.14E-04	2.24E-04	2.60E-03	7.61E-04	2.95E-05
Kidney	7.35E-02	5.44E-04	2.34E-04	2.62E-03	7.67E-04	3.01E-05
Lung	7.88E-02	4.73E-04	2.12E-04	2.64E-03	8.19E-04	2.90E-05
GI-LLI	7.33E-02	5.04E-04	2.23E-04	2.73E-03	7.65E-04	3.44E-05
Thyroid	2.27E-01	1.27E-02	4.24E-03	7.59E-03	2.30E-03	2.99E-04
Total Body	7.24E-02	4.97E-04	2.19E-04	2.62E-03	7.56E-04	3.01E-05
Age Class: Child						
Bone	2.55E-03	5.24E-04	1.93E-04	2.35E-03	2.83E-05	1.00E-04
Liver	6.46E-02	7.67E-04	3.21E-04	3.59E-03	6.75E-04	4.01E-05
Kidney	6.52E-02	8.13E-04	3.35E-04	3.60E-03	6.80E-04	4.08E-05
Lung	6.97E-02	6.93E-04	2.98E-04	3.61E-03	7.25E-04	3.91E-05
GI-LLI	6.44E-02	7.16E-04	3.05E-04	3.66E-03	6.73E-04	4.30E-05
Thyroid	2.53E-01	2.46E-02	8.06E-03	1.08E-02	2.55E-03	4.45E-04
Total Body	6.42E-02	7.43E-04	3.13E-04	3.64E-03	6.71E-04	4.21E-05
Age Class: Infant						
Bone	2.07E-03	5.38E-04	1.15E-04	2.01E-05	2.36E-05	1.04E-06
Liver	3.78E-02	7.36E-04	1.83E-04	3.48E-04	3.96E-04	4.37E-06
Kidney	3.79E-02	7.63E-04	1.92E-04	3.50E-04	3.97E-04	4.38E-06
Lung	4.25E-02	5.59E-04	1.30E-04	3.89E-04	4.42E-04	4.75E-06
GI-LLI	3.73E-02	5.71E-04	1.32E-04	3.44E-04	3.90E-04	4.29E-06
Thyroid	2.12E-01	5.67E-02	1.75E-02	1.86E-03	2.12E-03	2.80E-05
Total Body	3.73E-02	6.41E-04	1.53E-04	3.44E-04	3.91E-04	4.30E-06

* Pathway designations are as follows:

D = Deposition (Ground Plane)

C = Cow Milk

I = Inhalation

G = Goat Milk

V = Vegetable Garden

M = Meat

Table 1.2-3

Maximum Individual Organ Dose At Receptor Location -- mrem
From Gaseous Release Period: July-September 1996

Receptor: Direction: Distance: Pathway*:	Boundary NNE 0.10 km DI	Cow/Goat WSW 3.97 km DIVCG	Cow/Meat W 5.77 km DIVCM	Garden SE 0.82 km DIV	Resident NW 0.74 km DI	Meat S 3.80 km DIVM
Age Class: Adult						
Bone	2.08E-02	1.28E-04	6.17E-05	4.94E-04	1.18E-04	5.23E-05
Liver	2.02E-01	9.71E-04	3.97E-04	3.65E-03	1.56E-03	2.87E-04
Kidney	2.03E-01	1.00E-03	4.10E-04	3.67E-03	1.57E-03	2.89E-04
Lung	2.08E-01	9.31E-04	3.82E-04	3.65E-03	1.61E-03	2.85E-04
GI-LLI	2.02E-01	9.59E-04	3.96E-04	3.72E-03	1.57E-03	2.95E-04
Thyroid	5.39E-01	1.51E-02	5.87E-03	1.15E-02	4.10E-03	1.42E-03
Total Body	2.01E-01	9.53E-04	3.91E-04	3.64E-03	1.55E-03	2.86E-04
Age Class: Teen						
Bone	2.15E-02	2.06E-04	9.21E-05	6.88E-04	1.24E-04	7.23E-05
Liver	2.04E-01	1.18E-03	4.46E-04	4.02E-03	1.58E-03	3.02E-04
Kidney	2.05E-01	1.23E-03	4.67E-04	4.04E-03	1.59E-03	3.05E-04
Lung	2.13E-01	1.11E-03	4.22E-04	4.05E-03	1.65E-03	3.03E-04
GI-LLI	2.04E-01	1.14E-03	4.36E-04	4.10E-03	1.58E-03	3.10E-04
Thyroid	6.37E-01	2.28E-02	8.36E-03	1.14E-02	4.84E-03	1.28E-03
Total Body	2.02E-01	1.14E-03	4.35E-04	4.02E-03	1.57E-03	3.02E-04
Age Class: Child						
Bone	2.23E-02	4.76E-04	2.07E-04	1.48E-03	1.30E-04	1.56E-04
Liver	1.82E-01	1.75E-03	6.36E-04	5.51E-03	1.41E-03	4.11E-04
Kidney	1.84E-01	1.83E-03	6.67E-04	5.53E-03	1.42E-03	4.14E-04
Lung	1.91E-01	1.62E-03	5.92E-04	5.52E-03	1.47E-03	4.09E-04
GI-LLI	1.81E-01	1.64E-03	6.02E-04	5.54E-03	1.40E-03	4.14E-04
Thyroid	7.07E-01	4.40E-02	1.59E-02	1.62E-02	5.35E-03	1.86E-03
Total Body	1.81E-01	1.70E-03	6.20E-04	5.53E-03	1.40E-03	4.13E-04
Age Class: Infant						
Bone	2.15E-02	5.61E-04	1.59E-04	1.09E-04	1.24E-04	1.03E-05
Liver	1.14E-01	1.61E-03	3.64E-04	6.10E-04	8.60E-04	4.56E-05
Kidney	1.14E-01	1.66E-03	3.82E-04	6.12E-04	8.63E-04	4.57E-05
Lung	1.21E-01	1.31E-03	2.60E-04	6.46E-04	9.14E-04	4.79E-05
GI-LLI	1.12E-01	1.32E-03	2.64E-04	6.02E-04	8.48E-04	4.50E-05
Thyroid	5.96E-01	1.01E-01	3.44E-02	3.06E-03	4.48E-03	2.29E-04
Total Body	1.12E-01	1.44E-03	3.05E-04	6.03E-04	8.50E-04	4.51E-05

* Pathway designations are as follows:

D = Deposition (Ground Plane)

C = Cow Milk

I = Inhalation

G = Goat Milk

V = Vegetable Garden

M = Meat

Table 1.2-4

Maximum Individual Organ Dose At Receptor Location – mrem
From Gaseous Release Period: October-December 1996

Receptor: Direction: Distance: Pathway*:	Boundary N 0.08 km DI	Cow/Goat WSW 3.97 km DIVCG	Garden SE 0.82 km DIV	Cow/Meat W 5.77 km DIVCM	Resident ESE 0.80 km DI	Meat S 3.80 km DIVM
Age Class: Adult						
Bone	8.98E-04	4.42E-05	2.95E-04	1.90E-05	1.26E-05	1.41E-05
Liver	2.54E-01	6.80E-04	4.80E-03	3.61E-04	2.31E-03	1.69E-04
Kidney	2.54E-01	6.90E-04	4.81E-03	3.64E-04	2.31E-03	1.69E-04
Lung	2.55E-01	6.66E-04	4.80E-03	3.57E-04	2.32E-03	1.68E-04
GI-LLI	2.54E-01	6.76E-04	4.85E-03	3.61E-04	2.31E-03	1.71E-04
Thyroid	3.47E-01	5.04E-03	8.74E-03	1.78E-03	3.09E-03	4.05E-04
Total Body	2.54E-01	6.74E-04	4.81E-03	3.59E-04	2.30E-03	1.69E-04
Age Class: Teen						
Bone	1.11E-03	7.32E-05	4.38E-04	2.94E-05	1.44E-05	2.05E-05
Liver	2.56E-01	8.16E-04	5.31E-03	4.00E-04	2.32E-03	1.79E-04
Kidney	2.56E-01	8.33E-04	5.32E-03	4.06E-04	2.33E-03	1.79E-04
Lung	2.58E-01	7.93E-04	5.31E-03	3.94E-04	2.34E-03	1.78E-04
GI-LLI	2.56E-01	8.05E-04	5.36E-03	3.98E-04	2.32E-03	1.81E-04
Thyroid	3.76E-01	7.48E-03	8.80E-03	2.46E-03	3.34E-03	3.80E-04
Total Body	2.55E-01	8.06E-04	5.32E-03	3.98E-04	2.32E-03	1.79E-04
Age Class: Child						
Bone	1.38E-03	1.75E-04	1.02E-03	6.93E-05	1.66E-05	4.75E-05
Liver	2.26E-01	1.21E-03	7.33E-03	5.69E-04	2.05E-03	2.45E-04
Kidney	2.27E-01	1.23E-03	7.34E-03	5.77E-04	2.06E-03	2.45E-04
Lung	2.28E-01	1.17E-03	7.32E-03	5.57E-04	2.07E-03	2.44E-04
GI-LLI	2.26E-01	1.18E-03	7.36E-03	5.60E-04	2.05E-03	2.46E-04
Thyroid	3.74E-01	1.43E-02	1.25E-02	4.54E-03	3.31E-03	5.45E-04
Total Body	2.26E-01	1.19E-03	7.35E-03	5.65E-04	2.05E-03	2.46E-04
Age Class: Infant						
Bone	1.12E-03	1.98E-04	1.02E-05	4.65E-05	1.45E-05	4.52E-07
Liver	1.30E-01	1.04E-03	6.94E-04	2.67E-04	1.19E-03	2.22E-05
Kidney	1.31E-01	1.05E-03	6.94E-04	2.72E-04	1.19E-03	2.22E-05
Lung	1.33E-01	9.39E-04	7.04E-04	2.40E-04	1.20E-03	2.25E-05
GI-LLI	1.30E-01	9.45E-04	6.91E-04	2.41E-04	1.18E-03	2.21E-05
Thyroid	2.67E-01	3.18E-02	1.37E-03	9.13E-03	2.34E-03	4.85E-05
Total Body	1.30E-01	9.83E-04	6.92E-04	2.52E-04	1.18E-03	2.21E-05

* Pathway designations are as follows:

D = Deposition (Ground Plane)

C = Cow Milk

I = Inhalation

G = Goat Milk

V = Vegetable Garden

M = Meat

Table 1.2-5

Maximum Individual Organ Dose At Receptor Location -- mrem
From Gaseous Release Period: January-December 1996

Receptor: Direction: Distance: Pathway*:	Boundary NNE 0.10 km DI	Cow/Goat WSW 3.97 km DIVCG	Cow/Meat W 5.77 km DIVCM	Garden SE 0.82 km DIV	Resident NW 0.74 km DI	Meat S 3.80 km DIVM
Age Class: Adult						
Bone	1.74E-02	4.29E-04	1.74E-04	3.31E-03	2.00E-04	1.87E-04
Liver	5.17E-01	2.34E-03	1.02E-03	1.46E-02	5.36E-03	6.72E-04
Kidney	5.19E-01	2.40E-03	1.04E-03	1.46E-02	5.38E-03	6.77E-04
Lung	5.31E-01	2.26E-03	9.94E-04	1.46E-02	5.50E-03	6.69E-04
GI-LLI	5.19E-01	2.34E-03	1.03E-03	1.51E-02	5.38E-03	7.01E-04
Thyroid	9.85E-01	2.90E-02	1.00E-02	3.88E-02	9.95E-03	2.78E-03
Total Body	5.16E-01	2.31E-03	1.01E-03	1.46E-02	5.35E-03	6.73E-04
Age Class: Teen						
Bone	1.89E-02	7.03E-04	2.67E-04	4.89E-03	2.14E-04	2.69E-04
Liver	5.21E-01	2.82E-03	1.14E-03	1.61E-02	5.40E-03	7.10E-04
Kidney	5.23E-01	2.92E-03	1.17E-03	1.62E-02	5.43E-03	7.15E-04
Lung	5.45E-01	2.69E-03	1.10E-03	1.62E-02	5.63E-03	7.11E-04
GI-LLI	5.23E-01	2.79E-03	1.13E-03	1.67E-02	5.42E-03	7.41E-04
Thyroid	1.13E+00	4.35E-02	1.42E-02	3.79E-02	1.13E-02	2.51E-03
Total Body	5.19E-01	2.77E-03	1.12E-03	1.62E-02	5.39E-03	7.14E-04
Age Class: Child						
Bone	2.08E-02	1.68E-03	6.23E-04	1.13E-02	2.32E-04	6.17E-04
Liver	4.63E-01	4.18E-03	1.62E-03	2.21E-02	4.80E-03	9.69E-04
Kidney	4.65E-01	4.34E-03	1.67E-03	2.22E-02	4.82E-03	9.74E-04
Lung	4.83E-01	3.95E-03	1.55E-03	2.22E-02	5.00E-03	9.66E-04
GI-LLI	4.62E-01	4.02E-03	1.57E-03	2.25E-02	4.79E-03	9.87E-04
Thyroid	1.20E+00	8.41E-02	2.67E-02	5.40E-02	1.20E-02	3.64E-03
Total Body	4.61E-01	4.11E-03	1.60E-03	2.24E-02	4.79E-03	9.82E-04
Age Class: Infant						
Bone	1.88E-02	1.73E-03	3.71E-04	2.16E-04	2.14E-04	1.23E-05
Liver	2.73E-01	3.76E-03	8.42E-04	2.25E-03	2.84E-03	9.64E-05
Kidney	2.74E-01	3.86E-03	8.71E-04	2.25E-03	2.85E-03	9.66E-05
Lung	2.92E-01	3.18E-03	6.72E-04	2.39E-03	3.02E-03	1.02E-04
GI-LLI	2.71E-01	3.22E-03	6.78E-04	2.23E-03	2.82E-03	9.56E-05
Thyroid	9.49E-01	1.91E-01	5.69E-02	7.35E-03	9.45E-03	3.55E-04
Total Body	2.71E-01	3.45E-03	7.47E-04	2.23E-03	2.82E-03	9.58E-05

* Pathway designations are as follows:

D = Deposition (Ground Plane)

C = Cow Milk

I = Inhalation

G = Goat Milk

V = Vegetable Garden

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 1996 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 locations. This table includes all noble gas doses for the individual calendar quarters and total calendar year.

It should be noted that noble gas doses calculated for the entire year may not equal the sum of the doses for individual quarters. As was the case with particulate, iodine, and tritium doses described on Page 13, quarterly doses were calculated using meteorological conditions observed during the applicable quarterly period. Annual dose values are based on the sum of the quarterly noble gas releases, along with the annual-average meteorological conditions. A more detailed discussion of the reasons for the differences in annual doses from the summed quarterly doses can be found on Page 13.

Noble gases released in gaseous effluents from PNPS during 1996 resulted in a maximum total body dose of 0.19 mrem. The maximum skin dose was 1.7 mrem. Both of these doses occurred to a hypothetical individual. The maximum total body dose occurred at the shoreline 0.10 kilometers NNE of the PNPS Reactor Building. The maximum skin dose occurred at the shoreline 0.10 kilometers NNE of the PNPS Reactor Building. Both of these areas are under Boston Edison Control. Doses to more "realistic" individuals at offsite locations would be lower than doses for these hypothetical site boundary individuals.

Table 1.3-1

Maximum Doses From Noble Gas Releases During 1996

Release Period	Gamma Air Dose (location)	Beta Air Dose (location)	Total Body Dose (location)	Skin Dose (location)
Jan-Mar	5.94E-02 mrad (0.10 km NNE)	4.44E-01 mrad (0.11 km NE)	3.92E-02 mrem (0.10 km NNE)	3.81E-01 mrem (0.11 km NE)
Apr-Jun	7.50E-02 mrad (0.10 km NNE)	5.63E-01 mrad (0.10 km NNE)	4.96E-02 mrem (0.10 km NNE)	4.87E-01 mrem (0.10 km NNE)
Jul-Sep	7.51E-02 mrad (0.10 km NNE)	5.48E-01 mrad (0.10 km NNE)	4.96E-02 mrem (0.10 km NNE)	4.72E-01 mrem (0.10 km NNE)
Oct-Dec	5.86E-02 mrad (0.08 km N)	2.87E-01 mrad (0.08 km N)	3.85E-02 mrem (0.08 km N)	2.71E-01 mrem (0.08 km N)
Jan-Dec	2.82E-01 mrad (0.10 km NNE)	1.94E+00 mrad (0.10 km NNE)	1.86E-01 mrem (0.10 km NNE)	1.70E+00 mrem (0.10 km NNE)

2.0 POPULATION AND AVERAGE INDIVIDUAL DOSES

PNPS Technical Specifications do not contain 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:

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

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

These cumulative population doses were also calculated using methods presented in the PNPS ODCM, NRC Regulatory Guide 1.109, NRC Regulatory Guide 1.111, and the PNPS Appendix I Evaluation. Population doses were calculated separately for liquid and gaseous effluents, and are presented in Tables 2.1-1 and 2.2-1, respectively. 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 the population doses, average consumption and use factors for various pathways from Table E-4 of the PNPS ODCM were assumed, rather than the maximum use factors assumed for the maximum exposed individual.

Information related to liquid and gaseous effluent releases were obtained from the two semiannual Radioactive Effluent and Waste Disposal Reports. These effluent 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.

In addition to the population total body doses, doses to an average individual in the population were calculated. These average total body doses were estimated by dividing the total population dose (person-rem) by the total population of 4.18 million people within 50 miles of PNPS. The average individual doses, in mrem, are presented for liquid and gaseous effluents in Tables 2.1-2 and 2.2-2, respectively.

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 mile of PNPS. This table includes the doses for the four calendar quarters and entire year resulting from the various liquid exposure pathways. The corresponding average individual total body doses (mrem) are presented in Table 2.1-2.

Radioactivity released in liquid effluents from PNPS during 1996 resulted in a cumulative population total body dose of 0.0041 person-rem. The corresponding average individual total body dose was 0.00000097 mrem.

Again, it should be noted that the calculated doses for the entire year are different from the sum of the individual four quarters. This difference is due to the methods and equations used to calculate dose from liquid effluents, as prescribed by the NRC in Regulatory Guide 1.109. A more detailed discussion of the reasons for the differences can be found in Section 1.1, in the discussion of maximum individual doses from liquid effluent releases.

Table 2.1-1

Population Doses From Liquid Effluent Releases During 1996

Exposure Pathway	Population Total Body Dose : person-rem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Fish	4.38E-05	7.22E-05	1.25E-03	2.91E-04	1.65E-03
Shellfish	5.65E-05	9.04E-05	1.71E-03	4.20E-04	2.28E-03
Shoreline	7.19E-06	1.92E-05	6.52E-05	5.28E-05	1.44E-04
Swimming	1.62E-08	4.46E-08	1.60E-07	1.20E-07	3.40E-07
Total	1.08E-04	1.82E-04	3.03E-03	7.64E-04	4.07E-03

Table 2.1-2

Average Individual Doses From Liquid Effluent Releases During 1996

Exposure Pathway	Average Individual Total Body Dose : mrem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Fish	1.05E-08	1.73E-08	3.00E-07	6.97E-08	3.94E-07
Shellfish	1.35E-08	2.16E-08	4.09E-07	1.00E-07	5.44E-07
Shoreline	1.72E-09	4.60E-09	1.56E-08	1.26E-08	3.45E-08
Swimming	3.88E-12	1.07E-11	3.81E-11	2.87E-11	8.12E-11
Total	2.57E-08	4.35E-08	7.25E-07	1.82E-07	9.73E-07

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 mile of PNPS. This table includes the doses for the four calendar quarters and entire year resulting from the various gaseous exposure pathways. The corresponding average individual total body doses (mrem) are presented in Table 2.2-2.

Radioactivity released in gaseous effluents from PNPS during 1996 resulted in a cumulative population total body dose of 0.22 person-rem. The corresponding average individual total body dose was 0.000054 mrem.

Again, it should be noted that the calculated doses for the entire year are different from the sum of the individual four quarters. This difference is due to the methods and equations used to calculate dose from gaseous effluents, as prescribed by the NRC in Regulatory Guide 1.109. A more detailed discussion of the reasons for the differences can be found in Section 1.2, in the discussion of maximum individual doses from gaseous effluent releases.

Table 2.2-1

Population Doses From Gaseous Effluent Releases During 1996

Exposure Pathway	Population Total Body Dose : person-rem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Noble Gas	2.22E-02	2.96E-02	4.60E-02	6.98E-02	1.66E-01
Ground Deposition	1.66E-05	1.67E-04	6.57E-04	2.32E-05	8.88E-04
Inhalation	6.63E-03	7.51E-03	1.62E-02	1.89E-02	4.96E-02
Vegetables	3.80E-04	6.73E-04	1.57E-03	1.45E-03	4.19E-03
Milk	1.86E-04	5.50E-04	1.22E-03	1.02E-03	3.06E-03
Meat	1.27E-05	2.95E-05	6.63E-05	6.12E-05	1.74E-04
Total	2.94E-02	3.85E-02	6.57E-02	9.13E-02	2.24E-01

Table 2.2-2

Average Individual Doses From Gaseous Effluent Releases During 1996

Exposure Pathway	Average Individual Total Body Dose : mrem				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Dec
Noble Gas	5.31E-06	7.08E-06	1.10E-05	1.67E-05	3.96E-05
Ground Deposition	3.97E-09	3.99E-08	1.57E-07	5.55E-09	2.12E-07
Inhalation	1.59E-06	1.80E-06	3.87E-06	4.52E-06	1.19E-05
Vegetables	9.09E-08	1.61E-07	3.75E-07	3.47E-07	1.00E-06
Milk	4.45E-08	1.32E-07	2.92E-07	2.44E-07	7.32E-07
Meat	3.04E-09	7.05E-09	1.59E-08	1.46E-08	4.16E-08
Total	7.04E-06	9.22E-06	1.57E-05	2.18E-05	5.35E-05

3.0 OFFSITE AMBIENT RADIATION MEASUREMENTS

PNPS Technical Specifications do not contain limits or operational objectives related specifically to offsite ambient radiation exposure. However, 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 located within the site boundary, 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 to 70 mR/year. 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 gamma rays emitted from nitrogen-16 (N-16) contained in steam flowing through the turbine. Although the N-16 is enclosed in the process lines and turbine and is not released into the environment, the ambient radiation exposure and sky shine from this contained source accounts for the majority of the radiation dose, especially in close proximity to the station. Other sources of ambient radiation exposure include radiation emitted from contained radioactive materials and/or radwaste at the facility. Despite these sources of ambient radiation exposure at PNPS, increases in exposure from ambient radiation are typically not observable above background radiation levels at locations beyond Boston Edison controlled property.

The average exposure values presented in Table 3.0-1 appear to indicate an elevation in ambient exposures in Zone 1, those TLDs within 2 miles of PNPS. Most of this apparent elevation is due to increases in exposure levels measured at TLD locations on 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 Health Club (I&S Building), was 583 mR for the entire year. This location is immediately adjacent to the station proper and overlooks the turbine building, therefore receiving the highest direct ambient and sky shine exposure. When the near-site TLDs (those located within 0.6 km of the Reactor Building) are removed from the calculation of averages, the mean annual exposure in Zone 1 falls from 93.2 ± 86.1 mR/yr to 60.2 ± 7.2 mR/yr. Such a corrected dose is not statistically different from the Zone 4 average of 58.7 ± 6.6 mR/yr.

Although the annual exposure at TLD location OA was 524 mR above the average Zone 4 exposure rate, this area is not continuously occupied by members of the general public. When adjusted for such occupancy, a hypothetical member of the public who was at this location for 40 hours per year would only receive an incremental dose of 2.4 mrem over natural background radiation levels. At the nearest residence 0.80 kilometers(0.5 miles) southeast of the PNPS Reactor Building, the annual exposure was 60.0 ± 3.3 mR, which compares quite well to the Zone 4 annual average of 58.7 ± 6.6 mR.

In 1994, Boston Edison 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 direct ambient and sky shine exposure 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 1996, these personnel represent the most conservative case in regards to ambient radiation exposure to a member of the public. Their annual incremental radiation dose above background during 1996 is estimated as being about 40 mrem, based on the average exposure measured by three TLDs in the building.

The exposures measured by these three TLDs located in the health club would also include any increase in ambient radiation resulting from noble gases and/or particulate activity deposited on the ground from gaseous releases. However, they would not indicate any internal dose received by these contractor personnel from inhalation of small amounts of PNPS-related radioactivity contained in the air. An environmental air sampler located immediately adjacent to the health club did not indicate any PNPS-related activity during 1996. Dose calculations performed in the same manner as those outlined in Section 1.2 yielded a projected total body dose to the maximally-exposed contractor (2000 hr/yr exposure) of about 0.01 mrem, resulting from inhalation.

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 40CFR190. This regulation expressly applies to areas at or beyond the owner-controlled property, and is not applicable in this situation. As stated earlier, TLDs at and beyond the site boundary do not indicate elevated ambient radiation levels resulting from the operation of Pilgrim Station.

Although some of the TLDs in close proximity to PNPS indicate increases in exposure levels from ambient radiation, such increases are localized to areas under 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, Health Club, parking lots, etc.), such increases in dose from ambient radiation exposure are estimated as being less than 3 mrem/year.

Table 3.0-1

Average TLD Exposures By Distance Zone During 1996

Exposure Period	Average Exposure \pm Standard Deviation: mR/period			
	Zone 1* 0-3 km	Zone 2 3-8 km	Zone 3 8-15 km	Zone 4 >15 km
Jan-Mar	23.2 \pm 20.7	14.1 \pm 1.4	14.4 \pm 1.3	14.6 \pm 1.3
Apr-Jun	22.5 \pm 21.2	13.9 \pm 2.6	13.9 \pm 1.7	14.5 \pm 2.0
Jul-Sep	23.1 \pm 19.7	14.4 \pm 2.8	14.5 \pm 1.7	14.9 \pm 1.5
Oct-Dec	24.3 \pm 24.8	14.4 \pm 3.0	14.0 \pm 1.6	14.8 \pm 2.1
Jan-Dec	93.2 \pm 86.1**	56.8 \pm 9.9	56.9 \pm 6.0	58.7 \pm 6.6

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

** When corrected for TLDs located within the site boundary, the Zone 1 annual average is calculated to be 60.2 \pm 7.2 mR/yr.

4.0 PERCENT OF TECHNICAL SPECIFICATION LIMITS/OBJECTIVES

The PNPS Technical Specifications contain dose and concentration limits for radioactive effluents. In addition, operational objectives are specified which ensure that radioactive releases are maintained as low as reasonably achievable. The percentage of the PNPS Technical Specification limits were determined from doses calculated in Section 1, the liquid concentrations listed in the 1996 semiannual effluent releases reports, and the Technical Specification limits/objectives listed in Tables 4.1-1 and 4.2-1.

The percent of applicable limits are provided to supplement the information provided in the two semiannual Radioactive Effluent and Waste Disposal Reports. The format for the percent of 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 01, 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 1996 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 percentages shown in Table 4.1-1. The resulting concentration and doses from Pilgrim Station's liquid releases during 1996 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 1996

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

<u>Period</u>	<u>Value - $\mu\text{Ci/mL}$</u>	<u>Fraction of Limit</u>
January-March	1.75E-10	4.15E-03%
April-June	6.94E-10	2.86E-02%
July-September	3.58E-09	4.88E-02%
October-December	1.78E-09	3.11E-02%

- B. Tritium Average Concentration Limit
 PNPS Technical Specification 3.8.A.1
 Limit: 1.0E-03 $\mu\text{Ci/mL}$

<u>Period</u>	<u>Value - $\mu\text{Ci/mL}$</u>	<u>Fraction of Limit</u>
January-March	2.41E-08	2.41E-03%
April-June	1.57E-08	1.57E-03%
July-September	5.91E-06	5.91E-01%
October-December	3.68E-06	3.68E-01%

- C. Dissolved and Entrained Noble Gases Concentration Limit
 PNPS Technical Specification 3.8.A.1
 Limit: 2.0E-04 $\mu\text{Ci/mL}$

<u>Period</u>	<u>Value - $\mu\text{Ci/mL}$</u>	<u>Fraction of Limit</u>
January-March	NDA	--
April-June	NDA	--
July-September	2.56E-11	1.28E-05%
October-December	NDA	--

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

<u>Period</u>	<u>Value - mrem</u>	<u>Fraction of Limit</u>
January-March	1.07E-05	7.13E-04%
April-June	2.09E-05	1.39E-03%
July-September	2.95E-04	1.97E-02%
October-December	7.67E-05	5.11E-03%

Table 4.1-1 (continued)

Percent of Technical Specification Limits/Objectives
for Liquid Effluent Releases During 1996

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

<u>Period</u>	<u>Value - mrem</u>	<u>Fraction of Limit</u>
January-December	3.92E-04	1.31E-02%

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

<u>Period</u>	<u>Value - mrem</u>	<u>Fraction of Limit</u>
January-March	4.74E-05	9.48E-04%
April-June	5.10E-05	1.02E-03%
July-September	1.61E-03	3.22E-02%
October-December	3.28E-04	6.56E-03%

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

<u>Period</u>	<u>Value - mrem</u>	<u>Fraction of Limit</u>
January-December	2.02E-03	2.02E-02%

4.2 Gaseous Effluent Releases

Organ dose limits and objectives for the maximum-exposed individual from radioactive particulates, iodines, 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 1996 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 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 1996

A. Annual Dose Rate Limit - Noble Gases PNPS Technical Specification 3.8.D.1.a Limit: 500 mrem/yr Total Body Dose		
<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
January-December	1.86E-01	3.72E-02%
B. Annual Dose Rate Limit - Noble Gases PNPS Technical Specification 3.8.D.1.a Limit: 3000 mrem/yr Skin Dose		
<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
January-December	1.70E+00	5.67E-02%
C. Annual Dose Rate Limit - Particulates, Iodines, & Tritium PNPS Technical Specification 3.8.D.1.b Limit: 1500 mrem/yr Organ Dose		
<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
January-December	1.20E+00	8.00E-02%
D. Quarterly Dose Objective - Noble Gas Gamma Air Dose PNPS Technical Specification 7.3.A.1 Objective: 5 mrad Gamma Air Dose		
<u>Period</u>	<u>Value - mrad</u>	<u>Fraction of Limit</u>
January-March	5.94E-02	1.19E+00%
April-June	7.50E-02	1.50E+00%
July-September	7.51E-02	1.50E+00%
October-December	5.86E-02	1.17E+00%
E. Annual Dose Objective - Noble Gas Gamma Air Dose PNPS Technical Specification 7.3.A.2 Objective: 10 mrad Gamma Air Dose		
<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
January-December	2.82E-01	2.82E+00%

Table 4.1-1 (continued)

Percent of Technical Specification Limits/Objectives
for Gaseous Effluent Releases During 1996

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

<u>Period</u>	<u>Value - mrad</u>	<u>Fraction of Limit</u>
January-March	4.44E-01	4.44E+00%
April-June	5.63E-01	5.63E+00%
July-September	5.48E-01	5.48E+00%
October-December	2.87E-01	2.87E+00%

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

<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
January-December	1.94E+00	9.70E+00%

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

<u>Period</u>	<u>Value - mrad</u>	<u>Fraction of Limit</u>
January-March	9.70E-02	1.29E+00%
April-June	2.53E-01	3.37E+00%
July-September	7.07E-01	9.43E+00%
October-December	3.76E-01	5.01E+00%

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

<u>Period</u>	<u>Value - mrem/yr</u>	<u>Fraction of Limit</u>
January-December	1.20E+00	8.00E+00%

5.0 REFERENCES

1. Boston Edison Company, "Pilgrim Nuclear Power Station Offsite Dose Calculation Manual", Revision 7, November 1995.
2. U.S. Nuclear Regulatory Commission, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10CFR50 Appendix I", Regulatory Guide 1.109, Revision 1, October 1977.
3. U.S. Nuclear Regulatory Commission, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors", Regulatory Guide 1.111, July 1977.
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 01 through June 30, 1996", August 1996.
6. Boston Edison Company, Pilgrim Nuclear Power Station, "Radioactive Effluent and Waste Disposal Report including Meteorological Data for July 01 through December 31, 1996", February 1997.
7. YAEC Calculation No. BEC-082, "Dose Assessment for January-December 1996 Effluent Report", March 1997.
8. J.N. Hamawi, "AEOLUS", Yankee Atomic Electric Company, YAEC-1120, January 1977.
9. U.S. Nuclear Regulatory Commission, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plants", Regulatory Guide 1.21, Revision 1, June 1974.

APPENDIX A

Effluent Release Information

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Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Supplemental Information
January-June 1996

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 $\mu\text{Ci/mL}$ for entrained noble gases; 10CFR20 Appendix B Table II values for all other radionuclides

3. AVERAGE ENERGY

Not Applicable

4. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

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

5. BATCH RELEASES

- a. Liquid Effluents
 - 1. Total number of releases: 2.60E+01
 - 2. Total time period (minutes): 1.43E+03
 - 3. Maximum time period (minutes): 5.50E+02
 - 4. Average time period (minutes): 5.50E+01
 - 5. Minimum time period (minutes): 2.50E+01
 - 6. Average stream flow (Liters/min): 1.17E+06

- b. Gaseous Effluents

6. ABNORMAL RELEASES

- a. Liquid Effluents
- b. Gaseous Effluents

Jan-Mar 1996	Apr-Jun 1996
2.60E+01	1.30E+01
1.43E+03	6.08E+02
5.50E+02	1.50E+02
5.50E+01	4.70E+01
2.50E+01	2.30E+01
1.17E+06	1.03E+06
None	None
None	None
None	None

Table 1A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Summation of All Releases
January-June 1996

Period: Jan-Mar 1996	Period: Apr-Jun 1996	Estimated Total Error
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A. FISSION AND ACTIVATION GASES

Total Release: Ci	9.34E+01	8.45E+01	22%
Average Release Rate During Period: $\mu\text{Ci/sec}$	1.18E+01	1.07E+01	
Percent of Technical Specification Limit	*	*	

B. IODINES

Total Iodine-131 Release: Ci	1.01E-03	1.77E-03	20%
Average Release Rate During Period: $\mu\text{Ci/sec}$	1.28E-04	2.24E-04	
Percent of Technical Specification Limit	*	*	

C. PARTICULATES

Total Release: Ci	7.42E-04	6.55E-04	21%
Average Release Rate During Period: $\mu\text{Ci/sec}$	9.41E-05	8.31E-05	
Percent of Technical Specification Limit	*	*	
Gross Alpha Radioactivity: Ci	NDA	NDA	

D. TRITIUM

Total Release: Ci	1.53E+01	1.08E+01	20%
Average Release Rate During Period: $\mu\text{Ci/sec}$	1.94E+00	1.37E+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, 1997.

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

Table 1B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Elevated Release
January-June 1996

Nuclide Released	Continuous Mode		Batch Mode	
	Jan-Mar 1996	Apr-Jun 1996	Jan-Mar 1996	Apr-Jun 1996

1. FISSION AND ACTIVATION GASES - Ci

N-13	NDA	NDA	N/A	N/A
Kr-85m	7.73E+00	9.79E+00	N/A	N/A
Kr-87	NDA	NDA	N/A	N/A
Kr-88	5.72E+00	1.86E+00	N/A	N/A
Xe-133	1.93E+01	2.39E+01	N/A	N/A
Xe-135	1.20E+00	2.34E+00	N/A	N/A
Xe-135m	NDA	NDA	N/A	N/A
Xe-138	3.15E+00	6.77E+00	N/A	N/A
Total for period	3.71E+01	4.47E+01	N/A	N/A

2. IODINES - Ci

I-131	6.03E-04	8.89E-04	N/A	N/A
I-133	1.39E-03	2.28E-03	N/A	N/A
Total for period	1.99E-03	3.17E-03	N/A	N/A

3. PARTICULATES - Ci

Mn-54	NDA	2.25E-06	N/A	N/A
Co-60	NDA	3.17E-06	N/A	N/A
Sr-89	1.86E-05	4.01E-05	N/A	N/A
Sr-90	NDA	NDA	N/A	N/A
Cs-134	NDA	NDA	N/A	N/A
Cs-137	NDA	1.84E-06	N/A	N/A
Ba/La-140	9.87E-06	5.57E-05	N/A	N/A
Total for period	2.85E-05	1.03E-04	N/A	N/A

4. TRITIUM - Ci

H-3	6.07E-01	7.93E-01	N/A	N/A
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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 $\mu\text{Ci/cc}$
Iodines: 1E-12 $\mu\text{Ci/cc}$
Particulates: 1E-11 $\mu\text{Ci/cc}$

Table 1C
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Ground Level Release
January-June 1996

Nuclide Released	Continuous Mode		Batch Mode	
	Jan-Mar 1996	Apr-Jun 1996	Jan-Mar 1996	Apr-Jun 1996

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	5.63E+01	3.87E+01	N/A	N/A
Xe-135m	NDA	NDA	N/A	N/A
Xe-138	NDA	1.10E+00	N/A	N/A
Total for period	5.63E+01	3.98E+01	N/A	N/A

2. IODINES - Ci

I-131	4.08E-04	8.76E-04	N/A	N/A
I-133	1.91E-03	5.28E-03	N/A	N/A
Total for period	2.32E-03	6.16E-03	N/A	N/A

3. PARTICULATES - Ci

Co-60	NDA	NDA	N/A	N/A
Sr-89	5.49E-04	2.78E-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	1.64E-04	2.74E-04	N/A	N/A
Total for period	7.13E-04	5.52E-04	N/A	N/A

4. TRITIUM - Ci

H-3	1.47E+01	1.00E+01	N/A	N/A
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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 $\mu\text{Ci/cc}$
 Iodines: 1E-12 $\mu\text{Ci/cc}$
 Particulates: 1E-11 $\mu\text{Ci/cc}$

Table 2A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents - Summation of All Releases
January-June 1996

Period: Jan-Mar 1996	Period: Apr-Jun 1996	Estimated Total Error
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A. FISSION AND ACTIVATION PRODUCTS

Total Release (not including H-3, noble gas, or alpha): Ci	2.93E-04	4.34E-04	12%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	1.75E-10	6.94E-10	
Percent of Effluent Concentration Limit*	4.15E-03%	2.86E-02%	

B. RADIUM

Total Release: Ci	4.02E-02	9.83E-03	9.4%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	2.41E-08	1.57E-08	
Percent of Effluent Concentration Limit*	2.41E-03%	1.57E-03%	

C. DISSOLVED AND ENTRAINED GASES

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

D. GROSS ALPHA RADIOACTIVITY

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

Waste Volume: Liters	7.89E+04	2.10E+04	5.7%
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F. VOLUME OF DILUTION WATER USED DURING PERIOD

Dilution Volume: Liters	1.67E+09	6.25E+08	10%
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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, 1997.

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

Table 2B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents
January-June 1996

Nuclide Released	Continuous Mode		Batch Mode	
	Jan-Mar 1996	Apr-Jun 1996	Jan-Mar 1996	Apr-Jun 1996

1. FISSION AND ACTIVATION PRODUCTS - Ci

Na-24	N/A	N/A	NDA	1.21E-06
Cr-51	N/A	N/A	NDA	NDA
Mn-54	N/A	N/A	2.75E-05	6.54E-05
Fe-55	N/A	N/A	1.49E-04	6.55E-05
Fe-59	N/A	N/A	NDA	1.48E-06
Co-58	N/A	N/A	NDA	6.22E-06
Co-60	N/A	N/A	7.45E-05	1.70E-04
Zn-65	N/A	N/A	NDA	2.27E-06
Sr-89	N/A	N/A	NDA	1.81E-06
Sr-90	N/A	N/A	NDA	1.66E-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	NDA
Sb-124	N/A	N/A	NDA	NDA
I-131	N/A	N/A	1.98E-07	3.36E-07
I-133	N/A	N/A	NDA	NDA
Cs-134	N/A	N/A	NDA	NDA
Cs-137	N/A	N/A	4.18E-05	1.14E-04
Ba/La-140	N/A	N/A	NDA	4.54E-06
Ce-141	N/A	N/A	NDA	NDA
Total for period	N/A	N/A	2.93E-04	4.34E-04

2. DISSOLVED AND ENTRAINED GASES - Ci

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

Notes for Table 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 μ Ci/mL
 Iodines: 1E-06 μ Ci/mL
 Noble Gases: 1E-05 μ Ci/mL
 All Others: 5E-07 μ Ci/mL

Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Supplemental Information
July-December 1996

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 $\mu\text{Ci/mL}$ for entrained noble gases; 10CFR20 Appendix B Table II values for all other radionuclides |

3. AVERAGE ENERGY

Not Applicable

4. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

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

5. BATCH RELEASES

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

- b. Gaseous Effluents

Jul-Sep 1996	Oct-Dec 1996
2.70E+01	2.30E+01
1.61E+03	9.05E+02
1.90E+02	1.00E+02
5.96E+01	3.93E+01
1.00E+01	2.00E+01
1.12E+06	1.17E+06
None	None
1	None
None	None

6. ABNORMAL RELEASES

- a. Liquid Effluents
- b. Gaseous Effluents

Table 1A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Summation of All Releases
July-December 1996

Period: Jul-Sep 1996	Period: Oct-Dec 1996	Estimated Total Error
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A. FISSION AND ACTIVATION GASES

Total Release: Ci	1.41E+02	1.63E+02	22%
Average Release Rate During Period: $\mu\text{Ci/sec}$	1.79E+01	2.07E+01	
Percent of Technical Specification Limit	*	*	

B. IODINES

Total Iodine-131 Release: Ci	3.33E-03	1.05E-03	20%
Average Release Rate During Period: $\mu\text{Ci/sec}$	4.22E-04	1.33E-04	
Percent of Technical Specification Limit	*	*	

C. PARTICULATES

Total Release: Ci	7.10E-04	2.87E-04	21%
Average Release Rate During Period: $\mu\text{Ci/sec}$	9.00E-05	3.64E-05	
Percent of Technical Specification Limit	*	*	
Gross Alpha Radioactivity: Ci	NDA	NDA	

D. TRITIUM

Total Release: Ci	1.77E+01	2.90E+01	20%
Average Release Rate During Period: $\mu\text{Ci/sec}$	2.25E+00	3.68E+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, 1997.

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

Table 1B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Elevated Release
July-December 1996

Nuclide Released	Continuous Mode		Batch Mode	
	Jul-Sep 1996	Oct-Dec 1996	Jul-Sep 1996	Oct-Dec 1996

1. FISSION AND ACTIVATION GASES - Ci

Kr-85m	1.24E+01	3.00E+01	N/A	N/A
Kr-87	7.70E-01	NDA	N/A	N/A
Kr-88	1.17E+00	2.22E+01	N/A	N/A
Xe-131m	2.06E+00	NDA	N/A	N/A
Xe-133	7.61E+01	7.05E+01	N/A	N/A
Xe-135	2.99E+00	1.89E+00	N/A	N/A
Xe-135m	1.63E+00	1.12E+00	N/A	N/A
Xe-138	1.78E+01	1.50E+01	N/A	N/A
Total for period	1.15E+02	1.41E+02	N/A	N/A

2. IODINES - Ci

I-131	1.46E-03	5.28E-04	N/A	N/A
I-133	3.52E-03	2.10E-03	N/A	N/A
Total for period	4.98E-03	2.63E-03	N/A	N/A

3. PARTICULATES - Ci

Co-60	1.68E-06	NDA	N/A	N/A
Sr-89	5.05E-05	4.27E-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	6.76E-05	2.27E-05	N/A	N/A
Total for period	1.20E-04	6.54E-05	N/A	N/A

4. TRITIUM - Ci

H-3	9.31E-01	4.22E-01	N/A	N/A
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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 $\mu\text{Ci/cc}$
 Iodines: 1E-12 $\mu\text{Ci/cc}$
 Particulates: 1E-11 $\mu\text{Ci/cc}$

Table 1C
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Gaseous Effluents - Ground Level Release
July-December 1996

Nuclide Released	Continuous Mode		Batch Mode	
	Jul-Sep 1996	Oct-Dec 1996	Jul-Sep 1996	Oct-Dec 1996

1. FISSION AND ACTIVATION GASES - Ci

Kr-85m	NDA	NDA	N/A	N/A
Kr-87	NDA	NDA	N/A	N/A
Kr-88	NDA	NDA	N/A	N/A
Xe-133	NDA	NDA	N/A	N/A
Xe-135	2.61E+01	1.42E+01	N/A	N/A
Xe-135m	NDA	8.12E+00	N/A	N/A
Xe-138	NDA	NDA	N/A	N/A
Total for period	2.61E+01	2.23E+01	N/A	N/A

2. IODINES - Ci

I-131	1.87E-03	5.22E-04	N/A	N/A
I-133	8.48E-03	3.40E-03	N/A	N/A
Total for period	1.04E-02	3.92E-03	N/A	N/A

3. PARTICULATES - Ci

Mn-54	1.40E-05	NDA	N/A	N/A
Co-60	2.34E-05	NDA	N/A	N/A
Sr-89	2.30E-04	8.82E-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	3.23E-04	1.34E-04	N/A	N/A
Total for period	5.90E-04	2.22E-04	N/A	N/A

4. TRITIUM - Ci

H-3	1.68E+01	2.86E+01	N/A	N/A
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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 $\mu\text{Ci/cc}$
 Iodines: 1E-12 $\mu\text{Ci/cc}$
 Particulates: 1E-11 $\mu\text{Ci/cc}$

Table 2A
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents - Summation of All Releases
July-December 1996

Period: Jul-Sep 1996	Period: Oct-Dec 1996	Estimated Total Error
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A. FISSION AND ACTIVATION PRODUCTS

Total Release (not including H-3, noble gas, or alpha): Ci	6.48E-03	1.88E-03	12%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	3.58E-09	1.78E-09	
Percent of Effluent Concentration Limit*	4.88E-02%	3.11E-02%	

B. TRITIUM

Total Release: Ci	1.07E+01	3.90E+00	9.4%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	5.91E-06	3.68E-06	
Percent of Effluent Concentration Limit*	5.91E-01%	3.68E-01%	

C. DISSOLVED AND ENTRAINED GASES

Total Release: Ci	4.64E-05	NDA	16%
Average Diluted Concentration During Period: $\mu\text{Ci/mL}$	2.56E-11	NDA	
Percent of Effluent Concentration Limit*	1.28E-05%	--	

D. GROSS ALPHA RADIOACTIVITY

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

Waste Volume: Liters	7.21E+05	3.03E+05	5.7%
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F. VOLUME OF DILUTION WATER USED DURING PERIOD

Dilution Volume: Liters	1.81E+09	1.06E+09	10%
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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, 1997.

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

Table 2B
Pilgrim Nuclear Power Station
Effluent and Waste Disposal Report
Liquid Effluents
July-December 1996

Nuclide Released	Continuous Mode		Batch Mode	
	Jul-Sep 1996	Oct-Dec 1996	Jul-Sep 1996	Oct-Dec 1996

1. FISSION AND ACTIVATION PRODUCTS - Ci

Cr-51	N/A	N/A	NDA	NDA
Mn-54	N/A	N/A	3.90E-05	1.01E-04
Fe-55	N/A	N/A	5.02E-03	1.05E-03
Fe-59	N/A	N/A	1.63E-05	6.91E-07
Co-58	N/A	N/A	5.84E-07	NDA
Co-60	N/A	N/A	6.39E-04	6.33E-04
Zn-65	N/A	N/A	NDA	NDA
Sr-89	N/A	N/A	NDA	NDA
Sr-90	N/A	N/A	1.50E-06	6.17E-06
Zr/Nb-95	N/A	N/A	NDA	NDA
Mo-99/Tc-99m	N/A	N/A	1.04E-05	NDA
Ag-110m	N/A	N/A	NDA	NDA
Sb-124	N/A	N/A	NDA	NDA
I-131	N/A	N/A	NDA	6.11E-06
I-133	N/A	N/A	NDA	NDA
Cs-134	N/A	N/A	NDA	NDA
Cs-137	N/A	N/A	5.93E-04	8.64E-05
Ba/La-140	N/A	N/A	1.65E-04	NDA
Ce-141	N/A	N/A	NDA	NDA
Total for period	N/A	N/A	6.48E-03	1.88E-03

2. DISSOLVED AND ENTRAINED GASES - Ci

Xe-133	N/A	N/A	NDA	NDA
Xe-135	N/A	N/A	4.64E-05	NDA
Total for period	N/A	N/A	4.64E-05	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 $\mu\text{Ci/mL}$
 Iodines: 1E-06 $\mu\text{Ci/mL}$
 Noble Gases: 1E-05 $\mu\text{Ci/mL}$
 All Others: 5E-07 $\mu\text{Ci/mL}$

APPENDIX B

Atmospheric Dispersion and Deposition Factors

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Table B-1

Undepleted χ/Q Factors for Reactor Building VentRECo 1st Quarter 1996 General χ/Q 's: GROUND-LEVELGROUND RELEASE: GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION - (SEC/M3)

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	155	1.848E-05	5.636E-06	2.015E-06	1.094E-06	7.042E-07	3.730E-07	2.391E-07	1.702E-07
NNE	202	2.865E-05	8.553E-06	2.880E-06	1.575E-06	1.026E-06	5.585E-07	3.634E-07	2.617E-07
NE	182	3.406E-05	1.006E-05	3.336E-06	1.833E-06	1.170E-06	6.598E-07	4.318E-07	3.123E-07
ENE	185	2.729E-05	8.190E-06	2.774E-06	1.514E-06	9.862E-07	5.316E-07	3.439E-07	2.467E-07
E	295	3.136E-05	9.455E-06	3.295E-06	1.790E-06	1.159E-06	6.196E-07	3.995E-07	2.857E-07
ESE	228	2.476E-05	7.536E-06	2.663E-06	1.435E-06	9.237E-07	4.898E-07	3.145E-07	2.241E-07
SE	141	1.684E-05	5.221E-06	1.814E-06	9.752E-07	6.265E-07	3.313E-07	2.121E-07	1.507E-07
SSE	96	1.177E-05	3.662E-06	1.289E-06	6.874E-07	4.390E-07	2.305E-07	1.473E-07	1.046E-07
S	78	8.786E-06	2.747E-06	8.814E-07	4.713E-07	3.016E-07	1.585E-07	1.011E-07	7.161E-08
SSW	76	7.097E-06	2.185E-06	7.045E-07	3.788E-07	2.432E-07	1.285E-07	8.248E-08	5.874E-08
SW	62	5.763E-06	1.797E-06	5.623E-07	2.996E-07	1.919E-07	1.012E-07	6.483E-08	4.608E-08
WSW	44	4.111E-06	1.334E-06	4.340E-07	2.320E-07	1.478E-07	7.712E-08	4.903E-08	3.455E-08
W	23	2.079E-06	6.865E-07	2.132E-07	1.218E-07	7.639E-08	3.925E-08	2.258E-08	1.587E-08
WNW	19	2.000E-06	6.211E-07	2.256E-07	1.222E-07	7.862E-08	4.149E-08	2.917E-08	2.068E-08
NW	95	1.218E-05	3.650E-06	1.275E-06	6.954E-07	4.510E-07	2.416E-07	1.559E-07	1.117E-07
NNW	112	1.578E-05	4.656E-06	1.615E-06	8.808E-07	5.729E-07	3.093E-07	2.005E-07	1.440E-07
AVERAGE	1993	1.569E-05	4.749E-06	1.624E-06	8.816E-07	5.706E-07	3.057E-07	1.973E-07	1.412E-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	155	1.297E-07	1.031E-07	8.465E-08	7.100E-08	6.075E-08	3.415E-08	2.283E-08	1.298E-08
NNE	202	2.013E-07	1.615E-07	1.336E-07	1.129E-07	9.726E-08	5.590E-08	3.800E-08	2.213E-08
NE	182	2.411E-07	1.939E-07	1.608E-07	1.362E-07	1.176E-07	6.798E-08	4.644E-08	2.725E-08
ENE	185	1.894E-07	1.516E-07	1.253E-07	1.057E-07	9.093E-08	5.207E-08	3.532E-08	2.050E-08
E	295	2.187E-07	1.746E-07	1.439E-07	1.211E-07	1.039E-07	5.902E-08	3.975E-08	2.282E-08
ESE	228	1.708E-07	1.360E-07	1.118E-07	9.389E-08	8.040E-08	4.533E-08	3.033E-08	1.724E-08
SE	141	1.145E-07	9.092E-08	8.205E-08	6.887E-08	5.896E-08	3.021E-08	2.022E-08	1.149E-08
SSE	96	7.934E-08	6.293E-08	5.157E-08	4.324E-08	3.697E-08	2.075E-08	1.383E-08	7.808E-09
S	78	5.418E-08	4.289E-08	3.510E-08	2.940E-08	2.511E-08	1.405E-08	9.336E-09	5.241E-09
SSW	76	4.468E-08	3.552E-08	2.916E-08	2.448E-08	2.096E-08	1.180E-08	7.865E-09	4.434E-09
SW	62	3.497E-08	2.777E-08	2.279E-08	1.914E-08	1.639E-08	9.251E-09	6.188E-09	3.507E-09
WSW	44	2.592E-08	2.039E-08	1.827E-08	1.525E-08	1.299E-08	6.551E-09	4.287E-09	2.329E-09
W	23	1.188E-08	9.331E-09	7.595E-09	6.344E-09	5.009E-09	3.013E-09	1.988E-09	1.098E-09
WNW	19	1.566E-09	1.240E-09	9.223E-09	7.718E-09	6.590E-09	3.675E-09	2.431E-09	1.352E-09
NW	95	8.559E-08	6.842E-08	5.641E-08	4.751E-08	4.078E-08	2.318E-08	1.564E-08	9.006E-09
NNW	112	1.107E-07	8.873E-08	7.331E-08	6.185E-08	5.316E-08	3.033E-08	2.054E-08	1.192E-08
AVERAGE	1993	1.080E-07	8.625E-08	7.158E-08	6.029E-08	5.176E-08	2.920E-08	1.969E-08	1.132E-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	155	8.791E-09	6.539E-09	5.171E-09	4.249E-09	3.571E-09	3.079E-09	2.693E-09	
NNE	202	1.519E-08	1.140E-08	9.091E-09	7.514E-09	6.344E-09	5.482E-09	4.805E-09	
NE	182	1.877E-08	1.413E-08	1.129E-08	9.374E-09	7.899E-09	6.829E-09	5.989E-09	
ENE	185	1.405E-08	1.054E-08	8.387E-09	6.936E-09	5.854E-09	5.058E-09	4.433E-09	
E	295	1.555E-08	1.162E-08	9.224E-09	7.602E-09	6.405E-09	5.531E-09	4.845E-09	
ESE	228	1.170E-08	8.722E-09	6.907E-09	5.683E-09	4.785E-09	4.132E-09	3.621E-09	
SE	141	7.801E-09	5.814E-09	4.804E-09	3.788E-09	3.188E-09	2.750E-09	2.407E-09	
SSE	96	5.286E-09	3.932E-09	3.109E-09	2.556E-09	2.150E-09	1.856E-09	1.625E-09	
S	78	3.537E-09	2.625E-09	2.072E-09	1.701E-09	1.429E-09	1.232E-09	1.078E-09	
SSW	76	2.996E-09	2.225E-09	1.757E-09	1.443E-09	1.212E-09	1.045E-09	9.143E-10	
SW	62	2.382E-09	1.776E-09	1.407E-09	1.158E-09	9.753E-10	8.421E-10	7.380E-10	
WSW	44	1.541E-09	1.127E-09	8.794E-10	7.147E-10	5.951E-10	5.091E-10	4.426E-10	
W	23	7.375E-10	5.457E-10	4.297E-10	3.521E-10	2.954E-10	2.543E-10	2.225E-10	
WNW	19	9.048E-10	6.673E-10	5.241E-10	4.283E-10	3.583E-10	3.079E-10	2.686E-10	
NW	95	6.145E-09	4.596E-09	3.650E-09	3.009E-09	2.536E-09	2.190E-09	1.918E-09	
NNW	112	8.168E-09	6.130E-09	4.882E-09	4.034E-09	3.407E-09	2.946E-09	2.587E-09	
AVERAGE	1993	7.721E-09	5.775E-09	4.587E-09	3.762E-09	3.188E-09	2.753E-09	2.412E-09	

Table B-1

Undepleted χ/Q Factors for Reactor Building VentBECO 2nd Quarter 1996 General χ/Q 's: GROUND-LEVEL

SECTOR AVERAGE MODEL

GROUND RELEASE: GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION - (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	241	2.770E-05	8.574E-06	2.944E-06	1.579E-06	1.013E-06	5.390E-07	3.470E-07	2.476E-07
NNE	370	5.063E-05	1.525E-05	5.038E-06	2.686E-06	1.723E-06	9.430E-07	6.199E-07	4.491E-07
NE	241	4.554E-05	1.353E-05	4.328E-06	2.334E-06	1.514E-06	6.411E-07	5.566E-07	4.058E-07
NNE	175	3.752E-05	1.112E-05	3.754E-06	2.060E-06	1.344E-06	7.351E-07	4.798E-07	3.463E-07
E	152	2.071E-05	6.169E-06	2.095E-06	1.140E-06	7.412E-07	3.989E-07	2.581E-07	1.853E-07
ESE	88	1.147E-05	3.444E-06	1.146E-06	6.189E-07	4.013E-07	2.156E-07	1.395E-07	1.002E-07
SE	76	1.444E-05	4.412E-06	1.667E-06	9.040E-07	5.843E-07	3.119E-07	1.827E-07	1.306E-07
ESE	64	8.980E-06	2.847E-06	9.445E-07	4.523E-07	2.883E-07	1.515E-07	9.701E-08	6.893E-08
S	43	2.315E-06	6.620E-07	1.576E-07	7.920E-08	5.137E-08	2.816E-08	1.879E-08	1.387E-08
SSW	100	1.001E-05	3.181E-06	9.790E-07	5.134E-07	3.264E-07	1.706E-07	1.089E-07	7.711E-08
SW	69	8.359E-06	2.679E-06	8.412E-07	4.438E-07	2.822E-07	1.473E-07	9.393E-08	6.644E-08
WSW	122	1.868E-05	5.786E-06	1.847E-06	9.904E-07	6.331E-07	3.332E-07	2.135E-07	1.520E-07
W	115	2.008E-05	6.264E-06	1.988E-06	1.168E-06	7.455E-07	3.932E-07	2.291E-07	1.629E-07
WSW	80	1.244E-05	3.899E-06	1.353E-06	7.258E-07	4.653E-07	2.455E-07	1.729E-07	1.227E-07
NW	84	1.501E-05	4.646E-06	1.607E-06	8.679E-07	5.590E-07	2.968E-07	1.905E-07	1.357E-07
WNW	80	2.141E-05	6.482E-06	2.197E-06	1.196E-06	7.753E-07	4.207E-07	2.737E-07	1.968E-07
AVERAGE	2100	2.033E-05	6.184E-06	2.055E-06	1.110E-06	7.155E-07	3.857E-07	2.489E-07	1.788E-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	241	1.885E-07	1.500E-07	1.233E-07	1.037E-07	8.697E-08	5.044E-08	3.389E-08	1.938E-08
NNE	370	3.457E-07	2.776E-07	2.299E-07	1.947E-07	1.681E-07	9.701E-08	6.613E-08	3.874E-08
NE	241	3.142E-07	2.535E-07	2.108E-07	1.792E-07	1.552E-07	9.058E-08	6.225E-08	3.687E-08
NNE	175	2.668E-07	2.142E-07	1.773E-07	1.500E-07	1.293E-07	7.437E-08	5.064E-08	2.960E-08
E	152	1.425E-07	1.142E-07	9.439E-08	7.967E-08	6.853E-08	3.925E-08	2.688E-08	1.556E-08
ESE	88	7.697E-08	6.170E-08	5.102E-08	4.310E-08	3.710E-08	2.132E-08	1.452E-08	8.500E-09
SE	76	9.982E-08	7.964E-08	7.216E-08	6.075E-08	5.216E-08	2.969E-08	2.000E-08	1.148E-08
ESE	64	5.225E-08	4.148E-08	3.405E-08	2.865E-08	2.456E-08	1.396E-08	9.383E-09	5.357E-09
S	43	1.092E-08	8.952E-09	7.555E-09	6.514E-09	5.680E-09	3.415E-09	2.396E-09	1.463E-09
SSW	100	5.825E-08	4.611E-08	3.776E-08	3.170E-08	2.712E-08	1.528E-08	1.019E-08	5.750E-09
SW	69	5.008E-08	3.956E-08	3.234E-08	2.710E-08	2.316E-08	1.298E-08	8.602E-09	4.782E-09
WSW	122	1.158E-07	9.189E-08	6.297E-08	6.962E-08	5.960E-08	3.053E-08	2.043E-08	1.161E-08
W	115	1.237E-07	9.815E-08	8.047E-08	6.751E-08	5.776E-08	3.252E-08	2.172E-08	1.233E-08
WSW	80	9.306E-08	7.382E-08	5.502E-08	4.616E-08	3.951E-08	2.226E-08	1.487E-08	8.400E-09
NW	84	1.033E-07	8.215E-08	6.749E-08	5.671E-08	4.861E-08	2.751E-08	1.845E-08	1.050E-08
WNW	80	1.509E-07	1.208E-07	9.973E-08	8.419E-08	7.247E-08	4.151E-08	2.812E-08	1.627E-08
AVERAGE	2100	1.370E-07	1.096E-07	9.102E-08	7.683E-08	6.611E-08	3.766E-08	2.552E-08	1.479E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	34.95	40.00	45.00	50	
N	241	1.315E-08	9.847E-09	7.814E-09	6.437E-09	5.422E-09	4.679E-09	4.098E-09	
NNE	370	2.669E-08	2.012E-08	1.609E-08	1.334E-08	1.130E-08	9.791E-09	8.605E-09	
NE	241	2.553E-08	1.931E-08	1.549E-08	1.286E-08	1.090E-08	9.446E-09	8.301E-09	
NNE	175	2.033E-08	1.527E-08	1.218E-08	1.007E-08	8.507E-09	7.351E-09	6.443E-09	
E	152	1.070E-08	8.044E-09	6.416E-09	5.307E-09	4.485E-09	3.881E-09	3.406E-09	
ESE	88	5.861E-09	4.418E-09	3.530E-09	2.924E-09	2.474E-09	2.143E-09	1.882E-09	
SE	76	7.827E-09	5.850E-09	4.644E-09	3.826E-09	3.222E-09	2.780E-09	2.434E-09	
ESE	64	3.658E-09	2.740E-09	2.178E-09	1.798E-09	1.517E-09	1.311E-09	1.150E-09	
S	43	1.043E-09	8.059E-10	6.556E-10	5.520E-10	4.743E-10	4.163E-10	3.704E-10	
SSW	100	3.907E-09	2.916E-09	2.312E-09	1.905E-09	1.606E-09	1.388E-09	1.219E-09	
SW	69	3.218E-09	2.384E-09	1.879E-09	1.540E-09	1.293E-09	1.114E-09	9.743E-10	
WSW	122	7.873E-09	5.863E-09	4.641E-09	3.816E-09	3.209E-09	2.768E-09	2.423E-09	
W	115	8.356E-09	6.224E-09	4.927E-09	4.052E-09	3.409E-09	2.941E-09	2.575E-09	
WSW	80	5.684E-09	4.226E-09	3.341E-09	2.744E-09	2.306E-09	1.986E-09	1.737E-09	
NW	84	7.126E-09	5.310E-09	4.205E-09	3.458E-09	2.908E-09	2.507E-09	2.192E-09	
WNW	80	1.112E-08	8.331E-09	6.628E-09	5.470E-09	4.612E-09	3.981E-09	3.485E-09	
AVERAGE	2100	1.013E-08	7.604E-09	6.058E-09	5.007E-09	4.228E-09	3.655E-09	3.206E-09	

Table B-1

Undepleted χ/Q Factors for Reactor Building VentBECo 3rd Quarter 1996 General χ/Q 's: GROUND-LEVEL

SECTOR AVERAGE MODEL

GROUND RELEASE: GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION - (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	209	3.767E-05	1.146E-05	4.043E-06	2.214E-06	1.436E-06	7.672E-07	4.933E-07	3.518E-07
NNE	526	7.606E-05	2.283E-05	7.703E-06	4.199E-06	2.728E-06	1.487E-06	9.698E-07	6.990E-07
NE	351	8.061E-05	2.388E-05	7.590E-06	4.115E-06	2.679E-06	1.499E-06	9.945E-07	7.257E-07
NNE	149	3.741E-05	1.118E-05	3.708E-06	2.015E-06	1.307E-06	7.166E-07	4.699E-07	3.400E-07
E	102	2.051E-05	6.058E-06	2.053E-06	1.118E-06	7.264E-07	3.953E-07	2.577E-07	1.860E-07
ESE	60	1.219E-05	3.732E-06	1.300E-06	7.055E-07	4.564E-07	2.431E-07	1.564E-07	1.116E-07
SE	56	1.304E-05	4.027E-06	1.503E-06	8.129E-07	5.245E-07	2.823E-07	1.659E-07	1.186E-07
SSE	61	1.120E-05	3.486E-06	1.223E-06	6.006E-07	3.865E-07	2.047E-07	1.312E-07	9.325E-08
S	75	1.196E-05	3.737E-06	1.097E-06	5.956E-07	3.843E-07	2.038E-07	1.304E-07	9.256E-08
SSW	93	1.180E-05	3.686E-06	1.180E-06	6.337E-07	4.065E-07	2.143E-07	1.369E-07	9.710E-08
SW	74	1.169E-05	3.671E-06	1.151E-06	6.221E-07	4.015E-07	2.134E-07	1.370E-07	9.741E-08
WSW	112	2.512E-05	7.651E-06	2.463E-06	1.340E-06	8.651E-07	4.620E-07	2.974E-07	2.123E-07
W	126	2.321E-05	7.188E-06	2.325E-06	1.384E-06	8.891E-07	4.695E-07	2.729E-07	1.939E-07
WNW	78	2.029E-05	6.152E-06	2.185E-06	1.190E-06	7.683E-07	4.113E-07	2.918E-07	2.085E-07
NW	57	1.776E-05	5.302E-06	1.887E-06	1.043E-06	6.795E-07	3.652E-07	2.354E-07	1.684E-07
NNW	78	2.666E-05	7.827E-06	2.851E-06	1.582E-06	1.031E-06	5.539E-07	3.572E-07	2.557E-07
AVERAGE	2207	2.732E-05	8.240E-06	2.766E-06	1.511E-06	9.793E-07	5.305E-07	3.436E-07	2.470E-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	209	2.685E-07	2.138E-07	1.758E-07	1.477E-07	1.266E-07	7.155E-08	4.801E-08	2.738E-08
NNE	526	5.373E-07	4.307E-07	3.561E-07	3.010E-07	2.593E-07	1.490E-07	1.012E-07	5.678E-08
NE	351	5.624E-07	4.541E-07	3.778E-07	3.214E-07	2.785E-07	1.629E-07	1.121E-07	6.656E-08
NNE	149	2.621E-07	2.106E-07	1.745E-07	1.478E-07	1.275E-07	7.369E-08	5.028E-08	2.947E-08
E	102	1.434E-07	1.152E-07	9.535E-08	8.062E-08	6.946E-08	3.992E-08	2.720E-08	1.593E-08
ESE	60	8.514E-08	6.783E-08	5.579E-08	4.690E-08	4.022E-08	2.279E-08	1.531E-08	8.751E-09
SE	56	9.045E-08	7.206E-08	6.521E-08	5.492E-08	4.717E-08	2.685E-08	1.810E-08	1.039E-08
SSE	61	7.090E-08	5.620E-08	4.609E-08	3.867E-08	3.310E-08	1.864E-08	1.244E-08	7.012E-09
S	75	7.013E-08	5.558E-08	4.553E-08	3.817E-08	3.264E-08	1.834E-08	1.220E-08	6.839E-09
SSW	93	7.355E-08	5.828E-08	4.773E-08	4.000E-08	3.420E-08	1.918E-08	1.276E-08	7.160E-09
SW	74	7.389E-08	5.865E-08	4.812E-08	4.043E-08	3.464E-08	1.959E-08	1.307E-08	7.350E-09
WSW	112	1.619E-07	1.289E-07	1.165E-07	9.784E-08	8.384E-08	4.301E-08	2.862E-08	1.643E-08
W	126	1.478E-07	1.169E-07	9.578E-08	8.024E-08	6.860E-08	3.846E-08	2.565E-08	1.451E-08
WNW	78	1.592E-07	1.269E-07	9.483E-08	7.968E-08	6.830E-08	3.857E-08	2.586E-08	1.476E-08
NW	57	1.290E-07	1.030E-07	8.480E-08	7.130E-08	6.155E-08	3.463E-08	2.331E-08	1.338E-08
NNW	78	1.963E-07	1.569E-07	1.293E-07	1.086E-07	9.312E-08	5.260E-08	3.538E-08	2.034E-08
AVERAGE	2207	1.895E-07	1.516E-07	1.256E-07	1.060E-07	9.115E-08	5.186E-08	3.510E-08	2.031E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	34.9E	40.00	45.00	50.00	
N	209	1.857E-08	1.382E-08	1.093E-08	8.985E-09	7.549E-09	6.501E-09	5.680E-09	
NNE	526	4.027E-08	3.020E-08	2.406E-08	1.988E-08	1.678E-08	1.449E-08	1.269E-08	
NE	351	4.611E-08	3.488E-08	2.798E-08	2.324E-08	1.970E-08	1.706E-08	1.499E-08	
NNE	149	2.028E-08	1.526E-08	1.219E-08	1.010E-08	8.535E-09	7.380E-09	6.473E-09	
E	102	1.096E-08	8.248E-09	6.585E-09	5.452E-09	4.610E-09	3.990E-09	3.502E-09	
ESE	60	5.945E-09	4.432E-09	3.512E-09	2.889E-09	2.430E-09	2.094E-09	1.831E-09	
SE	56	7.076E-09	5.287E-09	4.199E-09	3.460E-09	2.914E-09	2.513E-09	2.199E-09	
SSE	61	4.734E-09	3.514E-09	2.774E-09	2.276E-09	1.910E-09	1.644E-09	1.436E-09	
S	75	4.601E-09	3.406E-09	2.683E-09	2.197E-09	1.841E-09	1.582E-09	1.380E-09	
SSW	93	4.836E-09	3.588E-09	2.832E-09	2.323E-09	1.950E-09	1.680E-09	1.469E-09	
SW	74	4.957E-09	3.676E-09	2.901E-09	2.378E-09	1.995E-09	1.714E-09	1.496E-09	
WSW	112	1.114E-08	8.292E-09	6.564E-09	5.396E-09	4.536E-09	3.910E-09	3.419E-09	
W	126	9.801E-09	7.277E-09	5.747E-09	4.716E-09	3.960E-09	3.411E-09	2.981E-09	
WNW	78	1.001E-08	7.449E-09	5.897E-09	4.849E-09	4.077E-09	3.514E-09	3.074E-09	
NW	57	9.091E-09	6.777E-09	5.370E-09	4.416E-09	3.713E-09	3.200E-09	2.797E-09	
NNW	78	1.382E-08	1.030E-08	8.163E-09	6.714E-09	5.645E-09	4.869E-09	4.257E-09	
AVERAGE	2207	1.389E-08	1.040E-08	8.275E-09	6.829E-09	5.759E-09	4.972E-09	4.355E-09	

Table B-1

Undepleted χ/Q Factors for Reactor Building VentNECo 4th Quarter 1986 General χ/Q 's: GROUND-LEVEL

SECTOR AVERAGE MODEL

GROUND RELEASE: GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION - (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	229	4.112E-05	1.219E-05	4.231E-06	2.352E-06	1.542E-06	8.363E-07	5.419E-07	3.892E-07
NNE	218	4.470E-05	1.318E-05	4.513E-06	2.514E-06	1.653E-06	9.019E-07	5.859E-07	4.215E-07
NE	234	5.262E-05	1.559E-05	5.014E-06	2.767E-06	1.820E-06	1.011E-06	6.652E-07	4.828E-07
NNE	252	4.658E-05	1.368E-05	4.793E-06	2.646E-06	1.726E-06	9.373E-07	6.090E-07	4.383E-07
E	238	2.984E-05	8.924E-06	3.127E-06	1.709E-06	1.109E-06	5.941E-07	3.831E-07	2.742E-07
ESE	145	1.883E-05	5.707E-06	1.981E-06	1.081E-06	7.009E-07	3.751E-07	2.415E-07	1.725E-07
SE	118	1.097E-05	3.374E-06	1.200E-06	6.473E-07	4.163E-07	2.202E-07	1.411E-07	1.003E-07
SSE	77	6.704E-06	2.095E-06	7.221E-07	3.034E-07	2.446E-07	1.284E-07	8.240E-08	5.862E-08
S	61	4.195E-06	1.331E-06	4.166E-07	2.222E-07	1.421E-07	7.466E-08	4.766E-08	3.374E-08
SSW	75	8.109E-06	2.545E-06	8.303E-07	4.454E-07	2.844E-07	1.490E-07	9.502E-08	6.728E-08
SW	96	9.943E-06	3.181E-06	1.057E-06	5.697E-07	3.635E-07	1.897E-07	1.203E-07	8.473E-08
WSW	98	1.094E-05	3.449E-06	1.129E-06	6.353E-07	3.860E-07	2.018E-07	1.284E-07	9.079E-08
W	101	1.323E-05	4.146E-06	1.369E-06	8.111E-07	5.185E-07	2.717E-07	1.573E-07	1.112E-07
WNW	41	8.630E-06	2.631E-06	9.539E-07	5.223E-07	3.375E-07	1.793E-07	1.266E-07	9.133E-08
NW	69	1.507E-05	4.527E-06	1.675E-06	9.207E-07	5.955E-07	3.165E-07	2.030E-07	1.446E-07
NNW	153	2.794E-05	8.305E-06	3.001E-06	1.663E-06	1.084E-06	5.822E-07	3.751E-07	2.681E-07
AVERAGE	2205	2.184E-05	6.553E-06	2.251E-06	1.241E-06	8.077E-07	4.356E-07	2.815E-07	2.017E-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	229	2.993E-07	2.398E-07	1.981E-07	1.670E-07	1.437E-07	8.212E-08	5.563E-08	3.222E-08
NNE	218	3.246E-07	2.605E-07	2.154E-07	1.819E-07	1.566E-07	8.987E-08	6.109E-08	3.557E-08
NE	234	3.735E-07	3.011E-07	2.501E-07	2.124E-07	1.838E-07	1.071E-07	7.353E-08	4.341E-08
NNE	252	3.375E-07	2.707E-07	2.237E-07	1.886E-07	1.622E-07	9.262E-08	6.279E-08	3.651E-08
E	238	2.102E-07	1.680E-07	1.385E-07	1.165E-07	1.000E-07	5.680E-08	3.833E-08	2.211E-08
ESE	145	1.318E-07	1.052E-07	8.659E-08	7.285E-08	6.251E-08	3.548E-08	2.390E-08	1.373E-08
SE	118	7.626E-08	6.058E-08	5.467E-08	4.586E-08	3.923E-08	2.004E-08	1.336E-08	7.538E-09
SSE	77	4.452E-08	3.537E-08	2.904E-08	2.439E-08	2.089E-08	1.180E-08	7.894E-09	4.474E-09
S	61	2.546E-08	2.013E-08	1.647E-08	1.381E-08	1.181E-08	6.625E-09	4.393E-09	2.448E-09
SSW	75	5.088E-08	4.025E-08	3.291E-08	2.753E-08	2.350E-08	1.310E-08	8.677E-09	4.841E-09
SW	96	6.367E-08	5.010E-08	4.077E-08	3.398E-08	2.891E-08	1.596E-08	1.046E-08	5.726E-09
WSW	98	6.856E-08	5.416E-08	4.865E-08	4.065E-08	3.467E-08	1.753E-08	1.159E-08	6.447E-09
W	101	8.407E-08	6.645E-08	5.428E-08	4.535E-08	3.867E-08	2.149E-08	1.421E-08	7.921E-09
WNW	41	6.864E-08	5.457E-08	4.071E-08	3.413E-08	2.920E-08	1.639E-08	1.093E-08	6.168E-09
NW	69	1.103E-07	8.771E-08	7.187E-08	6.029E-08	5.154E-08	2.884E-08	1.922E-08	1.087E-08
NNW	153	2.053E-07	1.639E-07	1.349E-07	1.133E-07	9.712E-08	5.484E-08	3.683E-08	2.108E-08
AVERAGE	2205	1.547E-07	1.236E-07	1.023E-07	8.617E-08	7.402E-08	4.191E-08	2.830E-08	1.632E-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	229	2.200E-08	1.645E-08	1.307E-08	1.077E-08	9.065E-09	7.814E-09	6.832E-09	
NNE	218	2.436E-08	1.826E-08	1.454E-08	1.200E-08	1.011E-08	8.723E-09	7.632E-09	
NE	234	2.897E-08	2.261E-08	1.809E-08	1.499E-08	1.268E-08	1.095E-08	9.602E-09	
NNE	252	2.498E-08	1.871E-08	1.489E-08	1.229E-08	1.036E-08	8.947E-09	7.836E-09	
E	238	1.509E-08	1.129E-08	8.969E-09	7.395E-09	6.231E-09	5.382E-09	4.713E-09	
ESE	145	9.357E-09	6.991E-09	5.548E-09	4.570E-09	3.848E-09	3.320E-09	2.906E-09	
SE	118	5.094E-09	3.784E-09	2.988E-09	2.454E-09	2.061E-09	1.777E-09	1.555E-09	
SSE	77	3.037E-09	2.264E-09	1.793E-09	1.476E-09	1.243E-09	1.073E-09	9.405E-10	
S	61	1.649E-09	1.223E-09	9.641E-10	7.909E-10	6.642E-10	5.722E-10	5.008E-10	
SSW	75	3.250E-09	2.402E-09	1.890E-09	1.547E-09	1.296E-09	1.115E-09	9.739E-10	
SW	96	3.798E-09	2.782E-09	2.175E-09	1.767E-09	1.472E-09	1.260E-09	1.096E-09	
WSW	98	4.321E-09	3.190E-09	2.508E-09	2.051E-09	1.717E-09	1.476E-09	1.288E-09	
W	101	5.310E-09	3.920E-09	3.081E-09	2.519E-09	2.109E-09	1.813E-09	1.582E-09	
WNW	41	4.155E-09	3.078E-09	2.426E-09	1.967E-09	1.666E-09	1.433E-09	1.250E-09	
NW	69	7.327E-09	5.428E-09	4.279E-09	3.506E-09	2.940E-09	2.530E-09	2.208E-09	
NNW	153	1.430E-08	1.064E-08	8.418E-09	6.917E-09	5.810E-09	5.005E-09	4.372E-09	
AVERAGE	2205	1.112E-08	8.314E-09	6.601E-09	5.439E-09	4.579E-09	3.950E-09	3.456E-09	

Table B-1

Undepicted χ/Q Factors for Reactor Building VentBRCO 1996 General χ/Q 's: GROUND-LEVEL

SECTOR AVERAGE MODEL

GROUND RELEASE: GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION (SPLIT-H MODEL) ~ (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	834	3.161E-05	9.570E-06	3.345E-06	1.831E-06	1.188E-06	6.364E-07	4.102E-07	2.932E-07
NNE	1316	5.054E-05	1.511E-05	5.088E-06	2.774E-06	1.803E-06	9.833E-07	6.417E-07	4.629E-07
NE	1008	5.378E-05	1.594E-05	5.120E-06	2.791E-06	1.822E-06	1.013E-06	6.692E-07	4.868E-07
NNE	761	3.744E-05	1.111E-05	3.782E-06	2.072E-06	1.350E-06	7.350E-07	4.789E-07	3.452E-07
E	787	2.552E-05	7.625E-06	2.633E-06	1.434E-06	9.307E-07	5.003E-07	3.235E-07	2.321E-07
ESE	521	1.668E-05	5.065E-06	1.758E-06	9.525E-07	6.157E-07	3.283E-07	2.113E-07	1.509E-07
SE	391	1.374E-05	4.233E-06	1.465E-06	7.910E-07	5.006E-07	2.713E-07	1.744E-07	1.244E-07
SSE	298	9.156E-06	2.863E-06	9.896E-07	5.280E-07	3.378E-07	1.779E-07	1.139E-07	8.093E-08
S	257	6.515E-06	2.027E-06	6.367E-07	3.422E-07	2.199E-07	1.163E-07	7.453E-08	5.297E-08
SSW	344	9.301E-06	2.914E-06	9.283E-07	4.954E-07	3.168E-07	1.665E-07	1.064E-07	7.544E-08
SW	301	9.026E-06	2.860E-06	9.121E-07	4.889E-07	3.131E-07	1.647E-07	1.051E-07	7.445E-08
WSW	376	1.493E-05	4.621E-06	1.490E-06	8.037E-07	5.155E-07	2.725E-07	1.747E-07	1.242E-07
W	365	1.498E-05	4.640E-06	1.499E-06	8.866E-07	5.671E-07	2.986E-07	1.735E-07	1.231E-07
WNW	218	1.104E-05	3.387E-06	1.201E-06	6.521E-07	4.202E-07	2.236E-07	1.580E-07	1.126E-07
NW	305	1.508E-05	4.552E-06	1.619E-06	8.366E-07	5.745E-07	3.067E-07	1.973E-07	1.409E-07
NNW	423	2.315E-05	6.876E-06	2.439E-06	1.343E-06	8.742E-07	4.710E-07	3.045E-07	2.182E-07
AVERAGE	8505	2.140E-05	6.462E-06	2.182E-06	1.192E-06	7.723E-07	4.166E-07	2.698E-07	1.936E-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	834	2.242E-07	1.789E-07	1.473E-07	1.239E-07	1.063E-07	6.031E-08	4.060E-08	2.328E-08
NNE	1316	3.561E-07	2.857E-07	2.363E-07	1.998E-07	1.722E-07	9.902E-08	6.732E-08	3.923E-08
NE	1008	3.769E-07	3.039E-07	2.526E-07	2.147E-07	1.858E-07	1.083E-07	7.441E-08	4.402E-08
NNE	761	2.658E-07	2.133E-07	1.764E-07	1.491E-07	1.284E-07	7.370E-08	5.011E-08	2.922E-08
E	787	1.781E-07	1.426E-07	1.177E-07	9.919E-08	8.523E-08	4.861E-08	3.290E-08	1.905E-08
ESE	521	1.153E-07	9.197E-08	7.571E-08	6.370E-08	5.464E-08	3.100E-08	2.087E-08	1.197E-08
SE	391	9.472E-08	7.537E-08	6.814E-08	5.728E-08	4.910E-08	2.527E-08	1.696E-08	9.675E-09
SSE	298	6.141E-08	4.874E-08	3.998E-08	3.357E-08	2.873E-08	1.621E-08	1.083E-08	6.132E-09
S	257	4.019E-08	3.190E-08	2.618E-08	2.198E-08	1.882E-08	1.051E-08	7.084E-09	3.999E-09
SSW	344	5.713E-08	4.527E-08	3.708E-08	3.108E-08	2.657E-08	1.491E-08	9.921E-09	5.574E-09
SW	301	5.624E-08	4.448E-08	3.638E-08	3.048E-08	2.605E-08	1.459E-08	9.677E-09	5.394E-09
WSW	376	9.440E-08	7.495E-08	6.761E-08	5.669E-08	4.850E-08	2.478E-08	1.653E-08	9.347E-09
W	365	9.333E-08	7.398E-08	6.058E-08	5.074E-08	4.336E-08	2.429E-08	1.617E-08	9.119E-09
WNW	218	8.576E-08	6.820E-08	5.091E-08	4.273E-08	3.659E-08	2.062E-08	1.378E-08	7.819E-09
NW	305	1.076E-07	8.578E-08	7.055E-08	5.927E-08	5.079E-08	2.869E-08	1.925E-08	1.099E-08
NNW	423	1.674E-07	1.338E-07	1.103E-07	9.285E-08	7.969E-08	4.522E-08	3.049E-08	1.755E-08
AVERAGE	8505	1.484E-07	1.187E-07	9.835E-08	8.294E-08	7.130E-08	4.039E-08	2.731E-08	1.577E-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	834	1.584E-08	1.181E-08	9.367E-09	7.708E-09	6.485E-09	5.590E-09	4.888E-09	
NNE	1316	2.691E-08	2.021E-08	1.612E-08	1.332E-08	1.125E-08	9.723E-09	8.523E-09	
NE	1008	3.044E-08	2.299E-08	1.842E-08	1.528E-08	1.294E-08	1.120E-08	9.831E-09	
NNE	761	2.005E-08	1.505E-08	1.200E-08	9.918E-09	8.373E-09	7.235E-09	6.341E-09	
E	787	1.304E-08	9.777E-09	7.780E-09	6.424E-09	5.420E-09	4.685E-09	4.107E-09	
ESE	521	8.158E-09	6.097E-09	4.840E-09	3.988E-09	3.360E-09	2.901E-09	2.542E-09	
SE	391	5.575E-09	4.904E-09	3.887E-09	3.189E-09	2.692E-09	2.322E-09	2.032E-09	
SSE	298	4.158E-09	3.097E-09	2.451E-09	2.016E-09	1.696E-09	1.463E-09	1.281E-09	
S	257	2.708E-09	2.015E-09	1.594E-09	1.310E-09	1.102E-09	9.503E-10	8.320E-10	
SSW	344	3.764E-09	2.795E-09	2.207E-09	1.812E-09	1.523E-09	1.313E-09	1.149E-09	
SW	301	3.624E-09	2.680E-09	2.110E-09	1.727E-09	1.447E-09	1.244E-09	1.086E-09	
WSW	376	6.316E-09	4.691E-09	3.705E-09	3.042E-09	2.554E-09	2.200E-09	1.923E-09	
W	365	6.156E-09	4.569E-09	3.607E-09	2.960E-09	2.485E-09	2.141E-09	1.872E-09	
WNW	218	5.289E-09	3.931E-09	3.107E-09	2.552E-09	2.143E-09	1.846E-09	1.614E-09	
NW	305	7.458E-09	5.554E-09	4.395E-09	3.614E-09	3.038E-09	2.618E-09	2.289E-09	
NNW	423	1.195E-08	8.926E-09	7.081E-09	5.831E-09	4.908E-09	4.235E-09	3.705E-09	
AVERAGE	8505	1.078E-08	8.069E-09	6.417E-09	5.294E-09	4.464E-09	3.854E-09	3.376E-09	

Table B-2

Depleted γ/Q Factors for Reactor Building Vent

BECO 1st Quarter 1996 General K/Q's: GROUND-LEVEL

SECTOR AVERAGE MODEL

GROUND RELEASE: GROUND-LEVEL AVERAGE CH1/Q AFTER DEPLETION (REGULATORY GUIDE 1.111 DEPLETION MODEL) - (SEC/HR)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	155	1.782E-05	5.354E-06	1.842E-06	9.749E-07	6.174E-07	3.160E-07	1.991E-07	1.378E-07
NNE	202	2.763E-05	8.124E-06	2.632E-06	1.403E-06	8.919E-07	4.763E-07	3.010E-07	2.119E-07
NE	182	3.285E-05	9.557E-06	3.049E-06	1.633E-06	1.052E-06	5.625E-07	3.576E-07	2.528E-07
NNE	185	1.632E-05	7.780E-06	2.535E-06	1.349E-06	8.646E-07	4.532E-07	2.849E-07	1.997E-07
E	295	3.024E-05	8.981E-06	3.012E-06	1.595E-06	1.016E-06	5.282E-07	3.309E-07	2.313E-07
ESE	228	2.387E-05	7.159E-06	2.434E-06	1.279E-06	8.098E-07	4.175E-07	2.605E-07	1.815E-07
SE	141	1.624E-05	4.959E-06	1.658E-06	8.691E-07	5.492E-07	2.824E-07	1.757E-07	1.220E-07
SSE	96	1.135E-05	3.479E-06	1.178E-06	6.126E-07	3.849E-07	1.965E-07	1.221E-07	8.468E-08
S	78	8.473E-06	2.610E-06	8.055E-07	4.200E-07	2.644E-07	1.351E-07	8.375E-08	5.798E-08
SSW	76	6.844E-06	2.075E-06	6.439E-07	3.376E-07	2.132E-07	1.095E-07	6.832E-08	4.755E-08
SW	62	5.557E-06	1.707E-06	5.139E-07	2.670E-07	1.683E-07	8.630E-08	5.370E-08	3.730E-08
WSW	44	3.965E-06	1.267E-06	3.967E-07	2.067E-07	1.296E-07	6.575E-08	4.061E-08	2.797E-08
W	23	2.005E-06	6.521E-07	1.948E-07	1.089E-07	6.697E-08	3.346E-08	1.871E-08	1.285E-08
WNW	19	1.929E-06	5.899E-07	2.062E-07	1.089E-07	6.892E-08	3.537E-08	2.416E-08	1.674E-08
NW	95	1.175E-06	3.467E-06	1.165E-06	6.197E-07	3.954E-07	2.060E-07	1.292E-07	9.040E-08
NNW	112	1.522E-06	4.422E-06	1.476E-06	7.849E-07	5.022E-07	2.637E-07	1.660E-07	1.166E-07
AVERAGE	1993	1.513E-05	4.511E-06	1.484E-06	7.856E-07	5.002E-07	2.606E-07	1.634E-07	1.143E-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	155	1.031E-07	8.068E-08	6.525E-08	5.405E-08	4.568E-08	2.413E-08	1.536E-08	8.107E-09
NNE	202	1.601E-07	1.263E-07	1.030E-07	8.595E-08	7.312E-08	3.950E-08	2.557E-08	1.382E-08
NE	182	1.917E-07	1.517E-07	1.239E-07	1.037E-07	8.838E-08	4.803E-08	3.126E-08	1.702E-08
NNE	185	1.506E-07	1.186E-07	9.655E-08	8.047E-08	6.837E-08	3.679E-08	2.376E-08	1.280E-08
E	295	1.739E-07	1.366E-07	1.109E-07	9.220E-08	7.814E-08	4.170E-08	2.674E-08	1.425E-08
ESE	228	1.358E-07	1.064E-07	8.615E-08	7.147E-08	6.045E-08	3.203E-08	2.041E-08	1.077E-08
SE	141	9.104E-08	7.113E-08	6.325E-08	5.243E-08	4.433E-08	2.135E-08	1.360E-08	7.178E-09
SSE	96	6.308E-08	4.923E-08	3.975E-08	3.291E-08	2.779E-08	1.466E-08	9.303E-09	4.877E-09
S	78	4.308E-08	3.356E-08	2.706E-08	2.238E-08	1.888E-08	9.927E-09	6.261E-09	3.274E-09
SSW	76	3.553E-08	2.779E-08	2.248E-08	1.864E-08	1.576E-08	8.335E-09	5.291E-09	2.770E-09
SW	62	2.781E-08	2.172E-08	1.757E-08	1.457E-08	1.232E-08	6.536E-09	4.163E-09	2.191E-09
WSW	44	2.061E-08	1.595E-08	1.408E-08	1.161E-08	9.769E-09	4.628E-09	2.884E-09	1.455E-09
W	23	9.445E-09	7.300E-09	5.854E-09	4.830E-09	4.066E-09	2.129E-09	1.337E-09	6.859E-10
WNW	19	1.245E-08	9.701E-09	7.109E-09	5.875E-09	4.955E-09	2.597E-09	1.635E-09	8.443E-10
NW	95	6.805E-08	5.853E-08	4.349E-08	3.616E-08	3.066E-08	1.638E-08	1.052E-08	5.626E-09
NNW	112	8.805E-08	6.942E-08	5.651E-08	4.708E-08	3.997E-08	2.143E-08	1.382E-08	7.445E-09
AVERAGE	1993	6.589E-08	6.748E-08	5.518E-08	4.589E-08	3.892E-08	2.063E-08	1.324E-08	7.070E-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	155	5.117E-09	3.591E-09	2.702E-09	2.127E-09	1.719E-09	1.433E-09	1.214E-09	
NNE	202	8.839E-09	6.262E-09	4.751E-09	3.762E-09	3.054E-09	2.551E-09	2.166E-09	
NE	182	1.092E-08	7.758E-09	5.898E-09	4.678E-09	3.802E-09	3.174E-09	2.699E-09	
NNE	185	8.178E-09	5.790E-09	4.388E-09	3.472E-09	2.818E-09	2.354E-09	1.998E-09	
E	295	9.051E-09	6.382E-09	4.820E-09	3.806E-09	3.083E-09	2.574E-09	2.184E-09	
ESE	228	6.812E-09	4.790E-09	3.609E-09	2.845E-09	2.303E-09	1.923E-09	1.632E-09	
SE	141	4.541E-09	3.193E-09	2.406E-09	1.896E-09	1.534E-09	1.279E-09	1.085E-09	
SSE	96	3.077E-09	2.159E-09	1.625E-09	1.280E-09	1.035E-09	8.635E-10	7.327E-10	
S	78	2.059E-09	1.442E-09	1.083E-09	8.514E-10	6.877E-10	5.731E-10	4.859E-10	
SSW	76	1.744E-09	1.222E-09	9.181E-10	7.221E-10	5.834E-10	4.862E-10	4.121E-10	
SW	62	1.386E-09	9.752E-10	7.352E-10	5.798E-10	4.695E-10	3.918E-10	3.326E-10	
WSW	44	8.973E-10	6.190E-10	4.596E-10	3.578E-10	2.895E-10	2.369E-10	1.995E-10	
W	23	4.293E-10	2.997E-10	2.246E-10	1.763E-10	1.422E-10	1.183E-10	1.003E-10	
WNW	19	5.267E-10	3.664E-10	2.739E-10	2.144E-10	1.725E-10	1.433E-10	1.211E-10	
NW	95	3.577E-09	2.524E-09	1.907E-09	1.506E-09	1.221E-09	1.019E-09	8.647E-10	
NNW	112	4.754E-09	3.366E-09	2.551E-09	2.020E-09	1.640E-09	1.372E-09	1.166E-09	
AVERAGE	1993	4.494E-09	3.171E-09	2.397E-09	1.893E-09	1.534E-09	1.281E-09	1.087E-09	

Table B-2

Depleted χ/Q Factors for Reactor Building Vent

BECo 2nd Quarter 1996 General X/Q's: GROUND-LEVEL
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	241	2.672E-05	8.164E-06	2.690E-06	1.407E-06	8.885E-07	4.595E-07	2.874E-07	2.004E-07
NNE	370	4.882E-05	1.446E-05	4.604E-06	2.393E-06	1.511E-06	8.039E-07	5.135E-07	3.636E-07
NE	241	4.392E-05	1.285E-05	3.956E-06	2.080E-06	1.327E-06	7.171E-07	4.613E-07	3.285E-07
NNE	175	5.618E-05	1.057E-05	3.431E-06	1.836E-06	1.178E-06	6.267E-07	3.974E-07	2.803E-07
E	152	1.998E-05	5.860E-06	1.915E-06	1.016E-06	6.499E-07	3.401E-07	2.138E-07	1.500E-07
ESE	88	1.106E-05	3.272E-06	1.047E-06	5.815E-07	3.518E-07	1.838E-07	1.156E-07	8.108E-08
SE	76	1.393E-05	4.191E-06	1.524E-06	8.056E-07	5.123E-07	2.659E-07	1.513E-07	1.057E-07
SSE	64	8.660E-06	2.704E-06	8.632E-07	4.030E-07	2.527E-07	1.292E-07	8.036E-08	5.580E-08
S	43	2.233E-06	6.288E-07	1.440E-07	7.058E-08	4.504E-08	2.400E-08	1.556E-08	1.123E-08
SSW	100	9.658E-06	3.022E-06	8.948E-07	4.575E-07	2.861E-07	1.455E-07	9.018E-08	6.242E-08
SW	69	8.062E-06	2.544E-06	7.689E-07	3.955E-07	2.474E-07	1.256E-07	7.780E-08	5.379E-08
WSW	122	1.801E-05	5.496E-06	1.688E-06	8.825E-07	5.550E-07	2.840E-07	1.769E-07	1.230E-07
W	115	1.937E-05	5.950E-06	1.817E-06	1.041E-06	6.536E-07	3.352E-07	1.898E-07	1.319E-07
WNW	80	1.200E-05	3.704E-06	1.237E-06	6.468E-07	4.079E-07	2.093E-07	1.431E-07	9.935E-08
NW	84	1.448E-05	4.413E-06	1.469E-06	7.734E-07	4.901E-07	2.530E-07	1.578E-07	1.059E-07
NNW	80	2.065E-05	6.157E-06	2.008E-06	1.066E-06	6.797E-07	3.586E-07	2.267E-07	1.593E-07
AVERAGE	2100	1.961E-05	5.874E-06	1.879E-06	9.891E-07	6.273E-07	3.288E-07	2.062E-07	1.448E-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	241	1.499E-07	1.174E-07	9.508E-08	7.897E-08	6.689E-08	3.564E-08	2.280E-08	1.210E-08
NNE	370	2.749E-07	2.172E-07	1.772E-07	1.482E-07	1.264E-07	6.854E-08	4.449E-08	2.420E-08
NE	241	2.498E-07	1.983E-07	1.625E-07	1.364E-07	1.167E-07	6.400E-08	4.188E-08	2.303E-08
NNE	175	2.122E-07	1.676E-07	1.367E-07	1.142E-07	9.718E-08	5.255E-08	3.407E-08	1.849E-08
E	152	1.133E-07	8.835E-08	7.276E-08	6.065E-08	5.153E-08	2.773E-08	1.795E-08	9.719E-09
ESE	88	6.121E-08	4.827E-08	3.933E-08	3.281E-08	2.790E-08	1.506E-08	9.771E-09	5.310E-09
SE	76	7.937E-08	6.231E-08	5.562E-08	4.625E-08	3.922E-08	2.097E-08	1.346E-08	7.173E-09
SSE	64	4.155E-08	3.245E-08	2.625E-08	2.181E-08	1.847E-08	9.862E-09	6.312E-09	3.468E-09
S	43	8.683E-09	7.003E-09	5.824E-09	4.959E-09	4.270E-09	2.413E-09	1.612E-09	9.138E-10
SSW	100	4.632E-08	3.607E-08	2.911E-08	2.413E-08	2.039E-08	1.080E-08	6.858E-09	3.592E-09
SW	69	3.982E-08	3.095E-08	2.493E-08	2.063E-08	1.741E-08	9.174E-09	5.787E-09	2.987E-09
WSW	122	9.193E-08	7.189E-08	6.396E-08	5.300E-08	4.481E-08	2.157E-08	1.374E-08	7.252E-09
W	115	9.834E-08	7.678E-08	6.203E-08	5.139E-08	4.344E-08	2.298E-08	1.462E-08	7.701E-09
WNW	80	7.400E-08	5.775E-08	4.241E-08	3.514E-08	2.971E-08	1.573E-08	1.000E-08	5.247E-09
NW	84	8.212E-08	6.427E-08	5.202E-08	4.317E-08	3.655E-08	1.943E-08	1.241E-08	6.558E-09
NNW	80	1.200E-07	9.450E-08	7.688E-08	6.409E-08	5.448E-08	2.933E-08	1.891E-08	1.016E-08
AVERAGE	2100	1.090E-07	8.575E-08	7.016E-08	5.849E-08	4.971E-08	2.661E-08	1.717E-08	9.237E-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	241	7.676E-09	5.408E-09	4.083E-09	3.223E-09	2.610E-09	2.177E-09	1.647E-09	
NNE	370	1.554E-08	1.105E-08	8.410E-09	6.681E-09	5.441E-09	4.556E-09	3.879E-09	
NE	241	1.486E-08	1.060E-08	8.092E-09	6.439E-09	5.249E-09	4.395E-09	3.741E-09	
NNE	175	1.183E-08	8.387E-09	6.366E-09	5.043E-09	4.095E-09	3.421E-09	2.904E-09	
E	152	6.226E-09	4.417E-09	3.353E-09	2.657E-09	2.159E-09	1.806E-09	1.535E-09	
ESE	88	3.412E-09	2.426E-09	1.845E-09	1.464E-09	1.191E-09	9.970E-10	8.482E-10	
SE	76	4.556E-09	3.212E-09	2.427E-09	1.915E-09	1.551E-09	1.294E-09	1.097E-09	
SSE	64	2.129E-09	1.504E-09	1.138E-09	9.000E-10	7.304E-10	6.101E-10	5.186E-10	
S	43	6.070E-10	4.425E-10	3.426E-10	2.763E-10	2.283E-10	1.937E-10	1.670E-10	
SSW	100	2.274E-09	1.601E-09	1.208E-09	9.535E-10	7.731E-10	6.460E-10	5.493E-10	
SW	69	1.873E-09	1.309E-09	9.818E-10	7.712E-10	6.224E-10	5.182E-10	4.392E-10	
WSW	122	4.583E-09	3.220E-09	2.425E-09	1.910E-09	1.545E-09	1.288E-09	1.092E-09	
W	115	4.865E-09	3.418E-09	2.575E-09	2.029E-09	1.641E-09	1.368E-09	1.161E-09	
WNW	80	3.309E-09	2.321E-09	1.746E-09	1.374E-09	1.110E-09	9.243E-10	7.830E-10	
NW	84	4.148E-09	2.916E-09	2.197E-09	1.731E-09	1.400E-09	1.166E-09	9.882E-10	
NNW	80	6.475E-09	4.575E-09	3.464E-09	2.739E-09	2.220E-09	1.852E-09	1.571E-09	
AVERAGE	2100	5.898E-09	4.176E-09	3.166E-09	2.507E-09	2.035E-09	1.701E-09	1.445E-09	

Table B-2

Depleted χ/Q Factors for Reactor Building Vent

LECo 3rd Quarter 1996 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	209	3.633E-05	1.068E-05	3.695E-06	1.973E-06	1.259E-06	6.540E-07	4.086E-07	2.848E-07
NNE	526	7.335E-05	2.169E-05	7.040E-06	3.742E-06	2.392E-06	1.267E-06	3.033E-07	5.659E-07
NE	351	7.775E-05	2.260E-05	6.937E-06	3.667E-06	2.349E-06	1.278E-06	8.238E-07	5.875E-07
NNE	149	3.607E-05	1.062E-05	3.389E-06	1.795E-06	1.146E-06	6.109E-07	3.892E-07	2.753E-07
E	102	1.978E-05	5.754E-06	1.876E-06	9.964E-07	6.360E-07	3.370E-07	2.135E-07	1.506E-07
ESE	60	1.175E-05	3.545E-06	1.188E-06	6.295E-07	4.001E-07	2.073E-07	1.295E-07	9.034E-08
SE	56	1.257E-05	3.825E-06	1.374E-06	7.244E-07	4.598E-07	2.407E-07	1.374E-07	9.605E-08
SSE	61	1.080E-05	3.511E-06	1.118E-06	5.352E-07	3.389E-07	1.745E-07	1.087E-07	7.549E-08
S	75	1.153E-05	3.549E-06	1.003E-06	5.308E-07	3.369E-07	1.738E-07	1.060E-07	7.493E-08
SSW	93	1.138E-05	3.501E-06	1.079E-06	5.648E-07	3.564E-07	1.827E-07	1.134E-07	7.861E-08
SW	74	1.127E-05	3.487E-06	1.052E-06	5.543E-07	3.520E-07	1.819E-07	1.135E-07	7.886E-08
WSW	112	2.423E-05	7.267E-06	2.251E-06	1.194E-06	7.584E-07	3.939E-07	2.464E-07	1.718E-07
W	126	2.238E-05	6.799E-06	2.125E-06	1.234E-06	7.795E-07	4.002E-07	2.261E-07	1.569E-07
WNW	78	1.957E-05	5.844E-06	1.997E-06	1.061E-06	6.736E-07	3.506E-07	2.417E-07	1.688E-07
NW	57	1.713E-05	5.036E-06	1.725E-06	9.293E-07	5.958E-07	3.114E-07	1.950E-07	1.363E-07
NNW	78	2.571E-05	7.435E-06	2.606E-06	1.410E-06	9.038E-07	4.722E-07	2.959E-07	2.070E-07
AVERAGE	2207	2.635E-05	7.827E-06	2.528E-06	1.346E-06	8.585E-07	4.523E-07	2.846E-07	2.000E-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	209	2.135E-07	1.673E-07	1.355E-07	1.124E-07	9.518E-08	5.056E-08	3.230E-08	1.710E-08
NNE	526	4.272E-07	3.370E-07	2.745E-07	2.291E-07	1.950E-07	1.053E-07	6.806E-08	3.672E-08
NE	351	4.472E-07	3.552E-07	2.912E-07	2.447E-07	2.094E-07	1.151E-07	7.543E-08	4.158E-08
NNE	149	2.084E-07	1.648E-07	1.345E-07	1.125E-07	9.590E-08	5.206E-08	3.383E-08	1.841E-08
E	102	1.140E-07	9.011E-08	7.350E-08	6.137E-08	5.223E-08	2.821E-08	1.822E-08	9.948E-09
ESE	60	6.770E-08	5.307E-08	4.300E-08	3.570E-08	3.024E-08	1.610E-08	1.030E-08	5.466E-09
SE	56	7.192E-08	5.637E-08	5.027E-08	4.181E-08	3.547E-08	1.897E-08	1.217E-08	6.488E-09
SSE	61	5.629E-08	4.397E-08	3.553E-08	2.944E-08	2.489E-08	1.317E-08	8.367E-09	4.380E-09
S	75	5.576E-08	4.348E-08	3.509E-08	2.905E-08	2.454E-08	1.296E-08	8.205E-09	4.272E-09
SSW	93	5.848E-08	4.560E-08	3.679E-08	3.045E-08	2.571E-08	1.355E-08	8.583E-09	4.478E-09
SW	74	5.875E-08	4.588E-08	3.709E-08	3.078E-08	2.605E-08	1.364E-08	8.794E-09	4.591E-09
WSW	112	1.287E-07	1.008E-07	8.980E-08	7.448E-08	6.303E-08	3.039E-08	1.939E-08	1.026E-08
W	126	1.171E-07	9.143E-08	7.383E-08	6.108E-08	5.158E-08	2.717E-08	1.725E-08	9.061E-09
WNW	78	1.266E-07	9.925E-08	7.310E-08	6.066E-08	5.135E-08	2.725E-08	1.740E-08	9.217E-09
NW	57	1.025E-07	8.056E-08	6.537E-08	5.428E-08	4.598E-08	2.447E-08	1.568E-08	8.357E-09
NNW	78	1.561E-07	1.228E-07	9.965E-08	8.269E-08	7.002E-08	3.716E-08	2.380E-08	1.271E-08
AVERAGE	2207	1.506E-07	1.186E-07	9.680E-08	8.066E-08	6.854E-08	3.664E-08	2.362E-08	1.269E-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	209	1.081E-08	7.580E-09	5.714E-09	4.498E-09	3.634E-09	3.025E-09	2.560E-09	
NNE	526	2.344E-08	1.659E-08	1.257E-08	9.951E-09	8.075E-09	6.741E-09	5.722E-09	
NE	351	2.684E-08	1.915E-08	1.462E-08	1.164E-08	9.485E-09	7.939E-09	6.756E-09	
NNE	149	1.180E-08	8.382E-09	6.372E-09	5.054E-09	4.109E-09	3.434E-09	2.918E-09	
E	102	6.379E-09	4.529E-09	3.441E-09	2.729E-09	2.219E-09	1.857E-09	1.579E-09	
ESE	60	3.461E-09	2.434E-09	1.835E-09	1.446E-09	1.170E-09	9.743E-10	8.254E-10	
SE	56	4.119E-09	2.903E-09	2.194E-09	1.732E-09	1.403E-09	1.169E-09	9.911E-10	
SSE	61	2.756E-09	1.930E-09	1.450E-09	1.139E-09	9.194E-10	7.649E-10	6.473E-10	
S	75	2.678E-09	1.870E-09	1.402E-09	1.100E-09	8.862E-10	7.361E-10	6.221E-10	
SSW	93	2.815E-09	1.970E-09	1.480E-09	1.163E-09	9.389E-10	7.818E-10	6.622E-10	
SW	74	2.885E-09	2.019E-09	1.516E-09	1.191E-09	9.601E-10	7.977E-10	6.745E-10	
WSW	112	6.484E-09	4.554E-09	3.430E-09	2.701E-09	2.184E-09	1.819E-09	1.541E-09	
W	126	5.705E-09	3.996E-09	3.003E-09	2.361E-09	1.906E-09	1.587E-09	1.344E-09	
WNW	78	5.824E-09	4.091E-09	3.082E-09	2.427E-09	1.962E-09	1.635E-09	1.385E-09	
NW	57	5.282E-09	3.722E-09	2.806E-09	2.211E-09	1.787E-09	1.489E-09	1.261E-09	
NNW	78	8.047E-09	5.659E-09	4.266E-09	3.361E-09	2.717E-09	2.265E-09	1.919E-09	
AVERAGE	2207	8.083E-09	5.712E-09	4.324E-09	3.419E-09	2.772E-09	2.313E-09	1.963E-09	

Table B-2

Depleted χ/Q Factors for Reactor Building Vent

BECo 4th Quarter 1996 General χ/Q 's: GROUND-LEVEL
GROUND RELEASE: GROUND-LEVEL AVERAGE χ/Q AFTER DEPLETION (REGULATORY GUIDE 1.111 DEPLETION MODEL) - (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	229	3.966E-05	1.157E-05	3.867E-06	2.096E-06	1.352E-06	7.129E-07	4.488E-07	3.150E-07
NNE	218	4.311E-05	1.252E-05	4.124E-06	2.240E-06	1.449E-06	7.689E-07	4.852E-07	3.412E-07
NE	234	5.074E-05	1.481E-05	4.583E-06	2.466E-06	1.596E-06	8.620E-07	5.510E-07	3.908E-07
NNE	252	4.492E-05	1.299E-05	4.380E-06	2.358E-06	1.513E-06	7.991E-07	5.044E-07	3.548E-07
E	238	2.878E-05	8.478E-06	2.858E-06	1.523E-06	9.723E-07	5.065E-07	3.173E-07	2.220E-07
ESE	145	1.816E-05	5.421E-06	1.811E-06	9.632E-07	6.145E-07	3.198E-07	2.090E-07	1.396E-07
SE	118	1.058E-05	3.205E-06	1.097E-06	5.768E-07	3.649E-07	1.877E-07	1.169E-07	8.122E-08
SSE	77	6.465E-06	1.990E-06	6.600E-07	3.416E-07	2.145E-07	1.096E-07	6.826E-08	4.746E-08
S	61	4.045E-06	1.264E-06	3.826E-07	1.980E-07	1.246E-07	6.365E-08	3.949E-08	2.731E-08
SSW	75	7.820E-06	2.417E-06	7.588E-07	3.969E-07	2.493E-07	1.270E-07	7.871E-08	5.447E-08
SW	96	9.589E-06	3.022E-06	9.663E-07	5.077E-07	3.187E-07	1.618E-07	9.969E-08	6.860E-08
WSW	98	1.055E-05	3.276E-06	1.032E-06	5.394E-07	3.384E-07	1.720E-07	1.064E-07	7.350E-08
W	101	1.378E-05	3.940E-06	1.251E-06	7.228E-07	4.545E-07	2.316E-07	1.303E-07	9.005E-08
WNW	41	8.323E-06	2.499E-06	8.719E-07	4.654E-07	2.959E-07	1.529E-07	1.048E-07	7.296E-08
NW	69	1.453E-05	4.300E-06	1.531E-06	8.205E-07	5.221E-07	2.698E-07	1.682E-07	1.170E-07
NNW	153	2.695E-05	7.889E-06	2.743E-06	1.482E-06	9.504E-07	4.964E-07	3.107E-07	2.171E-07
AVERAGE	2205	2.106E-05	6.225E-06	2.057E-06	1.106E-06	7.061E-07	3.713E-07	2.331E-07	1.633E-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	229	2.380E-07	1.876E-07	1.527E-07	1.272E-07	1.080E-07	5.802E-08	3.742E-08	2.012E-08
NNE	218	2.581E-07	2.038E-07	1.661E-07	1.385E-07	1.178E-07	6.350E-08	4.110E-08	2.222E-08
NE	234	2.970E-07	2.355E-07	1.928E-07	1.617E-07	1.382E-07	7.567E-08	4.947E-08	2.712E-08
NNE	252	2.684E-07	2.117E-07	1.724E-07	1.436E-07	1.220E-07	6.544E-08	4.224E-08	2.280E-08
E	238	1.671E-07	1.314E-07	1.067E-07	8.871E-08	7.520E-08	4.013E-08	2.579E-08	1.381E-08
ESE	145	1.040E-07	8.229E-08	6.675E-08	5.546E-08	4.700E-08	2.507E-08	1.608E-08	8.578E-09
SE	118	6.054E-08	4.739E-08	4.214E-08	3.491E-08	2.950E-08	1.416E-08	8.986E-09	4.709E-09
SSE	77	3.540E-08	2.767E-08	2.238E-08	1.857E-08	1.571E-08	8.339E-09	5.311E-09	2.794E-09
S	61	2.025E-08	1.575E-08	1.270E-08	1.052E-08	8.877E-09	4.681E-09	2.956E-09	1.529E-09
SSW	75	4.046E-08	3.149E-08	2.537E-08	2.096E-08	1.767E-08	9.258E-09	5.837E-09	3.024E-09
SW	96	5.063E-08	3.919E-08	3.143E-08	2.586E-08	2.174E-08	1.127E-08	7.036E-09	3.577E-09
WSW	98	5.451E-08	4.237E-08	3.750E-08	3.094E-08	2.607E-08	1.238E-08	7.795E-09	4.027E-09
W	101	6.685E-08	5.199E-08	4.184E-08	3.452E-08	2.908E-08	1.519E-08	9.561E-09	4.948E-09
WNW	41	5.458E-08	4.269E-08	3.138E-08	2.598E-08	2.195E-08	1.158E-08	7.351E-09	3.853E-09
NW	69	8.767E-08	6.862E-08	5.548E-08	4.589E-08	3.875E-08	2.037E-08	1.293E-08	6.791E-09
NNW	153	1.633E-07	1.282E-07	1.040E-07	8.626E-08	7.302E-08	3.875E-08	2.478E-08	1.317E-08
AVERAGE	2205	1.230E-07	9.674E-08	7.885E-08	6.560E-08	5.565E-08	2.961E-08	1.904E-08	1.019E-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	229	1.280E-08	9.033E-09	6.829E-09	5.381E-09	4.363E-09	3.636E-09	3.080E-09	
NNE	218	1.418E-08	1.003E-08	7.596E-09	6.005E-09	4.867E-09	4.059E-09	3.440E-09	
NE	234	1.745E-08	1.241E-08	9.453E-09	7.504E-09	6.102E-09	5.097E-09	4.328E-09	
NNE	252	1.454E-08	1.023E-08	7.780E-09	6.151E-09	4.987E-09	4.163E-09	3.532E-09	
E	238	8.786E-09	6.201E-09	4.687E-09	3.702E-09	3.000E-09	2.504E-09	2.125E-09	
ESE	145	5.447E-09	3.839E-09	2.899E-09	2.288E-09	1.852E-09	1.545E-09	1.310E-09	
SE	118	2.965E-09	2.078E-09	1.562E-09	1.228E-09	9.922E-10	8.264E-10	7.007E-10	
SSE	77	1.768E-09	1.243E-09	9.372E-10	7.390E-10	5.983E-10	4.994E-10	4.239E-10	
S	61	9.598E-10	6.713E-10	5.028E-10	3.959E-10	3.197E-10	2.663E-10	2.257E-10	
SSW	75	1.892E-09	1.319E-09	9.876E-10	7.744E-10	6.239E-10	5.188E-10	4.389E-10	
SW	96	2.211E-09	1.528E-09	1.135E-09	8.846E-10	7.087E-10	5.865E-10	4.940E-10	
WSW	98	2.515E-09	1.752E-09	1.310E-09	1.027E-09	8.265E-10	6.869E-10	5.807E-10	
W	101	3.091E-09	2.152E-09	1.610E-09	1.261E-09	1.015E-09	8.437E-10	7.133E-10	
WNW	41	2.419E-09	1.690E-09	1.268E-09	9.549E-10	8.018E-10	6.666E-10	5.634E-10	
NW	69	4.265E-09	2.941E-09	2.236E-09	1.755E-09	1.415E-09	1.177E-09	9.957E-10	
NNW	153	8.322E-09	5.843E-09	4.399E-09	3.463E-09	2.797E-09	2.329E-09	1.971E-09	
AVERAGE	2205	6.476E-09	4.566E-09	3.450E-09	2.723E-09	2.204E-09	1.838E-09	1.558E-09	

Table B-3

Gamma χ/Q Factors for Reactor Building VentRECo 1996 General χ/Q 's: GROUND-LEVEL

SECTOR AVERAGE MODEL

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

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	834	3.048E-05	9.091E-06	3.057E-06	1.631E-06	1.041E-06	5.425E-07	3.398E-07	2.374E-07
NNE	1316	4.874E-05	1.435E-05	4.650E-06	2.472E-06	1.580E-06	8.303E-07	5.316E-07	3.747E-07
NE	1008	5.187E-05	1.514E-05	4.679E-06	2.487E-06	1.597E-06	8.639E-07	5.543E-07	3.941E-07
NNE	762	3.611E-05	1.056E-05	3.456E-06	1.847E-06	1.183E-06	6.266E-07	3.967E-07	2.794E-07
E	787	2.461E-05	7.243E-06	2.406E-06	1.278E-06	8.159E-07	4.265E-07	2.680E-07	1.879E-07
ESE	521	1.608E-05	4.811E-06	1.606E-06	8.488E-07	5.398E-07	2.799E-07	1.750E-07	1.222E-07
SE	391	1.325E-05	4.021E-06	1.339E-06	7.049E-07	4.468E-07	2.313E-07	1.445E-07	1.007E-07
SSE	298	8.830E-06	2.719E-06	9.045E-07	4.705E-07	2.961E-07	1.517E-07	9.434E-08	5.551E-08
S	257	6.283E-06	1.926E-06	5.858E-07	3.049E-07	1.928E-07	9.918E-08	6.174E-08	4.288E-08
SSW	344	8.969E-06	2.768E-06	8.485E-07	4.415E-07	2.777E-07	1.419E-07	8.811E-08	6.108E-08
SW	301	8.705E-06	2.716E-06	8.337E-07	4.357E-07	2.745E-07	1.404E-07	8.708E-08	6.027E-08
WSW	376	1.440E-05	4.589E-06	1.362E-06	7.162E-07	4.520E-07	2.323E-07	1.447E-07	1.006E-07
W	365	1.437E-05	4.408E-06	1.370E-06	7.899E-07	4.972E-07	2.545E-07	1.437E-07	9.965E-08
WWW	218	1.065E-05	3.217E-06	1.098E-06	5.411E-07	3.684E-07	1.906E-07	1.309E-07	9.118E-08
NW	305	1.454E-05	4.324E-06	1.480E-06	7.931E-07	5.036E-07	2.615E-07	1.634E-07	1.140E-07
NNW	423	2.232E-05	6.531E-06	2.229E-06	1.197E-06	7.664E-07	4.016E-07	2.522E-07	1.767E-07
AVERAGE	8505	2.064E-05	6.138E-06	1.994E-06	1.062E-06	6.771E-07	3.552E-07	2.235E-07	1.568E-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	834	1.783E-07	1.399E-07	1.135E-07	9.431E-08	7.992E-08	4.261E-08	2.731E-08	1.454E-08
NNE	1316	2.832E-07	2.235E-07	1.822E-07	1.521E-07	1.295E-07	6.996E-08	4.529E-08	2.450E-08
NE	1008	2.997E-07	2.378E-07	1.947E-07	1.634E-07	1.397E-07	7.655E-08	5.006E-08	2.749E-08
NNE	762	2.113E-07	1.668E-07	1.360E-07	1.135E-07	9.652E-08	5.207E-08	3.371E-08	1.825E-08
E	787	1.416E-07	1.115E-07	9.070E-08	7.551E-08	6.408E-08	3.434E-08	2.213E-08	1.190E-08
ESE	521	9.169E-08	7.195E-08	5.836E-08	4.849E-08	4.108E-08	2.190E-08	1.404E-08	7.477E-09
SE	391	7.531E-08	5.897E-08	5.253E-08	4.360E-08	3.692E-08	1.785E-08	1.121E-08	6.044E-09
SSE	298	4.893E-08	3.813E-08	3.082E-08	2.555E-08	2.160E-08	1.145E-08	7.287E-09	3.630E-09
S	257	3.196E-08	2.496E-08	2.018E-08	1.673E-08	1.415E-08	7.497E-09	4.765E-09	2.498E-09
SSW	344	4.543E-08	3.542E-08	2.858E-08	2.366E-08	1.998E-08	1.054E-08	6.674E-09	3.482E-09
SW	301	4.472E-08	3.480E-08	2.805E-08	2.320E-08	1.958E-08	1.031E-08	6.510E-09	3.370E-09
WSW	376	7.506E-08	5.664E-08	5.212E-08	4.316E-08	3.647E-08	1.751E-08	1.112E-08	5.839E-09
W	365	7.421E-08	5.788E-08	4.678E-08	3.862E-08	3.260E-08	1.716E-08	1.088E-08	5.696E-09
WWW	218	6.819E-08	5.336E-08	3.924E-08	3.253E-08	2.751E-08	1.457E-08	9.273E-09	4.884E-09
NW	305	8.556E-08	6.711E-08	5.438E-08	4.512E-08	3.819E-08	2.027E-08	1.295E-08	6.867E-09
NNW	423	1.331E-07	1.047E-07	8.504E-08	7.068E-08	5.992E-08	3.195E-08	2.051E-08	1.097E-08
AVERAGE	8505	1.180E-07	9.284E-08	7.582E-08	6.313E-08	5.361E-08	2.853E-08	1.837E-08	9.853E-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	834	9.218E-09	6.488E-09	4.895E-09	3.859E-09	3.122E-09	2.601E-09	2.203E-09	
NNE	1316	1.567E-08	1.110E-08	8.422E-09	6.670E-09	5.416E-09	4.524E-09	3.842E-09	
NE	1008	1.772E-08	1.262E-08	9.626E-09	7.651E-09	6.230E-09	5.211E-09	4.432E-09	
NNE	762	1.167E-08	8.267E-09	6.271E-09	4.985E-09	4.031E-09	3.367E-09	2.858E-09	
E	787	7.592E-09	5.369E-09	4.066E-09	3.216E-09	2.609E-09	2.180E-09	1.851E-09	
ESE	521	4.749E-09	3.348E-09	2.529E-09	1.997E-09	1.618E-09	1.350E-09	1.146E-09	
SE	391	3.827E-09	2.693E-09	2.031E-09	1.601E-09	1.296E-09	1.080E-09	9.160E-10	
SSE	298	2.420E-09	1.701E-09	1.281E-09	1.009E-09	8.166E-10	6.809E-10	5.776E-10	
S	257	1.576E-09	1.106E-09	8.328E-10	6.556E-10	5.304E-10	4.422E-10	3.750E-10	
SSW	344	2.191E-09	1.535E-09	1.153E-09	9.072E-10	7.330E-10	6.108E-10	5.178E-10	
SW	301	2.109E-09	1.472E-09	1.102E-09	8.646E-10	6.966E-10	5.788E-10	4.895E-10	
WSW	376	3.677E-09	2.576E-09	1.936E-09	1.523E-09	1.230E-09	1.024E-09	8.669E-10	
W	365	3.584E-09	2.509E-09	1.885E-09	1.482E-09	1.196E-09	9.962E-10	8.437E-10	
WWW	218	3.079E-09	2.159E-09	1.624E-09	1.277E-09	1.032E-09	8.590E-10	7.273E-10	
NW	305	4.341E-09	3.050E-09	2.297E-09	1.809E-09	1.462E-09	1.218E-09	1.032E-09	
NNW	423	6.958E-09	4.901E-09	3.701E-09	2.919E-09	2.363E-09	1.970E-09	1.670E-09	
AVERAGE	8505	6.273E-09	4.431E-09	3.353E-09	2.650E-09	2.149E-09	1.793E-09	1.522E-09	

Table B-3

Gamma χ/Q Factors for Reactor Building Vent

BECo 1st Quarter 1996 General χ/Q 's: GROUND-LEVEL
 GROUND RELEASE: AVERAGE GAMMA DILUTION FACTORS (NET. 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	155	5.255E-06	2.216E-06	9.418E-07	5.619E-07	3.897E-07	2.290E-07	1.564E-07	1.165E-07
NNE	202	7.263E-06	3.034E-06	1.258E-06	7.500E-07	5.257E-07	3.750E-07	2.181E-07	1.640E-07
NE	182	7.974E-06	3.343E-06	1.396E-06	8.399E-07	5.923E-07	3.584E-07	2.497E-07	1.886E-07
ENE	185	7.669E-06	3.164E-06	1.279E-06	7.498E-07	5.228E-07	3.103E-07	2.135E-07	1.599E-07
E	295	9.261E-06	3.812E-06	1.550E-06	9.066E-07	6.308E-07	3.729E-07	2.560E-07	1.913E-07
ESE	228	7.950E-06	3.243E-06	1.298E-06	7.499E-07	5.205E-07	3.063E-07	2.094E-07	1.558E-07
SE	141	5.178E-06	2.154E-06	8.800E-07	5.135E-07	3.548E-07	2.074E-07	1.411E-07	1.046E-07
SSE	96	3.973E-06	1.596E-06	6.425E-07	3.703E-07	2.547E-07	1.480E-07	1.004E-07	7.433E-08
S	78	2.897E-06	1.195E-06	4.387E-07	2.538E-07	1.754E-07	1.024E-07	6.954E-08	5.140E-08
SSW	76	2.280E-06	9.360E-07	3.435E-07	1.990E-07	1.377E-07	8.076E-08	5.515E-08	4.103E-08
SW	62	1.935E-06	7.903E-07	2.826E-07	1.611E-07	1.110E-07	6.465E-08	4.390E-08	3.251E-08
WSW	44	1.340E-06	5.648E-07	2.141E-07	1.259E-07	8.699E-08	5.067E-08	3.438E-08	2.536E-08
W	23	7.492E-07	3.129E-07	1.132E-07	7.052E-08	4.758E-08	2.695E-08	1.629E-08	1.191E-08
WNW	19	6.109E-07	2.554E-07	1.073E-07	6.373E-08	4.444E-08	2.623E-08	1.974E-08	1.466E-08
NW	95	3.456E-06	1.431E-06	5.893E-07	3.477E-07	2.422E-07	1.435E-07	9.861E-08	7.382E-08
NNW	112	4.509E-06	1.837E-06	7.403E-07	4.331E-07	3.036E-07	1.715E-07	1.253E-07	9.404E-08
AVERAGE	1993	4.513E-06	1.868E-06	7.546E-07	4.436E-07	3.088E-07	1.827E-07	1.255E-07	9.374E-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	155	9.154E-08	7.460E-08	6.247E-08	5.330E-08	4.627E-08	2.715E-08	1.856E-08	1.080E-08
NNE	202	1.300E-07	1.068E-07	9.004E-08	7.735E-08	6.755E-08	4.051E-08	2.819E-08	1.685E-08
NE	182	1.502E-07	1.259E-07	1.047E-07	9.017E-08	7.894E-08	4.773E-08	3.344E-08	2.021E-08
ENE	185	1.264E-07	1.036E-07	8.714E-08	7.471E-08	6.513E-08	3.881E-08	2.688E-08	1.596E-08
E	295	1.508E-07	1.233E-07	1.035E-07	8.849E-08	7.698E-08	4.553E-08	3.132E-08	1.839E-08
ESE	228	1.223E-07	9.91E-08	8.329E-08	7.103E-08	6.163E-08	3.611E-08	2.463E-08	1.426E-08
SE	141	8.163E-08	6.646E-08	5.106E-08	4.201E-08	3.509E-08	2.395E-08	1.630E-08	9.404E-09
SSE	96	5.807E-08	4.709E-08	3.927E-08	3.341E-08	2.892E-08	1.682E-08	1.140E-08	6.521E-09
S	78	4.007E-08	3.244E-08	2.701E-08	2.295E-08	1.985E-08	1.150E-08	7.768E-09	4.617E-09
SSW	76	3.218E-08	2.618E-08	2.189E-08	1.866E-08	1.618E-08	9.474E-09	6.449E-09	3.712E-09
SW	62	2.538E-08	2.058E-08	1.717E-08	1.461E-08	1.266E-08	7.376E-09	5.004E-09	2.866E-09
WSW	44	1.960E-08	1.587E-08	1.449E-08	1.229E-08	1.061E-08	5.552E-09	3.711E-09	2.061E-09
W	23	9.186E-09	7.373E-09	6.097E-09	5.154E-09	4.439E-09	2.533E-09	1.684E-09	9.283E-10
WNW	19	1.146E-08	9.306E-09	7.059E-09	6.007E-09	5.202E-09	3.028E-09	2.050E-09	1.169E-09
NW	95	5.833E-08	4.775E-08	4.014E-08	3.436E-08	2.992E-08	1.775E-08	1.225E-08	7.233E-09
NNW	112	7.443E-08	6.102E-08	5.111E-08	4.401E-08	3.836E-08	2.282E-08	1.579E-08	9.381E-09
AVERAGE	1993	7.387E-08	6.035E-08	5.104E-08	4.366E-08	3.798E-08	2.229E-08	1.534E-08	9.011E-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	155	7.409E-09	5.553E-09	4.415E-09	3.641E-09	3.069E-09	2.651E-09	2.321E-09	
NNE	202	1.176E-08	8.921E-09	7.160E-09	5.951E-09	5.049E-09	4.380E-09	3.852E-09	
NE	182	1.619E-08	1.081E-08	8.708E-09	7.257E-09	6.171E-09	5.363E-09	4.724E-09	
ENE	185	1.109E-08	8.390E-09	6.721E-09	5.578E-09	4.726E-09	4.096E-09	3.599E-09	
E	295	1.269E-08	9.552E-09	7.617E-09	6.299E-09	5.320E-09	4.602E-09	4.036E-09	
ESE	228	9.760E-09	7.304E-09	5.798E-09	4.777E-09	4.023E-09	3.472E-09	3.039E-09	
SE	141	6.426E-09	4.803E-09	3.815E-09	3.144E-09	2.648E-09	2.234E-09	1.998E-09	
SSE	96	4.435E-09	3.303E-09	2.615E-09	2.149E-09	1.806E-09	1.556E-09	1.360E-09	
S	78	2.993E-09	2.233E-09	1.756E-09	1.441E-09	1.209E-09	1.040E-09	9.077E-10	
SSW	76	2.532E-09	1.890E-09	1.496E-09	1.230E-09	1.033E-09	8.901E-10	7.776E-10	
SW	62	1.952E-09	1.455E-09	1.153E-09	9.490E-10	7.980E-10	6.876E-10	6.010E-10	
WSW	44	1.376E-09	1.010E-09	7.894E-10	6.415E-10	5.335E-10	4.552E-10	3.942E-10	
W	23	6.185E-10	4.537E-10	3.558E-10	2.898E-10	2.416E-10	2.066E-10	1.794E-10	
WNW	19	7.223E-10	5.884E-10	4.640E-10	3.831E-10	3.184E-10	2.736E-10	2.384E-10	
NW	95	5.005E-09	3.776E-09	3.016E-09	2.497E-09	2.111E-09	1.828E-09	1.604E-09	
NNW	112	6.515E-09	4.928E-09	3.945E-09	3.273E-09	2.773E-09	2.405E-09	2.114E-09	
AVERAGE	1993	6.221E-09	4.685E-09	3.739E-09	3.094E-09	2.614E-09	2.262E-09	1.984E-09	

Table B-3

Gamma χ/Q Factors for Reactor Building Vent

NECO 2nd Quarter 1996 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	241	7.724E-06	3.246E-06	1.343E-06	7.896E-07	5.454E-07	3.194E-07	2.181E-07	1.624E-07
NNE	370	1.159E-05	4.792E-06	2.051E-06	1.221E-06	8.496E-07	5.079E-07	3.519E-07	2.651E-07
NE	241	9.465E-06	4.11E-06	1.673E-06	1.003E-06	7.037E-07	4.259E-07	2.978E-07	2.260E-07
NNE	175	8.299E-06	3.631E-06	1.517E-06	9.237E-07	6.502E-07	3.922E-07	2.728E-07	2.059E-07
E	152	5.707E-06	2.347E-06	9.457E-07	5.515E-07	3.834E-07	2.270E-07	1.561E-07	1.170E-07
ESE	88	3.288E-06	1.345E-06	5.302E-07	3.045E-07	2.105E-07	1.236E-07	8.473E-08	6.340E-08
SE	76	3.962E-06	1.666E-06	7.560E-07	4.452E-07	3.085E-07	1.815E-07	1.130E-07	8.444E-08
SSE	64	2.974E-06	1.220E-06	4.726E-07	2.416E-07	1.648E-07	9.488E-08	6.399E-08	4.727E-08
S	43	1.155E-06	4.151E-07	9.944E-08	4.435E-08	3.012E-08	1.753E-08	1.201E-08	9.051E-09
SSW	100	3.619E-06	1.462E-06	5.053E-07	2.806E-07	1.921E-07	1.109E-07	7.484E-08	5.515E-08
SW	69	2.891E-06	1.185E-06	4.226E-07	2.394E-07	1.642E-07	9.503E-08	6.428E-08	4.744E-08
WSW	122	5.409E-06	2.277E-06	8.429E-07	5.067E-07	3.477E-07	2.018E-07	1.371E-07	1.020E-07
W	115	5.767E-06	2.433E-06	9.225E-07	5.967E-07	4.107E-07	2.393E-07	1.479E-07	1.097E-07
WNW	80	3.688E-06	1.546E-06	6.366E-07	3.725E-07	2.569E-07	1.499E-07	1.121E-07	8.321E-08
NW	84	4.249E-06	1.784E-06	7.390E-07	4.353E-07	3.013E-07	1.767E-07	1.207E-07	8.985E-08
NNW	80	4.926E-06	2.111E-06	9.095E-07	5.517E-07	3.861E-07	2.309E-07	1.597E-07	1.200E-07
AVERAGE	2100	5.296E-06	2.218E-06	8.992E-07	5.317E-07	3.691E-07	2.184E-07	1.492E-07	1.117E-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	241	1.275E-07	1.039E-07	8.698E-08	7.429E-08	6.455E-08	3.803E-08	2.605E-08	1.517E-08
NNE	370	2.101E-07	1.726E-07	1.456E-07	1.252E-07	1.094E-07	6.581E-08	4.585E-08	2.748E-08
NE	241	1.805E-07	1.492E-07	1.255E-07	1.093E-07	9.594E-08	5.858E-08	4.131E-08	2.521E-08
NNE	175	1.638E-07	1.349E-07	1.140E-07	9.814E-08	8.585E-08	5.177E-08	3.620E-08	2.183E-08
E	152	9.266E-08	7.602E-08	6.402E-08	5.492E-08	4.791E-08	2.860E-08	1.966E-08	1.186E-08
ESE	88	5.012E-08	4.106E-08	3.455E-08	2.963E-08	2.584E-08	1.541E-08	1.069E-08	6.377E-09
SE	76	6.657E-08	5.441E-08	5.026E-08	4.302E-08	3.745E-08	2.221E-08	1.530E-08	8.997E-09
SSE	64	3.685E-08	2.985E-08	2.488E-08	2.118E-08	1.835E-08	1.071E-08	7.273E-09	4.170E-09
S	43	7.190E-09	5.920E-09	5.004E-09	4.311E-09	3.776E-09	2.291E-09	1.607E-09	9.724E-10
SSW	100	4.284E-08	3.459E-08	2.876E-08	2.442E-08	2.110E-08	1.221E-08	8.218E-09	4.641E-09
SW	69	3.687E-08	2.979E-08	2.476E-08	2.103E-08	1.818E-08	1.052E-08	7.072E-09	3.974E-09
WSW	122	8.006E-08	6.521E-08	6.003E-08	5.123E-08	4.447E-08	2.374E-08	1.622E-08	9.415E-09
W	115	8.591E-08	6.981E-08	5.833E-08	4.971E-08	4.311E-08	2.522E-08	1.717E-08	9.909E-09
WNW	80	6.510E-08	5.288E-08	4.016E-08	3.422E-08	2.968E-08	1.737E-08	1.182E-08	6.801E-09
NW	84	7.055E-08	5.748E-08	4.813E-08	4.111E-08	3.571E-08	2.103E-08	1.440E-08	8.374E-09
NNW	80	9.504E-08	7.798E-08	6.569E-08	5.640E-08	4.924E-08	2.948E-08	2.047E-08	1.218E-08
AVERAGE	2100	8.823E-08	7.222E-08	6.111E-08	5.238E-08	4.566E-08	2.706E-08	1.872E-08	1.108E-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	241	1.043E-08	7.829E-09	6.237E-09	5.153E-09	4.349E-09	3.758E-09	3.293E-09	
NNE	370	1.921E-08	1.461E-08	1.175E-08	9.789E-09	8.321E-09	7.231E-09	6.371E-09	
NE	241	1.781E-08	1.364E-08	1.103E-08	9.224E-09	7.868E-09	6.852E-09	6.049E-09	
NNE	175	1.529E-08	1.164E-08	9.364E-09	7.799E-09	6.627E-09	5.758E-09	5.070E-09	
E	152	8.263E-09	6.266E-09	5.030E-09	4.182E-09	3.549E-09	3.081E-09	2.711E-09	
ESE	88	4.444E-09	3.371E-09	2.708E-09	2.253E-09	1.913E-09	1.661E-09	1.462E-09	
SE	76	6.215E-09	4.693E-09	3.738E-09	3.094E-09	2.615E-09	2.262E-09	1.984E-09	
SSE	64	2.845E-09	2.125E-09	1.688E-09	1.392E-09	1.173E-09	1.011E-09	8.848E-10	
S	43	6.871E-10	5.271E-10	4.264E-10	3.572E-10	3.054E-10	2.669E-10	2.364E-10	
SSW	100	3.138E-09	2.328E-09	1.839E-09	1.509E-09	1.266E-09	1.089E-09	9.505E-10	
SW	69	2.676E-09	1.979E-09	1.557E-09	1.273E-09	1.065E-09	9.130E-10	7.945E-10	
WSW	122	6.453E-09	4.834E-09	3.843E-09	3.169E-09	2.671E-09	2.306E-09	2.019E-09	
W	115	6.773E-09	5.064E-09	4.022E-09	3.314E-09	2.791E-09	2.408E-09	2.107E-09	
WNW	80	4.641E-09	3.468E-09	2.749E-09	2.263E-09	1.904E-09	1.640E-09	1.434E-09	
NW	84	5.749E-09	4.312E-09	3.431E-09	2.831E-09	2.397E-09	2.061E-09	1.804E-09	
NNW	80	8.478E-09	6.422E-09	5.147E-09	4.273E-09	3.621E-09	3.139E-09	2.758E-09	
AVERAGE	2100	7.694E-09	5.819E-09	4.660E-09	3.867E-09	3.277E-09	2.840E-09	2.495E-09	

Table B-3

Gamma χ/Q Factors for Reactor Building Vent

BECO 3rd Quarter 1996 General K/Q's: GROUND-LEVEL

GROUND RELEASE: AVERAGE GAMMA DILUTION FACTORS (DET. 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	209	9.956E-06	4.236E-06	1.626E-06	1.104E-06	7.706E-07	4.569E-07	3.138E-07	2.343E-07
NNE	526	1.802E-05	7.656E-06	3.263E-06	1.972E-06	1.183E-06	8.297E-07	5.752E-07	4.329E-07
NE	351	1.554E-05	6.707E-06	2.880E-06	1.763E-06	1.244E-06	7.596E-07	5.335E-07	4.057E-07
ENE	149	8.170E-06	3.516E-06	1.517E-06	9.233E-07	6.462E-07	3.881E-07	2.696E-07	2.035E-07
E	102	5.127E-06	2.140E-06	8.906E-07	5.307E-07	3.710E-07	2.219E-07	1.536E-07	1.156E-07
ESE	60	3.360E-06	1.421E-06	6.000E-07	3.577E-07	2.480E-07	1.459E-07	9.982E-08	7.447E-08
SE	56	3.273E-06	1.407E-06	6.638E-07	4.004E-07	2.790E-07	1.654E-07	1.033E-07	7.700E-08
SSE	61	3.329E-06	1.397E-06	5.811E-07	3.119E-07	2.162E-07	1.269E-07	8.663E-08	6.436E-08
S	75	3.484E-06	1.470E-06	5.158E-07	3.074E-07	2.142E-07	1.264E-07	8.646E-08	6.419E-08
SSW	93	3.747E-06	1.555E-06	5.772E-07	3.366E-07	2.329E-07	1.363E-07	9.277E-08	6.871E-08
SW	74	3.516E-06	1.469E-06	5.475E-07	3.216E-07	2.235E-07	1.316E-07	8.998E-08	6.688E-08
WSW	112	6.631E-06	2.823E-06	1.108E-06	6.693E-07	4.668E-07	2.766E-07	1.899E-07	1.417E-07
W	126	6.621E-06	2.811E-06	1.092E-06	7.182E-07	4.971E-07	2.912E-07	1.804E-07	1.340E-07
WNW	78	5.230E-06	2.230E-06	9.697E-07	5.880E-07	4.107E-07	2.441E-07	1.647E-07	1.381E-07
NW	57	4.412E-06	1.883E-06	8.262E-07	5.059E-07	3.553E-07	2.124E-07	1.466E-07	1.099E-07
NNW	78	6.470E-06	2.762E-06	1.233E-06	7.606E-07	5.352E-07	3.207E-07	2.219E-07	1.667E-07
AVERAGE	2207	6.681E-06	2.843E-06	1.193E-06	7.232E-07	5.059E-07	3.021E-07	2.080E-07	1.561E-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	209	1.846E-07	1.508E-07	1.265E-07	1.081E-07	9.405E-08	5.555E-08	3.818E-08	2.237E-08
NNE	526	3.433E-07	2.819E-07	2.377E-07	2.043E-07	1.784E-07	1.071E-07	7.449E-08	4.450E-08
NE	351	3.244E-07	2.685E-07	2.280E-07	1.972E-07	1.733E-07	1.061E-07	7.505E-08	4.600E-08
ENE	149	1.618E-07	1.332E-07	1.126E-07	9.696E-08	8.486E-08	5.125E-08	3.586E-08	2.163E-08
E	102	9.188E-08	7.557E-08	6.378E-08	5.482E-08	4.790E-08	2.876E-08	2.005E-08	1.206E-08
ESE	60	5.862E-08	4.785E-08	4.013E-08	3.430E-08	2.983E-08	1.761E-08	1.210E-08	7.082E-09
SE	56	6.051E-08	4.934E-08	4.549E-08	3.890E-08	3.384E-08	2.001E-08	1.375E-08	8.053E-09
SSE	61	5.041E-08	4.098E-08	3.424E-08	2.919E-08	2.532E-08	1.482E-08	1.009E-08	5.812E-09
S	75	5.020E-08	4.076E-08	3.404E-08	2.899E-08	2.513E-08	1.468E-08	9.976E-09	5.719E-09
SSW	93	5.365E-08	4.349E-08	3.627E-08	3.085E-08	2.671E-08	1.554E-08	1.052E-08	6.009E-09
SW	74	5.234E-08	4.252E-08	3.553E-08	3.029E-08	2.629E-08	1.542E-08	1.050E-08	6.026E-09
WSW	112	1.115E-07	9.100E-08	8.392E-08	7.170E-08	6.232E-08	3.388E-08	2.290E-08	1.338E-08
W	126	1.051E-07	8.544E-08	7.142E-08	6.087E-08	5.279E-08	3.085E-08	2.102E-08	1.215E-08
WNW	78	1.088E-07	8.889E-08	6.780E-08	5.797E-08	5.041E-08	2.977E-08	2.045E-08	1.198E-08
NW	57	8.697E-08	7.128E-08	5.996E-08	5.136E-08	4.474E-08	2.658E-08	1.837E-08	1.088E-08
NNW	78	1.323E-07	1.086E-07	9.150E-08	7.843E-08	6.835E-08	4.064E-08	2.815E-08	1.675E-08
AVERAGE	2207	1.235E-07	1.013E-07	8.555E-08	7.339E-08	6.401E-08	3.801E-08	2.634E-08	1.565E-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	209	1.541E-08	1.158E-08	9.227E-09	7.623E-09	6.433E-09	5.559E-09	4.870E-09	
NNE	526	3.102E-08	2.353E-08	1.880E-08	1.568E-08	1.330E-08	1.154E-08	1.014E-08	
NE	351	3.257E-08	2.499E-08	2.023E-08	1.693E-08	1.445E-08	1.259E-08	1.112E-08	
ENE	149	1.517E-08	1.155E-08	9.301E-09	7.751E-09	6.591E-09	5.727E-09	5.045E-09	
E	102	8.432E-09	6.412E-09	5.155E-09	4.292E-09	3.647E-09	3.169E-09	2.791E-09	
ESE	60	4.877E-09	3.666E-09	2.921E-09	2.414E-09	2.037E-09	1.761E-09	1.543E-09	
SE	56	5.553E-09	4.180E-09	3.337E-09	2.762E-09	2.354E-09	2.018E-09	1.770E-09	
SSE	61	3.966E-09	2.961E-09	2.346E-09	1.930E-09	1.623E-09	1.397E-09	1.221E-09	
S	75	3.892E-09	2.900E-09	2.294E-09	1.885E-09	1.582E-09	1.361E-09	1.187E-09	
SSW	93	4.081E-09	3.036E-09	2.401E-09	1.972E-09	1.655E-09	1.424E-09	1.243E-09	
SW	74	4.107E-09	3.064E-09	2.425E-09	1.993E-09	1.674E-09	1.439E-09	1.256E-09	
WSW	112	9.202E-09	6.911E-09	5.502E-09	4.544E-09	3.834E-09	3.313E-09	2.802E-09	
W	126	8.307E-09	6.209E-09	4.928E-09	4.039E-09	3.416E-09	2.947E-09	2.577E-09	
WNW	78	8.249E-09	6.201E-09	4.939E-09	4.081E-09	3.444E-09	2.977E-09	2.609E-09	
NW	57	7.533E-09	5.684E-09	4.541E-09	3.760E-09	3.179E-09	2.752E-09	2.415E-09	
NNW	78	1.162E-08	8.778E-09	7.017E-09	5.814E-09	4.919E-09	4.263E-09	3.743E-09	
AVERAGE	2207	1.087E-08	8.229E-09	6.590E-09	5.468E-09	4.632E-09	4.015E-09	3.527E-09	

Table B-3

Gamma γ /Q Factors for Reactor Building Vent

BECo 4th Quarter 1996 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	229	9.185E-06	3.916E-06	1.713E-06	1.053E-06	7.421E-07	4.469E-07	3.104E-07	2.342E-07
NNE	218	9.760E-06	4.148E-06	1.801E-06	1.107E-06	7.835E-07	4.745E-07	3.305E-07	2.497E-07
NE	234	1.026E-05	4.399E-06	1.881E-06	1.154E-06	8.174E-07	4.989E-07	3.498E-07	2.657E-07
ENE	252	1.019E-05	4.341E-06	1.913E-06	1.177E-06	8.292E-07	4.998E-07	3.475E-07	2.623E-07
E	238	7.771E-06	3.243E-06	1.360E-06	8.104E-07	5.652E-07	3.356E-07	2.310E-07	1.732E-07
ESE	145	4.948E-06	2.073E-06	8.677E-07	5.166E-07	3.602E-07	2.137E-07	1.469E-07	1.099E-07
SE	118	3.264E-06	1.348E-06	5.521E-07	3.227E-07	2.243E-07	1.322E-07	9.055E-08	6.745E-08
SSE	77	2.139E-06	8.777E-07	3.473E-07	1.978E-07	1.357E-07	7.873E-08	5.346E-08	3.971E-08
S	61	1.432E-06	5.815E-07	2.056E-07	1.163E-07	8.047E-08	4.713E-08	3.209E-08	2.374E-08
SSW	75	2.395E-06	1.007E-06	3.843E-07	2.266E-07	1.565E-07	9.141E-08	6.223E-08	4.618E-08
SW	96	2.777E-06	1.199E-06	4.791E-07	2.897E-07	2.009E-07	1.176E-07	8.002E-08	5.920E-08
WSW	98	3.179E-06	1.348E-06	5.210E-07	3.092E-07	2.133E-07	1.243E-07	8.448E-08	6.261E-08
W	101	3.743E-06	1.592E-06	6.225E-07	4.096E-07	2.835E-07	1.660E-07	1.028E-07	7.625E-08
WNW	41	2.183E-06	9.323E-07	4.097E-07	2.496E-07	1.744E-07	1.035E-07	7.832E-08	5.859E-08
NW	69	3.727E-06	1.593E-06	7.109E-07	4.365E-07	3.060E-07	1.823E-07	1.256E-07	9.407E-08
NNW	153	6.484E-06	2.773E-06	1.237E-06	7.642E-07	5.383E-07	3.232E-07	2.239E-07	1.683E-07
AVERAGE	2205	5.216E-06	2.211E-06	9.378E-07	5.713E-07	4.007E-07	2.397E-07	1.656E-07	1.244E-07

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	229	1.864E-07	1.535E-07	1.297E-07	1.116E-07	9.757E-08	5.873E-08	4.100E-08	2.464E-08
NNE	218	1.989E-07	1.640E-07	1.387E-07	1.194E-07	1.045E-07	6.310E-08	4.417E-08	2.667E-08
NE	234	2.125E-07	1.759E-07	1.493E-07	1.291E-07	1.134E-07	6.941E-08	4.906E-08	3.002E-08
ENE	252	2.090E-07	1.722E-07	1.455E-07	1.252E-07	1.095E-07	6.584E-08	4.598E-08	2.770E-08
E	238	1.371E-07	1.124E-07	9.463E-08	8.112E-08	7.071E-08	4.209E-08	2.913E-08	1.729E-08
ESE	145	8.672E-08	7.095E-08	5.961E-08	5.104E-08	4.445E-08	2.638E-08	1.820E-08	1.073E-08
SE	118	5.296E-08	4.313E-08	3.671E-08	3.388E-08	2.941E-08	1.569E-08	1.070E-08	6.136E-09
SSE	77	3.110E-08	2.529E-08	2.114E-08	1.902E-08	1.564E-08	9.164E-09	6.240E-09	3.592E-09
S	61	1.849E-08	1.489E-08	1.246E-08	1.059E-08	9.162E-09	5.318E-09	3.585E-09	2.023E-09
SSW	75	3.612E-08	2.933E-08	2.448E-08	2.085E-08	1.806E-08	1.052E-08	7.133E-09	4.075E-09
SW	96	4.613E-08	3.733E-08	3.108E-08	2.640E-08	2.282E-08	1.320E-08	8.881E-09	5.003E-09
WSW	98	4.892E-08	3.968E-08	3.640E-08	3.097E-08	2.682E-08	1.417E-08	9.588E-09	5.462E-09
W	101	5.965E-08	4.843E-08	4.042E-08	3.441E-08	2.980E-08	1.734E-08	1.175E-08	6.721E-09
WNW	41	4.621E-08	3.777E-08	2.882E-08	2.464E-08	2.143E-08	1.266E-08	8.688E-09	5.074E-09
NW	69	7.431E-08	6.080E-08	5.106E-08	4.367E-08	3.798E-08	2.243E-08	1.541E-08	9.036E-09
NNW	153	1.334E-07	1.095E-07	9.222E-08	7.908E-08	6.895E-08	4.106E-08	2.843E-08	1.688E-08
AVERAGE	2205	9.862E-08	8.095E-08	6.846E-08	5.875E-08	5.126E-08	3.044E-08	2.112E-08	1.257E-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	229	1.722E-08	1.308E-08	1.049E-08	8.722E-09	7.398E-09	6.418E-09	5.643E-09	
NNE	218	1.869E-08	1.423E-08	1.144E-08	9.527E-09	8.092E-09	7.028E-09	6.086E-09	
NE	234	2.123E-08	1.627E-08	1.315E-08	1.100E-08	9.377E-09	8.162E-09	7.201E-09	
ENE	252	1.838E-08	1.473E-08	1.184E-08	9.847E-09	8.360E-09	7.262E-09	6.392E-09	
E	238	1.200E-08	9.072E-09	7.259E-09	6.020E-09	5.098E-09	4.419E-09	3.882E-09	
ESE	145	7.425E-09	5.600E-09	4.475E-09	3.706E-09	3.134E-09	2.713E-09	2.381E-09	
SE	118	4.229E-09	3.161E-09	2.507E-09	2.063E-09	1.736E-09	1.497E-09	1.309E-09	
SSE	77	2.453E-09	1.833E-09	1.453E-09	1.197E-09	1.007E-09	8.680E-10	7.589E-10	
S	61	1.365E-09	1.011E-09	7.964E-10	6.518E-10	5.456E-10	4.681E-10	4.076E-10	
SSW	75	2.766E-09	2.056E-09	1.624E-09	1.333E-09	1.118E-09	9.612E-10	8.385E-10	
SW	96	3.366E-09	2.485E-09	1.952E-09	1.594E-09	1.331E-09	1.140E-09	9.907E-10	
WSW	98	3.701E-09	2.748E-09	2.169E-09	1.779E-09	1.491E-09	1.282E-09	1.118E-09	
W	101	4.562E-09	3.392E-09	2.680E-09	2.199E-09	1.845E-09	1.587E-09	1.385E-09	
WNW	41	3.486E-09	2.615E-09	2.071E-09	1.713E-09	1.443E-09	1.245E-09	1.099E-09	
NW	69	6.218E-09	4.670E-09	3.714E-09	3.065E-09	2.584E-09	2.233E-09	1.955E-09	
NNW	153	1.170E-08	8.839E-09	7.062E-09	5.849E-09	4.946E-09	4.284E-09	3.759E-09	
AVERAGE	2205	8.737E-09	6.612E-09	5.294E-09	4.391E-09	3.719E-09	3.225E-09	2.831E-09	

Table B-3

Gamma χ/Q Factors for Reactor Building Vent

BECo 1996 General X/Q's: GROUND-LEVEL

GROUND RELEASE: AVERAGE GAMMA DILUTION FACTORS (DET. 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	834	8.140E-06	3.452E-06	1.477E-06	8.904E-07	6.213E-07	3.688E-07	2.536E-07	1.898E-07
NNE	1316	1.178E-05	4.989E-06	2.117E-06	1.278E-06	8.961E-07	5.382E-07	3.734E-07	2.813E-07
NE	1008	1.092E-05	4.662E-06	1.978E-06	1.203E-06	8.485E-07	5.163E-07	3.616E-07	2.745E-07
NNE	761	8.657E-06	3.672E-06	1.574E-06	9.546E-07	6.699E-07	4.023E-07	2.791E-07	2.103E-07
E	787	6.950E-06	2.879E-06	1.185E-06	6.989E-07	4.870E-07	2.890E-07	1.989E-07	1.491E-07
ESE	521	4.835E-06	2.001E-06	8.169E-07	4.784E-07	3.322E-07	1.959E-07	1.342E-07	1.001E-07
SE	391	3.898E-06	1.633E-06	6.762E-07	3.987E-07	2.765E-07	1.628E-07	1.113E-07	8.287E-08
SSE	298	2.913E-06	1.204E-06	4.830E-07	2.781E-07	1.913E-07	1.112E-07	7.552E-08	5.598E-08
S	257	2.130E-06	8.695E-07	3.123E-07	1.790E-07	1.241E-07	7.284E-08	4.968E-08	3.685E-08
SSW	344	3.028E-06	1.248E-06	4.555E-07	2.625E-07	1.810E-07	1.055E-07	7.169E-08	5.309E-08
SW	301	2.809E-06	1.174E-06	4.388E-07	2.565E-07	1.774E-07	1.036E-07	7.049E-08	5.219E-08
WSW	376	4.206E-06	1.781E-06	6.872E-07	4.081E-07	2.830E-07	1.659E-07	1.132E-07	8.418E-08
W	365	4.308E-06	1.824E-06	7.021E-07	4.583E-07	3.163E-07	1.846E-07	1.142E-07	8.469E-08
WNW	218	2.902E-06	1.264E-06	5.409E-07	3.246E-07	2.259E-07	1.334E-07	1.006E-07	7.505E-08
NW	305	3.983E-06	1.683E-06	7.217E-07	4.349E-07	3.036E-07	1.801E-07	1.238E-07	9.262E-08
NNW	423	5.657E-06	2.399E-06	1.044E-06	6.364E-07	4.471E-07	2.678E-07	1.853E-07	1.391E-07
AVERAGE	8505	5.450E-06	2.296E-06	9.506E-07	5.713E-07	3.988E-07	2.374E-07	1.635E-07	1.226E-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	834	1.499E-07	1.226E-07	1.030E-07	8.822E-08	7.682E-08	4.559E-08	3.145E-08	1.854E-08
NNE	1316	2.233E-07	1.836E-07	1.549E-07	1.332E-07	1.164E-07	6.996E-08	4.876E-08	2.922E-08
NE	1008	2.193E-07	1.813E-07	1.538E-07	1.329E-07	1.167E-07	7.126E-08	5.028E-08	3.071E-08
NNE	761	1.672E-07	1.375E-07	1.161E-07	9.987E-08	8.729E-08	5.249E-08	3.662E-08	2.201E-08
E	787	1.179E-07	9.667E-08	8.134E-08	6.972E-08	6.077E-08	3.618E-08	2.505E-08	1.487E-08
ESE	521	7.883E-08	6.437E-08	5.399E-08	4.616E-08	4.014E-08	2.371E-08	1.629E-08	9.550E-09
SE	391	6.507E-08	5.302E-08	4.883E-08	4.170E-08	3.623E-08	1.939E-08	1.327E-08	7.725E-09
SSE	298	4.377E-08	3.553E-08	2.966E-08	2.526E-08	2.190E-08	1.279E-08	8.690E-09	4.990E-09
S	257	2.880E-08	2.338E-08	1.951E-08	1.662E-08	1.440E-08	8.407E-09	5.707E-09	3.269E-09
SSW	344	4.144E-08	3.359E-08	2.801E-08	2.383E-08	2.063E-08	1.200E-08	8.122E-09	4.632E-09
SW	301	4.079E-08	3.297E-08	2.748E-08	2.337E-08	2.023E-08	1.177E-08	7.953E-09	4.516E-09
WSW	376	6.604E-08	5.375E-08	4.945E-08	4.218E-08	3.660E-08	1.950E-08	1.330E-08	7.693E-09
W	365	6.628E-08	5.384E-08	4.496E-08	3.829E-08	3.319E-08	1.936E-08	1.316E-08	7.572E-09
WNW	218	5.901E-08	4.812E-08	3.665E-08	3.130E-08	2.719E-08	1.601E-08	1.096E-08	6.376E-09
NW	305	7.309E-08	5.976E-08	5.018E-08	4.293E-08	3.735E-08	2.209E-08	1.520E-08	8.934E-09
NNW	423	1.103E-07	9.047E-08	7.619E-08	6.533E-08	5.696E-08	3.393E-08	2.350E-08	1.396E-08
AVERAGE	8505	9.693E-08	7.941E-08	6.713E-08	5.755E-08	5.017E-08	2.965E-08	2.052E-08	1.216E-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	834	1.282E-08	9.665E-09	7.717E-09	6.387E-09	5.399E-09	4.671E-09	4.097E-09	
NNE	1316	2.041E-08	1.551E-08	1.246E-08	1.036E-08	8.794E-09	7.633E-09	6.716E-09	
NE	1008	2.159E-08	1.662E-08	1.343E-08	1.123E-08	9.576E-09	8.336E-09	7.357E-09	
NNE	761	1.539E-08	1.170E-08	9.401E-09	7.822E-09	6.642E-09	5.768E-09	5.077E-09	
E	787	1.033E-08	7.812E-09	6.255E-09	5.189E-09	4.396E-09	3.811E-09	3.349E-09	
ESE	521	6.584E-09	4.954E-09	3.951E-09	3.267E-09	2.760E-09	2.387E-09	2.094E-09	
SE	391	5.306E-09	3.981E-09	3.169E-09	2.617E-09	2.207E-09	1.906E-09	1.670E-09	
SSE	298	3.402E-09	2.539E-09	2.013E-09	1.657E-09	1.393E-09	1.201E-09	1.050E-09	
S	257	2.226E-09	1.659E-09	1.314E-09	1.080E-09	9.076E-10	7.815E-10	6.826E-10	
SSW	344	3.144E-09	2.338E-09	1.848E-09	1.517E-09	1.274E-09	1.096E-09	9.565E-10	
SW	301	3.057E-09	2.269E-09	1.790E-09	1.467E-09	1.228E-09	1.055E-09	9.194E-10	
WSW	376	5.261E-09	3.934E-09	3.122E-09	2.572E-09	2.165E-09	1.867E-09	1.633E-09	
W	365	5.162E-09	3.851E-09	3.053E-09	2.512E-09	2.113E-09	1.821E-09	1.592E-09	
WNW	218	4.375E-09	3.280E-09	2.607E-09	2.150E-09	1.812E-09	1.564E-09	1.369E-09	
NW	305	6.162E-09	4.637E-09	3.696E-09	3.055E-09	2.580E-09	2.231E-09	1.955E-09	
NNW	423	9.692E-09	7.327E-09	5.860E-09	4.857E-09	4.111E-09	3.562E-09	3.128E-09	
AVERAGE	8505	8.439E-09	6.379E-09	5.105E-09	4.234E-09	3.585E-09	3.106E-09	2.728E-09	

Table B-4

Deposition D/Q Factors for Reactor Building Vent

BECO 1st Quarter 1996 General K/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	155	1.315E-07	4.424E-08	1.494E-08	7.884E-09	4.878E-09	2.359E-09	1.439E-09	9.806E-10
NNE	202	1.714E-07	5.765E-08	1.947E-08	1.027E-08	6.357E-09	3.074E-09	1.875E-09	1.278E-09
NE	182	1.545E-07	5.195E-08	1.754E-08	9.257E-09	5.727E-09	2.770E-09	1.690E-09	1.151E-09
NNE	185	1.570E-07	5.280E-08	1.783E-08	9.409E-09	5.822E-09	2.815E-09	1.718E-09	1.170E-09
E	295	2.504E-07	8.420E-08	2.843E-08	1.500E-08	9.283E-09	4.489E-09	2.739E-09	1.866E-09
ESE	228	1.935E-07	6.507E-08	2.198E-08	1.160E-08	7.175E-09	3.470E-09	2.117E-09	1.442E-09
SE	141	1.197E-07	4.024E-08	1.359E-08	7.171E-09	4.437E-09	2.146E-09	1.309E-09	8.921E-10
SSE	96	8.148E-08	2.740E-08	9.253E-09	4.883E-09	3.021E-09	1.461E-09	8.913E-10	6.074E-10
S	78	7.282E-08	2.449E-08	7.518E-09	3.967E-09	2.455E-09	1.187E-09	7.242E-10	4.935E-10
SSW	76	7.095E-08	2.386E-08	7.325E-09	3.865E-09	2.392E-09	1.157E-09	7.056E-10	4.808E-10
SW	62	5.788E-08	1.947E-08	5.976E-09	3.153E-09	1.951E-09	9.435E-10	5.756E-10	3.923E-10
WSW	44	4.108E-08	1.381E-08	4.241E-09	2.238E-09	1.385E-09	6.696E-10	4.085E-10	2.784E-10
W	23	2.147E-08	7.221E-09	2.217E-09	1.287E-09	7.962E-10	3.850E-10	2.135E-10	1.455E-10
WNW	19	1.613E-08	5.423E-09	1.831E-09	9.664E-10	5.979E-10	2.891E-10	1.940E-10	1.322E-10
NW	95	8.063E-08	2.711E-08	1.157E-09	4.832E-09	2.990E-09	1.446E-09	8.820E-10	6.010E-10
NNW	112	9.506E-08	3.197E-08	1.080E-08	5.696E-09	3.524E-09	1.704E-09	1.040E-09	7.086E-10
AVERAGE	1993	1.072E-07	3.606E-08	1.201E-08	6.341E-09	3.924E-09	1.898E-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	155	7.175E-10	5.488E-10	4.340E-10	3.487E-10	2.877E-10	1.443E-10	8.871E-11	4.377E-11
NNE	202	9.351E-10	7.153E-10	5.656E-10	4.545E-10	3.750E-10	1.880E-10	1.156E-10	5.704E-11
NE	182	8.425E-10	6.444E-10	5.096E-10	4.095E-10	3.379E-10	1.694E-10	1.042E-10	5.140E-11
NNE	185	8.564E-10	6.551E-10	5.180E-10	4.162E-10	3.434E-10	1.722E-10	1.059E-10	5.224E-11
E	295	1.366E-09	1.045E-09	8.260E-10	6.637E-10	5.476E-10	2.746E-10	1.688E-10	8.331E-11
ESE	228	1.055E-09	8.073E-10	6.394E-10	5.130E-10	4.233E-10	2.122E-10	1.305E-10	6.439E-11
SE	141	6.527E-10	4.793E-10	4.343E-10	3.490E-10	2.879E-10	1.312E-10	8.070E-11	3.982E-11
SSE	96	4.444E-10	3.399E-10	2.688E-10	2.160E-10	1.782E-10	8.935E-11	5.495E-11	2.711E-11
S	78	3.611E-10	2.762E-10	2.184E-10	1.755E-10	1.448E-10	7.260E-11	4.464E-11	2.203E-11
SSW	76	3.518E-10	2.691E-10	2.128E-10	1.710E-10	1.411E-10	7.074E-11	4.350E-11	2.146E-11
SW	62	2.870E-10	2.195E-10	1.736E-10	1.395E-10	1.151E-10	5.771E-11	3.549E-11	1.751E-11
WSW	44	2.037E-10	1.558E-10	1.355E-10	1.099E-10	8.985E-11	4.095E-11	2.518E-11	1.243E-11
W	23	1.065E-10	8.144E-11	6.440E-11	5.175E-11	4.270E-11	2.141E-11	1.316E-11	6.495E-12
WNW	19	9.475E-11	7.401E-11	5.320E-11	4.275E-11	3.527E-11	1.768E-11	1.087E-11	5.364E-12
NW	95	4.398E-10	3.364E-10	2.660E-10	2.137E-10	1.764E-10	8.842E-11	5.437E-11	2.683E-11
NNW	112	5.185E-10	3.966E-10	3.136E-10	2.520E-10	2.079E-10	1.042E-10	6.410E-11	3.163E-11
AVERAGE	1993	5.772E-10	4.415E-10	3.520E-10	2.829E-10	2.334E-10	1.159E-10	7.129E-11	3.518E-11

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		20.00	25.00	30.00	34.95	40.00	45.00	50.00	
N	155	2.690E-11	1.811E-11	1.276E-11	9.570E-12	7.444E-12	6.088E-12	5.055E-12	
NNE	202	3.506E-11	2.361E-11	1.663E-11	1.247E-11	9.701E-12	7.934E-12	6.588E-12	
NE	182	3.159E-11	2.127E-11	1.499E-11	1.124E-11	8.741E-12	7.148E-12	5.936E-12	
NNE	185	3.211E-11	2.162E-11	1.523E-11	1.142E-11	8.885E-12	7.266E-12	6.033E-12	
E	295	5.120E-11	3.447E-11	2.429E-11	1.821E-11	1.417E-11	1.159E-11	9.621E-12	
ESE	228	3.957E-11	2.664E-11	1.877E-11	1.408E-11	1.095E-11	8.955E-12	7.436E-12	
SE	141	2.447E-11	1.648E-11	1.161E-11	8.705E-12	6.772E-12	5.538E-12	4.588E-12	
SSE	96	1.666E-11	1.122E-11	7.905E-12	5.927E-12	4.811E-12	3.771E-12	3.131E-12	
S	78	1.354E-11	9.115E-12	6.422E-12	4.816E-12	3.746E-12	3.064E-12	2.544E-12	
SSW	76	1.319E-11	8.881E-12	6.258E-12	4.692E-12	3.650E-12	2.985E-12	2.479E-12	
SW	62	1.076E-11	7.245E-12	5.105E-12	3.828E-12	2.978E-12	2.435E-12	2.022E-12	
WSW	44	7.637E-12	5.142E-12	3.623E-12	2.717E-12	2.113E-12	1.728E-12	1.435E-12	
W	23	3.992E-12	2.688E-12	1.894E-12	1.420E-12	1.105E-12	8.034E-13	7.501E-13	
WNW	19	3.298E-12	2.220E-12	1.564E-12	1.173E-12	9.125E-13	7.463E-13	6.197E-13	
NW	95	1.649E-11	1.110E-11	7.822E-12	5.865E-12	4.563E-12	3.731E-12	3.098E-12	
NNW	112	1.944E-11	1.309E-11	9.222E-12	6.915E-12	5.378E-12	4.399E-12	3.653E-12	
AVERAGE	1993	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

BECs 2nd Quarter 1996 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	241	1.941E-07	6.528E-08	2.205E-08	1.163E-08	7.198E-09	3.481E-09	2.123E-09	1.447E-09
NNE	370	2.980E-07	1.002E-07	3.385E-08	1.786E-08	1.105E-08	5.344E-09	3.260E-09	2.222E-09
NE	241	1.941E-07	6.528E-08	2.205E-08	1.163E-08	7.198E-09	3.481E-09	2.123E-09	1.447E-09
NNE	175	1.410E-07	4.740E-08	1.601E-08	8.447E-09	5.226E-09	2.527E-09	1.542E-09	1.051E-09
E	152	1.224E-07	4.117E-08	1.390E-08	7.337E-09	4.542E-09	2.195E-09	1.339E-09	9.127E-10
ESE	88	7.088E-08	2.384E-08	8.050E-09	4.240E-09	2.628E-09	1.271E-09	7.754E-10	5.284E-10
SE	76	6.122E-08	2.059E-08	7.647E-09	4.035E-09	2.497E-09	1.207E-09	6.696E-10	4.563E-10
SSE	64	5.670E-08	1.907E-08	6.440E-09	3.089E-09	1.911E-09	9.243E-10	5.639E-10	3.843E-10
S	43	4.156E-08	1.398E-08	3.933E-09	2.076E-09	1.284E-09	6.210E-10	3.789E-10	2.582E-10
SSW	100	8.860E-08	2.980E-08	9.147E-09	4.827E-09	2.967E-09	1.444E-09	8.811E-10	6.004E-10
SW	69	6.113E-08	2.056E-08	6.312E-09	3.331E-09	2.061E-09	9.965E-10	6.080E-10	4.143E-10
WSW	122	1.081E-07	3.635E-08	1.116E-08	5.889E-09	3.644E-09	1.762E-09	1.075E-09	7.325E-10
W	115	1.019E-07	3.427E-08	1.052E-08	6.106E-09	3.778E-09	1.827E-09	1.013E-09	6.905E-10
WNW	80	6.444E-08	2.167E-08	7.318E-09	3.862E-09	2.389E-09	1.155E-09	7.754E-10	5.284E-10
NW	84	6.766E-08	2.275E-08	7.684E-09	4.055E-09	2.509E-09	1.213E-09	7.401E-10	5.046E-10
NNW	80	6.444E-08	2.167E-08	7.318E-09	3.862E-09	2.389E-09	1.155E-09	7.049E-10	4.803E-10
AVERAGE	2100	1.085E-07	3.649E-08	1.209E-08	6.393E-09	3.955E-09	1.913E-09	1.161E-09	7.911E-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	241	1.059E-09	8.099E-10	6.404E-10	5.146E-10	4.246E-10	2.129E-10	1.309E-10	6.459E-11
NNE	370	1.628E-09	1.243E-09	9.832E-10	7.971E-10	6.519E-10	3.268E-10	2.010E-10	9.916E-11
NE	241	1.059E-09	8.099E-10	6.404E-10	5.146E-10	4.246E-10	2.129E-10	1.309E-10	6.459E-11
NNE	175	7.689E-10	5.881E-10	4.650E-10	3.737E-10	3.083E-10	1.546E-10	9.506E-11	4.690E-11
E	152	6.478E-10	5.108E-10	4.039E-10	3.246E-10	2.678E-10	1.343E-10	8.256E-11	4.076E-11
ESE	88	5.866E-10	2.957E-10	2.338E-10	1.879E-10	1.550E-10	7.773E-11	4.780E-11	2.358E-11
SE	76	5.339E-10	2.554E-10	2.221E-10	1.785E-10	1.473E-10	7.385E-11	4.541E-11	2.241E-11
SSE	64	2.812E-10	2.151E-10	1.701E-10	1.367E-10	1.128E-10	5.653E-11	3.476E-11	1.715E-11
S	43	1.889E-10	1.445E-10	1.143E-10	9.182E-11	7.576E-11	3.798E-11	2.336E-11	1.152E-11
SSW	100	4.393E-10	3.361E-10	2.657E-10	2.135E-10	1.762E-10	8.833E-11	5.432E-11	2.680E-11
SW	69	3.031E-10	2.319E-10	1.833E-10	1.473E-10	1.216E-10	6.095E-11	3.748E-11	1.849E-11
WSW	122	5.360E-10	4.100E-10	3.566E-10	2.866E-10	2.364E-10	1.078E-10	6.627E-11	3.270E-11
W	115	5.052E-10	3.865E-10	3.156E-10	2.456E-10	2.026E-10	1.016E-10	6.247E-11	3.082E-11
WNW	80	3.866E-10	2.957E-10	2.126E-10	1.708E-10	1.409E-10	7.067E-11	4.345E-11	2.144E-11
NW	84	3.691E-10	2.823E-10	2.232E-10	1.794E-10	1.480E-10	7.420E-11	4.563E-11	2.251E-11
NNW	80	3.515E-10	2.688E-10	2.126E-10	1.708E-10	1.409E-10	7.067E-11	4.345E-11	2.144E-11
AVERAGE	2100	5.788E-10	4.427E-10	3.520E-10	2.829E-10	2.334E-10	1.164E-10	7.155E-11	3.530E-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	241	3.870E-11	2.673E-11	1.883E-11	1.412E-11	1.098E-11	8.984E-12	7.459E-12	
NNE	370	6.095E-11	4.103E-11	2.891E-11	2.168E-11	1.686E-11	1.379E-11	1.145E-11	
NE	241	3.870E-11	2.673E-11	1.883E-11	1.412E-11	1.098E-11	8.984E-12	7.459E-12	
NNE	175	2.883E-11	1.941E-11	1.368E-11	1.025E-11	7.976E-12	6.523E-12	5.417E-12	
E	152	2.504E-11	1.666E-11	1.188E-11	8.906E-12	6.928E-12	5.666E-12	4.705E-12	
ESE	88	1.450E-11	9.760E-12	6.877E-12	5.156E-12	4.011E-12	3.280E-12	2.724E-12	
SE	76	1.377E-11	9.272E-12	6.533E-12	4.898E-12	3.810E-12	3.116E-12	2.588E-12	
SSE	64	1.054E-11	7.098E-12	5.001E-12	3.750E-12	2.917E-12	2.386E-12	1.981E-12	
S	43	7.083E-12	4.769E-12	3.360E-12	2.520E-12	1.960E-12	1.603E-12	1.331E-12	
SSW	100	1.647E-11	1.109E-11	7.814E-12	5.859E-12	4.558E-12	3.728E-12	3.095E-12	
SW	69	1.137E-11	7.652E-12	5.392E-12	4.043E-12	3.145E-12	2.572E-12	2.136E-12	
WSW	122	2.010E-11	1.353E-11	9.533E-12	7.148E-12	5.561E-12	4.548E-12	3.776E-12	
W	115	1.894E-11	1.275E-11	8.986E-12	6.738E-12	5.242E-12	4.287E-12	3.559E-12	
WNW	80	1.318E-11	8.872E-12	6.251E-12	4.687E-12	3.646E-12	2.982E-12	2.476E-12	
NW	84	1.384E-11	9.316E-12	6.564E-12	4.922E-12	3.829E-12	3.131E-12	2.600E-12	
NNW	80	1.318E-11	8.872E-12	6.251E-12	4.687E-12	3.646E-12	2.982E-12	2.476E-12	
AVERAGE	2100	2.170E-11	1.461E-11	1.029E-11	7.718E-12	6.004E-12	4.910E-12	4.077E-12	

Table B-4

Deposition D/Q Factors for Reactor Building Vent

BEGO 3rd Quarter 1996 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	209	1.602E-07	5.387E-08	1.819E-08	9.599E-09	5.939E-09	2.872E-09	1.752E-09	1.194E-09
NNE	526	4.031E-07	1.356E-07	4.578E-08	2.416E-08	1.495E-08	7.228E-09	4.410E-09	3.005E-09
NE	351	2.690E-07	9.047E-08	3.055E-08	1.612E-08	9.974E-09	4.823E-09	2.943E-09	2.005E-09
NNE	149	1.142E-07	3.840E-08	1.297E-08	6.844E-09	4.234E-09	2.048E-09	1.249E-09	8.513E-10
E	102	7.817E-08	2.629E-08	8.878E-09	4.685E-09	2.899E-09	1.402E-09	6.552E-10	5.827E-10
ESE	60	4.598E-08	1.546E-08	5.222E-09	2.756E-09	1.705E-09	8.245E-10	5.070E-10	3.428E-10
SE	56	4.292E-08	1.443E-08	5.362E-09	2.829E-09	1.751E-09	8.465E-10	4.695E-10	3.199E-10
SSE	61	5.143E-08	1.729E-08	5.840E-09	2.802E-09	1.733E-09	8.383E-10	5.114E-10	3.553E-10
S	75	6.898E-08	2.320E-08	6.528E-09	3.445E-09	2.131E-09	1.031E-09	6.288E-10	4.285E-10
SSW	93	7.840E-08	2.637E-08	8.095E-09	4.271E-09	2.643E-09	1.278E-09	7.797E-10	5.313E-10
SW	74	6.239E-08	2.098E-08	6.441E-09	3.399E-09	2.103E-09	1.017E-09	6.204E-10	4.228E-10
WSW	112	9.442E-08	3.175E-08	9.748E-09	5.144E-09	3.183E-09	1.539E-09	9.390E-10	6.399E-10
W	126	1.062E-07	3.572E-08	1.097E-08	6.366E-09	3.939E-09	1.905E-09	1.056E-09	7.199E-10
WSW	78	5.978E-08	2.010E-08	6.788E-09	3.583E-09	2.217E-09	1.072E-09	7.193E-10	4.902E-10
NW	57	4.369E-08	1.469E-08	4.941E-09	2.618E-09	1.620E-09	7.833E-10	4.779E-10	3.257E-10
NNW	78	5.978E-08	2.010E-08	6.788E-09	3.583E-09	2.217E-09	1.072E-09	6.540E-10	4.456E-10
AVERAGE	2207	1.087E-07	3.654E-08	1.207E-08	6.388E-09	3.952E-09	1.911E-09	1.161E-09	7.908E-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	209	8.737E-10	6.683E-10	5.284E-10	4.246E-10	3.504E-10	1.757E-10	1.060E-10	5.330E-11
NNE	526	2.199E-09	1.602E-09	1.330E-09	1.069E-09	8.810E-10	4.421E-10	2.719E-10	1.341E-10
NE	351	1.467E-09	1.122E-09	8.875E-10	7.132E-10	5.884E-10	2.950E-10	1.814E-10	8.951E-11
NNE	149	6.222E-10	4.764E-10	3.767E-10	3.027E-10	2.498E-10	1.252E-10	7.701E-11	3.800E-11
E	102	4.264E-10	3.262E-10	2.579E-10	2.072E-10	1.710E-10	8.573E-11	5.272E-11	2.601E-11
ESE	60	2.508E-10	1.919E-10	1.517E-10	1.219E-10	1.006E-10	5.043E-11	3.101E-11	1.530E-11
SE	56	2.341E-10	1.701E-10	1.357E-10	1.252E-10	1.033E-10	5.178E-11	3.184E-11	1.571E-11
SSE	61	2.550E-10	1.951E-10	1.542E-10	1.239E-10	1.023E-10	5.127E-11	3.153E-11	1.556E-11
S	75	3.135E-10	2.398E-10	1.896E-10	1.524E-10	1.257E-10	6.304E-11	3.076E-11	1.913E-11
SSW	93	3.888E-10	2.974E-10	2.351E-10	1.890E-10	1.559E-10	7.817E-11	4.807E-11	2.372E-11
SW	74	3.094E-10	2.366E-10	1.871E-10	1.504E-10	1.241E-10	6.220E-11	3.825E-11	1.887E-11
WSW	112	4.682E-10	3.581E-10	3.115E-10	2.503E-10	2.065E-10	9.414E-11	5.789E-11	2.856E-11
W	126	5.267E-10	4.111E-10	3.186E-10	2.560E-10	2.112E-10	1.059E-10	6.512E-11	3.213E-11
WSW	78	3.587E-10	2.744E-10	1.972E-10	1.585E-10	1.308E-10	6.556E-11	4.031E-11	1.989E-11
NW	57	2.383E-10	1.423E-10	1.441E-10	1.158E-10	9.555E-11	4.791E-11	2.946E-11	1.454E-11
NNW	78	3.261E-10	2.494E-10	1.972E-10	1.585E-10	1.308E-10	6.556E-11	4.031E-11	1.989E-11
AVERAGE	2207	5.787E-10	4.426E-10	3.514E-10	2.824E-10	2.330E-10	1.162E-10	7.147E-11	3.526E-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	209	3.276E-11	2.206E-11	1.554E-11	1.165E-11	9.064E-12	7.413E-12	6.155E-12	
NNE	526	8.244E-11	5.551E-11	3.911E-11	2.933E-11	2.281E-11	1.866E-11	1.549E-11	
NE	351	5.502E-11	3.704E-11	2.610E-11	1.957E-11	1.522E-11	1.245E-11	1.034E-11	
NNE	149	2.335E-11	1.572E-11	1.108E-11	8.307E-12	6.462E-12	5.285E-12	4.388E-12	
E	102	1.899E-11	1.076E-11	7.584E-12	5.687E-12	4.424E-12	3.618E-12	3.004E-12	
ESE	60	9.404E-12	6.332E-12	4.461E-12	3.345E-12	2.602E-12	2.128E-12	1.767E-12	
SE	56	9.655E-12	6.500E-12	4.580E-12	3.434E-12	2.672E-12	2.185E-12	1.814E-12	
SSE	61	9.561E-12	6.437E-12	4.536E-12	3.401E-12	2.646E-12	2.164E-12	1.797E-12	
S	75	1.176E-11	7.915E-12	5.577E-12	4.181E-12	3.253E-12	2.660E-12	2.209E-12	
SSW	93	1.458E-11	9.144E-12	6.915E-12	5.185E-12	4.033E-12	3.299E-12	2.739E-12	
SW	74	1.160E-11	7.809E-12	5.502E-12	4.126E-12	3.209E-12	2.625E-12	2.179E-12	
WSW	112	1.755E-11	1.182E-11	8.328E-12	6.244E-12	4.857E-12	3.973E-12	3.299E-12	
W	126	1.975E-11	1.330E-11	9.369E-12	7.025E-12	5.465E-12	4.469E-12	3.711E-12	
WSW	78	1.223E-11	8.231E-12	5.800E-12	4.349E-12	3.383E-12	2.767E-12	2.297E-12	
NW	57	8.934E-12	6.015E-12	4.238E-12	3.178E-12	2.472E-12	2.022E-12	1.679E-12	
NNW	78	1.223E-11	8.231E-12	5.800E-12	4.349E-12	3.333E-12	2.767E-12	2.297E-12	
AVERAGE	2207	2.168E-11	1.459E-11	1.028E-11	7.710E-12	5.997E-12	4.905E-12	4.073E-12	

Table B-4

Deposition D/Q Factors for Reactor Building Vent

NECo 4th Quarter 1996 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	229	1.757E-07	5.908E-08	1.995E-08	1.053E-08	6.513E-09	3.150E-09	1.922E-09	1.310E-09
NNE	218	1.672E-07	5.624E-08	1.899E-08	1.002E-08	6.201E-09	2.999E-09	1.820E-09	1.247E-09
NE	234	1.791E-07	6.037E-08	2.039E-08	1.076E-08	6.656E-09	3.219E-09	1.964E-09	1.330E-09
NNE	252	1.933E-07	6.501E-08	2.195E-08	1.158E-08	7.168E-09	3.466E-09	2.115E-09	1.441E-09
E	238	1.826E-07	6.140E-08	2.073E-08	1.094E-08	6.769E-09	3.274E-09	1.997E-09	1.361E-09
ESE	145	1.112E-07	3.741E-08	1.263E-08	6.666E-09	4.124E-09	1.994E-09	1.217E-09	8.292E-10
SE	118	9.052E-08	3.044E-08	1.028E-08	5.425E-09	3.356E-09	1.623E-09	9.902E-10	6.748E-10
SSE	77	5.997E-08	1.986E-08	6.708E-09	3.540E-09	2.190E-09	1.059E-09	6.462E-10	4.403E-10
S	61	5.147E-08	1.731E-08	5.314E-09	2.804E-09	1.735E-09	8.390E-10	5.119E-10	3.488E-10
SSW	75	6.329E-08	2.128E-08	6.534E-09	3.440E-09	2.133E-09	1.032E-09	6.294E-10	4.289E-10
SW	96	8.101E-08	2.724E-08	8.363E-09	4.413E-09	2.731E-09	1.320E-09	8.056E-10	5.490E-10
WSW	98	8.269E-08	2.781E-08	8.539E-09	4.505E-09	2.787E-09	1.348E-09	8.224E-10	5.604E-10
W	101	8.523E-08	2.866E-08	8.799E-09	5.107E-09	3.160E-09	1.528E-09	8.476E-10	5.776E-10
WNW	41	3.145E-08	1.058E-08	3.572E-09	1.885E-09	1.166E-09	5.639E-10	3.785E-10	2.579E-10
NW	69	5.793E-08	1.780E-08	6.011E-09	3.172E-09	1.963E-09	9.491E-10	5.790E-10	3.946E-10
NNW	153	1.174E-07	3.947E-08	1.333E-08	7.434E-09	4.352E-09	2.104E-09	1.284E-09	8.749E-10
AVERAGE	2205	1.078E-07	3.625E-08	1.201E-08	6.364E-09	3.938E-09	1.904E-09	1.159E-09	7.895E-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	229	9.582E-10	7.329E-10	5.795E-10	4.657E-10	3.842E-10	1.927E-10	1.185E-10	5.845E-11
NNE	218	9.122E-10	6.977E-10	5.517E-10	4.433E-10	3.658E-10	1.834E-10	1.128E-10	5.564E-11
NE	234	9.791E-10	7.489E-10	5.922E-10	4.759E-10	3.926E-10	1.969E-10	1.211E-10	5.973E-11
NNE	252	1.054E-09	8.065E-10	6.377E-10	5.125E-10	4.228E-10	2.120E-10	1.304E-10	6.432E-11
E	238	9.859E-10	7.617E-10	6.023E-10	4.840E-10	3.993E-10	2.002E-10	1.231E-10	6.075E-11
ESE	145	6.067E-10	4.641E-10	3.669E-10	2.949E-10	2.433E-10	1.220E-10	7.501E-11	3.701E-11
SE	118	4.937E-10	3.777E-10	3.285E-10	2.640E-10	2.178E-10	9.927E-11	6.104E-11	3.012E-11
SSE	77	3.222E-10	2.464E-10	1.948E-10	1.566E-10	1.282E-10	6.478E-11	3.983E-11	1.965E-11
S	61	2.552E-10	1.952E-10	1.544E-10	1.241E-10	1.024E-10	5.132E-11	3.156E-11	1.557E-11
SSW	75	3.138E-10	2.400E-10	1.898E-10	1.525E-10	1.258E-10	6.310E-11	3.880E-11	1.914E-11
SW	96	4.017E-10	3.072E-10	2.429E-10	1.952E-10	1.611E-10	8.076E-11	4.966E-11	2.450E-11
WSW	98	4.101E-10	3.156E-10	2.726E-10	2.192E-10	1.809E-10	8.245E-11	5.070E-11	2.501E-11
W	101	4.226E-10	3.232E-10	2.556E-10	2.054E-10	1.695E-10	8.497E-11	5.225E-11	2.578E-11
WNW	41	1.887E-10	1.445E-10	1.030E-10	8.338E-11	6.878E-11	3.445E-11	2.121E-11	1.046E-11
NW	69	2.887E-10	2.208E-10	1.746E-10	1.403E-10	1.158E-10	5.805E-11	3.569E-11	1.761E-11
NNW	153	6.402E-10	4.897E-10	3.872E-10	3.111E-10	2.567E-10	1.287E-10	7.915E-11	3.905E-11
AVERAGE	2205	5.777E-10	4.419E-10	3.522E-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	229	3.593E-11	2.419E-11	1.704E-11	1.278E-11	9.941E-12	8.130E-12	6.750E-12	
NNE	218	3.420E-11	2.303E-11	1.622E-11	1.217E-11	9.463E-12	7.739E-12	6.426E-12	
NE	234	3.671E-11	2.472E-11	1.741E-11	1.306E-11	1.016E-11	8.307E-12	6.998E-12	
NNE	252	3.953E-11	2.667E-11	1.875E-11	1.406E-11	1.094E-11	8.946E-12	7.428E-12	
E	238	3.734E-11	2.514E-11	1.771E-11	1.328E-11	1.033E-11	8.449E-12	7.016E-12	
ESE	145	2.275E-11	1.532E-11	1.079E-11	8.092E-12	6.294E-12	5.148E-12	4.274E-12	
SE	118	1.851E-11	1.246E-11	8.782E-12	6.585E-12	5.122E-12	4.189E-12	3.478E-12	
SSE	77	1.208E-11	8.133E-12	5.731E-12	4.297E-12	3.342E-12	2.734E-12	2.270E-12	
S	61	9.570E-12	6.443E-12	4.540E-12	3.404E-12	2.648E-12	2.166E-12	1.798E-12	
SSW	75	1.177E-11	7.922E-12	5.562E-12	4.185E-12	3.256E-12	2.663E-12	2.211E-12	
SW	96	1.506E-11	1.014E-11	7.145E-12	5.357E-12	4.167E-12	3.408E-12	2.830E-12	
WSW	98	1.537E-11	1.035E-11	7.293E-12	5.469E-12	4.254E-12	3.479E-12	2.889E-12	
W	101	1.585E-11	1.067E-11	7.517E-12	5.636E-12	4.384E-12	3.586E-12	2.977E-12	
WNW	41	6.432E-12	4.331E-12	3.051E-12	2.288E-12	1.780E-12	1.456E-12	1.209E-12	
NW	69	1.082E-11	7.288E-12	5.135E-12	3.850E-12	2.995E-12	2.450E-12	2.034E-12	
NNW	153	2.400E-11	1.616E-11	1.139E-11	8.538E-12	6.642E-12	5.432E-12	4.510E-12	
AVERAGE	2205	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

NECo 1996 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	834	1.659E-07	5.578E-08	1.884E-08	9.940E-09	6.150E-09	2.974E-09	1.814E-09	1.236E-09
NNE	1316	2.617E-07	8.802E-08	2.972E-08	1.568E-08	9.704E-09	4.693E-09	2.863E-09	1.951E-09
NE	1008	2.005E-07	6.742E-08	2.277E-08	1.201E-08	7.433E-09	3.505E-09	2.193E-09	1.494E-09
NNE	761	1.513E-07	5.090E-08	1.719E-08	9.070E-09	5.612E-09	2.714E-09	1.656E-09	1.128E-09
E	787	1.565E-07	5.264E-08	1.778E-08	9.380E-09	5.803E-09	2.806E-09	1.712E-09	1.167E-09
ESE	521	1.036E-07	3.485E-08	1.177E-08	6.210E-09	3.842E-09	1.858E-09	1.133E-09	7.724E-10
SE	391	7.774E-08	2.615E-08	8.831E-09	4.660E-09	2.883E-09	1.394E-09	8.507E-10	5.797E-10
SSE	298	5.927E-08	1.993E-08	6.731E-09	3.552E-09	2.197E-09	1.063E-09	6.483E-10	4.418E-10
S	257	5.622E-08	1.891E-08	5.805E-09	3.063E-09	1.895E-09	9.165E-10	5.591E-10	3.810E-10
SSW	344	7.526E-08	2.531E-08	7.770E-09	4.100E-09	2.537E-09	1.227E-09	7.484E-10	5.100E-10
SW	301	6.585E-08	2.214E-08	6.798E-09	3.587E-09	2.220E-09	1.073E-09	6.549E-10	4.462E-10
WSW	376	8.226E-08	2.766E-08	8.492E-09	4.481E-09	2.773E-09	1.341E-09	8.180E-10	5.574E-10
W	365	7.985E-08	2.685E-08	8.244E-09	4.785E-09	2.961E-09	1.432E-09	7.941E-10	5.411E-10
WNW	218	4.336E-08	1.458E-08	4.924E-09	2.598E-09	1.608E-09	7.774E-10	5.217E-10	3.555E-10
NW	305	6.666E-08	2.040E-08	6.889E-09	3.635E-09	2.249E-09	1.088E-09	6.636E-10	4.522E-10
NNW	423	8.413E-08	2.829E-08	9.554E-09	5.042E-09	3.119E-09	1.508E-09	9.203E-10	6.271E-10
AVERAGE	8505	1.078E-07	3.624E-08	1.201E-08	6.363E-09	3.937E-09	1.904E-09	1.159E-09	7.901E-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	834	9.047E-10	6.920E-10	5.472E-10	4.397E-10	3.628E-10	1.819E-10	1.119E-10	5.519E-11
NNE	1316	1.428E-09	1.092E-09	8.634E-10	6.939E-10	5.725E-10	2.870E-10	1.765E-10	8.708E-11
NE	1008	1.093E-09	8.364E-10	6.613E-10	5.315E-10	4.385E-10	2.199E-10	1.352E-10	6.670E-11
NNE	761	8.255E-10	6.314E-10	4.993E-10	4.012E-10	3.310E-10	1.660E-10	1.021E-10	5.036E-11
E	787	8.537E-10	6.530E-10	5.164E-10	4.149E-10	3.424E-10	1.717E-10	1.056E-10	5.208E-11
ESE	521	5.652E-10	4.323E-10	3.618E-10	2.747E-10	2.268E-10	1.136E-10	6.988E-11	3.448E-11
SE	391	4.242E-10	3.244E-10	2.822E-10	2.268E-10	1.871E-10	8.528E-11	5.244E-11	2.587E-11
SSE	298	3.233E-10	2.473E-10	1.955E-10	1.571E-10	1.296E-10	6.500E-11	3.997E-11	1.972E-11
S	257	2.788E-10	2.132E-10	1.686E-10	1.355E-10	1.118E-10	5.605E-11	3.447E-11	1.701E-11
SSW	344	3.732E-10	2.856E-10	2.257E-10	1.814E-10	1.498E-10	7.503E-11	4.614E-11	2.276E-11
SW	301	3.265E-10	2.498E-10	1.975E-10	1.587E-10	1.309E-10	6.565E-11	4.037E-11	1.992E-11
WSW	376	4.079E-10	3.120E-10	2.714E-10	2.181E-10	1.799E-10	8.201E-11	5.043E-11	2.488E-11
W	365	3.960E-10	3.029E-10	2.395E-10	1.924E-10	1.588E-10	7.961E-11	4.895E-11	2.415E-11
WNW	218	2.601E-10	1.990E-10	1.430E-10	1.149E-10	9.483E-11	4.755E-11	2.844E-11	1.443E-11
NW	305	3.309E-10	2.531E-10	2.001E-10	1.608E-10	1.327E-10	6.652E-11	4.091E-11	2.018E-11
NNW	423	4.589E-10	3.510E-10	2.775E-10	2.230E-10	1.840E-10	9.226E-11	5.673E-11	2.799E-11
AVERAGE	8505	5.781E-10	4.422E-10	3.519E-10	2.828E-10	2.333E-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	834	3.392E-11	2.284E-11	1.609E-11	1.207E-11	9.386E-12	7.676E-12	6.374E-12	
NNE	1316	5.353E-11	3.604E-11	2.539E-11	1.904E-11	1.481E-11	1.211E-11	1.006E-11	
NE	1008	4.100E-11	2.760E-11	1.945E-11	1.458E-11	1.134E-11	9.278E-12	7.704E-12	
NNE	761	3.095E-11	2.084E-11	1.468E-11	1.101E-11	8.564E-12	7.004E-12	5.816E-12	
E	787	3.201E-11	2.155E-11	1.518E-11	1.139E-11	8.857E-12	7.244E-12	6.015E-12	
ESE	521	2.119E-11	1.427E-11	1.005E-11	7.538E-12	5.863E-12	4.795E-12	3.982E-12	
SE	391	1.590E-11	1.071E-11	7.544E-12	5.657E-12	4.400E-12	3.599E-12	2.988E-12	
SSE	298	1.212E-11	8.160E-12	5.750E-12	4.311E-12	3.354E-12	2.742E-12	2.277E-12	
S	257	1.045E-11	7.038E-12	4.959E-12	3.718E-12	2.892E-12	2.365E-12	1.964E-12	
SSW	344	1.399E-11	9.420E-12	6.637E-12	4.977E-12	3.871E-12	3.166E-12	2.629E-12	
SW	301	1.224E-11	8.243E-12	5.808E-12	4.355E-12	3.388E-12	2.770E-12	2.300E-12	
WSW	376	1.529E-11	1.030E-11	7.255E-12	5.440E-12	4.232E-12	3.461E-12	2.874E-12	
W	365	1.485E-11	9.995E-12	7.043E-12	5.281E-12	4.108E-12	3.359E-12	2.789E-12	
WNW	218	8.867E-12	5.970E-12	4.206E-12	3.154E-12	2.453E-12	2.006E-12	1.666E-12	
NW	305	1.241E-11	8.352E-12	5.885E-12	4.413E-12	3.433E-12	2.807E-12	2.331E-12	
NNW	423	1.720E-11	1.158E-11	8.162E-12	6.120E-12	4.761E-12	3.893E-12	3.233E-12	
AVERAGE	8505	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

NECo 1st Quarter 1996 General X/Q's: ELEVATED

SECTOR AVERAGE MODEL

STACK RELEASE: GROUND-LEVEL AVERAGE χ/Q BEFORE DEFLECTION - (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	121	1.105E-09	3.413E-08	2.686E-08	2.002E-08	1.803E-08	1.752E-08	1.662E-08	1.551E-08
NNE	138	7.312E-10	2.024E-08	1.565E-08	1.219E-08	1.309E-08	1.707E-08	1.860E-08	1.825E-08
NE	183	1.623E-09	5.604E-08	2.802E-08	1.985E-08	2.172E-08	2.611E-08	2.629E-08	2.460E-08
NNE	139	1.149E-09	4.227E-08	2.884E-08	1.963E-08	1.834E-08	1.985E-08	2.003E-08	1.894E-08
E	175	1.469E-09	4.595E-08	3.640E-08	2.527E-08	2.456E-08	2.553E-08	2.504E-08	2.309E-08
ESE	257	2.692E-09	7.578E-08	4.097E-08	3.119E-08	3.184E-08	3.534E-08	3.482E-08	3.227E-08
SE	202	2.416E-09	7.528E-08	5.766E-08	3.842E-08	3.657E-08	4.404E-08	3.992E-08	3.142E-08
SSE	139	2.747E-09	8.435E-08	6.835E-08	1.002E-07	1.055E-07	8.102E-08	6.166E-08	4.632E-08
S	113	3.820E-09	7.004E-08	1.031E-07	1.544E-07	1.234E-07	1.009E-07	7.491E-08	5.500E-08
SSW	90	4.342E-09	5.788E-08	7.598E-08	9.591E-08	1.503E-07	1.294E-07	8.314E-08	5.939E-08
SW	65	4.237E-09	2.987E-08	3.731E-08	5.265E-08	4.795E-08	3.923E-08	2.951E-08	2.298E-08
WSW	38	1.902E-09	5.659E-08	2.600E-08	3.157E-08	3.672E-08	2.840E-08	1.985E-08	1.471E-08
W	34	7.523E-10	1.299E-08	3.288E-08	2.911E-08	2.869E-08	2.443E-08	1.801E-08	1.468E-08
WNW	38	1.057E-09	1.290E-08	1.662E-08	1.634E-08	1.888E-08	1.689E-08	1.275E-08	1.052E-08
NW	87	9.368E-10	1.118E-08	1.037E-08	1.103E-08	1.404E-08	1.779E-08	1.769E-08	1.627E-08
NNW	85	6.589E-10	1.883E-08	1.042E-08	8.004E-09	9.041E-09	1.164E-08	1.235E-08	1.194E-08
AVERAGE	1904	1.979E-09	4.134E-08	3.847E-08	4.161E-08	4.367E-08	3.972E-08	3.159E-08	2.612E-08

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.5	10.00	15.00
N	121	1.401E-08	1.263E-08	1.143E-08	1.041E-08	9.494E-09	6.425E-09	4.742E-09	3.011E-09
NNE	138	1.704E-08	1.571E-08	1.444E-08	1.331E-08	1.227E-08	8.515E-09	6.348E-09	4.067E-09
NE	183	2.234E-08	2.016E-08	1.821E-08	1.654E-08	1.506E-08	1.012E-08	7.434E-09	4.696E-09
NNE	139	1.737E-08	1.582E-08	1.442E-08	1.322E-08	1.213E-08	8.351E-09	6.235E-09	4.028E-09
E	175	2.088E-08	1.885E-08	1.708E-08	1.557E-08	1.422E-08	9.716E-09	7.257E-09	4.717E-09
ESE	257	2.915E-08	2.626E-08	2.374E-08	2.159E-08	1.968E-08	1.328E-08	9.801E-09	6.237E-09
SE	202	2.826E-08	2.530E-08	2.273E-08	2.055E-08	1.863E-08	1.235E-08	8.976E-09	5.575E-09
SSE	139	3.698E-08	3.231E-08	2.736E-08	2.356E-08	2.057E-08	1.223E-08	8.409E-09	5.103E-09
S	113	4.206E-08	3.359E-08	2.769E-08	2.333E-08	2.004E-08	1.142E-08	7.694E-09	4.410E-09
SSW	90	4.547E-08	3.632E-08	2.994E-08	2.522E-08	2.166E-08	1.233E-08	8.328E-09	4.804E-09
SW	65	1.847E-08	1.526E-08	1.290E-08	1.109E-08	9.667E-09	5.728E-09	3.929E-09	2.291E-09
WSW	38	1.137E-08	9.118E-09	7.523E-09	6.341E-09	5.442E-09	3.072E-09	2.030E-09	1.113E-09
W	34	1.214E-08	1.024E-08	8.793E-09	7.658E-09	6.751E-09	5.041E-09	3.412E-09	1.956E-09
WNW	38	8.788E-09	7.472E-09	6.460E-09	5.632E-09	5.018E-09	2.975E-09	2.366E-09	1.410E-09
NW	87	1.454E-08	1.294E-08	1.157E-08	1.041E-08	9.412E-09	7.540E-09	5.262E-09	3.323E-09
NNW	85	1.104E-08	1.009E-08	9.207E-09	8.436E-09	7.730E-09	5.258E-09	4.061E-09	3.372E-09
AVERAGE	1904	2.199E-08	1.888E-08	1.647E-08	1.456E-08	1.299E-08	8.398E-09	6.018E-09	3.757E-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	121	2.171E-09	1.680E-09	1.365E-09	1.146E-09	9.807E-10	9.995E-10	8.788E-10	
NNE	138	2.945E-09	2.285E-09	1.858E-09	1.561E-09	1.337E-09	1.171E-09	1.038E-09	
NE	183	3.388E-09	2.628E-09	2.137E-09	1.797E-09	1.542E-09	1.352E-09	1.201E-09	
NNE	139	2.941E-09	2.359E-09	2.066E-09	1.751E-09	1.499E-09	1.311E-09	1.162E-09	
E	175	3.469E-09	2.727E-09	2.703E-09	2.271E-09	1.946E-09	1.703E-09	1.510E-09	
ESE	257	4.511E-09	3.830E-09	3.098E-09	2.593E-09	2.214E-09	1.933E-09	1.710E-09	
SE	202	3.970E-09	3.524E-09	2.815E-09	2.332E-09	1.974E-09	1.711E-09	1.504E-09	
SSE	139	3.494E-09	2.617E-09	2.079E-09	1.715E-09	1.446E-09	1.250E-09	1.096E-09	
S	113	3.007E-09	2.249E-09	1.786E-09	1.472E-09	1.240E-09	1.071E-09	9.383E-10	
SSW	90	3.280E-09	2.455E-09	1.951E-09	1.609E-09	1.356E-09	1.171E-09	1.025E-09	
SW	65	1.574E-08	1.182E-09	9.400E-10	7.760E-10	6.661E-10	5.753E-10	5.041E-10	
WSW	38	7.394E-10	5.429E-10	4.293E-10	3.484E-10	2.898E-10	2.482E-10	2.156E-10	
W	34	1.333E-09	9.951E-10	7.887E-10	6.401E-10	5.676E-10	4.882E-10	4.263E-10	
WNW	38	9.856E-10	7.938E-10	6.970E-10	5.976E-10	5.013E-10	4.304E-10	3.754E-10	
NW	87	2.282E-09	1.740E-09	1.391E-09	1.213E-09	1.017E-09	8.750E-10	7.639E-10	
NNW	85	2.304E-09	1.724E-09	1.369E-09	1.129E-09	9.520E-10	8.234E-10	7.223E-10	
AVERAGE	1904	2.650E-09	2.083E-09	1.718E-09	1.435E-09	1.220E-09	1.069E-09	9.419E-10	

Table B-5

Undepleted χ/Q Factors for Main Stack

EECo 2nd Quarter 1996 General X/Q's: ELEVATED

STACK RELEASE: GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION - (SEC/MS)

SECTOR AVERAGE X/Q

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	163	1.723E-09	5.067E-09	3.697E-09	2.789E-09	2.611E-09	2.677E-09	2.594E-09	2.391E-09
NNE	372	2.792E-09	8.385E-09	6.464E-09	4.646E-09	4.451E-09	4.827E-09	4.735E-09	4.355E-09
NE	233	1.814E-09	5.755E-09	4.052E-09	2.629E-09	2.356E-09	2.541E-09	2.605E-09	2.490E-09
NNE	114	7.007E-10	2.258E-09	1.355E-09	9.631E-09	1.032E-09	1.310E-09	1.382E-09	1.330E-09
E	187	1.386E-09	4.278E-09	3.385E-09	2.630E-09	2.414E-09	2.420E-09	2.361E-09	2.200E-09
ESE	147	1.708E-09	5.622E-09	3.211E-09	2.358E-09	2.132E-09	2.040E-09	1.956E-09	1.782E-09
SE	97	1.750E-09	6.853E-09	5.809E-09	3.293E-09	2.239E-09	2.022E-09	1.371E-09	1.264E-09
SSE	92	4.903E-09	1.226E-07	8.841E-09	5.453E-09	5.409E-09	4.111E-09	3.164E-09	2.506E-09
S	54	3.883E-09	5.725E-09	5.199E-09	6.073E-09	4.645E-09	3.381E-09	2.379E-09	1.72E-09
SSW	95	8.858E-09	1.100E-07	1.077E-07	1.108E-07	1.347E-07	9.157E-09	5.817E-09	4.11E-09
SW	71	8.822E-09	5.671E-09	5.909E-09	8.522E-09	8.248E-09	7.077E-09	5.404E-09	4.238E-09
WSW	72	1.135E-09	1.035E-07	7.387E-09	5.371E-09	5.786E-09	4.652E-09	3.677E-09	2.661E-09
W	104	4.653E-09	6.499E-09	9.856E-09	7.740E-09	7.996E-09	7.349E-09	5.626E-09	4.688E-09
WNW	111	2.147E-09	3.627E-09	7.573E-09	6.212E-09	6.846E-09	4.704E-09	5.490E-09	4.717E-09
NW	122	2.070E-09	5.006E-09	3.702E-09	2.768E-09	2.661E-09	2.726E-09	2.555E-09	2.888E-09
NNW	82	4.701E-10	1.641E-09	1.687E-09	1.522E-09	1.549E-09	1.652E-09	1.580E-09	1.432E-09
AVERAGE	2116	3.708E-09	6.252E-09	5.555E-09	4.653E-09	4.616E-09	4.040E-09	3.273E-09	2.755E-09

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	163	2.155E-09	1.933E-09	1.737E-09	1.570E-09	1.422E-09	9.398E-09	6.824E-09	4.220E-09
NNE	372	3.905E-09	3.484E-09	3.117E-09	2.807E-09	2.537E-09	1.665E-09	1.204E-09	7.430E-09
NE	233	2.301E-09	2.108E-09	1.930E-09	1.775E-09	1.633E-09	1.195E-09	8.530E-09	5.560E-09
NNE	114	1.231E-09	1.127E-09	1.030E-09	9.450E-09	8.678E-09	5.995E-09	4.087E-09	2.907E-09
E	187	2.002E-09	1.815E-09	1.650E-09	1.508E-09	1.382E-09	9.411E-09	6.827E-09	4.605E-09
ESE	147	1.615E-09	1.463E-09	1.331E-09	1.219E-09	1.118E-09	7.715E-09	5.806E-09	3.812E-09
SE	97	1.146E-09	1.041E-09	9.490E-09	8.712E-09	8.010E-09	5.581E-09	4.222E-09	2.791E-09
SSE	92	2.041E-09	1.705E-09	1.453E-09	1.259E-09	1.105E-09	6.687E-09	4.664E-09	2.916E-09
S	54	1.314E-09	1.047E-09	8.625E-09	7.273E-09	6.243E-09	3.561E-09	2.409E-09	1.395E-09
SSW	95	3.105E-09	2.650E-09	2.014E-09	1.692E-09	1.448E-09	8.186E-09	5.473E-09	3.096E-09
SW	71	3.417E-09	2.836E-09	2.395E-09	2.061E-09	1.796E-09	1.067E-09	7.315E-09	4.252E-09
WSW	72	2.024E-09	1.653E-09	1.385E-09	1.183E-09	1.025E-09	5.988E-09	4.069E-09	2.341E-09
W	104	3.933E-09	3.353E-09	2.901E-09	2.543E-09	2.252E-09	1.768E-09	1.207E-09	7.015E-09
WNW	111	4.034E-09	3.487E-09	2.794E-09	2.470E-09	2.201E-09	1.450E-09	1.039E-09	6.221E-09
NW	122	3.020E-09	1.785E-09	1.587E-09	1.422E-09	1.262E-09	1.031E-09	7.300E-09	4.814E-09
NNW	82	1.274E-09	1.131E-09	1.008E-09	9.050E-09	8.169E-09	5.357E-09	4.082E-09	3.871E-09
AVERAGE	2116	2.345E-09	2.026E-09	1.759E-09	1.560E-09	1.395E-09	9.320E-09	6.674E-09	4.203E-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	163	2.994E-09	2.292E-09	1.846E-09	1.560E-09	1.311E-09	1.295E-09	1.137E-09	
NNE	372	5.276E-09	4.046E-09	3.264E-09	2.726E-09	2.325E-09	2.028E-09	1.794E-09	
NE	233	4.088E-09	3.212E-09	2.634E-09	2.231E-09	1.925E-09	1.696E-09	1.513E-09	
NNE	114	2.131E-09	1.726E-09	1.572E-09	1.323E-09	1.135E-09	9.951E-10	8.836E-10	
E	187	3.375E-09	2.645E-09	2.638E-09	2.213E-09	1.894E-09	1.657E-09	1.468E-09	
ESE	147	2.813E-09	2.488E-09	2.031E-09	1.713E-09	1.473E-09	1.292E-09	1.149E-09	
SE	97	2.069E-09	2.110E-09	1.714E-09	1.438E-09	1.232E-09	1.077E-09	9.543E-10	
SSE	92	2.025E-09	1.532E-09	1.227E-09	1.019E-09	8.637E-10	7.495E-10	6.597E-10	
S	54	9.616E-10	7.254E-10	5.798E-10	4.810E-10	4.078E-10	3.541E-10	3.120E-10	
SSW	95	2.106E-09	1.573E-09	1.248E-09	1.028E-09	8.670E-10	7.491E-10	6.572E-10	
SW	71	2.818E-09	2.187E-09	1.738E-09	1.433E-09	1.229E-09	1.061E-09	9.294E-10	
WSW	72	1.604E-09	1.206E-09	9.741E-10	8.027E-10	6.768E-10	5.869E-10	5.150E-10	
W	104	4.818E-09	3.617E-09	2.879E-09	2.378E-09	2.129E-09	1.836E-09	1.607E-09	
WNW	111	4.342E-09	3.443E-09	2.978E-09	2.548E-09	2.145E-09	1.851E-09	1.620E-09	
NW	122	3.363E-09	2.621E-09	2.123E-09	1.956E-09	1.648E-09	1.422E-09	1.245E-09	
NNW	82	2.667E-09	2.008E-09	1.603E-09	1.327E-09	1.122E-09	9.718E-10	8.538E-10	
AVERAGE	2116	2.972E-09	2.339E-09	1.940E-09	1.635E-09	1.399E-09	1.226E-09	1.081E-09	

Table B-5

Undepleted χ/Q Factors for Main Stack

NECo 3rd Quarter 1996 General χ/Q 's: ELEVATED
 STACK RELEASE: GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION - (SEC/M3)

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	201	1.075E-09	3.582E-09	2.646E-08	2.035E-08	2.147E-08	2.723E-08	2.937E-08	2.880E-08
NNE	436	2.229E-09	7.518E-09	5.385E-08	4.081E-08	4.390E-08	5.547E-08	5.807E-08	5.545E-08
NE	300	1.061E-09	4.068E-09	3.579E-08	2.681E-08	2.653E-08	3.203E-08	3.389E-08	3.276E-08
NNE	166	2.848E-10	1.332E-09	2.100E-08	1.559E-08	1.441E-08	1.800E-08	2.024E-08	2.036E-08
E	182	7.657E-10	3.004E-09	3.302E-08	2.311E-08	1.915E-08	1.919E-08	1.989E-08	1.930E-08
ESE	83	7.073E-10	2.391E-09	1.301E-08	1.162E-08	1.191E-08	1.304E-08	1.297E-08	1.222E-08
SE	64	4.931E-10	1.987E-09	1.851E-08	1.499E-08	1.408E-08	1.758E-08	1.205E-08	1.136E-08
SSE	96	2.351E-09	6.818E-09	5.868E-08	6.777E-08	7.250E-08	5.562E-08	4.221E-08	3.299E-08
S	74	2.215E-09	3.944E-09	6.325E-08	9.740E-08	7.664E-08	5.929E-08	4.244E-08	3.073E-08
SSW	85	3.515E-09	6.371E-09	9.070E-08	1.124E-07	1.418E-07	9.364E-08	5.929E-08	4.187E-08
SW	62	5.254E-09	4.237E-09	5.030E-08	7.737E-08	7.155E-08	5.715E-08	4.224E-08	3.247E-08
WSW	45	3.859E-09	3.656E-09	3.108E-08	3.360E-08	4.572E-08	4.214E-08	3.157E-08	2.445E-08
W	113	1.796E-09	2.847E-09	9.617E-08	8.800E-08	8.775E-08	7.829E-08	5.891E-08	4.865E-08
WNW	120	7.799E-10	1.710E-09	5.259E-08	6.002E-08	7.683E-08	6.404E-08	7.103E-08	6.198E-08
NW	109	1.006E-09	1.888E-09	1.165E-08	1.145E-08	1.550E-08	2.287E-08	2.496E-08	2.430E-08
NNW	71	4.680E-10	4.863E-10	2.441E-09	2.730E-09	7.110E-09	7.927E-09	1.004E-08	1.065E-08
AVERAGE	2207	1.712E-09	3.463E-09	4.116E-08	4.400E-08	4.649E-08	4.272E-08	3.557E-08	3.052E-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	201	2.698E-08	2.497E-08	2.306E-08	2.136E-08	1.978E-08	1.401E-08	1.002E-08	7.002E-09
NNE	436	5.094E-08	4.630E-08	4.206E-08	3.837E-08	3.507E-08	2.382E-08	1.760E-08	1.117E-08
NE	300	3.039E-08	2.787E-08	2.550E-08	2.341E-08	2.152E-08	1.489E-08	1.115E-08	7.232E-09
NNE	166	1.941E-08	1.817E-08	1.690E-08	1.573E-08	1.462E-08	1.047E-08	7.995E-09	5.312E-09
E	182	1.802E-08	1.669E-08	1.542E-08	1.430E-08	1.326E-08	9.426E-09	7.180E-09	4.767E-09
ESE	83	1.121E-08	1.024E-08	9.366E-09	8.609E-09	7.922E-09	5.530E-09	4.188E-09	2.770E-09
SE	64	1.033E-08	9.334E-09	8.461E-09	7.672E-09	6.993E-09	4.705E-09	3.457E-09	2.180E-09
SSE	96	2.653E-08	2.192E-08	1.852E-08	1.591E-08	1.387E-08	8.210E-09	5.616E-09	3.888E-09
S	74	2.334E-08	1.854E-08	1.521E-08	1.277E-08	1.093E-08	6.161E-09	4.118E-09	2.333E-09
SSW	85	3.164E-08	2.504E-08	2.049E-08	1.716E-08	1.466E-08	8.212E-09	5.459E-09	3.066E-09
SW	62	2.581E-08	2.114E-08	1.775E-08	1.517E-08	1.317E-08	7.693E-09	5.208E-09	2.967E-09
WSW	45	1.955E-08	1.609E-08	1.355E-08	1.161E-08	1.010E-08	5.930E-09	4.036E-09	2.324E-09
W	113	4.960E-08	3.451E-08	2.980E-08	2.608E-08	2.308E-08	1.786E-08	1.214E-08	7.034E-09
WNW	120	5.343E-08	4.645E-08	3.739E-08	3.115E-08	2.963E-08	1.964E-08	1.407E-08	8.407E-09
NW	109	2.253E-08	2.066E-08	1.891E-08	1.737E-08	1.596E-08	1.455E-08	1.045E-08	7.235E-09
NNW	71	1.040E-08	9.911E-09	9.351E-09	8.812E-09	8.270E-09	6.047E-09	5.047E-09	6.128E-09
AVERAGE	2207	2.632E-08	2.299E-08	2.011E-08	1.797E-08	1.618E-08	1.107E-08	8.021E-09	5.207E-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	201	5.179E-09	4.023E-09	3.356E-09	2.847E-09	2.461E-09	3.276E-09	2.886E-09	
NNN	436	8.075E-09	6.267E-09	5.096E-09	4.285E-09	3.675E-09	3.221E-09	2.861E-09	
NE	300	5.309E-09	4.169E-09	3.417E-09	2.894E-09	2.499E-09	2.203E-09	1.966E-09	
NNE	166	3.951E-09	3.255E-09	3.065E-09	2.593E-09	2.235E-09	1.966E-09	1.752E-09	
E	182	3.541E-09	2.800E-09	2.961E-09	2.495E-09	2.143E-09	1.880E-09	1.670E-09	
ESE	83	2.056E-09	1.887E-09	1.545E-09	1.307E-09	1.126E-09	9.907E-10	8.823E-10	
SE	64	1.567E-09	1.490E-09	1.196E-09	9.945E-10	8.447E-10	7.336E-10	6.462E-10	
SSE	96	2.306E-09	1.719E-09	1.361E-09	1.118E-09	9.412E-10	8.112E-10	7.096E-10	
S	74	1.581E-09	1.176E-09	9.308E-10	7.651E-10	6.434E-10	5.547E-10	4.853E-10	
SSW	85	2.070E-09	1.537E-09	1.211E-09	9.963E-10	8.372E-10	7.220E-10	6.319E-10	
SW	62	2.014E-09	1.499E-09	1.184E-09	9.722E-10	8.271E-10	7.120E-10	6.222E-10	
WSW	45	1.585E-09	1.191E-09	9.767E-10	8.009E-10	6.720E-10	5.830E-10	5.093E-10	
W	113	4.817E-09	3.608E-09	2.867E-09	2.364E-09	2.079E-09	1.791E-09	1.565E-09	
WNW	120	5.843E-09	4.582E-09	3.855E-09	3.240E-09	2.721E-09	2.345E-09	2.049E-09	
NW	109	5.088E-09	4.027E-09	3.288E-09	3.248E-09	2.736E-09	2.360E-09	2.065E-09	
NNW	71	4.243E-09	3.204E-09	2.561E-09	2.122E-09	1.795E-09	1.555E-09	1.365E-09	
AVERAGE	2207	3.702E-09	2.906E-09	2.430E-09	2.065E-09	1.765E-09	1.605E-09	1.417E-09	

Table B-5

Undepleted χ/Q Factors for Main Stack

NECO 4th Quarter 1996 General X/Q's: ELEVATED

STACK RELEASE: GROUND-LEVEL AVERAGE CHI/Q BEFORE DEPLETION - (SEC/M3)

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	155	1.664E-10	5.939E-09	9.438E-09	8.733E-09	1.079E-08	1.711E-08	2.017E-08	2.056E-08
NNE	205	3.881E-10	1.486E-08	1.091E-08	1.191E-08	1.504E-08	2.205E-08	2.525E-08	2.552E-08
NE	162	7.433E-10	3.306E-08	2.324E-08	1.669E-08	1.680E-08	2.039E-08	2.163E-08	2.098E-08
NNE	169	1.382E-10	8.511E-09	2.463E-08	2.065E-08	1.771E-08	1.839E-08	1.947E-08	1.912E-08
N	291	1.228E-08	4.343E-08	3.217E-08	2.481E-08	2.552E-08	3.188E-08	3.476E-08	3.433E-08
NSE	215	1.442E-09	4.953E-08	2.822E-08	2.134E-08	2.142E-08	2.460E-08	2.540E-08	2.435E-08
SE	171	1.306E-09	4.288E-08	3.809E-08	2.978E-08	2.696E-08	2.986E-08	2.228E-08	2.037E-08
SSE	119	2.748E-09	7.137E-08	5.272E-08	6.045E-08	6.102E-08	4.545E-08	3.429E-08	2.877E-08
S	54	1.310E-09	1.941E-08	3.866E-08	5.511E-08	4.164E-08	3.037E-08	2.141E-08	1.542E-08
SSW	53	4.803E-10	1.307E-08	6.100E-08	7.506E-08	9.862E-08	6.689E-08	4.223E-08	2.976E-08
SW	81	4.698E-10	2.892E-09	3.742E-08	7.706E-08	6.959E-08	5.424E-08	3.978E-08	3.046E-08
WSW	91	3.882E-09	2.564E-08	4.228E-08	5.174E-08	6.780E-08	6.037E-08	4.488E-08	3.463E-08
W	123	2.155E-09	2.752E-08	6.522E-08	6.736E-08	7.181E-08	6.591E-08	4.992E-08	4.121E-08
WNW	74	1.409E-10	4.626E-09	2.228E-08	3.944E-08	4.049E-08	4.342E-08	3.606E-08	3.151E-08
NW	83	4.885E-13	1.887E-09	5.474E-09	6.245E-09	9.267E-09	1.517E-08	1.711E-08	1.691E-08
NNW	159	5.398E-19	4.123E-11	2.264E-09	5.554E-09	9.787E-09	1.734E-08	2.027E-08	2.049E-08
AVERAGE	2205	1.039E-09	2.282E-08	3.988E-08	3.522E-08	3.777E-08	3.521E-08	2.968E-08	2.577E-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	155	1.959E-08	1.833E-08	1.703E-08	1.585E-08	1.472E-08	1.042E-08	7.644E-09	5.081E-09
NNE	205	2.422E-08	2.263E-08	2.104E-08	1.958E-08	1.819E-08	1.288E-08	9.704E-09	6.302E-09
NE	162	7.950E-08	1.792E-08	1.644E-08	1.514E-08	1.394E-08	9.678E-09	7.249E-09	4.695E-09
NNE	169	1.796E-08	1.673E-08	1.555E-08	1.449E-08	1.350E-08	9.736E-09	7.476E-09	5.014E-09
N	291	3.221E-08	2.985E-08	2.757E-08	2.53E-08	2.361E-08	1.654E-08	1.240E-08	8.004E-09
NSE	215	2.250E-08	2.066E-08	1.898E-08	1.750E-08	1.614E-08	1.127E-08	8.489E-09	5.551E-09
SE	171	1.822E-08	1.629E-08	1.465E-08	1.326E-08	1.205E-08	8.079E-09	5.946E-09	3.780E-09
SSE	119	2.157E-08	1.787E-08	1.514E-08	1.304E-08	1.139E-08	6.788E-09	4.678E-09	2.844E-09
S	54	1.165E-08	9.219E-09	7.548E-09	6.333E-09	5.418E-09	3.051E-09	2.029E-09	1.135E-09
SSW	53	2.446E-08	1.774E-08	1.448E-08	1.209E-08	1.031E-08	5.734E-09	3.799E-09	2.128E-09
SW	81	2.413E-08	1.972E-08	1.653E-08	1.411E-08	1.223E-08	7.132E-09	4.812E-09	2.722E-09
WSW	91	2.765E-08	2.274E-08	1.914E-08	1.640E-08	1.426E-08	8.384E-09	5.714E-09	3.297E-09
W	123	3.433E-08	2.911E-08	2.508E-08	2.190E-08	1.933E-08	1.429E-08	9.653E-09	5.536E-09
WNW	74	2.732E-08	2.390E-08	2.112E-08	1.884E-08	1.694E-08	1.064E-08	6.618E-09	5.274E-09
NW	83	1.583E-08	1.461E-08	1.345E-08	1.241E-08	1.146E-08	1.110E-08	8.042E-09	5.650E-09
NNW	159	1.941E-08	1.808E-08	1.675E-08	1.555E-08	1.441E-08	1.017E-08	8.244E-09	8.287E-09
AVERAGE	2205	2.241E-08	1.971E-08	1.753E-08	1.575E-08	1.424E-08	9.744E-09	7.169E-09	4.706E-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	155	3.700E-09	2.882E-09	2.348E-09	1.976E-09	1.695E-09	1.944E-09	1.706E-09	
NNE	205	4.591E-09	3.576E-09	2.914E-09	2.452E-09	2.103E-09	1.643E-09	1.635E-09	
NE	162	3.432E-09	2.683E-09	2.193E-09	1.851E-09	1.593E-09	1.400E-09	1.246E-09	
NNE	169	3.743E-09	3.080E-09	2.854E-09	2.412E-09	2.077E-09	1.826E-09	1.625E-09	
N	291	5.818E-09	4.527E-09	4.343E-09	3.625E-09	3.088E-09	2.691E-09	2.377E-09	
NSE	215	4.076E-09	3.588E-09	2.918E-09	2.453E-09	2.103E-09	1.841E-09	1.633E-09	
SE	171	2.737E-09	2.658E-09	2.142E-09	1.788E-09	1.523E-09	1.327E-09	1.171E-09	
SSE	119	1.955E-09	1.470E-09	1.171E-09	9.680E-10	8.181E-10	7.084E-10	6.222E-10	
S	54	7.646E-10	5.666E-10	4.468E-10	3.662E-10	3.071E-10	2.640E-10	2.306E-10	
SSW	53	1.431E-09	1.059E-09	8.345E-10	6.837E-10	5.733E-10	4.936E-10	4.313E-10	
SW	81	1.837E-09	1.361E-09	1.071E-09	8.760E-10	7.474E-10	6.410E-10	5.583E-10	
WSW	91	2.251E-09	1.695E-09	1.407E-09	1.153E-09	9.672E-10	8.406E-10	7.334E-10	
W	123	3.767E-09	2.809E-09	2.224E-09	1.829E-09	1.585E-09	1.365E-09	1.192E-09	
WNW	74	3.725E-09	3.040E-09	2.700E-09	2.321E-09	1.948E-09	1.676E-09	1.462E-09	
NW	83	3.968E-09	3.123E-09	2.539E-09	2.374E-09	1.993E-09	1.713E-09	1.495E-09	
NNW	159	5.666E-09	4.239E-09	3.366E-09	2.773E-09	2.334E-09	2.013E-09	1.760E-09	
AVERAGE	2205	3.341E-09	2.647E-09	2.217E-09	1.869E-09	1.591E-09	1.412E-09	1.242E-09	

Table B-5

Undepleted χ/Q Factors for Main StackBECO 1996 General χ/Q 's: Elevated

SECTOR AVERAGE MODEL

STACK RELEASE: GROUND-LEVEL AVERAGE χ/Q BEFORE DEPLETION - (SEC/M3)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	640	1.007E-09	3.135E-08	2.474E-08	1.913E-08	1.907E-08	2.220E-08	2.327E-08	2.242E-08
NNE	1151	1.551E-09	4.918E-09	3.670E-08	2.821E-08	2.955E-08	3.625E-08	3.789E-08	3.624E-08
NE	878	1.294E-09	4.660E-09	3.194E-08	2.246E-08	2.215E-08	2.599E-08	2.700E-08	2.586E-08
NNE	588	5.459E-10	2.100E-08	2.185E-08	1.633E-08	1.514E-08	1.729E-08	1.838E-08	1.794E-08
E	835	1.205E-09	4.033E-08	3.377E-08	2.484E-08	2.329E-08	2.529E-08	2.588E-08	2.476E-08
ESE	702	1.599E-09	5.043E-08	2.809E-08	2.158E-08	2.126E-08	2.295E-08	2.276E-08	2.133E-08
SE	534	1.261E-09	4.294E-08	3.854E-08	2.697E-08	2.372E-08	2.645E-08	2.008E-08	1.857E-08
SSE	446	2.489E-09	6.783E-08	5.426E-08	6.985E-08	7.233E-08	5.506E-08	4.188E-08	3.284E-08
S	295	2.535E-09	4.196E-08	6.297E-08	9.001E-08	7.047E-08	5.472E-08	3.960E-08	2.882E-08
SSW	323	4.052E-09	5.801E-08	8.387E-08	9.970E-08	1.306E-07	9.419E-08	5.993E-08	4.247E-08
SW	279	4.412E-09	3.101E-08	4.387E-08	7.368E-08	6.845E-08	5.576E-08	4.168E-08	3.229E-08
WSW	246	4.651E-09	3.841E-08	4.155E-08	4.283E-08	5.251E-08	4.491E-08	3.292E-08	2.520E-08
W	374	2.221E-09	3.389E-08	7.082E-08	6.603E-08	6.829E-08	6.168E-08	4.666E-08	3.859E-08
WSW	343	1.624E-09	1.770E-08	3.963E-08	4.034E-08	4.927E-08	5.100E-08	4.199E-08	3.634E-08
NW	401	1.220E-09	2.135E-08	1.611E-08	1.407E-08	1.633E-08	2.081E-08	2.141E-08	2.020E-08
NNW	397	2.668E-10	8.108E-09	7.815E-09	7.793E-09	9.563E-09	1.339E-08	1.469E-08	1.444E-08
AVERAGE	8432	1.958E-09	3.753E-08	3.960E-08	4.150E-08	4.325E-08	3.925E-08	3.225E-08	2.739E-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	640	2.076E-08	1.903E-08	1.743E-08	1.602E-08	1.474E-08	1.020E-08	7.615E-09	4.900E-09
NNE	1151	3.331E-08	3.038E-08	2.759E-08	2.521E-08	2.307E-08	1.570E-08	1.160E-08	7.355E-09
NE	878	2.587E-08	2.182E-08	1.993E-08	1.828E-08	1.677E-08	1.156E-08	8.633E-09	5.576E-09
NNE	588	1.679E-08	1.553E-08	1.433E-08	1.326E-08	1.227E-08	8.678E-09	6.581E-09	4.341E-09
E	835	2.288E-08	2.099E-08	1.924E-08	1.772E-08	1.632E-08	1.137E-08	8.542E-09	5.561E-09
ESE	702	1.945E-08	1.749E-08	1.611E-08	1.477E-08	1.354E-08	9.331E-09	6.986E-09	4.541E-09
SE	534	1.672E-08	1.503E-08	1.355E-08	1.230E-08	1.120E-08	7.534E-09	5.546E-09	3.518E-09
SSE	446	2.651E-08	2.198E-08	1.863E-08	1.606E-08	1.403E-08	8.364E-09	5.763E-09	3.515E-09
S	295	2.195E-08	1.747E-08	1.437E-08	1.209E-08	1.037E-08	5.883E-09	3.951E-09	2.253E-09
SSW	323	3.222E-08	2.556E-08	2.097E-08	1.760E-08	1.506E-08	8.488E-09	5.676E-09	3.221E-09
SW	279	2.581E-08	2.124E-08	1.789E-08	1.533E-08	1.334E-08	7.850E-09	5.345E-09	3.073E-09
WSW	246	1.999E-08	1.636E-08	1.373E-08	1.173E-08	1.018E-08	5.941E-09	4.030E-09	2.309E-09
W	374	3.222E-08	2.737E-08	2.363E-08	2.066E-08	1.827E-08	1.399E-08	9.502E-09	5.491E-09
WSW	343	3.123E-08	2.710E-08	2.378E-08	2.108E-08	1.884E-08	1.144E-08	9.078E-09	5.459E-09
NW	401	1.833E-08	1.663E-08	1.506E-08	1.371E-08	1.252E-08	1.100E-08	7.858E-09	5.329E-09
NNW	397	1.549E-08	1.244E-08	1.144E-08	1.055E-08	9.728E-09	6.774E-09	5.418E-09	5.504E-09
AVERAGE	8472	2.347E-08	2.041E-08	1.798E-08	1.602E-08	1.439E-08	9.631E-09	7.008E-09	4.497E-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	640	3.564E-09	2.777E-09	2.264E-09	1.907E-09	1.638E-09	1.915E-09	1.685E-09	
NNE	1151	5.303E-09	4.107E-09	3.334E-09	2.799E-09	2.397E-09	2.098E-09	1.861E-09	
NE	878	4.078E-09	3.192E-09	2.611E-09	2.207E-09	1.902E-09	1.674E-09	1.492E-09	
NNE	588	3.212E-09	2.623E-09	2.414E-09	2.037E-09	1.751E-09	1.538E-09	1.367E-09	
E	835	4.079E-09	3.196E-09	3.183E-09	2.669E-09	2.283E-09	1.996E-09	1.760E-09	
ESE	702	3.329E-09	2.821E-09	2.377E-09	1.999E-09	1.714E-09	1.502E-09	1.332E-09	
SE	534	2.541E-09	2.410E-09	1.939E-09	1.616E-09	1.374E-09	1.196E-09	1.054E-09	
SSE	446	2.412E-09	1.910E-09	1.440E-09	1.189E-09	1.004E-09	8.678E-10	7.614E-10	
S	295	1.534E-09	1.166E-09	9.892E-10	7.491E-10	6.312E-10	5.449E-10	4.775E-10	
SSW	323	2.185E-09	1.628E-09	1.289E-09	1.061E-09	8.928E-10	7.704E-10	6.747E-10	
SW	279	2.095E-09	1.564E-09	1.238E-09	1.018E-09	8.708E-10	7.502E-10	6.559E-10	
WSW	246	1.573E-09	1.180E-09	9.650E-10	7.914E-10	6.641E-10	5.758E-10	5.030E-10	
W	374	3.756E-09	2.811E-09	2.233E-09	1.840E-09	1.621E-09	1.397E-09	1.221E-09	
WSW	343	3.816E-09	3.037E-09	2.620E-09	2.229E-09	1.873E-09	1.614E-09	1.410E-09	
NW	401	3.728E-09	2.921E-09	1.371E-09	2.236E-09	1.881E-09	1.510E-09	1.416E-09	
NNW	397	3.782E-09	2.840E-09	2.262E-09	1.868E-09	1.577E-09	1.363E-09	1.195E-09	
AVERAGE	8432	3.187E-09	2.510E-09	2.091E-09	1.764E-09	1.505E-09	1.319E-09	1.180E-09	

Table B-6

Depleted χ/Q Factors for Main Stack

BECo 1st Quarter 1996 General X/Q's: ELEVATED
 STACK RELEASE: GROUND-LEVEL AVERAGE χ/Q AFTER DEPLETION (GEN. AND ATOMIC ENERGY 1966 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	121	1.105E-09	3.411E-08	2.681E-08	1.996E-08	1.795E-08	1.742E-08	1.668E-08	1.534E-08
NNE	138	7.312E-10	2.023E-08	1.562E-08	1.216E-08	1.304E-08	1.700E-08	1.847E-08	1.806E-08
NE	183	1.623E-09	5.600E-08	2.793E-08	1.977E-08	2.163E-08	2.599E-08	2.610E-08	2.432E-08
NNE	139	1.149E-09	4.224E-08	2.875E-08	1.954E-08	1.825E-08	1.974E-08	1.987E-08	1.872E-08
E	175	1.489E-09	4.593E-08	3.610E-08	2.490E-08	2.418E-08	2.551E-08	2.457E-08	2.255E-08
ESE	257	2.692E-09	7.574E-08	4.087E-08	3.109E-08	3.172E-08	3.518E-08	3.457E-08	3.195E-08
SE	202	2.416E-09	7.524E-08	5.751E-08	3.828E-08	3.645E-08	4.386E-08	3.367E-08	3.106E-08
SSE	139	2.747E-09	8.428E-08	6.616E-08	9.966E-08	1.052E-07	8.036E-08	6.073E-08	4.720E-08
S	113	3.820E-09	6.998E-08	1.029E-07	1.541E-07	1.229E-07	9.968E-08	7.310E-08	5.298E-08
SSW	90	4.342E-09	5.784E-08	7.581E-08	9.569E-08	1.496E-07	1.262E-07	7.910E-08	5.492E-08
SW	65	4.237E-09	2.984E-08	3.725E-08	5.257E-08	4.782E-08	3.890E-08	2.908E-08	2.233E-08
WSW	38	1.502E-09	9.653E-09	2.598E-08	3.151E-08	3.657E-08	2.807E-08	1.943E-08	1.426E-08
W	34	7.523E-10	1.299E-08	3.279E-08	2.901E-08	2.857E-08	2.421E-08	1.771E-08	1.431E-08
WNW	38	1.057E-09	1.289E-08	1.657E-08	1.630E-08	1.883E-08	1.679E-08	1.261E-08	1.033E-08
NW	87	9.368E-10	1.517E-08	1.034E-08	1.099E-08	1.399E-08	1.770E-08	1.754E-08	1.605E-08
NNW	85	6.589E-10	1.882E-08	1.040E-08	7.983E-09	9.614E-09	1.160E-08	1.228E-08	1.182E-08
AVERAGE	1904	1.979E-09	4.131E-08	3.836E-08	4.149E-08	4.348E-08	3.926E-08	3.096E-08	2.539E-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	121	1.370E-08	1.238E-08	1.114E-08	1.009E-08	9.154E-09	6.004E-09	4.292E-09	2.563E-09
NNE	138	1.678E-08	1.539E-08	1.408E-08	1.290E-08	1.182E-08	7.950E-09	5.737E-09	3.452E-09
NE	183	2.199E-08	1.974E-08	1.775E-08	1.604E-08	1.453E-08	9.516E-09	6.821E-09	4.113E-09
NNE	139	1.708E-08	1.549E-08	1.405E-08	1.280E-08	1.168E-08	7.817E-09	5.674E-09	3.474E-09
E	175	2.029E-08	1.821E-08	1.640E-08	1.487E-08	1.350E-08	8.954E-09	6.495E-09	3.966E-09
ESE	257	2.874E-08	2.579E-08	2.320E-08	2.101E-08	1.906E-08	1.256E-08	9.044E-09	5.490E-09
SE	202	2.779E-08	2.475E-08	2.211E-08	1.987E-08	1.791E-08	1.151E-08	8.117E-09	4.761E-09
SSE	139	3.774E-08	3.099E-08	2.601E-08	2.219E-08	1.919E-08	1.091E-08	7.195E-09	3.979E-09
S	113	4.003E-08	3.159E-08	2.573E-08	2.143E-08	1.820E-08	9.812E-09	6.280E-09	3.280E-09
SSW	90	4.079E-08	3.161E-08	2.528E-08	2.067E-08	1.724E-08	8.603E-09	5.180E-09	2.478E-09
SW	65	1.772E-08	1.446E-08	1.206E-08	1.022E-08	8.792E-09	4.876E-09	3.146E-09	1.646E-09
WSW	38	1.091E-08	8.663E-09	7.078E-09	5.909E-09	5.024E-09	2.716E-09	1.726E-09	8.863E-10
W	34	1.172E-08	9.786E-09	8.316E-09	7.167E-09	6.252E-09	4.221E-09	2.664E-09	1.339E-09
WNW	38	8.578E-09	7.249E-09	6.228E-09	5.425E-09	4.779E-09	2.754E-09	2.095E-09	1.157E-09
NW	87	1.426E-08	1.262E-08	1.120E-08	1.001E-08	8.981E-09	6.773E-09	4.525E-09	2.583E-09
NNW	85	1.088E-08	9.900E-09	8.988E-09	8.180E-09	7.461E-09	4.919E-09	3.654E-09	2.618E-09
AVERAGE	1904	2.119E-08	1.804E-08	1.560E-08	1.368E-08	1.210E-08	7.494E-09	5.165E-09	2.988E-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	121	1.746E-09	1.283E-09	9.925E-10	7.966E-10	6.533E-10	5.616E-10	4.737E-10	
NNE	138	2.354E-09	1.725E-09	1.329E-09	1.061E-09	8.646E-10	7.222E-10	6.123E-10	
NE	183	2.841E-09	2.114E-09	1.650E-09	1.335E-09	1.102E-09	9.316E-10	7.986E-10	
NNE	139	2.410E-09	1.829E-09	1.499E-09	1.196E-09	9.742E-10	8.124E-10	6.875E-10	
E	175	2.771E-09	2.062E-09	1.825E-09	1.444E-09	1.167E-09	9.671E-10	8.144E-10	
ESE	257	5.782E-09	2.989E-09	2.303E-09	1.842E-09	1.504E-09	1.259E-09	1.070E-09	
SE	202	5.215E-09	2.557E-09	1.931E-09	1.517E-09	1.220E-09	1.008E-09	8.461E-10	
SSE	139	2.541E-09	1.787E-09	1.340E-09	1.048E-09	8.411E-10	6.943E-10	5.833E-10	
S	113	2.060E-09	1.430E-09	1.061E-09	8.221E-10	6.541E-10	5.359E-10	4.474E-10	
SSW	90	1.473E-09	9.914E-10	7.241E-10	5.582E-10	4.446E-10	3.662E-10	3.081E-10	
SW	65	1.031E-09	7.140E-10	5.289E-10	4.101E-10	3.251E-10	2.669E-10	2.235E-10	
WSW	38	5.573E-10	3.887E-10	2.861E-10	2.232E-10	1.789E-10	1.455E-10	1.225E-10	
W	34	8.102E-10	5.440E-10	3.922E-10	2.970E-10	2.138E-10	1.626E-10	1.353E-10	
WNW	38	7.473E-10	5.308E-10	3.793E-10	2.537E-10	1.969E-10	1.623E-10	1.367E-10	
NW	87	1.648E-09	1.164E-09	8.704E-10	5.670E-10	4.520E-10	3.715E-10	3.110E-10	
NNW	85	1.663E-09	1.164E-09	8.675E-10	6.743E-10	5.370E-10	4.399E-10	3.665E-10	
AVERAGE	1904	1.975E-09	1.455E-09	1.124E-09	8.779E-10	7.11E-10	5.879E-10	4.961E-10	

Table B-6

Depleted χ/Q Factors for Main Stack

NECO 2nd Quarter 1996 General X/Q's: ELEVATED
 STACK RELEASE: GROUND-LEVEL AVERAGE χ/Q AFTER DEPLETION (MKT. 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	163	1.723E-09	5.064E-08	3.689E-08	2.780E-08	2.600E-08	2.661E-08	2.569E-08	2.356E-08
NNE	372	2.792E-09	8.381E-08	6.452E-08	4.631E-08	4.435E-08	4.606E-08	4.702E-08	4.309E-08
NE	233	1.814E-09	5.752E-08	4.042E-08	2.616E-08	2.344E-08	2.528E-08	2.584E-08	2.458E-08
NNE	114	7.067E-10	2.297E-08	1.352E-08	9.597E-09	1.028E-08	1.303E-08	1.370E-08	1.312E-08
E	187	1.386E-09	4.275E-08	3.370E-08	2.620E-08	2.401E-08	2.402E-08	2.336E-08	2.166E-08
ESE	147	1.708E-09	5.618E-08	3.202E-08	2.346E-08	2.117E-08	2.019E-08	1.910E-08	1.750E-08
SE	97	1.759E-09	6.847E-08	5.789E-08	3.272E-08	2.221E-08	2.004E-08	1.555E-08	1.245E-08
ESE	92	4.903E-09	1.225E-07	8.814E-08	5.434E-08	5.383E-08	4.070E-08	3.108E-08	2.441E-08
S	54	3.883E-09	5.721E-08	5.176E-08	6.049E-08	4.614E-08	3.320E-08	2.299E-08	1.641E-08
SSW	95	8.858E-09	1.099E-07	1.074E-07	1.144E-07	1.337E-07	8.907E-08	5.563E-08	3.868E-08
SW	71	8.822E-09	5.666E-08	5.895E-08	8.502E-08	8.213E-08	6.983E-08	5.262E-08	4.063E-08
WSW	72	1.135E-08	1.034E-07	7.363E-08	5.352E-08	5.758E-08	4.592E-08	3.288E-08	2.471E-08
W	104	4.053E-09	6.492E-08	9.824E-08	7.712E-08	7.960E-08	7.276E-08	5.519E-08	4.544E-08
WNW	111	2.147E-09	3.625E-08	7.549E-08	6.185E-08	6.814E-08	6.650E-08	5.407E-08	4.602E-08
NW	122	2.970E-09	5.002E-08	3.691E-08	2.753E-08	2.646E-08	2.706E-08	2.524E-08	2.247E-08
NNW	82	4.701E-10	1.640E-08	1.683E-08	1.515E-08	1.538E-08	1.633E-08	1.553E-08	1.400E-08
AVERAGE	2116	3.708E-09	6.247E-08	5.540E-08	4.635E-08	4.590E-08	3.991E-08	3.209E-08	2.680E-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	163	2.111E-08	1.879E-08	1.675E-08	1.501E-08	1.349E-08	8.547E-09	5.962E-09	3.434E-09
NNE	372	3.847E-08	3.417E-08	3.044E-08	2.729E-08	2.455E-08	1.574E-08	1.114E-08	6.591E-09
NE	233	2.259E-08	2.057E-08	1.871E-08	1.709E-08	1.561E-08	1.048E-08	7.617E-09	4.680E-09
NNE	114	1.208E-08	1.099E-08	9.976E-09	9.091E-09	8.294E-09	5.553E-09	4.037E-09	2.486E-09
E	187	1.961E-08	1.767E-08	1.597E-08	1.451E-08	1.321E-08	8.787E-09	6.377E-09	3.920E-09
ESE	147	1.577E-08	1.421E-08	1.285E-08	1.170E-08	1.066E-08	7.132E-09	5.214E-09	3.252E-09
SE	97	1.123E-08	1.015E-08	9.204E-09	8.401E-09	7.677E-09	5.183E-09	3.799E-09	2.367E-09
ESE	92	1.970E-08	1.631E-08	1.378E-08	1.184E-08	1.029E-08	5.975E-09	4.012E-09	2.309E-09
S	54	1.235E-08	9.729E-09	7.924E-09	6.612E-09	5.619E-09	3.065E-09	2.000E-09	1.094E-09
SSW	95	2.874E-08	2.241E-08	1.810E-08	1.499E-08	1.267E-08	6.741E-09	4.283E-09	2.234E-09
SW	71	3.222E-08	2.623E-08	2.181E-08	1.844E-08	1.581E-08	8.605E-09	5.436E-09	2.723E-09
WSW	72	1.829E-08	1.556E-08	1.288E-08	1.087E-08	9.322E-09	5.165E-09	3.352E-09	1.788E-09
W	104	3.764E-08	3.166E-08	2.704E-08	2.338E-08	2.042E-08	1.438E-08	9.116E-09	4.638E-09
WNW	111	3.894E-08	3.327E-08	2.635E-08	2.301E-08	2.025E-08	1.245E-08	8.366E-09	4.484E-09
NW	122	1.971E-08	1.729E-08	1.526E-08	1.358E-08	1.215E-08	9.284E-09	6.324E-09	3.812E-09
NNW	82	1.238E-08	1.091E-08	9.650E-09	8.603E-09	7.708E-09	4.867E-09	3.554E-09	2.965E-09
AVERAGE	2116	2.261E-08	1.937E-08	1.667E-08	1.465E-08	1.298E-08	8.247E-09	5.661E-09	3.299E-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	163	2.290E-09	1.659E-09	1.271E-09	1.013E-09	8.257E-10	7.076E-10	5.975E-10	
NNE	372	4.503E-09	3.328E-09	2.592E-09	2.094E-09	1.728E-09	1.462E-09	1.255E-09	
NE	233	3.268E-09	2.449E-09	1.951E-09	1.562E-09	1.295E-09	1.099E-09	9.450E-10	
NNE	114	1.739E-09	1.342E-09	1.145E-09	9.195E-10	7.528E-10	6.305E-10	5.355E-10	
E	187	2.734E-09	2.045E-09	1.674E-09	1.499E-09	1.224E-09	1.023E-09	8.677E-10	
ESE	147	2.290E-09	1.899E-09	1.478E-09	1.192E-09	9.794E-10	8.231E-10	7.014E-10	
SE	97	1.659E-09	1.525E-09	1.167E-09	9.270E-10	7.513E-10	6.233E-10	5.249E-10	
ESE	92	1.506E-09	1.076E-09	8.174E-10	6.463E-10	5.232E-10	4.348E-10	3.675E-10	
S	54	7.207E-10	5.228E-10	4.033E-10	3.241E-10	2.668E-10	2.253E-10	1.934E-10	
SSW	95	1.424E-09	1.008E-09	7.638E-10	6.052E-10	4.926E-10	4.124E-10	3.518E-10	
SW	71	1.637E-09	1.089E-09	7.765E-10	5.813E-10	4.405E-10	3.510E-10	2.863E-10	
WSW	72	1.150E-09	8.153E-10	6.051E-10	4.775E-10	3.867E-10	3.164E-10	2.685E-10	
W	104	2.830E-09	1.909E-09	1.379E-09	1.042E-09	7.200E-10	5.026E-10	4.114E-10	
WNW	111	2.837E-09	2.004E-09	1.471E-09	9.495E-10	7.101E-10	5.722E-10	4.713E-10	
NW	122	2.479E-09	1.783E-09	1.342E-09	7.961E-10	6.320E-10	5.176E-10	4.327E-10	
NNW	82	1.895E-09	1.330E-09	9.935E-10	7.726E-10	6.148E-10	5.022E-10	4.174E-10	
AVERAGE	2116	2.185E-09	1.612E-09	1.250E-09	9.625E-10	7.714E-10	6.376E-10	5.392E-10	

Table B-6

Depleted χ/Q Factors for Main Stack

BECO 3rd Quarter 1996 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	201	1.075E-09	3.580E-08	2.640E-08	2.027E-08	2.139E-08	2.709E-08	2.911E-08	2.841E-08
NNE	436	2.229E-09	7.513E-08	5.371E-08	4.065E-08	4.372E-08	5.518E-08	5.757E-08	5.471E-08
NE	300	1.061E-09	4.065E-08	3.570E-08	2.670E-08	2.640E-08	3.185E-08	3.358E-08	3.229E-08
NNE	166	2.948E-10	1.332E-08	2.094E-08	1.550E-08	1.432E-08	1.787E-08	2.001E-08	2.000E-08
E	182	7.657E-10	3.002E-08	3.292E-08	2.296E-08	1.900E-08	1.905E-08	1.970E-08	1.902E-08
ESE	83	7.073E-10	2.389E-08	1.298E-08	1.157E-08	1.183E-08	1.292E-08	1.278E-08	1.196E-08
SE	64	4.931E-10	1.986E-08	1.846E-08	1.492E-08	1.400E-08	1.744E-08	1.189E-08	1.114E-08
SSE	96	2.351E-09	6.813E-08	5.854E-08	6.764E-08	7.223E-08	5.507E-08	4.144E-08	3.208E-08
S	74	2.215E-09	3.940E-08	6.315E-08	9.720E-08	7.632E-08	5.853E-08	4.137E-08	2.958E-08
SSW	85	3.515E-09	6.364E-08	9.046E-08	1.121E-07	1.409E-07	9.151E-08	5.711E-08	3.976E-08
SW	62	5.254E-09	4.231E-08	5.016E-08	7.718E-08	7.123E-08	5.638E-08	4.114E-08	3.116E-08
WSW	45	3.859E-09	3.651E-08	3.099E-08	3.352E-08	4.556E-08	4.167E-08	3.088E-08	2.361E-08
W	113	1.796E-09	2.845E-08	9.594E-08	8.765E-08	8.728E-08	7.745E-08	5.780E-08	4.727E-08
WNW	120	7.799E-10	1.708E-08	5.247E-08	5.983E-08	7.652E-08	2.336E-08	6.998E-08	6.048E-08
NW	109	1.006E-09	1.986E-08	1.163E-08	1.142E-08	1.545E-08	2.275E-08	2.470E-08	2.390E-08
NNW	71	4.680E-14	4.863E-10	2.434E-09	2.718E-09	4.097E-09	7.897E-09	9.969E-09	1.051E-08
AVERAGE	2207	1.712E-09	3.460E-08	4.105E-08	4.386E-08	4.627E-08	4.225E-08	3.494E-08	2.977E-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	201	2.645E-08	2.432E-08	2.229E-08	2.049E-08	1.882E-08	1.278E-08	9.275E-09	5.604E-09
NNE	436	4.997E-08	4.514E-08	4.074E-08	3.692E-08	3.352E-08	2.201E-08	1.573E-08	9.402E-09
NE	300	2.977E-08	2.711E-08	2.464E-08	2.247E-08	2.051E-08	1.374E-08	9.985E-09	6.157E-09
NNE	166	1.892E-08	1.755E-08	1.618E-08	1.492E-08	1.374E-08	9.387E-09	6.869E-09	4.243E-09
E	182	1.767E-08	1.626E-08	1.493E-08	1.376E-08	1.266E-08	8.691E-09	6.397E-09	3.990E-09
ESE	83	1.090E-08	9.869E-09	8.949E-09	8.154E-09	7.438E-09	4.971E-09	3.612E-09	2.216E-09
SE	64	1.006E-08	9.016E-09	8.087E-09	7.290E-09	6.590E-09	4.254E-09	3.005E-09	1.767E-09
SSE	96	2.555E-08	2.091E-08	1.749E-08	1.489E-08	1.286E-08	7.282E-09	4.786E-09	2.653E-09
S	74	2.221E-08	1.745E-08	1.416E-08	1.177E-08	9.972E-09	5.366E-09	3.442E-09	1.815E-09
SSW	85	2.965E-08	2.316E-08	1.872E-08	1.550E-08	1.309E-08	6.968E-09	4.433E-09	2.312E-09
SW	62	2.437E-08	1.964E-08	1.622E-08	1.364E-08	1.165E-08	6.293E-09	3.965E-09	1.992E-09
WSW	45	1.862E-08	1.511E-08	1.255E-08	1.060E-08	9.082E-09	4.968E-09	3.163E-09	1.614E-09
W	113	3.902E-08	3.278E-08	2.798E-08	2.418E-08	2.113E-08	1.452E-08	9.095E-09	4.517E-09
WNW	120	5.156E-08	4.429E-08	3.521E-08	3.081E-08	2.717E-08	1.667E-08	1.107E-08	5.791E-09
NW	109	2.199E-08	1.999E-08	1.813E-08	1.650E-08	1.502E-08	1.271E-08	8.613E-09	5.175E-09
NNW	71	1.020E-08	9.546E-09	9.028E-09	8.436E-09	7.847E-09	5.471E-09	4.320E-09	4.276E-09
AVERAGE	2207	2.543E-08	2.202E-08	1.908E-08	1.690E-08	1.507E-08	9.754E-09	6.735E-09	3.970E-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	201	3.806E-09	2.761E-09	2.094E-09	1.646E-09	1.320E-09	1.271E-09	1.037E-09	
NNE	436	6.427E-09	4.733E-09	3.660E-09	2.936E-09	2.404E-09	2.016E-09	1.716E-09	
NE	300	4.324E-09	3.257E-09	2.565E-09	2.091E-09	1.738E-09	1.477E-09	1.272E-09	
NNE	166	2.959E-09	2.289E-09	2.003E-09	1.599E-09	1.302E-09	1.084E-09	9.161E-10	
E	182	2.802E-09	2.103E-09	2.051E-09	1.643E-09	1.342E-09	1.122E-09	9.513E-10	
ESE	83	1.531E-09	1.266E-09	9.622E-10	7.585E-10	6.105E-10	5.035E-10	4.218E-10	
SE	64	1.192E-09	1.027E-09	7.748E-10	6.077E-10	4.872E-10	4.007E-10	3.348E-10	
SSE	96	1.690E-09	1.186E-09	8.873E-10	6.919E-10	5.526E-10	4.537E-10	3.790E-10	
S	74	1.156E-09	8.141E-10	6.121E-10	4.801E-10	3.860E-10	3.191E-10	2.685E-10	
SSW	85	1.466E-09	1.029E-09	7.724E-10	6.053E-10	4.865E-10	4.024E-10	3.387E-10	
SW	62	1.216E-09	8.257E-10	6.017E-10	4.599E-10	3.581E-10	2.907E-10	2.410E-10	
WSW	45	9.893E-10	6.700E-10	4.695E-10	3.548E-10	2.758E-10	2.135E-10	1.750E-10	
W	113	2.698E-09	1.789E-09	1.276E-09	9.556E-10	6.688E-10	4.943E-10	4.071E-10	
WNW	120	3.569E-09	2.424E-09	1.688E-09	1.090E-09	8.029E-10	6.354E-10	5.135E-10	
NW	109	3.242E-09	2.249E-09	1.624E-09	7.725E-10	5.919E-10	4.696E-10	3.807E-10	
NNW	71	2.623E-09	1.762E-09	1.260E-09	9.384E-10	7.148E-10	5.599E-10	4.462E-10	
AVERAGE	2207	2.606E-09	1.887E-09	1.456E-09	1.102E-09	8.775E-10	7.320E-10	6.124E-10	

Table B-6

Depleted χ/Q Factors for Main Stack

BECO 4th Quarter 1996 General X/Q's: ELEVATED
 STACK RELEASE: GROUND-LEVEL AVERAGE CHL/Q AFTER DEPLETION (MRT. 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	155	1.664E-10	5.937E-09	9.411E-09	8.689E-09	1.075E-08	1.705E-08	2.004E-08	2.034E-08
NNE	205	3.881E-10	1.485E-08	1.088E-08	1.186E-08	1.497E-08	2.191E-08	2.504E-08	2.522E-08
NE	162	7.433E-10	3.383E-08	2.314E-08	1.659E-08	1.671E-08	2.026E-08	2.143E-08	2.069E-08
NNE	169	1.382E-10	8.507E-09	2.456E-08	2.049E-08	1.755E-08	1.822E-08	1.926E-08	1.884E-08
E	291	1.228E-09	4.340E-08	3.208E-08	2.469E-08	2.540E-08	3.172E-08	3.450E-08	3.395E-08
ESE	215	1.442E-09	4.949E-08	2.813E-08	2.125E-08	2.132E-08	2.447E-08	2.521E-08	2.409E-08
SE	171	1.306E-09	4.285E-08	3.798E-08	2.942E-08	2.680E-08	2.966E-08	2.208E-08	2.013E-08
SSE	119	2.748E-09	7.133E-08	5.257E-08	6.033E-08	6.085E-08	4.514E-08	3.387E-08	2.627E-08
S	54	1.310E-09	1.939E-08	3.863E-08	5.503E-08	4.151E-08	3.006E-08	2.101E-08	1.500E-08
SSW	53	4.803E-10	1.306E-08	6.089E-08	7.568E-08	9.809E-08	6.541E-08	4.067E-08	2.821E-08
SW	81	4.698E-10	2.689E-08	3.741E-08	7.700E-08	6.942E-08	5.376E-08	3.908E-08	2.961E-08
WSW	91	3.882E-09	2.562E-08	4.222E-08	5.166E-08	6.759E-08	5.979E-08	4.402E-08	3.362E-08
W	123	2.155E-09	2.750E-08	6.508E-08	6.718E-08	7.156E-08	6.539E-08	4.917E-08	4.023E-08
WNW	74	1.609E-10	4.622E-09	2.224E-08	3.035E-08	4.033E-08	4.306E-08	3.550E-08	3.075E-08
NW	83	4.885E-13	1.587E-09	5.454E-09	6.215E-09	9.238E-09	1.510E-08	1.694E-08	1.662E-08
NNW	159	5.398E-19	4.123E-11	2.263E-09	5.541E-09	9.759E-09	1.727E-08	2.013E-08	2.026E-08
AVERAGE	2205	1.039E-09	2.281E-08	3.081E-08	3.512E-08	3.761E-08	3.489E-08	2.925E-08	2.524E-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	155	1.928E-08	1.793E-08	1.656E-08	1.531E-08	1.412E-08	9.624E-09	6.964E-09	4.175E-09
NNE	205	2.384E-08	2.217E-08	2.051E-08	1.899E-08	1.754E-08	1.206E-08	8.807E-09	5.383E-09
NE	162	1.912E-08	1.747E-08	1.594E-08	1.456E-08	1.334E-08	8.988E-09	6.540E-09	4.017E-09
NNE	169	1.762E-08	1.633E-08	1.509E-08	1.398E-08	1.294E-08	9.021E-09	6.691E-09	4.200E-09
E	291	3.171E-08	2.924E-08	2.685E-08	2.471E-08	2.271E-08	1.537E-08	1.113E-08	6.728E-09
ESE	215	2.217E-08	2.027E-08	1.853E-08	1.700E-08	1.560E-08	1.061E-08	7.770E-09	4.821E-09
SE	171	1.794E-08	1.596E-08	1.431E-08	1.290E-08	1.168E-08	7.657E-09	5.513E-09	3.357E-09
SSE	119	2.102E-08	1.730E-08	1.455E-08	1.245E-08	1.079E-08	6.221E-09	4.156E-09	2.360E-09
S	54	1.125E-08	8.841E-09	7.189E-09	5.990E-09	5.091E-09	2.778E-09	1.796E-09	9.541E-10
SSW	53	2.096E-08	1.630E-08	1.311E-08	1.079E-08	9.078E-09	4.737E-09	2.968E-09	1.509E-09
SW	81	2.319E-08	1.874E-08	1.551E-08	1.308E-08	1.120E-08	6.142E-09	3.904E-09	1.970E-09
WSW	91	2.652E-08	2.154E-08	1.790E-08	1.513E-08	1.299E-08	7.150E-09	4.578E-09	2.356E-09
W	123	3.317E-08	2.782E-08	2.371E-08	2.046E-08	1.785E-08	1.192E-08	7.532E-09	3.827E-09
WNW	74	2.639E-08	2.285E-08	1.997E-08	1.761E-08	1.565E-08	9.198E-09	6.963E-09	3.758E-09
NW	83	1.543E-08	1.412E-08	1.267E-08	1.175E-08	1.074E-08	6.655E-09	6.620E-09	4.027E-09
NNW	159	1.910E-08	1.770E-08	1.631E-08	1.504E-08	1.386E-08	9.465E-09	7.380E-09	6.084E-09
AVERAGE	2205	2.179E-08	1.904E-08	1.681E-08	1.499E-08	1.345E-08	8.789E-09	6.207E-09	3.720E-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	155	2.822E-09	2.046E-09	1.557E-09	1.228E-09	9.888E-10	8.690E-10	7.149E-10	
NNE	205	3.697E-09	2.720E-09	2.096E-09	1.672E-09	1.359E-09	1.131E-09	9.539E-10	
NE	162	2.793E-09	2.081E-09	1.623E-09	1.309E-09	1.076E-09	9.049E-10	7.710E-10	
NNE	169	2.945E-09	2.267E-09	1.927E-09	1.534E-09	1.244E-09	1.033E-09	8.695E-10	
E	291	4.604E-09	3.387E-09	2.944E-09	2.330E-09	1.885E-09	1.564E-09	1.317E-09	
ESE	215	3.366E-09	2.748E-09	2.121E-09	1.695E-09	1.382E-09	1.153E-09	9.752E-10	
SE	171	2.332E-09	2.078E-09	1.597E-09	1.272E-09	1.035E-09	8.622E-10	7.289E-10	
SSE	119	1.543E-09	1.109E-09	8.471E-10	6.741E-10	5.493E-10	4.597E-10	3.911E-10	
S	54	6.137E-10	4.360E-10	3.306E-10	2.614E-10	2.117E-10	1.763E-10	1.494E-10	
SSW	53	9.359E-10	6.451E-10	4.765E-10	3.683E-10	2.924E-10	2.393E-10	1.995E-10	
SW	81	1.199E-09	8.042E-10	5.839E-10	4.420E-10	3.403E-10	2.736E-10	2.249E-10	
WSW	91	1.455E-09	9.929E-10	7.022E-10	5.346E-10	4.189E-10	3.279E-10	2.715E-10	
W	123	2.340E-09	1.584E-09	1.148E-09	8.711E-10	6.249E-10	4.644E-10	3.828E-10	
WNW	74	2.350E-09	1.624E-09	1.111E-09	6.489E-10	4.636E-10	3.626E-10	2.906E-10	
NW	83	2.510E-09	1.719E-09	1.229E-09	5.717E-10	4.313E-10	3.374E-10	2.702E-10	
NNW	159	3.743E-09	2.536E-09	1.835E-09	1.386E-09	1.074E-09	8.584E-10	6.987E-10	
AVERAGE	2205	2.453E-09	1.799E-09	1.383E-09	1.050E-09	8.360E-10	6.885E-10	5.756E-10	

Table B-6

Depleted χ/Q Factors for Main Stack

ECCO 1996 General K/Q's: ELEVATED

SECTOR AVERAGE MODEL

STACK RELEASE: GROUND-LEVEL AVERAGE CHI/Q AFTER DEPLETION (MET. AND ATOMIC ENERGY 1966 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	640	1.007E-09	3.133E-09	2.468E-08	1.906E-08	1.899E-08	2.216E-08	2.307E-08	2.213E-08
NNE	1151	1.551E-09	4.915E-09	3.662E-08	2.811E-08	2.943E-08	3.607E-08	3.759E-08	3.581E-08
NE	878	1.294E-09	4.657E-09	3.184E-08	2.236E-08	2.205E-08	2.585E-08	2.677E-09	2.552E-08
ENE	588	5.459E-10	2.099E-09	2.178E-08	1.624E-08	1.504E-08	1.717E-08	1.820E-08	1.768E-08
E	835	1.205E-09	4.030E-09	3.363E-08	2.466E-08	2.310E-08	2.507E-08	2.559E-08	2.439E-08
ESE	702	1.599E-09	5.040E-09	2.802E-08	2.149E-08	2.115E-08	2.279E-08	2.254E-08	2.104E-08
SE	534	1.261E-09	4.291E-09	3.843E-08	2.604E-08	2.359E-08	2.629E-08	1.989E-08	1.832E-08
SSE	446	2.489E-09	6.779E-09	5.411E-08	6.969E-08	7.207E-08	5.418E-08	4.122E-08	3.205E-08
S	295	2.535E-09	4.193E-09	6.286E-08	8.980E-08	7.017E-08	5.402E-08	3.860E-08	2.774E-08
SSW	323	4.052E-09	5.796E-09	8.368E-08	9.944E-08	1.299E-07	9.149E-08	5.740E-08	3.989E-08
SW	279	4.412E-09	3.098E-08	4.379E-08	7.354E-08	6.821E-08	5.512E-08	4.074E-08	3.114E-08
WSW	246	4.651E-09	3.838E-08	4.145E-08	4.283E-08	5.231E-08	4.441E-08	3.223E-08	2.439E-08
W	374	2.221E-09	3.386E-08	7.063E-08	6.581E-08	6.790E-08	6.109E-08	4.584E-08	3.753E-08
WNW	343	1.024E-09	1.769E-08	3.972E-08	4.020E-08	4.907E-08	5.060E-08	4.136E-08	3.547E-08
NW	401	1.220E-09	2.133E-08	1.606E-08	1.400E-08	1.626E-08	2.069E-08	2.119E-08	1.987E-08
NNW	397	2.668E-10	8.503E-09	7.799E-09	7.765E-09	9.519E-09	1.330E-08	1.454E-08	1.423E-08
AVERAGE	8432	1.958E-09	3.750E-08	3.969E-08	4.136E-08	4.305E-08	3.882E-08	3.167E-08	2.670E-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	640	2.037E-08	1.856E-08	1.688E-08	1.541E-08	1.407E-08	9.361E-09	6.714E-09	3.999E-09
NNE	1151	3.276E-08	2.967E-08	2.684E-08	2.439E-08	2.219E-08	1.466E-08	1.051E-08	5.302E-09
NE	878	2.343E-08	2.129E-08	1.932E-08	1.761E-08	1.606E-08	1.072E-08	7.776E-09	4.765E-09
ENE	588	1.645E-08	1.512E-08	1.386E-08	1.273E-08	1.170E-08	7.975E-09	5.842E-09	3.817E-09
E	835	2.242E-08	2.045E-08	1.864E-08	1.706E-08	1.562E-08	1.052E-08	7.652E-09	4.688E-09
ESE	702	1.910E-08	1.727E-08	1.565E-08	1.426E-08	1.301E-08	8.700E-09	6.328E-09	3.896E-09
SE	534	1.642E-08	1.467E-08	1.316E-08	1.188E-08	1.075E-08	7.016E-09	5.014E-09	3.009E-09
SSE	446	2.565E-08	2.108E-08	1.772E-08	1.513E-08	1.311E-08	7.497E-09	4.971E-09	2.790E-09
S	295	2.090E-08	1.645E-08	1.338E-08	1.115E-08	9.460E-09	5.116E-09	3.290E-09	1.740E-09
SSW	323	2.967E-08	2.309E-08	1.858E-08	1.531E-08	1.287E-08	6.697E-09	4.181E-09	2.120E-09
SW	279	2.453E-08	1.989E-08	1.650E-08	1.393E-08	1.193E-08	6.514E-09	4.133E-09	2.091E-09
WSW	246	1.912E-08	1.545E-08	1.280E-08	1.079E-08	9.247E-09	5.080E-09	3.256E-09	1.687E-09
W	374	3.098E-08	2.601E-08	2.218E-08	1.916E-08	1.674E-08	1.148E-08	7.239E-09	3.649E-09
WNW	343	3.017E-08	2.589E-08	2.246E-08	1.967E-08	1.736E-08	9.834E-09	7.291E-09	3.885E-09
NW	401	1.795E-08	1.611E-08	1.447E-08	1.306E-08	1.182E-08	9.718E-09	6.594E-09	3.947E-09
NNW	397	1.323E-08	1.213E-08	1.108E-08	1.015E-08	9.297E-09	6.239E-09	4.778E-09	4.045E-09
AVERAGE	8432	2.270E-08	1.957E-08	1.709E-08	1.511E-08	1.345E-08	8.571E-09	5.973E-09	3.515E-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	640	2.703E-09	1.964E-09	1.498E-09	1.186E-09	9.587E-10	8.642E-10	7.152E-10	
NNE	1151	4.311E-09	3.175E-09	2.457E-09	1.970E-09	1.614E-09	1.353E-09	1.152E-09	
NE	878	3.324E-09	2.488E-09	1.950E-09	1.583E-09	1.310E-09	1.109E-09	9.519E-10	
ENE	588	2.525E-09	1.942E-09	1.654E-09	1.320E-09	1.075E-09	8.955E-10	7.568E-10	
E	835	3.249E-09	2.415E-09	2.189E-09	1.742E-09	1.415E-09	1.178E-09	9.951E-10	
ESE	702	2.712E-09	2.201E-09	1.697E-09	1.357E-09	1.107E-09	9.241E-10	7.831E-10	
SE	534	2.064E-09	1.772E-09	1.349E-09	1.067E-09	8.622E-10	7.143E-10	6.010E-10	
SSE	446	1.797E-09	1.274E-09	9.614E-10	7.563E-10	6.095E-10	5.049E-10	4.254E-10	
S	295	1.109E-09	7.812E-10	5.874E-10	4.610E-10	3.710E-10	3.072E-10	2.589E-10	
SSW	323	1.318E-09	9.150E-10	6.819E-10	5.327E-10	4.278E-10	3.541E-10	2.987E-10	
SW	279	1.275E-09	8.619E-10	6.244E-10	4.744E-10	3.667E-10	2.960E-10	2.442E-10	
WSW	246	1.054E-09	7.274E-10	5.230E-10	4.029E-10	3.192E-10	2.539E-10	2.118E-10	
W	374	2.211E-09	1.485E-09	1.069E-09	8.065E-10	5.674E-10	4.137E-10	3.404E-10	
WNW	343	2.429E-09	1.682E-09	1.187E-09	7.505E-10	5.540E-10	4.414E-10	3.596E-10	
NW	401	2.499E-09	1.748E-09	1.280E-09	6.795E-10	5.284E-10	4.249E-10	3.491E-10	
NNW	397	2.516E-09	1.721E-09	1.255E-09	9.543E-10	7.436E-10	5.964E-10	4.870E-10	
AVERAGE	8432	2.319E-09	1.697E-09	1.310E-09	1.003E-09	8.018E-10	6.644E-10	5.581E-10	

Table B-7

Gamma χ/Q Factors for Main Stack

BECo 1st Quarter 1996 General X/Q's: ELEVATED

STACK RELEASE: AVERAGE GAMA 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	121	3.336E-07	3.792E-07	6.637E-08	5.333E-08	4.024E-08	2.727E-08	2.070E-08	1.675E-08
NNE	136	3.943E-07	2.051E-07	1.017E-07	6.641E-08	5.087E-08	3.546E-08	2.749E-08	2.253E-08
NE	183	5.460E-07	2.926E-07	1.371E-07	8.404E-08	6.469E-08	4.528E-08	3.499E-08	2.849E-08
NNE	139	4.373E-07	2.341E-07	1.119E-07	6.885E-08	5.216E-08	3.575E-08	2.742E-08	2.238E-08
E	175	5.171E-07	2.740E-07	1.362E-07	8.022E-08	6.124E-08	4.239E-08	3.257E-08	2.648E-08
ESE	257	6.649E-07	3.578E-07	1.667E-07	1.058E-07	8.097E-08	5.608E-08	4.305E-08	3.494E-08
SE	202	8.458E-07	4.497E-07	2.592E-07	1.454E-07	9.630E-08	6.675E-08	5.047E-08	3.209E-08
SSE	139	8.146E-07	4.368E-07	2.400E-07	1.145E-07	8.938E-08	5.857E-08	4.260E-08	3.303E-08
S	113	5.234E-07	2.837E-07	1.526E-07	1.089E-07	7.966E-08	5.439E-08	3.955E-08	3.006E-08
SSW	90	5.126E-07	2.730E-07	1.374E-07	9.362E-08	6.425E-08	5.073E-08	4.062E-08	3.063E-08
SW	65	2.900E-07	1.525E-07	8.281E-08	5.423E-08	4.074E-08	2.736E-08	1.983E-08	1.535E-08
WSW	38	2.129E-07	1.099E-07	5.633E-08	3.523E-08	2.685E-08	1.809E-08	1.284E-08	9.745E-09
W	54	2.533E-07	1.318E-07	7.917E-08	4.431E-08	3.315E-08	2.174E-08	1.448E-08	1.136E-08
WNW	38	1.332E-07	7.043E-08	5.080E-08	2.978E-08	2.449E-08	1.630E-08	1.107E-08	8.756E-09
NW	87	2.840E-07	1.476E-07	7.317E-08	4.845E-08	3.762E-08	2.648E-08	2.043E-08	1.556E-08
NNW	85	2.420E-07	1.277E-07	6.146E-08	3.910E-08	3.016E-08	2.121E-08	1.648E-08	1.349E-08
AVERAGE	1904	4.378E-07	2.329E-07	1.208E-07	7.326E-08	5.580E-08	3.824E-08	2.773E-08	2.204E-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	121	1.401E-08	1.200E-08	1.046E-08	9.255E-09	8.278E-09	5.329E-09	3.852E-09	2.401E-09
NNE	136	1.901E-08	1.640E-08	1.439E-08	1.279E-08	1.149E-08	7.511E-09	5.479E-09	3.455E-09
NE	183	2.392E-08	2.053E-08	1.793E-08	1.588E-08	1.422E-08	9.195E-09	6.668E-09	4.170E-09
NNE	139	1.881E-08	1.618E-08	1.417E-08	1.258E-08	1.128E-08	7.349E-09	5.357E-09	3.380E-09
E	175	2.272E-08	1.908E-08	1.668E-08	1.479E-08	1.326E-08	8.627E-09	6.294E-09	3.982E-09
ESE	257	2.926E-08	2.508E-08	2.189E-08	1.937E-08	1.733E-08	1.119E-08	8.109E-09	5.077E-09
SE	202	2.689E-08	2.304E-08	2.008E-08	1.775E-08	1.566E-08	1.019E-08	7.340E-09	4.561E-09
SSE	139	2.667E-08	2.220E-08	1.890E-08	1.637E-08	1.439E-08	8.775E-09	6.135E-09	3.741E-09
S	113	2.381E-08	1.955E-08	1.648E-08	1.416E-08	1.237E-08	7.420E-09	5.150E-09	3.054E-09
SSW	90	2.436E-08	2.006E-08	1.696E-08	1.459E-08	1.277E-08	7.710E-09	5.308E-09	3.238E-09
SW	65	1.238E-08	1.030E-08	8.769E-09	7.593E-09	6.673E-09	4.068E-09	2.845E-09	1.699E-09
WSW	38	7.721E-09	6.326E-09	5.317E-09	4.555E-09	3.965E-09	2.341E-09	1.591E-09	9.038E-10
W	54	9.258E-09	7.758E-09	6.642E-09	5.781E-09	5.100E-09	3.483E-09	2.415E-09	1.426E-09
WNW	38	7.171E-09	6.041E-09	5.191E-09	4.533E-09	4.011E-09	2.332E-09	1.830E-09	1.099E-09
NW	87	1.383E-08	1.181E-08	1.027E-08	9.051E-09	8.071E-09	5.760E-09	4.058E-09	2.533E-09
NNW	85	1.136E-08	9.776E-09	8.559E-09	7.595E-09	6.810E-09	4.416E-09	3.302E-09	2.432E-09
AVERAGE	1904	1.817E-08	1.538E-08	1.329E-08	1.167E-08	1.037E-08	6.606E-09	4.738E-09	2.946E-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	121	1.715E-09	1.321E-09	1.072E-09	8.986E-10	7.682E-10	7.450E-10	6.563E-10	
NNE	136	2.484E-09	1.921E-09	1.560E-09	1.310E-09	1.121E-09	9.794E-10	8.671E-10	
NE	183	2.989E-09	2.309E-09	1.874E-09	1.572E-09	1.345E-09	1.176E-09	1.041E-09	
NNE	139	2.435E-09	1.917E-09	1.636E-09	1.372E-09	1.173E-09	1.024E-09	9.059E-10	
E	175	2.878E-09	2.237E-09	2.036E-09	1.708E-09	1.462E-09	1.277E-09	1.130E-09	
ESE	257	3.639E-09	2.970E-09	2.404E-09	2.013E-09	1.718E-09	1.499E-09	1.325E-09	
SE	202	3.228E-09	2.704E-09	2.171E-09	1.805E-09	1.532E-09	1.330E-09	1.170E-09	
SSE	139	2.599E-09	1.965E-09	1.572E-09	1.303E-09	1.103E-09	9.553E-10	8.389E-10	
S	113	2.123E-09	1.606E-09	1.286E-09	1.066E-09	9.030E-10	7.824E-10	6.872E-10	
SSW	90	2.267E-09	1.724E-09	1.385E-09	1.152E-09	9.785E-10	8.496E-10	7.481E-10	
SW	65	1.115E-09	8.973E-10	7.186E-10	5.962E-10	5.104E-10	4.421E-10	3.883E-10	
WSW	38	6.106E-10	4.524E-10	3.595E-10	2.934E-10	2.448E-10	2.098E-10	1.821E-10	
W	54	9.881E-10	7.453E-10	5.952E-10	4.926E-10	4.253E-10	3.674E-10	3.219E-10	
WNW	38	7.694E-10	6.025E-10	5.054E-10	4.264E-10	3.597E-10	3.104E-10	2.716E-10	
NW	87	1.763E-09	1.347E-09	1.082E-09	9.267E-10	7.823E-10	6.762E-10	5.926E-10	
NNW	85	1.694E-09	1.283E-09	1.028E-09	8.532E-10	7.232E-10	6.275E-10	5.519E-10	
AVERAGE	1904	2.085E-09	1.625E-09	1.330E-09	1.112E-09	9.468E-10	8.282E-10	7.299E-10	

Table B-7

Gamma χ/Q Factors for Main StackRECo 2nd Quarter 1996 General χ/Q 's: ELEVATEDSTACK RELEASE: AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1966 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	163	4.722E-07	2.564E-07	1.232E-07	7.628E-08	5.613E-08	4.007E-08	3.073E-08	2.498E-08
NNE	372	8.595E-07	4.636E-07	2.250E-07	1.403E-07	1.064E-07	7.308E-08	5.595E-08	4.548E-08
NE	233	6.221E-07	3.339E-07	1.607E-07	9.941E-08	7.508E-08	5.142E-08	3.958E-08	3.242E-08
ENE	114	3.114E-07	1.650E-07	7.963E-08	5.080E-08	3.906E-08	2.741E-08	2.132E-08	1.750E-08
E	187	5.121E-07	2.739E-07	1.338E-07	8.457E-08	6.431E-08	4.409E-08	3.374E-08	2.743E-08
ESE	147	4.235E-07	2.331E-07	1.075E-07	6.659E-08	5.059E-08	3.462E-08	2.644E-08	2.144E-08
SE	97	6.587E-07	3.582E-07	1.754E-07	8.744E-08	5.351E-08	3.557E-08	1.917E-08	1.554E-08
SSE	92	7.733E-07	4.310E-07	2.080E-07	6.497E-08	4.981E-08	3.206E-08	2.315E-08	1.794E-08
S	54	2.743E-07	1.551E-07	6.568E-08	4.207E-08	3.058E-08	1.996E-08	1.411E-08	1.057E-08
SSW	95	5.924E-07	3.296E-07	1.429E-07	9.091E-08	7.713E-08	4.976E-08	3.379E-08	2.507E-08
SW	71	5.724E-07	3.020E-07	1.698E-07	1.036E-07	7.844E-08	5.322E-08	3.870E-08	2.999E-08
WSW	72	5.931E-07	3.249E-07	1.363E-07	6.630E-08	4.868E-08	3.210E-08	2.267E-08	1.734E-08
W	104	8.488E-07	4.487E-07	2.821E-07	1.444E-07	1.092E-07	7.309E-08	4.932E-08	3.895E-08
WNW	111	5.238E-07	2.764E-07	1.300E-07	1.369E-07	1.117E-07	7.503E-08	5.102E-08	4.130E-08
NW	122	4.612E-07	2.487E-07	1.196E-07	7.435E-08	5.629E-08	3.831E-08	2.908E-08	2.348E-08
NNW	82	2.745E-07	1.452E-07	7.352E-08	4.835E-08	3.708E-08	2.560E-08	1.955E-08	1.581E-08
AVERAGE	2116	5.485E-07	2.966E-07	1.515E-07	8.612E-08	6.538E-08	4.409E-08	3.182E-08	2.533E-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	163	2.094E-08	1.794E-08	1.563E-08	1.380E-08	1.232E-08	7.857E-09	5.626E-09	3.440E-09
NNE	372	3.811E-08	3.263E-08	2.842E-08	2.509E-08	2.240E-08	1.431E-08	1.026E-08	6.302E-09
NE	233	2.739E-08	2.365E-08	2.077E-08	1.848E-08	1.661E-08	1.090E-08	7.988E-09	5.075E-09
ENE	114	1.478E-08	1.276E-08	1.119E-08	9.949E-09	8.936E-09	5.843E-09	4.268E-09	2.697E-09
E	187	2.302E-08	1.978E-08	1.729E-08	1.533E-08	1.374E-08	8.916E-09	6.489E-09	4.090E-09
ESE	147	1.797E-08	1.543E-08	1.349E-08	1.196E-08	1.072E-08	6.967E-09	5.084E-09	3.225E-09
SE	97	1.304E-08	1.121E-08	9.809E-09	8.709E-09	7.819E-09	5.114E-09	3.749E-09	2.396E-09
SSE	92	1.450E-08	1.208E-08	1.029E-08	8.926E-09	7.853E-09	4.807E-09	3.375E-09	2.084E-09
S	54	8.298E-09	6.760E-09	5.661E-09	4.839E-09	4.207E-09	2.483E-09	1.703E-09	9.937E-10
SSW	95	1.981E-08	1.594E-08	1.332E-08	1.137E-08	9.876E-09	5.811E-09	3.965E-09	2.264E-09
SW	71	2.420E-08	2.013E-08	1.713E-08	1.482E-08	1.302E-08	7.918E-09	5.521E-09	3.279E-09
WSW	72	1.388E-08	1.144E-08	9.679E-09	8.336E-09	7.292E-09	4.380E-09	3.024E-09	1.769E-09
W	104	3.190E-08	2.683E-08	2.305E-08	2.011E-08	1.778E-08	1.245E-08	8.666E-09	5.151E-09
WNW	111	3.407E-08	2.882E-08	2.279E-08	1.996E-08	1.770E-08	1.137E-08	8.128E-09	4.914E-09
NW	122	1.958E-08	1.670E-08	1.451E-08	1.278E-08	1.139E-08	8.197E-09	5.791E-09	3.668E-09
NNW	82	1.320E-08	1.126E-08	9.781E-09	8.616E-09	7.677E-09	4.873E-09	3.600E-09	2.743E-09
AVERAGE	2116	2.090E-08	1.771E-08	1.518E-08	1.332E-08	1.183E-08	7.637E-09	5.453E-09	3.382E-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	163	2.426E-09	1.850E-09	1.490E-09	1.241E-09	1.055E-09	1.002E-09	8.793E-10	
NNE	372	4.461E-09	3.413E-09	2.752E-09	2.196E-09	1.954E-09	1.700E-09	1.499E-09	
NE	233	3.674E-09	2.858E-09	2.331E-09	1.964E-09	1.687E-09	1.478E-09	1.312E-09	
ENE	114	1.946E-09	1.540E-09	1.335E-09	1.120E-09	9.583E-10	8.371E-10	7.409E-10	
E	187	2.948E-09	2.285E-09	2.100E-09	1.761E-09	1.505E-09	1.314E-09	1.163E-09	
ESE	147	2.334E-09	1.952E-09	1.590E-09	1.338E-09	1.147E-09	1.004E-09	8.909E-10	
SE	97	1.742E-09	1.580E-09	1.285E-09	1.080E-09	9.254E-10	8.095E-10	7.174E-10	
SSE	92	1.457E-09	1.107E-09	8.897E-10	7.405E-10	6.291E-10	5.466E-10	4.813E-10	
S	54	6.855E-10	5.162E-10	4.129E-10	3.425E-10	2.901E-10	2.514E-10	2.210E-10	
SSW	95	1.363E-09	1.168E-09	9.290E-10	7.659E-10	6.452E-10	5.564E-10	4.868E-10	
SW	71	2.278E-09	1.720E-09	1.375E-09	1.138E-09	9.731E-10	8.417E-10	7.381E-10	
WSW	72	1.219E-09	9.181E-10	7.409E-10	6.111E-10	5.150E-10	4.458E-10	3.902E-10	
W	104	3.583E-09	2.711E-09	2.170E-09	1.800E-09	1.569E-09	1.358E-09	1.192E-09	
WNW	111	3.448E-09	2.695E-09	2.257E-09	1.906E-09	1.612E-09	1.396E-09	1.226E-09	
NW	122	2.566E-09	1.976E-09	1.596E-09	1.398E-09	1.183E-09	1.024E-09	8.990E-10	
NNW	82	1.903E-09	1.439E-09	1.153E-09	9.574E-10	8.116E-10	7.036E-10	6.185E-10	
AVERAGE	2116	2.390E-09	1.858E-09	1.525E-09	1.279E-09	1.091E-09	9.544E-10	8.410E-10	

Table B-7

Gamma γ /Q Factors for Main Stack

NECo 3rd Quarter 1996 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	201	7.089E-07	3.711E-07	1.842E-07	1.203E-07	9.248E-08	6.486E-08	5.055E-08	4.159E-08	
NNE	436	1.158E-06	6.128E-07	3.022E-07	1.952E-07	1.503E-07	1.058E-07	8.234E-08	6.759E-08	
NE	300	8.058E-07	4.225E-07	2.111E-07	1.376E-07	1.051E-07	7.310E-08	5.664E-08	4.646E-08	
NNE	166	5.436E-07	2.801E-07	1.441E-07	9.621E-08	7.310E-08	5.059E-08	3.932E-08	3.246E-08	
E	182	5.076E-07	2.686E-07	1.353E-07	8.676E-08	6.507E-08	4.406E-08	3.379E-08	2.771E-08	
ESE	83	2.897E-07	1.550E-07	7.415E-08	4.932E-08	3.814E-08	2.677E-08	2.072E-08	1.690E-08	
SE	64	5.204E-07	2.712E-07	1.271E-07	6.940E-08	4.472E-08	3.147E-08	1.627E-08	1.328E-08	
SSE	96	9.036E-07	4.815E-07	2.620E-07	1.811E-07	1.463E-07	1.052E-07	8.091E-08	6.590E-08	
S	74	3.467E-07	1.861E-07	9.238E-08	6.850E-08	5.003E-08	3.382E-08	2.430E-08	1.828E-08	
SSW	85	4.910E-07	2.688E-07	1.322E-07	8.939E-08	7.768E-08	5.012E-08	3.407E-08	2.533E-08	
SW	62	4.320E-07	2.299E-07	1.312E-07	8.091E-08	6.124E-08	4.120E-08	2.973E-08	2.288E-08	
WSW	45	4.395E-07	2.324E-07	9.884E-08	5.537E-08	4.330E-08	3.041E-08	2.204E-08	1.702E-08	
W	113	8.043E-07	4.180E-07	2.832E-07	1.549E-07	1.150E-07	7.725E-08	5.204E-08	4.092E-08	
WNW	120	6.039E-07	3.119E-07	2.691E-07	1.698E-07	1.424E-07	9.894E-08	6.947E-08	5.561E-08	
NW	109	5.016E-07	2.595E-07	1.296E-07	8.682E-08	6.760E-08	4.820E-08	3.776E-08	3.103E-08	
NNW	71	2.715E-07	1.373E-07	7.074E-08	4.860E-08	3.761E-08	2.675E-08	2.111E-08	1.752E-08	
AVERAGE	2207	5.830E-07	3.068E-07	1.655E-07	9.943E-08	7.678E-08	5.286E-08	3.882E-08	3.115E-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	201	3.522E-08	3.049E-08	2.683E-08	2.392E-08	2.155E-08	1.422E-08	1.046E-08	6.685E-09
NNE	436	5.706E-08	4.918E-08	4.309E-08	3.824E-08	3.430E-08	2.228E-08	1.617E-08	1.011E-08
NE	300	3.926E-08	3.390E-08	2.977E-08	2.648E-08	2.380E-08	1.561E-08	1.143E-08	7.263E-09
NNE	166	2.760E-08	2.396E-08	2.113E-08	1.888E-08	1.703E-08	1.130E-08	8.337E-09	5.349E-09
E	182	2.345E-08	2.029E-08	1.786E-08	1.593E-08	1.435E-08	9.494E-09	6.999E-09	4.494E-09
ESE	83	1.422E-08	1.224E-08	1.073E-08	9.527E-09	8.554E-09	5.591E-09	4.094E-09	2.607E-09
SE	64	1.116E-08	9.584E-09	8.371E-09	7.411E-09	6.632E-09	4.274E-09	3.088E-09	1.920E-09
SSE	96	1.923E-08	1.595E-08	1.355E-08	1.171E-08	1.027E-08	6.213E-09	4.313E-09	2.603E-09
S	74	1.438E-08	1.173E-08	9.836E-09	8.411E-09	7.317E-09	4.328E-09	2.971E-09	1.733E-09
SSW	85	1.987E-08	1.618E-08	1.354E-08	1.157E-08	1.005E-08	5.919E-09	4.047E-09	2.344E-09
SW	62	1.834E-08	1.517E-08	1.285E-08	1.108E-08	9.697E-09	5.835E-09	4.030E-09	2.353E-09
WSW	45	1.370E-08	1.137E-08	9.656E-09	8.343E-09	7.317E-09	4.429E-09	3.078E-09	1.870E-09
W	113	3.338E-08	2.800E-08	2.399E-08	2.089E-08	1.844E-08	1.283E-08	8.894E-09	5.216E-09
WNW	120	4.596E-08	3.895E-08	3.085E-08	2.704E-08	2.400E-08	1.545E-08	1.106E-08	6.694E-09
NW	109	2.621E-08	2.262E-08	1.984E-08	1.764E-08	1.585E-08	1.217E-08	8.722E-09	5.740E-09
NNW	71	1.494E-08	1.301E-08	1.151E-08	1.031E-08	9.321E-09	6.228E-09	4.847E-09	4.288E-09
AVERAGE	2207	2.587E-08	2.204E-08	1.896E-08	1.671E-08	1.490E-08	9.761E-09	7.034E-09	4.454E-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	201	4.858E-09	3.788E-09	3.095E-09	2.611E-09	2.245E-09	2.488E-09	2.197E-09
NNE	436	7.240E-09	5.586E-09	4.528E-09	3.796E-09	3.244E-09	2.832E-09	2.505E-09
NE	300	5.262E-09	4.096E-09	3.343E-09	2.818E-09	2.422E-09	2.124E-09	1.887E-09
NNE	166	3.896E-09	3.119E-09	2.757E-09	2.322E-09	1.994E-09	1.747E-09	1.550E-09
E	182	3.276E-09	2.560E-09	2.432E-09	2.046E-09	1.755E-09	1.536E-09	1.363E-09
ESE	83	1.892E-09	1.613E-09	1.316E-09	1.108E-09	9.515E-10	8.338E-10	7.400E-10
SE	64	1.370E-09	1.193E-09	9.605E-10	8.005E-10	6.807E-10	5.818E-10	5.215E-10
SSE	96	1.794E-09	1.348E-09	1.074E-09	8.867E-10	7.479E-10	6.457E-10	5.653E-10
S	74	1.192E-09	8.955E-10	7.132E-10	5.890E-10	4.970E-10	4.293E-10	3.761E-10
SSW	85	1.606E-09	1.202E-09	9.543E-10	7.861E-10	6.618E-10	5.708E-10	4.993E-10
SW	62	1.617E-09	1.212E-09	9.624E-10	7.927E-10	6.728E-10	5.795E-10	5.063E-10
WSW	45	1.260E-09	9.537E-10	7.790E-10	6.427E-10	5.418E-10	4.704E-10	4.118E-10
W	113	3.652E-09	2.758E-09	2.208E-09	1.831E-09	1.590E-09	1.376E-09	1.207E-09
WNW	120	4.696E-09	3.663E-09	3.048E-09	2.564E-09	2.167E-09	1.877E-09	1.647E-09
NW	109	4.060E-09	3.169E-09	2.576E-09	2.330E-09	1.976E-09	1.713E-09	1.509E-09
NNW	71	3.024E-09	2.315E-09	1.867E-09	1.558E-09	1.327E-09	1.155E-09	1.019E-09
AVERAGE	2207	3.169E-09	2.467E-09	2.038E-09	1.718E-09	1.467E-09	1.311E-09	1.157E-09

Table B-7

Gamma χ /Q Factors for Main Stack

LECo 4th Quarter 1996 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	155	4.575E-07	2.329E-07	1.192E-07	8.076E-08	6.205E-08	4.350E-08	3.392E-08	2.792E-08
NNE	205	5.613E-07	2.879E-07	1.447E-07	9.712E-08	7.518E-08	5.307E-08	4.140E-08	3.397E-08
NE	162	4.902E-07	2.584E-07	1.257E-07	7.970E-08	6.087E-08	4.223E-08	3.264E-08	2.669E-08
NNE	169	5.072E-07	2.597E-07	1.354E-07	9.086E-08	6.824E-08	4.596E-08	3.502E-08	2.857E-08
E	291	7.816E-07	4.079E-07	2.011E-07	1.301E-07	9.952E-08	6.917E-08	5.356E-08	4.386E-08
ESE	215	5.544E-07	2.945E-07	1.399E-07	9.078E-08	6.936E-08	4.802E-08	3.699E-08	3.014E-08
SE	171	5.903E-07	3.112E-07	1.825E-07	1.044E-07	6.899E-08	4.735E-08	2.777E-08	2.245E-08
SSE	119	5.005E-07	2.730E-07	1.425E-07	6.393E-08	4.915E-08	3.169E-08	2.289E-08	1.773E-08
S	54	1.545E-07	8.276E-08	4.628E-08	3.340E-08	2.429E-08	1.612E-08	1.154E-08	8.684E-09
SSW	53	2.819E-07	1.466E-07	8.421E-08	5.524E-08	5.097E-08	3.301E-08	2.248E-08	1.676E-08
SW	81	3.200E-07	1.626E-07	1.007E-07	7.151E-08	5.422E-08	3.647E-08	2.639E-08	2.034E-08
WSW	91	4.850E-07	2.504E-07	1.243E-07	7.682E-08	5.921E-08	4.116E-08	2.980E-08	2.301E-08
W	123	6.629E-07	3.423E-07	2.046E-07	1.165E-07	8.879E-08	5.969E-08	4.027E-08	3.172E-08
WNW	74	3.674E-07	1.871E-07	1.463E-07	9.209E-08	7.744E-08	5.338E-08	3.709E-08	2.866E-08
NW	83	3.649E-07	1.847E-07	9.521E-08	6.519E-08	5.023E-08	3.529E-08	2.747E-08	2.254E-08
NNW	159	4.419E-07	2.230E-07	1.146E-07	7.916E-08	6.151E-08	4.369E-08	3.420E-08	2.811E-08
AVERAGE	2205	4.701E-07	2.441E-07	1.317E-07	8.323E-08	6.375E-08	4.374E-08	3.209E-08	2.576E-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	155	2.364E-08	2.046E-08	1.801E-08	1.606E-08	1.446E-08	9.526E-09	6.987E-09	4.440E-09
NNE	205	2.869E-08	2.479E-08	2.179E-08	1.941E-08	1.746E-08	1.147E-08	8.404E-09	5.340E-09
NE	162	2.250E-08	1.939E-08	1.701E-08	1.511E-08	1.358E-08	8.873E-09	6.485E-09	4.105E-09
NNE	169	2.409E-08	2.080E-08	1.829E-08	1.630E-08	1.468E-08	9.698E-09	7.156E-09	4.608E-09
E	291	3.702E-08	3.196E-08	2.806E-08	2.497E-08	2.246E-08	1.472E-08	1.077E-08	6.820E-09
ESE	215	2.535E-08	2.182E-08	1.913E-08	1.700E-08	1.527E-08	9.981E-09	7.318E-09	4.661E-09
SE	171	1.874E-08	1.603E-08	1.396E-08	1.234E-08	1.103E-08	7.096E-09	5.137E-09	3.215E-09
SSE	119	1.432E-08	1.193E-08	1.016E-08	8.809E-09	7.748E-09	4.741E-09	3.325E-09	2.035E-09
S	54	6.830E-09	5.576E-09	4.678E-09	4.005E-09	3.487E-09	2.071E-09	1.421E-09	8.248E-10
SSW	53	1.319E-08	1.077E-08	9.037E-09	7.728E-09	6.723E-09	3.974E-09	2.727E-09	1.590E-09
SW	81	1.632E-08	1.352E-08	1.147E-08	9.899E-09	8.677E-09	5.248E-09	3.637E-09	2.132E-09
WSW	91	1.853E-08	1.538E-08	1.308E-08	1.131E-08	9.926E-09	6.031E-09	4.204E-09	2.497E-09
W	123	2.581E-08	2.176E-08	1.867E-08	1.627E-08	1.437E-08	9.832E-09	6.830E-09	4.053E-09
WNW	74	2.453E-08	2.081E-08	1.801E-08	1.582E-08	1.407E-08	8.354E-09	6.653E-09	4.083E-09
NW	83	1.904E-08	1.643E-08	1.442E-08	1.283E-08	1.153E-08	8.871E-09	6.385E-09	4.215E-09
NNW	159	2.376E-08	2.054E-08	1.805E-08	1.607E-08	1.446E-08	9.492E-09	7.238E-09	5.776E-09
AVERAGE	2205	2.140E-08	1.825E-08	1.586E-08	1.399E-08	1.249E-08	8.125E-09	5.917E-09	3.775E-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	155	3.207E-09	2.489E-09	2.025E-09	1.703E-09	1.459E-09	1.493E-09	1.316E-09	
NNE	205	3.857E-09	2.992E-09	2.437E-09	2.050E-09	1.757E-09	1.538E-09	1.364E-09	
NE	162	2.963E-09	2.299E-09	1.872E-09	1.575E-09	1.351E-09	1.183E-09	1.049E-09	
NNE	169	3.365E-09	2.690E-09	2.355E-09	1.986E-09	1.707E-09	1.497E-09	1.330E-09	
E	291	4.927E-09	3.821E-09	3.436E-09	2.876E-09	2.456E-09	2.143E-09	1.894E-09	
ESE	215	3.377E-09	2.814E-09	2.289E-09	1.924E-09	1.649E-09	1.443E-09	1.279E-09	
SE	171	2.306E-09	2.015E-09	1.629E-09	1.362E-09	1.162E-09	1.013E-09	8.942E-10	
SSE	119	1.419E-09	1.076E-09	8.624E-10	7.161E-10	6.071E-10	5.266E-10	4.630E-10	
S	54	5.658E-10	4.238E-10	3.366E-10	2.772E-10	2.333E-10	2.010E-10	1.756E-10	
SSW	53	1.092E-09	8.194E-10	6.817E-10	5.377E-10	4.532E-10	3.914E-10	3.427E-10	
SW	81	1.469E-09	1.102E-09	8.750E-10	7.205E-10	6.124E-10	5.272E-10	4.603E-10	
WSW	91	1.734E-09	1.376E-09	1.080E-09	8.925E-10	7.533E-10	6.549E-10	5.737E-10	
W	123	2.814E-09	2.126E-09	1.700E-09	1.409E-09	1.214E-09	1.050E-09	9.214E-10	
WNW	74	2.893E-09	2.297E-09	1.954E-09	1.662E-09	1.408E-09	1.221E-09	1.073E-09	
NW	83	2.988E-09	2.331E-09	1.894E-09	1.684E-09	1.428E-09	1.238E-09	1.089E-09	
NNW	159	4.048E-09	3.080E-09	2.475E-09	2.059E-09	1.748E-09	1.518E-09	1.335E-09	
AVERAGE	2205	2.689E-09	2.106E-09	1.742E-09	1.465E-09	1.250E-09	1.102E-09	9.725E-10	

Table B-7

Gamma χ/Q Factors for Main Stack

NECo 1996 General X/Q's: ELEVATED

STACK RELEASE: AVERAGE GAMMA DILUTION FACTORS (MET. AND ATOMIC ENERGY 1966 FINITE CLOUD SECTOR AVERAGE MODEL)
(SEC/MS)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	640	5.030E-07	2.642E-07	1.304E-07	8.411E-08	6.427E-08	4.458E-08	3.444E-08	2.817E-08
NNE	1151	7.610E-07	4.003E-07	1.971E-07	1.270E-07	9.730E-08	6.776E-08	5.241E-08	4.285E-08
NE	878	6.228E-07	3.297E-07	1.600E-07	1.011E-07	7.708E-08	5.333E-08	4.115E-08	3.364E-08
NNE	588	4.542E-07	2.366E-07	1.189E-07	7.753E-08	5.874E-08	4.027E-08	3.100E-08	2.539E-08
E	835	5.835E-07	3.080E-07	1.525E-07	9.613E-08	7.307E-08	5.027E-08	3.867E-08	3.157E-08
ESE	702	4.778E-07	2.571E-07	1.207E-07	7.731E-08	5.914E-08	4.094E-08	3.147E-08	2.559E-08
SE	534	5.369E-07	2.854E-07	1.469E-07	9.466E-08	6.243E-08	4.291E-08	2.526E-08	2.051E-08
SSE	446	5.758E-07	3.119E-07	1.698E-07	7.991E-08	6.212E-08	4.046E-08	2.934E-08	2.273E-08
S	295	2.942E-07	1.504E-07	8.680E-08	6.155E-08	4.482E-08	3.017E-08	2.172E-08	1.641E-08
SSW	323	4.504E-07	2.432E-07	1.224E-07	8.203E-08	7.124E-08	4.702E-08	3.215E-08	2.402E-08
SW	279	3.883E-07	2.031E-07	1.148E-07	7.737E-08	5.649E-08	3.942E-08	2.857E-08	2.207E-08
WSW	246	3.924E-07	2.072E-07	9.880E-08	5.889E-08	4.482E-08	3.065E-08	2.200E-08	1.692E-08
W	374	6.570E-07	3.421E-07	2.044E-07	1.152E-07	8.740E-08	5.847E-08	3.937E-08	3.101E-08
WNW	343	4.184E-07	2.168E-07	1.167E-07	1.024E-07	8.537E-08	5.832E-08	4.032E-08	3.219E-08
NW	401	4.085E-07	2.125E-07	1.056E-07	6.945E-08	5.345E-08	3.736E-08	2.888E-08	2.355E-08
NNW	397	3.112E-07	1.599E-07	8.097E-08	5.447E-08	4.209E-08	2.966E-08	2.310E-08	1.894E-08
AVERAGE	8432	4.897E-07	2.586E-07	1.373E-07	8.494E-08	6.511E-08	4.468E-08	3.249E-08	2.597E-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	640	2.375E-08	2.047E-08	1.795E-08	1.595E-08	1.432E-08	9.345E-09	6.815E-09	4.296E-09
NNE	1151	3.608E-08	3.105E-08	2.718E-08	2.411E-08	2.161E-08	1.402E-08	1.018E-08	6.366E-09
NE	878	2.836E-08	2.444E-08	2.142E-08	1.903E-08	1.709E-08	1.117E-08	8.161E-09	5.166E-09
NNE	588	2.145E-08	1.854E-08	1.629E-08	1.451E-08	1.305E-08	8.596E-09	6.317E-09	4.034E-09
E	835	2.650E-08	2.292E-08	2.010E-08	1.787E-08	1.606E-08	1.051E-08	7.689E-09	4.881E-09
ESE	702	2.148E-08	1.846E-08	1.614E-08	1.432E-08	1.284E-08	8.355E-09	6.094E-09	3.857E-09
SE	534	1.717E-08	1.472E-08	1.284E-08	1.136E-08	1.017E-08	6.558E-09	4.750E-09	2.969E-09
SSE	446	1.834E-08	1.526E-08	1.299E-08	1.125E-08	9.887E-09	6.028E-09	4.214E-09	2.572E-09
S	295	1.294E-08	1.059E-08	8.899E-09	7.627E-09	6.647E-09	3.959E-09	2.731E-09	1.604E-09
SSW	323	1.893E-08	1.547E-08	1.300E-08	1.113E-08	9.694E-09	5.761E-09	3.969E-09	2.328E-09
SW	279	1.776E-08	1.474E-08	1.252E-08	1.082E-08	9.495E-09	5.758E-09	4.004E-09	2.365E-09
WSW	246	1.357E-08	1.123E-08	9.520E-09	8.214E-09	7.196E-09	4.342E-09	3.010E-09	1.771E-09
W	374	2.533E-08	2.128E-08	1.825E-08	1.591E-08	1.405E-08	9.722E-09	6.756E-09	4.011E-09
WNW	343	2.657E-08	2.250E-08	1.944E-08	1.704E-08	1.512E-08	8.875E-09	7.006E-09	4.257E-09
NW	401	1.978E-08	1.699E-08	1.485E-08	1.315E-08	1.178E-08	8.794E-09	6.275E-09	4.064E-09
NNW	397	1.599E-08	1.380E-08	1.211E-08	1.077E-08	9.674E-09	6.324E-09	4.802E-09	3.850E-09
AVERAGE	8432	2.151E-08	1.828E-08	1.584E-08	1.394E-08	1.242E-08	8.007E-09	5.798E-09	3.649E-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	640	3.092E-09	2.394E-09	1.946E-09	1.635E-09	1.401E-09	1.448E-09	1.276E-09	
NNE	1151	4.558E-09	3.516E-09	2.851E-09	2.389E-09	2.042E-09	1.783E-09	1.577E-09	
NE	878	3.732E-09	2.898E-09	2.362E-09	1.988E-09	1.706E-09	1.495E-09	1.326E-09	
NNE	588	2.929E-09	2.332E-09	2.033E-09	1.711E-09	1.467E-09	1.284E-09	1.139E-09	
E	835	3.530E-09	2.744E-09	2.514E-09	2.109E-09	1.804E-09	1.576E-09	1.395E-09	
ESE	702	2.786E-09	2.317E-09	1.883E-09	1.582E-09	1.355E-09	1.185E-09	1.050E-09	
SE	534	2.127E-09	1.844E-09	1.488E-09	1.243E-09	1.059E-09	9.221E-10	8.137E-10	
SSE	446	1.787E-09	1.351E-09	1.081E-09	8.967E-10	7.592E-10	6.577E-10	5.777E-10	
S	295	1.109E-09	8.358E-10	6.674E-10	5.525E-10	4.671E-10	4.041E-10	3.545E-10	
SSW	323	1.607E-09	1.210E-09	9.647E-10	7.978E-10	6.739E-10	5.828E-10	5.110E-10	
SW	279	1.637E-09	1.233E-09	9.828E-10	8.121E-10	6.923E-10	5.978E-10	5.234E-10	
WSW	246	1.223E-09	9.233E-10	7.511E-10	6.194E-10	5.219E-10	4.524E-10	3.958E-10	
W	374	2.787E-09	2.107E-09	1.686E-09	1.398E-09	1.212E-09	1.049E-09	9.207E-10	
WNW	343	2.996E-09	2.350E-09	1.971E-09	1.665E-09	1.409E-09	1.220E-09	1.072E-09	
NW	401	2.865E-09	2.222E-09	1.801E-09	1.596E-09	1.352E-09	1.172E-09	1.030E-09	
NNW	397	2.697E-09	2.052E-09	1.649E-09	1.372E-09	1.166E-09	1.013E-09	8.915E-10	
AVERAGE	8432	2.591E-09	2.021E-09	1.664E-09	1.398E-09	1.193E-09	1.053E-09	9.283E-10	

Table B-8

Deposition D/Q Factors for Main Stack

BECe 1st Quarter 1996 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	121	1.105E-11	3.411E-10	2.681E-10	1.996E-10	1.795E-10	1.742E-10	1.668E-10	1.534E-10
NNE	138	7.312E-12	2.023E-10	1.562E-10	1.216E-10	1.304E-10	1.700E-10	1.847E-10	1.806E-10
NE	183	1.623E-11	5.600E-10	2.793E-10	1.977E-10	2.163E-10	2.599E-10	2.610E-10	2.432E-10
NNE	139	1.149E-11	4.224E-10	2.875E-10	1.954E-10	1.825E-10	1.974E-10	1.987E-10	1.872E-10
E	175	1.489E-11	4.593E-10	3.610E-10	2.490E-10	2.418E-10	2.551E-10	2.457E-10	2.255E-10
ESE	257	2.692E-11	7.574E-10	4.087E-10	3.109E-10	3.172E-10	3.518E-10	3.457E-10	3.195E-10
SE	202	2.416E-11	7.524E-10	5.751E-10	3.828E-10	3.645E-10	4.386E-10	3.367E-10	3.106E-10
SSE	139	2.747E-11	8.428E-10	6.816E-10	9.996E-10	1.052E-09	8.036E-10	6.073E-10	4.720E-10
S	113	3.820E-11	6.998E-10	1.029E-09	1.541E-09	1.229E-09	9.968E-10	7.310E-10	5.298E-10
SSW	90	4.342E-11	5.784E-10	7.581E-10	9.569E-10	1.496E-09	1.262E-09	7.910E-10	5.492E-10
SW	65	4.237E-11	2.984E-10	3.725E-10	5.257E-10	4.782E-10	3.890E-10	2.900E-10	2.233E-10
WSW	38	1.902E-11	9.653E-11	2.598E-10	3.151E-10	3.657E-10	2.807E-10	1.943E-10	1.426E-10
W	34	7.523E-12	1.288E-10	3.278E-10	2.901E-10	2.857E-10	2.421E-10	1.771E-10	1.431E-10
WSW	38	1.057E-11	1.289E-10	1.657E-10	1.630E-10	1.883E-10	1.679E-10	1.261E-10	1.033E-10
NW	87	9.368E-12	1.517E-10	1.034E-10	1.099E-10	1.399E-10	1.770E-10	1.754E-10	1.605E-10
NNW	85	6.589E-12	1.882E-10	1.040E-10	7.983E-11	9.014E-11	1.160E-10	1.228E-10	1.182E-10
AVERAGE	1904	1.979E-11	4.131E-10	3.836E-10	4.149E-10	4.348E-10	3.926E-10	3.096E-10	2.539E-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	121	1.379E-10	1.238E-10	1.114E-10	1.009E-10	9.154E-11	6.004E-11	4.292E-11	2.563E-11
NNE	138	1.678E-10	1.539E-10	1.408E-10	1.290E-10	1.182E-10	7.950E-11	5.737E-11	3.452E-11
NE	183	2.199E-10	1.974E-10	1.775E-10	1.604E-10	1.453E-10	9.516E-11	6.821E-11	4.113E-11
NNE	139	1.708E-10	1.549E-10	1.405E-10	1.280E-10	1.168E-10	7.817E-11	5.674E-11	3.474E-11
E	175	2.029E-10	1.821E-10	1.640E-10	1.487E-10	1.350E-10	8.954E-11	6.495E-11	3.986E-11
ESE	257	2.874E-10	2.579E-10	2.320E-10	2.101E-10	1.906E-10	1.256E-10	9.044E-11	5.490E-11
SE	202	2.779E-10	2.475E-10	2.211E-10	1.987E-10	1.791E-10	1.151E-10	8.117E-11	4.761E-11
SSE	139	3.774E-10	3.099E-10	2.601E-10	2.219E-10	1.919E-10	1.091E-10	7.195E-11	3.979E-11
S	113	4.003E-10	3.159E-10	2.573E-10	2.143E-10	1.820E-10	9.612E-11	6.280E-11	3.280E-11
SSW	90	4.079E-10	3.161E-10	2.528E-10	2.067E-10	1.724E-10	8.603E-11	5.180E-11	2.478E-11
SW	65	1.772E-10	1.446E-10	1.206E-10	1.022E-10	8.792E-11	4.876E-11	3.146E-11	1.656E-11
WSW	38	1.091E-10	8.663E-11	7.078E-11	5.909E-11	5.024E-11	2.716E-11	1.726E-11	8.863E-12
W	34	1.172E-10	9.786E-11	8.316E-11	7.167E-11	6.252E-11	4.221E-11	2.664E-11	1.339E-11
WSW	38	8.578E-11	7.249E-11	6.228E-11	5.425E-11	4.779E-11	2.754E-11	2.095E-11	1.157E-11
NW	87	1.426E-10	1.262E-10	1.120E-10	1.001E-10	8.961E-11	6.773E-11	4.525E-11	2.583E-11
NNW	85	1.088E-10	9.900E-11	8.988E-11	8.190E-11	7.463E-11	4.919E-11	3.654E-11	2.618E-11
AVERAGE	1904	2.119E-10	1.804E-10	1.560E-10	1.368E-10	1.210E-10	7.494E-11	5.165E-11	2.988E-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	121	1.746E-11	1.283E-11	9.925E-12	7.966E-12	6.533E-12	5.616E-12	4.737E-12	
NNE	138	2.354E-11	1.725E-11	1.329E-11	1.061E-11	8.646E-12	7.222E-12	6.123E-12	
NE	183	2.841E-11	2.114E-11	1.650E-11	1.335E-11	1.102E-11	9.316E-12	7.986E-12	
NNE	139	2.416E-11	1.829E-11	1.499E-11	1.196E-11	9.742E-12	8.124E-12	6.875E-12	
E	175	2.771E-11	2.062E-11	1.625E-11	1.444E-11	1.167E-11	9.671E-12	8.144E-12	
ESE	257	3.791E-11	2.988E-11	2.303E-11	1.842E-11	1.504E-11	1.259E-11	1.070E-11	
SE	202	3.213E-11	2.557E-11	1.931E-11	1.517E-11	1.220E-11	1.008E-11	8.461E-12	
SSE	139	2.841E-11	1.787E-11	1.340E-11	1.048E-11	8.411E-12	6.943E-12	5.833E-12	
S	113	2.060E-11	1.430E-11	1.061E-11	8.221E-12	6.541E-12	5.359E-12	4.474E-12	
SSW	90	1.473E-11	9.914E-12	7.241E-12	5.582E-12	4.446E-12	3.662E-12	3.081E-12	
SW	65	1.031E-11	7.140E-12	5.289E-12	4.101E-12	3.251E-12	2.669E-12	2.235E-12	
WSW	38	5.573E-12	3.887E-12	2.861E-12	2.232E-12	1.789E-12	1.455E-12	1.225E-12	
W	34	8.182E-12	5.440E-12	3.922E-12	2.970E-12	2.136E-12	1.626E-12	1.353E-12	
WSW	38	7.473E-12	5.308E-12	3.793E-12	2.537E-12	1.969E-12	1.623E-12	1.367E-12	
NW	87	1.649E-11	1.164E-11	8.704E-12	5.670E-12	4.520E-12	3.715E-12	3.110E-12	
NNW	85	1.663E-11	1.164E-11	8.675E-12	6.743E-12	5.370E-12	4.399E-12	3.665E-12	
AVERAGE	1904	1.979E-11	1.455E-11	1.124E-11	8.779E-12	7.081E-12	5.879E-12	4.961E-12	

Table B-8

Deposition D/Q Factors for Main Stack

BECO 2nd Quarter 1996 General X/Q's: ELEVATED

SECTOR AVERAGE MODEL

STACK RELEASE: AVERAGE DEPOSITION RATES (DEPLETED CHI/Q*DEP. VELOCITY MODEL, MET. AND ATOMIC ENERGY 1968) - (1/92)

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		.12	.25	.50	.75	1.00	1.50	2.00	2.50
N	163	1.723E-11	5.064E-10	3.609E-10	2.780E-10	2.600E-10	2.661E-10	2.569E-10	2.356E-10
NNE	372	2.792E-11	8.381E-10	6.452E-10	4.631E-10	4.435E-10	4.806E-10	4.702E-10	4.309E-10
NE	233	1.814E-11	5.752E-10	4.042E-10	2.616E-10	2.344E-10	2.528E-10	2.584E-10	2.456E-10
ENE	114	7.007E-12	2.287E-10	1.352E-10	9.597E-11	1.028E-10	1.303E-10	1.370E-10	1.312E-10
E	187	1.386E-11	4.275E-10	3.378E-10	2.620E-10	2.401E-10	2.402E-10	2.336E-10	2.166E-10
ESE	147	1.708E-11	5.618E-10	3.202E-10	2.346E-10	2.117E-10	2.019E-10	1.910E-10	1.750E-10
SE	97	1.750E-11	6.847E-10	5.789E-10	3.272E-10	2.221E-10	2.004E-10	1.355E-10	1.245E-10
SSE	92	4.903E-11	1.225E-09	8.814E-10	5.434E-10	5.383E-10	4.070E-10	3.108E-10	2.441E-10
S	54	3.883E-11	5.721E-10	5.176E-10	6.049E-10	4.614E-10	3.320E-10	2.299E-10	1.641E-10
SSW	95	8.858E-11	1.099E-09	1.074E-09	1.144E-09	1.337E-09	8.907E-10	5.563E-10	3.868E-10
SW	71	8.822E-11	5.666E-10	5.895E-10	8.502E-10	8.213E-10	6.983E-10	5.262E-10	4.063E-10
WSW	72	1.135E-10	1.034E-09	7.363E-10	5.352E-10	5.750E-10	4.592E-10	3.288E-10	2.471E-10
W	104	4.053E-11	6.492E-10	9.824E-10	7.712E-10	7.960E-10	7.276E-10	5.519E-10	4.544E-10
WRW	111	2.147E-11	3.625E-10	7.549E-10	6.185E-10	6.814E-10	6.650E-10	5.407E-10	4.602E-10
NW	122	2.970E-11	5.002E-10	3.691E-10	2.753E-10	2.646E-10	2.706E-10	2.524E-10	2.247E-10
NNW	82	4.701E-12	1.640E-10	1.683E-10	1.515E-10	1.538E-10	1.633E-10	1.553E-10	1.400E-10
AVERAGE	2116	3.708E-11	6.247E-10	5.540E-10	4.635E-10	4.590E-10	3.991E-10	3.209E-10	2.620E-10

DOWNWIND SECTOR	NO. OBS	DISTANCE FROM RELEASE POINT (MILES)							
		3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	163	2.111E-10	1.879E-10	1.675E-10	1.501E-10	1.349E-10	8.547E-11	5.962E-11	3.434E-11
NNE	372	3.847E-10	3.417E-10	3.044E-10	2.729E-10	2.455E-10	1.574E-10	1.114E-10	6.591E-11
NE	233	2.259E-10	2.057E-10	1.871E-10	1.709E-10	1.561E-10	1.048E-10	7.617E-11	4.680E-11
ENE	114	1.208E-10	1.099E-10	9.976E-11	9.091E-11	8.294E-11	5.553E-11	4.037E-11	2.486E-11
E	187	1.961E-10	1.767E-10	1.597E-10	1.451E-10	1.321E-10	8.787E-11	6.377E-11	3.920E-11
ESE	147	1.577E-10	1.421E-10	1.285E-10	1.170E-10	1.066E-10	7.132E-11	5.214E-11	3.252E-11
SE	97	1.123E-10	1.015E-10	9.204E-11	8.401E-11	7.677E-11	5.183E-11	3.799E-11	2.367E-11
SSE	92	1.970E-10	1.631E-10	1.378E-10	1.184E-10	1.029E-10	5.975E-11	4.012E-11	2.309E-11
S	54	1.235E-10	9.729E-11	7.924E-11	6.612E-11	5.619E-11	3.065E-11	2.000E-11	1.094E-11
SSW	95	2.874E-10	2.241E-10	1.810E-10	1.499E-10	1.267E-10	6.741E-11	4.283E-11	2.234E-11
SW	71	3.222E-10	2.623E-10	2.181E-10	1.844E-10	1.581E-10	8.605E-11	5.333E-11	2.723E-11
WSW	72	1.929E-10	1.556E-10	1.388E-10	1.087E-10	9.322E-11	5.165E-11	3.352E-11	1.788E-11
W	104	3.764E-10	3.165E-10	2.704E-10	2.338E-10	2.042E-10	1.438E-10	9.116E-11	4.638E-11
WRW	111	3.894E-10	3.327E-10	2.635E-10	2.301E-10	2.025E-10	1.245E-10	8.366E-11	4.484E-11
NW	122	1.971E-10	1.729E-10	1.526E-10	1.356E-10	1.215E-10	9.284E-11	6.324E-11	3.812E-11
NNW	82	1.238E-10	1.091E-10	9.650E-11	8.603E-11	7.708E-11	4.867E-11	3.554E-11	2.965E-11
AVERAGE	2116	2.261E-10	1.937E-10	1.667E-10	1.465E-10	1.298E-10	8.247E-11	5.661E-11	3.299E-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	163	2.290E-11	1.659E-11	1.271E-11	1.013E-11	8.257E-12	7.076E-12	5.975E-12	
NNE	372	4.503E-11	3.328E-11	2.592E-11	2.094E-11	1.728E-11	1.462E-11	1.255E-11	
NE	233	3.268E-11	2.449E-11	1.921E-11	1.562E-11	1.295E-11	1.099E-11	9.450E-12	
ENE	114	1.739E-11	1.342E-11	1.145E-11	9.195E-12	7.528E-12	6.305E-12	5.355E-12	
E	187	2.734E-11	2.045E-11	1.874E-11	1.499E-11	1.224E-11	1.023E-11	8.677E-12	
ESE	147	2.290E-11	1.899E-11	1.478E-11	1.192E-11	9.794E-12	8.231E-12	7.014E-12	
SE	97	1.659E-11	1.525E-11	1.167E-11	9.270E-12	7.513E-12	6.233E-12	5.249E-12	
SSE	92	1.506E-11	1.076E-11	8.174E-12	6.463E-12	5.232E-12	4.348E-12	3.675E-12	
S	54	7.207E-12	5.228E-12	4.033E-12	3.241E-12	2.668E-12	2.253E-12	1.934E-12	
SSW	95	1.424E-11	1.008E-11	7.638E-12	6.052E-12	4.926E-12	4.124E-12	3.518E-12	
SW	71	1.637E-11	1.089E-11	7.765E-12	5.813E-12	4.405E-12	3.510E-12	2.863E-12	
WSW	72	1.150E-11	8.153E-12	6.051E-12	4.775E-12	3.867E-12	3.164E-12	2.685E-12	
W	104	2.830E-11	1.909E-11	1.379E-11	1.042E-11	7.200E-12	5.026E-12	4.114E-12	
WRW	111	2.837E-11	2.004E-11	1.471E-11	9.495E-12	7.101E-12	5.722E-12	4.713E-12	
NW	122	2.479E-11	1.783E-11	1.342E-11	7.961E-12	6.320E-12	5.176E-12	4.327E-12	
NNW	82	1.895E-11	1.330E-11	9.935E-12	7.726E-12	6.148E-12	5.022E-12	4.174E-12	
AVERAGE	2116	2.185E-11	1.612E-11	1.250E-11	9.625E-12	7.714E-12	6.376E-12	5.392E-12	

Table B-8

Deposition D/Q Factors for Main Stack

NECo 3rd Quarter 1996 General X/Q's: ELEVATED
 STACK RELEASE: AVERAGE DEPOSITION RATES (DEPLETED CH₄/Q*DEP. VELOCITY MODEL, MET. AND ATOMIC ENERGY 1968) - (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	201	1.075E-11	3.580E-10	2.640E-10	2.027E-10	2.139E-10	2.709E-10	2.911E-10	2.841E-10
NNE	436	2.229E-11	7.513E-10	5.371E-10	4.065E-10	4.372E-10	5.518E-10	5.757E-10	5.471E-10
NE	300	1.061E-11	4.065E-10	3.570E-10	2.670E-10	2.640E-10	3.185E-10	3.358E-10	3.229E-10
NNE	166	2.848E-12	1.332E-10	2.094E-10	1.550E-10	1.432E-10	1.787E-10	2.001E-10	2.000E-10
E	182	7.657E-12	3.002E-10	3.292E-10	2.296E-10	1.900E-10	1.905E-10	1.970E-10	1.902E-10
ESE	83	7.073E-12	2.389E-10	1.298E-10	1.157E-10	1.183E-10	1.292E-10	1.278E-10	1.196E-10
SE	64	4.931E-12	1.986E-10	1.846E-10	1.492E-10	1.400E-10	1.744E-10	1.188E-10	1.114E-10
SSE	96	2.351E-11	6.813E-10	5.854E-10	6.764E-10	7.223E-10	5.507E-10	4.144E-10	3.208E-10
S	74	2.215E-11	3.940E-10	6.315E-10	9.720E-10	7.632E-10	5.853E-10	4.137E-10	2.958E-10
SSW	85	3.515E-11	6.364E-10	9.046E-10	1.121E-09	1.409E-09	9.151E-10	5.711E-10	3.976E-10
SW	62	5.254E-11	4.231E-10	5.016E-10	7.718E-10	7.123E-10	5.638E-10	4.114E-10	3.116E-10
WSW	45	3.859E-11	3.651E-10	3.099E-10	3.352E-10	4.556E-10	4.167E-10	3.088E-10	2.361E-10
W	113	1.796E-11	2.845E-10	9.594E-10	8.765E-10	8.728E-10	7.745E-10	5.780E-10	4.727E-10
WNW	120	7.799E-12	1.708E-10	5.247E-10	5.983E-10	7.652E-10	8.336E-10	6.998E-10	6.048E-10
NW	109	1.006E-11	1.886E-10	1.161E-10	1.142E-10	1.545E-10	2.275E-10	2.470E-10	2.390E-10
NNW	71	4.680E-16	4.863E-12	2.434E-11	2.718E-11	4.097E-11	7.897E-11	9.969E-11	1.051E-10
AVERAGE	2207	1.712E-11	3.460E-10	4.105E-10	4.386E-10	4.627E-10	4.225E-10	3.494E-10	2.974E-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	201	2.545E-10	2.432E-10	2.229E-10	2.049E-10	1.882E-10	1.278E-10	9.275E-11	5.604E-11
NNE	436	4.997E-10	4.514E-10	4.071E-10	3.692E-10	3.352E-10	2.201E-10	1.573E-10	9.402E-11
NE	300	2.977E-10	2.711E-10	2.464E-10	2.247E-10	2.051E-10	1.374E-10	9.985E-11	6.157E-11
NNE	166	1.892E-10	1.755E-10	1.618E-10	1.492E-10	1.374E-10	9.387E-11	6.869E-11	4.243E-11
E	182	1.767E-10	1.626E-10	1.493E-10	1.376E-10	1.266E-10	8.691E-11	6.397E-11	3.990E-11
ESE	83	1.090E-10	9.869E-11	8.949E-11	8.154E-11	7.438E-11	4.971E-11	3.612E-11	2.216E-11
SE	64	1.006E-10	9.016E-11	8.087E-11	7.308E-11	6.590E-11	4.254E-11	3.005E-11	1.767E-11
SSE	96	2.555E-10	2.091E-10	1.749E-10	1.489E-10	1.286E-10	7.282E-11	4.786E-11	2.653E-11
S	74	2.221E-10	1.745E-10	1.416E-10	1.177E-10	9.972E-11	5.366E-11	3.442E-11	1.815E-11
SSW	85	2.965E-10	2.316E-10	1.872E-10	1.550E-10	1.309E-10	6.968E-11	4.433E-11	2.312E-11
SW	62	2.437E-10	1.964E-10	1.622E-10	1.364E-10	1.165E-10	6.293E-11	3.965E-11	1.992E-11
WSW	45	1.862E-10	1.511E-10	1.255E-10	1.060E-10	9.082E-11	4.968E-11	3.163E-11	1.614E-11
W	113	3.902E-10	3.278E-10	2.798E-10	2.418E-10	2.113E-10	1.452E-10	9.095E-11	4.517E-11
WNW	120	5.156E-10	4.429E-10	3.521E-10	3.081E-10	2.717E-10	1.667E-10	1.107E-10	5.791E-11
NW	109	2.199E-10	1.999E-10	1.813E-10	1.650E-10	1.502E-10	1.271E-10	8.613E-11	5.175E-11
NNW	71	1.020E-10	9.646E-11	9.028E-11	8.436E-11	7.847E-11	5.471E-11	4.320E-11	4.276E-11
AVERAGE	2207	2.543E-10	2.202E-10	1.968E-10	1.690E-10	1.507E-10	9.754E-11	6.735E-11	3.970E-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	201	3.806E-11	2.763E-11	2.094E-11	1.646E-11	1.320E-11	1.271E-11	1.037E-11	
NNE	436	6.427E-11	4.733E-11	3.660E-11	2.936E-11	2.404E-11	2.016E-11	1.716E-11	
NE	300	4.324E-11	3.257E-11	2.565E-11	2.091E-11	1.738E-11	1.477E-11	1.272E-11	
NNE	166	2.959E-11	2.289E-11	2.003E-11	1.599E-11	1.302E-11	1.084E-11	9.161E-12	
E	182	2.802E-11	2.103E-11	2.051E-11	1.643E-11	1.342E-11	1.122E-11	9.513E-12	
ESE	83	1.531E-11	1.266E-11	9.622E-12	7.585E-12	6.105E-12	5.035E-12	4.218E-12	
SE	64	1.192E-11	1.027E-11	7.748E-12	6.077E-12	4.872E-12	4.007E-12	3.348E-12	
SSE	96	1.690E-11	1.186E-11	8.873E-12	6.919E-12	5.526E-12	4.537E-12	3.790E-12	
S	74	1.156E-11	8.141E-12	6.121E-12	4.801E-12	3.860E-12	3.191E-12	2.685E-12	
SSW	85	1.466E-11	1.029E-11	7.724E-12	6.053E-12	4.865E-12	4.024E-12	3.387E-12	
SW	62	1.216E-11	8.257E-12	6.017E-12	4.599E-12	3.581E-12	2.907E-12	2.410E-12	
WSW	45	9.893E-12	6.700E-12	4.695E-12	3.548E-12	2.758E-12	2.135E-12	1.750E-12	
W	113	2.698E-11	1.789E-11	1.276E-11	9.556E-12	6.688E-12	4.943E-12	4.071E-12	
WNW	120	3.569E-11	2.424E-11	1.688E-11	1.090E-11	8.029E-12	6.354E-12	5.135E-12	
NW	109	3.242E-11	2.249E-11	1.624E-11	7.725E-12	5.919E-12	4.696E-12	3.807E-12	
NNW	71	2.623E-11	1.762E-11	1.260E-11	9.384E-12	7.148E-12	5.599E-12	4.462E-12	
AVERAGE	2207	2.606E-11	1.887E-11	1.456E-11	1.102E-11	8.775E-12	7.320E-12	6.124E-12	

Table B-8

Deposition D/Q Factors for Main Stack

BECo 4th Quarter 1996 General X/Q's: ELEVATEL
 STACK RELEASE: AVERAGE DEPOSITION RATES (DEPLETED CHL/Q*DEF. VELOCITY MODEL, MET. AND ATOMIC ENERGY 1962) - (1/M2)

BECO 4th Quarter 1996 General X/Q's: ELEVATED		SECTOR AVERAGE MODEL							
STACK RELEASE: AVERAGE DEPOSITION RATES (DEPLETED CHI/Q*DMF, 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	155	1.664E-12	5.937E-11	9.411E-11	8.689E-11	1.075E-10	1.705E-10	2.004E-10	2.034E-10
NNE	205	3.881E-12	1.485E-10	1.088E-10	1.186E-10	1.497E-10	2.191E-10	2.504E-10	2.522E-10
NE	162	7.433E-12	3.383E-10	2.314E-10	1.659E-10	1.671E-10	2.026E-10	2.143E-10	2.069E-10
NNE	169	1.382E-12	8.507E-11	2.456E-10	2.049E-10	1.755E-10	1.822E-10	1.926E-10	1.884E-10
E	291	1.228E-11	4.340E-10	3.208E-10	2.469E-10	2.540E-10	3.172E-10	3.450E-10	3.395E-10
ESE	215	1.442E-11	4.949E-10	2.813E-10	2.125E-10	2.132E-10	2.447E-10	2.521E-10	2.409E-10
SE	171	1.306E-11	4.285E-10	3.798E-10	2.942E-10	2.680E-10	2.966E-10	2.208E-10	2.013E-10
SSE	119	2.748E-11	7.133E-10	5.257E-10	6.033E-10	6.085E-10	4.514E-10	3.387E-10	2.627E-10
S	54	1.310E-11	1.939E-10	3.863E-10	5.503E-10	4.511E-10	3.006E-10	2.101E-10	1.500E-10
SSW	53	4.803E-12	1.306E-10	6.089E-10	7.568E-10	9.809E-10	6.541E-10	4.067E-10	2.821E-10
SW	81	4.698E-12	2.889E-11	3.741E-10	7.700E-10	6.942E-10	5.376E-10	3.908E-10	2.961E-10
WSW	91	3.882E-11	2.562E-10	4.222E-10	5.166E-10	6.759E-10	5.979E-10	4.402E-10	3.362E-10
W	123	2.155E-11	2.750E-10	6.508E-10	6.718E-10	7.156E-10	6.539E-10	4.917E-10	4.023E-10
WNW	74	1.609E-12	4.622E-11	2.224E-10	3.035E-10	4.033E-10	4.306E-10	3.550E-10	3.075E-10
NW	83	4.885E-15	1.587E-11	5.454E-11	6.215E-11	9.238E-11	1.510E-10	1.694E-10	1.662E-10
NNW	159	5.398E-21	4.123E-13	2.263E-11	5.541E-11	9.759E-11	1.727E-10	2.013E-10	2.026E-10
AVERAGE	2205	1.039E-11	2.281E-10	3.081E-10	3.512E-10	3.761E-10	3.489E-10	2.925E-10	2.524E-10

		DISTANCE FROM RELEASE POINT (MILES)							
DOWNWIND SECTOR	NO. OBS	3.00	3.50	4.00	4.50	5.00	7.50	10.00	15.00
N	155	1.928E-10	1.793E-10	1.656E-10	1.531E-10	1.412E-10	9.624E-11	6.964E-11	4.175E-11
NNE	205	2.384E-10	2.217E-10	2.051E-10	1.899E-10	1.754E-10	1.206E-10	8.807E-11	5.383E-11
NE	162	1.912E-10	1.747E-10	1.594E-10	1.458E-10	1.334E-10	8.988E-11	6.540E-11	4.017E-11
NNE	169	1.762E-10	1.633E-10	1.509E-10	1.398E-10	1.294E-10	9.021E-11	6.691E-11	4.200E-11
E	291	3.171E-10	2.924E-10	2.685E-10	2.471E-10	2.271E-10	1.537E-10	1.113E-10	6.728E-11
ESE	215	2.217E-10	2.027E-10	1.853E-10	1.700E-10	1.560E-10	1.061E-10	7.770E-11	4.821E-11
SE	171	1.794E-10	1.596E-10	1.431E-10	1.290E-10	1.168E-10	7.657E-11	5.513E-11	3.357E-11
SSE	119	2.102E-10	1.730E-10	1.455E-10	1.245E-10	1.079E-10	6.221E-11	4.156E-11	2.360E-11
S	54	1.125E-10	8.841E-11	7.189E-11	5.990E-11	5.091E-11	2.778E-11	1.796E-11	9.541E-12
SSW	53	2.096E-10	1.630E-10	1.311E-10	1.079E-10	9.078E-11	4.737E-11	2.968E-11	1.509E-11
SW	81	2.319E-10	1.874E-10	1.551E-10	1.309E-10	1.120E-10	6.142E-11	3.904E-11	1.970E-11
WSW	91	2.652E-10	2.154E-10	1.790E-10	1.511E-10	1.299E-10	7.150E-11	4.578E-11	2.356E-11
W	123	3.317E-10	2.782E-10	2.371E-10	2.045E-10	1.785E-10	1.192E-10	7.532E-11	3.827E-11
WNW	74	2.639E-10	2.285E-10	1.997E-10	1.761E-10	1.565E-10	9.198E-11	6.963E-11	3.758E-11
NW	83	1.543E-10	1.412E-10	1.287E-10	1.175E-10	1.074E-10	9.685E-11	6.620E-11	4.027E-11
NNW	159	1.910E-10	1.770E-10	1.631E-10	1.504E-10	1.386E-10	9.465E-11	7.380E-11	6.084E-11
AVERAGE	2205	2.179E-10	1.904E-10	1.681E-10	1.499E-10	1.345E-10	8.789E-11	6.207E-11	3.720E-11

		DISTANCE FROM RELEASE POINT (MILES)							
DOWNWIND SECTOR	NO. OBS	20.00	25.00	30.00	34.95	40.00	45.00	50.00	
N	155	2.822E-11	2.046E-11	1.557E-11	1.228E-11	9.888E-12	8.690E-12	7.149E-12	
NNE	205	3.697E-11	2.720E-11	2.096E-11	1.672E-11	1.359E-11	1.131E-11	9.539E-12	
NE	162	2.793E-11	2.081E-11	1.623E-11	1.309E-11	1.076E-11	9.049E-12	7.710E-12	
NNE	169	2.945E-11	2.267E-11	1.827E-11	1.534E-11	1.244E-11	1.033E-11	8.695E-12	
E	291	4.604E-11	3.387E-11	2.944E-11	2.330E-11	1.635E-11	1.564E-11	1.317E-11	
ESE	215	3.366E-11	2.748E-11	2.121E-11	1.695E-11	1.387E-11	1.153E-11	9.752E-12	
SE	171	2.332E-11	2.076E-11	1.597E-11	1.272E-11	1.035E-11	8.622E-12	7.289E-12	
SSE	119	1.543E-11	1.109E-11	8.471E-12	6.741E-12	5.493E-12	4.597E-12	3.911E-12	
S	54	6.137E-12	4.360E-12	3.306E-12	2.614E-12	2.117E-12	1.763E-12	1.494E-12	
SSW	53	9.359E-12	6.451E-12	4.765E-12	3.783E-12	2.924E-12	2.393E-12	1.995E-12	
SW	81	1.199E-11	8.082E-12	5.832E-12	4.420E-12	3.403E-12	2.736E-12	2.249E-12	
WSW	91	1.455E-11	9.929E-12	7.022E-12	5.346E-12	4.189E-12	3.279E-12	2.715E-12	
W	123	2.340E-11	1.584E-11	1.148E-11	8.711E-12	6.249E-12	4.644E-12	3.828E-12	
WNW	74	2.350E-11	1.624E-11	1.111E-11	6.489E-12	4.636E-12	3.626E-12	2.906E-12	
NW	83	2.510E-11	1.719E-11	1.229E-11	5.717E-12	4.313E-12	3.374E-12	2.702E-12	
NNW	159	3.743E-11	2.536E-11	1.835E-11	1.386E-11	1.074E-11	8.584E-12	6.987E-12	
AVERAGE	2205	2.453E-11	1.799E-11	1.383E-11	1.050E-11	8.360E-12	6.885E-12	5.756E-12	

Table B-8

Deposition D/Q Factors for Main Stack

RECo 1996 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	640	1.007E-11	3.133E-10	2.468E-10	1.906E-10	1.899E-10	2.216E-10	2.307E-10	2.213E-10
NNE	1151	1.551E-11	4.915E-10	3.662E-10	2.811E-10	2.943E-10	3.607E-10	3.759E-10	3.581E-10
NE	878	1.294E-11	4.657E-10	3.184E-10	2.236E-10	2.205E-10	2.565E-10	2.677E-10	2.552E-10
NNE	588	5.459E-12	2.099E-10	2.178E-10	1.624E-10	1.504E-10	1.717E-10	1.820E-10	1.768E-10
E	835	1.205E-11	4.030E-10	3.363E-10	2.466E-10	2.310E-10	2.507E-10	2.559E-10	2.439E-10
ESE	702	1.599E-11	5.040E-10	2.802E-10	2.149E-10	2.115E-10	2.279E-10	2.254E-10	2.104E-10
SE	534	1.261E-11	4.291E-10	3.843E-10	2.684E-10	2.359E-10	2.629E-10	1.989E-10	1.832E-10
SSE	446	2.489E-11	6.779E-10	5.411E-10	6.969E-10	7.207E-10	5.458E-10	4.122E-10	3.205E-10
S	295	2.535E-11	4.193E-10	6.286E-10	8.980E-10	7.017E-10	5.402E-10	3.860E-10	2.774E-10
SSW	323	4.052E-11	5.796E-10	8.368E-10	9.944E-10	1.299E-09	9.399E-10	5.740E-10	3.989E-10
SW	279	4.412E-11	3.098E-10	4.379E-10	7.354E-10	6.821E-10	5.512E-10	4.074E-10	3.114E-10
WSW	246	4.651E-11	3.838E-10	4.145E-10	4.283E-10	5.231E-10	4.441E-10	3.223E-10	2.439E-10
W	374	2.221E-11	3.386E-10	7.063E-10	6.581E-10	6.799E-10	6.109E-10	4.584E-10	3.753E-10
WNW	343	1.024E-11	1.769E-10	3.972E-10	4.020E-10	4.907E-10	5.060E-10	4.136E-10	3.547E-10
NW	401	1.220E-11	2.133E-10	1.606E-10	1.400E-10	1.626E-10	2.069E-10	2.119E-10	1.987E-10
NNW	397	2.668E-12	8.503E-11	7.799E-11	7.765E-11	9.519E-11	1.330E-10	1.454E-10	1.423E-10
AVERAGE	8432	1.958E-11	3.750E-10	3.969E-10	4.136E-10	4.305E-10	3.882E-10	3.167E-10	2.670E-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	640	2.037E-10	1.856E-10	1.688E-10	1.541E-10	1.407E-10	9.361E-11	6.714E-11	3.999E-11
NNE	1151	3.276E-10	2.967E-10	2.684E-10	2.439E-10	2.219E-10	1.466E-10	1.051E-10	6.302E-11
NE	878	2.343E-10	2.129E-10	1.932E-10	1.761E-10	1.606E-10	1.072E-10	7.776E-11	4.765E-11
NNE	588	1.645E-10	1.512E-10	1.386E-10	1.273E-10	1.170E-10	7.975E-11	5.842E-11	3.617E-11
E	835	2.242E-10	2.045E-10	1.864E-10	1.706E-10	1.562E-10	1.052E-10	7.652E-11	4.688E-11
ESE	702	1.910E-10	1.727E-10	1.565E-10	1.426E-10	1.301E-10	8.700E-11	6.328E-11	3.896E-11
SE	534	1.642E-10	1.467E-10	1.316E-10	1.188E-10	1.075E-10	7.016E-11	5.014E-11	3.009E-11
SSE	446	2.565E-10	2.109E-10	1.772E-10	1.513E-10	1.311E-10	7.497E-11	4.971E-11	2.790E-11
S	295	2.090E-10	1.645E-10	1.338E-10	1.115E-10	9.460E-11	5.116E-11	3.290E-11	1.740E-11
SSW	323	2.967E-10	2.309E-10	1.858E-10	1.531E-10	1.287E-10	6.697E-11	4.181E-11	2.120E-11
SW	279	2.453E-10	1.989E-10	1.650E-10	1.393E-10	1.193E-10	6.514E-11	4.133E-11	2.091E-11
WSW	246	1.912E-10	1.545E-10	1.280E-10	1.079E-10	9.247E-11	5.080E-11	3.256E-11	1.687E-11
W	374	3.098E-10	2.601E-10	2.218E-10	1.926E-10	1.674E-10	1.148E-10	7.239E-11	3.649E-11
WNW	343	3.017E-10	2.589E-10	2.246E-10	1.967E-10	1.736E-10	9.834E-11	7.291E-11	3.885E-11
NW	401	1.795E-10	1.611E-10	1.447E-10	1.306E-10	1.182E-10	9.718E-11	6.594E-11	3.947E-11
NNW	397	1.323E-10	1.213E-10	1.108E-10	1.015E-10	9.297E-11	6.239E-11	4.778E-11	4.045E-11
AVERAGE	8432	2.270E-10	1.977E-10	1.709E-10	1.511E-10	1.345E-10	8.571E-11	5.973E-11	3.515E-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	640	2.703E-11	1.964E-11	1.498E-11	1.186E-11	9.587E-12	8.642E-12	7.152E-12	
NNE	1151	4.311E-11	3.175E-11	2.457E-11	1.970E-11	1.614E-11	1.353E-11	1.152E-11	
NE	878	3.324E-11	2.488E-11	1.950E-11	1.583E-11	1.310E-11	1.109E-11	9.519E-12	
NNE	588	2.525E-11	1.942E-11	1.654E-11	1.320E-11	1.075E-11	8.955E-12	7.568E-12	
E	835	3.249E-11	2.415E-11	2.189E-11	1.742E-11	1.415E-11	1.178E-11	9.951E-12	
ESE	702	2.712E-11	2.201E-11	1.697E-11	1.357E-11	1.107E-11	9.241E-12	7.831E-12	
SE	534	2.064E-11	1.772E-11	1.349E-11	1.067E-11	8.622E-12	7.143E-12	6.010E-12	
SSE	446	1.797E-11	1.274E-11	9.614E-12	7.563E-12	6.095E-12	5.049E-12	4.254E-12	
S	295	1.109E-11	7.812E-12	5.874E-12	4.610E-12	3.710E-12	3.072E-12	2.589E-12	
SSW	323	1.318E-11	9.150E-12	6.819E-12	5.327E-12	4.278E-12	3.541E-12	2.987E-12	
SW	279	1.275E-11	8.619E-12	6.244E-12	4.744E-12	3.667E-12	2.960E-12	2.442E-12	
WSW	246	1.054E-11	7.274E-12	5.230E-12	4.029E-12	3.192E-12	2.539E-12	2.118E-12	
W	374	2.211E-11	1.485E-11	1.069E-11	8.065E-12	5.674E-12	4.137E-12	3.404E-12	
WNW	343	2.429E-11	1.682E-11	1.187E-11	7.503E-12	5.540E-12	4.414E-12	3.596E-12	
NW	401	2.499E-11	1.749E-11	1.280E-11	6.795E-12	5.284E-12	4.249E-12	3.491E-12	
NNW	397	2.516E-11	1.721E-11	1.255E-11	9.543E-12	7.436E-12	5.964E-12	4.870E-12	
AVERAGE	8432	2.319E-11	1.697E-11	1.310E-11	1.003E-11	8.018E-12	6.644E-12	5.581E-12	