FPL

L-2011-054
10 CFR 52.3

February 9, 2011

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Re: Florida Power & Light Company
Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
Response to NRC Request for Additional Information Letter No. 016 (eRAI 5311)
Standard Review Plan Section 02.03.05 - Long Term Atmospheric Dispersion Estimates for Routine Releases

Reference:

1. NRC Letter to FPL dated January 11, 2011, Request for Additional Information Letter No. 016 Related To SRP Section 02.03.05 Long Term Atmospheric Dispersion Estimates for Routine Release for the Turkey Point Nuclear Plant Units 6 and 7 Combined License Application

Florida Power & Light Company (FPL) provides, as an attachment to this letter, its response to the Nuclear Regulatory Commission's (NRC) request for additional information (RAI) 02.03.05-1 provided in the referenced letter. The attachment identifies changes that will be made in a future revision of the Turkey Point Units 6 and 7 Combined License Application (if applicable).

If you have any questions, or need additional information, please contact me at 561-691-7490.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 9, 2011

Sincerely,

William Maher
Senior Licensing Director – New Nuclear Projects

Attachment: FPL Response to NRC RAI No. 02.03.05-1 (eRAI 5311)

cc:
PTN 6 & 7 Project Manager, AP1000 Projects Branch 1, USNRC DNRL/NRO
Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant 3 & 4

D097
NRO

NRC RAI Letter No. PTN-RAI-LTR-016

SRP Section: 02.03.05 – LONG-TERM ATMOSPHERIC DISPERSION ESTIMATES FOR ROUTINE RELEASES

Questions from Siting and Accident Consequence Branch (RSAC)

NRC RAI Number: 02.03.05-1 (eRAI 5311)

10 CFR Part 50, Appendix I requires that all light water cooled reactors meet the ALARA criterion for radioactive material. Regulatory Guide 1.111, Revision 1 states that radioactive decay and depletion should be considered in radiological impact evaluations. The RG also states that for conservative estimates of radioactive decay, an overall halflife of 2.26 days is acceptable for short-lived noble gases and of 8 days for all iodines released to the atmosphere. This data is used in the review of Chapter 11 of the FSAR to determine the radioactive doses to specific receptors, individuals, and the population within 50 miles of the plant.

Please provide in PTN COL FSAR Section 2.3.5 the XOQDOQ-predicted annual average χ/Q values at the standard radial distances and distance segment boundaries, which include the 2.26- and 8.00-day decay periods and depletion.

FPL RESPONSE:

The XOQDOQ-predicted annual average χ/Q values at the standard radial distances and distance segment boundaries, which include the no decay (undepleted), 2.26-day decay period (undepleted) and 8-day decay period (depleted) will be included in a future revision to FSAR 2.3.5.

This response is PLANT SPECIFIC.

References:

None

ASSOCIATED COLA REVISIONS:

The following text and table changes will be included in a future revision to the COLA, FSAR Section 2.3.5, Subsection 2.3.5.2, last paragraph:

Tables 2.3.5-203 ~~and~~ **through** 2.3.5-~~204~~ **206** summarize the annual average sector X/Q values (for no decay **[undepleted], 2.26-day decay [undepleted], and 8-day decay [depleted]),** and D/Q values for 22 standard radial distances between 0.25 and 50 miles, and for 10 distance-segment boundaries between 0.5 and 50 miles downwind along each of the 16 standard direction radials separated by 22.5 degrees. Table 2.3.5-~~205~~ **207** summarizes the predicted annual X/Q values and D/Q at the sensitive receptors.

Table 2.3.5-203 (Sheet 1 of 2)
XOQDOQ-Predicted Annual Average X/Q Value at the Standard Radial Distances and Distance Segment Boundaries – No Decay, Undepleted

[Note: All information in table is unchanged]

Table 2.3.5-203 (Sheet 2 of 2)
XOQDOQ-Predicted Annual Average X/Q Value at the Standard Radial Distances and Distance Segment Boundaries – No Decay, Undepleted

[Note: All information in table is unchanged]

Table 2.3.5-204 (Sheet 1 of 2)
XOQDOQ-Predicted Annual Average X/Q Value at the Standard Radial Distances and Distance Segment Boundaries – 2.26-Day Decay, Undepleted

RELEASE POINT - GROUND LEVEL - NO INTERMITTENT RELEASES
2.260 DAY DECAY, UNDEPLETED
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) — DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	3.594E-05	1.077E-05	5.457E-06	2.735E-06	1.101E-06	6.075E-07	3.951E-07	2.812E-07	2.127E-07	1.680E-07	1.371E-07
SSW	1.063E-05	3.273E-06	1.739E-06	8.837E-07	3.571E-07	1.950E-07	1.248E-07	8.772E-08	6.563E-08	5.137E-08	4.157E-08
SW	1.671E-05	5.341E-06	2.906E-06	1.476E-06	5.908E-07	3.186E-07	2.012E-07	1.398E-07	1.037E-07	8.051E-08	6.472E-08
WSW	2.759E-05	8.951E-06	5.021E-06	2.571E-06	1.031E-06	5.553E-07	3.497E-07	2.425E-07	1.794E-07	1.390E-07	1.116E-07
W	5.159E-05	1.655E-05	9.260E-06	4.752E-06	1.917E-06	1.036E-06	6.548E-07	4.553E-07	3.377E-07	2.623E-07	2.109E-07
WNW	3.751E-05	1.200E-05	6.635E-06	3.393E-06	1.366E-06	7.372E-07	4.652E-07	3.231E-07	2.394E-07	1.858E-07	1.493E-07
NW	2.633E-05	8.284E-06	4.541E-06	2.324E-06	9.403E-07	5.102E-07	3.235E-07	2.255E-07	1.677E-07	1.305E-07	1.051E-07
NNW	1.775E-05	5.553E-06	2.986E-06	1.513E-06	6.060E-07	3.273E-07	2.072E-07	1.443E-07	1.072E-07	8.339E-08	6.714E-08
N	1.329E-05	4.154E-06	2.244E-06	1.138E-06	4.562E-07	2.467E-07	1.563E-07	1.090E-07	8.099E-08	6.303E-08	5.077E-08
NNE	1.373E-05	4.245E-06	2.248E-06	1.140E-06	4.594E-07	2.504E-07	1.601E-07	1.124E-07	8.399E-08	6.568E-08	5.313E-08
NE	1.427E-05	4.333E-06	2.239E-06	1.132E-06	4.585E-07	2.521E-07	1.628E-07	1.152E-07	8.664E-08	6.812E-08	5.536E-08
ENE	1.445E-05	4.379E-06	2.255E-06	1.144E-06	4.662E-07	2.571E-07	1.661E-07	1.176E-07	8.855E-08	6.966E-08	5.664E-08
E	2.020E-05	6.070E-06	3.098E-06	1.569E-06	6.399E-07	3.539E-07	2.295E-07	1.629E-07	1.230E-07	9.691E-08	7.892E-08
ESE	2.612E-05	7.798E-06	3.945E-06	1.984E-06	8.033E-07	4.444E-07	2.893E-07	2.060E-07	1.558E-07	1.231E-07	1.004E-07
SE	3.270E-05	9.737E-06	4.896E-06	2.462E-06	9.983E-07	5.531E-07	3.604E-07	2.569E-07	1.945E-07	1.538E-07	1.255E-07
SSE	6.203E-05	1.841E-05	9.234E-06	4.620E-06	1.861E-06	1.031E-06	6.733E-07	4.809E-07	3.648E-07	2.888E-07	2.361E-07

DISTANCE IN MILES FROM THE SITE
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.148E-07	6.130E-08	4.065E-08	2.391E-08	1.637E-08	1.217E-08	9.530E-09	7.735E-09	6.444E-09	5.477E-09	4.729E-09
SSW	3.454E-08	1.795E-08	1.167E-08	6.672E-09	4.477E-09	3.275E-09	2.529E-09	2.028E-09	1.671E-09	1.406E-09	1.203E-09
SW	5.347E-08	2.719E-08	1.742E-08	9.774E-09	6.484E-09	4.705E-09	3.612E-09	2.883E-09	2.368E-09	1.988E-09	1.697E-09
WSW	9.204E-08	4.651E-08	2.969E-08	1.658E-08	1.097E-08	7.952E-09	6.105E-09	4.877E-09	4.010E-09	3.370E-09	2.882E-09
W	1.742E-07	8.851E-08	5.671E-08	3.183E-08	2.113E-08	1.535E-08	1.181E-08	9.444E-09	7.774E-09	6.540E-09	5.598E-09
WNW	1.233E-07	6.258E-08	4.006E-08	2.247E-08	1.492E-08	1.084E-08	8.332E-09	6.663E-09	5.482E-09	4.610E-09	3.944E-09
NW	8.696E-08	4.448E-08	2.862E-08	1.614E-08	1.074E-08	7.817E-09	6.015E-09	4.811E-09	3.958E-09	3.328E-09	2.845E-09
NNW	5.554E-08	2.843E-08	1.830E-08	1.034E-08	6.892E-09	5.020E-09	3.866E-09	3.093E-09	2.546E-09	2.140E-09	1.830E-09
N	4.202E-08	2.155E-08	1.389E-08	7.863E-09	5.248E-09	3.826E-09	2.950E-09	2.363E-09	1.946E-09	1.638E-09	1.402E-09
NNE	4.412E-08	2.288E-08	1.486E-08	8.478E-09	5.679E-09	4.147E-09	3.198E-09	2.560E-09	2.107E-09	1.770E-09	1.512E-09
NE	4.616E-08	2.428E-08	1.591E-08	9.180E-09	6.190E-09	4.541E-09	3.514E-09	2.821E-09	2.326E-09	1.958E-09	1.675E-09
ENE	4.724E-08	2.488E-08	1.632E-08	9.442E-09	6.381E-09	4.693E-09	3.639E-09	2.928E-09	2.420E-09	2.041E-09	1.750E-09
E	6.592E-08	3.489E-08	2.296E-08	1.333E-08	9.021E-09	6.639E-09	5.151E-09	4.144E-09	3.424E-09	2.887E-09	2.473E-09
ESE	8.401E-08	4.471E-08	2.953E-08	1.722E-08	1.168E-08	8.610E-09	6.685E-09	5.381E-09	4.446E-09	3.749E-09	3.211E-09
SE	1.051E-07	5.614E-08	3.720E-08	2.181E-08	1.488E-08	1.102E-08	8.598E-09	6.952E-09	5.771E-09	4.887E-09	4.204E-09
SSE	1.980E-07	1.064E-07	7.080E-08	4.183E-08	2.872E-08	2.139E-08	1.678E-08	1.363E-08	1.137E-08	9.672E-09	8.357E-09

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT (METERS)	.00	REP. WIND HEIGHT (METERS)	10.0
DIAMETER (METERS)	.00	BUILDING HEIGHT (METERS)	60.9
EXIT VELOCITY (METERS)	.00	BLDG.MIN.CRS.SEC.AREA (SQ.METERS)	2636.0
		HEAT EMISSION RATE (CAL/SEC)	.0

Table 2.3.5-204 (Sheet 2 of 2)
XOQDOQ-Predicted Annual Average X/Q Value at the Standard Radial Distances and Distance Segment Boundaries - 2.26-Day Decay, Undepleted

RELEASE POINT - GROUND LEVEL - NO INTERMITTENT RELEASES
2.260 DAY DECAY, UNDEPLETED
CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	5.428E-06	1.245E-06	4.062E-07	2.153E-07	1.380E-07	6.401E-08	2.428E-08	1.223E-08	7.756E-09	5.486E-09
SSW	1.700E-06	4.021E-07	1.287E-07	6.651E-08	4.187E-08	1.885E-08	6.807E-09	3.297E-09	2.035E-09	1.410E-09
SW	2.812E-06	6.666E-07	2.079E-07	1.052E-07	6.523E-08	2.869E-08	1.001E-08	4.742E-09	2.895E-09	1.993E-09
WSW	4.805E-06	1.162E-06	3.616E-07	1.820E-07	1.125E-07	4.915E-08	1.700E-08	8.018E-09	4.897E-09	3.379E-09
W	8.877E-06	2.155E-06	6.767E-07	3.426E-07	2.125E-07	9.341E-08	3.260E-08	1.547E-08	9.483E-09	6.557E-09
WNW	6.387E-06	1.537E-06	4.809E-07	2.429E-07	1.505E-07	6.606E-08	2.302E-08	1.092E-08	6.690E-09	4.622E-09
NW	4.387E-06	1.057E-06	3.341E-07	1.700E-07	1.059E-07	4.687E-08	1.651E-08	7.877E-09	4.830E-09	3.336E-09
NNW	2.902E-06	6.838E-07	2.141E-07	1.087E-07	6.766E-08	2.995E-08	1.057E-08	5.057E-09	3.105E-09	2.145E-09
N	2.177E-06	5.147E-07	1.615E-07	8.214E-08	5.116E-08	2.270E-08	8.040E-09	3.855E-09	2.372E-09	1.642E-09
NNE	2.199E-06	5.177E-07	1.651E-07	8.512E-08	5.351E-08	2.404E-08	8.652E-09	4.176E-09	2.570E-09	1.774E-09
NE	2.212E-06	5.165E-07	1.676E-07	8.773E-08	5.573E-08	2.542E-08	9.346E-09	4.570E-09	2.830E-09	1.962E-09
ENE	2.233E-06	5.239E-07	1.710E-07	8.966E-08	5.701E-08	2.604E-08	9.611E-09	4.722E-09	2.938E-09	2.045E-09
E	3.079E-06	7.192E-07	2.360E-07	1.245E-07	7.944E-08	3.648E-08	1.355E-08	6.679E-09	4.157E-09	2.893E-09
ESE	3.930E-06	9.062E-07	2.974E-07	1.577E-07	1.011E-07	4.670E-08	1.749E-08	8.659E-09	5.397E-09	3.756E-09
SE	4.890E-06	1.126E-06	3.704E-07	1.968E-07	1.263E-07	5.860E-08	2.215E-08	1.108E-08	6.973E-09	4.896E-09
SSE	9.222E-06	2.105E-06	6.917E-07	3.690E-07	2.376E-07	1.109E-07	4.244E-08	2.150E-08	1.367E-08	9.688E-09

XOQDOQ - FPL COL (3 YEAR COMPOSITE 2002, 2005, 2006 Met Data)

Table 2.3.5-205 (Sheet 1 of 2)
XOQDOQ-Predicted Annual Average X/Q Value at the Standard Radial Distances and Distance Segment Boundaries – 8-Day Decay, Depleted

RELEASE POINT - GROUND LEVEL - NO INTERMITTENT RELEASES
8.000 DAY DECAY, DEPLETED
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) — DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	3.403E-05	9.849E-06	4.872E-06	2.401E-06	9.386E-07	5.056E-07	3.221E-07	2.252E-07	1.675E-07	1.304E-07	1.049E-07
SSW	1.007E-05	2.993E-06	1.554E-06	7.760E-07	3.048E-07	1.625E-07	1.019E-07	7.036E-08	5.180E-08	3.995E-08	3.190E-08
SW	1.583E-05	4.884E-06	2.594E-06	1.295E-06	5.036E-07	2.651E-07	1.640E-07	1.119E-07	8.163E-08	6.245E-08	4.951E-08
WSW	2.613E-05	8.182E-06	4.480E-06	2.254E-06	8.783E-07	4.616E-07	2.846E-07	1.937E-07	1.409E-07	1.075E-07	8.509E-08
W	4.885E-05	1.513E-05	8.263E-06	4.167E-06	1.632E-06	8.613E-07	5.330E-07	3.637E-07	2.653E-07	2.029E-07	1.608E-07
WNW	3.552E-05	1.097E-05	5.922E-06	2.976E-06	1.163E-06	6.130E-07	3.788E-07	2.583E-07	1.882E-07	1.439E-07	1.140E-07
NW	2.494E-05	7.574E-06	4.054E-06	2.039E-06	8.014E-07	4.245E-07	2.636E-07	1.805E-07	1.320E-07	1.012E-07	8.037E-08
NNW	1.681E-05	5.078E-06	2.666E-06	1.328E-06	5.167E-07	2.725E-07	1.690E-07	1.156E-07	8.445E-08	6.471E-08	5.139E-08
N	1.259E-05	3.798E-06	2.003E-06	9.989E-07	3.889E-07	2.053E-07	1.274E-07	8.721E-08	6.377E-08	4.889E-08	3.884E-08
NNE	1.300E-05	3.883E-06	2.008E-06	1.001E-06	3.920E-07	2.087E-07	1.307E-07	9.011E-08	6.628E-08	5.108E-08	4.076E-08
NE	1.352E-05	3.964E-06	2.001E-06	9.946E-07	3.915E-07	2.103E-07	1.331E-07	9.249E-08	6.849E-08	5.308E-08	4.256E-08
ENE	1.369E-05	4.006E-06	2.015E-06	1.005E-06	3.980E-07	2.143E-07	1.357E-07	9.438E-08	6.992E-08	5.421E-08	4.348E-08
E	1.914E-05	5.553E-06	2.768E-06	1.378E-06	5.464E-07	2.951E-07	1.876E-07	1.308E-07	9.717E-08	7.549E-08	6.066E-08
ESE	2.475E-05	7.135E-06	3.526E-06	1.744E-06	6.863E-07	3.709E-07	2.367E-07	1.656E-07	1.233E-07	9.602E-08	7.731E-08
SE	3.098E-05	8.906E-06	4.374E-06	2.162E-06	8.520E-07	4.610E-07	2.944E-07	2.061E-07	1.535E-07	1.196E-07	9.634E-08
SSE	5.875E-05	1.683E-05	8.246E-06	4.055E-06	1.587E-06	8.583E-07	5.492E-07	3.852E-07	2.874E-07	2.242E-07	1.808E-07

DISTANCE IN MILES FROM THE SITE
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	8.669E-08	4.408E-08	2.804E-08	1.547E-08	1.007E-08	7.189E-09	5.435E-09	4.277E-09	3.465E-09	2.871E-09	2.422E-09
SSW	2.617E-08	1.297E-08	8.099E-09	4.356E-09	2.789E-09	1.964E-09	1.468E-09	1.144E-09	9.195E-10	7.563E-10	6.336E-10
SW	4.038E-08	1.955E-08	1.202E-08	6.330E-09	3.998E-09	2.785E-09	2.065E-09	1.599E-09	1.277E-09	1.045E-09	8.718E-10
WSW	6.926E-08	3.326E-08	2.033E-08	1.061E-08	6.654E-09	4.613E-09	3.407E-09	2.629E-09	2.095E-09	1.711E-09	1.425E-09
W	1.311E-07	6.332E-08	3.885E-08	2.039E-08	1.283E-08	8.921E-09	6.604E-09	5.105E-09	4.074E-09	3.332E-09	2.777E-09
WNW	9.288E-08	4.483E-08	2.750E-08	1.443E-08	9.091E-09	6.323E-09	4.683E-09	3.622E-09	2.892E-09	2.365E-09	1.972E-09
NW	6.565E-08	3.196E-08	1.972E-08	1.043E-08	6.604E-09	4.610E-09	3.423E-09	2.653E-09	2.122E-09	1.738E-09	1.451E-09
NNW	4.198E-08	2.046E-08	1.264E-08	6.706E-09	4.259E-09	2.980E-09	2.218E-09	1.722E-09	1.379E-09	1.132E-09	9.458E-10
N	3.174E-08	1.550E-08	9.585E-09	5.089E-09	3.233E-09	2.263E-09	1.685E-09	1.308E-09	1.048E-09	8.601E-10	7.191E-10
NNE	3.343E-08	1.654E-08	1.032E-08	5.543E-09	3.546E-09	2.495E-09	1.864E-09	1.452E-09	1.166E-09	9.587E-10	8.027E-10
NE	3.505E-08	1.760E-08	1.109E-08	6.037E-09	3.893E-09	2.755E-09	2.068E-09	1.617E-09	1.303E-09	1.074E-09	9.013E-10
ENE	3.581E-08	1.799E-08	1.134E-08	6.177E-09	3.986E-09	2.822E-09	2.120E-09	1.659E-09	1.337E-09	1.103E-09	9.261E-10
E	5.004E-08	2.528E-08	1.600E-08	8.750E-09	5.662E-09	4.018E-09	3.022E-09	2.367E-09	1.910E-09	1.577E-09	1.325E-09
ESE	6.389E-08	3.248E-08	2.065E-08	1.136E-08	7.382E-09	5.253E-09	3.960E-09	3.108E-09	2.511E-09	2.075E-09	1.745E-09
SE	7.965E-08	4.058E-08	2.583E-08	1.425E-08	9.278E-09	6.615E-09	4.996E-09	3.927E-09	3.178E-09	2.631E-09	2.216E-09
SSE	1.496E-07	7.657E-08	4.890E-08	2.711E-08	1.772E-08	1.267E-08	9.597E-09	7.563E-09	6.135E-09	5.089E-09	4.296E-09

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT (METERS)	.00	REP. WIND HEIGHT (METERS)	10.0
DIAMETER (METERS)	.00	BUILDING HEIGHT (METERS)	60.9
EXIT VELOCITY (METERS)	.00	BLDG.MIN.CRS.SEC.AREA (SQ.METERS)	2636.0
		HEAT EMISSION RATE (CAL/SEC)	.0

Table 2.3.5-205 (Sheet 2 of 2)
XOQDOQ-Predicted Annual Average X/Q Value at the Standard Radial Distances and Distance Segment Boundaries – 8-Day Decay, Depleted

RELEASE POINT - GROUND LEVEL - NO INTERMITTENT RELEASES
8.000 DAY DECAY, DEPLETED
CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.880E-06	1.071E-06	3.323E-07	1.698E-07	1.057E-07	4.642E-08	1.586E-08	7.257E-09	4.299E-09	2.881E-09
SSW	1.528E-06	3.463E-07	1.055E-07	5.259E-08	3.216E-08	1.374E-08	4.491E-09	1.986E-09	1.151E-09	7.592E-10
SW	2.526E-06	5.736E-07	1.701E-07	8.297E-08	4.996E-08	2.083E-08	6.558E-09	2.821E-09	1.610E-09	1.050E-09
WSW	4.314E-06	9.989E-07	2.954E-07	1.433E-07	8.588E-08	3.551E-08	1.101E-08	4.675E-09	2.648E-09	1.719E-09
W	7.969E-06	1.853E-06	5.528E-07	2.696E-07	1.623E-07	6.751E-08	2.113E-08	9.038E-09	5.141E-09	3.346E-09
WNW	5.735E-06	1.322E-06	3.930E-07	1.913E-07	1.150E-07	4.780E-08	1.496E-08	6.405E-09	3.647E-09	2.376E-09
NW	3.941E-06	9.090E-07	2.733E-07	1.341E-07	8.108E-08	3.401E-08	1.079E-08	4.667E-09	2.671E-09	1.746E-09
NNW	2.607E-06	5.884E-07	1.752E-07	8.582E-08	5.185E-08	2.177E-08	6.938E-09	3.016E-09	1.733E-09	1.136E-09
N	1.956E-06	4.429E-07	1.321E-07	6.480E-08	3.919E-08	1.648E-08	5.263E-09	2.290E-09	1.317E-09	8.637E-10
NNE	1.977E-06	4.458E-07	1.352E-07	6.730E-08	4.110E-08	1.753E-08	5.717E-09	2.523E-09	1.461E-09	9.624E-10
NE	1.990E-06	4.450E-07	1.374E-07	6.947E-08	4.290E-08	1.859E-08	6.208E-09	2.784E-09	1.626E-09	1.078E-09
ENE	2.008E-06	4.512E-07	1.401E-07	7.092E-08	4.382E-08	1.900E-08	6.351E-09	2.852E-09	1.668E-09	1.107E-09
E	2.769E-06	6.196E-07	1.936E-07	9.853E-08	6.112E-08	2.665E-08	8.988E-09	4.058E-09	2.380E-09	1.582E-09
ESE	3.536E-06	7.811E-07	2.441E-07	1.250E-07	7.788E-08	3.420E-08	1.166E-08	5.304E-09	3.124E-09	2.082E-09
SE	4.398E-06	9.693E-07	3.035E-07	1.556E-07	9.705E-08	4.271E-08	1.461E-08	6.677E-09	3.947E-09	2.639E-09
SSE	8.292E-06	1.812E-06	5.660E-07	2.913E-07	1.821E-07	8.051E-08	2.778E-08	1.279E-08	7.600E-09	5.105E-09

XOQDOQ - FPL COL (3 YEAR COMPOSITE 2002, 2005, 2006 Met Data)

Table 2.3.5-~~204~~ 206 (Sheet 1 of 2)
XOQDOQ-Predicted Annual Average D/Q Value at the Standard Radial Distances and Distance Segment Boundaries

RELEASE POINT - GROUND LEVEL - NO INTERMITTENT RELEASES
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

RELATIVE DEPOSITION PER UNIT AREA (M**-2) AT FIXED POINTS BY DOWNWIND SECTORS

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	1.312E-07	4.436E-08	2.278E-08	1.083E-08	3.889E-09	1.929E-09	1.136E-09	7.437E-10	5.233E-10	3.878E-10	2.988E-10
SSW	5.059E-08	1.711E-08	8.784E-09	4.176E-09	1.500E-09	7.439E-10	4.380E-10	2.868E-10	2.018E-10	1.496E-10	1.153E-10
SW	1.466E-07	4.957E-08	2.545E-08	1.210E-08	4.346E-09	2.155E-09	1.269E-09	8.310E-10	5.847E-10	4.333E-10	3.339E-10
WSW	2.370E-07	8.015E-08	4.115E-08	1.956E-08	7.027E-09	3.485E-09	2.052E-09	1.344E-09	9.455E-10	7.007E-10	5.400E-10
W	4.078E-07	1.379E-07	7.081E-08	3.366E-08	1.209E-08	5.997E-09	3.531E-09	2.312E-09	1.627E-09	1.206E-09	9.291E-10
WNW	3.077E-07	1.040E-07	5.342E-08	2.540E-08	9.122E-09	4.524E-09	2.664E-09	1.744E-09	1.227E-09	9.095E-10	7.009E-10
NW	1.928E-07	6.520E-08	3.347E-08	1.591E-08	5.716E-09	2.835E-09	1.669E-09	1.093E-09	7.691E-10	5.700E-10	4.392E-10
NNW	1.380E-07	4.667E-08	2.396E-08	1.139E-08	4.092E-09	2.029E-09	1.195E-09	7.824E-10	5.505E-10	4.080E-10	3.144E-10
N	1.027E-07	3.474E-08	1.784E-08	8.480E-09	3.046E-09	1.511E-09	8.895E-10	5.824E-10	4.098E-10	3.037E-10	2.340E-10
NNE	7.283E-08	2.463E-08	1.265E-08	6.012E-09	2.160E-09	1.071E-09	6.306E-10	4.129E-10	2.905E-10	2.153E-10	1.659E-10
NE	5.551E-08	1.877E-08	9.639E-09	4.582E-09	1.646E-09	8.163E-10	4.806E-10	3.147E-10	2.215E-10	1.641E-10	1.265E-10
ENE	4.950E-08	1.674E-08	8.594E-09	4.086E-09	1.468E-09	7.278E-10	4.286E-10	2.806E-10	1.975E-10	1.463E-10	1.128E-10
E	5.807E-08	1.964E-08	1.008E-08	4.793E-09	1.722E-09	8.538E-10	5.027E-10	3.292E-10	2.316E-10	1.717E-10	1.323E-10
ESE	6.472E-08	2.189E-08	1.124E-08	5.342E-09	1.919E-09	9.517E-10	5.604E-10	3.669E-10	2.582E-10	1.913E-10	1.474E-10
SE	9.289E-08	3.141E-08	1.613E-08	7.667E-09	2.754E-09	1.366E-09	8.042E-10	5.266E-10	3.705E-10	2.746E-10	2.116E-10
SSE	2.081E-07	7.037E-08	3.613E-08	1.718E-08	6.171E-09	3.060E-09	1.802E-09	1.180E-09	8.302E-10	6.152E-10	4.741E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	2.374E-10	1.055E-10	6.389E-11	3.229E-11	1.954E-11	1.310E-11	9.390E-12	7.051E-12	5.482E-12	4.379E-12	3.574E-12
SSW	9.157E-11	4.068E-11	2.464E-11	1.245E-11	7.538E-12	5.054E-12	3.622E-12	2.719E-12	2.114E-12	1.689E-12	1.379E-12
SW	2.653E-10	1.179E-10	7.139E-11	3.608E-11	2.184E-11	1.464E-11	1.049E-11	7.879E-12	6.126E-12	4.893E-12	3.994E-12
WSW	4.290E-10	1.906E-10	1.154E-10	5.835E-11	3.531E-11	2.368E-11	1.697E-11	1.274E-11	9.905E-12	7.912E-12	6.458E-12
W	7.381E-10	3.279E-10	1.986E-10	1.004E-10	6.077E-11	4.074E-11	2.919E-11	2.192E-11	1.704E-11	1.362E-11	1.111E-11
WNW	5.568E-10	2.474E-10	1.498E-10	7.574E-11	4.584E-11	3.073E-11	2.202E-11	1.654E-11	1.286E-11	1.027E-11	8.383E-12
NW	3.489E-10	1.550E-10	9.390E-11	4.746E-11	2.873E-11	1.926E-11	1.380E-11	1.036E-11	8.058E-12	6.436E-12	5.254E-12
NNW	2.498E-10	1.110E-10	6.722E-11	3.397E-11	2.056E-11	1.379E-11	9.879E-12	7.418E-12	5.768E-12	4.607E-12	3.761E-12
N	1.859E-10	8.260E-11	5.004E-11	2.529E-11	1.531E-11	1.026E-11	7.354E-12	5.522E-12	4.294E-12	3.430E-12	2.799E-12
NNE	1.318E-10	5.856E-11	3.547E-11	1.793E-11	1.085E-11	7.276E-12	5.214E-12	3.915E-12	3.044E-12	2.432E-12	1.985E-12
NE	1.005E-10	4.464E-11	2.704E-11	1.367E-11	8.272E-12	5.546E-12	3.974E-12	2.984E-12	2.320E-12	1.853E-12	1.513E-12
ENE	8.959E-11	3.980E-11	2.411E-11	1.219E-11	7.375E-12	4.945E-12	3.543E-12	2.661E-12	2.069E-12	1.652E-12	1.349E-12
E	1.051E-10	4.669E-11	2.828E-11	1.429E-11	8.652E-12	5.801E-12	4.157E-12	3.121E-12	2.427E-12	1.939E-12	1.582E-12
ESE	1.171E-10	5.204E-11	3.152E-11	1.593E-11	9.643E-12	6.466E-12	4.633E-12	3.479E-12	2.705E-12	2.161E-12	1.764E-12
SE	1.681E-10	7.468E-11	4.524E-11	2.287E-11	1.384E-11	9.280E-12	6.649E-12	4.993E-12	3.882E-12	3.101E-12	2.531E-12
SSE	3.767E-10	1.673E-10	1.014E-10	5.123E-11	3.101E-11	2.079E-11	1.490E-11	1.119E-11	8.698E-12	6.948E-12	5.671E-12

~~USNRC COMPUTER CODE -- XOQDOQ, VERSION 2.0~~

XOQDOQ - FPL COL (3 YEAR COMPOSITE 2002, 2005, 2006 Met Data)

Table 2.3.5-~~204~~ 206 (Sheet 2 of 2)
XOQDOQ-Predicted Annual Average D/Q Value at the Standard Radial Distances and Distance Segment Boundaries

RELEASE POINT - GROUND LEVEL - NO INTERMITTENT RELEASES
RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS

	SEGMENT BOUNDARIES IN MILES									
DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	2.226E-08	4.560E-09	1.190E-09	5.346E-10	3.024E-10	1.163E-10	3.365E-11	1.334E-11	7.122E-12	4.408E-12
SSW	8.586E-09	1.759E-09	4.591E-10	2.062E-10	1.166E-10	4.486E-11	1.298E-11	5.143E-12	2.747E-12	1.700E-12
SW	2.488E-08	5.095E-09	1.330E-09	5.974E-10	3.380E-10	1.300E-10	3.760E-11	1.490E-11	7.958E-12	4.926E-12
WSW	4.022E-08	8.239E-09	2.151E-09	9.660E-10	5.465E-10	2.101E-10	6.080E-11	2.410E-11	1.287E-11	7.964E-12
W	6.921E-08	1.418E-08	3.701E-09	1.662E-09	9.403E-10	3.616E-10	1.046E-10	4.146E-11	2.214E-11	1.370E-11
WNW	5.221E-08	1.069E-08	2.792E-09	1.254E-09	7.094E-10	2.728E-10	7.892E-11	3.128E-11	1.670E-11	1.034E-11
NW	3.272E-08	6.702E-09	1.750E-09	7.858E-10	4.445E-10	1.709E-10	4.945E-11	1.960E-11	1.047E-11	6.479E-12
NNW	2.342E-08	4.798E-09	1.252E-09	5.625E-10	3.182E-10	1.224E-10	3.540E-11	1.403E-11	7.493E-12	4.638E-12
N	1.743E-08	3.571E-09	9.323E-10	4.187E-10	2.369E-10	9.109E-11	2.635E-11	1.044E-11	5.577E-12	3.452E-12
NNE	1.236E-08	2.532E-09	6.610E-10	2.969E-10	1.679E-10	6.458E-11	1.868E-11	7.405E-12	3.954E-12	2.447E-12
NE	9.421E-09	1.930E-09	5.038E-10	2.263E-10	1.280E-10	4.922E-11	1.424E-11	5.644E-12	3.014E-12	1.865E-12
ENE	8.400E-09	1.721E-09	4.492E-10	2.017E-10	1.141E-10	4.389E-11	1.270E-11	5.032E-12	2.687E-12	1.663E-12
E	9.854E-09	2.019E-09	5.269E-10	2.367E-10	1.339E-10	5.149E-11	1.489E-11	5.903E-12	3.152E-12	1.951E-12
ESE	1.098E-08	2.250E-09	5.873E-10	2.638E-10	1.492E-10	5.739E-11	1.660E-11	6.580E-12	3.514E-12	2.175E-12
SE	1.576E-08	3.229E-09	8.430E-10	3.786E-10	2.142E-10	8.236E-11	2.383E-11	9.444E-12	5.043E-12	3.121E-12
SSE	3.532E-08	7.234E-09	1.889E-09	8.482E-10	4.798E-10	1.845E-10	5.338E-11	2.116E-11	1.130E-11	6.993E-12

0VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	.00	REP. WIND HEIGHT	(METERS)	10.0
DIAMETER	(METERS)	.00	BUILDING HEIGHT	(METERS)	60.9
EXIT VELOCITY	(METERS)	.00	BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	2636.0
			HEAT EMISSION RATE	(CAL/SEC)	.0

ALL GROUND LEVEL RELEASES.
XOQDOQ - FPL COL (3 YEAR COMPOSITE 2002, 2005, 2006 Met Data)

Table 2.3.5-~~205~~ 207
XOQDOQ-Predicted Annual Average X/Q and D/Q Values at Sensitive Receptors

RELEASE POINT - GROUND LEVEL - NO INTERMITTENT RELEASES
CORRECTED USING STANDARD OPEN TERRAIN FACTORS
SPECIFIC POINTS OF INTEREST

θRELEASE ID	TYPE OF LOCATION	DIRECTION FROM SITE	DISTANCE (MILES)	DISTANCE (METERS)	X/Q (SEC/CUB.METER) NO DECAY UNDEPLETED	X/Q (SEC/CUB.METER) 2.260 DAY DECAY UNDEPLETED	X/Q (SEC/CUB.METER) 8.000 DAY DECAY DEPLETED	D/Q (PER SQ.METER)
A	Residential	NW	3.97	6388.	1.3E-07	1.3E-07	1.0E-07	5.8E-10
A	Residential	NNW	5.06	8145.	5.5E-08	5.4E-08	4.1E-08	2.4E-10
A	Residential	N	2.55	4098.	1.5E-07	1.5E-07	1.2E-07	8.5E-10
A	Vegetable	NW	4.78	7692.	9.6E-08	9.4E-08	7.2E-08	3.8E-10
A	Vegetable	NNW	5.06	8145.	5.5E-08	5.4E-08	4.1E-08	2.4E-10
A	UNIT 7	W	.13	215.	1.6E-04	1.6E-04	1.5E-04	1.0E-06
A	School	NW	1.99	3198.	5.2E-07	5.2E-07	4.3E-07	2.9E-09
A	EAB	S	.52	840.	1.0E-05	1.0E-05	9.1E-06	4.1E-08
A	EAB	SSW	.51	819.	3.2E-06	3.2E-06	2.9E-06	1.7E-08
A	EAB	SW	.45	724.	6.3E-06	6.3E-06	5.8E-06	5.9E-08
A	EAB	WSW	.48	780.	9.4E-06	9.3E-06	8.6E-06	8.4E-08
A	EAB	W	.49	782.	1.7E-05	1.7E-05	1.6E-05	1.4E-07
A	EAB	WNW	.49	789.	1.2E-05	1.2E-05	1.1E-05	1.1E-07
A	EAB	NW	.48	766.	8.9E-06	8.9E-06	8.2E-06	7.1E-08
A	EAB	NNW	.48	767.	6.0E-06	6.0E-06	5.5E-06	5.0E-08
A	EAB	N	.48	767.	4.5E-06	4.5E-06	4.1E-06	3.8E-08
A	EAB	NNE	.48	767.	4.6E-06	4.6E-06	4.2E-06	2.7E-08
A	EAB	NE	.27	435.	1.2E-05	1.2E-05	1.2E-05	4.9E-08
A	EAB	ENE	.28	458.	1.1E-05	1.1E-05	1.1E-05	4.1E-08
A	EAB	E	.30	479.	1.5E-05	1.5E-05	1.4E-05	4.5E-08
A	EAB	ESE	.37	589.	1.3E-05	1.3E-05	1.2E-05	3.6E-08
A	EAB	SE	.36	586.	1.7E-05	1.7E-05	1.6E-05	5.2E-08
A	EAB	SSE	.53	848.	1.7E-05	1.7E-05	1.5E-05	6.5E-08
A	Prop Line	S	.36	577.	1.9E-05	1.9E-05	1.8E-05	7.5E-08
A	Prop Line	SSW	2.72	4373.	1.1E-07	1.1E-07	8.6E-08	3.6E-10
A	Prop Line	SW	1.50	2409.	6.0E-07	5.9E-07	5.1E-07	4.4E-09
A	Prop Line	WSW	1.36	2195.	1.3E-06	1.3E-06	1.1E-06	8.9E-09
A	Prop Line	W	1.35	2173.	2.4E-06	2.4E-06	2.1E-06	1.6E-08
A	Prop Line	WNW	2.83	4560.	3.6E-07	3.6E-07	2.9E-07	2.0E-09
A	Prop Line	NW	1.64	2641.	7.8E-07	7.7E-07	6.6E-07	4.6E-09
A	Prop Line	NNW	1.51	2430.	6.0E-07	6.0E-07	5.1E-07	4.0E-09
A	Prop Line	N	1.12	1797.	8.9E-07	8.8E-07	7.7E-07	6.4E-09
A	Prop Line	NNE	1.10	1773.	9.2E-07	9.1E-07	8.0E-07	4.7E-09
A	Prop Line	NE	.39	624.	6.7E-06	6.6E-06	6.2E-06	2.8E-08
A	Prop Line	ENE	.40	647.	6.3E-06	6.3E-06	5.8E-06	2.4E-08
A	Prop Line	E	.39	635.	9.1E-06	9.1E-06	8.4E-06	2.9E-08
A	Prop Line	ESE	.43	688.	1.0E-05	1.0E-05	9.4E-06	2.8E-08
A	Prop Line	SE	.37	595.	1.6E-05	1.6E-05	1.5E-05	5.1E-08
A	Prop Line	SSE	.35	564.	3.4E-05	3.4E-05	3.2E-05	1.2E-07

θVENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	.00	REP. WIND HEIGHT	(METERS)	10.0
DIAMETER	(METERS)	.00	BUILDING HEIGHT	(METERS)	60.9
EXIT VELOCITY	(METERS)	.00	BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	2636.0
			HEAT EMISSION RATE	(CAL/SEC)	.0

ALL GROUND LEVEL RELEASES.
XOQDOQ - FPL COL (3 YEAR COMPOSITE 2002, 2005, 2006 Met Data)

ASSOCIATED ENCLOSURES:

None