

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

TABLE 2.7-117

ANNUAL AVERAGE X/Q AND D/Q  
(DATA PERIOD 2002 - 2003)

Location	Direction	Distance (miles) <sup>2</sup>	Distance (meters)	$\chi/Q$ (sec/m <sup>3</sup> ) No Decay Undepleted	$\chi/Q$ (sec/m <sup>3</sup> ) No Decay Depleted	D/Q (per m <sup>2</sup> )
SITE BOUNDARY	S	0.72	1155.	2.2E-06	1.9E-06	7.9E-09
SITE BOUNDARY	S-SW	0.73	1169.	3.7E-06	3.3E-06	8.1E-09
SITE BOUNDARY	SW	0.85	1364.	6.8E-06	6.0E-06	8.7E-09
SITE BOUNDARY	W-SW	0.85	1364.	8.8E-06	7.8E-06	6.8E-09
SITE BOUNDARY	W	0.98	1575.	6.7E-06	5.8E-06	5.1E-09
SITE BOUNDARY	W-NW	0.98	1575.	4.2E-06	3.7E-06	4.5E-09
SITE BOUNDARY	NW	0.98	1575.	2.6E-06	2.3E-06	5.3E-09
SITE BOUNDARY	N-NW	0.67	1076.	3.3E-06	2.9E-06	8.7E-09
SITE BOUNDARY	N	0.58	934.	3.9E-06	3.5E-06	1.2E-08
SITE BOUNDARY	N-NE	0.52	841.	3.0E-06	2.8E-06	9.6E-09
SITE BOUNDARY	NE	0.52	841.	1.9E-06	1.8E-06	7.3E-09
SITE BOUNDARY	E-NE	0.52	841.	2.4E-06	2.2E-06	7.4E-09
SITE BOUNDARY	E	0.56	904.	1.5E-06	1.4E-06	5.6E-09
SITE BOUNDARY	E-SE	0.67	1086.	8.8E-07	7.9E-07	3.3E-09
SITE BOUNDARY	SE	0.60	963.	1.2E-06	1.1E-06	3.9E-09
SITE BOUNDARY	S-SE	0.60	963.	2.0E-06	1.8E-06	8.6E-09
NEAREST HOME	S	3.45	5548.	1.8E-07	1.4E-07	5.2E-10
NEAREST HOME	S-SW	1.05	1686.	2.0E-06	1.7E-06	4.4E-09
NEAREST HOME	N	0.81	1310.	2.2E-06	1.9E-06	6.6E-09
NEAREST HOME	N-NE	0.64	1029.	2.1E-06	1.9E-06	7.0E-09

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TABLE 2.7-117 (Continued)

Location	Direction	Distance (miles) <sup>2</sup>	Distance (meters)	$\chi/Q$ (sec/m <sup>3</sup> ) No Decay Undepleted	$\chi/Q$ (sec/m <sup>3</sup> ) No Decay Depleted	D/Q (per m <sup>2</sup> )
NEAREST HOME	E-NE	0.63	1021.	1.7E-06	1.5E-06	5.4E-09
NEAREST HOME	E-SE	1.06	1708.	4.1E-07	3.5E-07	1.5E-09
NEAREST HOME	SE	2.39	3843.	1.3E-07	1.0E-07	3.7E-10
NEAREST HOME	S-SE	1.42	2283.	4.5E-07	3.9E-07	2.0E-09
NEAREST GARDEN	S	3.45	5548.	1.8E-07	1.4E-07	5.2E-10
NEAREST GARDEN	S-SW	1.05	1686.	2.0E-06	1.7E-06	4.4E-09
NEAREST GARDEN	N	1.49	2404.	8.0E-07	6.8E-07	2.3E-09
NEAREST GARDEN	E-NE	0.63	1021.	1.7E-06	1.5E-06	5.4E-09
NEAREST GARDEN	E-SE	1.06	1701.	4.1E-07	3.6E-07	1.6E-09
NEAREST GARDEN	SE	4.17	6704.	5.5E-08	4.2E-08	1.4E-10
NEAREST GARDEN	S-SE	4.70	7561.	7.0E-08	5.3E-08	2.4E-10
RV AREA	E-NE	0.39	620.	4.1E-06	3.8E-06	1.2E-08
ESC	N-NW	0.20	314.	2.9E-05	2.7E-05	6.0E-08
GIN LAKE	W-NW	0.46	747.	1.6E-05	1.4E-05	1.5E-08
HAMILTON LAKE	W	0.55	884.	1.8E-05	1.6E-05	1.3E-08
SITE GARDEN	S-SE	0.69	1107.	1.5E-06	1.4E-06	6.8E-09
NEAREST MILK COW	S-SW	10	16093	4.7E-08	4.7E-08	8.7E-11
NEAREST MEAT COW	S	4	6437	1.1E-07	1.1E-07	4.0E-10

NOTES:

1. Combined vent – Ground Level Releases Only.
2. Distances are corrected for the approximate difference between GGNS Unit 1 location and the ESP facility location. For example, dose analyses were done using a distance of 0.63 miles for the nearest garden, based on the distance of 0.67 miles given in ER Section 2.7 Reference 29 for this receptor location.