

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 666-6911

May 23, 1984

Docket No. 50-423
B11201

Director of Nuclear Reactor Regulation
Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Youngblood:

Millstone Nuclear Power Station, Unit No. 3
Siting Analysis Branch (SAB) Meeting Summary

A meeting was held between the NRC-SAB and Northeast Nuclear Energy Company (NNECO) in Bethesda, Maryland, on May 7, 1984. The purpose of the meeting was to discuss discrepancies between population distribution by sector for the 10 to 50 mile area as provided by Stone & Webster Engineering Corporation (SWEC) in the Millstone 3 FSAR and sector counts provided to the NRC by Oak Ridge National Laboratory (ORNL) and Donnelly. Attachment 1 is a list of attendees.

Upon review of the maps it was agreed that map orientation was slightly different, with SWEC's map extending about 1.5 miles beyond the NRC's map in the SW sector and about 1.5 miles less than the NRC's map in the NE sector. It was also learned that the NRC centerpoint is between Units 1 and 2 and not on the Unit 3 reactor. NRC reviewer, Mr. J. Sinisgalli felt that the curvature of the earth could also be causing differences in the numbers since this was considered in the Donnelly analysis but not in the SWEC analysis.

Mr. J. Sinisgalli concluded that all methods were acceptable and that he would perform an independent analysis within the next two weeks and provide his final numbers to NNECO prior to publication. This analysis will be provided to the Accident Evaluation Branch to be used in performing the CRACK code analysis. Mr. Sinisgalli also requested that we provide him with the Canadian population counts we compiled for the Probabalistic Safety Study (PSS). Attachment II provides the Millstone Site population density data base as contained in Appendix 6-A of the PSS (pp. 6-A-1, -2, -3) and a table listing the 1931 Canadian population included between 200-350 miles.

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If you have any concerns related to the information contained herein, please contact our licensing representative, Ms. C. J. Shaffer at (203) 665-3285.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL
By Northeast Nuclear Energy Company, Their Agent

W. G. Council
W. G. Council
Senior Vice President

C. F. Sears
By: C. F. Sears
Vice President Nuclear and
Environmental Engineering

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

Then personally appeared before me C. F. Sears, who being duly sworn, did state that he is Vice President of Northeast Nuclear Energy Company, an Applicant herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Applicant herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.

Lorraine J. D'Amico
Notary Public
My Commission Expires March 31, 1988

ATTACHMENT I

Site Analysis Branch (SAB)
Population Distribution Meeting
May 7, 1984

<u>Name</u>	<u>Organization</u>
E. L. Doolittle	NRC/LPM
J. Sinisgalli	NRC/SAB
Don Cleary	NRC/SAB, Section Leader
Brian Richter	NRC/SAB
Kaz Campe	NRC/SAB, Section Leader
Barbara Mohrman	SWEC
C. J. Shaffer	NUSCO/Licensing

ATTACHMENT II

Millstone Site Population Density Base
(PSS, Appendix 6-A)
and Canadian Population Data
between 200-350 miles

APPENDIX 6-A

MILLSTONE SITE POPULATION DENSITY DATA BASE

(Stone and Webster Engineering Corporation)

POPULATION AROUND MILLSTONE SITE

NORMAL POPULATION BASED ON 1980 CENSUS

Sector	N	N-NE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Radial Interval Miles																
1 0-.5	0	0	23	6	0	0	0	0	0	0	0	0	0	0	0	0
2 .5-1.	0	0	153	68	16	0	0	0	0	0	0	0	0	0	0	0
3 1.-1.5	116	31	57	160	528	73	0	0	0	0	0	0	0	0	0	122
4 1.5-2.	495	325	439	210	165	89	0	0	0	0	0	0	0	0	37	458
5 2.-2.5	119	475	410	111	212	68	0	0	0	0	0	0	257	516	580	198
6 2.5-3.0	357	806	191	108	250	11	0	0	0	0	29	1302	1019	723	364	438
7 3.0-3.5	773	614	1036	514	844	0	0	0	0	0	132	179	383	504	147	272
8 3.5-4.0	91	241	2595	4127	1871	0	0	0	0	0	0	204	409	524	645	246
9 4.0-4.5	17	288	5649	1182	209	0	0	0	0	0	0	112	694	23	297	232
10 4.5-5.0	45	1904	6537	140	76	0	0	0	0	0	0	0	23	40	89	400
11 5.0-6.0	317	1850	5717	7223	751	0	0	0	0	0	0	1009	295	32	319	155
12 6.0-7.0	359	1295	4020	1364	0	0	0	0	0	0	0	1103	435	157	573	455
13 7.0-8.5	1697	1862	3728	4475	621	219	0	0	0	0	0	1510	187	52	52	75
14 8.5-10.0	1823	3623	2643	4387	2263	415	0	0	147	6	0	35	525	518	513	1076
15 10.0-12.5	3585	3449	3521	8129	613	125	0	0	157	112	0	18	765	421	392	1268
16 12.5-15.0	3801	7123	4375	3167	1898	0	0	119	0	721	0	335	6324	2782	673	1104
17 15.0-17.5	4215	12988	2492	4347	2910	0	0	125	292	138	472	0	5059	3485	979	1089
18 17.5-20.0	2394	13256	1747	6244	4632	0	154	395	226	581	3149	0	3739	4311	1287	1389
19 20.0-25.0	3819	16095	4426	8012	7414	0	889	1676	6674	1826	1681	0	8566	2175	1810	2881
20 25.0-30.0	22992	7918	3753	6631	1652	0	0	0	262	8465	8206	0	10729	6066	6905	6688
21 30.0-35.0	15014	10604	9235	11430	4908	615	0	0	0	8756	13479	0	14997	18007	21332	9153
22 35.0-40.0	16350	14725	16357	21117	6921	0	0	0	0	0	0	0	32277	39549	39104	16221
23 40.0-45.0	9419	14430	49825	44766	1135	0	0	0	0	518	22557	310	120757	94929	118751	82445
24 45.0-50.0	9416	15579	108963	74863	1592	0	0	0	0	0	56346	100562	142931	65705	280731	56488
25 50-55	25678	34842	308232	51758	0	0	0	0	0	0	82581	45270	109444	138140	98897	46438
26 55-60	19169	38844	204828	116805	0	0	0	0	0	0	75293	61017	196865	42390	33335	58959
27 60-65	27102	58460	66877	40304	0	0	0	0	0	0	118123	104964	117599	21358	30323	183951
28 65-70	24712	188559	89625	134423	56	0	0	0	0	0	75570	105141	63027	11497	26742	166242
29 70-75	22171	370924	533329	86153	8621	0	0	0	0	0	75282	232048	130185	20639	4379	80662
30 75-100	70536	498314	1561045	99466	1477	0	0	0	0	0	125969	907053	241543	42403	19409	107369
31 100-150	191257	1027110	357980	74193	5087	0	0	0	0	0	1621	5027447	466711	175463	78897	58812
32 150-200	135673	382081	0	0	0	0	0	0	0	0	553003	7890165	523764	203204	764084	153862
33 200-350	1364924	563068	216217	9842	0	0	0	0	0	0	70224	5004763	450940	211342	264879	196134
						0	0	0	0	0	1267828	7792300	1621585	2414401	899024	4069905

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POPULATION AROUND MILLSTONE SITE
PROJECTED 1990 POPULATION BASED ON 1980 CENSUS

Sector	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Radial Interval																
1	0	0	24	6	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	159	71	17	0	0	0	0	0	0	0	0	0	0	0
3	121	32	59	166	549	76	0	0	0	0	0	0	0	0	0	127
4	515	338	456	218	172	93	0	0	0	0	0	0	0	0	40	477
5	124	494	427	116	220	70	0	0	0	0	0	0	275	553	621	209
6	371	837	199	112	260	12	0	0	0	0	31	1395	1092	775	390	468
7	804	637	1075	521	869	0	0	0	0	0	142	191	411	540	158	286
8	94	249	2630	4173	1892	0	0	0	0	0	0	219	438	562	691	257
9	18	298	5712	1195	211	0	0	0	0	0	0	120	744	25	318	241
10	47	1948	6610	142	77	0	0	0	0	0	0	0	25	43	96	424
11	330	1892	5799	7368	765	0	0	0	0	0	0	1173	341	34	371	176
12	374	1346	4093	1390	0	0	0	0	0	0	0	1282	505	170	614	488
13	1792	1943	3835	4558	632	274	0	0	0	0	0	1755	217	61	56	84
14	1956	3980	2880	4472	2297	518	0	0	184	8	0	41	611	603	560	1146
15	3845	3756	3995	8470	678	157	0	0	196	140	0	18	814	488	439	1358
16	4038	7704	4972	3404	2036	0	0	149	0	901	0	348	6556	2933	767	1200
17	4382	13492	2701	4611	3125	0	0	157	213	172	590	0	5355	3649	1079	1266
18	2508	13794	1783	6662	5030	0	193	494	2657	726	3934	0	3992	4691	1401	1581
19	4038	16796	4660	8984	8086	0	1111	2093	8331	2283	2100	0	9230	2480	1995	3301
20	24188	9080	4432	7708	1877	0	0	0	327	8245	7367	0	11849	7057	7804	7820
21	15349	12173	10726	13903	5978	694	0	0	0	10567	10251	0	16307	19843	23217	10954
22	16732	16285	18817	25912	7758	0	0	0	0	10938	16841	0	33430	41837	43848	18379
23	10618	15654	53874	52328	1486	0	0	0	0	647	28181	387	121678	98320	126477	86327
24	10086	16533	11590	85862	2084	0	0	0	0	0	70395	13194	144531	70148	285359	61444
25 50-55	27760	37667	333229	55955	0	0	0	0	0	0	103171	56556	113678	41846	104083	50254
26 55-60	29723	41994	221439	126277	0	0	0	0	0	0	81399	65965	212830	45827	36038	63740
27 60-65	29299	63201	72300	43572	0	0	0	0	0	0	27918	113476	127136	23090	32782	198869
28 65-70	26716	203851	96891	145324	60	0	0	0	0	0	81698	113667	68138	12429	28910	179724
29 70-85	23969	401005	576532	93140	9320	0	0	0	0	0	81387	250867	140743	22312	4734	87203
30 85-100	76249	538727	1687645	107532	1596	0	0	0	0	0	136185	980614	261132	45841	20983	116076
31 100-150	206767	1110408	387012	80210	5499	0	0	0	0	0	1752	5435172	504561	189693	85295	63581
32 150-200	146676	413067	0	0	0	0	0	0	0	0	597851	8530057	566241	219681	826051	166340
33 200-350	1491024	608732	233752	10640	0	0	0	0	0	0	724579	5410649	487511	228481	286360	212040
											1370648	8424255	1753095	2610208	971934	4199374

6-A-2

POPULATION AROUND MILLSTONE SITE
TRANSIENT (SUMMER WEEKEND) POPULATION BASED ON 1980 CENSUS

Sector	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Radial Interval																
1	0	0	23	6	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	153	68	246	0	0	0	0	0	0	0	0	0	0	0
3	116	31	57	160	528	73	0	0	0	0	0	0	0	0	0	0
4	495	325	439	210	165	89	0	0	0	0	0	0	0	0	0	0
5	119	475	410	111	885	483	0	0	0	0	0	0	0	0	0	0
6	357	806	191	108	922	427	0	0	0	0	0	0	0	632	37	122
7	773	614	1036	1014	8344	0	0	0	0	0	29	1302	257	1149	580	198
8	91	241	2595	4627	9371	0	0	0	0	0	132	179	1019	723	364	438
9	17	288	5649	1182	384	0	0	0	0	0	0	179	383	504	147	272
10	45	1904	6537	140	151	0	0	0	0	0	0	204	3598	524	645	246
11	317	1850	5842	7223	1251	0	0	0	0	0	0	112	3884	23	297	212
12	359	1295	4145	1364	500	0	0	0	0	0	0	0	23	40	89	400
13	1697	1862	3853	4475	1121	0	0	0	0	0	0	1009	295	32	319	155
14	1823	3623	2768	4387	2763	219	0	0	0	0	0	1103	435	157	573	455
15	3585	3449	3521	8129	5963	415	0	0	147	6	0	1510	187	52	52	75
16	3801	7323	4375	3167	7248	125	0	0	157	112	0	35	525	518	513	1076
17	4215	12988	2492	4347	8260	0	0	0	0	1045	0	18	765	421	392	1268
18	2394	13256	1747	6244	9982	0	0	119	2.2	462	0	335	6324	2782	673	1104
19	3819	16095	4426	8012	7414	0	154	125	2.6	905	3149	0	5059	3485	979	1089
20	22992	7918	3753	6631	1652	0	889	395	2128	2150	1681	0	3739	4311	1287	1389
21	15034	10604	9235	11430	22408	865	0	992	6674	6602	5897	0	8566	2175	1810	2881
22	16350	14725	16.57	21117	24421	250	0	0	262	8465	8206	0	16545	6066	6905	6688
23	9419	14430	49825	53316	1385	0	0	0	0	8756	15614	0	20813	18007	21332	9153
24	9416	15579	108.63	83413	1842	0	0	0	0	518	24692	0	32277	39549	39104	16221
25	25678	34842	30.232	51758	0	0	0	0	0	0	56.46	310	120757	94929	118751	82445
26	19169	38844	204828	116805	0	0	0	0	0	0	82581	10562	144408	65705	280731	56488
27	27102	58460	66377	40304	0	0	0	0	0	0	75293	45270	110921	138140	98897	46438
28	24712	188559	89625	134423	56	0	0	0	0	0	82581	61017	196865	42390	33335	58959
29	22171	370924	533329	86153	8621	0	0	0	0	0	118323	104964	117599	21358	30323	183951
30	70530	498314	1561045	99466	1477	0	0	0	0	0	75570	105141	63027	11497	26742	166242
31	191257	1027110	357980	74193	5087	0	0	0	0	0	75282	232048	130185	20639	4379	80662
32	135673	382081	0	0	0	0	0	0	0	0	125969	907053	241543	42403	19409	107369
33	1369924	563068	216217	9842	0	0	0	0	0	0	1621	5027447	466711	175463	78897	58812
											0	553003	7890165	523764	203204	764084
											0	670224	450940	211342	264879	153862
											0	1267828	5004763	211342	264879	196134
											0	7792300	1621585	2414401	899024	406405

6-A-3

Millstone 3 Population Distribution
For Sectors Which Include 1981
Canadian Population Data
Between 200-350 Miles

<u>Sector</u>	<u>1981 Canadian Population Included</u>
WNW	3,464
NW	424,004
NNW	3,730,283
N	1,186,011
NNE	64,327
NE	—
ENE	9,842
TOTAL	<u>5,417,931</u>