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FOIA/PA REQUEST

Case No.: 2012-0307
Date Rec'd: 8/22/12
Specialist: Kilgore
Related Case: 2012-0162

August 21, 2012

FREEDOM OF INFORMATION ACT (FOIA) REQUEST

NRC Freedom of Information Act and Privacy Act (FOIA/PA) Officer
U.S. Nuclear Regulatory Commission
Mail Stop T-5 F09
Washington, DC 20555-0001

[emailed to FOIA.resource@nrc.gov on August 21, 2012]

To Whom It May Concern:

This is a follow-up to a previous FOIA [FOIA/PA-2012-00162] submitted to the NRC on March 5, 2012. This request was only partially fulfilled, as the data returned in response to that FOIA was only broken down by career length (Appendix A), and not by year as clearly requested in the March FOIA (Appendix B).

Therefore, in this new request, we ask that the data compiled in the table in Appendix A¹ be presented by calendar year from 1977 through 2009. This would result in a total of 33 tables identical to the table in Appendix A, for each year from 1977 to 2009. This is in line with what was discussed in a conference call with REIRS representatives and NRC officials on March 14, 2012. During that call, the REIRS officials (who presumably compiled the data in Appendix A) clearly stated that the data would also be presented by calendar year, yet failed to do so as evidenced by Appendix A.

As it has now been almost eight months since we first attempted to obtain these data, we look forward to a prompt response to this final request.

Thank you,

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¹ 1- Distribution of whole body lifetime radiation doses, broken down by career length, 2- Average Career Length for Individuals with Measurable Career Exposure, 3- Average Career Dose for Individuals with Measurable Dose, 4- Average Career Length for Individuals with Measurable Career Exposure and Career Lengths of at Least One Year, and 5- Average Career Dose for Individuals with Measurable Dose with career lengths of at least one year.

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Appendix A: Data made public in response to FOIA/PA-2012-00162

Table 5.7
Career External Dose (DDE) Distribution By Dose and Career Length At Reactor Facilities
1977 - 2009

Career Length	Number of Persons in Dose Range (rems)															Grand Total
	No Meas.	.001 - .1	.1 - .5	.5 - 1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 50	>50	
<=30 days	154,598	27,605	9,447	2,747	3,187	1,104	63	7	3	-	-	-	-	1	-	198,76
31 days - 6 mos	71,360	41,202	25,839	8,815	7,028	2,488	1,183	304	48	3	2	-	-	-	-	158,27
6 mos - 1 yr	31,985	17,494	10,214	3,278	2,590	1,246	678	306	249	4	-	-	-	-	-	68,04
1 - 2 yrs	25,478	16,890	11,492	4,604	3,810	1,722	984	694	730	29	2	1	-	-	-	66,33
2 - 3 yrs	14,338	10,865	8,164	3,479	3,137	1,585	849	559	934	100	8	1	-	-	-	44,01
3 - 4 yrs	9,002	7,843	6,248	3,036	2,778	1,359	766	476	896	173	32	3	1	-	-	32,61
4 - 5 yrs	6,346	5,909	4,909	2,495	2,399	1,285	764	470	916	194	37	14	3	-	-	25,74
5 - 10 yrs	16,126	17,919	15,195	8,016	8,555	4,841	3,027	2,051	4,449	1,209	398	131	48	23	2	81,98
10 - 15 yrs	6,580	9,309	8,499	4,560	5,227	3,220	2,195	1,606	3,914	1,317	541	241	108	88	8	47,41
15 - 20 yrs	3,004	5,311	5,218	2,823	3,257	2,124	1,536	1,149	3,237	1,304	533	311	174	166	7	30,15
20 - 25 yrs	1,319	2,972	3,179	1,752	2,050	1,405	993	792	2,317	1,154	546	323	192	230	35	19,25
25 - 30 yrs	399	1,151	1,548	872	1,024	732	613	449	1,421	728	441	243	137	197	32	9,98
30 - 35 yrs	114	308	452	284	368	254	180	168	495	277	181	112	81	116	20	3,41
> 35 yrs	19	34	58	42	47	33	22	18	71	51	28	25	10	29	8	49
Grand Total	340,668	164,812	110,452	46,802	45,457	23,398	13,853	8,949	19,680	6,543	2,749	1,405	754	850	110	786,48

Average Career Length for Individuals with Measurable Career Exposure: 5.75 yrs

Average Career Dose for Individuals with Measurable Dose (631,178 rem / 445,814 persons): 1.42 rem

Average Career Length for Individuals with Measurable Career Exposure and Careers Lengths of at Least One Year: 9.1 yrs

Average Career Dose for Individuals with Measurable Dose with career length of at least one year (565,671 rem / 278,679 persons): 2.03 rem

	Roughly the values where individuals averaged 5 rem/yr during their career
	Roughly the values where individuals averaged 2 rem/yr during their career

Only individuals that ended monitoring after 1977 but before 2010 are included in this analysis.

Appendix B: FOIA/PA-2012-00162 submitted March 5, 2012 [Note incorrect previous FOIA referenced below in the first sentence that reads: "This is a clarification of a previous FOIA [2012-0101]..." The sentence should read: "This is a clarification of a previous FOIA [2012-0102]..."



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[emailed to FOIA.resource@nrc.gov on March 5, 2012]

To Whom It May Concern:

This is a clarification of a previous FOIA [2012-0101] submitted to the NRC on Dec. 29, 2011. In your initial response dated Jan. 25, 2012, you returned a list of annual NRC reports going back to 1985. Note that we are asking for lifetime exposure data, not annual exposure data that is already available in the annual reports. The only annual data we are requesting (category "c" below) is for pregnant workers not already in the annual reports.

In 1994, the Nuclear Regulatory Commission (NRC) removed the requirement that nuclear power plants under its jurisdiction submit "termination reports" that documented an employee's lifetime radiation exposure for entry into the NRC REIRS database:

"Under the previous requirements of 10 CFR Part 20.1 through 20.602, seven classes of licensees were required to submit termination reports containing occupational radiation exposure data for the entire period of work or employment to the NRC when individuals terminated employment or a work assignment at their facilities. Thus, at the end of a worker's employment, the individual's entire exposure record would be part of NRC's exposure database. In addition, these licensees were required to submit a statistical summary of the exposures of all individuals occupationally exposed at their facilities.

Under the new requirements of 10 CFR 20.1001 through 20.2402, which became mandatory on January 1, 1994, these licensees are now required to annually submit occupational radiation exposure data to the NRC for all persons occupationally exposed at their facilities, during that year, for whom monitoring is required. **Termination reports are no longer required (emphasis added).**"¹

In addition, in 2007, the NRC revoked its requirement that nuclear power plants attempt to obtain lifetime occupational radiation exposure histories on most of their workers (Federal Register, Vol 72, No. 232):

¹ Nuclear Regulatory Commission, NRC Generic Letter 94-04: Voluntary reporting of additional occupational radiation exposure data, September 2, 1994. Accessed December 29, 2011 <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/gen-letters/1994/g194004.html>

“...this rule removes the requirement that licensees attempt to obtain cumulative exposure records for workers unless these individuals are being authorized to receive a planned special exposure.”²

As a result, no NRC annual report going back to 1995 (the earliest publicly available report on the NRC website) presents lifetime exposure data for power plant employees.

The harmful health effects, mainly cancer, from low-dose radiation exposure are incurred over a lifetime in a dose-response fashion. It is extremely concerning, therefore, that the NRC does not collect, or even require employers to collect, data on lifetime radiation exposure to ensure that no, or as few as possible, workers are being exposed to excessive health risks over their working life. The NRC acknowledged the importance of such lifetime exposure data in a notice³ related to the 1994 rule change that began requiring annual exposure reporting, instead of (not in addition to) lifetime reports.

We, therefore, submit this FOIA request for aggregate data on lifetime occupational ionizing radiation exposure for workers at nuclear power plants under the NRC's jurisdiction that were sent to the NRC before 1994 in the form of “termination reports” (required under 10 CFR Part 20.1 through 20.602), and after 1994 through analyses of existing Form 4 records in the REIRS database.

Specifically, we request, by calendar year and individual nuclear facility, and for both terminated and current nuclear power plant employees:

- a) mean and median individual lifetime doses of whole body, and organ-specific, radiation (in rems);
- b) a distribution of individual lifetime radiation doses (whole body and organ-specific), with the number of workers exposed in each radiation dose category, similar to that provided in the NRC annual reports for annual exposures (see as an example Table 4.4 in the 2009 report below)⁴; and
- c) the distribution of individual annual and lifetime radiation doses (whole body and organ-specific) for pregnant workers.

² Nuclear Regulatory Commission 10 CFR Parts 19, 20, and 50 RIN 3150-AH40. Occupational Dose Records, Labeling Containers, and the Total Effective Dose Equivalent. Action: Final rule.

³ Nuclear Regulatory Commission. NRC Generic Letter 94-04: Voluntary reporting of additional occupational radiation exposure data. September 2, 1994. The notice states that incomplete lifetime exposure records would have the following consequences: “First, NRC would not be able to continue to provide complete exposure histories to individuals to facilitate the movement of transient workers from one licensee to another. Second, actual lifetime exposures could not be determined for the occupationally exposed workers in the seven categories of licensees. Without this information, NRC may have difficulty in evaluating whether further limitations on occupational doses are needed to achieve dose levels recommended by the ICRP.” Accessed December 29, 2011. <http://www.nrc.gov/reading-mv/doc-collections/gen-comm/gen-letters/1994/gj94004.html>

⁴ NRC. Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities 2009. Table 4.4. Accessed on October 5, 2011. <http://www.reirs.com/nureg2009/nureg2009.pdf>

