

## Resident Inspector Demographics and Site Staffing

Scope and Objectives—This enclosure provides the annual update on demographic data for inspectors assigned to the resident inspector (RI) program, as the Commission directed in a staff requirements memorandum issued April 8, 1998. This analysis seeks to determine whether the agency's actions associated with the RI program have resulted in a stable or increasing resident experience base and to identify any necessary actions. This enclosure also provides an update on site staffing.

RI Demographic Data—The U.S. Nuclear Regulatory Commission (NRC) staff review of the demographics included analysis of the overall program data for the RI and senior RI (SRI) groups (see Tables 1 and 2, as well as Figures 1 and 2). The staff used median values from the month of November in 2001, 2002, 2003, 2004, and 2005 for statistical comparison.

The demographic analysis consists of the following five distinct data sets:

- (1) "NRC time" is the total number of years the individual has accumulated as an NRC employee.
- (2) "Total resident time" is the total number of years the individual has accumulated as an RI or SRI.
- (3) "Qualified total resident time" is the time the individual has been assigned to an RI or SRI position after completing the reactor operations inspector qualification requirements in Inspection Manual Chapter (IMC) 1245, "Inspector Qualification Program for the Office of Nuclear Reactor Regulation Inspection Program."<sup>1</sup>
- (4) "Current site time" is the total number of years spent as an RI or SRI at the current site.
- (5) "Relevant non-NRC experience" is nuclear power experience acquired outside of the NRC. Examples of relevant non-NRC experience include operation, engineering, maintenance, or construction experience with commercial nuclear power plants, naval shipyards, Department of Energy facilities, and/or the U.S. Navy's nuclear power program.

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<sup>1</sup>"Qualified total resident time" does not count time for RIs that are basic certified under IMC 1245. Inspection hours by RIs who are basic certified count against the baseline inspection program. The NRC initially developed data collection to capture fully qualified time, as the basic certification program did not exist until 2002. Data presented under "total resident time" include time spent as basic certified and provide a more accurate accounting of resident time. Additionally, the regions typically do not assign inspectors to the resident program until they are basic certified. For these reasons, the staff is deleting the "qualified total resident time" metric for future updates.

The annual Reactor Oversight Process performance metric report, available through the Agencywide Documents Access and Management System (ADAMS), provides more detailed graphs, data, and analysis for these resident demographic metrics (reference ADAMS Accession No. ML060590135).

Analysis of 2005 RI Group—RI demographic data for 2005 (see Table 1 and Figure 1) reflect a stable population with increases in all areas with the exception of NRC time, which was relatively stable.

During 2005, 23 RIs left the RI program. Of the 23 RIs, 10 were promoted to SRIs, 9 were either promoted or laterally reassigned to a region or to headquarters, and 4 retired or resigned from the NRC.

Data indicate that significantly experienced engineers entered the program as RIs. On average, the new RIs had about 14 years of relevant non-NRC experience, compared to an average of 12 years in 2004. All 16 of the new RIs in 2005 had at least 3 years of relevant non-NRC experience. Table 3 shows the percentage of new RIs with less than 3 years of relevant non-NRC experience from 1997 through 2005. The percentages in this table represent the ratio of those RIs hired in that particular year who had fewer than 3 years of relevant non-NRC experience to the total number of RIs hired.

**TABLE 3  
PERCENTAGE OF NEW RIs WITH LESS THAN 3 YEARS OF RELEVANT NON-NRC  
EXPERIENCE**

<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
6% (1/18)	12% (2/17)	0% (0/5)	31% (4/13)	6% (1/16)	20% (3/15)	30% (8/27)	21% (3/14)	0% (0/16)

Analysis of 2005 SRI Group—SRI demographic data for 2005 (see Table 2 and Figure 2) reflect a stable population with increases in all areas.

In 2005, 11 SRI positions were filled, an increase of 5 from 2004, when 6 positions were filled. In 2005, 10 SRIs left the program; of those 10, 5 were promoted within the NRC, 4 were laterally reassigned to headquarters or a region, and 1 retired from the NRC.

Site Staffing—The staff developed a site staffing metric in response to a recommendation by the Davis-Besse Lessons Learned Task Force (DBLLTF). The purpose of the metric is to evaluate the agency’s ability to provide continuity of regulatory oversight. Specifically, DBLLTF item 3.3.5.3 recommended that the staff establish a measurement for RI staffing, including program expectations to satisfy minimum staffing levels. In 2004, the staff conducted a pilot program that obtained 99 percent collective coverage, but these data did not reflect instances where permanently assigned RIs or SRIs were away from their sites for longer than 6 weeks. Therefore, the staff revised the metric to capture such data in 2005. This enclosure reports these data for the first time.

The metric counts (1) RIs and SRIs who are permanently assigned to the site and (2) inspectors who are on rotational assignments to the site for 6 weeks or longer. Only

inspectors who have attained at least a basic inspector certification status, as defined by IMC 1245, are counted. The metric does not count permanently assigned RIs and SRIs who are away from their sites for longer than 6 weeks. Inspectors who are assigned to sites for less than 6 weeks are not counted towards satisfying the metric.

The success criteria for the metric is 90 percent coverage for each site. This year, the average site coverage for the regions was 98.2 percent, with all regions exceeding 97 percent. However, three sites did not meet the success criteria of 90 percent (their scores were 85 percent and higher), primarily because of the assignment of the SRI to special work. The staff's evaluation determined that oversight continuity was maintained and that these three sites were adequately covered for one or more of the following reasons: (1) the permanent RI was present, (2) an experienced SRI was temporarily assigned, and/or (3) the site was covered with qualified inspectors on assignments for less than 6 weeks. At no time did these sites remain without qualified inspectors. It is important to note that for all three of these sites the permanent SRIs were temporarily assigned for periods of up to 5 months to participate in projects related to nuclear security.

Conclusions—In summary, the staff concluded the following:

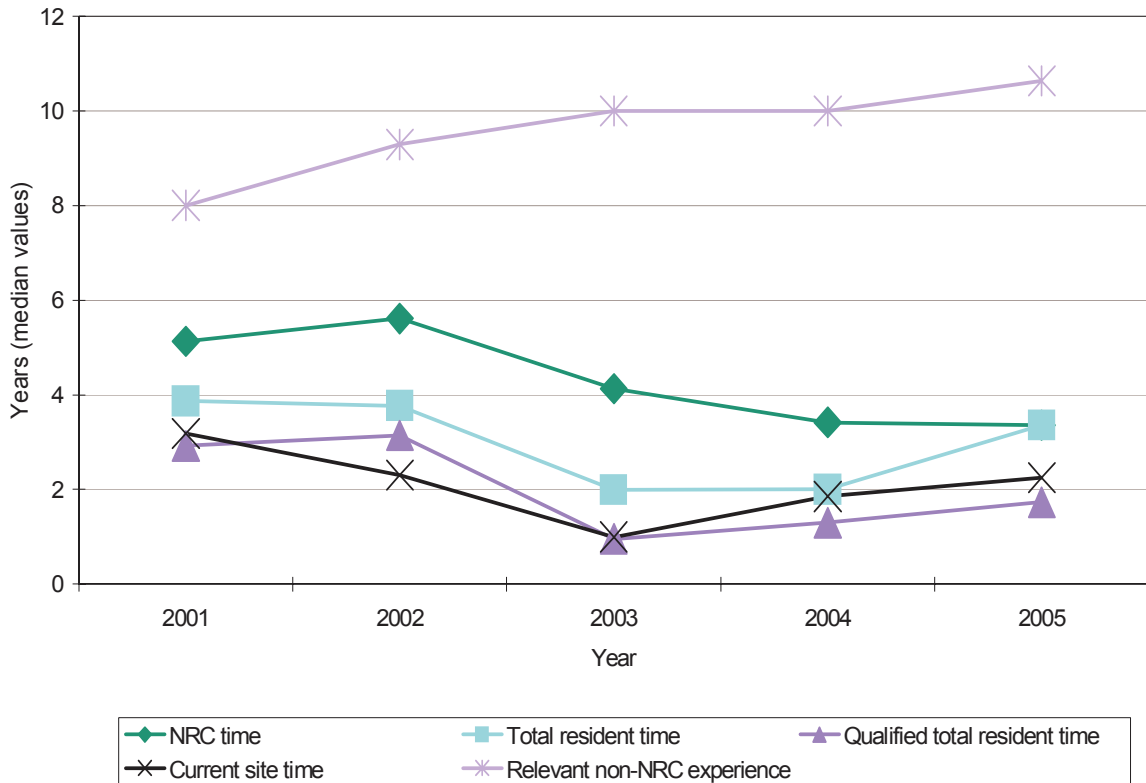
- The experience levels of both RIs and SRIs are relatively high.
- The RI and SRI staffing levels are generally good.
- The staffing turnover rate for calendar year 2005 was not excessive.

In conclusion, the program continues to attract and retain quality staff. Therefore, no changes to the RI program are warranted at this time. The staff will continue to monitor the program.

**TABLE 1  
SUMMARY OF RI GROUP EXPERIENCE LEVELS (IN YEARS)**

		Nov. 2001	Nov. 2002	Nov. 2003	Nov. 2004	Nov. 2005
<b>NRC time</b>	average	6.21	6.39	5.34	5.60	5.80
	median	5.13	5.61	4.13	3.42	3.36
<b>Total resident time</b>	average	3.84	3.90	3.28	3.20	3.52
	median	3.87	3.77	1.99	2.00	2.31
<b>Qualified total resident time</b>	average	3.11	3.14	2.50	2.48	2.72
	median	2.92	3.14	0.96	1.30	1.73
<b>Current site time</b>	average	2.74	2.86	1.64	2.18	2.38
	median	3.18	2.30	1.00	1.85	2.25
<b>Relevant non-NRC experience</b>	average	8.80	9.68	10.26	11.01	12.55
	median	8.00	9.29	10.00	10.00	10.63

Resident Inspectors - Figure 1



**TABLE 2  
SUMMARY OF SRI GROUP EXPERIENCE LEVELS (IN YEARS)**

		Nov. 2001	Nov. 2002	Nov. 2003	Nov. 2004	Nov. 2005
<b>NRC time</b>	average	12.03	11.85	11.30	11.57	11.30
	median	11.47	12.11	11.00	8.80	8.84
<b>Total resident time</b>	average	8.66	8.17	8.22	8.22	8.16
	median	8.12	7.36	6.82	7.32	7.54
<b>Qualified total resident time</b>	average	7.94	7.36	7.40	7.42	7.39
	median	7.38	6.31	5.95	6.49	6.63
<b>Current site time</b>	average	2.96	2.90	2.44	2.68	2.79
	median	2.98	3.06	1.76	2.31	2.63
<b>Relevant non-NRC experience</b>	average	6.07	7.26	8.37	8.51	8.98
	median	4.25	5.17	6.42	6.55	7.96

Senior Resident Inspectors - Figure 2

