

## LIST OF TABLES

|            |                                                                                                                |    |
|------------|----------------------------------------------------------------------------------------------------------------|----|
| Table 3-1  | Average Annual Exposure Data for Certain Categories of NRC Licensees .....                                     | 2  |
| Table 3-2  | Distribution of TEDE by License Category 2024 .....                                                            | 3  |
| Table 3-3  | Annual Dose Data for Industrial Radiography Licensees, 2022–2024 .....                                         | 4  |
| Table 3-4  | Annual Exposure Information for Manufacturing and Distribution Licensees, 2022–2024 .....                      | 4  |
| Table 3-5  | Annual Exposure Information for Fuel Cycle Licensees, 2022–2024 .....                                          | 4  |
| Table 3-6  | Intake by Licensee Category and Radionuclide—Mode of Intake: Ingestion or Other, 2024 .....                    | 5  |
| Table 3-7  | Intake by Licensee Category and Radionuclide—Mode of Intake: Inhalation, 2024 .....                            | 6  |
| Table 3-8  | Collective and Average CEDE by Licensee Category, 2024 .....                                                   | 8  |
| Table 3-9  | Internal Dose (CEDE) Distribution, 1994–2024 .....                                                             | 9  |
| Table 4-1  | Summary of Information Reported by Commercial BWRs, 1994–2024 .....                                            | 10 |
| Table 4-2  | Summary of Information Reported by Commercial PWRs, 1994–2024 .....                                            | 11 |
| Table 4-3  | Summary of Information Reported by All Commercial LWRs, 1994–2024 .....                                        | 12 |
| Table 4-4a | Summary of Distribution of Annual TEDE at Commercial LWRs, 1994–2024 .....                                     | 13 |
| Table 4-4b | Summary of Distribution of Annual TEDE at Commercial LWRs, Adjusted for Transient Individuals, 1994–2024 ..... | 14 |
| Table 4-5  | Three-Year Totals and Averages for BWRs, in Ascending Order of Collective TEDE per Reactor, 2022–2024 .....    | 15 |
| Table 4-6  | Three-Year Totals and Averages for PWRs, in Ascending Order of Collective TEDE per Reactor, 2022–2024 .....    | 16 |
| Table 4-7  | Three-Year Collective TEDE per Reactor-Year for BWRs, 2022–2024 .....                                          | 17 |
| Table 4-8  | Three-Year Collective TEDE per Reactor-Year for PWRs, 2022–2024 .....                                          | 18 |
| Table 4-9  | Plants No Longer in Operation, 2024 .....                                                                      | 19 |
| Table 5-1  | Effects of Transient Individuals on Annual Statistical Compilations, 2024 .....                                | 20 |
| Table 6-1  | Summary of Annual TEDE Distributions for Certain NRC Licensees, 2014–2024 .....                                | 21 |
| Table 6-2  | Maximum Occupational Doses for Each Exposure Category, 2024 .....                                              | 21 |

## DRAFT Tables and Figures

Table 3-1 Average Annual Exposure Data for Certain Categories of NRC Licensees

| NRC License Category* and Program Code                                                                                                  | Calendar Year | Number of Licensees Reporting | Number of Monitored Individuals | Number of Individuals with Measurable TEDE | Collective TEDE (person-rem) | Average TEDE (rem) | Average Measurable TEDE per Individual (rem) |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------|---------------------------------|--------------------------------------------|------------------------------|--------------------|----------------------------------------------|
| Industrial Radiography<br>03310<br>03320<br>04312<br>04313                                                                              | 2014          | 57                            | 3,288                           | 2,862                                      | 1,778.171                    | 0.54               | 0.62                                         |
|                                                                                                                                         | 2015          | 69                            | 3,426                           | 2,908                                      | 1,695.040                    | 0.49               | 0.58                                         |
|                                                                                                                                         | 2016          | 64                            | 3,035                           | 2,635                                      | 1,270.459                    | 0.42               | 0.48                                         |
|                                                                                                                                         | 2017          | 62                            | 3,389                           | 2,912                                      | 1,709.858                    | 0.50               | 0.59                                         |
|                                                                                                                                         | 2018          | 61                            | 3,876                           | 3,303                                      | 1,967.879                    | 0.51               | 0.60                                         |
|                                                                                                                                         | 2019          | 60                            | 3,732                           | 3,152                                      | 1,668.408                    | 0.45               | 0.53                                         |
|                                                                                                                                         | 2020          | 56                            | 3,058                           | 2,577                                      | 1,130.511                    | 0.37               | 0.44                                         |
|                                                                                                                                         | 2021          | 43                            | 2,331                           | 1,996                                      | 789.140                      | 0.34               | 0.40                                         |
|                                                                                                                                         | 2022          | 48                            | 2,523                           | 2,137                                      | 962.450                      | 0.38               | 0.45                                         |
|                                                                                                                                         | 2023          | 51                            | 3,241                           | 2,817                                      | 1,541.161                    | 0.48               | 0.55                                         |
|                                                                                                                                         | 2024          | 51                            | 3,158                           | 2,746                                      | 1,384.854                    | 0.44               | 0.50                                         |
| Manufacturing and Distribution<br>02500<br>03211<br>03212<br>03214                                                                      | 2014          | 19                            | 962                             | 656                                        | 138.631                      | 0.14               | 0.21                                         |
|                                                                                                                                         | 2015          | 21                            | 949                             | 634                                        | 155.688                      | 0.16               | 0.25                                         |
|                                                                                                                                         | 2016          | 21                            | 905                             | 606                                        | 142.958                      | 0.16               | 0.24                                         |
|                                                                                                                                         | 2017          | 21                            | 940                             | 615                                        | 139.071                      | 0.15               | 0.23                                         |
|                                                                                                                                         | 2018          | 14                            | 1,086                           | 718                                        | 136.505                      | 0.13               | 0.19                                         |
|                                                                                                                                         | 2019          | 16                            | 1,188                           | 804                                        | 147.927                      | 0.12               | 0.18                                         |
|                                                                                                                                         | 2020          | 13                            | 1,112                           | 799                                        | 134.045                      | 0.12               | 0.17                                         |
|                                                                                                                                         | 2021          | 16                            | 1,258                           | 896                                        | 181.531                      | 0.14               | 0.20                                         |
|                                                                                                                                         | 2022          | 16                            | 1,287                           | 998                                        | 182.718                      | 0.14               | 0.18                                         |
|                                                                                                                                         | 2023          | 17                            | 1,300                           | 1,034                                      | 192.289                      | 0.15               | 0.19                                         |
|                                                                                                                                         | 2024          | 13                            | 1,588                           | 1,221                                      | 228.649                      | 0.14               | 0.19                                         |
| Independent Spent Fuel Storage<br>23100<br>23200                                                                                        | 2014          | 2                             | 51                              | 22                                         | 3.192                        | 0.06               | 0.15                                         |
|                                                                                                                                         | 2015          | 2                             | 57                              | 20                                         | 1.102                        | 0.02               | 0.06                                         |
|                                                                                                                                         | 2016          | 2                             | 57                              | 22                                         | 0.579                        | 0.01               | 0.03                                         |
|                                                                                                                                         | 2017          | 2                             | 67                              | 20                                         | 0.631                        | 0.01               | 0.03                                         |
|                                                                                                                                         | 2018          | 2                             | 70                              | 17                                         | 1.740                        | 0.02               | 0.10                                         |
|                                                                                                                                         | 2019          | 2                             | 79                              | 28                                         | 1.939                        | 0.02               | 0.07                                         |
|                                                                                                                                         | 2020          | 2                             | 59                              | 19                                         | 0.454                        | 0.01               | 0.02                                         |
|                                                                                                                                         | 2021          | 2                             | 76                              | 20                                         | 0.795                        | 0.01               | 0.04                                         |
|                                                                                                                                         | 2022          | 3                             | 96                              | 27                                         | 1.891                        | 0.02               | 0.07                                         |
|                                                                                                                                         | 2023          | 2                             | 93                              | 15                                         | 0.994                        | 0.01               | 0.07                                         |
|                                                                                                                                         | 2024          | 2                             | 82                              | 22                                         | 1.550                        | 0.02               | 0.07                                         |
| Fuel Cycle Licenses – Fabrication, Processing, and Uranium Enrichment, and UF <sub>6</sub> Production Plants<br>11400<br>21200<br>21210 | 2014          | 9                             | 6,689                           | 3,685                                      | 366.224                      | 0.05               | 0.10                                         |
|                                                                                                                                         | 2015          | 7                             | 5,296                           | 3,033                                      | 327.112                      | 0.06               | 0.11                                         |
|                                                                                                                                         | 2016          | 7                             | 5,413                           | 2,999                                      | 277.687                      | 0.05               | 0.09                                         |
|                                                                                                                                         | 2017          | 7                             | 5,058                           | 2,930                                      | 254.997                      | 0.05               | 0.09                                         |
|                                                                                                                                         | 2018          | 7                             | 4,737                           | 2,783                                      | 229.530                      | 0.05               | 0.08                                         |
|                                                                                                                                         | 2019          | 7                             | 4,347                           | 2,690                                      | 250.522                      | 0.06               | 0.09                                         |
|                                                                                                                                         | 2020          | 7                             | 3,900                           | 2,755                                      | 244.264                      | 0.06               | 0.09                                         |
|                                                                                                                                         | 2021          | 7                             | 4,267                           | 2,769                                      | 238.564                      | 0.06               | 0.09                                         |
|                                                                                                                                         | 2022          | 7                             | 4,933                           | 3,464                                      | 304.805                      | 0.06               | 0.09                                         |
|                                                                                                                                         | 2023          | 7                             | 6,036                           | 4,001                                      | 329.353                      | 0.05               | 0.08                                         |
|                                                                                                                                         | 2024          | 7                             | 6,023                           | 3,267                                      | 297.930                      | 0.05               | 0.09                                         |
| Commercial LWRs**<br>41111                                                                                                              | 2014          | 100                           | 174,853                         | 70,847                                     | 7,124.519                    | 0.04               | 0.10                                         |
|                                                                                                                                         | 2015          | 99                            | 176,886                         | 70,798                                     | 7,019.088                    | 0.04               | 0.10                                         |
|                                                                                                                                         | 2016          | 99                            | 155,574                         | 59,353                                     | 5,365.709                    | 0.03               | 0.09                                         |
|                                                                                                                                         | 2017          | 99                            | 157,072                         | 64,761                                     | 6,416.548                    | 0.04               | 0.10                                         |
|                                                                                                                                         | 2018          | 98                            | 150,219                         | 61,014                                     | 5,829.471                    | 0.04               | 0.10                                         |
|                                                                                                                                         | 2019          | 96                            | 134,897                         | 53,615                                     | 5,080.795                    | 0.04               | 0.09                                         |
|                                                                                                                                         | 2020          | 95                            | 125,010                         | 52,820                                     | 4,899.128                    | 0.04               | 0.09                                         |
|                                                                                                                                         | 2021          | 93                            | 122,681                         | 50,667                                     | 5,303.198                    | 0.04               | 0.10                                         |
|                                                                                                                                         | 2022          | 92                            | 125,338                         | 51,010                                     | 5,085.286                    | 0.04               | 0.10                                         |
|                                                                                                                                         | 2023          | 92                            | 124,892                         | 51,049                                     | 5,552.061                    | 0.04               | 0.11                                         |
|                                                                                                                                         | 2024          | 93                            | 122,389                         | 52,082                                     | 4,903.383                    | 0.04               | 0.09                                         |
| Grand Totals and Averages                                                                                                               | 2014          | 187                           | 185,843                         | 78,072                                     | 9,410.737                    | 0.05               | 0.12                                         |
|                                                                                                                                         | 2015          | 198                           | 186,614                         | 77,393                                     | 9,198.030                    | 0.05               | 0.12                                         |
|                                                                                                                                         | 2016          | 193                           | 164,984                         | 65,615                                     | 7,057.392                    | 0.04               | 0.11                                         |
|                                                                                                                                         | 2017          | 190                           | 159,355                         | 67,341                                     | 7,909.670                    | 0.05               | 0.12                                         |
|                                                                                                                                         | 2018          | 182                           | 159,988                         | 67,835                                     | 8,165.125                    | 0.05               | 0.12                                         |
|                                                                                                                                         | 2019          | 174                           | 143,026                         | 59,765                                     | 6,590.069                    | 0.05               | 0.11                                         |
|                                                                                                                                         | 2020          | 163                           | 132,942                         | 58,501                                     | 6,109.158                    | 0.05               | 0.10                                         |
|                                                                                                                                         | 2021          | 167                           | 131,520                         | 57,293                                     | 6,755.062                    | 0.05               | 0.12                                         |
|                                                                                                                                         | 2022          | 166                           | 134,177                         | 57,636                                     | 6,537.150                    | 0.05               | 0.11                                         |
|                                                                                                                                         | 2023          | 169                           | 135,562                         | 58,916                                     | 7,615.858                    | 0.06               | 0.13                                         |
|                                                                                                                                         | 2024          | 166                           | 133,240                         | 59,338                                     | 6,816.366                    | 0.05               | 0.11                                         |

NOTE: The data shown in this table for all categories of licensees have not been adjusted to account for transient individuals (see section 5). TEDE is defined as total effective dose equivalent.

\* These categories include only NRC licensees required to submit an annual report (see section 2).

\*\* This category includes all light-water reactors (LWRs) that had been in commercial operation for at least a full year as of December 31 of the year under consideration.

## DRAFT Tables and Figures

Table 3-2 Distribution of TEDE by License Category 2024

| License Category<br>(Number of Sites Reporting) | Number of Individuals with TEDE in Range (rem) * |                |               |               |               |              |             |             |             |             |      | Number of<br>Monitored<br>Individuals | Number with<br>Meas. TEDE | Total Collective<br>TEDE<br>(person-rem) |
|-------------------------------------------------|--------------------------------------------------|----------------|---------------|---------------|---------------|--------------|-------------|-------------|-------------|-------------|------|---------------------------------------|---------------------------|------------------------------------------|
|                                                 | No.<br>Meas.                                     | Meas.<br><0.01 | 0.10–<br>0.25 | 0.25–<br>0.50 | 0.50–<br>0.75 | 0.75–<br>1.0 | 1.0–<br>2.0 | 2.0–<br>3.0 | 3.0–<br>4.0 | 4.0–<br>5.0 | >5.0 |                                       |                           |                                          |
| INDUSTRIAL RADIOGRAPHY                          |                                                  |                |               |               |               |              |             |             |             |             |      |                                       |                           |                                          |
| Fixed Locations (2)                             | 6                                                | 6              | -             | -             | -             | -            | -           | -           | -           | -           | -    | 12                                    | 6                         | 0.239                                    |
| 1–5 Temporary Job Sites (44)                    | 278                                              | 548            | 336           | 329           | 239           | 146          | 301         | 73          | 19          | 5           | -    | 2,274                                 | 1,996                     | 1,138.815                                |
| 6–20 Temporary Job Sites (5)                    | 128                                              | 263            | 153           | 154           | 88            | 40           | 41          | 4           | 1           | -           | -    | 872                                   | 744                       | 245.800                                  |
| Total (51)                                      | 412                                              | 817            | 489           | 483           | 327           | 186          | 342         | 77          | 20          | 5           | -    | 3,158                                 | 2,746                     | 1,384.854                                |
| MANUFACTURING AND DISTRIBUTION                  |                                                  |                |               |               |               |              |             |             |             |             |      |                                       |                           |                                          |
| Broad-Type A (2)                                | 138                                              | 386            | 103           | 62            | 20            | 11           | 46          | 9           | -           | -           | -    | 778                                   | 640                       | 171.474                                  |
| Broad-Type B and Other (0)                      | -                                                | -              | -             | -             | -             | -            | -           | -           | -           | -           | -    | -                                     | -                         | -                                        |
| Nuclear Pharmacies (11)                         | 229                                              | 429            | 90            | 44            | 10            | 5            | 2           | 1           | -           | -           | -    | 810                                   | 581                       | 57.175                                   |
| Total (13)                                      | 367                                              | 815            | 193           | 106           | 30            | 16           | 48          | 10          | -           | -           | -    | 1,588                                 | 1,221                     | 228.649                                  |
| INDEPENDENT SPENT FUEL STORAGE                  |                                                  |                |               |               |               |              |             |             |             |             |      |                                       |                           |                                          |
| Total (2)                                       | 60                                               | 16             | 3             | 3             | -             | -            | -           | -           | -           | -           | -    | 82                                    | 22                        | 1.550                                    |
| FUEL CYCLE**                                    |                                                  |                |               |               |               |              |             |             |             |             |      |                                       |                           |                                          |
| Total (7)                                       | 2,756                                            | 2,431          | 445           | 301           | 66            | 10           | 6           | -           | -           | -           | -    | 6,023                                 | 3,267                     | 297.930                                  |
| COMMERCIAL POWER REACTORS***                    |                                                  |                |               |               |               |              |             |             |             |             |      |                                       |                           |                                          |
| Boiling Water (31)                              | 19,946                                           | 17,975         | 5,402         | 2,320         | 602           | 179          | 81          | 7           | -           | -           | -    | 46,512                                | 26,566                    | 2,943.736                                |
| Pressurized Water (62)                          | 50,361                                           | 19,688         | 4,329         | 1,210         | 213           | 51           | 25          | -           | -           | -           | -    | 75,877                                | 25,516                    | 1,959.647                                |
| Total (93)                                      | 70,307                                           | 37,663         | 9,731         | 3,530         | 815           | 230          | 106         | 7           | -           | -           | -    | 122,389                               | 52,082                    | 4,903.383                                |
| GRAND TOTALS                                    | 73,902                                           | 41,742         | 10,861        | 4,423         | 1,238         | 442          | 502         | 94          | 20          | 5           | 0    | 133,240                               | 59,338                    | 6,816.366                                |

NOTE: The data shown in this table for all categories of licensees have not been adjusted to account for transient individuals (see section 5). TEDE is defined as total effective dose equivalent.

\* TEDE values exactly equal to the values separating ranges are reported in the higher range.

\*\* This category includes fabrication, processing, and uranium enrichment plants (see section 3.3.5).

\*\*\* This category includes all reactors that had been in commercial operation for a full year as of December 31, 2024. Vogtle 4 became operational on April 29, 2024, and is not included in these values.

**Table 3-3 Annual Dose Data for Industrial Radiography Licensees, 2022–2024**

| Year | Type of License          | Number of Licensees | Number of Monitored Individuals | Number of Individuals with Measurable TEDE | Collective TEDE (person-rem) | Average Measurable TEDE (rem) |
|------|--------------------------|---------------------|---------------------------------|--------------------------------------------|------------------------------|-------------------------------|
| 2022 | Fixed Location           | 2                   | 11                              | 6                                          | 1.565                        | 0.26                          |
|      | 1–5 Temporary Job Sites  | 42                  | 1,699                           | 1,449                                      | 747.824                      | 0.52                          |
|      | 6–20 Temporary Job Sites | 4                   | 813                             | 682                                        | 213.061                      | 0.31                          |
|      | <b>Total</b>             | <b>48</b>           | <b>2,523</b>                    | <b>2,137</b>                               | <b>962.450</b>               | <b>0.45</b>                   |
| 2023 | Fixed Location           | 2                   | 12                              | 8                                          | 0.409                        | 0.05                          |
|      | 1–5 Temporary Job Sites  | 45                  | 2,465                           | 2,146                                      | 1,314.182                    | 0.61                          |
|      | 6–20 Temporary Job Sites | 4                   | 764                             | 663                                        | 226.570                      | 0.34                          |
|      | <b>Total</b>             | <b>51</b>           | <b>3,241</b>                    | <b>2,817</b>                               | <b>1,541.161</b>             | <b>0.55</b>                   |
| 2024 | Fixed Location           | 2                   | 12                              | 6                                          | 0.239                        | 0.04                          |
|      | 1–5 Temporary Job Sites  | 44                  | 2,274                           | 1,996                                      | 1,138.815                    | 0.57                          |
|      | 6–20 Temporary Job Sites | 5                   | 872                             | 744                                        | 245.800                      | 0.33                          |
|      | <b>Total</b>             | <b>51</b>           | <b>3,158</b>                    | <b>2,746</b>                               | <b>1,384.854</b>             | <b>0.50</b>                   |

NOTE: TEDE is defined as total effective dose equivalent.

**Table 3-4 Annual Exposure Information for Manufacturing and Distribution Licensees, 2022–2024**

| Year | Type of License            | Number of Licensees | Number of Monitored Individuals | Number of Individuals with Measurable TEDE | Collective TEDE (person-rem) | Average Measurable TEDE (rem) |
|------|----------------------------|---------------------|---------------------------------|--------------------------------------------|------------------------------|-------------------------------|
| 2022 | M&D—Broad-Type A           | 2                   | 443                             | 393                                        | 129.751                      | 0.33                          |
|      | M&D—Broad-Type B and Other | 0                   | 0                               | 0                                          | 0.000                        | 0.00                          |
|      | M&D—Nuclear Pharmacies     | 14                  | 844                             | 605                                        | 52.967                       | 0.09                          |
|      | <b>Total</b>               | <b>16</b>           | <b>1,287</b>                    | <b>998</b>                                 | <b>182.718</b>               | <b>0.18</b>                   |
| 2023 | M&D—Broad-Type A           | 2                   | 465                             | 420                                        | 134.366                      | 0.32                          |
|      | M&D—Broad-Type B and Other | 0                   | 0                               | 0                                          | 0.000                        | 0.00                          |
|      | M&D—Nuclear Pharmacies     | 15                  | 835                             | 614                                        | 57.923                       | 0.09                          |
|      | <b>Total</b>               | <b>17</b>           | <b>1,300</b>                    | <b>1,034</b>                               | <b>192.289</b>               | <b>0.19</b>                   |
| 2024 | M&D—Broad-Type A           | 2                   | 778                             | 640                                        | 171.474                      | 0.27                          |
|      | M&D—Broad-Type B and Other | 0                   | 0                               | 0                                          | 0.000                        | 0.00                          |
|      | M&D—Nuclear Pharmacies     | 11                  | 810                             | 581                                        | 57.175                       | 0.10                          |
|      | <b>Total</b>               | <b>13</b>           | <b>1,588</b>                    | <b>1,221</b>                               | <b>228.649</b>               | <b>0.19</b>                   |

NOTE: TEDE is defined as total effective dose equivalent.

**Table 3-5 Annual Exposure Information for Fuel Cycle Licensees, 2022–2024**

| Year | Type of License | Number of Licensees | Number of Monitored Individuals | Number of Individuals with Meas. TEDE | Collective TEDE (person-rem) | Average Meas. TEDE (rem) | Number of Individuals with Meas. DDE | Collective DDE (person-rem) | Average Meas. DDE (rem) | Number of Individuals with Meas. CEDE | Collective CEDE (person-rem) | Average Meas. CEDE (rem) |
|------|-----------------|---------------------|---------------------------------|---------------------------------------|------------------------------|--------------------------|--------------------------------------|-----------------------------|-------------------------|---------------------------------------|------------------------------|--------------------------|
| 2022 | Fuel Cycle      | 7                   | 4,933                           | 3,464                                 | 304.805                      | 0.09                     | 2,757                                | 194.757                     | 0.07                    | 2,296                                 | 110.048                      | 0.05                     |
| 2023 | Fuel Cycle      | 7                   | 6,036                           | 4,001                                 | 329.353                      | 0.08                     | 3,218                                | 219.769                     | 0.07                    | 2,364                                 | 109.676                      | 0.05                     |
| 2024 | Fuel Cycle      | 7                   | 6,023                           | 3,267                                 | 297.930                      | 0.09                     | 2,449                                | 195.085                     | 0.08                    | 2,154                                 | 102.845                      | 0.05                     |

NOTE: TEDE is defined as total effective dose equivalent.

**Table 3-6 Intake by Licensee Category and Radionuclide—Mode of Intake: Ingestion or Other, 2024**

| Mode      | Licensee Category     | Program Code | Radionuclide | Number of Intake Records | Collective Intake (microcuries) (sci. notation) |
|-----------|-----------------------|--------------|--------------|--------------------------|-------------------------------------------------|
| Ingestion | Nuclear Power Reactor | 41111        | Ag-110M      | 1                        | 1.00E-02                                        |
|           | Nuclear Power Reactor | 41111        | Am-241       | 1                        | 5.00E-04                                        |
|           | Nuclear Power Reactor | 41111        | Cm-242       | 1                        | 2.00E-02                                        |
|           | Nuclear Power Reactor | 41111        | Cm-243       | 1                        | 1.00E-03                                        |
|           | Nuclear Power Reactor | 41111        | Co-60        | <b>10</b>                | 2.74E+01                                        |
|           | Nuclear Power Reactor | 41111        | Fe-55        | 1                        | 4.16E+01                                        |
|           | Nuclear Power Reactor | 41111        | Mn-54        | 4                        | 5.88E-02                                        |
|           | Nuclear Power Reactor | 41111        | Ni-63        | 1                        | 4.39E+00                                        |
|           | Nuclear Power Reactor | 41111        | Pu-238       | 1                        | 3.00E-03                                        |
|           | Nuclear Power Reactor | 41111        | Pu-239       | 1                        | 3.00E-03                                        |
|           | Nuclear Power Reactor | 41111        | Pu-241       | 1                        | 3.00E-01                                        |
|           | Nuclear Power Reactor | 41111        | Sr-90        | 1                        | 6.76E+00                                        |
|           | Nuclear Power Reactor | 41111        | Zr-95        | 1                        | <b>4.18E+01</b>                                 |

NOTE: The data values shown in bold and boxed represent the highest value in each category.

**Table 3-7 Intake by Licensee Category and Radionuclide—Mode of Intake: Inhalation, 2024**

| Licensee Category                           | Program Code | Radionuclide | Pulmonary Clearance Class or Solubility Type | Number of Intake Records * | Collective Intake (microcuries) (sci. notation) |
|---------------------------------------------|--------------|--------------|----------------------------------------------|----------------------------|-------------------------------------------------|
| Manufacturing and Distribution Broad-Type A | 03211        | In-111       | D                                            | 1                          | 5.75E+02                                        |
| Nuclear Pharmacies                          | 02500        | I-123        | W                                            | 16                         | 1.64E-01                                        |
|                                             | 02500        | I-131        | D                                            | 1                          | 8.72E-02                                        |
|                                             | 02500        | I-131        | W                                            | 73                         | 2.14E+00                                        |
| Nuclear Power Reactors                      | 41111        | Ag-110M      | Y                                            | 1                          | 9.00E+01                                        |
|                                             | 41111        | Am-241       | W                                            | 15                         | 4.53E-04                                        |
|                                             | 41111        | C-14         | V                                            | 1                          | 7.92E-06                                        |
|                                             | 41111        | Cm-243       | W                                            | 1                          | 8.63E-06                                        |
|                                             | 41111        | Co-58        | Y                                            | 9                          | 2.36E-01                                        |
|                                             | 41111        | Co-60        | Y                                            | 10                         | 5.56E-01                                        |
|                                             | 41111        | Cs-137       | D                                            | 1                          | 4.45E-02                                        |
|                                             | 41111        | Fe-55        | D                                            | 1                          | 8.94E-02                                        |
|                                             | 41111        | Fe-55        | W                                            | 1                          | 1.51E+00                                        |
|                                             | 41111        | H-3          | D                                            | 4                          | 9.03E+02                                        |
|                                             | 41111        | Mn-54        | W                                            | 3                          | 5.10E-02                                        |
|                                             | 41111        | Nb-95        | Y                                            | 1                          | 4.00E-03                                        |
|                                             | 41111        | Ni-63        | D                                            | 1                          | 1.83E-01                                        |
|                                             | 41111        | Ni-63        | W                                            | 1                          | 2.61E-02                                        |
|                                             | 41111        | Pu-238       | W                                            | 1                          | 7.11E-06                                        |
|                                             | 41111        | Pu-239       | W                                            | 1                          | 2.28E-06                                        |
|                                             | 41111        | Pu-241       | W                                            | 1                          | 8.35E-05                                        |
|                                             | 41111        | Sr-90        | W                                            | 1                          | 1.94E-04                                        |
|                                             | 41111        | Tc-99        | W                                            | 1                          | 1.04E-05                                        |
|                                             | 41111        | U-234        | Y                                            | 1                          | 4.35E-06                                        |
|                                             | 41111        | U-238        | Y                                            | 1                          | 7.22E-07                                        |
| Uranium Fuel Processing Plants              | 21210        | Am-241       | M                                            | 17                         | 1.70E-06                                        |
|                                             | 21210        | Pu-239       | M                                            | 35                         | 4.62E-05                                        |
|                                             | 21210        | Sr-90        | S                                            | 279                        | 2.21E+07                                        |
|                                             | 21210        | Th-232       | M                                            | 6                          | 2.69E-06                                        |
|                                             | 21210        | Th-232       | S                                            | 22                         | 1.58E-05                                        |
|                                             | 21210        | U-232        | W                                            | 1                          | 1.20E-07                                        |
|                                             | 21210        | U-232        | Y                                            | 29                         | 4.08E-05                                        |
|                                             | 21210        | U-234        | D                                            | 90                         | 7.15E-02                                        |

NOTE: The data values shown in bold and boxed represent the highest value in each category.

\* An intake event may involve multiple nuclides; individuals may incur multiple intakes during the year. The number of intake records given here indicates the number of separate intake reports that were submitted using NRC Form 5 under 10 CFR 20.2206.

## DRAFT Tables and Figures

**Table 3-7 Intake by Licensee Category and Radionuclide—Mode of Intake: Inhalation, 2024 (continued)**

| Licensee Category                                         | Program Code | Radionuclide | Pulmonary Clearance Class or Solubility Type | Number of Intake Records * | Collective Intake (microcuries) (sci. notation) |
|-----------------------------------------------------------|--------------|--------------|----------------------------------------------|----------------------------|-------------------------------------------------|
| Uranium Fuel Processing Plants (continued)                | 21210        | U-234        | F                                            | 703                        | 6.34E-02                                        |
|                                                           | 21210        | U-234        | M                                            | 647                        | 7.41E-03                                        |
|                                                           | 21210        | U-234        | S                                            | <b>1,831</b>               | 1.72E+00                                        |
|                                                           | 21210        | U-234        | W                                            | 48                         | 1.84E-02                                        |
|                                                           | 21210        | U-234        | Y                                            | 409                        | 6.30E-01                                        |
|                                                           | 21210        | U-235        | D                                            | 82                         | 2.59E-03                                        |
|                                                           | 21210        | U-235        | S                                            | 293                        | 4.97E-02                                        |
|                                                           | 21210        | U-235        | W                                            | 48                         | 6.82E-04                                        |
|                                                           | 21210        | U-235        | Y                                            | 214                        | 2.32E-02                                        |
|                                                           | 21210        | U-236        | D                                            | 82                         | 1.11E-04                                        |
|                                                           | 21210        | U-236        | F                                            | 650                        | 1.09E-03                                        |
|                                                           | 21210        | U-236        | S                                            | 79                         | 9.88E-04                                        |
|                                                           | 21210        | U-236        | W                                            | 48                         | 3.26E-05                                        |
|                                                           | 21210        | U-236        | Y                                            | 214                        | 2.26E-03                                        |
|                                                           | 21210        | U-238        | D                                            | 90                         | 9.69E-03                                        |
|                                                           | 21210        | U-238        | M                                            | 590                        | 3.66E-04                                        |
|                                                           | 21210        | U-238        | S                                            | 298                        | 1.75E-01                                        |
| Uranium Hexafluoride (UF <sub>6</sub> ) Production Plants | 21210        | U-238        | W                                            | 48                         | 2.48E-03                                        |
|                                                           | 21210        | U-238        | Y                                            | 409                        | 8.49E-02                                        |
|                                                           | 11400        | Ac-227       | W                                            | 265                        | 6.08E-04                                        |
|                                                           | 11400        | Pa-231       | W                                            | 265                        | 6.08E-04                                        |
|                                                           | 11400        | Pb-210       | W                                            | 240                        | 4.85E-04                                        |
|                                                           | 11400        | Po-210       | W                                            | 211                        | 3.88E-04                                        |
|                                                           | 11400        | Ra-226       | W                                            | 391                        | 1.50E-03                                        |
|                                                           | 11400        | Ra-228       | W                                            | 200                        | 3.51E-04                                        |
|                                                           | 11400        | Th-228       | W                                            | 200                        | 3.51E-04                                        |
|                                                           | 11400        | Th-230       | D                                            | 1                          | 5.00E-06                                        |
|                                                           | 11400        | Th-230       | W                                            | 615                        | 1.52E-02                                        |
|                                                           | 11400        | Th-232       | W                                            | 200                        | 3.51E-04                                        |
|                                                           | 11400        | U-234        | D                                            | 1                          | 4.25E-04                                        |
|                                                           | 11400        | U-234        | W                                            | <b>621</b>                 | <b>1.41E+00</b>                                 |
|                                                           | 11400        | U-235        | D                                            | 1                          | 2.00E-05                                        |
|                                                           | 11400        | U-235        | W                                            | <b>621</b>                 | 6.56E-02                                        |
|                                                           | 11400        | U-238        | D                                            | 1                          | 3.54E-04                                        |
|                                                           | 11400        | U-238        | W                                            | <b>621</b>                 | 1.17E+00                                        |

NOTE: The data values shown in bold and boxed represent the highest value in each category.

\* An intake event may involve multiple nuclides; individuals may incur multiple intakes during the year. The number of intake records given here indicates the number of separate intake reports that were submitted using NRC Form 5 under 10 CFR 20.2206.

Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities 2024  
DRAFT Tables and Figures

Table 3-8 Collective and Average CEDE by Licensee Category, 2024

| Licensee Category                                | Licensee Name                                  | License Number | Number with Meas. CEDE* | Collective CEDE (person-rem) | Average Meas. CEDE (rem) |
|--------------------------------------------------|------------------------------------------------|----------------|-------------------------|------------------------------|--------------------------|
| <b>MANUFACTURING AND DISTRIBUTION FACILITIES</b> |                                                |                |                         |                              |                          |
| 02500                                            | CARDINAL HEALTH                                | 34-29200-01MD  | <b>31</b>               | <b>0.059</b>                 | <b>0.002</b>             |
| 02500                                            | CARDINAL HEALTH                                | 34-31473-02MD  | 2                       | 0.002                        | 0.001                    |
|                                                  | <b>Totals and Averages</b>                     |                | <b>33</b>               | <b>0.061</b>                 | <b>0.002</b>             |
| <b>MANUFACTURING AND DISTRIBUTION FACILITIES</b> |                                                |                |                         |                              |                          |
| 03211                                            | CURIUM US, LLC                                 | 24-04206-01    | 1                       | 0.317                        | 0.317                    |
|                                                  | <b>Totals and Averages</b>                     |                | 1                       | 0.317                        | 0.317                    |
| <b>UF<sub>6</sub> PRODUCTION FACILITIES</b>      |                                                |                |                         |                              |                          |
| 11400                                            | HONEYWELL PERFORMANCE MATERIALS AND TECHNOLOGY | SUB-0526       | <b>621</b>              | <b>20.404</b>                | <b>0.033</b>             |
|                                                  | <b>Totals and Averages</b>                     |                | <b>621</b>              | <b>20.404</b>                | <b>0.033</b>             |
| <b>FUEL FABRICATION FACILITIES</b>               |                                                |                |                         |                              |                          |
| 21210                                            | BWX TECHNOLOGIES, INC                          | SNM-0042       | 261                     | 8.418                        | 0.032                    |
| 21210                                            | FRAMATOME INC                                  | SNM-1227       | 214                     | 18.804                       | 0.088                    |
| 21210                                            | GLOBAL NUCLEAR FUEL—AMERICAS, LLC              | SNM-1097       | 197                     | 15.257                       | 0.077                    |
| 21210                                            | NUCLEAR FUEL SERVICES, INC.                    | SNM-0124       | <b>568</b>              | 2.983                        | 0.005                    |
| 21210                                            | WESTINGHOUSE ELECTRIC COMPANY, LLC             | SNM-1107       | 293                     | <b>36.979</b>                | <b>0.126</b>             |
|                                                  | <b>Totals and Averages</b>                     |                | <b>1,533</b>            | <b>82.441</b>                | <b>0.054</b>             |
| <b>COMMERCIAL LIGHT-WATER REACTORS</b>           |                                                |                |                         |                              |                          |
| 41111                                            | ARKANSAS                                       | DPR-51         | 4                       | 0.014                        | 0.004                    |
| 41111                                            | COLUMBIA GENERATING                            | NPF-21         | 1                       | 0.004                        | 0.004                    |
| 41111                                            | FERMI                                          | NPF-43         | 6                       | 0.011                        | 0.002                    |
| 41111                                            | RIVER BEND                                     | NPF-47         | 1                       | 0.001                        | 0.001                    |
| 41111                                            | SOUTH TEXAS                                    | NPF-76         | 2                       | 0.003                        | 0.002                    |
| 41111                                            | COOK                                           | DPR-58         | <b>10</b>               | <b>0.198</b>                 | <b>0.020</b>             |
| 41111                                            | MILLSTONE                                      | NPF-49         | 1                       | 0.007                        | 0.007                    |
| 41111                                            | FITZPATRICK                                    | DPR-59         | 1                       | 0.001                        | 0.001                    |
| 41111                                            | SUMMER                                         | NPF-12         | 1                       | 0.010                        | 0.010                    |
| 41111                                            | GRAND GULF                                     | NPF-29         | 2                       | 0.011                        | 0.006                    |
|                                                  | <b>Totals and Averages</b>                     |                | <b>29</b>               | <b>0.260</b>                 | <b>0.009</b>             |
| <b>Grand Totals and Averages</b>                 |                                                |                | <b>2,217</b>            | <b>103.483</b>               | <b>0.047</b>             |

NOTE: The data values shown in bold and boxed represent the highest value in each category.

\* CEDE is defined as committed effective dose equivalent.

**Table 3-9 Internal Dose (CEDE) Distribution, 1994–2024**

| Year | Number of Individuals with CEDE in Range (rem) * |             |             |             |             |           |         |         |         |         | Number with Meas. CEDE | Collective CEDE (person-rem) | Average Meas. CEDE (rem) |
|------|--------------------------------------------------|-------------|-------------|-------------|-------------|-----------|---------|---------|---------|---------|------------------------|------------------------------|--------------------------|
|      | Meas. – 0.020                                    | 0.020–0.100 | 0.100–0.250 | 0.250–0.500 | 0.500–0.750 | 0.750–1.0 | 1.0–2.0 | 2.0–3.0 | 3.0–4.0 | 4.0–5.0 |                        |                              |                          |
| 1994 | 3,425                                            | 577         | 287         | 683         | 237         | 141       | 293     | 69      | 2       | -       | 5,714                  | 1,170.453                    | 0.205                    |
| 1995 | 2,869                                            | 691         | 338         | 730         | 254         | 147       | 290     | 49      | 2       | -       | 5,370                  | 1,167.105                    | 0.217                    |
| 1996 | 3,096                                            | 598         | 305         | 584         | 324         | 138       | 187     | 22      | 2       | 2       | 5,258                  | 931.799                      | 0.177                    |
| 1997 | 3,835                                            | 869         | 381         | 827         | 267         | 148       | 169     | 30      | -       | -       | 6,526                  | 998.406                      | 0.153                    |
| 1998 | 3,310                                            | 932         | 426         | 746         | 246         | 140       | 153     | 21      | 2       | -       | 5,976                  | 922.935                      | 0.154                    |
| 1999 | 3,423                                            | 752         | 466         | 438         | 206         | 117       | 173     | 29      | -       | -       | 5,604                  | 813.605                      | 0.145                    |
| 2000 | 3,275                                            | 1,001       | 570         | 383         | 216         | 98        | 224     | 58      | 7       | 1       | 5,833                  | 988.640                      | 0.169                    |
| 2001 | 1,774                                            | 827         | 716         | 364         | 128         | 53        | 146     | 82      | 15      | 1       | 4,106                  | 884.134                      | 0.215                    |
| 2002 | 1,760                                            | 746         | 647         | 531         | 144         | 33        | 23      | 3       | -       | -       | 3,887                  | 494.821                      | 0.127                    |
| 2003 | 2,208                                            | 778         | 726         | 388         | 116         | 17        | 5       | -       | -       | -       | 4,238                  | 395.573                      | 0.093                    |
| 2004 | 1,989                                            | 838         | 657         | 381         | 105         | 17        | 3       | -       | -       | -       | 3,990                  | 375.021                      | 0.094                    |
| 2005 | 1,205                                            | 706         | 685         | 341         | 98          | 33        | 2       | -       | -       | -       | 3,070                  | 365.258                      | 0.119                    |
| 2006 | 1,302                                            | 726         | 686         | 346         | 96          | 18        | 3       | -       | -       | -       | 3,177                  | 346.918                      | 0.109                    |
| 2007 | 1,480                                            | 805         | 646         | 310         | 52          | 5         | 3       | -       | -       | -       | 3,301                  | 300.863                      | 0.091                    |
| 2008 | 1,008                                            | 761         | 526         | 303         | 41          | 8         | 4       | -       | -       | -       | 2,651                  | 267.415                      | 0.101                    |
| 2009 | 1,115                                            | 711         | 597         | 229         | 80          | 21        | 7       | -       | -       | -       | 2,760                  | 293.251                      | 0.106                    |
| 2010 | 1,216                                            | 884         | 669         | 210         | 67          | 30        | 6       | -       | -       | -       | 3,082                  | 308.332                      | 0.100                    |
| 2011 | 1,243                                            | 916         | 628         | 270         | 72          | 19        | 14      | 1       | -       | -       | 3,163                  | 322.615                      | 0.102                    |
| 2012 | 1,158                                            | 933         | 554         | 155         | 52          | 6         | 3       | -       | -       | -       | 2,861                  | 232.462                      | 0.081                    |
| 2013 | 1,632                                            | 758         | 353         | 149         | 20          | 1         | -       | -       | -       | -       | 2,913                  | 164.799                      | 0.057                    |
| 2014 | 1,175                                            | 829         | 417         | 86          | 24          | 1         | -       | -       | -       | -       | 2,532                  | 157.191                      | 0.062                    |
| 2015 | 1,036                                            | 838         | 442         | 103         | 16          | -         | -       | -       | -       | -       | 2,435                  | 162.670                      | 0.067                    |
| 2016 | 1,100                                            | 920         | 407         | 69          | 7           | -         | -       | -       | -       | -       | 2,503                  | 144.627                      | 0.058                    |
| 2017 | 1,073                                            | 766         | 324         | 99          | 6           | -         | -       | -       | -       | -       | 2,268                  | 128.373                      | 0.057                    |
| 2018 | 1,159                                            | 489         | 297         | 99          | 1           | -         | -       | -       | -       | -       | 2,045                  | 112.004                      | 0.055                    |
| 2019 | 1,096                                            | 482         | 318         | 91          | 3           | 1         | -       | -       | -       | -       | 1,991                  | 111.187                      | 0.056                    |
| 2020 | 978                                              | 484         | 291         | 75          | 2           | -         | -       | -       | -       | -       | 1,830                  | 99.151                       | 0.054                    |
| 2021 | 1,141                                            | 475         | 268         | 81          | 2           | 1         | -       | -       | -       | -       | 1,968                  | 99.971                       | 0.051                    |
| 2022 | 1,352                                            | 665         | 266         | 90          | 4           | 0         | -       | -       | -       | -       | 2,377                  | 110.594                      | 0.047                    |
| 2023 | 1,446                                            | 657         | 302         | 65          | 3           | 0         | -       | -       | -       | -       | 2,473                  | 110.230                      | 0.045                    |
| 2024 | 1,312                                            | 575         | 256         | 67          | 7           | 0         | -       | -       | -       | -       | 2,217                  | 103.483                      | 0.047                    |

\* CEDE values exactly equal to the values separating ranges are reported in the next higher range.

## DRAFT Tables and Figures

Table 4-1 Summary of Information Reported by Commercial BWRs, 1994–2024

| Year | Number of Reactors Included* | Number of Individuals with Measurable TEDE** | Annual Collective TEDE (person-rem) | Average Measurable TEDE per Individual (rem)** | Average Collective TEDE per Reactor (person rem) | Average Number of Individuals with Measurable TEDE per Reactor** | Electricity Generated*** (MW-yr) | Average Collective TEDE per MW-yr (person-rem/ MW-yr) | Average Electricity Generated per Reactor (MW-yr) | Average Maximum Dependable Capacity Net (Mwe) | Maximum Dependable Capacity Achieved |
|------|------------------------------|----------------------------------------------|-------------------------------------|------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------|----------------------------------|-------------------------------------------------------|---------------------------------------------------|-----------------------------------------------|--------------------------------------|
| 1994 | 37                           | 39,171                                       | 12,098                              | 0.31                                           | 327                                              | 1,059                                                            | 22,139.0                         | 0.55                                                  | 598                                               | 801                                           | 75%                                  |
| 1995 | 37                           | 35,686                                       | 9,471                               | 0.27                                           | 256                                              | 964                                                              | 24,737.0                         | 0.38                                                  | 669                                               | 835                                           | 80%                                  |
| 1996 | 37                           | 37,792                                       | 9,466                               | 0.25                                           | 256                                              | 1,021                                                            | 24,322.2                         | 0.39                                                  | 657                                               | 838                                           | 78%                                  |
| 1997 | 37                           | 34,021                                       | 7,603                               | 0.22                                           | 205                                              | 919                                                              | 22,866.1                         | 0.33                                                  | 618                                               | 845                                           | 73%                                  |
| 1998 | 36                           | 32,899                                       | 6,829.296                           | 0.21                                           | 190                                              | 914                                                              | 23,781.2                         | 0.29                                                  | 661                                               | 874                                           | 76%                                  |
| 1999 | 35                           | 31,482                                       | 6,434.430                           | 0.20                                           | 184                                              | 899                                                              | 26,962.6                         | 0.24                                                  | 770                                               | 885                                           | 87%                                  |
| 2000 | 35                           | 31,186                                       | 6,089.676                           | 0.20                                           | 174                                              | 891                                                              | 28,476.9                         | 0.21                                                  | 814                                               | 893                                           | 91%                                  |
| 2001 | 35                           | 28,797                                       | 4,835.397                           | 0.17                                           | 138                                              | 823                                                              | 28,730.4                         | 0.17                                                  | 821                                               | 895                                           | 92%                                  |
| 2002 | 35                           | 30,978                                       | 6,107.767                           | 0.20                                           | 175                                              | 885                                                              | 29,460.0                         | 0.21                                                  | 842                                               | 907                                           | 93%                                  |
| 2003 | 35                           | 30,759                                       | 5,659.434                           | 0.18                                           | 162                                              | 879                                                              | 29,094.4                         | 0.19                                                  | 831                                               | 912                                           | 91%                                  |
| 2004 | 35                           | 33,948                                       | 5,450.982                           | 0.16                                           | 156                                              | 970                                                              | 29,424.8                         | 0.19                                                  | 841                                               | 893                                           | 94%                                  |
| 2005 | 35                           | 33,544                                       | 5,995.975                           | 0.18                                           | 171                                              | 958                                                              | 29,386.8                         | 0.20                                                  | 840                                               | 946                                           | 89%                                  |
| 2006 | 35                           | 34,159                                       | 4,989.761                           | 0.15                                           | 143                                              | 976                                                              | 30,238.4                         | 0.17                                                  | 864                                               | 954                                           | 91%                                  |
| 2007 | 35                           | 37,515                                       | 5,388.416                           | 0.14                                           | 154                                              | 1,072                                                            | 30,189.3                         | 0.18                                                  | 863                                               | 955                                           | 90%                                  |
| 2008 | 35                           | 34,642                                       | 4,522.413                           | 0.13                                           | 129                                              | 990                                                              | 31,248.3                         | 0.14                                                  | 893                                               | 957                                           | 93%                                  |
| 2009 | 35                           | 36,207                                       | 5,282.869                           | 0.15                                           | 151                                              | 1,034                                                            | 30,762.7                         | 0.17                                                  | 879                                               | 959                                           | 92%                                  |
| 2010 | 35                           | 37,214                                       | 4,807.656                           | 0.13                                           | 137                                              | 1,063                                                            | 31,274.6                         | 0.15                                                  | 894                                               | 961                                           | 93%                                  |
| 2011 | 35                           | 38,202                                       | 4,976.503                           | 0.13                                           | 142                                              | 1,091                                                            | 30,549.7                         | 0.16                                                  | 873                                               | 937                                           | 93%                                  |
| 2012 | 35                           | 38,164                                       | 4,200.281                           | 0.11                                           | 120                                              | 1,090                                                            | 30,485.4                         | 0.14                                                  | 871                                               | 968                                           | 90%                                  |
| 2013 | 35                           | 36,513                                       | 4,459.270                           | 0.12                                           | 127                                              | 1,043                                                            | 31,221.1                         | 0.14                                                  | 892                                               | 967                                           | 92%                                  |
| 2014 | 35                           | 33,706                                       | 3,798.108                           | 0.11                                           | 109                                              | 963                                                              | 31,904.2                         | 0.12                                                  | 912                                               | 976                                           | 93%                                  |
| 2015 | 34                           | 35,346                                       | 4,155.273                           | 0.12                                           | 122                                              | 1,040                                                            | 31,720.1                         | 0.13                                                  | 933                                               | 992                                           | 94%                                  |
| 2016 | 34                           | 31,299                                       | 3,339.055                           | 0.11                                           | 98                                               | 921                                                              | 31,464.8                         | 0.11                                                  | 925                                               | 995                                           | 93%                                  |
| 2017 | 34                           | 32,234                                       | 4,007.342                           | 0.12                                           | 118                                              | 948                                                              | 31,820.0                         | 0.13                                                  | 936                                               | 995                                           | 94%                                  |
| 2018 | 33                           | 31,169                                       | 3,659.588                           | 0.12                                           | 111                                              | 945                                                              | 30,722.7                         | 0.12                                                  | 931                                               | 1,008                                         | 92%                                  |
| 2019 | 32                           | 29,100                                       | 3,372.909                           | 0.12                                           | 105                                              | 909                                                              | 31,237.4                         | 0.11                                                  | 976                                               | 1,018                                         | 96%                                  |
| 2020 | 31                           | 26,398                                       | 2,946.746                           | 0.11                                           | 95                                               | 852                                                              | 30,249.1                         | 0.10                                                  | 976                                               | 1,032                                         | 95%                                  |
| 2021 | 31                           | 26,540                                       | 3,345.582                           | 0.13                                           | 108                                              | 856                                                              | 30,946.5                         | 0.11                                                  | 998                                               | 1,043                                         | 96%                                  |
| 2022 | 31                           | 25,318                                       | 3,111.590                           | 0.12                                           | 100                                              | 817                                                              | 30,335.1                         | 0.10                                                  | 979                                               | 1,042                                         | 94%                                  |
| 2023 | 31                           | 26,135                                       | 3,607.444                           | 0.14                                           | 116                                              | 843                                                              | 30,465.2                         | 0.12                                                  | 983                                               | 1,043                                         | 94%                                  |
| 2024 | 31                           | 26,566                                       | 2,943.736                           | 0.11                                           | 95                                               | 857                                                              | 30,864.1                         | 0.10                                                  | 996                                               | 1,043                                         | 95%                                  |

NOTE: TEDE is defined as total effective dose equivalent.

\* Includes only those reactors that had been in commercial operation for at least 1 full year as of December 31 of each of the indicated years.

\*\* Figures are not adjusted for the multiple reporting of transient individuals (see section 5).

\*\*\* Beginning in 1997, the data on electricity generated indicate the net electricity generated.

## DRAFT Tables and Figures

Table 4-2 Summary of Information Reported by Commercial PWRs, 1994–2024

| Year | Number of Reactors Included* | Number of Individuals with Measurable TEDE** | Annual Collective TEDE (person-rem) | Average Measurable TEDE per Individual (rem)** | Average Collective TEDE per Reactor (person rem) | Average Number of Individuals with Measurable TEDE per Reactor** | Electricity Generated*** (MW-yr) | Average Collective TEDE per MW-yr (person-rem/ MW-yr) | Average Electricity Generated per Reactor (MW-yr) | Average Maximum Dependable Capacity Net (Mwe) | Maximum Dependable Capacity Achieved |
|------|------------------------------|----------------------------------------------|-------------------------------------|------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------|----------------------------------|-------------------------------------------------------|---------------------------------------------------|-----------------------------------------------|--------------------------------------|
| 1994 | 70                           | 44,283                                       | 9,574                               | 0.22                                           | 137                                              | 633                                                              | 52,397.6                         | 0.18                                                  | 749                                               | 928                                           | 81%                                  |
| 1995 | 70                           | 49,985                                       | 11,762                              | 0.24                                           | 168                                              | 714                                                              | 54,138.2                         | 0.22                                                  | 773                                               | 929                                           | 83%                                  |
| 1996 | 72                           | 46,852                                       | 9,417                               | 0.20                                           | 131                                              | 651                                                              | 55,337.8                         | 0.17                                                  | 769                                               | 935                                           | 82%                                  |
| 1997 | 72                           | 50,690                                       | 9,546                               | 0.19                                           | 133                                              | 704                                                              | 48,985.3                         | 0.19                                                  | 680                                               | 943                                           | 72%                                  |
| 1998 | 69                           | 38,586                                       | 6,358.096                           | 0.16                                           | 92                                               | 559                                                              | 53,288.7                         | 0.12                                                  | 772                                               | 942                                           | 82%                                  |
| 1999 | 69                           | 43,938                                       | 7,231.281                           | 0.16                                           | 105                                              | 637                                                              | 56,235.0                         | 0.13                                                  | 815                                               | 942                                           | 87%                                  |
| 2000 | 69                           | 42,922                                       | 6,562.006                           | 0.15                                           | 95                                               | 622                                                              | 57,529.9                         | 0.11                                                  | 834                                               | 943                                           | 88%                                  |
| 2001 | 69                           | 38,773                                       | 6,273.155                           | 0.16                                           | 91                                               | 562                                                              | 58,822.4                         | 0.11                                                  | 852                                               | 946                                           | 90%                                  |
| 2002 | 69                           | 42,264                                       | 6,018.423                           | 0.14                                           | 87                                               | 613                                                              | 59,369.7                         | 0.10                                                  | 860                                               | 947                                           | 91%                                  |
| 2003 | 69                           | 44,054                                       | 6,296.136                           | 0.14                                           | 91                                               | 638                                                              | 57,920.6                         | 0.11                                                  | 839                                               | 949                                           | 88%                                  |
| 2004 | 69                           | 35,901                                       | 4,916.915                           | 0.14                                           | 71                                               | 520                                                              | 60,398.7                         | 0.08                                                  | 875                                               | 943                                           | 93%                                  |
| 2005 | 69                           | 44,583                                       | 5,459.832                           | 0.12                                           | 79                                               | 646                                                              | 59,790.9                         | 0.09                                                  | 867                                               | 955                                           | 91%                                  |
| 2006 | 69                           | 46,106                                       | 6,031.425                           | 0.13                                           | 87                                               | 668                                                              | 59,751.3                         | 0.10                                                  | 866                                               | 960                                           | 90%                                  |
| 2007 | 69                           | 42,015                                       | 4,731.597                           | 0.11                                           | 69                                               | 609                                                              | 61,955.6                         | 0.08                                                  | 898                                               | 961                                           | 93%                                  |
| 2008 | 69                           | 44,808                                       | 4,673.527                           | 0.10                                           | 68                                               | 649                                                              | 60,586.0                         | 0.08                                                  | 878                                               | 964                                           | 91%                                  |
| 2009 | 69                           | 45,547                                       | 4,741.935                           | 0.10                                           | 69                                               | 660                                                              | 60,467.9                         | 0.08                                                  | 876                                               | 966                                           | 91%                                  |
| 2010 | 69                           | 37,796                                       | 3,823.728                           | 0.10                                           | 55                                               | 548                                                              | 60,859.4                         | 0.06                                                  | 882                                               | 967                                           | 91%                                  |
| 2011 | 69                           | 43,119                                       | 3,795.601                           | 0.09                                           | 55                                               | 625                                                              | 59,682.5                         | 0.06                                                  | 865                                               | 937                                           | 92%                                  |
| 2012 | 69                           | 41,385                                       | 3,835.112                           | 0.09                                           | 56                                               | 600                                                              | 57,272.5                         | 0.07                                                  | 830                                               | 974                                           | 85%                                  |
| 2013 | 65                           | 30,723                                       | 2,300.277                           | 0.07                                           | 35                                               | 473                                                              | 58,785.5                         | 0.04                                                  | 904                                               | 987                                           | 92%                                  |
| 2014 | 65                           | 37,141                                       | 3,326.411                           | 0.09                                           | 51                                               | 571                                                              | 59,262.2                         | 0.06                                                  | 912                                               | 989                                           | 92%                                  |
| 2015 | 65                           | 35,452                                       | 2,863.815                           | 0.08                                           | 44                                               | 545                                                              | 59,377.2                         | 0.05                                                  | 913                                               | 990                                           | 92%                                  |
| 2016 | 65                           | 28,054                                       | 2,026.654                           | 0.07                                           | 31                                               | 432                                                              | 60,052.5                         | 0.03                                                  | 924                                               | 1,001                                         | 92%                                  |
| 2017 | 65                           | 32,527                                       | 2,409.206                           | 0.07                                           | 37                                               | 500                                                              | 60,148.9                         | 0.04                                                  | 925                                               | 1,001                                         | 92%                                  |
| 2018 | 65                           | 29,845                                       | 2,169.883                           | 0.07                                           | 34                                               | 459                                                              | 61,113.7                         | 0.04                                                  | 940                                               | 1,002                                         | 94%                                  |
| 2019 | 64                           | 24,515                                       | 1,707.886                           | 0.07                                           | 27                                               | 383                                                              | 60,400.6                         | 0.03                                                  | 944                                               | 1,008                                         | 94%                                  |
| 2020 | 64                           | 26,422                                       | 1,952.382                           | 0.07                                           | 31                                               | 413                                                              | 59,648.7                         | 0.03                                                  | 932                                               | 1,008                                         | 92%                                  |
| 2021 | 62                           | 24,127                                       | 1,957.616                           | 0.08                                           | 32                                               | 389                                                              | 57,834.3                         | 0.03                                                  | 933                                               | 1,008                                         | 93%                                  |
| 2022 | 61                           | 25,692                                       | 1,973.696                           | 0.08                                           | 32                                               | 421                                                              | 57,506.2                         | 0.03                                                  | 943                                               | 1,013                                         | 93%                                  |
| 2023 | 61                           | 24,914                                       | 1,944.617                           | 0.08                                           | 32                                               | 408                                                              | 57,643.9                         | 0.03                                                  | 945                                               | 1,013                                         | 93%                                  |
| 2024 | 62                           | 25,516                                       | 1,959.647                           | 0.08                                           | 32                                               | 412                                                              | 57,473.3                         | 0.03                                                  | 927                                               | 1,013                                         | 92%                                  |

NOTE: TEDE is defined as total effective dose equivalent.

\* Includes only those reactors that had been in commercial operation for at least 1 full year as of December 31 of each of the indicated years.

\*\* Figures are not adjusted for the multiple reporting of transient individuals (see section 5).

\*\*\* Beginning in 1997, the data on electricity generated indicate the net electricity generated.

## DRAFT Tables and Figures

Table 4-3 Summary of Information Reported by All Commercial LWRs, 1994–2024

| Year | Number of Reactors Included* | Number of Individuals with Measurable TEDE** | Annual Collective TEDE (person-rem) | Average Measurable TEDE per Individual (rem)** | Average Collective TEDE per Reactor (person rem) | Average Number of Individuals with Measurable TEDE per Reactor** | Electricity Generated*** (MW-yr) | Average Collective TEDE per MW-yr (person-rem/ MW-yr) | Average Electricity Generated per Reactor (MW-yr) | Average Maximum Dependable Capacity Net (Mwe) | Maximum Dependable Capacity Achieved |
|------|------------------------------|----------------------------------------------|-------------------------------------|------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------|----------------------------------|-------------------------------------------------------|---------------------------------------------------|-----------------------------------------------|--------------------------------------|
| 1994 | 107                          | 83,454                                       | 21,672                              | 0.26                                           | 203                                              | 780                                                              | 74,536.6                         | 0.29                                                  | 697                                               | 884                                           | 79%                                  |
| 1995 | 107                          | 85,671                                       | 21,233                              | 0.25                                           | 198                                              | 801                                                              | 78,875.2                         | 0.27                                                  | 737                                               | 896                                           | 82%                                  |
| 1996 | 109                          | 84,644                                       | 18,883                              | 0.22                                           | 173                                              | 777                                                              | 79,660.0                         | 0.24                                                  | 731                                               | 902                                           | 81%                                  |
| 1997 | 109                          | 84,711                                       | 17,149                              | 0.20                                           | 157                                              | 777                                                              | 71,851.4                         | 0.24                                                  | 659                                               | 910                                           | 72%                                  |
| 1998 | 105                          | 71,485                                       | 13,187.392                          | 0.18                                           | 126                                              | 681                                                              | 77,069.9                         | 0.17                                                  | 734                                               | 918                                           | 80%                                  |
| 1999 | 104                          | 75,420                                       | 13,665.711                          | 0.18                                           | 131                                              | 725                                                              | 83,197.6                         | 0.16                                                  | 800                                               | 923                                           | 87%                                  |
| 2000 | 104                          | 74,108                                       | 12,651.682                          | 0.17                                           | 122                                              | 713                                                              | 86,006.8                         | 0.15                                                  | 827                                               | 926                                           | 89%                                  |
| 2001 | 104                          | 67,570                                       | 11,108.552                          | 0.16                                           | 107                                              | 650                                                              | 87,552.8                         | 0.13                                                  | 842                                               | 929                                           | 91%                                  |
| 2002 | 104                          | 73,242                                       | 12,126.190                          | 0.17                                           | 117                                              | 704                                                              | 88,829.7                         | 0.14                                                  | 854                                               | 934                                           | 91%                                  |
| 2003 | 104                          | 74,813                                       | 11,955.570                          | 0.16                                           | 115                                              | 719                                                              | 87,015.0                         | 0.14                                                  | 837                                               | 936                                           | 89%                                  |
| 2004 | 104                          | 69,849                                       | 10,367.897                          | 0.15                                           | 100                                              | 672                                                              | 89,823.5                         | 0.12                                                  | 864                                               | 926                                           | 93%                                  |
| 2005 | 104                          | 78,127                                       | 11,455.807                          | 0.15                                           | 110                                              | 751                                                              | 89,177.7                         | 0.13                                                  | 857                                               | 952                                           | 90%                                  |
| 2006 | 104                          | 80,265                                       | 11,021.186                          | 0.14                                           | 106                                              | 772                                                              | 89,989.7                         | 0.12                                                  | 865                                               | 958                                           | 90%                                  |
| 2007 | 104                          | 79,530                                       | 10,120.013                          | 0.13                                           | 97                                               | 765                                                              | 92,144.9                         | 0.11                                                  | 886                                               | 959                                           | 92%                                  |
| 2008 | 104                          | 79,450                                       | 9,195.940                           | 0.12                                           | 88                                               | 764                                                              | 91,834.3                         | 0.10                                                  | 883                                               | 961                                           | 92%                                  |
| 2009 | 104                          | 81,754                                       | 10,024.804                          | 0.12                                           | 96                                               | 786                                                              | 91,230.6                         | 0.11                                                  | 877                                               | 964                                           | 91%                                  |
| 2010 | 104                          | 75,010                                       | 8,631.384                           | 0.12                                           | 83                                               | 721                                                              | 92,134.0                         | 0.09                                                  | 886                                               | 965                                           | 92%                                  |
| 2011 | 104                          | 81,321                                       | 8,771.326                           | 0.11                                           | 84                                               | 782                                                              | 90,232.2                         | 0.10                                                  | 868                                               | 967                                           | 90%                                  |
| 2012 | 104                          | 79,549                                       | 8,035.393                           | 0.10                                           | 77                                               | 765                                                              | 87,757.9                         | 0.09                                                  | 844                                               | 972                                           | 87%                                  |
| 2013 | 100                          | 67,236                                       | 6,759.547                           | 0.10                                           | 68                                               | 672                                                              | 90,006.6                         | 0.08                                                  | 900                                               | 980                                           | 92%                                  |
| 2014 | 100                          | 70,847                                       | 7,124.519                           | 0.10                                           | 71                                               | 708                                                              | 91,166.4                         | 0.08                                                  | 912                                               | 985                                           | 93%                                  |
| 2015 | 99                           | 70,798                                       | 7,019.088                           | 0.10                                           | 71                                               | 715                                                              | 91,097.3                         | 0.08                                                  | 920                                               | 991                                           | 93%                                  |
| 2016 | 99                           | 59,353                                       | 5,365.709                           | 0.09                                           | 54                                               | 600                                                              | 91,517.3                         | 0.06                                                  | 924                                               | 999                                           | 93%                                  |
| 2017 | 99                           | 64,761                                       | 6,416.548                           | 0.10                                           | 65                                               | 654                                                              | 91,968.8                         | 0.07                                                  | 929                                               | 999                                           | 93%                                  |
| 2018 | 98                           | 61,014                                       | 5,829.471                           | 0.10                                           | 59                                               | 623                                                              | 91,836.4                         | 0.06                                                  | 937                                               | 1,004                                         | 93%                                  |
| 2019 | 96                           | 53,615                                       | 5,080.795                           | 0.09                                           | 53                                               | 558                                                              | 91,638.0                         | 0.06                                                  | 955                                               | 1,011                                         | 94%                                  |
| 2020 | 95                           | 52,820                                       | 4,899.128                           | 0.09                                           | 52                                               | 556                                                              | 89,897.8                         | 0.05                                                  | 946                                               | 1,016                                         | 93%                                  |
| 2021 | 93                           | 50,667                                       | 5,303.198                           | 0.10                                           | 57                                               | 545                                                              | 88,780.8                         | 0.06                                                  | 955                                               | 1,020                                         | 94%                                  |
| 2022 | 92                           | 51,010                                       | 5,085.286                           | 0.10                                           | 55                                               | 554                                                              | 87,841.3                         | 0.06                                                  | 955                                               | 1,023                                         | 93%                                  |
| 2023 | 92                           | 51,049                                       | 5,552.061                           | 0.11                                           | 60                                               | 555                                                              | 88,109.0                         | 0.06                                                  | 958                                               | 1,022                                         | 94%                                  |
| 2024 | 93                           | 52,082                                       | 4,903.383                           | 0.09                                           | 53                                               | 560                                                              | 88,337.4                         | 0.06                                                  | 950                                               | 1,023                                         | 93%                                  |

NOTE: TEDE is defined as total effective dose equivalent.

\* Includes only those reactors that had been in commercial operation for at least 1 full year as of December 31 of each of the indicated years.

\*\* Figures are not adjusted for the multiple reporting of transient individuals (see section 5).

\*\*\* Beginning in 1997, the data on electricity generated indicate the net electricity generated.

## DRAFT Tables and Figures

Table 4-4a Summary of Distribution of Annual TEDE at Commercial LWRs,\* 1994–2024

| Year | Number of Individuals with TEDE in Range (rem)** |                  |           |           |           |          |         |         |         |         |      | Total Number Monitored | Number with Measurable Exposure | Collective TEDE (person-rem) | Average Measurable TEDE (rem) |
|------|--------------------------------------------------|------------------|-----------|-----------|-----------|----------|---------|---------|---------|---------|------|------------------------|---------------------------------|------------------------------|-------------------------------|
|      | No. Measurable Exposure                          | Measurable <0.01 | 0.10–0.25 | 0.25–0.50 | 0.50–0.75 | 0.75–1.0 | 1.0–2.0 | 2.0–3.0 | 3.0–4.0 | 4.0–5.0 | >5.0 |                        |                                 |                              |                               |
| 1994 | 85,145                                           | 36,528           | 18,633    | 14,246    | 6,800     | 3,502    | 3,323   | 215     | 6       | -       | -    | 168,398                | 83,253                          | 21,534.000                   | 0.259                         |
| 1995 | 81,032                                           | 38,575           | 20,245    | 15,279    | 6,884     | 3,336    | 3,077   | 125     | 5       | -       | -    | 168,558                | 87,526                          | 21,674.000                   | 0.248                         |
| 1996 | 78,197                                           | 39,426           | 19,955    | 14,201    | 5,809     | 2,648    | 2,342   | 68      | -       | -       | -    | 162,646                | 84,449                          | 18,874.000                   | 0.223                         |
| 1997 | 80,163                                           | 41,759           | 19,951    | 13,396    | 5,394     | 2,240    | 1,671   | 59      | 3       | -       | -    | 164,636                | 84,473                          | 17,136.000                   | 0.203                         |
| 1998 | 77,080                                           | 37,039           | 17,189    | 10,467    | 3,930     | 1,562    | 1,129   | 35      | -       | -       | -    | 148,431                | 71,351                          | 13,169.366                   | 0.185                         |
| 1999 | 74,867                                           | 39,663           | 18,063    | 10,964    | 3,994     | 1,569    | 1,141   | 24      | 2       | -       | -    | 150,287                | 75,420                          | 13,665.711                   | 0.181                         |
| 2000 | 73,793                                           | 40,301           | 17,598    | 10,310    | 3,525     | 1,375    | 976     | 23      | -       | -       | -    | 147,901                | 74,108                          | 12,651.682                   | 0.171                         |
| 2001 | 73,206                                           | 37,461           | 16,078    | 9,231     | 2,930     | 1,060    | 747     | 63      | -       | -       | -    | 140,776                | 67,570                          | 11,108.552                   | 0.164                         |
| 2002 | 76,270                                           | 41,588           | 16,752    | 9,426     | 3,121     | 1,245    | 1,003   | 105     | 2       | -       | -    | 149,512                | 73,242                          | 12,126.190                   | 0.166                         |
| 2003 | 77,889                                           | 42,720           | 17,231    | 9,589     | 3,139     | 1,233    | 864     | 37      | -       | -       | -    | 152,702                | 74,813                          | 11,955.570                   | 0.160                         |
| 2004 | 80,473                                           | 41,583           | 15,626    | 8,245     | 2,733     | 978      | 668     | 16      | -       | -       | -    | 150,322                | 69,849                          | 10,367.897                   | 0.148                         |
| 2005 | 82,574                                           | 46,444           | 17,754    | 9,191     | 2,934     | 1,104    | 683     | 17      | -       | -       | -    | 160,701                | 78,127                          | 11,455.807                   | 0.147                         |
| 2006 | 84,558                                           | 48,571           | 18,269    | 9,312     | 2,675     | 904      | 532     | 2       | -       | -       | -    | 164,823                | 80,265                          | 11,021.186                   | 0.137                         |
| 2007 | 84,551                                           | 49,998           | 17,672    | 8,294     | 2,329     | 824      | 402     | 11      | -       | -       | -    | 164,081                | 79,530                          | 10,120.013                   | 0.127                         |
| 2008 | 89,875                                           | 51,831           | 17,337    | 7,578     | 1,847     | 583      | 269     | 5       | -       | -       | -    | 169,325                | 79,450                          | 9,195.940                    | 0.116                         |
| 2009 | 94,627                                           | 52,670           | 17,417    | 8,352     | 2,161     | 741      | 413     | -       | -       | -       | -    | 176,381                | 81,754                          | 10,024.804                   | 0.123                         |
| 2010 | 104,638                                          | 49,571           | 16,042    | 6,656     | 1,801     | 602      | 333     | 5       | -       | -       | -    | 179,648                | 75,010                          | 8,631.384                    | 0.115                         |
| 2011 | 110,217                                          | 55,407           | 16,651    | 6,753     | 1,675     | 559      | 276     | -       | -       | -       | -    | 191,538                | 81,321                          | 8,771.326                    | 0.108                         |
| 2012 | 114,428                                          | 55,735           | 15,593    | 6,072     | 1,509     | 385      | 242     | 13      | -       | -       | -    | 193,977                | 79,549                          | 8,035.393                    | 0.101                         |
| 2013 | 107,378                                          | 47,190           | 13,158    | 5,088     | 1,227     | 380      | 191     | 2       | -       | -       | -    | 174,614                | 67,236                          | 6,759.547                    | 0.101                         |
| 2014 | 104,006                                          | 50,110           | 13,650    | 5,231     | 1,167     | 421      | 235     | 33      | -       | -       | -    | 174,853                | 70,847                          | 7,124.519                    | 0.101                         |
| 2015 | 106,088                                          | 50,067           | 13,856    | 4,980     | 1,230     | 421      | 242     | 2       | -       | -       | -    | 176,886                | 70,798                          | 7,019.088                    | 0.099                         |
| 2016 | 96,221                                           | 43,386           | 10,938    | 3,829     | 865       | 243      | 92      | -       | -       | -       | -    | 155,574                | 59,353                          | 5,365.709                    | 0.090                         |
| 2017 | 92,311                                           | 45,920           | 12,376    | 4,745     | 1,184     | 382      | 154     | -       | -       | -       | -    | 157,072                | 64,761                          | 6,416.548                    | 0.099                         |
| 2018 | 89,205                                           | 44,206           | 11,030    | 4,207     | 1,086     | 316      | 168     | 1       | -       | -       | -    | 150,219                | 61,014                          | 5,829.471                    | 0.096                         |
| 2019 | 81,282                                           | 39,068           | 9,512     | 3,636     | 942       | 300      | 156     | 1       | -       | -       | -    | 134,897                | 53,615                          | 5,080.795                    | 0.095                         |
| 2020 | 72,190                                           | 39,021           | 9,254     | 3,192     | 815       | 320      | 217     | 1       | -       | -       | -    | 125,010                | 52,820                          | 4,899.128                    | 0.093                         |
| 2021 | 72,014                                           | 36,168           | 9,206     | 3,521     | 999       | 478      | 286     | 9       | -       | -       | -    | 122,681                | 50,667                          | 5,303.198                    | 0.105                         |
| 2022 | 74,328                                           | 36,262           | 9,837     | 3,500     | 886       | 338      | 185     | 2       | -       | -       | -    | 125,338                | 51,010                          | 5,085.286                    | 0.100                         |
| 2023 | 73,843                                           | 35,725           | 9,635     | 3,840     | 1,113     | 423      | 308     | 5       | -       | -       | -    | 124,892                | 51,049                          | 5,552.061                    | 0.109                         |
| 2024 | 70,307                                           | 37,663           | 9,731     | 3,530     | 815       | 230      | 106     | 7       | -       | -       | -    | 122,389                | 52,082                          | 4,903.383                    | 0.094                         |

NOTE: TEDE is defined as total effective dose equivalent.

\* Data are from reports submitted in accordance with 10 CFR 20.2206 for BWRs and PWRs that had been in commercial operation for at least 1 full year as of December 31 of each of the indicated years. Figures have not been adjusted to account for transient individuals (see table 4-4b and section 5).

\*\* TEDE values exactly equal to the values separating ranges are reported in the next range.

## DRAFT Tables and Figures

Table 4-4b Summary of Distribution of Annual TEDE at Commercial LWRs,\* Adjusted for Transient Individuals, 1994–2024

| Year | Number of Individuals with TEDE in Range (rem)** |                  |           |           |           |          |         |         |         |         |      | Total Number Monitored | Number with Measurable Exposure | Collective TEDE (person-rem) | Average Measurable TEDE (rem) |
|------|--------------------------------------------------|------------------|-----------|-----------|-----------|----------|---------|---------|---------|---------|------|------------------------|---------------------------------|------------------------------|-------------------------------|
|      | No. Measurable Exposure                          | Measurable <0.01 | 0.10–0.25 | 0.25–0.50 | 0.50–0.75 | 0.75–1.0 | 1.0–2.0 | 2.0–3.0 | 3.0–4.0 | 4.0–5.0 | >5.0 |                        |                                 |                              |                               |
| 1994 | 67,700                                           | 29,847           | 14,841    | 11,716    | 6,124     | 3,586    | 4,222   | 508     | 40      | -       | -    | 138,584                | 70,884                          | 21,534.000                   | 0.304                         |
| 1995 | 61,505                                           | 29,588           | 15,097    | 12,020    | 6,121     | 3,300    | 3,906   | 595     | 133     | 2       | -    | 132,267                | 70,762                          | 21,674.000                   | 0.306                         |
| 1996 | 58,292                                           | 30,021           | 14,831    | 11,340    | 5,418     | 2,831    | 3,194   | 408     | 67      | -       | -    | 126,402                | 68,110                          | 18,874.000                   | 0.277                         |
| 1997 | 58,647                                           | 31,751           | 14,881    | 10,902    | 5,228     | 2,447    | 2,598   | 286     | 41      | -       | -    | 126,781                | 68,134                          | 17,136.000                   | 0.252                         |
| 1998 | 57,041                                           | 27,905           | 12,829    | 8,802     | 3,930     | 1,839    | 1,829   | 182     | 15      | 1       | -    | 114,373                | 57,332                          | 13,169.366                   | 0.230                         |
| 1999 | 55,121                                           | 29,271           | 13,278    | 9,017     | 3,806     | 1,908    | 1,898   | 245     | 18      | -       | -    | 114,562                | 59,441                          | 13,665.711                   | 0.230                         |
| 2000 | 53,324                                           | 28,480           | 12,921    | 8,679     | 3,571     | 1,644    | 1,734   | 186     | 18      | -       | -    | 110,557                | 57,233                          | 12,651.682                   | 0.221                         |
| 2001 | 52,636                                           | 27,246           | 11,491    | 7,659     | 2,907     | 1,323    | 1,392   | 221     | 53      | -       | -    | 104,928                | 52,292                          | 11,108.552                   | 0.212                         |
| 2002 | 53,440                                           | 28,523           | 11,610    | 7,668     | 3,004     | 1,479    | 1,820   | 320     | 35      | 1       | -    | 107,900                | 54,460                          | 12,126.190                   | 0.223                         |
| 2003 | 54,028                                           | 29,161           | 11,971    | 8,190     | 3,253     | 1,527    | 1,651   | 184     | 18      | -       | -    | 109,983                | 55,955                          | 11,955.570                   | 0.214                         |
| 2004 | 57,420                                           | 28,863           | 11,178    | 7,335     | 2,873     | 1,233    | 1,190   | 188     | 13      | -       | -    | 110,293                | 52,873                          | 10,367.897                   | 0.196                         |
| 2005 | 56,709                                           | 31,035           | 12,422    | 7,813     | 3,106     | 1,537    | 1,490   | 147     | 3       | -       | -    | 114,262                | 57,553                          | 11,455.807                   | 0.199                         |
| 2006 | 57,546                                           | 32,439           | 12,687    | 7,802     | 2,971     | 1,415    | 1,407   | 82      | 2       | -       | -    | 116,351                | 58,805                          | 11,021.186                   | 0.187                         |
| 2007 | 57,314                                           | 32,706           | 11,961    | 7,396     | 2,714     | 1,284    | 1,100   | 97      | 9       | -       | -    | 114,581                | 57,267                          | 10,120.013                   | 0.177                         |
| 2008 | 61,336                                           | 33,832           | 12,322    | 6,786     | 2,430     | 1,026    | 922     | 38      | -       | -       | -    | 118,692                | 57,356                          | 9,195.940                    | 0.160                         |
| 2009 | 66,310                                           | 35,877           | 12,318    | 7,317     | 2,562     | 1,174    | 1,144   | 68      | 4       | -       | -    | 126,774                | 60,464                          | 10,024.804                   | 0.166                         |
| 2010 | 74,218                                           | 33,873           | 11,670    | 6,356     | 2,231     | 946      | 832     | 42      | 3       | -       | -    | 130,171                | 55,953                          | 8,631.384                    | 0.154                         |
| 2011 | 78,090                                           | 36,745           | 12,119    | 6,307     | 2,226     | 1,008    | 837     | 23      | -       | -       | -    | 137,355                | 59,265                          | 8,771.326                    | 0.148                         |
| 2012 | 79,222                                           | 36,990           | 11,943    | 5,904     | 1,962     | 774      | 672     | 37      | -       | -       | -    | 137,504                | 58,282                          | 8,035.393                    | 0.138                         |
| 2013 | 76,261                                           | 32,326           | 10,166    | 5,231     | 1,680     | 674      | 430     | 18      | -       | -       | -    | 126,786                | 50,525                          | 6,759.547                    | 0.134                         |
| 2014 | 73,390                                           | 32,917           | 10,285    | 5,212     | 1,685     | 695      | 589     | 58      | -       | -       | -    | 124,831                | 51,441                          | 7,124.519                    | 0.138                         |
| 2015 | 71,980                                           | 31,806           | 10,208    | 5,034     | 1,686     | 708      | 647     | 27      | 3       | -       | -    | 122,099                | 50,119                          | 7,019.088                    | 0.140                         |
| 2016 | 67,685                                           | 29,063           | 8,736     | 4,196     | 1,236     | 429      | 332     | 16      | 1       | -       | -    | 111,694                | 44,009                          | 5,365.709                    | 0.122                         |
| 2017 | 62,882                                           | 29,448           | 9,210     | 4,695     | 1,666     | 671      | 532     | 11      | -       | -       | -    | 109,115                | 46,233                          | 6,416.548                    | 0.139                         |
| 2018 | 59,356                                           | 28,012           | 8,146     | 4,205     | 1,488     | 663      | 462     | 20      | 2       | -       | -    | 102,354                | 42,998                          | 5,829.471                    | 0.136                         |
| 2019 | 55,718                                           | 25,322           | 7,167     | 3,798     | 1,272     | 554      | 402     | 4       | -       | -       | -    | 94,237                 | 38,519                          | 5,080.795                    | 0.132                         |
| 2020 | 50,006                                           | 25,125           | 6,962     | 3,416     | 1,154     | 532      | 457     | 13      | -       | -       | -    | 87,665                 | 37,659                          | 4,899.128                    | 0.130                         |
| 2021 | 48,780                                           | 22,249           | 6,640     | 3,489     | 1,292     | 676      | 646     | 24      | -       | -       | -    | 83,796                 | 35,016                          | 5,303.198                    | 0.151                         |
| 2022 | 49,530                                           | 21,948           | 7,233     | 3,712     | 1,231     | 555      | 462     | 19      | -       | -       | -    | 84,690                 | 35,160                          | 5,085.286                    | 0.145                         |
| 2023 | 49,291                                           | 21,363           | 6,708     | 3,568     | 1,404     | 679      | 732     | 39      | -       | -       | -    | 83,784                 | 34,493                          | 5,552.061                    | 0.161                         |
| 2024 | 45,888                                           | 22,805           | 7,166     | 3,634     | 1,277     | 464      | 357     | 17      | -       | -       | -    | 81,608                 | 35,720                          | 4,903.383                    | 0.137                         |

NOTE: TEDE is defined as total effective dose equivalent.

\* Summary of reports submitted in accordance with 10 CFR 20.2206 for BWRs and PWRs that had been in commercial operation for at least 1 full year as of December 31 of each of the indicated years.

\*\* TEDE values exactly equal to the values separating ranges are reported in the next higher range.

**Table 4-5 Three-Year Totals and Averages for BWRs, in Ascending Order of Collective TEDE per Reactor, 2022–2024**

| Plant Name*                     | Reactor-Years | Three-Year Collective TEDE per Reactor Year, 2022–2024 (person rem) | Three-Year Collective TEDE per Site (person rem) | Number of Individuals with Measurable TEDE | Average TEDE per Worker (rem) | Total Electricity Output (MW-yrs) | Average TEDE per MW-Yr (rem) |
|---------------------------------|---------------|---------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------|-------------------------------|-----------------------------------|------------------------------|
| PEACH BOTTOM 2,3                | 6             | 63.706                                                              | 382.233                                          | 4,320                                      | 0.088                         | 7,553.1                           | 0.05                         |
| HATCH 1,2                       | 6             | 64.810                                                              | 388.862                                          | 3,750                                      | 0.104                         | 4,891.8                           | 0.08                         |
| DRESDEN 2,3                     | 6             | 69.736                                                              | 418.417                                          | 5,585                                      | 0.075                         | 5,238.1                           | 0.08                         |
| CLINTON                         | 3             | 70.224                                                              | 210.673                                          | 2,000                                      | 0.105                         | 3,062.1                           | 0.07                         |
| SUSQUEHANNA 1,2                 | 6             | 76.341                                                              | 458.047                                          | 3,340                                      | 0.137                         | 6,878.6                           | 0.07                         |
| MONTICELLO                      | 3             | 80.359                                                              | 241.077                                          | 1,827                                      | 0.132                         | 1,805.4                           | 0.13                         |
| BROWNS FERRY 1,2,3              | 9             | 81.229                                                              | 731.058                                          | 7,315                                      | 0.100                         | 10,213.8                          | 0.07                         |
| LIMERICK 1,2                    | 6             | 82.231                                                              | 493.388                                          | 5,328                                      | 0.093                         | 6,571.7                           | 0.08                         |
| COOPER STATION                  | 3             | 88.248                                                              | 264.744                                          | 2,420                                      | 0.109                         | 2,126.0                           | 0.12                         |
| COLUMBIA GENERATING             | 3             | 92.376                                                              | 277.129                                          | 2,677                                      | 0.104                         | 3,219.1                           | 0.09                         |
| HOPE CREEK 1                    | 3             | 92.877                                                              | 278.631                                          | 2,677                                      | 0.104                         | 3,214.2                           | 0.09                         |
| FITZPATRICK                     | 3             | 100.743                                                             | 302.229                                          | 2,644                                      | 0.114                         | 2,367.6                           | 0.13                         |
| NINE MILE POINT 1,2             | 6             | 104.330                                                             | 625.980                                          | 4,217                                      | 0.148                         | 5,271.4                           | 0.12                         |
| BRUNSWICK 1,2                   | 6             | 104.947                                                             | 629.681                                          | 4,446                                      | 0.142                         | 5,322.9                           | 0.12                         |
| RIVER BEND 1                    | 3             | 117.968                                                             | 353.904                                          | 2,808                                      | 0.126                         | 2,419.2                           | 0.15                         |
| GRAND GULF                      | 3             | 123.818                                                             | 371.455                                          | 3,052                                      | 0.122                         | 3,549.9                           | 0.10                         |
| QUAD CITIES 1,2                 | 6             | 127.886                                                             | 767.317                                          | 5,754                                      | 0.133                         | 5,228.9                           | 0.15                         |
| PERRY                           | 3             | 168.889                                                             | 506.666                                          | 2,113                                      | 0.240                         | 3,323.2                           | 0.15                         |
| LASALLE 1,2                     | 6             | 173.724                                                             | 1,042.342                                        | 6,210                                      | 0.168                         | 6,634.1                           | 0.16                         |
| FERMI 2                         | 3             | 306.312                                                             | 918.937                                          | 5,575                                      | 0.165                         | 2,773.3                           | 0.33                         |
| <b>Totals and Averages</b>      | <b>93</b>     | <b>-</b>                                                            | <b>9,662.770</b>                                 | <b>78,058</b>                              | <b>0.124</b>                  | <b>91,664.4</b>                   | <b>0.11</b>                  |
| <b>Average per Reactor-Year</b> | <b>-</b>      | <b>103.901</b>                                                      | <b>-</b>                                         | <b>839</b>                                 | <b>-</b>                      | <b>985.6</b>                      | <b>-</b>                     |

NOTE: TEDE is defined as total effective dose equivalent.

\* Sites where not all reactors had completed 3 full years of commercial operations as of December 31, 2024, are not included.

**Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities 2024**  
**DRAFT Tables and Figures**

**Table 4-6 Three-Year Totals and Averages for PWRs, in Ascending Order of Collective TEDE per Reactor, 2022–2024**

| Plant Name*                     | Reactor-Years | Three-Year Collective TEDE per Reactor Year, 2022–2024 (person rem) | Three-Year Collective TEDE per Site (person rem) | Number of Individuals with Measurable TEDE | Average TEDE per Worker (rem) | Total Electricity Output (MW-yrs) | Average TEDE per MW-Yr (rem) |
|---------------------------------|---------------|---------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------|-------------------------------|-----------------------------------|------------------------------|
| HARRIS 1                        | 3             | 12.714                                                              | 38.141                                           | 835                                        | 0.046                         | 2,749.5                           | 0.01                         |
| FARLEY 1,2                      | 6             | 14.266                                                              | 85.593                                           | 1,459                                      | 0.059                         | 4,886.6                           | 0.02                         |
| PALO VERDE 1,2,3                | 9             | 15.098                                                              | 135.885                                          | 2,427                                      | 0.056                         | 10,931.6                          | 0.01                         |
| OCONEE 1,2,3                    | 9             | 18.017                                                              | 162.157                                          | 3,480                                      | 0.047                         | 7,421.3                           | 0.02                         |
| DIABLO CANYON 1,2               | 6             | 18.084                                                              | 108.502                                          | 1,925                                      | 0.056                         | 6,140.6                           | 0.02                         |
| CALLAWAY 1                      | 3             | 20.185                                                              | 60.554                                           | 1,044                                      | 0.058                         | 3,262.2                           | 0.02                         |
| BYRON 1,2                       | 6             | 22.391                                                              | 134.343                                          | 2,433                                      | 0.055                         | 6,735.3                           | 0.02                         |
| BRAIDWOOD 1,2                   | 6             | 23.830                                                              | 142.977                                          | 2,529                                      | 0.057                         | 6,813.2                           | 0.02                         |
| PRAIRIE ISLAND 1,2              | 6             | 25.701                                                              | 154.207                                          | 2,066                                      | 0.075                         | 2,591.5                           | 0.06                         |
| SEABROOK                        | 3             | 26.161                                                              | 78.482                                           | 1,151                                      | 0.068                         | 3,436.7                           | 0.02                         |
| CALVERT CLIFFS 1,2              | 6             | 26.796                                                              | 160.773                                          | 2,124                                      | 0.076                         | 5,075.3                           | 0.03                         |
| COMANCHE PEAK 1,2               | 6             | 27.176                                                              | 163.056                                          | 2,062                                      | 0.079                         | 6,690.1                           | 0.02                         |
| SUMMER 1                        | 3             | 27.249                                                              | 81.748                                           | 1,200                                      | 0.068                         | 2,683.7                           | 0.03                         |
| NORTH ANNA 1,2                  | 6             | 27.646                                                              | 165.875                                          | 2,143                                      | 0.077                         | 5,253.0                           | 0.03                         |
| DAVIS-BESSE 1                   | 3             | 28.587                                                              | 85.761                                           | 1,471                                      | 0.058                         | 2,490.9                           | 0.03                         |
| GINNA                           | 3             | 29.743                                                              | 89.228                                           | 1,206                                      | 0.074                         | 1,651.7                           | 0.05                         |
| VOGTLE 1,2,3                    | 7             | 29.947                                                              | 209.630                                          | 2,527                                      | 0.083                         | 6,596.6                           | 0.03                         |
| BEAVER VALLEY 1,2               | 6             | 30.658                                                              | 183.948                                          | 2,026                                      | 0.091                         | 5,043.9                           | 0.04                         |
| SOUTH TEXAS 1,2                 | 6             | 31.552                                                              | 189.311                                          | 1,430                                      | 0.132                         | 7,159.7                           | 0.03                         |
| ST. LUCIE 1,2                   | 6             | 32.405                                                              | 194.428                                          | 2,312                                      | 0.084                         | 5,403.0                           | 0.04                         |
| CATAWBA 1,2                     | 6             | 33.366                                                              | 200.198                                          | 2,412                                      | 0.083                         | 6,454.7                           | 0.03                         |
| POINT BEACH 1,2                 | 6             | 37.648                                                              | 225.889                                          | 1,556                                      | 0.145                         | 3,413.4                           | 0.07                         |
| COOK 1,2                        | 6             | 38.746                                                              | 232.476                                          | 2,549                                      | 0.091                         | 6,078.4                           | 0.04                         |
| TURKEY POINT 3,4                | 6             | 39.036                                                              | 234.216                                          | 2,428                                      | 0.096                         | 4,833.1                           | 0.05                         |
| ROBINSON 2                      | 3             | 39.711                                                              | 119.132                                          | 1,650                                      | 0.072                         | 2,118.6                           | 0.06                         |
| MILLSTONE 2,3                   | 6             | 40.955                                                              | 245.729                                          | 2,622                                      | 0.094                         | 5,375.8                           | 0.05                         |
| SEQUOYAH 1,2                    | 6             | 42.739                                                              | 256.436                                          | 3,565                                      | 0.072                         | 5,876.7                           | 0.04                         |
| SURRY 1,2                       | 6             | 42.807                                                              | 256.839                                          | 2,799                                      | 0.092                         | 4,640.1                           | 0.06                         |
| ARKANSAS 1,2                    | 6             | 43.304                                                              | 259.826                                          | 3,673                                      | 0.071                         | 5,010.9                           | 0.05                         |
| WOLF CREEK 1                    | 3             | 43.746                                                              | 131.237                                          | 1,601                                      | 0.082                         | 3,249.6                           | 0.04                         |
| MCGUIRE 1,2                     | 6             | 44.680                                                              | 268.082                                          | 3,260                                      | 0.082                         | 6,569.4                           | 0.04                         |
| WATERFORD 3                     | 3             | 52.900                                                              | 158.699                                          | 2,248                                      | 0.071                         | 2,492.8                           | 0.06                         |
| SALEM 1,2                       | 6             | 53.932                                                              | 323.594                                          | 3,163                                      | 0.102                         | 6,429.6                           | 0.05                         |
| WATTS BAR 1,2                   | 6             | 56.835                                                              | 341.008                                          | 4,745                                      | 0.072                         | 6,189.6                           | 0.06                         |
| <b>Totals and Averages</b>      | <b>184</b>    | <b>-</b>                                                            | <b>5,877.960</b>                                 | <b>76,121</b>                              | <b>0.077</b>                  | <b>171,749.1</b>                  | <b>0.03</b>                  |
| <b>Average per Reactor-Year</b> | <b>-</b>      | <b>31.945</b>                                                       | <b>-</b>                                         | <b>414</b>                                 | <b>-</b>                      | <b>933.4</b>                      | <b>-</b>                     |

NOTE: These data do not include Palisades, which closed in May 2022. TEDE is defined as total effective dose equivalent.

\* Sites where not all reactors had completed 3 full years of commercial operation as of December 31, 2024, are not included.

**Table 4-7 Three-Year Collective TEDE per Reactor-Year for BWRs, 2022–2024**

|                          | Plant Name          | Three-Year Coll. TEDE per Reactor-Year, 2022–2024 | Percentage Change from 2021–2023 | 2021–2023 Quartile (If Changed) |
|--------------------------|---------------------|---------------------------------------------------|----------------------------------|---------------------------------|
| 1st Quartile             | PEACH BOTTOM 2,3    | 63.706                                            | -1% ▼                            | -                               |
|                          | HATCH 1,2           | 64.810                                            | 23% ▲                            | -                               |
|                          | DRESDEN 2,3         | 69.736                                            | 7% ▲                             | -                               |
|                          | CLINTON             | 70.224                                            | -29% ▼                           | 3                               |
|                          | SUSQUEHANNA 1,2     | 76.341                                            | 0% ▲                             | 2                               |
| 2nd Quartile             | MONTICELLO          | 80.359                                            | -27% ▼                           | 3                               |
|                          | BROWNS FERRY 1,2,3  | 81.229                                            | -8% ▼                            | -                               |
|                          | LIMERICK 1,2        | 82.231                                            | 20% ▲                            | -                               |
|                          | COOPER STATION      | 88.248                                            | 60% ▲                            | 1                               |
|                          | COLUMBIA GENERATING | 92.376                                            | -51% ▼                           | 4                               |
| 3rd Quartile             | HOPE CREEK 1        | 92.877                                            | -8% ▼                            | -                               |
|                          | FITZPATRICK         | 100.743                                           | 58% ▲                            | 1                               |
|                          | NINE MILE POINT 1,2 | 104.330                                           | 21% ▲                            | 2                               |
|                          | BRUNSWICK 1,2       | 104.947                                           | 0% ▲                             | -                               |
|                          | RIVER BEND 1        | 117.968                                           | -34% ▼                           | 4                               |
| 4th Quartile             | GRAND GULF          | 123.818                                           | 48% ▲                            | 2                               |
|                          | QUAD CITIES 1,2     | 127.886                                           | 26% ▲                            | 3                               |
|                          | PERRY               | 168.889                                           | -31% ▼                           | -                               |
|                          | LASALLE 1,2         | 173.724                                           | -31% ▼                           | -                               |
|                          | FERMI 2             | 306.312                                           | 38% ▲                            | -                               |
| Average per Reactor-Year |                     | 103.901                                           | -4% ▼                            |                                 |

NOTE: TEDE is defined as total effective dose equivalent.

Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities 2024  
DRAFT Tables and Figures

Table 4-8 Three-Year Collective TEDE per Reactor-Year for PWRs, 2022–2024

|                          | Plant Name         | Three-Year Coll. TEDE per Reactor-Year, 2022–2024 | Percentage Change from 2021–2023 | 2021–2023 Quartile (If Changed) |
|--------------------------|--------------------|---------------------------------------------------|----------------------------------|---------------------------------|
| 1st Quartile             | HARRIS 1           | 12.714                                            | 3% ▲                             | -                               |
|                          | FARLEY 1,2         | 14.266                                            | -23% ▼                           | -                               |
|                          | PALO VERDE 1,2,3   | 15.098                                            | 6% ▲                             | -                               |
|                          | OCONEE 1,2,3       | 18.017                                            | 19% ▲                            | -                               |
|                          | DIABLO CANYON 1,2  | 18.084                                            | 20% ▲                            | -                               |
|                          | CALLAWAY 1         | 20.185                                            | 1% ▲                             | -                               |
|                          | BYRON 1,2          | 22.391                                            | 4% ▲                             | -                               |
|                          | BRAIDWOOD 1,2      | 23.830                                            | -15% ▼                           | 2                               |
|                          | PRAIRIE ISLAND 1,2 | 25.701                                            | 12% ▲                            | 2                               |
| 2nd Quartile             | SEABROOK           | 26.161                                            | -7% ▼                            | -                               |
|                          | CALVERT CLIFFS 1,2 | 26.796                                            | 8% ▲                             | -                               |
|                          | COMANCHE PEAK 1,2  | 27.176                                            | -36% ▼                           | 3                               |
|                          | SUMMER 1           | 27.249                                            | 30% ▲                            | 1                               |
|                          | NORTH ANNA 1,2     | 27.646                                            | 11% ▲                            | -                               |
|                          | DAVIS-BESSE 1      | 28.587                                            | 49% ▲                            | 1                               |
|                          | GINNA              | 29.743                                            | 0% ▼                             | -                               |
|                          | VOGTLE 1,2,3       | 29.947                                            | -15% ▼                           | 3                               |
| 3rd Quartile             | BEAVER VALLEY 1,2  | 30.658                                            | -4% ▼                            | -                               |
|                          | SOUTH TEXAS 1,2    | 31.552                                            | 22% ▲                            | 2                               |
|                          | ST. LUCIE 1,2      | 32.405                                            | -6% ▼                            | -                               |
|                          | CATAWBA 1,2        | 33.366                                            | -22% ▼                           | 4                               |
|                          | POINT BEACH 1,2    | 37.648                                            | -12% ▼                           | 4                               |
|                          | COOK 1,2           | 38.746                                            | 26% ▲                            | -                               |
|                          | TURKEY POINT 3,4   | 39.036                                            | -11% ▼                           | 4                               |
|                          | ROBINSON 2         | 39.711                                            | 67% ▲                            | 2                               |
| 4th Quartile             | MILLSTONE 2,3      | 40.955                                            | 5% ▲                             | 3                               |
|                          | SEQUOYAH 1,2       | 42.739                                            | 9% ▲                             | 3                               |
|                          | SURRY 1,2          | 42.807                                            | 9% ▲                             | 3                               |
|                          | ARKANSAS 1,2       | 43.304                                            | -11% ▼                           | -                               |
|                          | WOLF CREEK 1       | 43.746                                            | -7% ▼                            | -                               |
|                          | MCGUIRE 1,2        | 44.680                                            | -5% ▼                            | -                               |
|                          | WATERFORD 3        | 52.900                                            | 4% ▲                             | -                               |
|                          | SALEM 1,2          | 53.932                                            | 12% ▲                            | -                               |
|                          | WATTS BAR 1,2      | 56.835                                            | -7% ▼                            | -                               |
| Average per Reactor-Year |                    | 31.945                                            | 4% ▲                             |                                 |

NOTE: These data do not include Palisades, which closed in May 2022. TEDE is defined as total effective dose equivalent.

\* Sites where not all reactors had completed 3 full years of commercial operation as of December 31, 2024, are not included.

**Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities 2024**  
**DRAFT Tables and Figures**

**Table 4-9 Plants No Longer in Operation, 2024**

| Plant Name                                  | Date of First Commercial Operation | Ceased Operations | License Termination Plan Approved by NRC | PSDAR Submitted | Plant Status* | Completion of Decommissioning** |
|---------------------------------------------|------------------------------------|-------------------|------------------------------------------|-----------------|---------------|---------------------------------|
| CRYSTAL RIVER 3                             | 12/1/1976                          | 2/2013            | TBD                                      | 6/2019          | DECON         | 2037                            |
| DRESDEN 1                                   | 8/1/1960                           | 10/1978           | TBD                                      | 6/1998          | SAFSTOR       | 2038                            |
| DUANE ARNOLD                                | 2/1/1975                           | 8/2020            | TBD                                      | 4/2020          | SAFSTOR       | 2080                            |
| FERMI 1                                     | 5/10/1963                          | 9/1972            | TBD                                      | 4/1998          | SAFSTOR       | 2032                            |
| FORT CALHOUN                                | 8/9/1973                           | 10/2016           | TBD                                      | 12/2019         | DECON         | 2026                            |
| INDIAN POINT 1                              | 8/1/1962                           | 10/1974           | TBD                                      | 12/2019         | DECON         | 2062                            |
| INDIAN POINT 2                              | 7/1/1974                           | 4/2020            | TBD                                      | 12/2019         | DECON         | 2062                            |
| INDIAN POINT 3                              | 8/30/1976                          | 4/2021            | TBD                                      | 12/2019         | DECON         | 2062                            |
| KEWAUNEE                                    | 12/1/1973                          | 5/2013            | TBD                                      | 5/2013          | DECON         | 2055                            |
| MILLSTONE 1                                 | 12/28/1970                         | 7/1998            | TBD                                      | 6/1999          | SAFSTOR       | 2056                            |
| OYSTER CREEK                                | 12/1/1969                          | 9/2018            | TBD                                      | 6/2018          | DECON         | 2035                            |
| PALISADES                                   | 12/31/1971                         | 5/2022            | TBD                                      | 12/2020         | SAFSTOR       | 2041                            |
| PEACH BOTTOM 1                              | 6/1/1967                           | 10/1974           | TBD                                      | 6/1998          | SAFSTOR       | 2034                            |
| PILGRIM 1                                   | 12/1/1972                          | 5/2019            | TBD                                      | 11/2018         | DECON         | 2063                            |
| SAN ONOFRE 1                                | 1/1/1968                           | 11/1992           | TBD                                      | 12/1998         | DECON         | 2032                            |
| SAN ONOFRE 2                                | 1/1/1983                           | 6/2013            | TBD                                      | 9/2014          | DECON         | 2028                            |
| SAN ONOFRE 3                                | 1/1/1984                           | 6/2013            | TBD                                      | 9/2014          | DECON         | 2028                            |
| THREE MILE ISLAND 1                         | 9/2/1974                           | 9/2019            | TBD                                      | 4/2019          | SAFSTOR       | 2079                            |
| THREE MILE ISLAND 2                         | 12/30/1978                         | 3/1979            | TBD                                      | 12/2019         | DECON         | 2052                            |
| VERMONT YANKEE                              | 11/30/1972                         | 12/2014           | TBD                                      | 4/2017          | DECON         | 2030                            |
| <b>REACTOR DECOMMISSIONING COMPLETED***</b> |                                    |                   |                                          |                 |               |                                 |
| BIG ROCK POINT                              | 3/29/1963                          | 8/1997            | TBD                                      | 9/1997          | ISFSI only    | 2007                            |
| HADDAM NECK                                 | 12/27/1974                         | 12/1996           | TBD                                      | 8/1997          | ISFSI only    | 2007                            |
| HUMBOLDT BAY 3                              | 8/1/1963                           | 7/1976            | 2012                                     | 2/1998          | ISFSI only    | 2021****                        |
| LACROSSE                                    | 11/1/1969                          | 4/1987            | TBD                                      | 5/1991          | ISFSI only    | 2023                            |
| MAINE YANKEE                                | 6/29/1973                          | 8/1997            | TBD                                      | 8/1997          | ISFSI only    | 2005                            |
| RANCHO SECO                                 | 4/17/1975                          | 6/1989            | 5/2008                                   | 3/1997          | ISFSI only    | 2009                            |
| TROJAN                                      | 5/20/1976                          | 11/1992           | 2/2001                                   | 8/1995          | ISFSI only    | 2004****                        |
| YANKEE ROWE                                 | 12/24/1963                         | 10/1991           | TBD                                      | -               | ISFSI only    | 2007                            |
| ZION 1                                      | 12/31/1973                         | 2/1997            | 9/2018                                   | 3/2008          | DECON         | 2024                            |
| ZION 2                                      | 9/17/1974                          | 9/1996            | 9/2018                                   | 3/2008          | DECON         | 2024                            |

\* Plant status as of 2024.

\*\* Including the generally licensed ISFSI.

\*\*\* Not including ISFSI.

\*\*\*\* 10 CFR Part 72 ISFSI, 10 CFR Part 50 license terminated.

NOTE: Information on the latest decommissioning status of plants listed in this table can be found in SECY-23-0098, "Status of the Decommissioning Program—2023 Annual Report," dated December 5, 2023 (Agencywide Documents Access and Management System Accession No. ML23262B428) [Ref. 22]. Rows displayed in gray represent plants that have completed decommissioning [Refs. 22–24].

TBD: To be determined.

SAFSTOR (often considered "delayed DECON"): The nuclear facility is maintained and monitored in a condition that allows the radioactivity to decay; afterwards, it is dismantled.

DECON (immediate dismantlement): Soon after the nuclear facility closes or transitions out of SAFSTOR, equipment, structures, and portions of the facility containing radioactive contaminants are removed or decontaminated to a level that permits release of the property and termination of the NRC license.

## DRAFT Tables and Figures

Table 5-1 Effects of Transient Individuals on Annual Statistical Compilations,\* 2024

| License Category                       | Number of Individuals with TEDE in Range (rem)** |                  |           |           |           |          |         |         |         |         |      | Total Number Monitored | Number with Measurable TEDE | Collective TEDE (person-rem) | Average Measurable TEDE (rem) |
|----------------------------------------|--------------------------------------------------|------------------|-----------|-----------|-----------|----------|---------|---------|---------|---------|------|------------------------|-----------------------------|------------------------------|-------------------------------|
|                                        | No. Measurable Exposure                          | Measurable <0.01 | 0.10–0.25 | 0.25–0.50 | 0.50–0.75 | 0.75–1.0 | 1.0–2.0 | 2.0–3.0 | 3.0–4.0 | 4.0–5.0 | >5.0 |                        |                             |                              |                               |
| COMMERCIAL LIGHT-WATER REACTORS        |                                                  |                  |           |           |           |          |         |         |         |         |      |                        |                             |                              |                               |
| (1a) Form 5 Summation                  | 70,307                                           | 37,663           | 9,731     | 3,530     | 815       | 230      | 106     | 7       | -       | -       | -    | 122,389                | 52,082                      | 4,903.383                    | 0.09                          |
| (2a) Transients, as Reported           | 30,690                                           | 22,232           | 6,464     | 2,358     | 523       | 140      | 60      | 3       | -       | -       | -    | 62,470                 | 31,780                      | 3,157.517                    | 0.10                          |
| (3a) Transients, Actual                | 6,271                                            | 7,374            | 3,899     | 2,462     | 985       | 374      | 311     | 13      | -       | -       | -    | 21,689                 | 15,418                      | 3,157.517                    | 0.20                          |
| Corrected Distribution (1- [2 - 3]) ** | 45,888                                           | 22,805           | 7,166     | 3,634     | 1,277     | 464      | 357     | 17      | -       | -       | -    | 81,608                 | 35,720                      | 4,903.383                    | 0.14                          |
| ALL LICENSEES                          |                                                  |                  |           |           |           |          |         |         |         |         |      |                        |                             |                              |                               |
| (1b) Form 5 Summation                  | 73,902                                           | 41,742           | 10,861    | 4,423     | 1,238     | 442      | 502     | 94      | 20      | 5       | -    | 133,240                | 59,338                      | 6,816.366                    | 0.11                          |
| (2b) Transients, as Reported           | 32,219                                           | 22,890           | 6,724     | 2,508     | 582       | 153      | 87      | 5       | 2       | -       | -    | 65,170                 | 32,951                      | 3,368.906                    | 0.10                          |
| (3b) Transients, Actual                | 6,544                                            | 7,586            | 3,990     | 2,551     | 1,042     | 416      | 362     | 16      | 2       | -       | -    | 22,509                 | 15,965                      | 3,368.906                    | 0.21                          |
| Corrected Distribution (1- [2 - 3]) ** | 48,227                                           | 26,438           | 8,127     | 4,466     | 1,698     | 705      | 777     | 105     | 20      | 5       | -    | 90,579                 | 42,352                      | 6,816.37                     | 0.16                          |

NOTE: TEDE is defined as total effective dose equivalent.

\* TEDE values exactly equal to the values separating ranges are reported in the next higher range.

\*\* The corrected distribution applies only to the number of individuals and is calculated by the total number in (1) minus the difference between (2) and (3).

**Table 6-1 Summary of Annual TEDE Distributions for Certain NRC Licensees,\* 2014–2024**

| Year | Total Number of Monitored Individuals |                     | Individuals with Measurable TEDE *** |         |         |         |
|------|---------------------------------------|---------------------|--------------------------------------|---------|---------|---------|
|      |                                       |                     | < 2 rem                              | > 2 rem | < 5 rem | > 5 rem |
|      | Reported Number                       | Corrected Number ** | %                                    | Number  | %       | Number  |
| 2014 | 185,843                               | 135,817             | 99.8%                                | 224     | 100%    | -       |
| 2015 | 186,614                               | 131,827             | 99.9%                                | 133     | 99.9%   | 2       |
| 2016 | 164,984                               | 121,129             | 99.9%                                | 81      | 100%    | -       |
| 2017 | 166,526                               | 118,715             | 99.9%                                | 164     | 99.9%   | 2       |
| 2018 | 159,988                               | 110,861             | 99.8%                                | 188     | 99.9%   | 1       |
| 2019 | 144,243                               | 102,182             | 99.9%                                | 110     | 100%    | -       |
| 2020 | 133,139                               | 94,779              | 99.9%                                | 74      | 99.9%   | 2       |
| 2021 | 130,613                               | 90,470              | 99.9%                                | 84      | 100%    | -       |
| 2022 | 134,177                               | 107,070             | 99.9%                                | 92      | 100%    | -       |
| 2023 | 135,562                               | 93,489              | 99.8%                                | 166     | 100%    | -       |
| 2024 | 133,240                               | 90,579              | 99.9%                                | 130     | 100%    | -       |

NOTE: TEDE is defined as total effective dose equivalent.

\* Licensees required to submit radiation exposure reports to the NRC under 10 CFR 20.2206.

\*\* The values in this column have been corrected to account for transient individuals (i.e., individuals who may have been counted more than once because they worked at more than one facility during the monitoring year; see section 5).

\*\*\* The data for 2014–2024 are based on the distribution of individual doses after adjusting for the multiple counting of transient individuals (see section 5).

**Table 6-2 Maximum Occupational Doses for Each Exposure Category,\* 2024**

| Dose Category** | Annual Dose Limit, 10 CFR 20*** | Maximum Annual Dose Reported (rem) | Max Dose Percentage of Limit | Number of Individuals with Measurable Dose | Number of Individuals with >25% of Limit | Number of Individuals with >50% of Limit | Number of Individuals with >75% of Limit | Number of Individuals with >95% of Limit | Number of Individuals with Dose > Limit |
|-----------------|---------------------------------|------------------------------------|------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|
| SDE-ME          | 50 rem                          | 38.100                             | 76%                          | 36,682                                     | 71                                       | 9                                        | 1                                        | -                                        | -                                       |
| SDE-WB          | 50 rem                          | 4.717                              | 9%                           | 42,441                                     | -                                        | -                                        | -                                        | -                                        | -                                       |
| LDE             | 15 rem                          | 0.596                              | 4%                           | 41,818                                     | 7                                        | -                                        | -                                        | -                                        | -                                       |
| CEDE            |                                 | 0.565                              |                              | 2,217                                      |                                          |                                          |                                          |                                          |                                         |
| CDE             |                                 | 4.724                              |                              | 2,009                                      |                                          |                                          |                                          |                                          |                                         |
| DDE             |                                 | 4.453                              |                              | 42,435                                     |                                          |                                          |                                          |                                          |                                         |
| TEDE            | 5 rem                           | 4.453                              | 89%                          | 43,241                                     | 522                                      | 57                                       | 7                                        | -                                        | -                                       |
| TODE            | 50 rem                          | 4.842                              | 10%                          | 42,460                                     | -                                        | -                                        | -                                        | -                                        | -                                       |

NOTE: TEDE is defined as total effective dose equivalent.

\* Only records reported by licensees required to report under 10 CFR 20.2206 are included. Numbers have been adjusted for the multiple reporting of transient individuals (see section 5).

\*\* SDE-ME = shallow dose equivalent to the maximally exposed extremity

SDE-WB = shallow dose equivalent to the whole body

LDE = lens dose equivalent to the lens of the eye

CEDE = committed effective dose equivalent

CDE = committed dose equivalent

DDE = deep dose equivalent

TEDE = total effective dose equivalent

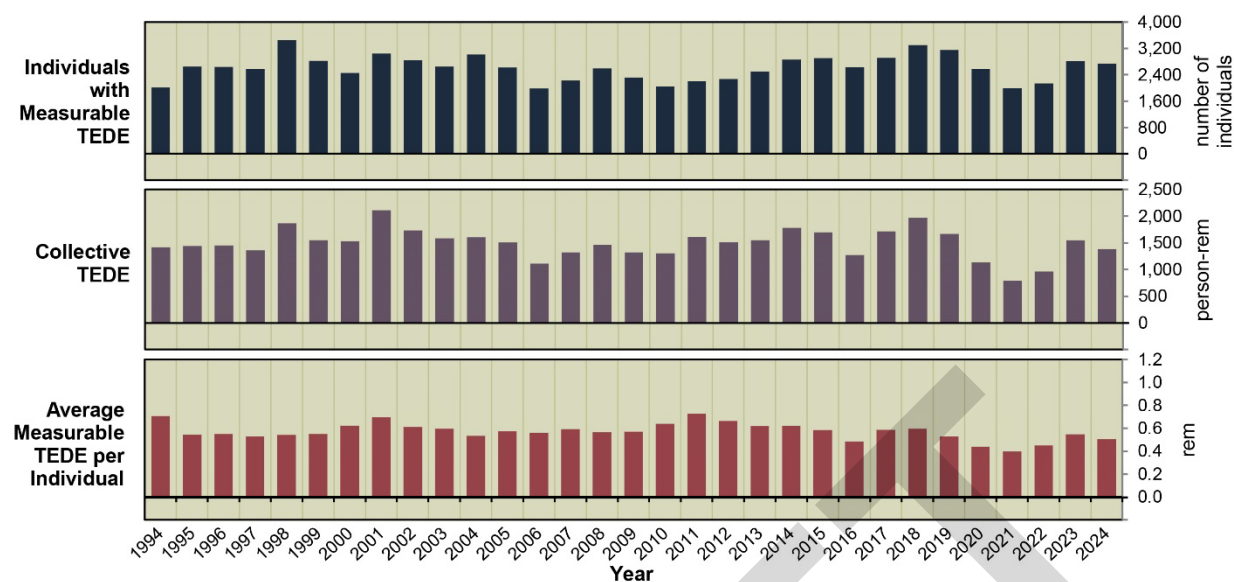
TODE = total organ dose equivalent

\*\*\* Shaded boxes represent dose categories that do not have specific dose limits defined in 10 CFR Part 20.

## LIST OF FIGURES

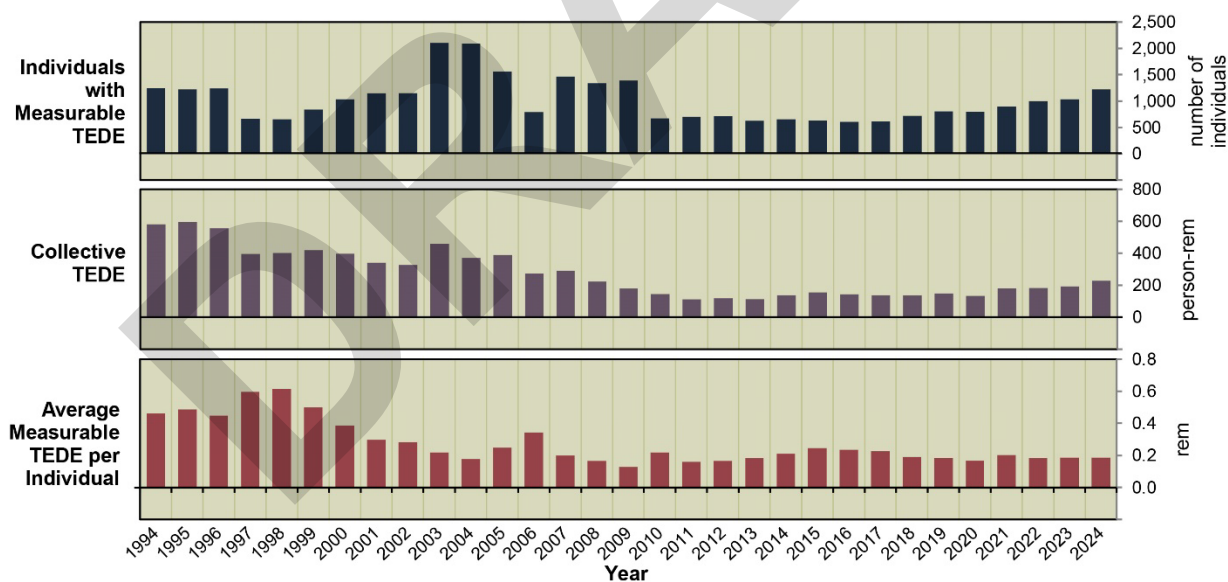
|             |                                                                                                                                                        |    |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 3-1  | Number of Individuals with Measurable TEDE, Collective TEDE, and Average Measurable TEDE for Industrial Radiography Licensees, 1994–2024.....          | 23 |
| Figure 3-2  | Number of Individuals with Measurable TEDE, Collective TEDE, and Average Measurable TEDE for Manufacturing and Distribution Licensees, 1994–2024 ..... | 23 |
| Figure 3-3  | Number of Individuals with Measurable TEDE, Collective TEDE, and Average Measurable TEDE for ISFSI Licensees, 1994–2024.....                           | 24 |
| Figure 3-4  | Annual Exposure Information for Fuel Cycle Licensees, 1994–2024.....                                                                                   | 25 |
| Figure 4-1  | Average Collective TEDE per Reactor and Average Number of Individuals with Measurable TEDE per Reactor, 1994–2024 .....                                | 26 |
| Figure 4-2  | Number of Operating Reactors and Electricity Generated, 1994–2024 .....                                                                                | 27 |
| Figure 4-3  | Average Measurable TEDE per Individual and Collective TEDE per Megawatt-Year, 1994–2024 .....                                                          | 28 |
| Figure 4-4a | Average, Median, and Extreme Values of the Collective TEDE per BWR, 1994–2024 .....                                                                    | 29 |
| Figure 4-4b | Average, Median, and Extreme Values of the Collective TEDE per PWR, 1994–2024 .....                                                                    | 30 |
| Figure 4-5  | Average Collective TEDE per PWR, 1995–2024 .....                                                                                                       | 31 |
| Figure 4-6  | Average Collective TEDE per BWR, 1995–2024 .....                                                                                                       | 31 |
| Figure 4-7  | Commercial Nuclear Power Reactor Decommissioning Process Flowchart .....                                                                               | 32 |

## DRAFT Tables and Figures



NOTE: TEDE is defined as total effective dose equivalent.

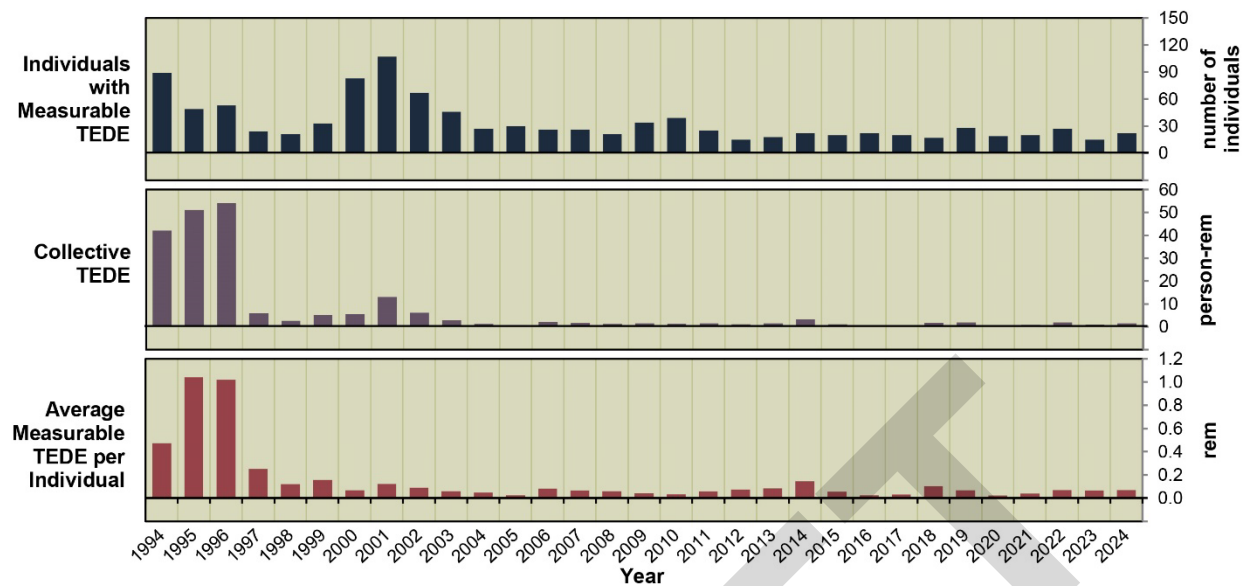
**Figure 3-1** Number of Individuals with Measurable TEDE, Collective TEDE, and Average Measurable TEDE for Industrial Radiography Licensees, 1994–2024



NOTE: TEDE is defined as total effective dose equivalent.

**Figure 3-2** Number of Individuals with Measurable TEDE, Collective TEDE, and Average Measurable TEDE for Manufacturing and Distribution Licensees, 1994–2024

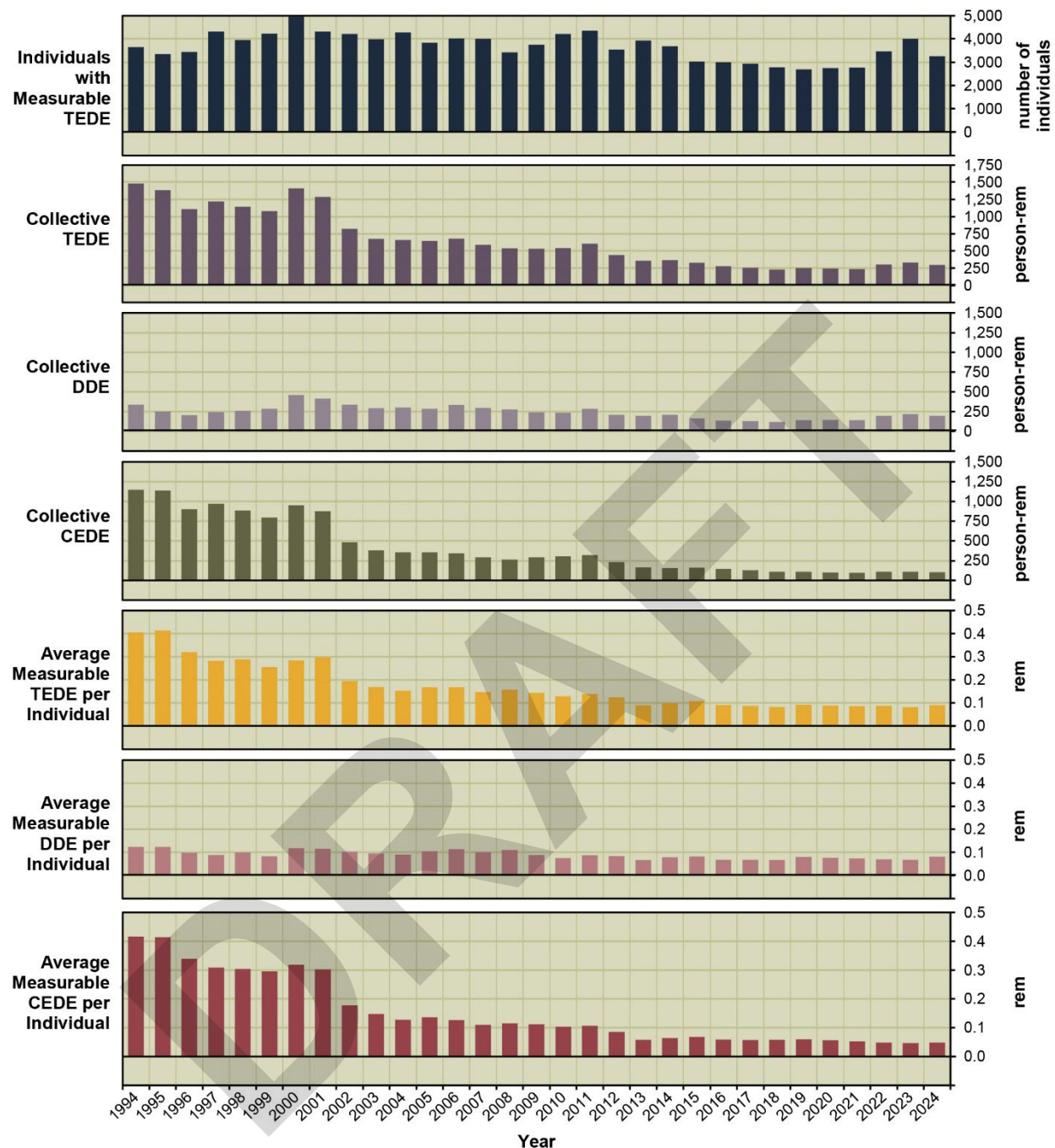
## DRAFT Tables and Figures



NOTE: TEDE is defined as total effective dose equivalent.

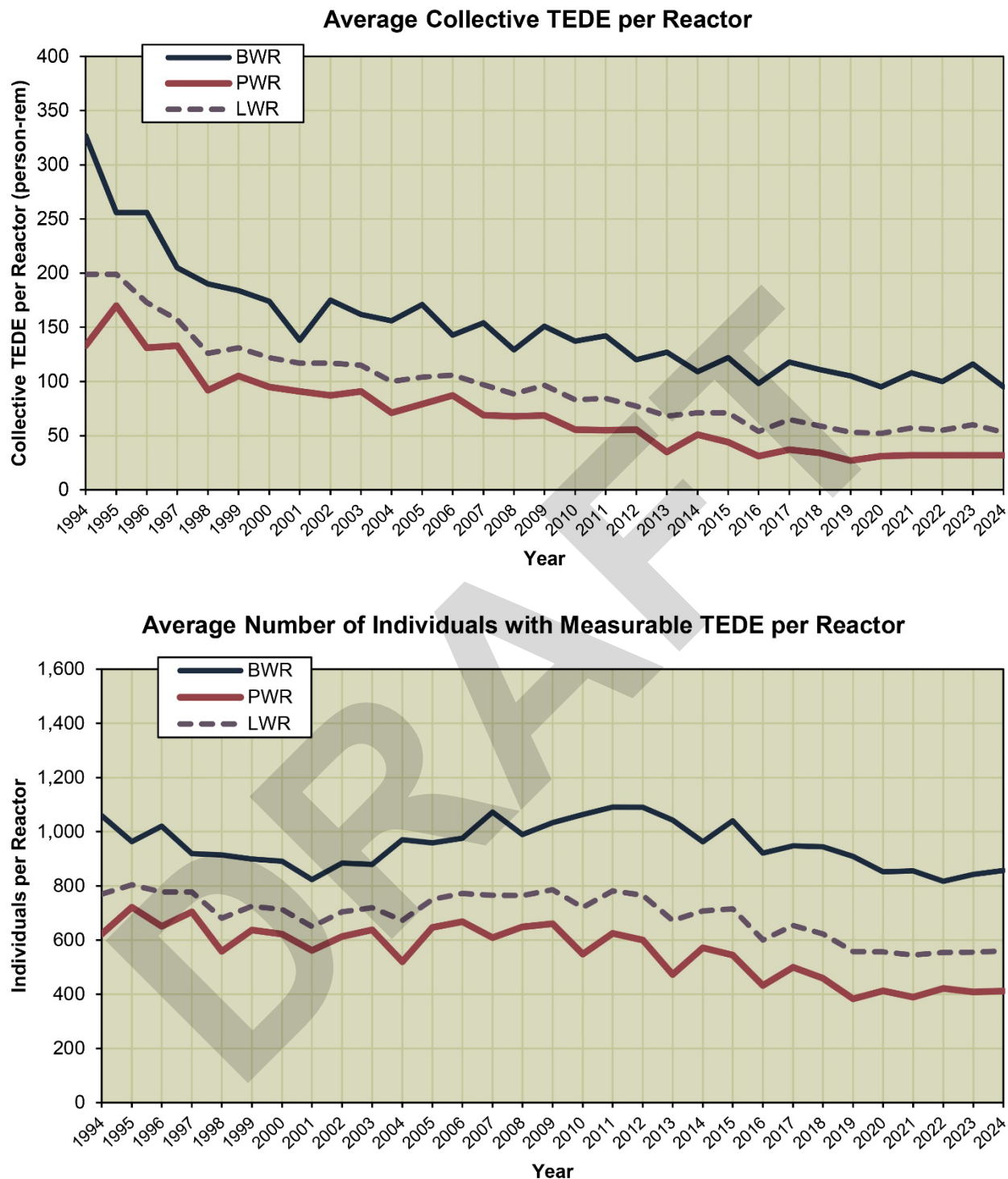
**Figure 3-3** Number of Individuals with Measurable TEDE, Collective TEDE, and Average Measurable TEDE for ISFSI Licensees, 1994–2024

Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities 2024  
DRAFT Tables and Figures



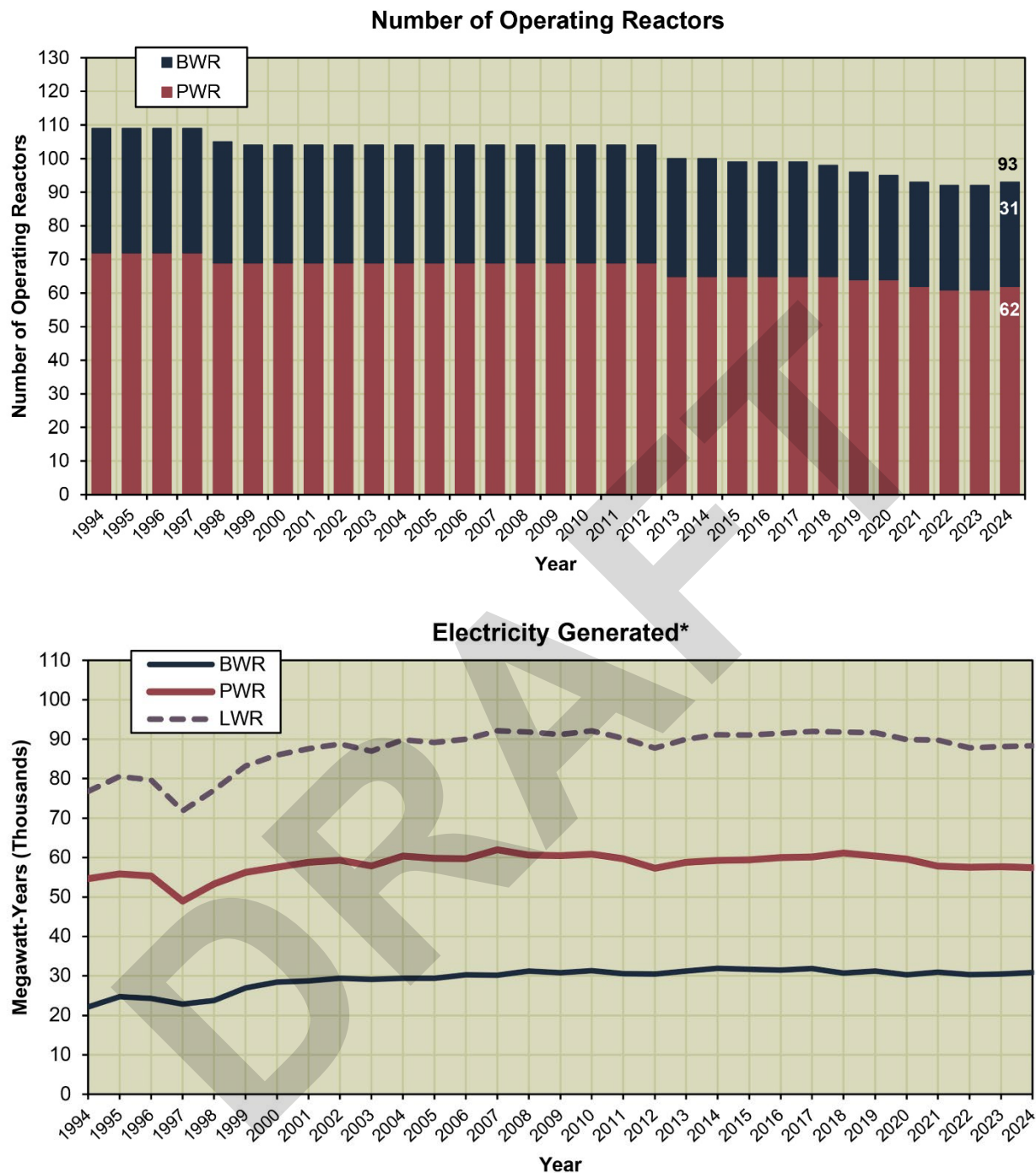
NOTE: TEDE is defined as total effective dose equivalent.

**Figure 3-4 Annual Exposure Information for Fuel Cycle Licensees, 1994–2024**

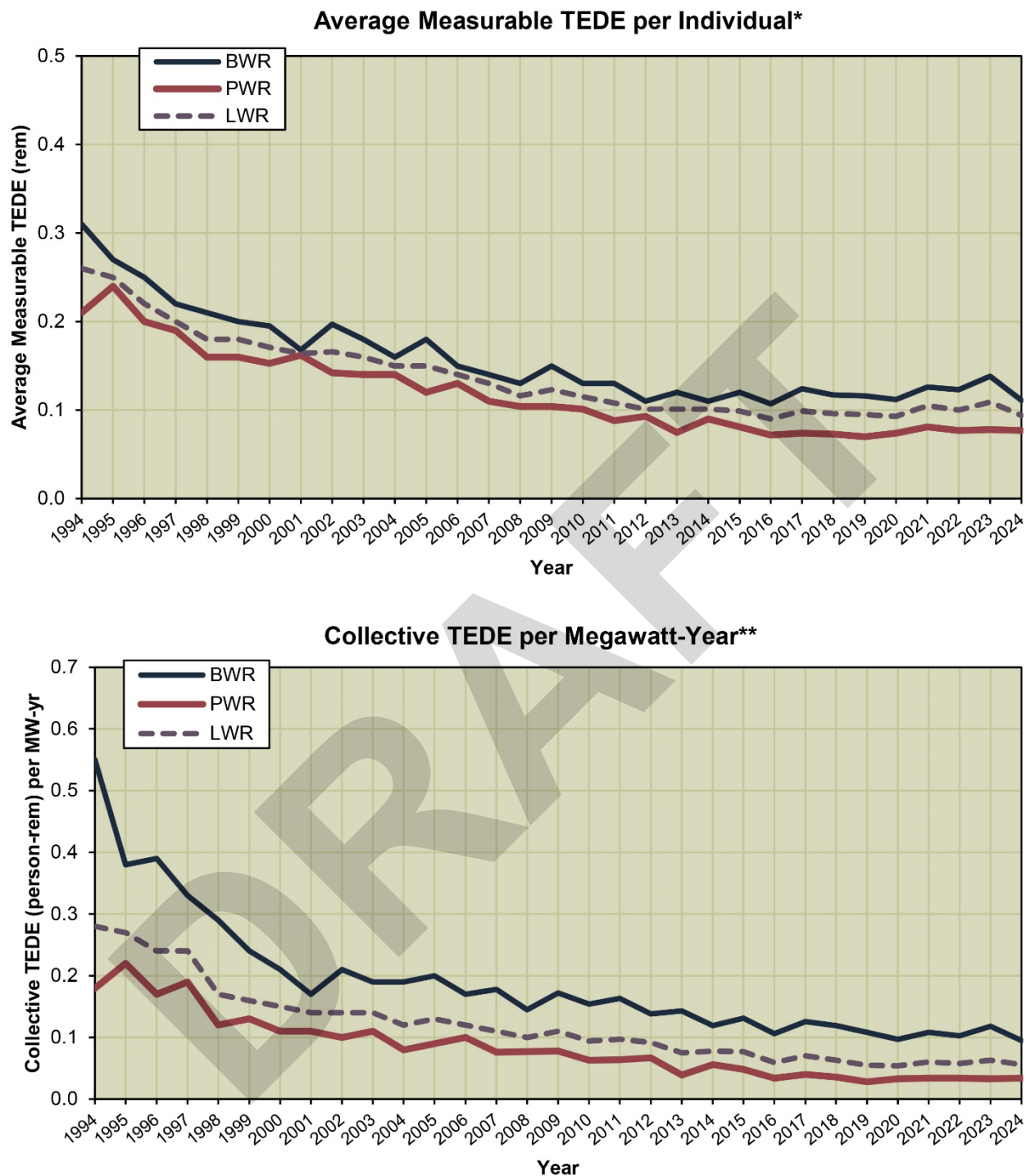


NOTE: TEDE is defined as total effective dose equivalent.

**Figure 4-1 Average Collective TEDE per Reactor and Average Number of Individuals with Measurable TEDE per Reactor, 1994–2024**



**Figure 4-2 Number of Operating Reactors and Electricity Generated, 1994–2024**

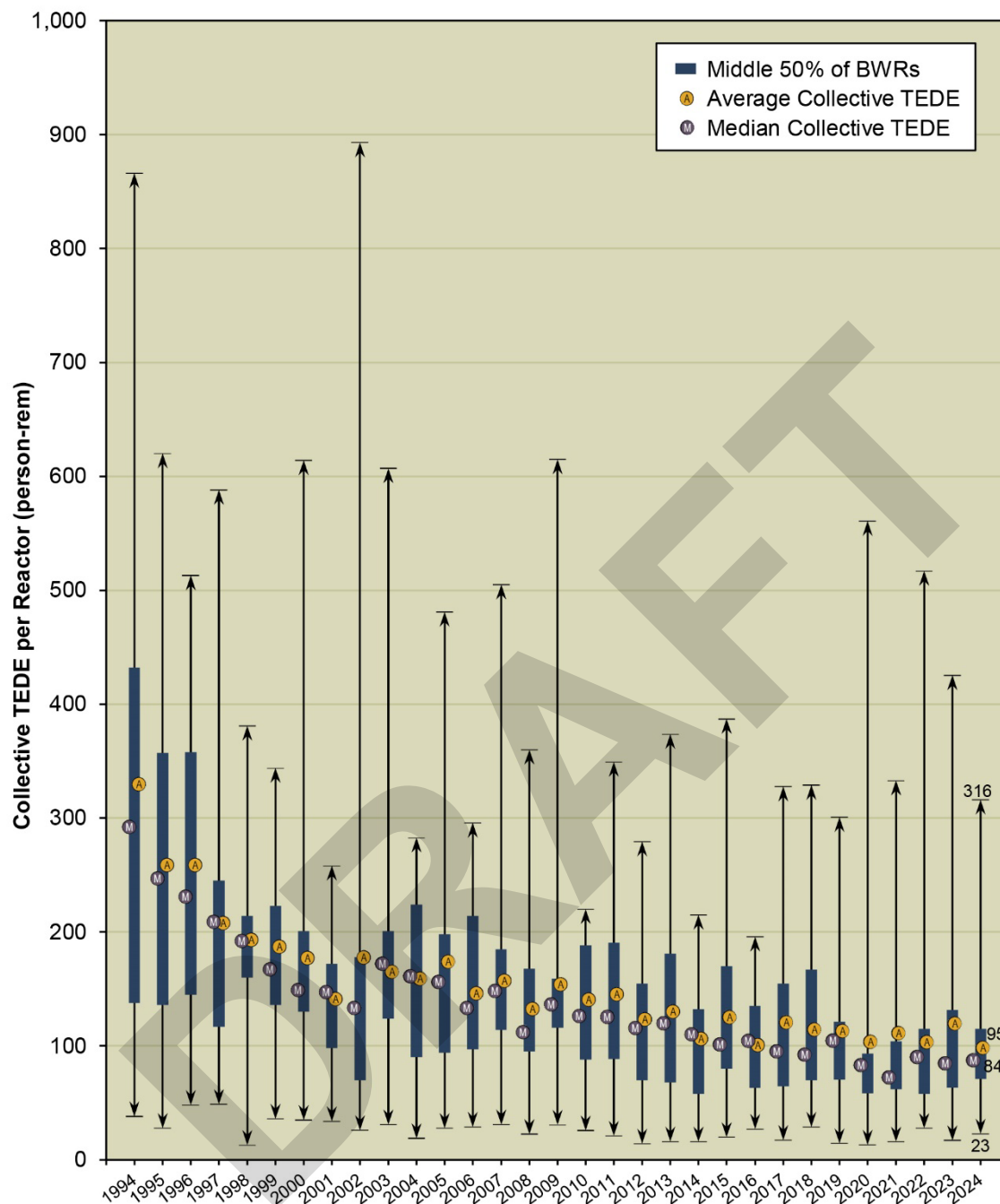


NOTE: TEDE is defined as total effective dose equivalent.

\* Not adjusted to account for transient individuals; see section 5.

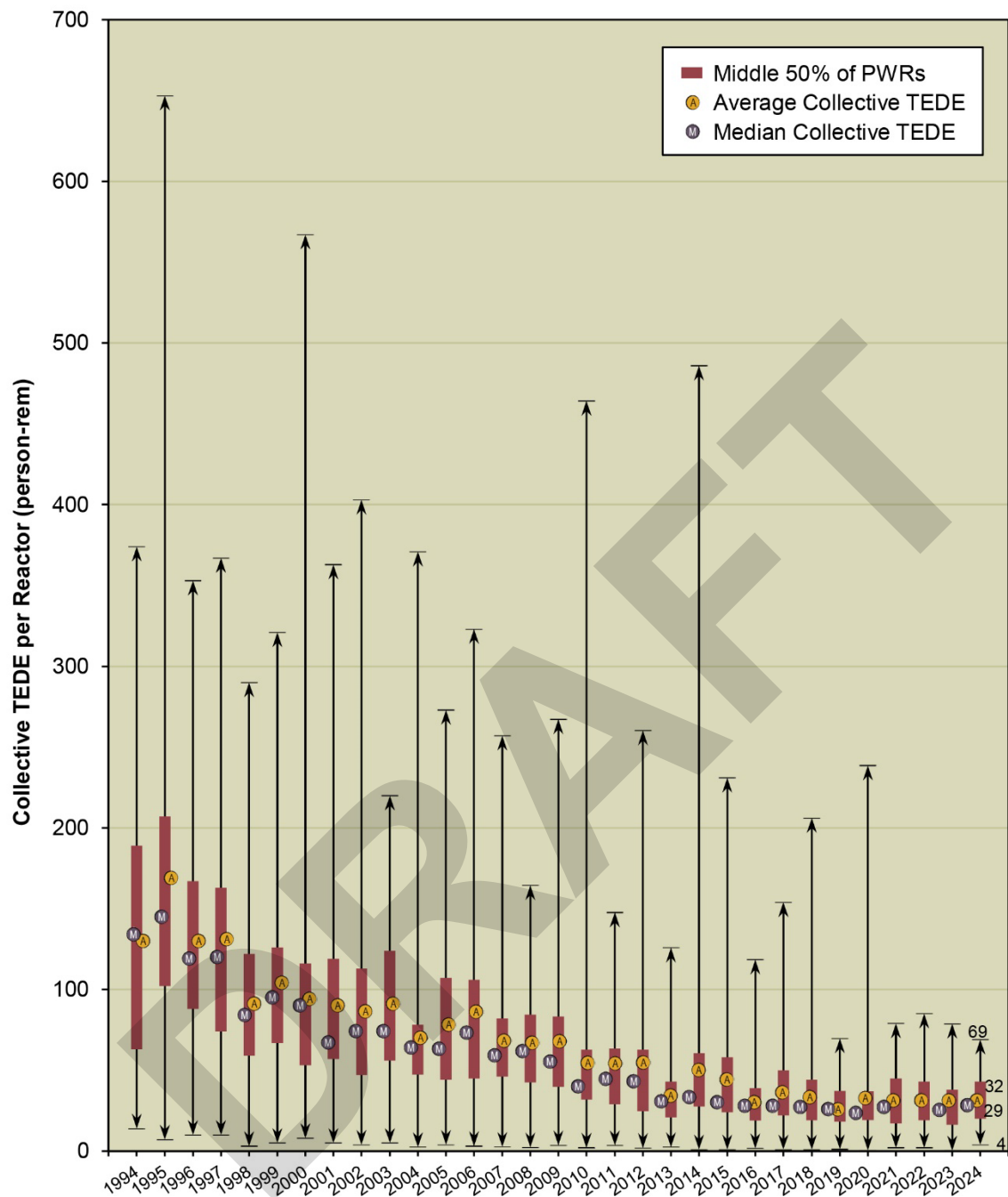
\*\* Gross electricity is shown for 1994–1996; net electricity is shown for 1997–2024.

**Figure 4-3 Average Measurable TEDE per Individual and Collective TEDE per Megawatt-Year, 1994–2024**



NOTE: TEDE is defined as total effective dose equivalent.

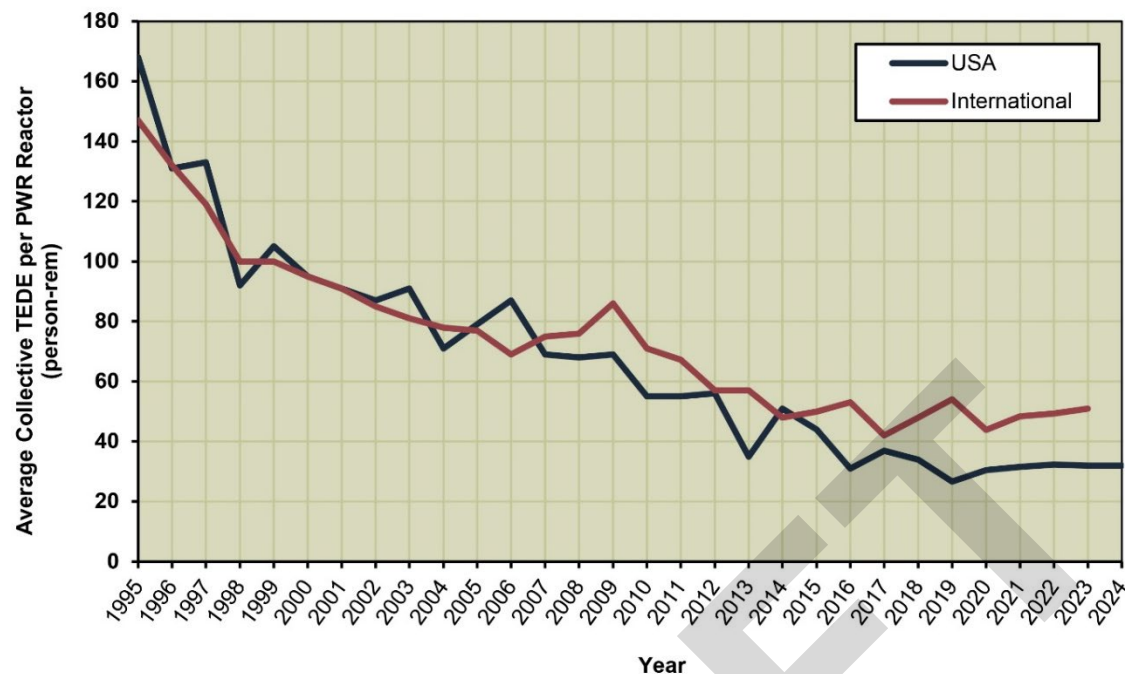
**Figure 4-4a Average, Median, and Extreme Values of the Collective TEDE per BWR, 1994–2024**



NOTE: TEDE is defined as total effective dose equivalent.

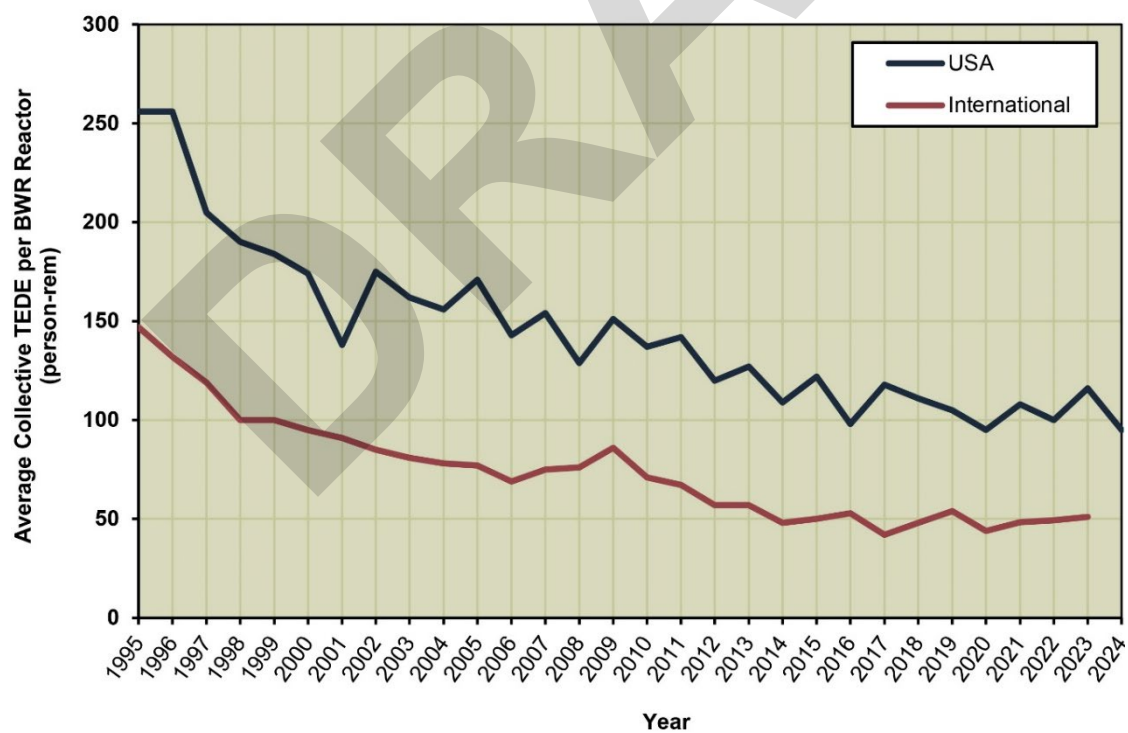
**Figure 4-4b Average, Median, and Extreme Values of the Collective TEDE per PWR, 1994–2024**

## DRAFT Tables and Figures



NOTE: TEDE is defined as total effective dose equivalent.

**Figure 4-5 Average Collective TEDE per PWR, 1995–2024**



NOTE: TEDE is defined as total effective dose equivalent.

**Figure 4-6 Average Collective TEDE per BWR, 1995–2024**

## DRAFT Tables and Figures

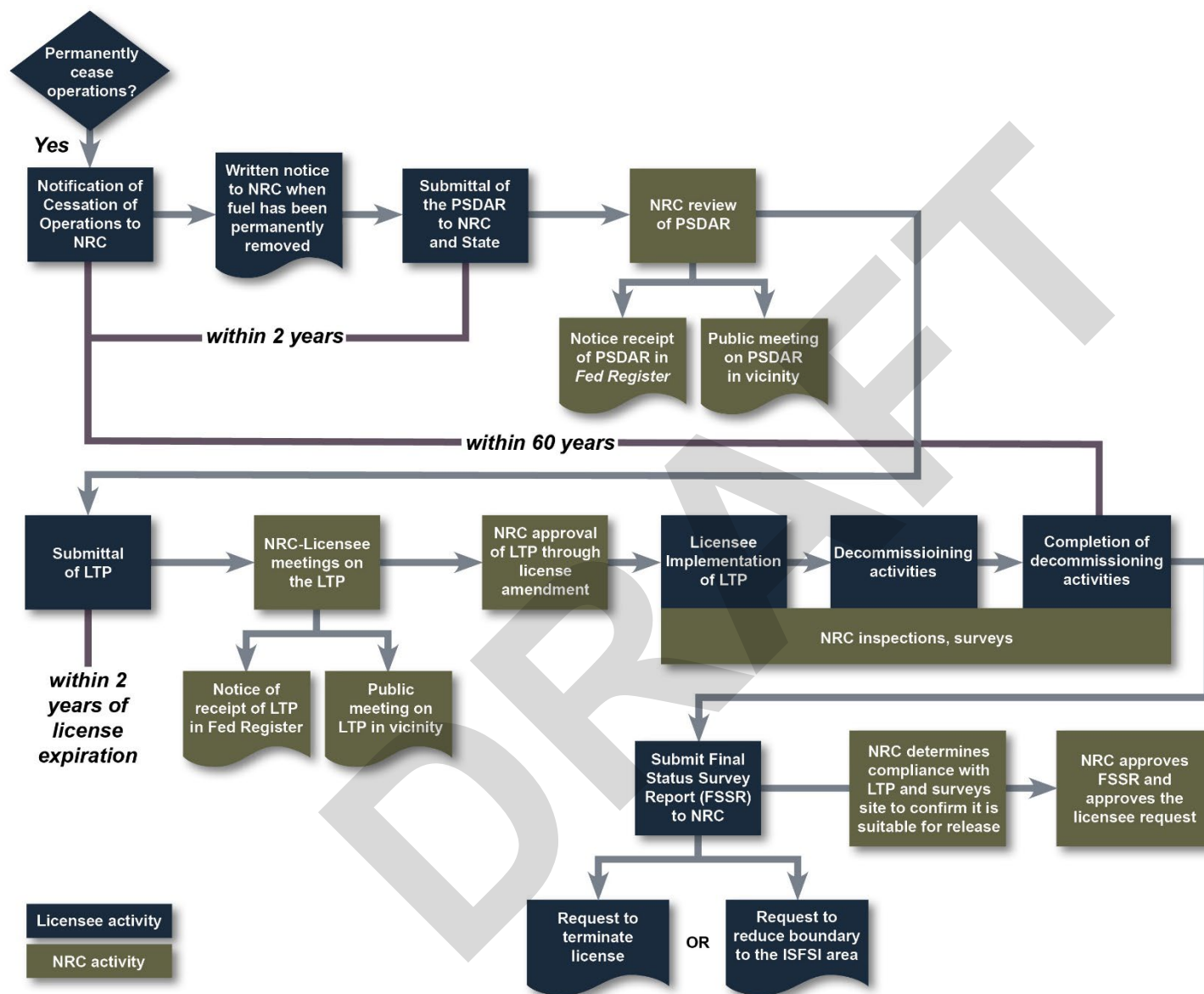


Figure 4-7 Commercial Nuclear Power Reactor Decommissioning Process Flowchart