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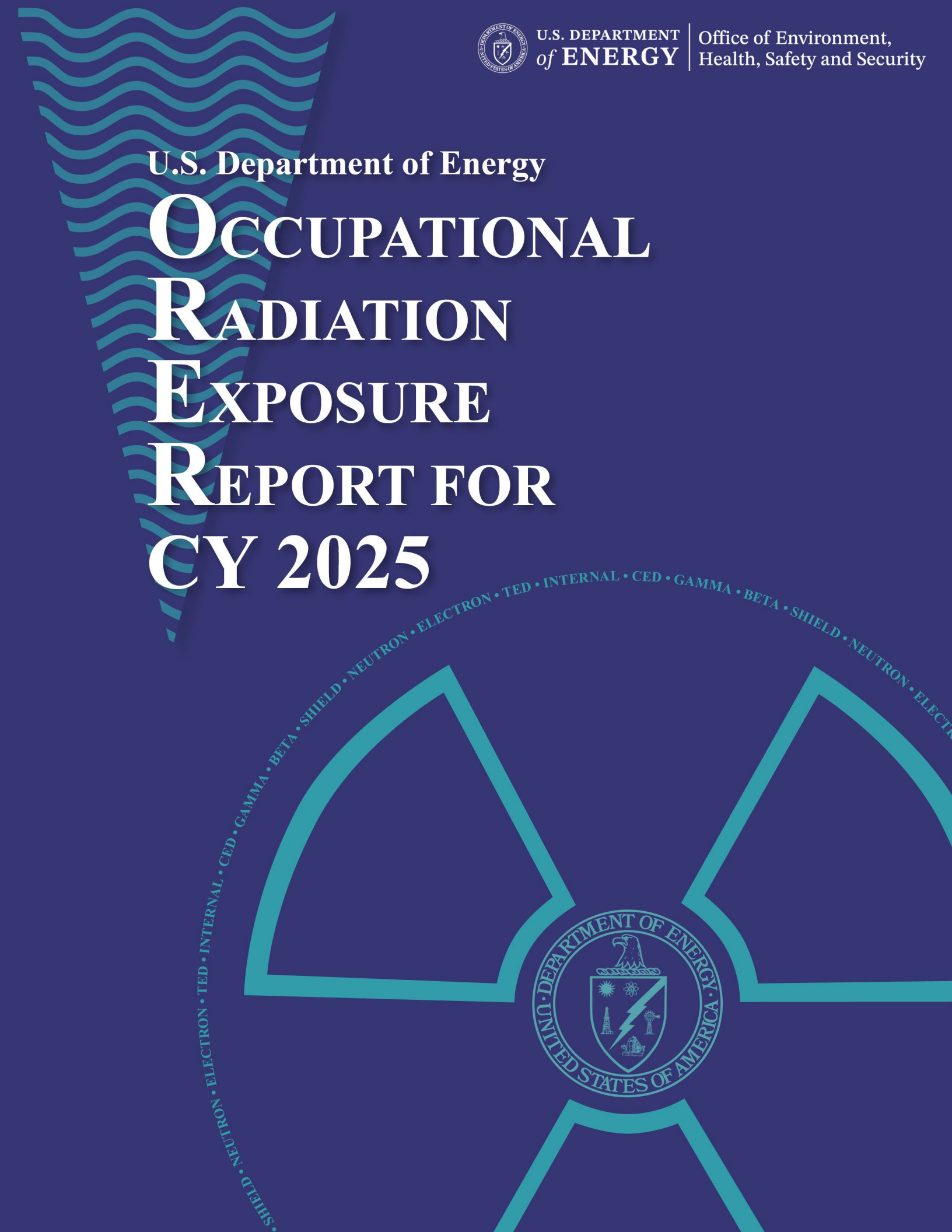
U.S. Department of Energy

Occupational Radiation Exposure Report for CY 2025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U.S. Department of Energy

Occupational Radiation Exposure Report for CY 2025

Manuscript Completed: August 2026
Date Published: November 30, 2026

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Foreword

The *U.S. Department of Energy Occupational Radiation Exposure Report for CY 2025* presents the results of analyses of occupational radiation exposures at the U.S. Department of Energy (DOE), including the National Nuclear Security Administration (NNSA) operations, during calendar year (CY) 2025. This report includes occupational radiation exposure data for over 86,000 DOE Federal employees, contractors, and subcontractors, as well as members of the public who have worked in or entered controlled areas monitored for exposure to radiation.

DOE publishes this annual report to provide DOE Management, Program Offices, workers, health physicists, and other stakeholders with an evaluation of DOE-wide performance regarding compliance with Title 10 of the *Code of Federal Regulations* (CFR) Part 835, *Occupational Radiation Protection* (10 CFR 835) radiation exposure limits and adherence to as low as reasonably achievable principles.

This report provides a discussion regarding radiation protection and exposure reporting requirements. It also includes CY 2025 information and analyses regarding aggregate, individual, site, DOE Program, transient individuals' dose, as well as a historical review of DOE exposure data. DOE continues to be diligent in protecting its workers and the public from exposure to radiation from DOE operations, as illustrated by the results contained in this report.

As part of our continual improvement process, you, the reader, are encouraged to provide comments and suggestions regarding this report via the User Survey included at the end of this report.

THOMAS C. MESSER
ACTING DIRECTOR
OFFICE OF ENVIRONMENT, HEALTH, SAFETY
AND SECURITY

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LIST OF ABBREVIATIONS AND ACRONYMS

ACL	Administrative Control Level
AEC	U.S. Atomic Energy Commission
AEDE	Annual Effective Dose Equivalent
AL	Action Level
AMWTP	Advanced Mixed Waste Treatment Project
ANL	Argonne National Laboratory
ASTA-UED	Accelerator Structure Test Area – Ultrafast Electron Diffraction
ATR	Advanced Test Reactor
BLIP	Brookhaven Linac Isotope Producer
BNL	Brookhaven National Laboratory
BSRA	Battelle Savannah River Alliance
CEBAF	Continuous Electron Beam Accelerator Facility
CED	Committed Effective Dose
CEDE	Committed Effective Dose Equivalent
CEqD	Committed Equivalent Dose
CEqD-SK	Committed Equivalent Dose to the Skin
CFR	Code of Federal Regulations
CY	Calendar Year
DAC	Derived Air Concentration
DDE	Deep Dose Equivalent
DOE	U.S. Department of Energy
DRUM	Defense-Related Uranium Mines
DUF6	Depleted Uranium Hexafluoride Project
ED	Effective Dose
EqD	Equivalent Dose
EqD-Eye	Equivalent Dose to the Lens of the Eye
EqD-Fetus	Equivalent Dose to the Fetus
EqD-ME	Equivalent Dose to the Skin of the Maximally Exposed Extremity
EqD-SkWB	Equivalent Dose to the Skin of the Whole Body
EqD-WB	Equivalent Dose to the Whole Body
EH	Office of Environment, Health, Safety and Security
EM	Office of Environmental Management
EPA	U.S. Environmental Protection Agency
ERDA	Energy Research and Development Administration
ES&H	Environment, Safety, and Health
ETEC	Energy Technology Engineering Center
ETTP	East Tennessee Technology Park
FACET-II	Facilities for Accelerator Science and Experimental Test Beams
Fermilab	Fermi National Accelerator Laboratory
FRNP	Four Rivers Nuclear Partnership
FTE	Full-Time Equivalent
HGEO	Hydrocarbons and Geothermal Energy Office
HMIS	Hanford Mission Integration Solutions
ICP	Idaho Cleanup Project
ICRP	International Commission on Radiological Protection
INL	Idaho National Laboratory
ISS	Infrastructure Support Services

KC-NSC	Kansas City National Security Campus
KIPAC	Kavli Institute for Particle Astrophysics and Cosmology
LANL	Los Alamos National Laboratory
LBNL	Lawrence Berkeley National Laboratory
LCLS	Linac Coherent Light Source
LERF	Low Energy Recirculator Facility
LINAC	Linear Accelerator
LLNL	Lawrence Livermore National Laboratory
LM	Office of Legacy Management
MCS	Mid-America Conversion Services
MESC	Office of Critical Minerals and Energy Innovation
MeV	Megaelectronvolt
MSA	Mission Support Alliance
mSv	Millisievert
NCRP	National Council on Radiation Protection and Measurements
NE	Office of Nuclear Energy, Science and Technology
NETL	National Energy Technology Laboratory
NLCTA	Next Linear Collider Test Accelerator
NLR	National Laboratory of the Rockies
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
NORM	Naturally Occurring Radioactive Materials
NRC	U.S. Nuclear Regulatory Commission
OpEx	Operating Experience
ORISE	Oak Ridge Institute for Science and Education
ORNL	Oak Ridge National Laboratory
ORP	Office of River Protection
OSMS	Operations and Site Mission Support
OST	Office of Secure Transportation
PAS	Personal Air Samplers
PGDP	Paducah Gaseous Diffusion Plant
PNNL	Pacific Northwest National Laboratory
PORTS	Portsmouth Gaseous Diffusion Plant
PPPL	Princeton Plasma Physics Laboratory
PULSE	Photon Ultrafast Laser Science and Engineering
RCT	Radiation Control Technician
rem	Roentgen equivalent man
REMS	Radiation Exposure Monitoring System
RGD	Radiation Generating Device
Rh-102	Rhodium-102
Rh-102m	Rhodium-102m
RSO	Radiation Safety Officer
RWP	Radiation Work Permit
SC	Office of Science
SIMES	Stanford Institute for Materials and Energy Sciences
SLAC	SLAC National Accelerator Laboratory
SNM	Special Nuclear Material
SNL	Sandia National Laboratories
SOC	Standard Occupational Classification
SPRU	Separations Process Research Unit
SRNL	Savannah River National Laboratory

SRS	Savannah River Site
SRSO	Senior Radiation Safety Officer
SSRL	Stanford Synchrotron Radiation Lightsource
SRTE	Savannah River Tritium Enterprise
STD	Standard
Sv	Sievert
TED	Total Effective Dose
TENORM	Technologically Enhanced Naturally Occurring Radioactive Materials
TJNAF	Thomas Jefferson National Accelerator Facility
TOD	Total Organ Dose
TRU	Transuranic
TSS	Transportation Safeguards System
TWPC	Transuranic Waste Process Center
U	Uranium
U-234	Uranium-234
UCOR	United Cleanup Oak Ridge, LLC.
UMTRA	Uranium Mill Tailings Remedial Action Project
USEC	United States Enrichment Corporation
WIPP	Waste Isolation Pilot Plant
WVCA	West Valley Cleanup Alliance
WVDP	West Valley Demonstration Project
WVNS	West Valley Nuclear Services, Inc.
Y-12	Y-12 National Security Complex

Executive Summary

The U.S. Department of Energy (DOE) Office of Environment, Health, Safety and Security (EH) publishes annual occupational radiation exposure reports to provide DOE Management, Program Offices, workers, health physicists, and other stakeholders an evaluation of DOE-wide performance regarding compliance with Title 10 of the *Code of Federal Regulations* (CFR) Part 835, *Occupational Radiation Protection* (10 CFR 835) radiation exposure limits.

This report presents the results of analyses of occupational radiation exposures at DOE operations, including the National Nuclear Security Administration (NNSA), during calendar year (CY) 2025. The report includes occupational radiation exposure information for over 86,000 DOE Federal employees, contractors, and subcontractors, and members of the public monitored for radiation exposure. The 88 DOE organizations that submitted radiation exposure reports in CY 2025 have been grouped into 34 sites. The information has been analyzed to provide a measure of DOE's performance in protecting workers and individuals who have entered controlled areas.

Individuals who have the potential to be exposed to radiation at a DOE facility are required to be monitored in accordance with 10 CFR 835, Subpart E. The exposure monitoring data are used to determine the radiation dose received by the individual, which is reported to DOE through the DOE Radiation Exposure Monitoring System (REMS).

Unless otherwise specified, the term "dose" used in this report refers to the total effective dose (TED) and is measured in units of "rem" (derived from the phrase Roentgen equivalent man). The sievert (Sv) is the international unit of effective dose, where 1 Sv is equal to 100 rem and 1 rem is, therefore, equal to 10 millisieverts (mSv). TED is the summation of the effective dose from sources of radiation that are external and internal to the body. The committed effective dose (CED) is the dose resulting from radioactive material taken into the body and is commonly referred to as internal dose. The term "collective dose" is the sum of the individual doses received by a group of individuals and is shown in units of "person-rem."

Analysis of the collected exposure data for CY 2025 indicates that:

- No exposures were reported to have exceeded the occupational dose limit of 5 rem (50 mSv) TED; and
- Only 17 percent of the monitored individuals received a measurable dose (a detectable dose greater than zero), and, of those, the average measurable dose received was 1 percent of the 5 rem (50 mSv) TED limit.

In addition, from CY 2024 to CY 2025:

- The collective TED increased by 2 percent to 942.3 person-rem (9,423 person-mSv);
- The number of individuals with measurable dose decreased by 11 percent from 16,334 individuals to 14,477 individuals;
- Collective CED (internal exposure) decreased slightly to 43.0 person-rem (430 person-mSv); and
- Collective TED for transient individuals increased by 80 percent to 38.9 person-rem (389 person-mSv).

The collective dose at DOE facilities has decreased by 88 percent since CY 1986. This coincides with the end of the Cold War era, which shifted the DOE mission from weapons production to stabilization, waste management, and environmental remediation activities, along with the consolidation and remediation of facilities across the complex to meet the new mission.

In alignment with the change in mission, regulations and requirements have been modified (see *Section 2*) that reinforce DOE's focus on risk reduction to lower occupational radiation dose.

Over the past 5 years, only one monitored individual, at Los Alamos National Laboratory (LANL), received a dose above the 2 rem (20 mSv) TED administrative control level [1].

In CY 2025, an individual received a TED of 3.99 rem (39.9 mSv) after an airborne release of radioactive material that occurred while four individuals were involved in exchanging a glovebox window. The contamination was believed to have occurred when an air mover re-started during the installation process. One of the individuals received an internal dose during the incident as evidenced by a positive nasal smear. Two other individuals received intakes associated with the incident but did not exceed the 2 rem (20 mSv) TED administrative control level. Details of this incident are available in the occurrence report NA--LASO-LANL-TA55-2025-0022. (See *Section 3.3.1*.)

This report and other information regarding DOE occupational radiation exposure may be accessed at:

https://www.energy.gov/ehss/occupational-radiation-exposure

1 Introduction

The *U.S. Department of Energy Occupational Radiation Exposure Report for CY 2025* presents the results of analyses of occupational radiation exposures at the U.S. Department of Energy (DOE), including the National Nuclear Security Administration (NNSA), operations during calendar year (CY) 2025. This report includes occupational radiation exposure information for DOE Federal employees, contractors, and subcontractors, and members of the public monitored for radiation exposure. The 88 DOE organizations that submitted radiation exposure reports for CY 2025 have been grouped into 34 sites.[*] The information has been analyzed and trended to provide a measure of DOE's performance in protecting workers and individuals who have entered controlled areas.

This report is published by the DOE Office of Environment, Health, Safety and Security (EH). The purpose of this report is to provide DOE Management, Program Offices, workers, health physicists, and other stakeholders with an evaluation of DOE-wide performance regarding compliance with Title 10 of the *Code of Federal Regulations* (CFR) Part 835, *Occupational Radiation Protection* (10 CFR 835) radiation exposure limits.

Individuals who have the potential to be exposed to radiation at a DOE facility are required to be monitored in accordance with 10 CFR 835, Subpart E. The exposure monitoring data are used to determine the radiation dose received by those individuals, which is reported to DOE through the DOE Radiation Exposure Monitoring System (REMS). Unless otherwise specified, the term "dose" used in this report refers to the total effective dose (TED) and is measured in units of "rem" (derived from the phrase Roentgen equivalent man). TED is the summation of the effective dose from sources of radiation that are external and internal to the body. The committed effective dose (CED) is the dose resulting from radioactive material taken into the body and is commonly referred to as internal dose. The term "collective dose" is the sum of the individual doses received by a group of individuals and is shown in units of "person-rem."

1.1 Report Organization

This report is organized into nine sections. *Section 1* describes the content and organization of this report. *Section 2* discusses radiation protection, radiation dose limits, and reporting requirements. *Section 3* presents the CY 2025 occupational dose data along with trends over the past 5 years and includes information and analyses regarding aggregate, individual, site, DOE Program, and transient individual exposure data; a historical review; and a DOE occurrence report review. *Section 4* discusses the DOE Corporate Operating Experience Program, while *Section 5* summarizes the 2025 data and overall conclusions. *Sections 6, 7*, and *8* contain the report glossary, references, and a user survey, respectively. *Section 9* contains the appendices, which have additional detail and data associated with the information presented within the report.

1.2 Report Availability

This report, the appendices, and all other associated information are available on the DOE Radiation Exposure Monitoring System (REMS) web site at:

https://www.energy.gov/ehss/occupational-radiation-exposure

The REMS web site contains additional information on occupational radiation exposure, such as:

- Annual occupational radiation exposure reports and associated appendices in pdf since CY 1974;
- Guidance on reporting radiation exposure information to the DOE REMS;
- Updated REMS-Online Query Tool;

[**] For the purposes of this report, the sites and facilities are grouped by geographic location. When reported separately, the data for individual facilities at the sites are provided separately. See *Section 3.4* for more information.

- Guidance on how to request a dose history for an individual;
- Statistical data since CY 1987 for analysis;
- Applicable DOE orders and manuals for the recordkeeping and reporting of occupational radiation exposure at DOE;
- Occupational Exposure Dashboard—interactive data explorer; and
- Ten Year Summary—graphical comprehensive overview of the past 10 years of radiation exposure data.

Requests for access to the data files, or for individual dose records used to compile this report, as well as suggestions and comments, should be directed to:

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Standards and Requirements

It is DOE's mission to provide a safe and healthy workplace for all DOE Federal employees, contractors, and subcontractors as well as members of the public that visit DOE facilities. To meet this mission, the EH establishes comprehensive and integrated programs for the protection of workers from hazards in the workplace, including ionizing radiation. The DOE standards for occupational radiation protection include radiation exposure limits to workers. In addition, DOE strives to maintain radiation exposures as far below the limits, which incorporates pre-job planning, engineering controls, and worker training.

This section identifies the radiation protection standards and requirements applicable to DOE operations in CY 2025.

2.1 Radiation Protection Requirements

DOE radiation protection standards are based on Federal guidance for protection against occupational radiation exposure promulgated by the U.S. Environmental Protection Agency (EPA) in CY 1987 [2]. The guidance, initially implemented by DOE in CY 1989, was based on the CY 1977 recommendations of the International Commission on Radiological Protection (ICRP) Publication 26 [3] and the CY 1987 recommendations of the National Council on Radiation Protection and Measurements (NCRP) Publication 91 [4]. EPA recommends that internal dose be added to the external whole-body dose to determine the TED equivalent. The laws and requirements for occupational radiation protection pertaining to the information collected and presented in this report are summarized in *Exhibit 2-1*.

2.2 Radiation Dose Limits

Radiation dose limits are codified in 10 CFR 835, sections 202, 206, 207, and 208 [5] and are summarized in *Exhibit 2-2*.

2.3 Reporting

Exposure records for the monitoring year are reported by March 31 of the following calendar year. Specific instructions for preparing occupational exposure data for submittal to the REMS repository are contained in the REMS Data Reporting Guide [6] available online at:

https://www.energy.gov/ehss/articles/radiation-exposure-monitoring-systems-data-reporting-guide

Exhibit 2-1: Regulations and Requirements Pertaining to the Collection and Reporting of Radiation Exposures.

Title	Date	Description
10 CFR 835, Occupational Radiation Protection [5]	Issued 12/14/1993 Amended 11/4/1998 Amended 6/8/2007 Amended 4/13/2011 Amended 8/11/2017 Amended 9/11/2017 Amended 6/26/2023	Establishes radiation protection standards, exposure limits, and program requirements for protecting individuals from ionizing radiation that results from the conduct of DOE activities.
REMS Data Reporting Guide [6]	Issued 2/23/2012	Specifies the current format and content of the reports submitted to the REMS Repository.

Exhibit 2-2: DOE Dose Limits from 10 CFR 835.

Personnel Category	Section of 10 CFR 835	Type of Exposure	Acronym	Annual Limit
General employees	835.202	Total effective dose. The sum of the effective dose (for external exposures) and the committed effective dose.	TED	5 rem (50 mSv)
		The sum of the equivalent dose to the whole body for external exposures and the committed equivalent dose to any organ or tissue other than the skin or the lens of the eye, also referred to as the total organ dose (TOD).	EqD-WB + CEqD (TOD)	50 rem (500 mSv)
		Equivalent dose to the lens of the eye	EqD-Eye	15 rem (150 mSv)
		The sum of the equivalent dose to the skin or to any extremity for external exposures and the committed equivalent dose to the skin or to any extremity	EqD-SkWB + CEqD-SK and EqD-ME + CEqD-SK	50 rem (500 mSv)
Declared pregnant workers*	835.206	The equivalent dose to the embryo/fetus from the period of conception to birth as a result of occupational exposure of a declared pregnant worker.	EqD-Fetus	0.500 rem (5 mSv) from the period of conception to birth
Minors	835.207	Total effective dose	TED	0.100 rem (1 mSv)
Members of the public in a controlled area	835.208	Total effective dose	TED	0.100 rem (1 mSv)

* Limit applies to the embryo/fetus.

2.4 Amendments to 10 CFR 835

In August 2006, DOE published a proposed amendment to 10 CFR 835 in the *Federal Register*, and, in June 2007, the amended rule was published. The amendment:

- Specified new dosimetric terminology and quantities based on ICRP 60/68 in place of ICRP 26/30;
- Specified ICRP 60 tissue weighting factors in place of ICRP 26 weighting factors;
- Specified ICRP 60 radiation weighting factors in place of ICRP 26 quality factors;
- Amended other parts of the regulation that changed as a result of adopting ICRP 60 dosimetry system;
- Used the ICRP 68 dose conversion factors to determine values for the derived air concentrations; and
- Adopted other changes intended to enhance radiation protection.

The amended rule became effective on July 9, 2007, and was required to be fully implemented by DOE sites by July 9, 2010. All terminology used in this annual report reflects that of the amendment. In addition, 10 CFR 835 was revised in April 2011 when Appendix C was updated. On August 11, 2017, Appendices C and E were amended. The amendment to Appendix C corrected the air immersion DAC for any single radionuclide not listed in the Appendix C table with a decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than 2 hours, adjusted for an 8-hour workday. The amendment to Appendix E corrected the activity information of two radioisotopes of rhodium (Rh-102 and Rh-102m).

An administrative amendment in June 2023 focused on updating position titles and reporting responsibilities without altering the actual radiation dose limits or safety thresholds.

Occupational Radiation Dose at DOE

3.1 Analysis of the Data

The following key indicators are analyzed to identify and correlate parameters that impact occupational radiation doses at DOE:

- Number of records for monitored individuals;
- Individuals who received a measurable dose;
- Collective dose;
- Average measurable dose; and
- Dose distribution.

The analysis of key indicators for individual dose data includes:

- Doses exceeding the 5 rem (50 millisievert [mSv]) DOE regulatory limit; and
- Doses exceeding the 2 rem (20 mSv) TED DOE administrative control level (ACL).

This report provides additional information on activities at sites that contribute most of the collective dose.

The data for prior years contained in this report are subject to change as sites may submit corrections for previous years. Corrected or updated records received after the annual March 31 deadline are included in the following year's annual report.

3.2 Analysis of Aggregate Data

3.2.1 Number of Monitored Individuals

The data in the REMS repository are reported by each facility in the form of a record for a monitoring period for each individual. An individual may have been monitored more than once at the same facility (e.g., multiple short-term assignments) or may have been monitored at more than one facility during the year. This can result in more than one record for an individual during the year in the REMS repository. However, the impact of multiple records per person on the annual trends and aggregate analysis of the data in this report is not significant, as it occurs consistently from year to year. An analysis of the number of individuals monitored at more than one location during the year is provided in *Section 3.5* and supports this assertion. The term "number of monitored individuals" will be used herein with the understanding that it is determined by the number of records for monitored individuals.

3.2.2 Number of Individuals with Measurable Dose

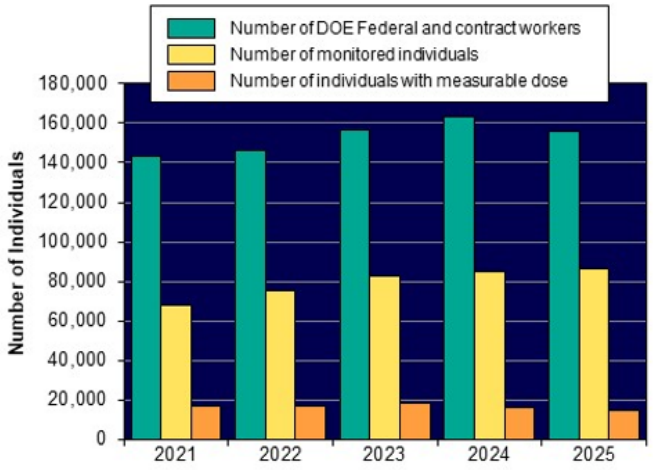
DOE uses the number of individuals with measurable dose to represent the exposed workforce size. In this context, "with measurable dose" means that a detectable value was reported for the individual.

Over the past 5-year period, measurable doses to all monitored individuals were well below the annual DOE regulatory limit of 5 rem (50 mSv) TED; however, one monitored individual received a dose of 3.99 rem (39.9 mSv) TED in CY 2025. This dose exceeded the 2 rem (20 mSv) DOE ACL.

Exhibit 3-1a and *Exhibit 3-1b* show the number of DOE Federal and contract workers, the total number of individuals monitored for radiation dose, the number of individuals with a measurable dose, and the relative percentages of individuals with measurable dose for the past 5 years. The number of DOE Federal and contract employees was calculated by dividing the total hours worked per year by the average number of work hours per year. It is, therefore, not a true count of individuals, but is a representation of the total size of the DOE workforce as full-time equivalents (FTEs) and is included here to compare it to the number of individuals monitored.

As shown in *Exhibit 3-1b*, the number of monitored individuals increased by 1.7 percent from a value of 84,976 in CY 2024 to a value of 86,423 in CY 2025. Since 1989, the number of monitored individuals has been greater than 70,000. However, in CY 2020 and CY 2021, the number of monitored individuals was fewer than 65,000 due to COVID pandemic-related work restrictions.

Exhibit 3-1a: Monitoring of the DOE Workforce, CY 2021 – 2025.



For CY 2025, 55 percent of the DOE workforce were monitored for radiation dose, and 17 percent of monitored individuals received a measurable dose.

Exhibit 3-1b: Monitoring of the DOE Workforce, CY 2021 – 2025.

Year	DOE Federal & Contractor Workforce*	Number of Monitored Individuals	Percent of Monitored Individuals**	Number of Individuals with Measurable Dose	Percent of Individuals with Measurable Dose**
2021	143,518	67,793	47% ▼	16,903	25% ▼
2022	146,242	75,348	52% ▲	16,776	22% ▼
2023	156,271	82,422	53% ▲	18,477	22%
2024	163,017	84,976	52% ▼	16,334	19% ▼
2025	156,110	86,423	55% ▲	14,477	17% ▼
5-Year Average	**153,032**	**79,392**	**52%**	**16,593**	**21%**

* The number of DOE and contract workers was determined from the total annual work hours at DOE [7] converted to FTEs.
** Up arrows indicate an increase from the previous year's value. Down arrows indicate a decrease from the previous year's value.

The number of individuals with measurable dose decreased 11 percent from a value of 16,334 in CY 2024 to a value of 14,477 in CY 2025. Although the number of monitored individuals continued to increase post-COVID, the percentage of individuals with measurable dose decreased from 19 percent in CY 2024 to 17 percent in CY 2025.

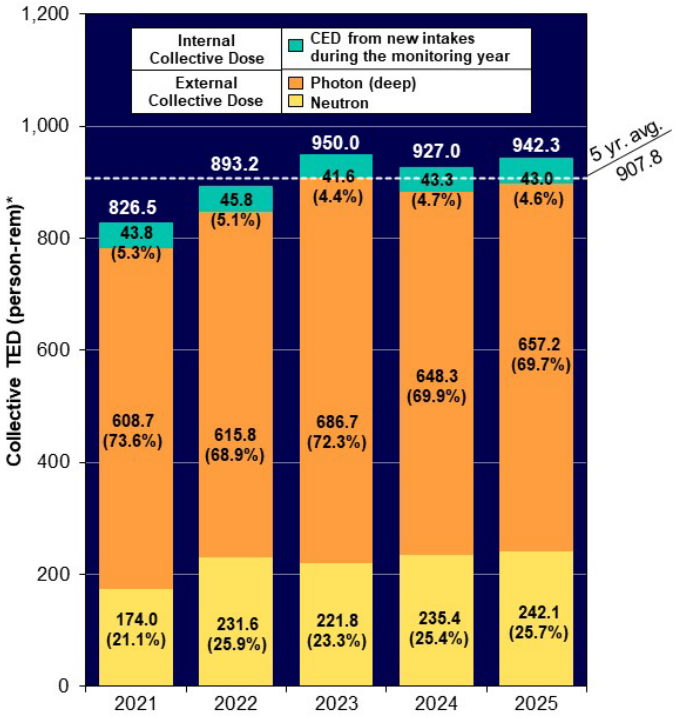
3.2.3 Collective Dose

The collective dose is the sum of the dose received by all individuals with a measurable dose and is measured in units of person-rem and person-mSv. DOE monitors the collective dose as one measure of the overall performance of radiation protection programs to reduce individual exposures and collective exposures.

In this report, the term "collective dose" is also applied to various types of radiation dose, such as external or internal, and will be specified in conjunction with the term "collective" to clarify the intended meaning.

As shown in *Exhibit 3-2*, the collective TED increased at DOE by 2 percent from 927.0 person-rem (9,270 person-mSv) in CY 2024 to 942.3 person-rem (9,423 person-mSv) in CY 2025.

Exhibit 3-2: Components of TED, CY 2021 – 2025.



* The percentages in parentheses represent the percentage of each dose component to the collective TED.

The collective TED increased by 2 percent at DOE from CY 2024 to 2025.

The collective internal dose decreased by 1 percent from CY 2024 to 2025.

The collective neutron dose increased by 3 percent from CY 2024 to 2025.

The collective photon dose increased by 1 percent from CY 2024 to 2025.

Effective dose from photons—the component of external dose from gamma or X-ray electro-magnetic radiation (also includes energetic betas)

Effective dose from neutrons—the component of external dose from neutrons ejected from the nucleus of an atom during nuclear reactions

Internal dose—radiation dose resulting from radioactive material taken into the body

The internal dose is based on the 50-year CED methodology. Under this methodology, the cumulative dose received from the intake of radioactive material over the next 50 years is assigned to the individual as a one-time dose in the year of intake.

The internal dose component of the collective TED decreased slightly from 43.3 person-rem (433 person-mSv) in CY 2024 to 43.0 person-rem (430 person-mSv) in CY 2025 primarily due to a decrease at the Oak Ridge Y-12 National Security Complex. The collective photon dose increased by 1 percent from 648.3 person-rem (6,483 person-mSv) in CY 2024 to 657.2 person-rem (6,572 person-mSv) in CY 2025 due to increases at West Valley Cleanup Alliance and Hanford Field Office.

The neutron component of the collective TED increased by 3 percent from 235.4 person-rem (2,354 person-mSv) in CY 2024 to 242.1 person-rem (2,421 person-mSv). The increase in CY 2025 resulted primarily from an increase in collective neutron dose at Los Alamos National Laboratory (LANL).

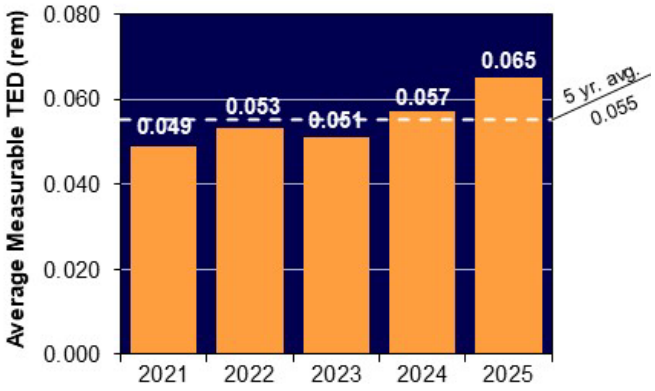
Five DOE sites contributed 86 percent of the collective TED in CY 2025. In descending order of collective TED, these were: LANL, Savannah River, Idaho, Oak Ridge, and Hanford. LANL, Idaho, Oak Ridge and Savannah River had increases in collective TED in CY 2025, while collective TED decreased at Hanford. (See *Section 3.4.3.*)

3.2.4 Average Measurable Dose

The average measurable dose to DOE monitored individuals, a key radiation dose indicator, is calculated by dividing the collective TED by the number of individuals with measurable dose. This is the average most commonly used by radiation exposure research organizations when examining trends and comparing doses received by individuals because it excludes those individuals that did not receive a measurable dose.

Exhibit 3-3 illustrates that the average measurable TED increased by 14 percent from 0.057 rem (0.570 mSv) in CY 2024 to 0.065 rem (0.650 mSv) in CY 2025.

Exhibit 3-3: Average Measurable TED, CY 2021 – 2025.



While the collective dose and average measurable dose serve as measures of the magnitude of the dose accrued by DOE-monitored individuals, they do not depict the distribution of doses among the monitored individuals.

3.2.5 Dose Distribution

Exposure data are commonly analyzed in terms of dose intervals to depict the TED distribution among the monitored individuals. *Exhibit 3-4* shows the number of individuals in each of 11 different dose ranges. The number of individuals receiving doses above 0.100 rem (1 mSv) is included to show the number of individuals with doses above the monitoring threshold specified in 10 CFR 835.402(a) and (c) [5].

The number of individuals in each measurable dose range below 0.250 rem (2.5 mSv) decreased, and the number of individuals in the ranges above 0.250 rem (2.5 mSv) increased from CY 2024 to CY 2025. In the past 5 years, only one individual has received dose above 2.0 rem TED.

Exhibit 3-5 presents the dose distribution of those individuals with measurable doses in terms of the percentage of individuals with measurable TED in each range. The doses received by 83 percent of monitored individuals who received a measurable dose were below the required monitoring threshold of 0.100 rem (1 mSv) specified in 10 CFR 835.402 (a) and (c).

These results reflect DOE's conservative practice of monitoring more individuals than are required to ensure adequate protection of the individual.

Exhibit 3-4: Distribution of TED by Dose Range, CY 2021 – 2025.

	TED Range (rem)*	2021	2022	2023	2024	2025
Number of Individuals in Each Dose Range	Less than measurable	50,890	58,572	63,945	68,642	71,946
	Measurable <0.100	14,937	14,730	16,146	13,970	12,076
	0.100 – 0.250	1,383	1,374	1,655	1,572	1,506
	0.250 – 0.500	443	453	526	616	646
	0.500 – 0.750	98	137	116	127	167
	0.750 – 1.000	29	60	28	37	48
	1.0 – 2.0	13	22	6	12	33
	2.0 – 3.0	-	-	-	-	-
	3.0 – 4.0	-	-	-	-	1
	4.0 – 5.0	-	-	-	-	-
	>5.0	-	-	-	-	-
Total number of records for monitored individuals		67,793	75,348	82,422	84,976	86,423
Number with measurable dose		16,903	16,776	18,477	16,334	14,477
Number with dose >0.100 rem		1,966	2,046	2,331	2,364	2,401
Collective TED (person-rem)		826.474	893.225	950.040	927.008	942.256
Average measurable TED (rem)		0.049	0.053	0.051	0.057	0.065

* Individuals with doses equal to the dose value separating the dose ranges are included in the next higher dose range.
- Indicates dose ranges containing no individuals.

Exhibit 3-5: Percentage of Individuals with Measurable TED by Dose Range, CY 2021 – 2025.

	TED Range (rem)*	2021	2022	2023	2024	2025
Percentage of Individuals with Measurable TED	Measurable <0.100	88.37%	87.80%	87.38%	85.53%	83.42%
	0.100 – 0.250	8.18%	8.19%	8.96%	9.62%	10.40%
	0.250 – 0.500	2.62%	2.70%	2.85%	3.77%	4.46%
	0.500 – 0.750	0.58%	0.82%	0.63%	0.78%	1.15%
	0.750 – 1.000	0.17%	0.36%	0.15%	0.23%	0.33%
	1.0 – 2.0	0.08%	0.13%	0.03%	0.07%	0.23%
	2.0 – 3.0	-	-	-	-	-
	3.0 – 4.0	-	-	-	-	0.01%
	4.0 – 5.0	-	-	-	-	-
	>5.0	-	-	-	-	-
% of monitored individuals with measurable dose		**25%**	**22%**	**22%**	**19%**	**17%**
% of monitored individuals with dose >0.100 rem		**3%**	**3%**	**3%**	**3%**	**3%**

* Individuals with doses equal to the dose value separating the dose ranges are included in the next higher dose range.
- Indicates dose ranges containing no individuals.

3.3 Analysis of Individual Dose Data

The previous section's analysis is based on aggregate data for DOE. From both the individual and regulatory perspectives, it is important to examine the doses received by individuals in the elevated dose ranges to understand the circumstances that led to these exposures and reduce or eliminate these types of exposures in the future.

3.3.1 Doses in Excess of the Regulatory Limit

No individual was reported to have exceeded the TED regulatory limit (5 rem [50 mSv]) from CY 2021–2025.

Eighty-three percent of monitored individuals who received a measurable dose in CY 2025 received doses below the required monitoring threshold of 0.100 rem (1 mSv) specified in 10 CFR 835.402 (a) and (c).

3.3.2 Doses in Excess of the DOE Administrative Control Level

DOE Standard (STD)-1098-2017, *Radiological Control* [1] establishes a 2-rem (20-mSv) ACL for TED per year per person for all DOE activities. The Standard states that each DOE site should establish an annual facility ACL based on historical and projected exposures and that no individual should be allowed to exceed this value without prior facility management approval.

One individual was reported to have exceeded the TED ACL (2 rem [20 mSv]) in CY 2025. November of CY 2025, four individuals at LANL's TA-55 Facility were exchanging a glovebox window when the continuous air monitor alarmed, indicating an airborne release of radioactive material. One individual had positive nasal smears and two had skin contamination. An internal dose of 3.5 rem (35 mSv) CED was assigned to the individual with positive nasal smears based on urine bioassay results. The resulting TED was 3.99 rem (39.9 mSv) for the year. The two individuals with skin contamination also had confirmed intakes with resulting TED less than the ACL. Details of the incident are available in the occurrence report NA-LASO-LANL-TA55-2025-0022.

3.3.3 Intakes of Radioactive Material

DOE tracks the number of radionuclide intakes as a performance measure in this report. DOE emphasizes the importance of implementing measures to prevent intakes when possible. Intakes involving certain radionuclides can take significant time to analyze and to determine final dose. This can result in changes to the dose totals for prior years if the updates are received after the March 31 annual reporting deadline.

Exhibit 3-6 shows the number of individuals with measurable CED, collective CED, and average measurable CED for CY 2021 – 2025. The number of individuals with measurable CED decreased 11 percent from 1,420 in CY 2024 to 1,262 in CY 2025, and the collective CED decreased by less than 1 percent. The average measurable CED per deposition increased 10 percent from 0.031 rem (0.310 mSv) in CY 2024 to 0.034 rem (0.340 mSv) in CY 2025. The collective CED remained below the 5-year average while the average measurable CED increased slightly above the 5-year average.

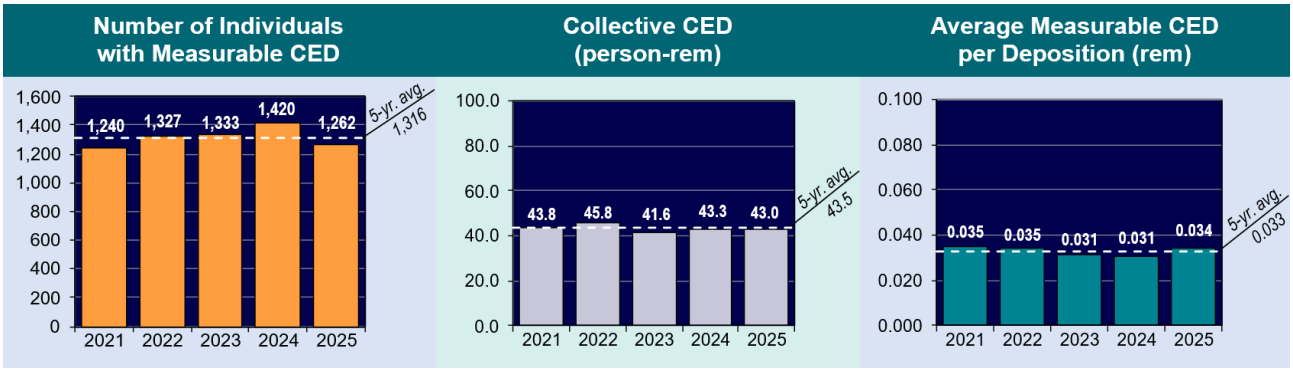
Eighty-seven percent of the collective CED in CY 2025 was from uranium intakes at Y-12 during the operation and management of Enriched Uranium Operations facilities at the site. Compared with external doses, few individuals at DOE receive measurable internal doses. Larger fluctuations may occur from year to year in the number of individuals and the collective CED compared to other components of TED.

Exhibit 3-7 shows the distribution of the CED from CY 2021 – 2025. The total number of individuals with measurable CED in each dose range is the sum of the number of individuals receiving a CED in the dose range. Individuals may have had more than one intake of radioactive material, but the site would report one CED value from these intakes. (See *Section 3.3.1*.)

The internal dose records indicate that the majority of the intakes resulted in relatively low doses. Doses below 0.020 rem (0.200 mSv) are shown as a separate dose range in order to show the large number of individuals in this low dose range. In CY 2025, 55 percent of the internal dose records were for doses below 0.020 rem (0.200 mSv).

Over the 5-year period, internal doses accounted for 5 percent of the collective TED; although only 6 percent of the individuals who received internal doses had estimated doses above the monitoring threshold (0.100 rem [1 mSv]) specified in 10 CFR 835.402(c) [5]. It is noted that the CED is a dose received over a 50-year period after the intake that is all credited to the individual in the year of intake, so the actual annual dose is lower.

Exhibit 3-6: Number of Individuals with Measurable CED, Collective CED, and Average Measurable CED, CY 2021 – 2025.



Note: The number of internal depositions represents the number of internal dose records with positive results reported for each individual.

Exhibit 3-7: Internal Dose Distribution from Intakes, CY 2021 – 2025.

Year	Number of Individuals with CED in the Ranges (rem)*											Total No. of Indiv.	Total Collective CED (person-rem)
	Meas. <0.020	0.020–0.100	0.100–0.250	0.250–0.500	0.500–0.750	0.750–1.000	1.0–2.0	2.0–3.0	3.0–4.0	4.0–5.0	>5.0		
2021	667	456	113	4	-	-	-	-	-	-	-	1,240	43.789
2022	685	537	104	1	-	-	-	-	-	-	-	1,327	45.805
2023	706	558	66	3	-	-	-	-	-	-	-	1,333	41.563
2024	741	607	72	-	-	-	-	-	-	-	-	1,420	43.346
2025	697	493	66	4	-	1	-	-	1	-	-	1,262	43.014

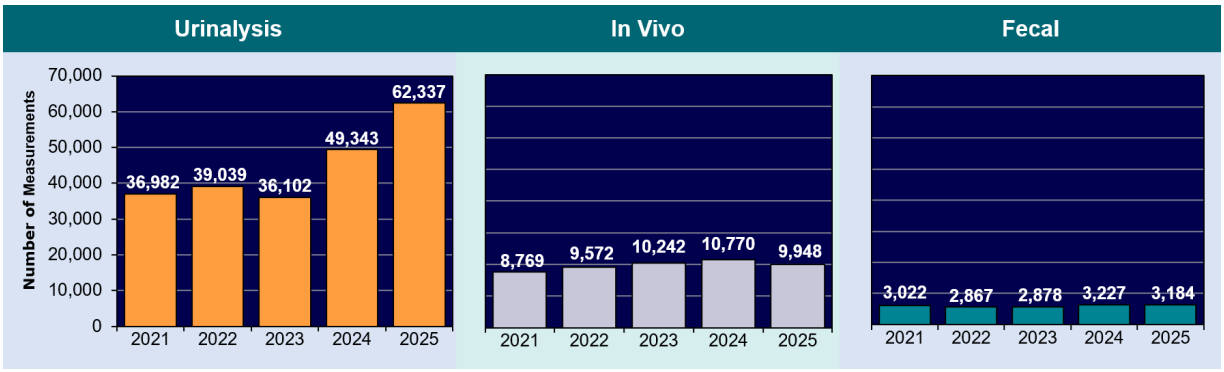
* Individuals with doses equal to the dose value separating the dose ranges are included in the next higher dose range.
- Indicates dose ranges containing no individuals.

3.3.4 Bioassay and Intake Summary Information

Exhibit 3-8 shows the breakdown of bioassay measurements by type and number of measurements. Bioassay and intake summary information are required to be reported under the REMS Data Reporting Guide [6].

The values shown are based on the number of measurements taken and not the number of individuals monitored. Individuals may have measurements taken more than once during the year.

Exhibit 3-8: Bioassay Measurements, CY 2021 – 2025.



During the past 5 years, "Urinalysis" has been reported as the most common method of bioassay measurement used to determine internal doses to individuals. The number of "Urinalysis" measurements increased by 29% from CY 2024 to CY 2025.

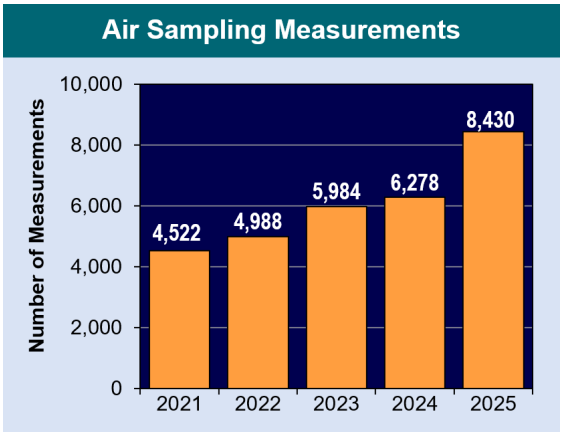
Savannah River Site had the largest percentage increase in the number of "Urinalysis" measurements in CY 2025. The increase in sampling measurements can be attributed to the support required for the Savannah River Tritium Enterprise (SRTE)'s successful completion of a maintenance outage. Eighty-three percent of the "Urinalysis" measurements in CY 2025 were performed at four sites: Savannah River Site Y-12, LANL, and Pantex Plant.

The measurements reported as "In Vivo" include direct measurements of the radioactive material in the body of the monitored person. Examples of "In Vivo" measurements include whole-body counts and lung or thyroid counts. Three sites—Hanford Field Office, Savannah River Site, and ORNL—accounted for 75 percent of the "In Vivo" measurements.

Exhibit 3-8 also indicates the number of "Fecal" bioassay measurements taken. Y-12 accounted for 95 percent of the measurements in CY 2025.

Exhibit 3-9 shows the reported "Air Sampling" measurements, which are used to calculate the amount of airborne radioactive material taken into the body and the resultant internal dose.

Exhibit 3-9: Air Sampling Measurements, CY 2021 – 2025.

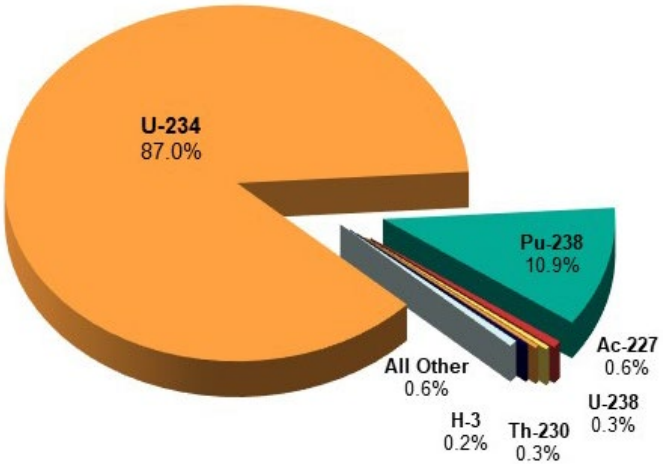


Savannah River Site performed the largest number of air sampling measurements, comprising 99 percent of the total air measurements taken in CY 2025. Two facilities at Savannah River Site saw an increase in the use of Personal Air Samplers (PAS) in CY 2025 compared to CY 2024. One facility completed a crane outage in CY 2025 requiring multiple area entries per shift in which workers wore PAS. The increase in the other facility can be attributed to a change in monitoring guidance, as determined by facility radiological engineering in conjunction with Internal Dosimetry, which began in 2025. Collectively, these factors contributed to an overall increase of greater than 2,000 PAS uses across the two facilities.

Savannah River Site performed the largest number of bioassay and air sampling measurements combined, comprising 30 percent of the total measurements taken.

Exhibit 3-10 shows the breakdown of the collective CED by radionuclide for CY 2025. Uranium-234 (U-234) accounted for the largest percentage of the collective CED, with 87 percent of this dose accrued at Y-12.

Exhibit 3-10: Collective CED by Radionuclide from Internal Exposure, CY 2025.



Appendix B contains additional information on intake data, such as *Exhibits B-4, Internal Dose by Site; B-17, Internal Dose by Facility Type and Nuclide; B-19, Internal Dose by Labor Category;* and *B-21, Internal Dose Distribution by Site and Nuclide*.

3.4 Analysis of Site Data

3.4.1 Collective TED by Site and Other Facilities

The collective TED values for CY 2023 – 2025 for the major DOE sites and operations/field offices are shown graphically in *Exhibit 3-11*. A list of the collective TED and number of individuals with measurable TED by DOE sites is shown in *Exhibit 3-12*. For the purposes of this report, the sites and facilities are grouped by geographic location as shown in these exhibits. When reported separately, the data for individual facilities at the sites are provided separately, such as at Hanford, Oak Ridge, and Savannah River. The data for Idaho is not provided separately and includes the Idaho National Laboratory (INL), Idaho Cleanup Project (ICP), and the Advanced Mixed Waste Treatment Project (AMWTP).

The collective TED increased by 2 percent from 927.0 person-rem (9,270 person-mSv) in CY 2024 to 942.3 person-rem (9,423 person-mSv) in CY 2025, with LANL, Savannah River, Idaho, Oak Ridge, and Hanford contributing 86 percent of the total DOE collective TED.

Exhibit 3-11: Collective TED by DOE Site for CY 2023 – 2025.

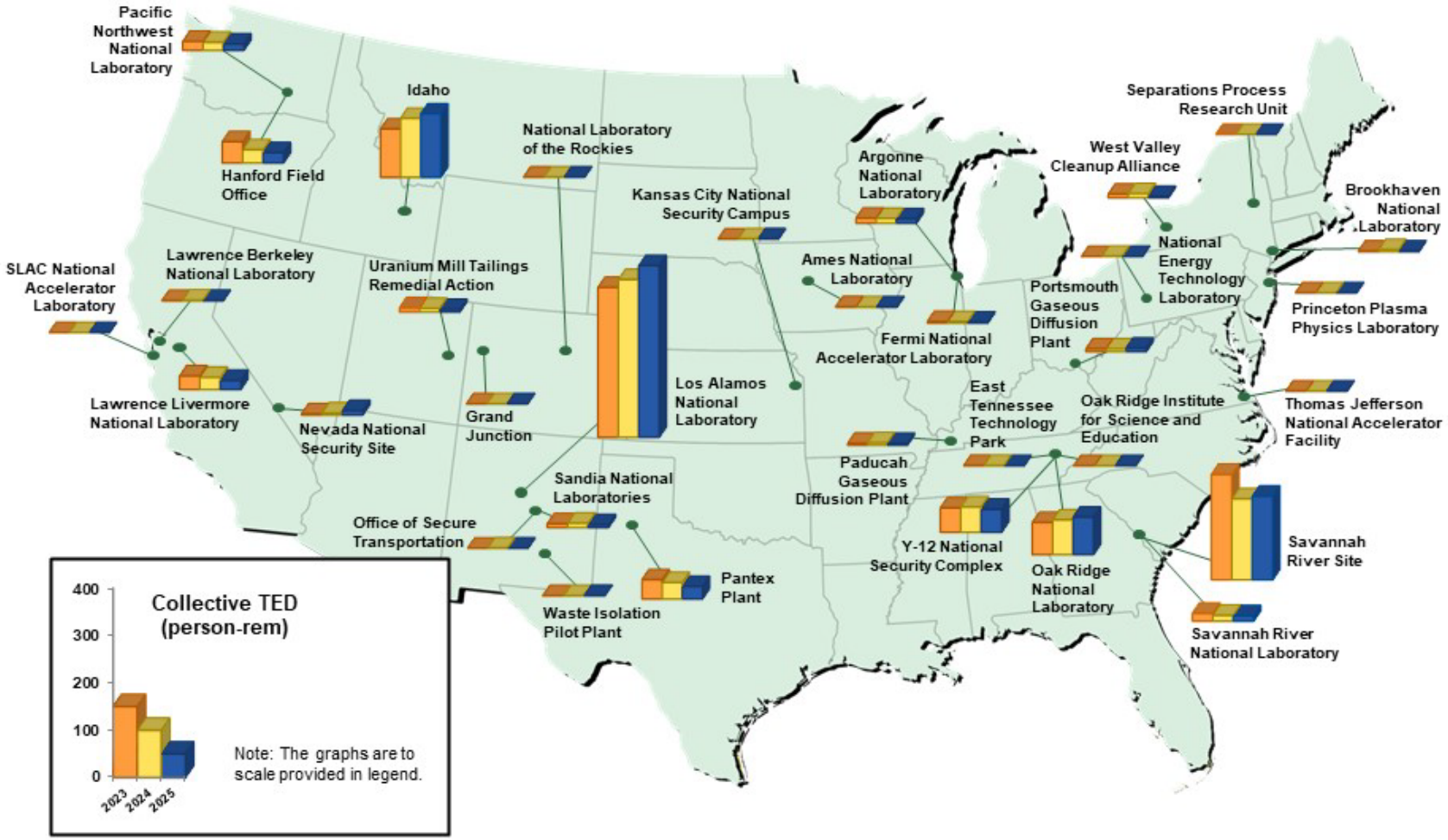


Exhibit 3-12: Collective TED and Number of Individuals with Measurable TED by DOE Site, CY 2023 – 2025.

Site	2023		2024		2025	
	Collective TED (person-rem)	Number with Meas. TED	Collective TED (person-rem)	Number with Meas. TED	Collective TED (person-rem)	Number with Meas. TED
Ames National Laboratory	0.778	34	0.704	31	0.744	35
Argonne National Laboratory	10.225	261	9.676	221	9.045	77
Brookhaven National Laboratory	1.611	49	4.531	100	1.689	68
Fermi National Accelerator Laboratory	3.440	89	3.040	97	2.260	65
Grand Junction Site	0.003	2	0.004	4	0.006	6
Hanford:*						
Hanford Site	23.745	503	12.631	442		
Office of River Protection	20.427	523	14.672	439		
Hanford Field Office					21.436	601
Pacific Northwest National Laboratory	18.488	671	16.598	354	13.144	274
Hanford Totals:	*62.660*	*1,697*	*43.901*	*1,235*	*34.580*	*875*
Idaho	100.316	1,699	122.306	1,848	131.740	1,657
Kansas City National Security Campus	0.312	68	0.845	57	0.898	61
Lawrence Berkeley National Laboratory	0.434	10	1.020	14	0.669	17
Lawrence Livermore National Laboratory	27.907	333	24.999	373	18.602	269
Los Alamos National Laboratory	**311.506**	3,764	**327.736**	3,360	**356.773**	3,425
National Energy Technology Laboratory	0.000	0	0.001	1	0.131	4
National Laboratory of the Rockies	0.003	1	0.001	1	0.084	3
Nevada National Security Site	2.351	43	4.081	70	9.041	142
Oak Ridge:						
East Tennessee Technology Park	0.577	59	0.829	70	0.117	11
Oak Ridge Institute for Science and Education	0.098	6	0.063	8	0.047	2
Oak Ridge National Laboratory	66.688	1,220	72.172	1,171	77.962	998
Y-12 National Security Complex	50.006	1,567	52.164	1,603	47.280	1,465
Oak Ridge Totals:	*117.369*	*2,852*	*125.228*	*2,852*	*125.406*	*2,476*
Office of Secure Transportation	0.048	4	0.786	8	0.436	5
Paducah Gaseous Diffusion Plant	4.172	96	5.088	83	3.926	70
Pantex Plant	40.176	564	34.205	492	26.025	424
Portsmouth Gaseous Diffusion Plant	5.993	157	5.667	144	7.779	189
Princeton Plasma Physics Laboratory	0.336	48	0.280	53	0.127	29
Sandia National Laboratories	7.959	112	9.181	179	5.903	114
Savannah River:						
Savannah River National Laboratory	15.793	546	11.665	507	10.898	421
Savannah River Site	217.548	**5,702**	167.097	**4,219**	172.531	**3,687**
Savannah River Totals:	*233.341*	*6,248*	*178.762*	*4,726*	*183.429*	*4,108*
Separations Process Research Unit	0.013	1	0.011	1	0.033	3
SLAC National Accelerator Laboratory	0.036	2	0.045	1	0.173	10
Thomas Jefferson National Accelerator Facility	0.612	37	0.451	28	0.587	41
Uranium Mill Tailings Remedial Action Project	8.905	125	7.482	135	5.207	97
Waste Isolation Pilot Plant	0.163	9	0.268	15	0.370	25
West Valley Cleanup Alliance	7.734	130	8.664	133	3.082	104
Service Center Personnel **	1.637	42	7.432	58	13.511	78
Totals	**950.040**	**18,477**	**927.008**	**16,334**	**942.256**	**14,477**

Note: Bold and boxed values indicate the greatest value in each column. Dashes indicate no data reported for the year shown.
* In CY 2025, Hanford Site and Office of River Protection combined and reported together as the Hanford Field Office.
** Includes personnel at NNSA Albuquerque complex, Oak Ridge, and Waste Isolation Pilot Plant (WIPP) in addition to several smaller facilities not associated with a DOE site.

3.4.2 Changes by Site from CY 2024 to 2025

Exhibit 3-13 shows the collective TED, the number monitored, the number with a measurable TED, the average measurable TED, and the percentage change in these values from the previous year. Some of the largest percentage changes occurred at relatively small facilities where conditions may fluctuate from year to year due to changes in workload and tasks conducted.

In addition, there are several smaller organizations not associated with a DOE site that are reported to REMS. These individuals are reported under the category 'Service Center Personnel.' This includes personnel at NNSA Albuquerque complex, Oak Ridge, WIPP, and DOE Federal Employees.

Changes that have the most impact on the overall values at DOE typically occur at sites with large collective TED. For example, the collective TED at LANL increased from 327.736 person-rem (3,277 person-mSv) in CY 2024 to 356.773 person-rem (3,567 person-mSv) in CY 2025. (See *Exhibit 3-12* and *Section 3.4.3.*)

Thirteen of the 34 DOE sites reported decreases in the collective TED from the CY 2024 values, and 21 of the 34 DOE sites reported increases in the collective TED from the CY 2024 values.

Eighteen of the 34 sites reported decreases in average measurable TED from the CY 2024 values, and 16 of the 34 sites reported increases in average measurable TED from CY 2024 values. The largest increase in average measurable TED occurred at Argonne National Laboratory (ANL) with an increase of 168 percent from 0.044 rem (0.440 mSv) in CY2024 to 0.117 rem (1.170 mSv) in CY 2025. Although the percent increase at ANL was large, the number of individuals with measurable dose and the collective dose are relatively small, resulting in substantial variation from year to year in the average measurable dose. LANL had an average measurable TED of 0.104 person-rem (1.040 mSv) in CY 2025, an increase of 7 percent from 0.098 person-rem (0.980 mSv) in CY 2024.

Twenty of the 34 reporting sites experienced decreases in the number of workers with a measurable TED from CY 2024 to 2025. The largest decrease in total number of individuals with a measurable TED occurred at Savannah River Site, with a decrease of 532 individuals or 13 percent. (See *Exhibit 3-14.)* The second largest decrease in the total number of individuals with a measurable TED occurred at Idaho, with a decrease of 191 individuals, or 10 percent.

Fourteen of the 34 reporting sites experienced increases in the number of individuals with a measurable TED from CY 2024 to 2025. The largest increase in the number of individuals receiving a measurable TED occurred at NNSS, with an increase of 72 individuals, or 100 percent. A discussion of activities at the highest dose facilities is included in *Section 3.4.3.*

Site Listings of Exhibit 3-14 for > 5 Person-Rem

Los Alamos National Laboratory (LANL) 3-13
Savannah River Site (SRS) 3-13
Idaho 3-14
Oak Ridge: Oak Ridge National Laboratory (ORNL) 3-14
Oak Ridge: Y-12 National Security Complex (Y-12) 3-14
Pantex Plant (Pantex) 3-15
Hanford: Hanford Field Office 3-15
Lawrence Livermore National Laboratory (LLNL) 3-15
Hanford: Pacific Northwest National Laboratory (PNNL) 3-16
Savannah River National Laboratory (SRNL) 3-16
Argonne National Laboratory (ANL) 3-16
Nevada National Security Site (NNSS) 3-17
Portsmouth Gaseous Diffusion Plant (PORTS) 3-17
Sandia National Laboratories (SNL) 3-17
Uranium Mill Tailings Remedial Action Project (UMTRA) 3-18

Site Listings of Exhibit 3-15 for < 5 Person-Rem

Paducah Gaseous Diffusion Plant (PGDP) 3-18
West Valley Cleanup Alliance (WVCA) 3-19
Fermi National Accelerator Laboratory (Fermilab) 3-19
Brookhaven National Laboratory (BNL) 3-19
Kansas City National Security Campus (KC-NSC) 3-20
Ames National Laboratory (Ames Lab) 3-20
Lawrence Berkeley National Laboratory (LBNL) 3-20
Thomas Jefferson National Accelerator Facility (TJNAF) 3-21
Office of Secure Transportation (OST) 3-21
Waste Isolation Pilot Plant (WIPP) 3-21
SLAC National Accelerator Laboratory (SLAC) 3-22
National Energy Technology Laboratory (NETL) 3-22
Princeton Plasma Physics Laboratory (PPPL) 3-22
Oak Ridge: East Tennessee Technology Park (ETTP) 3-23
National Laboratory of the Rockies (NLR) 3-23
Oak Ridge: Oak Ridge Institute for Science and Education (ORISE) 3-23
Separations Process Research Unit (SPRU) 3-24
Grand Junction Site 3-24

Exhibit 3-13: Site Dose Data, CY 2025.

Site	2025							
	Collective TED (person-rem)	Percent Change from 2024	Number of Monitored Individuals	Percent Change from 2024	Number with Meas. TED	Percent Change from 2024	Avg. Meas. TED (person-rem)	Percent Change from 2024
Ames National Laboratory	0.744	◊	164	◊	35	◊	0.021	◊
Argonne National Laboratory	9.045	-7% ▼	4,781	48% ▲	77	-65% ▼	0.117	**168% ▲**
Brookhaven National Laboratory	1.689	-63% ▼	2,799	-4% ▼	68	-32% ▼	0.025	-45% ▼
Fermi National Accelerator Laboratory	2.260	-26% ▼	1,145	-15% ▼	65	-33% ▼	0.035	11% ▲
Grand Junction Site	0.006	◊	25	◊	6	◊	0.001	◊
Hanford:								
Hanford Field Office	21.436	-21% ▼	7,908	7% ▲	601	-32% ▼	0.036	15% ▲
Pacific Northwest National Laboratory	13.144	-21% ▼	2,929	-4% ▼	274	-23% ▼	0.048	2% ▲
Hanford Totals:	*34.580*	*-21% ▼*	*10,837*	*4% ▲*	*875*	*-29% ▼*	*0.040*	*11% ▲*
Idaho	131.740	8% ▲	6,612	-4% ▼	1,657	-10% ▼	0.080	20% ▲
Kansas City National Security Campus	0.898	◊	229	◊	61	◊	0.015	◊
Lawrence Berkeley National Laboratory	0.669	◊	669	◊	17	◊	0.039	◊
Lawrence Livermore National Laboratory	18.602	-26% ▼	4,355	-4% ▼	269	-28% ▼	0.069	3% ▲
Los Alamos National Laboratory	**356.773**	9% ▲	**14,538**	-3% ▼	3,425	2% ▲	0.104	7% ▲
National Energy Technology Laboratory	0.131	◊	117	◊	4	◊	0.033	◊
National Laboratory of the Rockies	0.084	◊	6	◊	3	◊	0.028	◊
Nevada National Security Site	9.041	**122% ▲**	1,247	**70% ▲**	142	**103% ▲**	0.064	9% ▲
Oak Ridge:								
East Tennessee Technology Park	0.117	◊	225	◊	11	◊	0.011	◊
Oak Ridge Institute for Science and Education	0.047	◊	84	◊	2	◊	0.024	◊
Oak Ridge National Laboratory	77.962	8% ▲	6,069	3% ▲	998	-15% ▼	0.078	27% ▲
Y-12 National Security Complex	47.280	-9% ▼	8,036	-2% ▼	1,465	-9% ▼	0.032	-1% ▼
Oak Ridge Totals:	*125.406*	*0% ▲*	*14,414*	*0% ▼*	*2,476*	*-13% ▼*	*0.051*	*15% ▲*
Office of Secure Transportation	0.436	◊	297	◊	5	◊	0.087	◊
Paducah Gaseous Diffusion Plant	3.926	-23% ▼	1,504	9% ▲	70	-16% ▼	0.056	-9% ▼
Pantex Plant	26.025	-24% ▼	4,626	-7% ▼	424	-14% ▼	0.061	-12% ▼
Portsmouth Gaseous Diffusion Plant	7.779	37% ▲	2,316	12% ▲	189	31% ▲	0.041	5% ▲
Princeton Plasma Physics Laboratory	0.127	◊	285	◊	29	◊	0.004	◊
Sandia National Laboratories	5.903	-36% ▼	1,897	-3% ▼	114	-36% ▼	0.052	1% ▲
Savannah River:								
Savannah River National Laboratory	10.898	-7% ▼	698	8% ▲	421	-17% ▼	0.026	13% ▲
Savannah River Site	172.531	3% ▲	7,425	1% ▲	**3,687**	-13% ▼	0.047	18% ▲
Savannah River Totals:	*183.429*	*3% ▲*	*8,123*	*2% ▲*	*4,108*	*-13% ▼*	*0.045*	*18% ▲*
Separations Process Research Unit	0.033	◊	15	◊	3	◊	0.011	◊
SLAC National Accelerator Laboratory	0.173	◊	2,307	◊	10	◊	0.017	◊
Thomas Jefferson National Accelerator Facility	0.587	◊	1,547	◊	41	◊	0.014	◊
Uranium Mill Tailings Remedial Action Project	5.207	-30% ▼	109	-32% ▼	97	-28% ▼	0.054	-3% ▼
Waste Isolation Pilot Plant	0.370	◊	835	◊	25	◊	0.015	◊
West Valley Cleanup Alliance	3.082	-64% ▼	435	-2% ▼	104	-22% ▼	0.030	-55% ▼
Service Center Personnel*	13.511	82% ▲	189	-8% ▼	78	34% ▲	**0.173**	35% ▲
Totals	**942.256**	**2% ▲**	**86,423**	**2% ▲**	**14,477**	**-11% ▼**	**0.065**	**14% ▲**

Note: Bold and boxed values indicate the greatest value in each column.
◊ The percentage change from the previous year is not shown because it is not meaningful when the site collective dose is less than 1 person-rem (10 person-mSv).
* Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP in addition to several smaller facilities not associated with a DOE site.

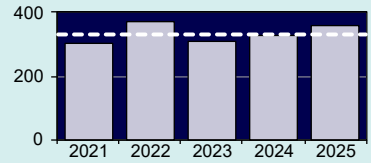
3.4.3 Activities Significantly Contributing to Collective Dose in CY 2025

To identify the reasons for changes in the collective dose at DOE, the sites provided information on activities that significantly contributed to the collective dose for CY 2025 as instructed in the REMS Data Reporting Guide, Item 1. In *Exhibit 3-14*, these sites are presented in descending order of collective TED with a dotted line representing the site's 5-year average TED. Sites that have reported less than 5 person-rem (50 person-mSv) for CY 2025 are listed in *Exhibit 3-15*. Due to the low doses and small number of individuals with measurable dose, wider variation can occur from year to year.

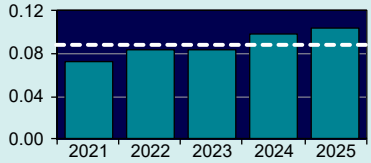
Exhibit 3-14: Activities Significantly Contributing to Collective TED in CY 2025, for Sites Reporting Greater Than 5 Person-Rem, in Descending Order of Collective Dose.

Los Alamos National Laboratory (LANL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

LANL conducts radiological operations in active facilities, storage facilities, and facilities with legacy radiological concerns, in addition to operations in inactive facilities and areas destined for decommissioning. Radiological activities include programmatic and production work; facility construction, modification, and maintenance; and research, development, and testing.

Activities Involving Radiation Exposure

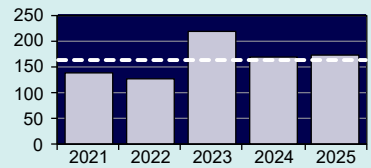
- Weapons manufacturing and related work at the TA-55 plutonium facility;
- Plutonium-238 work;
- Retrieval, repackaging, and shipping of radioactive waste; and
- Infrastructure support for radiological work and facility maintenance.

Changes in Dose

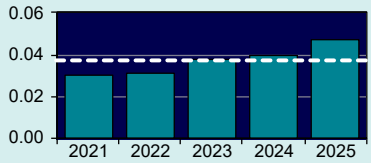
- In CY 2025, TA-55 operations accounted for the majority of occupational dose at LANL;
- TA-55 began a 24/4 shift schedule largely for construction and maintenance purposes; and
- LANL dose was accrued by workers conducting programmatic and maintenance work at the Los Alamos Neutron Science Center accelerator facility, analytical chemistry operations, and waste management activities.

Savannah River Site (SRS)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

Savannah River Site was constructed during the early 1950s to produce the basic materials used in the fabrication of nuclear weapons, primarily tritium and plutonium-239, in support of our nation's defense programs. Five reactors were built to produce these materials, along with several support facilities, including two chemical separations plants, a heavy water extraction plant, a nuclear fuel and target fabrication facility, and a tritium extraction facility.

Activities Involving Radiation Exposure

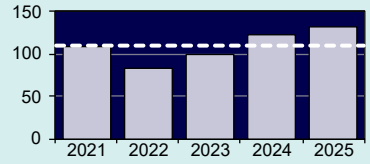
- K Area Complex successfully down-blended 1 metric ton of surplus plutonium since the commencement of the operation in 2017;
- L Area and H Canyon completed the Fast Critical Assembly mission. All tritium commitments for the stockpile were achieved for 2025, with a record number of tritium extractions completed; and
- Savannah River Mission Completion closed the 7th waste tank, which was completed 27 months ahead of schedule.

Changes in Dose

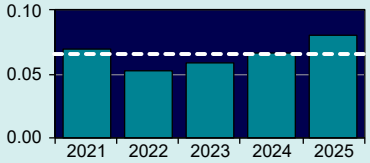
- In CY 2025, SRS saw a small increase in collective TED in comparison to CY 2024, which was primarily attributed to the support of Liquid Waste Operations.

Idaho

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

The DOE Idaho Operations Office oversees three major contracts to ensure that operations and research activities are carried out safely and in compliance with laws, regulations, and contract provisions. The Idaho Cleanup Project (ICP) focuses on addressing legacy wastes resulting from decades of widely varied work, including conventional weapons testing, government-owned research and power reactor development and testing, spent nuclear fuel reprocessing, laboratory research, and defense missions.

Activities Involving Radiation Exposure

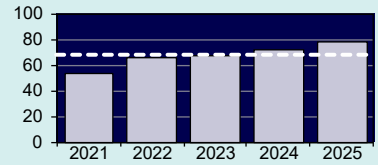
- Work at the Advanced Test Reactor (ATR) Complex included experiment system operations, plant maintenance, routine reactor operations, and outage support, with a significant focus on loop maintenance, experiment handling, radiological support, and waste processing.
- Activities at Materials and Fuels Complex (MFC) included extensive nuclear research, fuel development, sample preparation, facility maintenance, waste management, and reactor operations across multiple facilities, supporting advanced fuels research, radioactive material handling, and post-irradiation examination; and
- The rest of the INL site activities included a variety of radiological research, development, and training activities, including uranium and actinide processing, radiochemistry studies, neutron generator operations, and emergency response training.

Changes in Dose

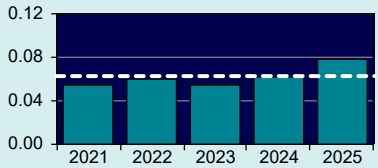
- The increased dose was a result of completing several significant tasks in high dose rate areas.

Oak Ridge: Oak Ridge National Laboratory (ORNL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

ORNL is a multiprogramming science and technology laboratory. ORNL's mission is to deliver scientific discoveries and technical breakthroughs that will accelerate the development and deployment of solutions in clean energy and global security, and, in doing so, create economic opportunity for the nation. ORNL also performs other work for DOE, including isotope production, information management, and technical program management, and provides research and technical assistance to other organizations.

Activities Involving Radiation Exposure

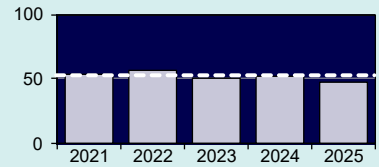
- The primary activities resulting in significant radiation exposure include radioisotope processing and production;
- Maintenance activities at ORNL's reactor, nuclear, radiological, and accelerator facilities;
- Material irradiation and testing; and
- Routine cleanup and demolition activities along with dispositioning waste at the Transuranic Waste Process Center.

Changes in Dose

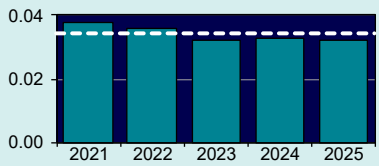
- The collective TED for ORNL during CY 2025 was 77.962 person-rem, an 8 percent increase from CY 2024;
- The increase in collective TED was primarily attributed to increases in radioisotope processing and production, particularly radioisotope production for industrial sponsors;
- The increase in the number of individuals monitored; and
- ORNL had a significant increase in scheduled maintenance activities in nuclear and accelerator facilities in 2025.

Oak Ridge: Y-12 National Security Complex (Y-12)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

Y-12 is one of four production facilities in the National Nuclear Security Administration (NNSA) Nuclear Security Enterprise. The facility's emphasis is the processing and storage of uranium and development of technologies associated with those activities. Y-12 maintains the safety, security, and effectiveness of the U.S. nuclear weapons stockpile and processes highly enriched uranium for the Naval Nuclear Propulsion Program.

Activities Involving Radiation Exposure

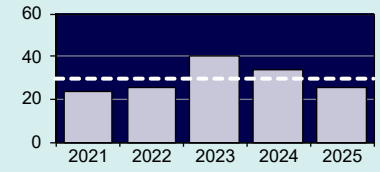
- Manufacture, processing, and storage of special nuclear materials;
- Characterization and hazardous waste removal at the Y-12 Biology Complex; and
- Maintenance of equipment and facilities.

Changes in Dose

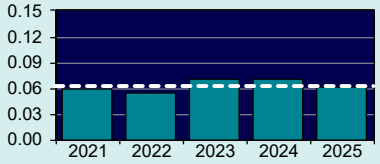
- In CY 2025, the primary factor contributing to the observed decreases in all dose categories was the focus on cleanup coupled with the reduction of contamination areas around the site.

Pantex Plant (Pantex)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

Pantex is the nation's primary facility for the final assembly, disassembly, and maintenance of nuclear weapons. The last new nuclear weapon was completed in CY 1991. Since then, the plant has safely dismantled thousands of weapons retired from the stockpile by the military and placed the resulting plutonium pits in interim storage. Pantex has approximately 650 buildings, including specialized facilities in which maintenance, modification, disassembly, and assembly operations are conducted.

Activities Involving Radiation Exposure

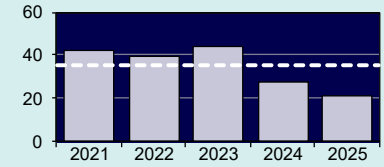
- Operations that expose individuals to large numbers of bare weapon pits containing significant quantities of special nuclear material (SNM); and
- Nuclear explosive assembly/disassembly operations, weapon dismantlement programs, life-extension programs, SNM Component Re-qualification, and SNM staging.

Changes in Dose

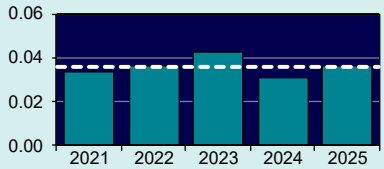
- The CY 2025 dose decrease is a result of various areas of production downtime, employees' continued awareness of "As Low as Reasonably Achievable" principles, workers gaining experience in radiological areas and becoming more efficient, an increase in protection controls, and other impacts that continue to evolve to meet actual goals.

Hanford: Hanford Field Office

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

DOE's Hanford Field Office sits on 586 square miles in the desert of southeastern Washington State. The area is home to nine former nuclear reactors and their associated processing facilities built beginning in CY 1943. Hanford reactors produced plutonium from CY 1944 until CY 1987. In CY 2025, the Office of River Protection was combined with Hanford Site to form the Hanford Field Office. As a result, current work is focused on environmental cleanup and remediation of the site.

Activities Involving Radiation Exposure

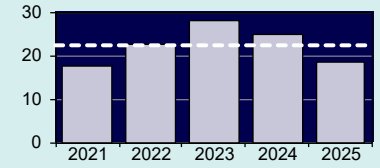
- Work activities at the plutonium finishing plant facility;
- Material handling and waste transfer; and
- Facility demolition and site remediation.

Changes in Dose

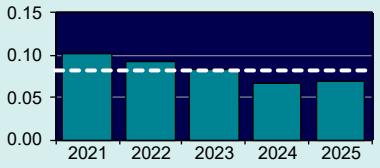
- The CY 2025 decrease in collective TED can be attributed to a decrease in the number of personnel entries into various high dose rate facilities; and
- Dose reduction work practices, improved planning efforts, and technology advances (particularly related to tank farm activities) also contributed to this reduction.

Lawrence Livermore National Laboratory (LLNL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

LLNL is a DOE facility operated by the Lawrence Livermore National Security, LLC management team, which includes Bechtel, the University of California, BWX Technologies, Washington Group, and Battelle. The site serves as a national resource of scientific, technical, and engineering capability with a special focus on national security. LLNL's mission encompasses such areas as: strategic defense, energy, the environment, biomedicine, technology transfer, education, counterterrorism, and emergency response. The types of radioactive materials range from tritium to transuranic (TRU); the quantities of each range from nanocuries (i.e., normal environmental background values) to kilocuries.

Activities Involving Radiation Exposure

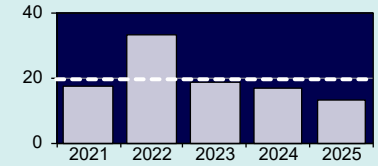
- Radiation-producing devices, such as X-ray machines, accelerators, and electron-beam welders; and
- Handling a wide range and quantity of radioactive materials.

Changes in Dose

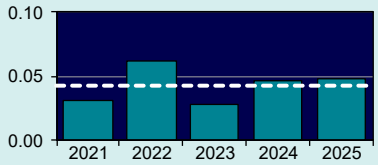
- The decrease in TED for CY 2025 is primarily due to a work pause impacting individuals expected to receive high doses.

Hanford: Pacific Northwest National Laboratory (PNNL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

Located in Richland, Washington, PNNL is 1 of 10 national laboratories managed by DOE's Office of Science (SC). The laboratory provides the facilities, unique scientific equipment, and world-renowned scientists and engineers to strengthen U.S. scientific foundations through fundamental research and innovation. The lab also supports Hanford site cleanup efforts by performing scientific and technical evaluations and reviews and developing and advancing new technologies to address site cleanup challenges.

Activities Involving Radiation Exposure

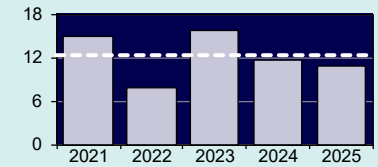
- Work at the Radiochemical Processing Laboratory;
- Radiation detection research; and
- Implementation of security measures for radiological materials of concern.

Changes in Dose

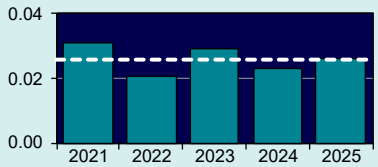
The decrease in CY 2025 is primarily driven by a decrease in planned radiological work activities.

Savannah River National Laboratory (SRNL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

Savannah River National Laboratory (SRNL) began reporting separately from the Savannah River Site (SRS) effective CY 2016. The laboratory supports DOE in its environmental management and nuclear security missions and applies its expertise in nuclear chemical manufacturing to assist DOE in meeting its objectives in areas, such as nuclear waste cleanup and defense nonproliferation.

Activities Involving Radiation Exposure

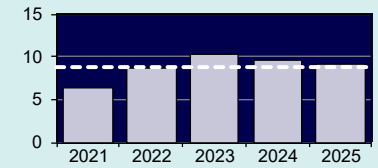
- Currently, most SRNL programs support the SRS tritium mission. This includes applying hydrogen technologies used in processing tritium; extraction, purification, and storage of tritium; and
- SRNL made important first steps towards the recovery of rare and valuable isotopes in the Mark 18-A Target Recovery Program, which will support future government missions and proactively improve stewardship of legacy materials at SRS.

Changes in Dose

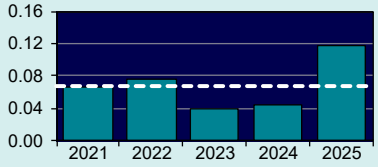
- The dose decreased during CY 2025 as SRNL continued to support SRS by processing samples from all facilities on site.

Argonne National Laboratory (ANL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

ANL is one of DOE's largest national laboratories for scientific and engineering research. ANL's mission is to apply a unique mix of world-class science, engineering, and user facilities to deliver innovative research and technologies. The principal radiological facilities at the laboratory are the Advanced Photon Source, a superconducting heavy-ion linear accelerator (LINAC), a 22-MeV pulsed electron LINAC, and several other charged-particle accelerators.

Activities Involving Radiation Exposure

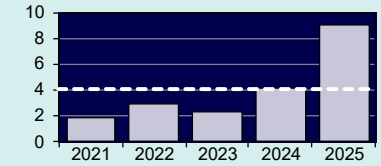
- Work supporting the lab's radiological facilities;
- Programmatic activities resulting primarily from research activities in the Irradiated Materials Laboratory; and
- Material handling, management, storage, and disposition activities associated with the Alpha Gamma Hot Cell Facility, the Waste Management Operations Facility, and the Radioactive Waste Storage Facility.

Changes in Dose

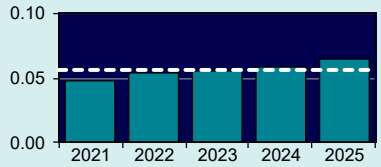
- In CY 2025, there was a slight decrease in collective TED consistent with year-to-year variation.

Nevada National Security Site (NNSS)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

NNSS is located approximately 65 miles northwest of Las Vegas. It is a remote facility that covers approximately 1,375 square miles of land. NNSS has been the primary location for testing nuclear experiments in the continental United States since CY 1951.

Activities Involving Radiation Exposure

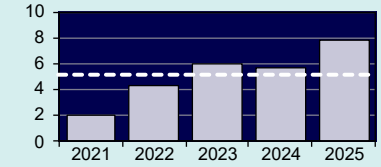
- Operating low-level radioactive and mixed-waste disposal facilities;
- Assembling/executing national-level subcritical experiments, confined critical experiments, and special experiments in support of the national laboratories;
- Operating pulsed X-ray machines, neutron generators, and linear accelerators;
- Developing, testing, and evaluating radiation detectors, equipment, and systems;
- Developing/providing nuclear and radiological emergency response capabilities/training;
- Conducting surface cleanup and site characterization of contaminated land; and
- Managing environmental activity of the University of Nevada system.

Changes in Dose

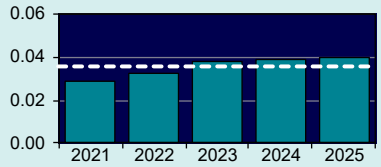
- In CY 2025, there was an increase in the number of monitored individuals, an increase in emergency response training, and an increase in radiological work associated with critical and special National Laboratories experiments.

Portsmouth Gaseous Diffusion Plant (PORTS)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

PORTS is located in Pike County, Ohio. PORTS was one of three large gaseous diffusion plants initially constructed to produce enriched uranium to support the nation's nuclear weapons program and later enrich uranium for commercial nuclear reactors. The plant has been shut down and is currently undergoing decontamination and decommissioning.

Activities Involving Radiation Exposure

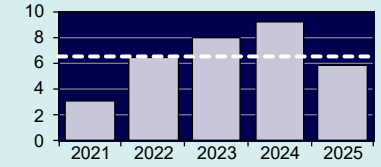
- Continued support of site deactivation, decommissioning, and demolition activities for the Portsmouth Site, with radiological exposure relating to waste processing, handling, and shipment of uranium-bearing materials, and processing of uranium (UF6) cylinders;
- Continued support of plant operations and maintenance of the Portsmouth Depleted Uranium Hexafluoride project (DUF6) as a nuclear facility; converting uranium hexafluoride into a more stable form for the sole purpose of minimizing environmental hazards; and
- Radiation protection efforts involved protection of plant personnel, protection of the public and the environment.

Changes in Dose

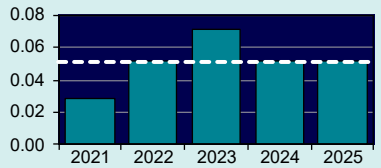
- The increase in the collective TED was due to normal variations in site operations and the addition of workers to support the new Operations and Site Mission Support (OSMS) contract.

Sandia National Laboratories (SNL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

SNL's primary mission is ensuring the U.S. nuclear arsenal is safe, secure, and reliable and can fully support our nation's deterrence policy. SNL is the engineering arm of the U.S. nuclear weapons enterprise. SNL's foundation is science-based engineering in which fundamental science, computer models, and unique experimental facilities come together so that researchers can understand, predict, and verify weapon systems performance.

Activities Involving Radiation Exposure

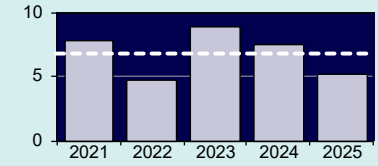
- Operation of a research reactor, gamma irradiation facilities, hot cell facilities, and several pulsed power accelerators;
- Performance of light laboratory work involving X-ray machines and the use of tracer radionuclides; and
- Waste operations.

Changes in Dose

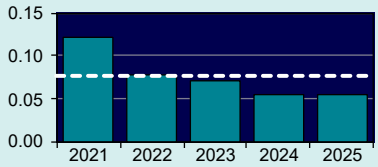
- The CY 2025 SNL decreases are attributable to budgetary cuts, staffing cuts, and a government shutdown causing delays and preventing planned work.

Uranium Mill Tailings Remedial Action Project (UMTRA)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

The UMTRA site is located approximately 3 miles northwest of Moab in Grand County, Utah, and includes a former uranium-ore processing facility. The site encompasses 480 acres, of which approximately 130 acres were covered by a uranium mill tailings pile. The pile on the banks of the Colorado River contained 16 tons of tailings and stood 80 feet in height when DOE acquired the project and began removing tailings in 2009. Most recently, the UMTRA project was shipping four trainloads of tailings to the Crescent Junction Disposal Site each week and as of October 1, 2025, the 16 million tons of tailings had been relocated with only remedial residual radioactive material still being removed.

Activities Involving Radiation Exposure

- Project activities are broken down into three categories at the site: mill tailings pile excavation, transportation of the tailings, and placement into the disposal cell.

Changes in Dose

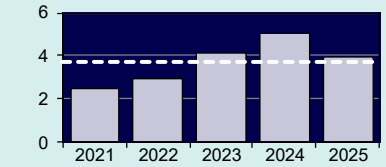
- The site has entered the final cleanup stage with most of the source term removed. It may still be possible for some monitored workers to receive over 100 mrem. However, it is anticipated that dose will be significantly reduced or eliminated by 2027.

As previously illustrated by the map found in *Exhibit 3-11*, most of the collective TED is associated with just a few DOE sites. For sites with relatively low collective dose or with fewer monitored individuals, wider variation can occur from year to year. These year-to-year variations are often due to changes in funding or mission priorities, which can significantly affect the relatively small amount of work involving radiation exposure. In CY 2025, 18 DOE sites reported less than 5 person-rem (50 person-mSv) collective TED for their respective site. These sites and the activities contributing to collective TED can be found in *Exhibit 3-15*.

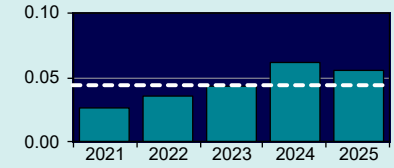
Exhibit 3-15: Activities Significantly Contributing to Collective TED in CY 2025, for Sites Reporting Less Than 5 Person-Rem, in Descending Order of Collective Dose.

Paducah Gaseous Diffusion Plant (PGDP)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

PGDP is located 3 miles south of the Ohio River and is 12 miles west of Paducah, Kentucky. The plant began enriching uranium in CY 1952, first for the nation's nuclear weapons program and then for nuclear fuel for commercial power plants. In CY 1994, the enrichment facilities were leased to United States Enrichment Corporation (USEC). In August 2013, USEC notified DOE that they were discontinuing enrichment operations and planning to de-lease the enrichment facilities.

Activities Involving Radiation Exposure

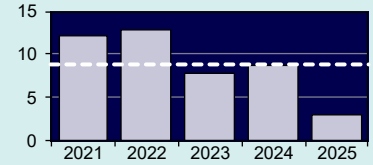
- Four Rivers Nuclear Partnership (FRNP) activities included deactivation work, environmental remediation work, and surveillance and maintenance work;
- Infrastructure Support Services (ISS) mowing and maintenance activities in radiological areas such as contamination and high contamination areas. ISS does not perform work in radiation areas; and
- Operations and Site Mission Support (OSMS) activities during the 2025 reporting period that involved radiation exposure were for continued support of plant operations and maintenance of the Depleted Uranium Hexafluoride (DUF6) facility. The project's main goal is to convert uranium hexafluoride into a more stable form for the sole purpose of minimizing environmental hazards. Radiation protection efforts involved protection of plant personnel, protection of the public and the environment.

Changes in Dose

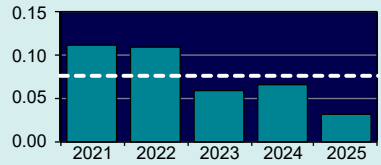
- The decrease in the collective TED for CY 2025 was due to deactivation work at FRNP with individuals receiving less measurable dose at low levels; changes in work scope with ISS; and the OSMS contract slowing production to perform upgrades and maintenance at the Paducah DUF6 facility.

West Valley Cleanup Alliance (WVCA)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

WVCA is DOE's environmental management contractor at the West Valley Demonstration Project (WVDP) for the Phase 1B Deactivation & Demolition Contract. WVCA comprises BWXT Technical Services Group, Inc.; Amentum Technology, Inc.; and Geosyntec Consultants, Inc. WVDP is a unique operation within the U.S. Department of Energy. It came into being through the West Valley Demonstration Project Act of 1980. The Act states that the Department is responsible for solidifying the high-level waste, disposing of waste created by the solidification, and decommissioning the facilities used in the process. After DOE's responsibilities under the Act are complete, the Act requires that the premises be returned to New York State.

Activities Involving Radiation Exposure

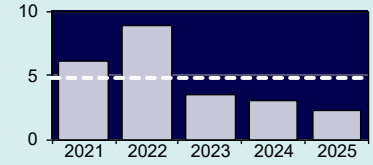
- Worker exposure related almost exclusively to demolition of the Main Plant Process Building. Among these activities, waste load out support operations within the Main Plant Process Building demolition area;
- Personnel in the radiological buffer area; and
- Non-demolition waste management and support activities.

Changes in Dose

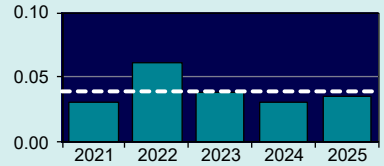
- During CY 2025, there was a 63.8 percent decrease in dose. The demolition of the Main Plant Process Building in 2024 was for 12 months and had high radiation areas versus demolition in 2025 was only for 6 months and was primarily alpha contamination. There was no measurable committed effective dose in CY 2025.

Fermi National Accelerator Laboratory (Fermilab)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

Fermilab provides leadership and resources for qualified researchers to conduct basic research at the frontiers of high-energy particle physics and related disciplines. The primary features of the site include the accelerator complex and associated building infrastructure, an interconnected industrial cooling water system, a housing complex for visiting researchers, row crop agriculture, and natural areas in various states of restoration.

Activities Involving Radiation Exposure

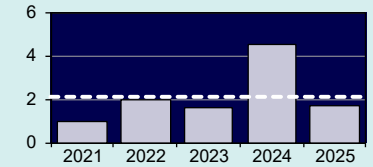
- Primary activities were upgrade and repair activities of the accelerator complex;
- Maintenance and upgrades performed during the summer shutdown were required to support current and future research at the laboratory; and
- One non-shutdown job contributed to the laboratory's 2025 TED.

Changes in Dose

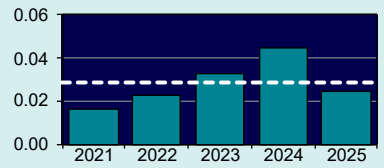
- Most of the dose resulted from work performed during shutdowns. The shutdown lasted for a duration of 14 weeks. The TED for CY 2025 is within the expected range for a year with a shutdown of this duration; and
- Prior to the start of shutdown work, each of the 773 planned jobs were examined by Environment, Safety, and Health (ES&H) Radiation Physics Operations Department radiation safety officers (RSOs) and radiation control technicians (RCTs). Of these jobs, 11 were identified as requiring RCT coverage, 30 required RCT coverage and Radiological Work Permits (RWPs), and an additional 6 required approval by the Senior Radiation Safety Officer (SRSO) prior to the start of work.

Brookhaven National Laboratory (BNL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

BNL conducts research in the physical, biomedical, and environmental sciences as well as in energy technologies and national security. BNL also builds and operates major scientific facilities that are available to university, industry, and government researchers.

Activities Involving Radiation Exposure

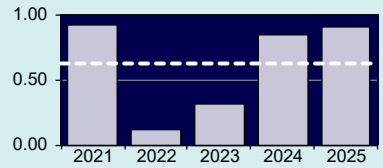
- Accelerator facility maintenance and repair activities; and
- Radioactive waste handling performed at BNL facilities.

Changes in Dose

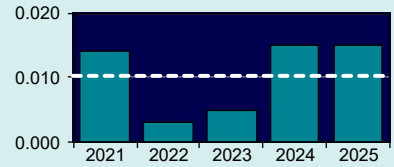
- The 63 percent decrease in dose for CY 2025 was due to a decrease in higher radiological dose work being performed (e.g. BLIP Window Replacement) as well as effective radiological controls at the accelerator facilities and radioactive waste handling performed at BNL facilities; and
- The highest individual dose was 0.141 rem; no individual exceeded the 2-rem TED or exceeded any DOE occupational dose limit.

Kansas City National Security Campus (KC-NSC)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

KC-NSC is responsible for manufacturing and procuring non-nuclear components for nuclear weapons, including electronic, mechanical, and engineered material components. It supports national laboratories, universities, and U.S. industry and is located in Kansas City, Missouri.

Activities Involving Radiation Exposure

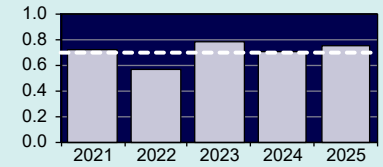
- Non-destructive testing and development projects;
- Telemetry component production and testing with neutron generators;
- Security operations;
- Small scale depleted uranium operations; and
- Legacy part refurbishment departments, and waste management.

Changes in Dose

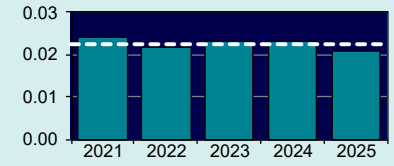
- The increase in TED is primarily attributed to dosimeter storage and handling compliance;
- The measurable neutron dose of 20 mrem was received by a primary telemetry engineer, which was expected and is being closely monitored; and
- Continued to maintain an ACL of 100 mrem per year, 1/50th of DOE's 5 rem/year threshold, and an Action Level (AL) of 50 mrem/year. Four radiation workers exceeded the AL and effort to further reduce all exposure going forward continues.

Ames National Laboratory (Ames Lab)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

Ames Lab is a government-owned, contractor-operated research facility of the US DOE. For over 79 years, Ames Lab has sought and delivered critical materials solutions to the nation by translating foundational science for energy and chemical conversion into critical technology innovation.

Activities Involving Radiation Exposure

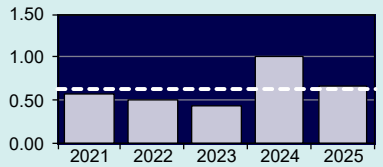
- Limited radioactive material work;
- Operation of 25 X-ray systems and 1 Mossbauer spectroscopy system; and
- Ongoing remediation of radiological legacy contamination.

Changes in Dose

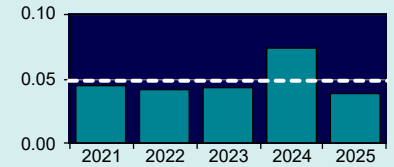
- The collective dose reflects normal routine operations and normal variations, given the limited number of individuals with measurable dose and very low doses.

Lawrence Berkeley National Laboratory (LBNL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

LBNL is a member of the national laboratory system supported by DOE through its Office of Science (SC) and is charged with conducting unclassified research across a wide range of scientific disciplines. LBNL employs approximately 4,200 scientists, engineers, support staff, and students.

Activities Involving Radiation Exposure

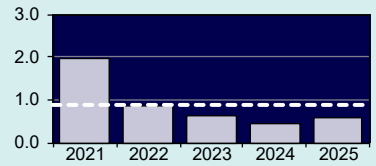
- Fluorine-18 research;
- Antineutrino research and experiments; and
- Site inventory of radioactive and nuclear material activities.

Changes in Dose

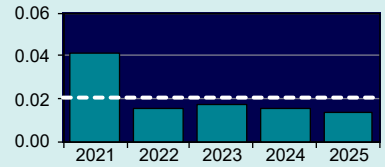
- During CY 2025, the collective TED decreased due to a reduction in maintenance at the 88-Inch Cyclotron. However, the radiological work scope expanded in other areas, including the resumption of regular operations at the Building 56 medical cyclotron and new experiments involving Sr-82 and Sr-90 in the Building 70A laboratories.

Thomas Jefferson National Accelerator Facility (TJNAF)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

TJNAF is one of 17 national laboratories funded by DOE. TJNAF's primary mission is to conduct basic research of the atom's nucleus using the unique particle accelerator known as the Continuous Electron Beam Accelerator Facility (CEBAF).

Activities Involving Radiation Exposure

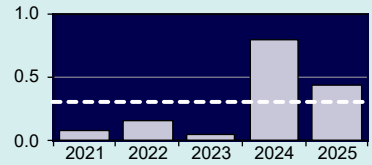
- Maintenance, modification, and repair of activated components associated with the CEBAF, Low Energy Recirculator Facility (LERF) and other ancillary activities, e.g., transport, storage, and disposal of radioactive materials. Typically, collective TED fluctuates up or down from year-to-year, depending on maintenance associated with unique experimental set-ups performed in radiological areas.

Changes in Dose

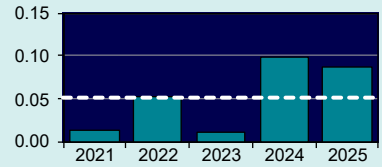
- The CY 2025 collective TED was primarily related to maintenance on Hall A and Hall C beam dump systems (RWP 2025-S016) and routine radiological protection support activities (RWP 2025-S002). Maintenance work in Building 95 (RWP 2025-S005) and welding operations on collars for the Moeller Hall A beam dump pipe restraint (RWP 2025-J003) also contributed to the total effective dose for 2025; and
- The dose received by Radiation Control support was primarily attributed to work performed in the vicinity of activated cryomodules in the CEBAF accelerator, as well as radiation surveys supporting experiments with significant residual radioactivity in experimental halls.

Office of Secure Transportation (OST)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

OST is the NNSA organization tasked to provide secure ground transportation of nuclear weapons, special nuclear material (SNM), nuclear weapon components, and nuclear explosive-like assemblies. OST operates both secure ground transporters and Federal aircraft, which make up the Transportation Safeguards System (TSS). The TSS Federal agent and vehicle maintenance facilities are located in Oak Ridge, Tennessee; Amarillo, Texas; and Albuquerque, New Mexico. The OST Administrative Headquarters are located at Kirtland Air Force Base in Albuquerque, New Mexico.

Activities Involving Radiation Exposure

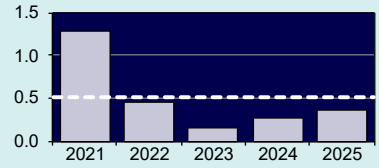
- Providing secure ground transportation of nuclear weapons, SNM, nuclear weapon components, and nuclear explosive-like assemblies; and
- Tracking and directing cargo loading revisions to minimize radiation exposure.

Changes in Dose

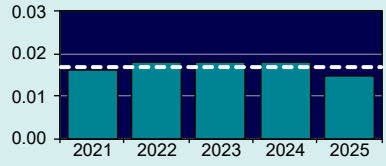
- Differences may be attributed to the small number of individuals (less than 10 for each year).

Waste Isolation Pilot Plant (WIPP)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

WIPP is located in the Chihuahuan Desert near Carlsbad, New Mexico. This DOE facility safely disposes of the nation's defense-related transuranic (TRU) radioactive waste. WIPP began disposal operations in March 1999.

Activities Involving Radiation Exposure

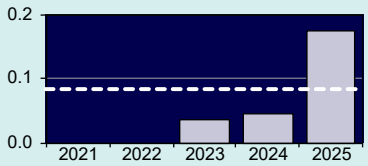
- Handling and processing of TRU waste for disposal; and
- Managing long-term repository operations.

Changes in Dose

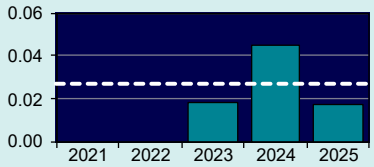
- The collective TED for CY 2025 increased slightly from CY 2024. All doses received were from routine activities associated with the disposal of transuranic waste and transportation operations.
- A total of 441 shipments were completed in CY 2025 compared to 470 in CY 2024.

SLAC National Accelerator Laboratory (SLAC)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

SLAC, which opened in CY 1962, is one of 10 DOE SC laboratories and is operated by Stanford University on behalf of DOE. Originally a premier, high-energy particle accelerator laboratory, SLAC has grown into a state-of-the-art photon science laboratory. SLAC's scientific mission has diversified from an original focus on particle physics and accelerator science to include cosmology, materials and environmental sciences, biology, chemistry, and alternative energy research.

Activities Involving Radiation Exposure

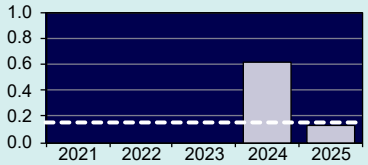
- Linac Coherent Light Source (LCLS and LCLS-II);
- Stanford Synchrotron Radiation Lightsource (SSRL);
- Photon Science: Photon Ultrafast Laser Science and Engineering (PULSE), and Stanford Institute for Material and Energy Sciences (SIMES);
- Particle Physics and Astrophysics: Experimental Particle Physics, Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), and Accelerator Research and Development;
- Facilities for Accelerator Science and Experimental Test Beams (FACET-II); and
- Test Facilities: Next Linear Collider Test Accelerator (NLCTA) and Accelerator Structure Test Area – Ultrafast Electron Diffraction (ASTA-UED).

Changes in Dose

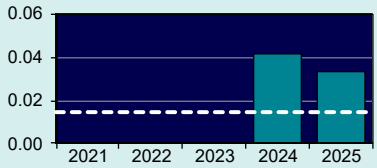
- The CY 2025 collective TED of 0.173 person-rem continues to reflect no major radiological projects during CY 2025.

National Energy Technology Laboratory (NETL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

NETL is a DOE national laboratory dedicated to innovating and accelerating the nation's energy solutions in hydrocarbon, geothermal energy and critical minerals production. With research sites in Albany, Oregon; Morgantown, West Virginia; and Pittsburgh, Pennsylvania, NETL operates as one laboratory to apply its expertise in subsurface materials and processes, materials engineering, energy conversion, systems analysis, computational science and program deployment to implement DOE programs across the nation and advance energy technologies. Through its collaborations and world-class research, NETL is strengthening national energy security and contributing to an America that leads the world with affordable, reliable and secure energy to fuel human prosperity.

Activities Involving Radiation Exposure

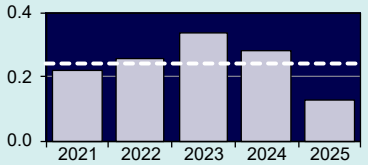
- Conducting research that involves the use of Radiation Generating Devices (RGDs).
- Conducting research that involves the use of Sealed Sources.
- Conducting research that involves various types of Radioactive Materials, Naturally Occurring Radioactive Materials (NORM), and Technologically Enhanced NORM (TENORM), including, but not limited to zirconia crucibles, monazites, produced waters, core samples, and byproducts from the oil and gas industries.
- Supporting facility operations, such as the use of X-rays in mailrooms; and
- Supporting construction related activities, such as completing scoping survey.

Changes in Dose

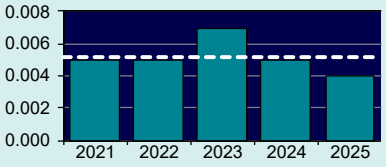
- In CY 2025, there were no significant changes in the range of exposure experienced by employees using dosimetry at NETL in comparison to previous years.

Princeton Plasma Physics Laboratory (PPPL)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

PPPL is a collaborative national center for fusion energy research. The laboratory advances the coupled fields of fusion energy and plasma physics research and enhances the scientific understanding and key innovations needed to realize fusion as an energy source for the world. Additional focus is on next-generation computing and microelectronics while partnering with industries shaping these fields to accelerate the development of fusion energy.

Activities Involving Radiation Exposure

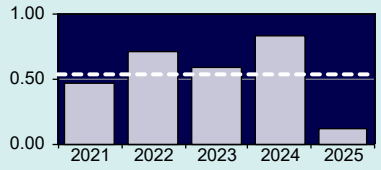
- PPPL is engaged in ongoing research work involving radioactive sources, radiation generating devices and management of legacy tritium from Tokamak Fusion Test Reactor operations.

Changes in Dose

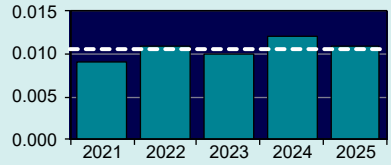
- For CY 2025, the TED to PPPL employees decreased 55 percent from the previous year due to fewer work activities in radiological areas.

Oak Ridge: East Tennessee Technology Park (ETTP)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

ETTP was originally named the Oak Ridge Gaseous Diffusion Plant. As part of the Manhattan Project, the plant was designed to produce enriched uranium for use in atomic weapons operations during World War II. After the war, the plant was renamed the Oak Ridge K-25 Site and produced enriched uranium for the commercial nuclear power industry from CY 1945 to 1985. In CY 1987, DOE renamed the site ETTP and began a major environmental cleanup project with the long-term goal of converting ETTP into a private industrial park.

Activities Involving Radiation Exposure

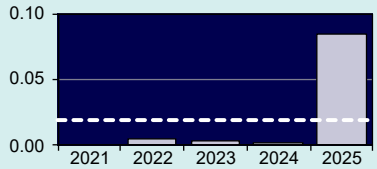
- Primary work activities that contributed to the TED in CY 2025 were in support of dispositioning waste at the Transuranic Waste Process Center (TWPC); and
- Operations at ORNL Environmental Cleanup Project and ORNL Nuclear Operations Project.

Changes in Dose

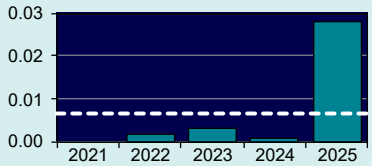
- The change in dose resulted from participation in routine cleanup and demolition activities.

National Laboratory of the Rockies (NLR)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

NLR is the U.S. Department of Energy's primary national laboratory for energy systems. With a focus on security and reliability, NLR leads energy systems innovation and integration—enhancing existing technologies and developing new, cutting-edge solutions that unlock economic opportunity and fuel America's global competitiveness. NLR bridges foundational research with practical applications to integrate various energy sources, storage, buildings, transportation, and emerging technologies.

Activities Involving Radiation Exposure

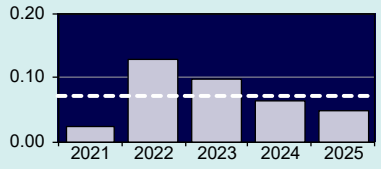
- Work involving ionizing radiation at the National Laboratory of the Rockies is confined to the use of analytical cabinet x-ray machines for x-ray diffraction and x-ray fluorescence to perform isotopic characterizations, a very limited amount of low-level uranyl acetate for use in a particular microscopy stain, periodic swapping out of some emergency exit signs that operate via sealed tritium sources, occasional subcontractor work involving soil-density gauges, and lastly some vials of calibration standards that include background levels of radioactive isotopes to be utilized in spectrometers.

Changes in Dose

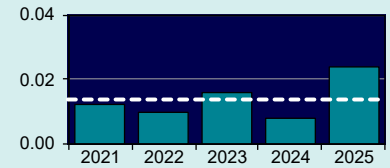
- The primary reason for the slight increase in dose was an increase in work time involving radiation exposure surrounding X-ray-generating equipment.

Oak Ridge: Oak Ridge Institute for Science and Education (ORISE)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

ORISE is a DOE institute focusing on scientific initiatives to research health risks from occupational hazards, assess environmental cleanup, respond to radiation medical emergencies, support national security and emergency preparedness, and educate the next generation of scientists.

Activities Involving Radiation Exposure

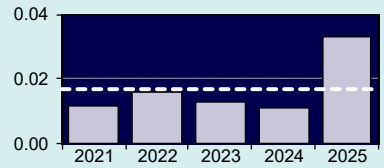
- Staff are involved in radiological/health physics training using beta/gamma sources.
- Some staff work with tritiated thymidine and are monitored for potential internal uptake of tritium; and
- Some staff perform independent verification radiological surveys at DOE and U.S. Nuclear Regulatory Commission (NRC) sites.

Changes in Dose

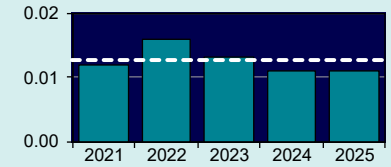
- No significant change in dose from the previous year.

Separations Process Research Unit (SPRU)

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

SPRU is located at Knolls Atomic Power Laboratory based in upstate New York. Built in the 1940s, the buildings supported the SPRU mission to research the chemical process to extract plutonium from irradiated materials. Although the equipment was flushed and drained and bulk waste was removed following the shutdown of the facilities in CY 1953, residual materials are present in the tanks, buildings H2 and G2, and interconnecting pipe tunnels. The site is currently undergoing a variety of cleanup activities, including demolition, decontamination, and remediation.

Activities Involving Radiation Exposure

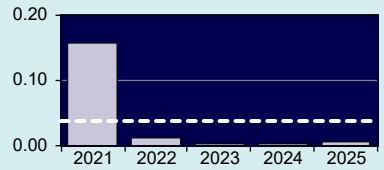
- Surveillance & Maintenance of the SPRU TRU Waste Storage Area.

Changes in Dose

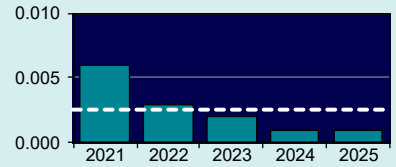
- Collective dose remained low due to maintaining effective controls during quarterly inspections of the TRU waste storage area.

Grand Junction Site

Collective TED (person-rem)



Average Measurable TED (rem)



Site Description

The Grand Junction Site was transferred to the Office of Legacy Management (LM) in CY 2003. LM manages the site according to a site-specific Long-Term Surveillance and Maintenance Plan.

Activities Involving Radiation Exposure

- Walk-over radiological surveys;
- Environmental/geological soil sampling; and
- Abandoned mine site inspections.

Changes in Dose

- All doses received were from routine field activities performed by LM personnel as they worked to develop a record of all locations and current conditions of legacy uranium mines under the Defense-Related Uranium Mines (DRUM) Program. The DRUM Program, through its verification and validation work, determined the location, status, and current environmental, human health, and safety conditions of legacy uranium mines throughout the country.

3.4.4 Summary by Program Office

DOE has divided the responsibility of managing its missions among specific program offices. A site may include facilities or project areas that perform work in support of the mission of multiple program offices. In these cases, the dose records are separated by the reporting organization and assigned to the corresponding program office. For this reason, some sites will have portions of the collective dose shown under more than one program office.

Exhibit 3-16 shows the collective TED, number of individuals with measurable TED, and the average measurable TED by DOE program office. NNSA and the Office of Environmental Management (EM) account for 83 percent of the collective TED (52 and 31 percent, respectively).

The primary sites contributing to the collective TED within EM are Savannah River Site and Idaho. For NNSA, the primary contributors are LANL and Y-12 National Security Complex.

A more detailed breakdown of the exposure information by site, program office, and contractor is included in the Appendices of this report.

Exhibit 3-16: Program Office Dose Data, CY 2025.

Program Office	Collective TED (person-rem)	Percent Change from 2024	Number with Meas. Dose (TED)	Percent Change from 2024	Avg. Meas. TED (rem)	Percent Change from 2024
Office of Critical Minerals and Energy Innovation (MESC)					**Total Monitored**	**= 6***
National Laboratory of the Rockies	0.084	◊	3	◊	0.028	◊
EE Totals	**0.084**	◊	**3**	◊	**0.028**	◊
Office of Environmental Management (EM)					**Total Monitored**	**= 23,075***
East Tennessee Technology Park	0.117	◊	11	◊	0.011	◊
Hanford Field Office	21.436	-21% ▼	601	-32% ▼	0.036	15% ▲
Idaho	67.742	-4% ▼	751	-12% ▼	0.090	8% ▲
Los Alamos National Laboratory	1.483	-49% ▼	67	-18% ▼	0.022	-38% ▼
Oak Ridge National Laboratory	10.813	-47% ▼	453	-38% ▼	0.024	-15% ▼
Paducah Gaseous Diffusion Plant	3.944	-22% ▼	70	-16% ▼	0.056	-8% ▼
Portsmouth Gaseous Diffusion Plant	7.779	37% ▲	189	31% ▲	0.041	5% ▲
Savannah River National Laboratory	10.898	-7% ▼	421	-17% ▼	0.026	13% ▲
Savannah River Site	**144.539**	14% ▲	**2,847**	-4% ▼	0.051	19% ▲
Separations Process Research Unit	0.033	◊	3	◊	0.011	◊
Service Center Personnel*	13.511	**82%** ▲	78	**34%** ▲	**0.173**	**35%** ▲
Uranium Mill Tailings Remedial Action Project	5.207	-30% ▼	97	-28% ▼	0.054	-3% ▼
Waste Isolation Pilot Plant	0.370	◊	25	◊	0.015	◊
West Valley Cleanup Alliance	3.082	-64% ▼	104	-22% ▼	0.030	-55% ▼
EM Totals	**290.954**	**-2%** ▼	**5,717**	**-14%** ▼	**0.051**	**15%** ▲
Hydrocarbons and Geothermal Energy Office (HGEO)					**Total Monitored**	**= 117***
National Energy Technology Laboratory	0.131	◊	4	◊	0.033	◊
HGEO Totals	**0.131**	◊	**4**	◊	**0.033**	◊
Office of Legacy Management (LM)					**Total Monitored**	**= 25***
Grand Junction Site	0.004	◊	4	◊	0.001	◊
LM Totals	**0.004**	◊	**4**	◊	**0.001**	◊
National Nuclear Security Administration (NNSA)					**Total Monitored**	**= 37,143***
Kansas City National Security Campus	0.898	◊	61	◊	0.015	◊
Lawrence Livermore National Laboratory	18.602	-26% ▼	269	-28% ▼	0.069	3% ▲
Los Alamos National Laboratory	**355.290**	9% ▲	**3,358**	2% ▼	**0.106**	7% ▲
Nevada National Security Site	9.041	**122%** ▲	142	**103%** ▲	0.064	**9%** ▲
Office of Secure Transportation	0.436	◊	5	◊	0.087	◊
Pantex Plant	26.025	-24% ▼	424	-14% ▼	0.061	-12% ▼
Sandia National Laboratories	5.903	-36% ▼	114	-36% ▼	0.052	1% ▲
Savannah River Site	27.992	-30% ▼	840	-33% ▼	0.033	4% ▲
Y-12 National Security Complex	47.280	-9% ▼	1,465	-9% ▼	0.032	-1% ▼
NNSA Totals*	**491.467**	**0%**	**6,678**	**-9%** ▼	**0.074**	**10%** ▲
Office of Nuclear Energy, Science and Technology (NE)					**Total Monitored**	**= 4,576***
Idaho	63.998	24% ▲	906	-9% ▼	0.071	37% ▲
NE Totals*	**63.998**	**24%** ▲	**906**	**-9%** ▼	**0.071**	**37%** ▲
Office of Science (SC)					**Total Monitored**	**= 21,480***
Ames National Laboratory	0.744	◊	35	◊	0.021	◊
Argonne National Laboratory	9.045	-6% ▼	77	-65% ▼	0.117	**167%** ▲
Brookhaven National Laboratory	1.689	-63% ▼	68	-32% ▼	0.025	-45% ▼
Fermi National Accelerator Laboratory	2.260	-26% ▼	65	-33% ▼	0.035	11% ▲
Lawrence Berkeley National Laboratory	0.669	◊	17	◊	0.039	◊
Oak Ridge Institute for Science and Education	0.047	◊	2	◊	0.024	◊
Oak Ridge National Laboratory	**67.149**	**30%** ▲	**545**	**24%** ▲	**0.123**	5% ▲
Pacific Northwest National Laboratory	13.144	-21% ▼	274	-23% ▼	0.048	2% ▲
Princeton Plasma Physics Laboratory	0.127	◊	29	◊	0.004	◊
SLAC National Accelerator Laboratory	0.173	◊	10	◊	0.017	◊
Thomas Jefferson National Accelerator Facility	0.587	◊	41	◊	0.014	◊
SC Totals*	**95.634**	**9%** ▲	**1,163**	**-14%** ▼	**0.082**	**26%** ▲

Note: Bold and boxed values indicate the greatest value in each category.

◊ The percentage change from the previous year is not shown because it is not meaningful when the site's collective dose is less than 1 person-rem (10 person-mSv).

* Individuals who worked at more than one program office are represented within each grouping; therefore, the total monitored values will not match the annual number of individuals monitored.

3.5 Transient Individuals

For this report, a DOE site is defined as a geographic location. Transient individuals, or transients, are defined as individuals who are monitored at more than one DOE site during the calendar year and, therefore, had more than one monitoring record reported to the REMS repository for CY 2025. This section presents information on transient individuals to determine the extent to which individuals traveled from site to site and to examine the doses received by these individuals.

The tracking and analysis of transient individuals are important aspects of the REMS Program. While each site is responsible for monitoring individuals during their work at that site, the REMS Program collects dose records from all sites and verifies that individuals do not exceed regulatory limits by accruing doses at multiple facilities. Although the number of transient individuals and average doses have been low, the examination of these records remains an important function in assessing performance of DOE radiation protection programs.

Exhibit 3-17 shows the dose distribution and total number of transient individuals from CY 2021 to 2025. Over the past 5 years, the records of transient individuals have averaged between 1.5 and 3.5 percent of the total records for all monitored individuals.

These individuals received 4 percent of the collective TED in CY 2025. The collective TED for transients increased by 80% from 21.62 person-rem (216.2 person-mSv) in CY 2024 to 38.93 person-rem (389.3 person-mSv) in CY 2025. The average measurable TED increased from 0.039 rem (0.390 mSv) in CY 2024 to 0.075 rem (0.750 mSv) in CY 2025.

3.6 Historical Data

To provide historical context for radiation exposure data at DOE, it is useful to include information prior to the past 5 years. *Exhibit 3-18* and *Exhibit 3-19* show a summary of occupational exposures starting in CY 1974, when the U.S. Atomic Energy Commission (AEC) split into the U.S. Nuclear Regulatory Commission (NRC) and the Energy Research and Development Administration (ERDA), which subsequently became DOE. *Exhibit 3-18* and *Exhibit 3-19* show the collective dose, average measurable dose, and number of individuals with a measurable dose from CY 1974 to CY 2025. All three parameters decreased dramatically between CY 1986 and CY 1993 due to the shutdown of facilities within the weapons complex and the end of the Cold War era. After this time, the DOE mission shifted from weapons production to shutdown, stabilization, and decontamination and decommissioning activities.

Exhibit 3-17: Dose Distribution of Transient Individuals, CY 2021 – 2025.

	Dose Ranges (TED in rem) *	2021	2022	2023	2024	2025
Transients	Less than measurable	911	1,552	2,035	1,966	1,978
	Measurable <0.100	358	516	621	518	446
	0.100 – 0.250	17	31	43	30	52
	0.250 – 0.500	5	12	20	10	11
	0.500 – 0.750	1	3	1	-	5
	0.750 – 1.000	-	3	1	1	2
	1.0 – 2.0	1	5	1	-	1
	>2.0	-	-	-	-	-
	Total number of individuals monitored**	1,293	2,122	2,722	2,525	2,495
	Number with measurable dose	382	570	687	559	517
	% with measurable dose	30%	27%	25%	22%	21%
	Collective TED (person-rem)	15.316	30.809	29.613	21.624	38.927
	Average measurable TED (rem)	0.040	0.054	0.043	0.039	0.075
All DOE	Total number of records for monitored individuals	67,793	75,348	82,422	84,976	86,423
	Number of individuals with measurable dose	16,903	16,776	18,477	16,334	14,477
	% of total monitored individuals who are transient	1.9%	2.8%	3.3%	3.0%	2.9%
	% of the number of individuals with measurable dose who are transient	2.3%	3.4%	3.7%	3.4%	3.6%

* Individuals with doses equal to the dose value separating the dose ranges are included in the next higher dose range.
** Total number of individuals represents the number of individuals monitored and not the number of records.
\- Indicates dose ranges containing no individuals.

Exhibit 3-18: Collective Dose and Average Measurable Dose, CY 1974 – 2025.

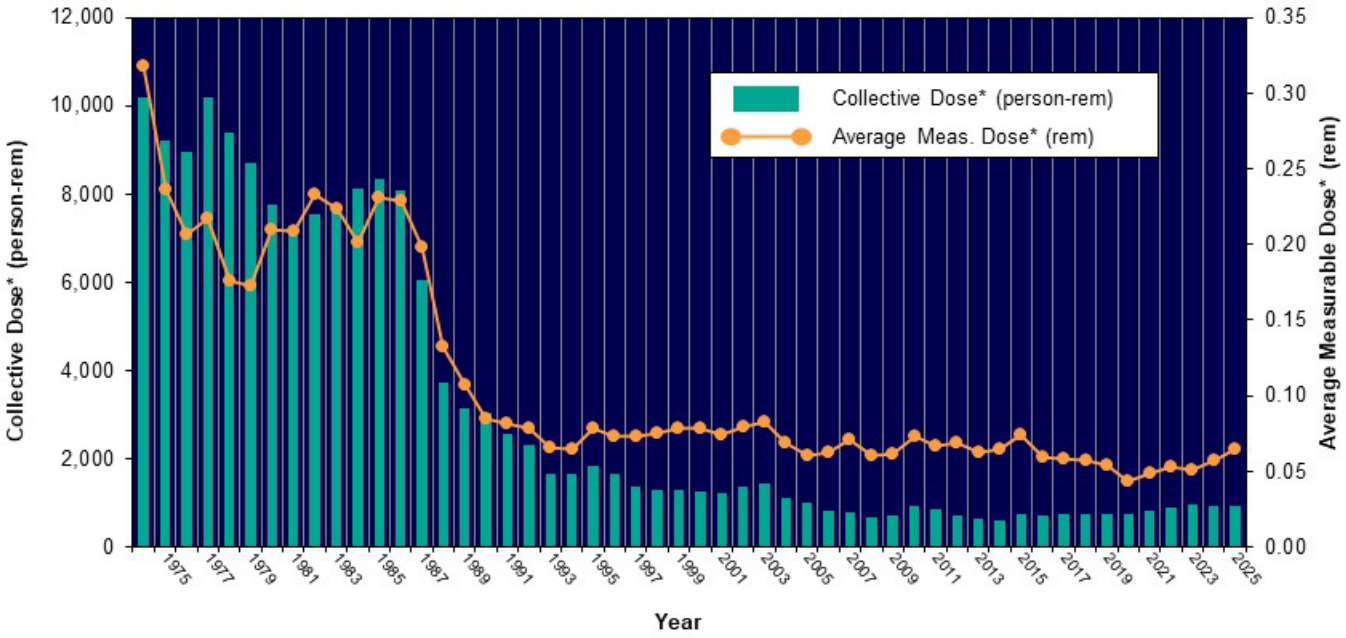
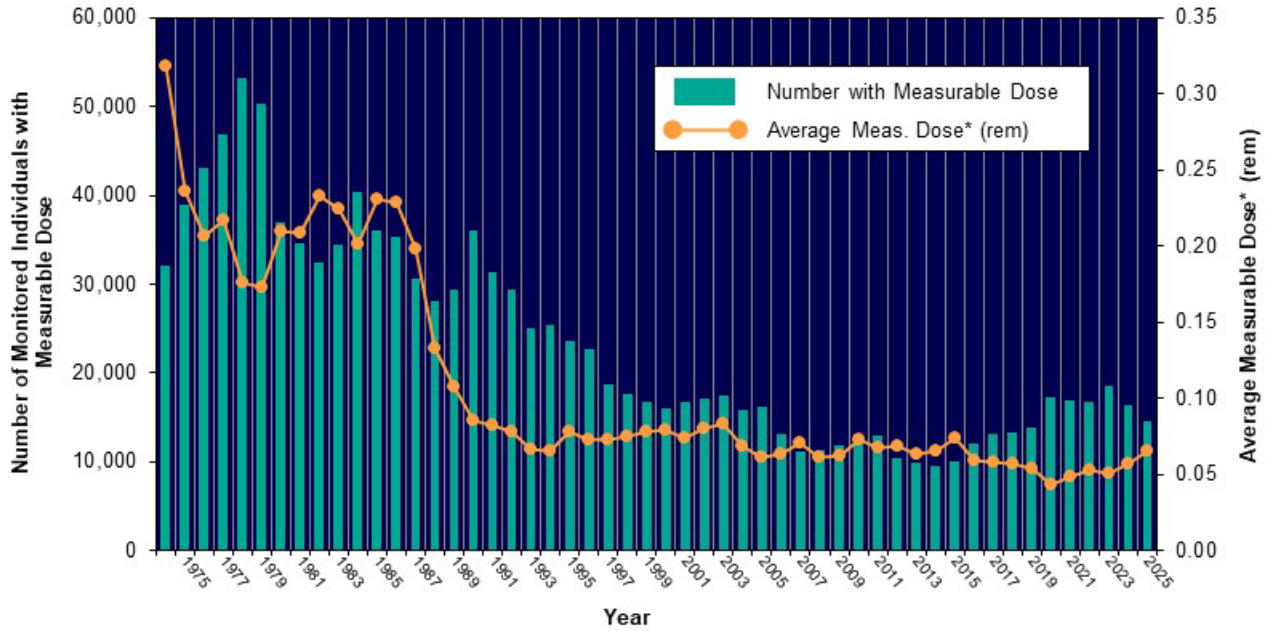


Exhibit 3-19: Number of Individuals with Measurable Dose and Average Measurable Dose, CY 1974 – 2025.



* COLLECTIVE DOSE

1974 – 1989	collective dose = Deep Dose Equivalent (DDE)
1990 – 1992	collective dose = DDE + Annual Effective Dose Equivalent (AEDE)
1993 – 2009	collective dose = DDE + Committed Effective Dose Equivalent (CEDE)
2010 – Present	collective dose = Effective Dose (from external sources) (ED) + Committed Effective Dose (CED)

AGENCIES

1946 – 1974	U.S. Atomic Energy Commission (AEC)
1974 – 1977	Energy Research and Development Administration (ERDA)
1977 – Present	U.S. Department of Energy (DOE)

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Operating Experience Program

DOE has a mature operating experience (OpEx) program, which has been enhanced from the lessons learned program that was initially developed in CY 1994. The OpEx program is described in DOE O 210.2A, *DOE Corporate Operating Experience Program* [8].

The objectives of the OpEx program are to institute a DOE-wide program for the management of operating experience to prevent adverse operating incidents and to expand the sharing of good work practices among DOE sites. The program provides a systematic review, identification, collection, screening, evaluation, and dissemination of operating experience from U.S. and foreign government agencies and industry, professional societies, trade associations, national academies, universities, and DOE and its contractors. DOE Headquarters takes corporate responsibility for identifying, analyzing, and sharing operating experience information through OpEx documents and trending reports. DOE field sites share individual lessons learned from their operations that are communicated through the DOE corporate database, DOE OPEXShare.

DOE operating experience information and links to other operating experience resources are available on DOE OPEXShare through user accounts, enabling DOE and external entities to improve operational health and safety, including reducing accidents and injuries.

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https://www.energy.gov/ehss/corporate-operating-experience-program

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Conclusions

Analysis of the collected exposure data for CY 2025 indicates that:

- No exposures were reported to have exceeded the occupational dose limit of 5 rem (50 mSv) TED; and
- Only 17 percent of the monitored individuals received a measurable dose, and, of those, the average measurable dose received was 1 percent of the 5 rem (50 mSv) TED limit.

In addition, from CY 2024 to CY 2025:

- The collective TED increased by 2 percent to 942.3 person-rem (9,423 person-mSv);
- Number of individuals with measurable dose decreased by 11 percent from 16,334 individuals to 14,477 individuals;
- Collective CED (internal exposure) decreased slightly to 43.0 person-rem (430 person-mSv); and
- Collective TED for transient individuals increased by 80 percent to 38.9 person-rem (389 person-mSv).

The collective dose at DOE facilities has decreased by 88 percent since CY 1986. This coincides with the end of the Cold War era, which shifted the DOE mission from weapons production to stabilization, waste management, and environmental remediation activities, along with the consolidation and remediation of facilities across the complex to meet the new mission.

In alignment with the change in mission, regulations and requirements have been modified (see *Section 2*) that reinforce DOE's focus on risk reduction to lower occupational radiation dose.

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Glossary

Administrative Control Level (ACL)

A dose level that is established below the DOE dose limit to administratively control exposures. ACLs are multi-tiered, with increasing levels of authority required to approve a higher level of exposure.

Average Measurable Dose

The dose was obtained by dividing the collective dose by the number of individuals who received a measurable dose. This is the average most commonly used when examining trends and comparing doses received by individuals because it reflects the exclusion of those individuals receiving a less than measurable dose. In this report, average measurable dose is calculated for total effective dose (TED) and committed effective dose (CED).

Bioassay Measurements

As presented in *Section 3.3.4*, the number of bioassay measurements is the number of measurements taken to determine the kinds, quantities, or concentrations of radioactive material in the human body, whether by direct measurement or by analysis and evaluation of materials excreted or removed from the human body. Types of bioassay include:

- In Vivo bioassay: From the Latin for "in one that is living," occurring within the living. The direct measurement of radioactive material in the human body. The number of In Vivo measurements represents the number of measurements performed for all individuals during the year.
- Fecal bioassay: The evaluation of radioactive material excreted in feces from the human body. The number of fecal bioassay measurements is the number of fecal samples analyzed for all individuals during the year.
- Urinalysis bioassay: The evaluation of radioactive material excreted in urine from the human body. The number of urinalysis bioassay measurements is the number of urine samples analyzed for all individuals during the year.

Collective Dose

The sum of doses to all individuals in a population for a period of time and is used whenever the dose may refer to more than one type of dose. In cases where the type of dose is specified, the term “collective” is followed by the type of dose, such as the TED, CED, or photon. In all cases, the population is the group of DOE individuals that were monitored for occupational radiation exposure, and the period of time is the monitoring year. Collective dose is expressed in units of person-rem.

Committed Effective Dose (CED) or (E_{50})

The sum of the committed equivalent doses to various tissues or organs in the body ($H_{T,50}$), each multiplied by the appropriate tissue weighting factor (w_T)—that is, $E_{50} = \Sigma w_T H_{T,50} + w_{Remainder} H_{Remainder,50}$. Where $w_{Remainder}$ is the tissue weighting factor assigned to the remainder organs and tissues and $H_{Remainder,50}$ is the committed equivalent dose to the remainder organs and tissues. Committed effective dose is expressed in units of rem (or Sv). [10 CFR 835.2]

Committed Equivalent Dose (CEqD) or ($H_{T,50}$)

The equivalent dose calculated to be received by a tissue or organ over a 50-year period after the intake of a radionuclide into the body. It does not include contributions from radiation sources external to the body. Committed equivalent dose is expressed in units of rem (or Sv). [10 CFR 835.2]

Dose

A general term for absorbed dose, equivalent dose, effective dose, committed equivalent dose, committed effective dose, or total effective dose as defined in this part. [10 CFR 835.2]

Effective Dose

The summation of the products of the equivalent dose received by specified tissues or organs of the body (H_T) and the appropriate tissue weighting factor (w_T)—that is, $E = \Sigma w_T H_T$. It includes the dose from radiation sources internal and/or external to the body. For purposes of compliance with this part, equivalent dose to the whole body may be used as effective dose for external exposures. The effective dose is expressed in units of rem (or Sv). [10 CFR 835.2]

Equivalent Dose (EqD)

The product of average absorbed dose ($D_{T,R}$) in rad (or gray) in a tissue or organ (T) and a radiation (R) weighting factor (w_R). For external dose, the equivalent dose to the whole body is assessed at a depth of 1 cm in tissue; the equivalent dose to the lens of the eye is assessed at a depth of 0.3 cm in tissue, and the equivalent dose to the extremity and skin is assessed at a depth of 0.007 cm in tissue. Equivalent dose is expressed in units of rem (or Sv). [10 CFR 835.2]

Measurable Dose

A dose greater than zero rem (not including doses reported as "not detectable").

Member of the Public

An individual who is not a general employee. An individual is not a "member of the public" during any period in which the individual receives an occupational dose. [10 CFR 835.2] The definition of general employee is specified in 10 CFR 835.

Number of Individuals with Measurable Dose

The subset of all monitored individuals who receive a measurable dose (greater than the limit of detection for the monitoring system). Many personnel are monitored as a matter of prudence and may not receive a measurable dose. For this reason, the number of individuals with measurable dose is presented in this report as a more accurate indicator of the exposed workforce. The number of individuals represents the number of dose records reported. Some individuals may be counted more than once if multiple dose records are reported for the individual during the year.

Occupational Exposure

An individual's exposure to ionizing radiation (external and internal) as a result of that individual's work assignment. Occupational exposure does not include planned special exposures, exposure received as a medical patient, background radiation, or voluntary participation in medical research programs.

Person-rem

The unit of measurement used for the collective dose to all DOE Federal, contractor, and subcontractor employees.

Rem

A unit of dose derived from the phrase roentgen equivalent man. The rem is equal to 0.010 Sv, which is the international unit of measurement for radiation exposure.

Total Effective Dose (TED)

The sum of the effective dose (for external exposures) and the committed effective dose. [10 CFR 835.2]

Total Organ Dose (TOD)

The sum of the equivalent dose to the whole body for external exposures and the committed equivalent dose to any organ or tissue other than the skin or the lens of the eye.

Transient Individual

As used in this report, a transient individual is an individual monitored for radiation exposure at more than one DOE site during the calendar year.

References

1. DOE Standard, DOE-STD-1098-2017, "Radiological Control," January 2017. Online at: https://www.standards.doe.gov/standards-documents/1000/1098-AStd-2017/@@images/file.

2. EPA (U.S. Environmental Protection Agency), 1987. "Radiation Protection Guidance to Federal Agencies for Occupational Exposure," *Federal Register* 52, No. 17, 2822; with corrections published in the *Federal Registers* of Friday, January 30, and Wednesday, February 4, 1987.

3. ICRP (International Commission on Radiological Protection), 1977. "Recommendations of the International Commission on Radiological Protection," ICRP Publication 26, *Annals of the ICRP, Vol. 1, No. 3* (Pergamon Press, New York).

4. NCRP (National Council on Radiation Protection and Measurements), 1987. "Recommendations on Limits for Exposure to Ionizing Radiation," NCRP 91; superseded by NCRP Report No. 116.

5. 10 CFR 835, 1998, "Occupational Radiation Protection." Rule; DOE *Federal Register*, November 4, 1998. Amended June 26, 2023.

6. REMS Data Reporting Guide, issued February 23, 2012. Online at: https://www.energy.gov/ehss/articles/radiation-exposure-monitoring-systems-data-reporting-guide.

7. Computerized Accident Incident Reporting System (CAIRS), "DOE and Contractor Injury and Illness Data by Year by Quarter" report. Online at: https://www.energy.gov/ehss/policy-guidance-reports/databases/computerized-accident-incident-reporting-system.

8. DOE O 210.2A, "DOE Corporate Operating Experience Program," April 8, 2011. Online at: https://www.directives.doe.gov/directives-documents/200-series/0210.2-BOrder-a/@@images/file.

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U.S. Department of Energy Occupational Radiation Exposure Report for Calendar Year 2025

DOE, striving to meet the needs of its stakeholders, is looking for suggestions on ways to improve the *U.S. Department of Energy Occupational Radiation Exposure Report for Calendar Year 2025*. **Your feedback is important**. Constructive feedback will ensure this report can continue to meet user needs. Please fill out the attached survey form and return it to:

Kali Crosby
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Questions concerning this survey should be directed to Ms. Crosby.

1. Identification:

   Name:
   _____

   Title: _____

   Mailing Address: _____

   _____

   _____

   _____

2. Distribution:

   2.1 Do you wish to remain on the distribution for this report? _____ yes _____ no

   2.2 Do you wish to be added to the distribution? _____ yes _____ no

(continued on back)

Please circle one.

	Not Useful				Very Useful
Please rate the usefulness of this report overall:	1	2	3	4	5

Please rate the usefulness of the analysis presented in the following sections:

Executive Summary	1	2	3	4	5
Analysis of Aggregate Data	1	2	3	4	5
Collective Dose	1	2	3	4	5
Average Measurable Dose	1	2	3	4	5
Dose Distribution	1	2	3	4	5
Analysis of Individual Dose Data	1	2	3	4	5
Doses in Excess of DOE Limit (5 rem)	1	2	3	4	5
Doses in Excess of ACL Limit (2 rem)	1	2	3	4	5
Intakes of Radioactive Material	1	2	3	4	5
Bioassay and Intake Summary Information	1	2	3	4	5
Analysis of Site Data	1	2	3	4	5
Collective TED by Site and Other Facilities	1	2	3	4	5
Activities Significantly Contributing to Collective Dose	1	2	3	4	5
Additional Site Descriptions	1	2	3	4	5
Summary by Program Office	1	2	3	4	5
Transient Individuals	1	2	3	4	5
Historical Data	1	2	3	4	5
Conclusions	1	2	3	4	5

Please rate the importance of the timeliness of the publication of this report as it relates to your professional need for the information on occupational radiation exposure at DOE:

	Not important				Critical
	1	2	3	4	5

Please provide any additional input or comments on this report.

Appendix A: DOE Reporting Sites and Reporting Codes

The following is a list of the Occupation Codes that are reported with each individual's dose record to the U.S. Department of Energy (DOE) Radiation Exposure Monitoring System (REMS). Occupation Codes are grouped into Labor Categories for the purposes of analysis and summary in this report. The Occupation Codes are listed in the REMS Data Reporting Guide, Table G-7, and represent a subset of the occupations listed in the Department of Commerce's Standard Occupational Classification (SOC) Manual (1980).

Exhibit A-1: Labor Categories and Occupation Codes.

Labor Category	Occupation Code	Occupation Name
Agriculture	562	Groundskeepers
	570	Forest Workers
	580	Misc. Agriculture
Construction/Repair	610	Mechanics/Repairers
	641	Masons
	642	Carpenters
	643	Electricians
	644	Painters
	645	Pipe Fitter
	650	Miners/Drillers
	660	Misc. Repair/Construction
Laborers	850	Handlers/Laborers/Helpers
Management	110	Manager - Administrator
	400	Sales
	450	Admin. Support and Clerical
Misc.	910	Military
	990	Miscellaneous
Production	681	Machinists
	682	Sheet Metal Workers
	690	Operators, Plant/System/Utility
	710	Machine Setup/Operators
	771	Welders and Solderers
	780	Misc. Precision/Production
Professional	160	Engineer
	170	Scientist
	184	Health Physicist
	200	Misc. Professional
	260	Doctors and Nurses

Exhibit A-1: Labor Categories and Occupation Codes. (continued)		
Labor Category	**Occupation Code**	**Occupation Name**
Service Workers	512	Firefighters
	513	Security Guards
	521	Food Service Employees
	524	Janitors
	525	Misc. Service
Technicians	350	Technicians
	360	Health Technicians
	370	Engineering Technicians
	380	Science Technicians
	383	Radiation Monitors/Techs.
	390	Misc. Technicians
Transport Workers	820	Truck Drivers
	821	Bus Drivers
	825	Pilots
	830	Equipment Operators
	840	Misc. Transport
Unknown	001	Unknown

The following is a list of all organizations reporting to the DOE REMS from CY 2021–2025. The list provides the Site groupings used in this report as well as the organization reporting code and name.

Exhibit A-2: Organizations Reporting to DOE REMS, CY 2021–2025.							
Site	**Org. Code**	**Organization Name**	**2021**	**2022**	**2023**	**2024**	**2025**
Albuquerque	OST3100	Office of Secure Transportation	●	●	●	●	●
Ames National Laboratory (Ames Lab)	1000503	Ames National Laboratory (Iowa State)	●	●	●	●	●
Argonne National Laboratory (ANL)	1000703	Argonne National Laboratory	●	●	●	●	●
	1000710	ANL-Radiological Assistance Program	-	-	-	●	●
Brookhaven National Laboratory (BNL)	1001003	Brookhaven National Laboratory	●	●	●	●	●
Fermi National Accelerator Lab. (FERMI)	1002503	Fermilab	●	●	●	●	●
Grand Junction Site	3260615	RSI Entech, LLC	●	●	●	●	●
Hanford	4700805	Bechtel National Corporation	●	●	●	●	●
	4701001	DOE, Office of River Protection	●	●	●	●	-
	4701001	Hanford Field Office					●
	4702004	Advanced Technologies and Laboratories Int'l	-	-	-	●	-
	4702005	Wastren Advantage, Inc.	●	-	-	-	-
	4706104	Hanford Laboratory Management Integration	●	●	●	●	●
	4707104	Washington River Protection Solutions, LLC	●	●	●	●	●
	4708104	Hanford Tank Waste Operations and Closure	-	-	-	-	●
	NA-2000	NNSA - Visitors	-	-	●	●	-
	NA-2100	NNSA - Management and Support Personnel	●	●	●	●	-
	NA-2101	NNSA - Mgmt. & Support Personnel: MELE Assoc.	●	●	●	●	-

Exhibit A-2: Organizations Reporting to DOE REMS, CY 2021–2025. (continued)

Site	Org. Code	Organization Name	2021	2022	2023	2024	2025
Hanford (continued)	NA-2110	NNSA - North and South America	-	-	-	-	-
	NA-2120	NNSA - Europe, Africa and the Middle East	-	-	●	●	●
	7500503	Battelle - PNNL	●	●	●	●	●
	7500504	Battelle -PNNL- Subs	●	●	●	●	●
	7500521	Pacific Northwest Site Office	●	●	●	●	●
	7502504	HPMC Occupational Medical Services	●	●	●	-	-
	7504204	Hanford Mission Integration Solutions (HMIS)	●	●	●	●	●
	7504304	Central Plateau Cleanup Company	●	●	●	●	●
	7505214	Mission Support Alliance (MSA)	●	-	-	-	-
	7502514	Inomedic Health Applications	-	-	-	●	●
	7505304	CH2M Hill Plateau Remediation Company	●	-	-	-	-
	7506001	DOE-Richland Field Office	●	●	●	●	●
Idaho	3004001	Idaho Field Office	●	●	●	●	●
	3005003	INL - BEA, LLC - Research	●	●	●	●	●
	3005004	INL - BEA, LLC - Services	●	●	●	●	●
	3005009	INL - BEA, LLC - Security	●	●	●	●	●
	3005012	INL - BEA, LLC - Production	●	●	●	●	●
	3006002	INL - Fluor- Projects	●	●	●	●	●
	3006004	ICP - Fluor - Subcontractors	●	●	●	●	●
	3006005	ICP - Fluor - Support	●	●	●	●	●
Kansas City National Security Campus (KC-NSC)	0531002	Honeywell FM & T	●	●	●	●	●
Lawrence Berkeley National Lab. (LBNL)	8003003	Lawrence Berkeley National Laboratory	●	●	●	●	●
Lawrence Livermore National Lab. (LLNL)	0580403	Lawrence Livermore National Laboratory	●	●	●	●	●
	0580414	LLNL - Service Subcontractors	●	●	●	●	-
	0580503	LLNL - Nevada	●	●	●	●	-
	0580701	LLNL - DOE Site Office	-	●	●	●	●
Los Alamos National Lab. (LANL)	0540001	NNSA Los Alamos Site Office	●	●	●	●	●
	0544003	Los Alamos National Laboratory	●	●	●	●	●
	0544006	Los Alamos National Lab Construction Subs	●	●	●	●	-
	544809	Protection Technologies Los Alamos	-	-	●	-	-
	544904	Johnson Controls, Inc.	-	-	●	-	-
	1530001	Newport News Nuclear BWXT Los Alamos (LANL N3B)	●	●	●	●	●
National Energy Technology Laboratory (NETL)	2041001	NETL Morgantown	●	●	●	●	●
	2042001	NETL Pittsburgh	●	●	●	●	●
	2045001	NETL Albany	●	●	●	●	●
National Laboratory of the Rockies (NLR)	2806003	National Renewable Energy Laboratory	●	●	●	●	-
	2806003	National Laboratory of the Rockies					●
Nevada National Security Site (NNSS)	0501001	NNSA Service Center	-	●	●	-	-
	0520001	NNSA Nevada Site Office	●	●	-	●	-
	0521104	MSTS - Livermore Operations	-	-	●	-	-
	0521204	MSTS - Las Vegas	●	●	-	●	-
	0521304	MSTS - Los Alamos	●	●	●	●	-
	0521405	MSTS - NTS	●	●	●	●	●

Exhibit A-2: Organizations Reporting to DOE REMS, CY 2021–2025. (continued)

Site	Org. Code	Organization Name	2021	2022	2023	2024	2025
Nevada National Security Site (continued)	0521416	MSTS - NTS subcontractors	●	-	-	-	-
	0521503	MSTS - Special Tech. Lab	●	●	●	●	-
	0529009	Wackenhut Services Inc. - NV	●	●	●	-	-
	3505104	Navarro-Intera LLC	●	-	-	-	-
	3508703	SAIC - NV	-	●	●	●	-
Oak Ridge	4004203	Oak Ridge Inst. For Science & Educ. (ORISE)	●	●	●	●	●
	4004602	Tru Waste Processing Center - ORNL	●	●	●	●	●
	4006002	UCOR - ETTP	●	●	●	●	●
	4006503	UT-Battelle - ORNL	●	●	●	●	●
	4006510	UCOR - ORNL	●	●	●	●	●
	4008010	UCOR - Y-12	●	●	●	●	●
	4018102	CNS, LLC, Y-12	●	●	●	●	●
Paducah Gaseous Diff. Plant (PGDP)	4007002	Swift & Staley Team	●	●	●	●	-
	4007002	Infrastructure Support Services (ISS)					●
	6203106	DUF6 Paducah Construction Subs - MACS	●	●	●	●	-
	6203106	Operations and Site Mission Support Subs					●
	6503304	Four Rivers Nuclear Partnership	●	●	●	●	●
Pantex Plant	0514004	Battelle - Pantex	●	●	●	●	●
	0515002	CNS Pantex	●	●	●	●	●
Portsmouth Gaseous Diff. Plant (PORTS)	6202106	Mid-America Conversion Services (MCS)	●	-	●	●	●
	6202204	Portsmouth Mission Alliance (PMA)	●	●	●	●	-
	6202204	Northwind Dynamics					●
	6202304	Fluor B & W Portsmouth	●	●	●	●	-
	6202304	Southern Ohio Cleanup Company					●
Princeton Plasma Physics Laboratory (PPPL)	1005003	Princeton Plasma Physics Laboratory	●	●	●	●	●
Sandia National Laboratories (SNL)	0578003	Sandia National Laboratories	●	●	●	●	●
Savannah River	0595112	Tritium Extraction Facility	●	●	●	●	●
	8500000	Savannah River Operations	●	●	●	●	-
	8500505	Bechtel Construction - SR	●	●	●	●	●
	8500516	Miscellaneous SRS Construction Subs	●	●	●	●	●
	8501042	SRR Operations	●	●	●	●	●
	8501044	SRR Service Subs	●	●	●	●	●
	8502042	SR Mission Completion Operations	-	●	-	-	●
	8505001	SR Forest Station	-	●	-	-	-
	8505501	Savannah River Field Office	●	●	●	●	●
	8505504	Misc. DOE Contractors - SR	●	●	●	●	●
	8505525	Parsons	●	-	●	●	●
	8505526	SR Construction - Parsons Subcontractors	●	●	-	-	-
	8509003	Univ. of Georgia Ecology Laboratories	●	●	●	●	●
	8509509	Centerra - SR	●	●	●	●	●
	8511002	Savannah River Nuclear Solutions, Inc.	●	●	●	●	●
	8511003	Savannah River National Laboratory	●	●	●	●	●
	8511004	SRNS Service Subs	●	●	●	●	●
	8511005	SRNS Construction	●	●	●	●	●

Exhibit A-2: Organizations Reporting to DOE REMS, CY 2021–2025. (continued)

Site	Org. Code	Organization Name	2021	2022	2023	2024	2025
Savannah River (continued)	8511006	SRNS Construction Subs	●	●	●	●	●
	8512003	BSRA - SR National Laboratory	●	●	●	●	●
	8512004	BSRA - Service Subs	●	●	●	●	●
Separations Process Research Unit	1523016	NY SPRU	●	●	●	●	●
Service Center Personnel	0501001	NNSA Albuquerque Complex	-	-	●	●	-
	0701001	Carlsbad Field Office	●	●	●	●	●
	0702003	Los Alamos National Lab - WIPP	●	-	-	-	-
	1504001	DOE Headquarters	●	●	●	●	-
	4003602	Isotek (Bldg. 3019)	●	●	●	●	●
	9900002	DOE Federal Employees	-	-	●	-	-
SLAC National Accelerator Facility	8008003	Stanford Linear Accelerator Center	●	●	●	●	●
Thomas Jefferson National Accelerator Facility	1509503	Thomas Jefferson National Accelerator Facility	●	●	●	●	●
	1509521	Jefferson Laboratory - DOE Employees	●	●	●	●	●
Uranium Mill Tailings Remediation Action Project	3260645	Uranium Mill Tailings Remedial Action - Moab	●	●	●	●	●
Waste Isolation Pilot Plant	0701001	Carlsbad Field Office	-	●	●	-	●
	0703104	Washington TRU Solutions LLC-WIPP	●	●	●	●	●
	0703109	Santa Fe Protective Services - WIPP	●	-	-	-	-
	0703114	WTS Subcontractors - WIPP	●	-	-	-	-
West Valley Project	4539004	West Valley Nuclear Services, Inc. (WVNS)	●	●	●	●	-
	4530002	West Valley Cleanup Alliance (WVCA)					●
Pittsburgh Naval Reactor Office	6007504	PNR - BAPL & BPMI-P	●	●	●	●	●
	6008003	PNR - BAPL & BPMI-P	●	●	●	●	●
	6009003	Naval Reactors - Idaho	●	●	●	●	●
Schenectady Naval Reactor Office	9004003	Knolls Atomic Power Laboratory	●	●	●	●	●
	9005003	Knolls Atomic Power Laboratory	●	●	●	●	●
	9005004	Knolls Atomic Power Laboratory	●	●	●	●	●

The following is a list of Facility Type Codes reported to REMS in accordance with the REMS Data Reporting Guide. A facility type code is reported with each individual's dose record and indicates the facility type where the majority of the individual's dose was accrued during the monitoring year.

Exhibit A-3: Facility Type Codes.

Facility Type Code	Description
10	Accelerator
21	Fuel/Uranium Enrichment
22	Fuel Fabrication
23	Fuel Processing
40	Maintenance and Support (Site-Wide)
50	Reactor
61	Research, General
62	Research, Fusion
70	Waste Processing/Mgmt.
80	Weapons Fab. and Testing
99	Other

Appendix B: Additional Data

Exhibit B-1: Site Dose Data, CY 2023.

Site	Collective TED (person–rem)	Percent Change – Coll. TED	Number with Meas. Dose	Percent Change – # with Meas. Dose	Avg. Meas. TED (rem)	Percent Change – Avg. Meas. TED	Percentage of Coll. TED above 0.500 rem	Percent Change – Coll. TED above 0.500 rem
Ames National Laboratory	0.778	–	34	–	0.023	–	–	–
Argonne National Laboratory	10.225	18% ▲	261	127% ▲	0.039	–48%	17% ▲	–47% ▼
Brookhaven National Laboratory	1.611	–18% ▼	49	–44% ▼	0.033	45%	–	–
Fermi National Accelerator Laboratory	3.440	–61% ▼	89	–39% ▼	0.039	–37%	–	–
Grand Junction Site	0.003	–	2	–	0.002	–	–	–
Hanford: Hanford Field Office	44.172	11% ▲	1,026	–8% ▼	0.043	20%	–	–
Hanford: Pacific Northwest National Laboratory	18.488	–44% ▼	671	25% ▲	0.028	–56%	9% ▲	–82% ▼
Idaho	100.316	20% ▲	1,699	7% ▲	0.059	12%	3% ▲	147% ▲
Kansas City National Security Campus	0.312	–	68	–	0.005	–	–	–
Lawrence Berkeley National Laboratory	0.434	–	10	–	0.043	–	–	–
Lawrence Livermore National Laboratory	27.907	23% ▲	333	36% ▲	**0.084**	–9%	**24%** ▲	–16% ▼
Los Alamos National Laboratory	**311.506**	–16% ▼	3,764	–16% ▼	0.083	0%	18% ▲	–41% ▼
National Laboratory of the Rockies	0.003	–	1	–	0.003	–	–	–
Nevada National Security Site	2.351	–18% ▼	43	–19% ▼	0.055	1%	–	–
Oak Ridge: East Tennessee Technology Park	0.577	–	59	–	0.010	–	–	–
Oak Ridge: Oak Ridge Institute for Science and Education	0.098	–	6	–	0.016	–	–	–
Oak Ridge: Oak Ridge National Laboratory	66.688	2% ▲	1,220	11% ▲	0.055	–8%	14% ▲	–41% ▼
Oak Ridge: Y-12 National Security Complex	50.006	–12% ▼	1,567	0%	0.032	–12%	–	–
Office of Secure Transportation	0.048	–	4	–	0.012	–	–	–
Paducah Gaseous Diffusion Plant	4.172	40% ▲	96	16% ▲	0.043	21%	–	–
Pantex Plant	40.176	55% ▲	564	18% ▲	0.071	31%	–	–
Portsmouth Gaseous Diffusion Plant	5.993	41% ▲	157	18% ▲	0.038	19%	–	–
Princeton Plasma Physics Laboratory	0.336	–	48	–	0.007	–	–	–
Sandia National Laboratories	7.959	23% ▲	112	–12% ▼	0.071	39%	10% ▲	–
Savannah River National Laboratory	15.793	106% ▲	546	47% ▲	0.029	40%	–	–
Savannah River Site	217.548	70% ▲	**5,702**	40% ▲	0.038	22%	8% ▲	**154%** ▲
Separations Process Research Unit	0.013	–	1	–	0.013	–	–	–
SLAC National Accelerator Laboratory	0.036	–	2	–	0.018	–	–	–
Thomas Jefferson National Accelerator Facility	0.622	–	38	–	0.016	–	–	–
Uranium Mill Tailings Remedial Action Project	8.905	87% ▲	125	105% ▲	0.071	–9%	–	–
Waste Isolation Pilot Plant	0.163	–	9	–	0.018	–	–	–
West Valley Demonstration Project	7.734	–40% ▼	130	9% ▲	0.059	-45%	–	–
Service Center Personnel*	1.627	**280%** ▲	41	**173%** ▲	0.040	**39%**	–	–
Totals	**950.040**	**6%** ▲	18,477	10% ▲	0.051	–3%	10% ▲	–43% ▼

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.
◊ The percentage change from the previous year is not shown because it is not meaningful when the site collective dose is less than 1 person-rem (10 person-mSv).

* Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP, in addition to several smaller facilities not associated with a DOE site.

Exhibit B-2: Site Dose Data, CY 2024.

Site	Collective TED (person–rem)	Percent Change – Coll. TED	Number with Meas. Dose	Percent Change – # with Meas. Dose	Avg. Meas. TED (rem)	Percent Change – Avg. Meas. TED	Percentage of Coll. TED above 0.500 rem	Percent Change – Coll. TED above 0.500 rem
Ames National Laboratory	0.704	–	31	–	0.023	–	–	–
Argonne National Laboratory	9.676	–5% ▼	221	–15% ▼	0.044	12% ▲	**31%**	85% ▲
Brookhaven National Laboratory	4.531	181% ▲	100	**104%** ▲	0.045	38% ▲	–	–
Fermi National Accelerator Laboratory	3.04	–12% ▼	97	9% ▲	0.031	–19% ▼	–	–
Grand Junction Site	0.004	–	4	–	0.001	–	–	–
Hanford: Hanford Field Office	27.303	–38% ▼	881	–14% ▼	0.031	–28% ▼	–	–
Hanford: Pacific Northwest National Laboratory	16.598	–10% ▼	354	–47% ▼	0.047	70% ▲	–	–
Idaho	122.306	22% ▲	1,848	9% ▲	0.066	12% ▲	4%	15% ▲
Kansas City National Security Campus	0.845	–	57	–	0.015	–	–	–
Lawrence Berkeley National Laboratory	1.02	135% ▲	14	40% ▲	0.073	68% ▲	–	–
Lawrence Livermore National Laboratory	24.999	–10% ▼	373	12% ▲	0.067	–20% ▼	3%	–87% ▼
Los Alamos National Laboratory	**327.736**	5% ▲	3,360	–11% ▼	0.098	18% ▲	24%	**30%** ▲
National Energy Technology Laboratory	0.614	–	15	–	0.041	–	–	–
National Laboratory of the Rockies	0.001	–	1	–	0.001	–	–	–
Nevada National Security Site	4.081	74% ▲	70	63% ▲	0.058	7% ▲	–	–
Oak Ridge: East Tennessee Technology Park	0.829	–	70	–	0.012	–	–	–
Oak Ridge: Oak Ridge Institute for Science and Education	0.063	–	8	–	0.008	–	–	–
Oak Ridge: Oak Ridge National Laboratory	72.172	8% ▲	1,171	–4% ▼	0.062	13% ▲	17%	21% ▲
Oak Ridge: Y-12 National Security Complex	52.164	4% ▲	1,603	2% ▲	0.033	2% ▲	–	–
Office of Secure Transportation	0.786	–	8	–	0.098	–	–	–
Paducah Gaseous Diffusion Plant	5.088	22% ▲	83	–14% ▼	0.061	41% ▲	–	–
Pantex Plant	34.205	–15% ▼	492	–13% ▼	0.070	–2% ▼	2%	–
Portsmouth Gaseous Diffusion Plant	5.667	–5% ▼	144	–8% ▼	0.039	3% ▲	–	–
Princeton Plasma Physics Laboratory	0.28	–	53	–	0.005	–	–	–
Sandia National Laboratories	9.181	15% ▲	179	60% ▲	0.051	–28% ▼	–	–
Savannah River National Laboratory	11.665	–26% ▼	507	–7% ▼	0.023	–20% ▼	–	–
Savannah River Site	167.097	–23% ▼	**4,219**	–26% ▼	0.040	4% ▲	13%	58% ▲
Separations Process Research Unit	0.011	–	1	–	0.011	–	–	–
SLAC National Accelerator Laboratory	0.045	–	1	–	0.045	–	–	–
Thomas Jefferson National Accelerator Facility	0.451	–	28	–	0.016	–	–	–
Uranium Mill Tailings Remedial Action Project	7.482	–16% ▼	135	8% ▲	0.055	–22% ▼	–	–
Waste Isolation Pilot Plant	0.268	–	15	–	0.018	–	–	–
West Valley Demonstration Project	8.664	12% ▲	133	2% ▲	0.065	9% ▲	–	–
Service Center Personnel*	7.432	**357%** ▲	58	41% ▲	**0.128**	**223%** ▲	–	–
Totals	**927.008**	**–2%** ▼	**16,334**	**–12%** ▼	**0.057**	**10%** ▲	**13%**	**26%** ▲

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

◊ The percentage change from the previous year is not shown because it is not meaningful when the site's collective dose is less than 1 person-rem (10 person-mSv).

* Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP, in addition to several smaller facilities not associated with a DOE site.

Exhibit B-3: Site Dose Data, CY 2025.

Site	Collective TED (person–rem)	Percent Change – Coll. TED	Number with Meas. Dose	Percent Change – # with Meas. Dose	Avg. Meas. TED (rem)	Percent Change – Avg. Meas. TED	Percentage of Coll. TED above 0.500 rem	Percent Change – Coll. TED above 0.500 rem
Ames National Laboratory	0.744	–	35	–	0.021	–	–	–
Argonne National Laboratory	9.045	–7% ▼	77	–65% ▼	0.117	**168% ▲**	**51% ▲**	61% ▲
Brookhaven National Laboratory	1.689	–63% ▼	68	–32% ▼	0.025	–45% ▼	–	–
Fermi National Accelerator Laboratory	2.26	–26% ▼	65	–33% ▼	0.035	11% ▲	–	–
Grand Junction Site	0.006	–	6	–	0.001	–	–	–
Hanford: Hanford Field Office	21.436	–21% ▼	601	–32% ▼	0.036	15% ▲	–	–
Hanford: Pacific Northwest National Laboratory	13.144	–21% ▼	274	–23% ▼	0.048	2% ▲	9% ▲	–
Idaho	131.740	8% ▲	1,657	–10% ▼	0.080	20% ▲	16% ▲	**327% ▲**
Kansas City National Security Campus	0.898	–	61	–	0.015	–	–	–
Lawrence Berkeley National Laboratory	0.669	–	17	–	0.039	–	–	–
Lawrence Livermore National Laboratory	18.602	–26% ▼	269	–28% ▼	0.069	3% ▲	–	–
Los Alamos National Laboratory	**356.773**	9% ▲	3,425	2% ▲	0.104	7% ▲	27% ▲	14% ▲
National Energy Technology Laboratory	0.131	–	4	–	0.033	–	–	–
National Laboratory of the Rockies	0.084	–	3	–	0.028	–	–	–
Nevada National Security Site	9.041	**122% ▲**	142	**103% ▲**	0.064	9% ▲	–	–
Oak Ridge: East Tennessee Technology Park	0.117	–	11	–	0.011	–	–	–
Oak Ridge: Oak Ridge Institute for Science and Education	0.047	–	2	–	0.024	–	–	–
Oak Ridge: Oak Ridge National Laboratory	77.962	8% ▲	998	–15% ▼	0.078	27% ▲	31% ▲	82% ▲
Oak Ridge: Y-12 National Security Complex	47.28	–9% ▼	1,465	–9% ▼	0.032	–1% ▼	–	–
Office of Secure Transportation	0.436	–	5	–	0.087	–	–	–
Paducah Gaseous Diffusion Plant	3.926	–23% ▼	70	–16% ▼	0.056	–9% ▼	–	–
Pantex Plant	26.025	–24% ▼	424	–14% ▼	0.061	–12% ▼	2% ▲	22% ▲
Portsmouth Gaseous Diffusion Plant	7.779	37% ▲	189	31% ▲	0.041	5% ▲	–	–
Princeton Plasma Physics Laboratory	0.127	–	29	–	0.004	–	–	–
Sandia National Laboratories	5.903	–36% ▼	114	–36% ▼	0.052	1% ▲	–	–
Savannah River National Laboratory	10.898	–7% ▼	421	–17% ▼	0.026	13% ▲	–	–
Savannah River Site	172.531	3% ▲	**3,687**	–13% ▼	0.047	18% ▲	16% ▲	25% ▲
Separations Process Research Unit	0.033	–	3	–	0.011	–	–	–
SLAC National Accelerator Laboratory	0.173	–	10	–	0.017	–	–	–
Thomas Jefferson National Accelerator Facility	0.587	–	41	–	0.014	–	–	–
Uranium Mill Tailings Remedial Action Project	5.207	–30% ▼	97	–28% ▼	0.054	–3% ▼	–	–
Waste Isolation Pilot Plant	0.37	–	25	–	0.015	–	–	–
West Valley Cleanup Alliance	3.082	–	104	–	0.030	–	–	–
Service Center Personnel*	13.511	82% ▲	78	34% ▲	**0.173**	35% ▲	33% ▲	–
Totals	**942.256**	**2% ▲**	**14,477**	**–11% ▼**	**0.065**	**14% ▲**	**19% ▲**	**47% ▲**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.
◊ The percentage change from the previous year is not shown because it is not meaningful when the site collective dose is less than 1 person-rem (10 person-mSv).
* Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP, in addition to several smaller facilities not associated with a DOE site.

Exhibit B-4: Internal Dose by Site, CY 2023–2025.

Site	No. of Individuals with Measurable CED* 2023	No. of Individuals with Measurable CED* 2024	No. of Individuals with Measurable CED* 2025	Collective CED Dose (person–rem) 2023	Collective CED Dose (person–rem) 2024	Collective CED Dose (person–rem) 2025	Average Measurable CED 2023	Average Measurable CED 2024	Average Measurable CED 2025
Hanford: Hanford Field Office	5	1	–	0.008	0.003	–	0.002	0.003	–
Idaho	–	1	1	–	0.069	0.028	–	0.069	0.028
Lawrence Livermore National Laboratory	1	–	3	0.011	–	0.067	0.011	–	0.022
Los Alamos National Laboratory	27	39	37	0.117	0.150	4.730	0.004	0.004	**0.128**
National Energy Technology Laboratory	–	1	–	–	0.101	–	–	0.101	–
Nevada National Security Site	–	–	4	–	–	0.040	–	–	0.010
Oak Ridge: Oak Ridge National Laboratory	2	1	2	0.070	0.039	0.057	0.035	0.039	0.029
Oak Ridge: Y-12 National Security Complex	**1,226**	**1,314**	**1,157**	**38.757**	**41.853**	**37.407**	0.032	0.032	0.032
Paducah Gaseous Diffusion Plant	10	9	4	0.212	0.224	0.084	0.021	0.025	0.021
Sandia National Laboratories	2	9	7	0.024	0.072	0.028	0.012	0.008	0.004
Savannah River Site	2	6	2	0.018	0.021	0.006	0.009	0.004	0.003
Uranium Mill Tailings Remedial Action Project	58	38	45	2.346	0.660	0.567	**0.040**	0.017	0.013
West Valley Demonstration Project	–	1	–	–	0.154	–	–	**0.154**	–
Totals	**1,333**	**1,420**	**1,262**	**41.563**	**43.346**	**43.014**	**0.031**	**0.031**	**0.034**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no individuals with measurable CED for the year shown. Dashes indicate no data reported for the year shown.

* The number of internal depositions represents the number of internal dose records with positive results reported for each individual.

** Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP, in addition to several smaller facilities not associated with a DOE site.

Exhibit B-5: Neutron Dose Distribution by Site, CY 2025.

Site	No Meas. Dose	Meas. < 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.00	1.0 – 2.0	> 2.0	Total Monitored*	No. of Individuals with Meas. Dose	% of Individuals with Meas. Dose	Collective Neutron Dose (person–rem)	Avg. Meas. Neutron Dose (rem)
Ames National Laboratory	164	–	–	–	–	–	–	–	164	–	–	–	–
Argonne National Laboratory	4,781	–	–	–	–	–	–	–	4,781	–	–	–	–
Brookhaven National Laboratory	2,798	1	–	–	–	–	–	–	2,799	1	0%	0.007	0.007
Fermi National Accelerator Laboratory	1,145	–	–	–	–	–	–	–	1,145	–	–	–	–
Grand Junction Site	25	–	–	–	–	–	–	–	25	–	–	–	–
Hanford: Hanford Field Office	7,780	128	–	–	–	–	–	–	7,908	128	2%	1.902	0.015
Hanford: Pacific Northwest National Laboratory	2,929	–	–	–	–	–	–	–	2,929	–	–	–	–
Idaho	6,574	37	1	–	–	–	–	–	6,612	38	1%	1.590	0.042
Kansas City National Security Campus	228	1	–	–	–	–	–	–	229	1	0%	0.020	0.020
Lawrence Berkeley National Laboratory	669	–	–	–	–	–	–	–	669	–	–	–	–
Lawrence Livermore National Laboratory	4,308	42	5	–	–	–	–	–	4,355	47	1%	2.169	0.046
Los Alamos National Laboratory	12,277	1,694	332	190	32	10	3	–	**14,538**	**2,261**	**16%**	**199.754**	0.088
National Energy Technology Laboratory	117	–	–	–	–	–	–	–	117	–	–	–	–
National Laboratory of the Rockies	6	–	–	–	–	–	–	–	6	–	–	–	–
Nevada National Security Site	1,243	4	–	–	–	–	–	–	1,247	4	0%	0.120	0.030
Oak Ridge: East Tennessee Technology Park	225	–	–	–	–	–	–	–	225	–	–	–	–
Oak Ridge: Oak Ridge Institute for Science and Education	84	–	–	–	–	–	–	–	84	–	–	–	–
Oak Ridge: Oak Ridge National Laboratory	5,891	124	34	19	1	–	–	–	6,069	178	3%	16.363	**0.092**
Oak Ridge: Y-12 National Security Complex	8,029	7	–	–	–	–	–	–	8,036	7	0%	0.163	0.023
Office of Secure Transportation	297	–	–	–	–	–	–	–	297	–	–	–	–
Paducah Gaseous Diffusion Plant	1,504	–	–	–	–	–	–	–	1,504	–	–	–	–
Pantex Plant	4,324	271	28	3	–	–	–	–	4,626	302	7%	14.637	0.048
Portsmouth Gaseous Diffusion Plant	2,316	–	–	–	–	–	–	–	2,316	–	–	–	–
Princeton Plasma Physics Laboratory	285	–	–	–	–	–	–	–	285	–	–	–	–
Sandia National Laboratories	1,888	9	–	–	–	–	–	–	1,897	9	0%	0.156	0.017
Savannah River National Laboratory	690	8	–	–	–	–	–	–	698	8	1%	0.250	0.031

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.
* Represents the total number of monitoring records. The number of individuals specifically monitored for neutron radiation cannot be determined.
** Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP, in addition to several smaller facilities not associated with a DOE site.

Exhibit B-5: Neutron Dose Distribution by Site, CY 2025. (continued)

Site	No Meas. Dose	Meas. < 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.00	1.0 – 2.0	> 2.0	Total Monitored*	No. of Individuals with Meas. Dose	% of Individuals with Meas. Dose	Collective Neutron Dose (person–rem)	Avg. Meas. Neutron Dose (rem)
Savannah River Site	7,329	86	9	1	–	–	–	–	7,425	96	1%	4.950	0.052
Separations Process Research Unit	15	–	–	–	–	–	–	–	15	–	–	–	–
SLAC National Accelerator Laboratory	2,307	–	–	–	–	–	–	–	2,307	–	–	–	–
Thomas Jefferson National Accelerator Facility	1,556	–	–	–	–	–	–	–	1,556	–	–	–	–
Uranium Mill Tailings Remedial Action Project	109	–	–	–	–	–	–	–	109	–	–	–	–
Waste Isolation Pilot Plant	835	–	–	–	–	–	–	–	835	–	–	–	–
West Valley Cleanup Alliance	435	–	–	–	–	–	–	–	435	–	–	–	–
Service Center Personnel*	180	–	–	–	–	–	–	–	180	–	–	–	–
Totals	**83,343**	**2,412**	**409**	**213**	**33**	**10**	**3**	–	**86,423**	**3,080**	**4%**	**242.081**	**0.079**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

* Represents the total number of monitoring records. The number of individuals specifically monitored for neutron radiation cannot be determined.

** Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP, in addition to several smaller facilities not associated with a DOE site.

Exhibit B-6a: Distribution of TED by Facility Type, CY 2023.

TOTAL EFFECTIVE DOSE (TED)
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Facility Type	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Accelerator	7,988	345	38	2	–	–	–	–	–	–	–	8,373	5%	385	14.514	0.038
Fuel Processing	110	499	12	–	–	–	–	–	–	–	–	621	**82%**	511	12.364	0.024
Fuel/Uranium Enrichment	2,176	202	14	–	–	–	–	–	–	–	–	2,392	9%	216	6.570	0.030
Maintenance and Support	5,595	746	91	16	–	–	–	–	–	–	–	6,448	13%	853	37.795	0.044
Other	6,223	891	62	10	1	–	–	–	–	–	–	7,187	13%	964	32.871	0.034
Reactor	178	20	6	1	–	–	–	–	–	–	–	205	13%	27	2.188	**0.081**
Research, Fusion	359	50	1	–	–	–	–	–	–	–	–	410	12%	51	0.588	0.012
Research, General	24,231	5,378	453	163	22	9	2	–	–	–	–	**30,258**	20%	**6,027**	281.108	0.047
Waste Processing/Management	4,236	4,814	384	91	29	2	–	–	–	–	–	9,556	56%	5,320	236.665	0.044
Weapons Fabrication and Testing	12,849	3,201	594	243	64	17	4	–	–	–	–	16,972	24%	4,123	**325.377**	0.079
Totals	**63,945**	**16,146**	**1,655**	**526**	**116**	**28**	**6**	**–**	**–**	**–**	**–**	**82,422**	**22%**	**18,477**	**950.040**	**0.051**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-6b: Distribution of TED by Facility Type, CY 2024.

TOTAL EFFECTIVE DOSE (TED)

Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Facility Type	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Accelerator	9,144	345	29	3	–	–	–	–	–	–	–	9,521	4%	377	13.954	0.037
Fuel Processing	349	353	3	–	–	–	–	–	–	–	–	705	**50%**	356	7.326	0.021
Fuel/Uranium Enrichment	2,072	197	17	–	–	–	–	–	–	–	–	2,286	9%	214	6.496	0.030
Maintenance and Support	5,417	726	61	14	–	–	–	–	–	–	–	6,218	13%	801	29.718	0.037
Other	6,487	642	48	11	–	–	–	–	–	–	–	7,188	10%	701	25.372	0.036
Reactor	147	30	11	–	–	–	–	–	–	–	–	188	22%	41	2.615	0.064
Research, Fusion	334	60	1	–	–	–	–	–	–	–	–	395	15%	61	0.648	0.011
Research, General	25,415	4,799	470	247	18	11	1	–	–	–	–	**30,961**	18%	**5,546**	295.376	0.053
Waste Processing/Management	5,727	3,820	325	96	38	1	–	–	–	–	–	10,007	43%	4,280	199.201	0.047
Weapons Fabrication and Testing	13550	2998	607	245	71	25	11	–	–	–	–	17,507	23%	3,957	**346.302**	**0.088**
Totals	**68,642**	**13,970**	**1,572**	**616**	**127**	**37**	**12**	**–**	**–**	**–**	**–**	**84,976**	**19%**	**16,334**	**927.008**	**0.057**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-6c: Distribution of TED by Facility Type, CY 2025.

TOTAL EFFECTIVE DOSE (TED)
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Facility Type	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Accelerator	10,800	281	20	1	–	–	–	–	–	–	–	11,102	3%	302	10.015	0.033
Fuel Processing	391	260	6	–	–	–	–	–	–	–	–	657	**40%**	266	6.019	0.023
Fuel/Uranium Enrichment	2,341	176	23	1	–	–	–	–	–	–	–	2,541	8%	200	7.896	0.039
Maintenance and Support	5,372	513	76	14	1	–	–	–	–	–	–	5,976	10%	604	29.42	0.049
Other	6,979	564	32	18	8	–	–	–	–	–	–	7,601	8%	622	28.471	0.046
Reactor	130	20	6	2	–	–	–	–	–	–	–	158	18%	28	2.457	0.088
Research, Fusion	316	30	–	–	–	–	–	–	–	–	–	346	9%	30	0.159	0.005
Research, General	25,826	4,123	491	234	51	14	8	–	–	–	–	**30,747**	16%	**4,921**	315.099	0.064
Waste Processing/Management	6,310	3,399	335	100	20	12	8	–	–	–	–	10,184	38%	3,874	191.715	0.049
Weapons Fabrication and Testing	13,481	2,710	517	276	87	22	17	–	1	–	–	17,111	21%	3,630	**351.005**	**0.097**
Totals	**71,946**	**12,076**	**1,506**	**646**	**167**	**48**	**33**	–	**1**	–	–	**86,423**	**17%**	**14,477**	**942.256**	**0.065**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-7a: Collective TED by Site and Facility Type, CY 2023.

Site	Accelerator	Fuel/ Uranium Enrichment	Fuel Processing	Maintenance and Support	Reactor	Research, General	Research, Fusion	Waste Processing/ Management	Weapons Fabrication and Testing	Other	Totals
Ames National Laboratory	–	–	–	–	–	0.778	–	–	–	–	0.778
Argonne National Laboratory	1.110	–	–	0.597	–	4.490	–	4.028	–	–	10.225
Brookhaven National Laboratory	1.009	–	–	0.521	–	–	–	0.081	–	–	1.611
Fermi National Accelerator Laboratory	3.440	–	–	–	–	–	–	–	–	–	3.440
Grand Junction Site	–	–	–	–	–	–	–	–	–	0.003	0.003
Hanford: Hanford Field Office	–	–	–	**17.837**	–	–	–	15.649	–	10.686	44.172
Hanford: Pacific Northwest National Laboratory	–	–	–	–	–	18.488	–	–	–	–	18.488
Idaho	–	–	–	–	–	**100.316**	–	–	–	–	100.316
Kansas City National Security Campus	–	–	–	–	–	–	–	–	0.312	–	0.312
Lawrence Berkeley National Laboratory	–	–	–	–	–	0.434	–	–	–	–	0.434
Lawrence Livermore National Laboratory	–	–	–	0.935	–	26.972	–	–	–	–	27.907
Los Alamos National Laboratory	**6.981**	–	–	8.124	–	46.482	–	9.507	**229.611**	**10.801**	**311.506**
National Laboratory of the Rockies	–	–	–	–	–	0.003	–	–	–	–	0.003
Nevada National Security Site	–	–	–	2.351	–	–	–	–	–	–	2.351
Oak Ridge: East Tennessee Technology Park	–	0.577	–	–	–	–	–	–	–	–	0.577
Oak Ridge: Oak Ridge Institute for Science and Education	–	–	–	–	–	0.098	–	–	–	–	0.098
Oak Ridge: Oak Ridge National Laboratory	–	–	–	–	–	58.491	–	8.197	–	–	66.688
Oak Ridge: Y-12 National Security Complex	–	–	–	–	–	–	–	–	50.006	–	50.006
Office of Secure Transportation	–	–	–	–	–	–	–	–	0.036	0.012	0.048
Paducah Gaseous Diffusion Plant	–	–	–	–	–	0.234	–	3.938	–	–	4.172
Pantex Plant	–	–	–	–	–	–	–	–	40.176	–	40.176
Portsmouth Gaseous Diffusion Plant	–	**5.993**	–	–	–	–	–	–	–	–	5.993
Princeton Plasma Physics Laboratory	–	–	–	–	–	–	**0.336**	–	–	–	0.336
Sandia National Laboratories	1.316	–	–	0.960	**2.188**	1.355	0.252	0.065	1.503	0.320	7.959
Savannah River National Laboratory	–	–	0.032	0.030	–	15.371	–	0.279	0.028	0.053	15.793
Savannah River Site	–	–	**12.332**	6.423	–	7.596	–	**178.106**	3.705	9.386	217.548
Separations Process Research Unit	–	–	–	–	–	–	–	0.013	–	–	0.013
SLAC National Accelerator Laboratory	0.036	–	–	–	–	–	–	–	–	–	0.036
Thomas Jefferson National Accelerator Facility	0.622	–	–	–	–	–	–	–	–	–	0.622
Uranium Mill Tailings Remedial Action Project	–	–	–	–	–	–	–	8.905	–	–	8.905
Waste Isolation Pilot Plant	–	–	–	–	–	–	–	0.163	–	–	0.163
West Valley Demonstration Project	–	–	–	–	–	–	–	7.734	–	–	7.734
Service Center Personnel*	–	–	–	0.017	–	–	–	–	–	1.610	1.627
Totals	**14.514**	**6.570**	**12.364**	**37.795**	**2.188**	**281.108**	**0.588**	**236.665**	**325.377**	**32.871**	**950.040**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data for this facility type.

* Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP.

Exhibit B-7b: Collective TED by Site and Facility Type, CY 2024.

Site	Accelerator	Fuel/ Uranium Enrichment	Fuel Processing	Maintenance and Support	Reactor	Research, General	Research, Fusion	Waste Processing/ Management	Weapons Fabrication and Testing	Other	Totals
Ames National Laboratory	–	–	–	–	–	0.704	–	–	–	–	0.704
Argonne National Laboratory	0.623	–	–	0.609	–	5.798	–	2.646	–	–	9.676
Brookhaven National Laboratory	3.367	–	–	0.933	–	–	–	0.231	–	–	4.531
Fermi National Accelerator Laboratory	3.040	–	–	–	–	–	–	–	–	–	3.040
Grand Junction Site	–	–	–	–	–	–	–	–	–	0.004	0.004
Hanford: Hanford Field Office	–	–	–	**10.514**	–	–	–	12.847	–	3.942	27.303
Hanford: Pacific Northwest National Laboratory	–	–	–	–	–	16.598	–	–	–	–	16.598
Idaho	–	–	–	–	–	**122.306**	–	–	–	–	122.306
Kansas City National Security Campus	–	–	–	–	–	–	–	–	0.845	–	0.845
Lawrence Berkeley National Laboratory	–	–	–	–	–	1.020	–	–	–	–	1.020
Lawrence Livermore National Laboratory	–	–	–	1.030	–	23.969	–	–	–	–	24.999
Los Alamos National Laboratory	**3.816**	–	–	7.074	–	42.394	–	10.645	**255.876**	**7.931**	**327.736**
National Energy Technology Laboratory	–	–	–	0.075	–	0.539	–	–	–	–	0.614
National Laboratory of the Rockies	–	–	–	–	–	0.001	–	–	–	–	0.001
Nevada National Security Site	–	–	–	4.081	–	–	–	–	–	–	4.081
Oak Ridge: East Tennessee Technology Park	–	0.829	–	–	–	–	–	–	–	–	0.829
Oak Ridge: Oak Ridge Institute for Science and Education	–	–	–	–	–	0.063	–	–	–	–	0.063
Oak Ridge: Oak Ridge National Laboratory	–	–	–	–	–	64.898	–	7.274	–	–	72.172
Oak Ridge: Y-12 National Security Complex	–	–	–	–	–	–	–	–	52.164		52.164
Office of Secure Transportation	–	–	–	–	–	–	–	–	0.676	0.110	0.786
Paducah Gaseous Diffusion Plant	–	–	–	0.064	–	0.224	–	4.800		–	5.088
Pantex Plant	–	–	–	–	–	–	–	–	34.205	–	34.205
Portsmouth Gaseous Diffusion Plant	–	**5.667**	–	–	–	–	–	–	–	–	5.667
Princeton Plasma Physics Laboratory	–	–	–	–	–	–	0.280	–	–	–	0.280
Sandia National Laboratories	2.612	–	–	0.786	**2.615**	1.308	**0.368**	0.143	0.145	1.204	9.181
Savannah River National Laboratory	–	–	0.013	0.015	–	11.245	–	0.210	0.046	0.136	11.665
Savannah River Site	–	–	**7.313**	4.537	–	4.309	–	**143.980**	2.345	4.613	167.097
Separations Process Research Unit	–	–	–	–	–	–	–	0.011	–	–	0.011
SLAC National Accelerator Laboratory	0.045	–	–	–	–	–	–	–	–	–	0.045
Thomas Jefferson National Accelerator Facility	0.451	–	–	–	–	–	–	–	–	–	0.451
Uranium Mill Tailings Remedial Action Project	–	–	–	–	–	–	–	7.482	–	–	7.482
Waste Isolation Pilot Plant	–	–	–	–	–	–	–	0.268	–	–	0.268
West Valley Demonstration Project	–	–	–	–	–	–	–	8.664	–	–	8.664
Service Center Personnel*	–	–	–	–	–	–	–	–	–	7.432	7.432
Totals	**13.954**	**6.496**	**7.326**	**29.718**	**2.615**	**295.376**	**0.648**	**199.201**	**346.302**	**25.372**	**927.008**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

* Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP.

Exhibit B-7c: Collective TED by Site and Facility Type, CY 2025.

Site	Accelerator	Fuel/ Uranium Enrichment	Fuel Processing	Maintenance and Support	Reactor	Research, General	Research, Fusion	Waste Processing/ Management	Weapons Fabrication and Testing	Other	Totals
Ames National Laboratory	–	–	–	–	–	0.744	–	–	–	–	0.744
Argonne National Laboratory	0.279	–	–	0.617	–	4.882	–	3.267	–	–	9.045
Brookhaven National Laboratory	1.360	–	–	0.318	–	–	–	0.011	–	–	1.689
Fermi National Accelerator Laboratory	2.260	–	–	–	–	–	–	–	–	–	2.26
Grand Junction Site	–	–	–	–	–	–	–	–	–	0.006	0.006
Hanford: Hanford Field Office	–	–	–	**9.239**	–	–	–	9.660	–	2.537	21.436
Hanford: Pacific Northwest National Laboratory	–	–	–	–	–	13.144	–	–	–	–	13.144
Idaho	–	–	–	–	–	**131.740**	–	–	–	–	131.74
Kansas City National Security Campus	–	–	–	–	–	–	–	–	0.898	–	0.898
Lawrence Berkeley National Laboratory	–	–	–	–	–	0.669	–	–	–	–	0.669
Lawrence Livermore National Laboratory	–	–	–	–	–	18.602	–	–	–	–	18.602
Los Alamos National Laboratory	**4.509**	–	–	3.384	–	57.640	–	7.483	**274.719**	9.038	**356.773**
National Energy Technology Laboratory	–	–	–	–	–	0.131	–	–	–	–	0.131
National Laboratory of the Rockies	–	–	–	–	–	0.084	–	–	–	–	0.084
Nevada National Security Site	–	–	–	9.041	–	–	–	–	–	–	9.041
Oak Ridge: East Tennessee Technology Park	–	0.117	–	–	–	–	–	–	–	–	0.117
Oak Ridge: Oak Ridge Institute for Science and Education	–	–	–	–	–	0.047	–	–	–	–	0.047
Oak Ridge: Oak Ridge National Laboratory	–	–	–	–	–	73.748	–	4.214	–	–	77.962
Oak Ridge: Y-12 National Security Complex	–	–	–	–	–	–	–	–	47.280	–	47.28
Office of Secure Transportation	–	–	–	–	–	–	–	–	0.261	0.175	0.436
Paducah Gaseous Diffusion Plant	–	–	–	0.022	–	0.084	–	3.820	–	–	3.926
Pantex Plant	–	–	–	–	–	–	–	–	26.025	–	26.025
Portsmouth Gaseous Diffusion Plant	–	**7.779**	–	–	–	–	–	–	–	–	7.779
Princeton Plasma Physics Laboratory	–	–	–	–	–	–	**0.127**	–	–	–	0.127
Sandia National Laboratories	0.847	–	–	0.588	2.457	0.908	0.032	0.347	0.125	0.599	5.903
Savannah River National Laboratory	–	–	–	0.032	–	10.666	–	0.200	–	–	10.898
Savannah River Site	–	–	**6.019**	6.179	–	2.010	–	**154.021**	1.697	2.605	172.531
Separations Process Research Unit	–	–	–	–	–	–	–	0.033	–	–	0.033
SLAC National Accelerator Laboratory	0.173	–	–	–	–	–	–	–	–	–	0.173
Thomas Jefferson National Accelerator Facility	0.587	–	–	–	–	–	–	–	–	–	0.587
Uranium Mill Tailings Remedial Action Project	–	–	–	–	–	–	–	5.207	–	–	5.207
Waste Isolation Pilot Plant	–	–	–	–	–	–	–	0.370	–	–	0.37
West Valley Cleanup Alliance	–	–	–	–	–	–	–	3.082	–	–	3.082
Service Center Personnel*	–	–	–	–	–	–	–	–	–	**13.511**	13.511
Totals	**10.015**	**7.896**	**6.019**	**29.420**	**2.457**	**315.099**	**0.159**	**191.715**	**351.005**	**28.471**	**942.256**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data for this facility type.
* Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP.

Exhibit B-8: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Accelerator Facilities, CY 2025.

ACCELERATORS
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Sandia National Laboratories	411	15	2	–	–	–	–	–	–	–	–	428	4%	17	0.847	**0.050**
Los Alamos National Laboratory	628	88	11	1	–	–	–	–	–	–	–	728	**14%**	**100**	**4.509**	0.045
Fermi National Accelerator Lab	1,080	61	4	–	–	–	–	–	–	–	–	1,145	6%	65	2.260	0.035
Brookhaven National Laboratory	1,776	52	3	–	–	–	–	–	–	–	–	1,831	3%	55	1.360	0.025
Argonne National Laboratory	3,091	14	–	–	–	–	–	–	–	–	–	**3,105**	0%	14	0.279	0.020
SLAC National Accelerator Laboratory	2,297	10	–	–	–	–	–	–	–	–	–	2,307	0%	10	0.173	0.017
Thomas Jefferson Natl. Accel. Facil.	1,506	41	–	–	–	–	–	–	–	–	–	1,547	3%	41	0.587	0.014
LANL N3B	2	–	–	–	–	–	–	–	–	–	–	2	0%	0	0.000	0.000
Thomas Jefferson Site Office-DOE Employees	9	–	–	–	–	–	–	–	–	–	–	9	0%	0	0.000	0.000
Totals	**10,800**	**281**	**20**	**1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**11,102**	**3%**	**302**	**10.015**	**0.033**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-9: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Fuel Facilities, CY 2025.

FUEL FACILITIES
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
ENRICHMENT																
Mission Conversion Services Alliance	493	66	23	1	–	–	–	–	–	–	–	583	**15%**	90	5.93	**0.066**
Northwind Dynamics	81	3	–	–	–	–	–	–	–	–	–	84	4%	3	0.064	0.021
Southern Ohio Cleanup Company	1,553	96	–	–	–	–	–	–	–	–	–	**1,649**	6%	**96**	**1.785**	0.019
URS/CH2MHill - Oak Ridge (UCOR): ETTP	214	11	–	–	–	–	–	–	–	–	–	225	5%	11	0.117	0.011
Totals	**2,341**	**176**	**23**	**1**	–	–	–	–	–	–	–	**2,541**	**8%**	**200**	**7.896**	**0.039**
PROCESSING																
Savannah River Nuclear Solutions	249	199	6	–	–	–	–	–	–	–	–	**454**	45%	**205**	**5.314**	**0.026**
SRNS Construction	38	34	–	–	–	–	–	–	–	–	–	72	**47%**	34	0.432	0.013
Savannah River Field Office	8	2	–	–	–	–	–	–	–	–	–	10	20%	2	0.023	0.012
SRNS Construction Subs	12	5	–	–	–	–	–	–	–	–	–	17	29%	5	0.053	0.011
Centerra Services Inc. - SR	69	20	–	–	–	–	–	–	–	–	–	89	22%	20	0.197	0.010
BSRA - SR National Laboratory	1	–	–	–	–	–	–	–	–	–	–	1	0%	0	0	0
Misc. DOE Contractors - SR	7	–	–	–	–	–	–	–	–	–	–	7	0%	0	0	0
SR Mission Completion Operations - Other	1	–	–	–	–	–	–	–	–	–	–	1	0%	0	0	0
SRNS Service Subs	6	–	–	–	–	–	–	–	–	–	–	6	0%	0	0	0
Totals	**391**	**260**	**6**	–	–	–	–	–	–	–	–	**657**	**40%**	**266**	**6.019**	**0.023**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-10: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Maintenance and Support, CY 2025.

MAINTENANCE AND SUPPORT
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
SR Mission Completion Operations - Other	–	2	5	2	–	–	–	–	–	–	–	9	**100%**	9	1.557	**0.173**
Argonne National Laboratory	189	3	–	1	–	–	–	–	–	–	–	193	2%	4	0.617	0.154
SRR Operations	3	13	13	2	1	–	–	–	–	–	–	32	91%	29	4.144	0.143
MSTS - NTS	1,105	113	23	6	–	–	–	–	–	–	–	**1,247**	11%	142	**9.041**	0.064
Central Plateau Cleanup Company	864	119	25	1	–	–	–	–	–	–	–	1,009	14%	**145**	6.534	0.045
Sandia National Laboratories	328	15	–	1	–	–	–	–	–	–	–	344	5%	16	0.588	0.037
Los Alamos National Laboratory	385	102	3	1	–	–	–	–	–	–	–	491	22%	106	3.384	0.032
Hanford Mission Integration Solutions (HMIS)	1,112	84	7	–	–	–	–	–	–	–	–	1,203	8%	91	2.705	0.030
Brookhaven National Laboratory	930	12	–	–	–	–	–	–	–	–	–	942	1%	12	0.318	0.027
Infrastructure Support Services (ISS)	164	1	–	–	–	–	–	–	–	–	–	165	1%	1	0.022	0.022
SRNS Service Subs	1	3	–	–	–	–	–	–	–	–	–	4	75%	3	0.061	0.020
SRNL	–	2	–	–	–	–	–	–	–	–	–	2	**100%**	2	0.026	0.013
Univ. of Georgia Ecology Laboratory	7	10	–	–	–	–	–	–	–	–	–	17	59%	10	0.122	0.012
Savannah River Nuclear Solutions	54	25	–	–	–	–	–	–	–	–	–	79	32%	25	0.239	0.010
SRNS Construction	13	8	–	–	–	–	–	–	–	–	–	21	38%	8	0.056	0.007
BSRA - SR National Laboratory	–	1	–	–	–	–	–	–	–	–	–	1	**100%**	1	0.006	0.006
Argonne-Radiological Assistance Program	1	–	–	–	–	–	–	–	–	–	–	1	0%	0	0.000	0.000
DOE-Richland Field Office	2	–	–	–	–	–	–	–	–	–	–	2	0%	0	0.000	0.000
NETL Pittsburgh	17	–	–	–	–	–	–	–	–	–	–	17	0%	0	0.000	0.000
Operations and Site Mission Support Subs	196	–	–	–	–	–	–	–	–	–	–	196	0%	0	0.000	0.000
Savannah River Field Office	1	–	–	–	–	–	–	–	–	–	–	1	0%	0	0.000	0.000
Totals	**5,372**	**513**	**76**	**14**	**1**	–	–	–	–	–	–	**5,976**	**10%**	**604**	**29.420**	**0.049**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-11: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Reactor Facilities, CY 2025.

REACTOR FACILITIES
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Sandia National Laboratories	126	20	6	2	–	–	–	–	–	–	–	**154**	**18%**	**28**	**2.457**	**0.088**
Brookhaven National Laboratory	4	–	–	–	–	–	–	–	–	–	–	4	0%	0	0.000	0.000
Totals	**130**	**20**	**6**	**2**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**158**	**18%**	**28**	**2.457**	**0.088**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-12: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Research, General, CY 2025.

RESEARCH, GENERAL
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Lawrence Livermore National Laboratories	74	1	1	–	–	–	–	–	–	–	–	76	3%	2	0.270	**0.135**
UT-Batelle ORNL	4,263	373	84	54	22	6	6	–	–	–	–	4,808	11%	545	**67.149**	0.123
Argonne National Laboratory	1,332	38	2	2	1	–	2	–	–	–	–	1,377	3%	45	4.882	0.108
INL - BEA LLC - Security	40	8	–	–	1	–	–	–	–	–	–	49	18%	9	0.894	0.099
ICP - Fluor Service Subcontractors (ICP/AMWTP)	887	440	89	63	9	–	–	–	–	–	–	1,488	40%	601	55.986	0.093
NETL Pittsburgh	24	1	–	–	–	–	–	–	–	–	–	25	4%	1	0.086	0.086
ICP - Fluor Projects (ICP and AMWTP)	230	98	28	8	1	–	–	–	–	–	–	365	37%	135	11.212	0.083
INL - BEA LLC - Research	180	36	4	2	–	1	–	–	–	–	–	223	19%	43	3.191	0.074
INL - BEA LLC - Services	3,204	677	76	44	13	6	–	–	–	–	–	4,020	20%	816	57.660	0.071
Lawrence Livermore National Laboratory	4,012	211	44	12	–	–	–	–	–	–	–	4,279	6%	267	18.332	0.069
INL - BEA LLC - Production	246	33	2	2	1	–	–	–	–	–	–	284	13%	38	2.253	0.059
NNSA Los Alamos Site Office	8	1	–	–	–	–	–	–	–	–	–	9	11%	1	0.059	0.059
Battelle - PNNL	2,374	222	27	5	2	–	–	–	–	–	–	2,630	10%	256	12.880	0.050
Los Alamos National Laboratory	5,011	1,035	102	41	1	1	–	–	–	–	–	**6,191**	19%	**1,180**	57.379	0.049
Sandia National Laboratories	370	20	2	–	–	–	–	–	–	–	–	392	6%	22	0.908	0.041
ICP - Fluor - Support	16	10	1	–	–	–	–	–	–	–	–	27	41%	11	0.445	0.040
Lawrence Berkeley Laboratory	652	15	2	–	–	–	–	–	–	–	–	669	3%	17	0.669	0.039
National Laboratory of the Rockies	3	3	–	–	–	–	–	–	–	–	–	6	50%	3	0.084	0.028
BSRA - SR National Laboratory	242	377	17	1	–	–	–	–	–	–	–	637	62%	395	10.501	0.027
Idaho Field Office	152	4	–	–	–	–	–	–	–	–	–	156	3%	4	0.099	0.025
Oak Ridge Institute for Science & Education	82	2	–	–	–	–	–	–	–	–	–	84	2%	2	0.047	0.024
Savannah River Field Office	3	4	–	–	–	–	–	–	–	–	–	7	57%	4	0.090	0.023
UCOR: ORNL	714	296	9	–	–	–	–	–	–	–	–	1,019	30%	305	6.599	0.022
Ames National Laboratory (Iowa State)	129	35	–	–	–	–	–	–	–	–	–	164	21%	35	0.744	0.021
Four Rivers Nuclear Partnership (FRNP)	874	4	–	–	–	–	–	–	–	–	–	878	0%	4	0.084	0.021
SRNS Construction	49	21	1	–	–	–	–	–	–	–	–	71	31%	22	0.389	0.018

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-12: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Research, General, CY 2025. (continued)

RESEARCH, GENERAL
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
LANL N3B	138	12	–	–	–	–	–	–	–	–	–	150	8%	12	0.202	0.017
SRNL	9	10	–	–	–	–	–	–	–	–	–	19	53%	10	0.165	0.017
SRNS Construction Subs	11	10	–	–	–	–	–	–	–	–	–	21	48%	10	0.160	0.016
Battelle -PNNL- Subs	250	18	–	–	–	–	–	–	–	–	–	268	7%	18	0.264	0.015
NETL Morgantown	54	3	–	–	–	–	–	–	–	–	–	57	5%	3	0.045	0.015
Savannah River Nuclear Solutions	38	56	–	–	–	–	–	–	–	–	–	94	60%	56	0.770	0.014
SRNS Service Subs	8	25	–	–	–	–	–	–	–	–	–	33	76%	25	0.343	0.014
Centerra Services Inc. - SR	47	21	–	–	–	–	–	–	–	–	–	68	31%	21	0.233	0.011
SR Mission Completion Operations - Other	–	1	–	–	–	–	–	–	–	–	–	1	**100%**	1	0.010	0.010
SRS Tritium Facilities	–	1	–	–	–	–	–	–	–	–	–	1	**100%**	1	0.008	0.008
SRR Operations	1	1	–	–	–	–	–	–	–	–	–	2	50%	1	0.007	0.007
Argonne-Radiological Assistance Program	46	–	–	–	–	–	–	–	–	–	–	46	0%	0	0.000	0.000
Brookhaven National Laboratory	1	–	–	–	–	–	–	–	–	–	–	1	0%	0	0.000	0.000
DOE Headquarters	1	–	–	–	–	–	–	–	–	–	–	1	0%	0	0.000	0.000
Misc. DOE Contractors - SR	2	–	–	–	–	–	–	–	–	–	–	2	0%	0	0.000	0.000
NETL Albany	18	–	–	–	–	–	–	–	–	–	–	18	0%	0	0.000	0.000
Pacific Northwest Site Office	31	–	–	–	–	–	–	–	–	–	–	31	0%	0	0.000	0.000
Totals	**25,826**	**4,123**	**491**	**234**	**51**	**14**	**8**	**–**	**–**	**–**	**–**	**30,747**	**16%**	**4,921**	**315.099**	**0.064**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-13: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Research, Fusion, CY 2025.

RESEARCH, FUSION
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person–rem)	Avg. Meas. TED (rem)
Sandia National Laboratories	60	1	–	–	–	–	–	–	–	–	–	61	2%	1	**0.032**	**0.032**
Princeton Plasma Physics Laboratory	256	29	–	–	–	–	–	–	–	–	–	**285**	**10%**	**29**	0.127	0.004
Totals	**316**	**30**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**346**	**9%**	**30**	**0.159**	**0.005**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-14: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Waste Processing, CY 2025.

WASTE PROCESSING
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Argonne National Laboratory	45	6	5	1	1	–	1	–	–	–	–	59	24%	14	3.267	**0.233**
SR Mission Completion Operations - Other	345	591	84	32	10	8	7	–	–	–	–	1,077	68%	732	55.027	0.075
Sandia National Laboratories	23	4	1	–	–	–	–	–	–	–	–	28	18%	5	0.347	0.069
Operations and Site Mission Support Subs	200	57	8	–	–	–	–	–	–	–	–	265	25%	65	3.820	0.059
Northwind Portage - UMTRA Project - Moab	12	75	22	–	–	–	–	–	–	–	–	109	89%	97	5.207	0.054
SRR Operations	640	1,319	141	50	3	4	–	–	–	–	–	**2,157**	70%	**1,517**	**75.727**	0.050
Savannah River Nuclear Solutions	454	345	32	15	5	–	–	–	–	–	–	851	47%	397	18.872	0.048
Hanford Laboratory Management Integration	275	80	10	–	–	–	–	–	–	–	–	365	25%	90	4.257	0.047
Los Alamos National Laboratory	248	142	14	2	1	–	–	–	–	–	–	407	39%	159	7.483	0.047
Hanford Tank Waste Operations and Closure	1,947	175	5	–	–	–	–	–	–	–	–	2,127	8%	180	5.403	0.030
West Valley Cleanup Alliance	331	101	3	–	–	–	–	–	–	–	–	435	24%	104	3.082	0.030
Tru Waste Processing Center - ORNL	94	140	8	–	–	–	–	–	–	–	–	242	61%	148	4.214	0.028
SRR Service Subs	12	15	2	–	–	–	–	–	–	–	–	29	59%	17	0.424	0.025
SRNS Construction	199	106	–	–	–	–	–	–	–	–	–	305	35%	106	1.678	0.016
BSRA - SR National Laboratory	5	13	–	–	–	–	–	–	–	–	–	18	72%	13	0.200	0.015
Washington TRU Solutions LLC-WIPP	810	25	–	–	–	–	–	–	–	–	–	835	3%	25	0.370	0.015
BSRA - Service Subs		1	–	–	–	–	–	–	–	–	–	1	**100%**	1	0.014	0.014
Centerra Services Inc. - SR	171	90	–	–	–	–	–	–	–	–	–	261	34%	90	1.079	0.012
SRNS Service Subs	96	47	–	–	–	–	–	–	–	–	–	143	33%	47	0.578	0.012
Brookhaven National Laboratory	20	1	–	–	–	–	–	–	–	–	–	21	5%	1	0.011	0.011
Misc. DOE Contractors - SR	26	25	–	–	–	–	–	–	–	–	–	51	49%	25	0.268	0.011
SPRU-NY (Building remediation)	12	3	–	–	–	–	–	–	–	–	–	15	20%	3	0.033	0.011
Savannah River Field Office	25	23	–	–	–	–	–	–	–	–	–	48	48%	23	0.241	0.010
Misc. S.R.S. Const. Subcontractors	2	2	–	–	–	–	–	–	–	–	–	4	50%	2	0.018	0.009

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-14: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Waste Processing, CY 2025. (continued)

WASTE PROCESSING
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
SRNS Construction Subs	18	7	–	–	–	–	–	–	–	–	–	25	28%	7	0.061	0.009
SRS Tritium Facilities	6	6	–	–	–	–	–	–	–	–	–	12	50%	6	0.034	0.006
Bechtel Construction - SR	1	–	–	–	–	–	–	–	–	–	–	1	0%	0	0.000	0.000
Bechtel National Corporation	2	–	–	–	–	–	–	–	–	–	–	2	0%	0	0.000	0.000
Carlsbad Field Office	8	–	–	–	–	–	–	–	–	–	–	8	0%	0	0.000	0.000
Central Plateau Cleanup Company	3	–	–	–	–	–	–	–	–	–	–	3	0%	0	0.000	0.000
LANL N3B	4	–	–	–	–	–	–	–	–	–	–	4	0%	0	0.000	0.000
Parsons	1	–	–	–	–	–	–	–	–	–	–	1	0%	0	0.000	0.000
Washington River Protection Solutions	275	–	–	–	–	–	–	–	–	–	–	275	0%	0	0.000	0.000
Totals	**6,310**	**3,399**	**335**	**100**	**20**	**12**	**8**	**–**	**–**	**–**	**–**	**10,184**	**38%**	**3,874**	**191.715**	**0.049**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-15: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Weapons Fabrication, CY 2025.

WEAPONS FABRICATION
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Los Alamos National Laboratory	1,648	828	373	254	86	22	17	–	1	–	–	3,229	49%	**1,581**	**274.719**	**0.174**
Office Of Secure Transportation	150	1	1	–	–	–	–	–	–	–	–	152	1%	2	0.261	0.131
CNS, LLC - Pantex	4,202	347	60	16	1	–	–	–	–	–	–	4,626	9%	424	26.025	0.061
CNS, LLC - Y-12	6,380	1,366	77	5	–	–	–	–	–	–	–	**7,828**	18%	1,448	47.110	0.033
Sandia National Laboratories	141	5	–	–	–	–	–	–	–	–	–	146	3%	5	0.125	0.025
Savannah River Nuclear Solutions	397	65	4	–	–	–	–	–	–	–	–	466	15%	69	1.439	0.021
Kansas City National Security Campus	168	58	2	1	–	–	–	–	–	–	–	229	27%	61	0.898	0.015
SRNS Construction	163	19	–	–	–	–	–	–	–	–	–	182	10%	19	0.222	0.012
SRS Tritium Facilities	4	3	–	–	–	–	–	–	–	–	–	7	43%	3	0.031	0.010
URS/CH2MHill - Oak Ridge (UCOR): Y-12	191	17	–	–	–	–	–	–	–	–	–	208	8%	17	0.170	0.010
SRNS Construction Subs	1	1	–	–	–	–	–	–	–	–	–	2	**50%**	1	0.005	0.005
BSRA - SR National Laboratory	13	–	–	–	–	–	–	–	–	–	–	13	0%	0	0.000	0.000
LANL N3B	19	–	–	–	–	–	–	–	–	–	–	19	0%	0	0.000	0.000
SRNS Service Subs	2	–	–	–	–	–	–	–	–	–	–	2	0%	0	0.000	0.000
SRR Operations	2	–	–	–	–	–	–	–	–	–	–	2	0%	0	0.000	0.000
Totals	**13,481**	**2,710**	**517**	**276**	**87**	**22**	**17**	**–**	**1**	**–**	**–**	**17,111**	**21%**	**3,630**	**351.005**	**0.097**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-16: Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Other, CY 2025.

OTHER
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Isotek (Bldg. 3019)	93	45	11	14	8	–	–	–	–	–	–	171	46%	78	**13.511**	**0.173**
Office Of Secure Transportation	142	2	1	–	–	–	–	–	–	–	–	145	2%	3	0.175	0.058
SRNS Service Subs	47	14	3	–	–	–	–	–	–	–	–	64	27%	17	0.746	0.044
Hanford Tank Waste Operations and Closure	279	15	–	–	–	–	–	–	–	–	–	294	5%	15	0.599	0.040
Los Alamos National Laboratory	2,698	219	8	4	–	–	–	–	–	–	–	**2,929**	8%	**231**	7.757	0.034
Central Plateau Cleanup Company	278	22	2	–	–	–	–	–	–	–	–	302	8%	24	0.720	0.030
Sandia National Laboratories	324	19	1	–	–	–	–	–	–	–	–	344	6%	20	0.599	0.030
SRNS Construction Subs	4	1	–	–	–	–	–	–	–	–	–	5	20%	1	0.030	0.030
DOE-Richland Field Office	412	28	2	–	–	–	–	–	–	–	–	442	7%	30	0.871	0.029
LANL N3B	316	53	2	–	–	–	–	–	–	–	–	371	15%	55	1.281	0.023
Savannah River Nuclear Solutions	375	76	2	–	–	–	–	–	–	–	–	453	17%	78	1.285	0.016
SRNS Construction	85	25	–	–	–	–	–	–	–	–	–	110	23%	25	0.397	0.016
Hanford Laboratory Management Integration	124	3	–	–	–	–	–	–	–	–	–	127	2%	3	0.044	0.015
Bechtel National Corporation	1,552	22	–	–	–	–	–	–	–	–	–	1,574	1%	22	0.302	0.014
Centerra Services Inc. - SR	11	9	–	–	–	–	–	–	–	–	–	20	45%	9	0.127	0.014
Misc. DOE Contractors - SR	–	2	–	–	–	–	–	–	–	–	–	2	**100%**	2	0.010	0.005
Savannah River Field Office	6	1	–	–	–	–	–	–	–	–	–	7	14%	1	0.005	0.005
SR Mission Completion Operations - Other	2	1	–	–	–	–	–	–	–	–	–	3	33%	1	0.005	0.005
Hanford Mission Integration Solutions (HMIS)	104	1	–	–	–	–	–	–	–	–	–	105	1%	1	0.001	0.001
RSI Entech, LLC	19	6	–	–	–	–	–	–	–	–	–	25	24%	6	0.006	0.001
BSRA - SR National Laboratory	7	–	–	–	–	–	–	–	–	–	–	7	0%	0	0.000	0.000
Inomedic Health Applications	8	–	–	–	–	–	–	–	–	–	–	8	0%	0	0.000	0.000
NNSA Los Alamos Site Office	8	–	–	–	–	–	–	–	–	–	–	8	0%	0	0.000	0.000
SRR Operations	8	–	–	–	–	–	–	–	–	–	–	8	0%	0	0.000	0.000
SRR Service Subs	2	–	–	–	–	–	–	–	–	–	–	2	0%	0	0.000	0.000
Univ. of Georgia Ecology Laboratory	5	–	–	–	–	–	–	–	–	–	–	5	0%	0	0.000	0.000
Washington River Protection Solutions	70	–	–	–	–	–	–	–	–	–	–	70	0%	0	0.000	0.000
Totals	**6,979**	**564**	**32**	**18**	**8**	**–**	**–**	**–**	**–**	**–**	**–**	**7,601**	**8%**	**622**	**28.471**	**0.046**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-17: Internal Dose by Facility Type and Nuclide, CY 2023–2025.

Facility	Nuclide*	No. of Individuals with Measurable CED** 2023	No. of Individuals with Measurable CED** 2024	No. of Individuals with Measurable CED** 2025	Collective CED Dose (person–rem) 2023	Collective CED Dose (person–rem) 2024	Collective CED Dose (person–rem) 2025	Average Measurable CED (rem) 2023	Average Measurable CED (rem) 2024	Average Measurable CED (rem) 2025
Accelerator	Other	–	1	1	–	0.002	0.007	–	0.002	0.007
	Total	–	1	1	–	0.002	0.007	–	0.002	0.007
Fuel Fabrication	Total	–	–	–	–	–	–	–	–	–
Fuel Processing	Total	–	–	–	–	–	–	–	–	–
Fuel/Uranium Enrichment	Total	–	–	–	–	–	–	–	–	–
Maintenance and Support	Hydrogen-3	–	1	–	–	0.003	–	–	0.003	–
	Other	–	1	4	–	0.009	0.040	–	0.009	0.010
	Plutonium	5	1		0.008	0.003	–	0.002	0.003	–
	Total	5	3	4	0.008	0.015	0.040	0.002	0.005	0.010
Other	Hydrogen-3	–	–	2	–	–	0.002	–	–	0.001
	Other	2	2	2	0.024	0.011	0.005	0.012	0.006	0.003
	Plutonium	–	1	–	–	0.034	–	–	0.034	–
	Total	2	3	4	0.024	0.045	0.007	0.012	0.015	0.002
Reactor	Other	–	2	1	–	0.003	0.001	–	0.002	0.001
	Total	–	2	1	–	0.003	0.001	–	0.002	0.001
Research, Fusion	Other	–	1	–	–	0.008	–	–	0.008	–
	Total	–	1	–	–	0.008	–	–	0.008	–
Research, General	Americium	–	1	2	–	0.069	0.042	–	0.069	0.021
	Hydrogen-3	3	1	3	0.013	0.001	0.054	0.004	0.001	0.018
	Mixed	1	–	–	0.059	–	–	0.059	–	–
	Other	–	–	2	–	–	0.011	–	–	0.006
	Plutonium	2	1	2	0.078	0.039	0.057	0.039	0.039	0.029
	Thorium	–	1	–	–	0.101	–	–	0.101	–
	Uranium	16	25	11	0.232	0.301	0.054	0.015	0.012	0.005
	Uranium	–	–	1	–	–	0.041	–	–	0.041
	Total	22	29	21	0.382	0.511	0.259	0.017	0.018	0.012
Waste Processing/Management	Other	–	2	1	–	0.159	0.004	–	0.080	0.004
	Uranium	58	38	45	2.346	0.660	0.567	0.040	0.017	0.013
	Total	58	40	46	2.346	0.819	0.571	0.040	0.020	0.012

Note: Dashes indicate no data reported for this facility type and nuclide. Dashes indicate no data reported for the year shown.

* Intakes grouped by nuclide. Intakes involving multiple nuclides were grouped into "mixed." Nuclides where fewer than 10 individuals had intakes were grouped as "other."

** The number of internal depositions represents the number of internal dose records with positive results reported for each individual.

Exhibit B-17: Internal Dose by Facility Type and Nuclide, CY 2023–2025. (continued)

Facility	Nuclide*	No. of Individuals with Measurable CED** 2023	No. of Individuals with Measurable CED** 2024	No. of Individuals with Measurable CED** 2025	Collective CED Dose (person–rem) 2023	Collective CED Dose (person–rem) 2024	Collective CED Dose (person–rem) 2025	Average Measurable CED (rem) 2023	Average Measurable CED (rem) 2024	Average Measurable CED (rem) 2025
Weapons Fabrication and Testing	Carbon	–	1	–	–	0.035	–	–	0.035	–
	Hydrogen-3	20	25	24	0.046	0.052	0.044	0.002	0.002	0.002
	Mixed	3	3	3	0.035	0.030	0.084	0.012	0.010	0.028
	Plutonium	–	1	4	–	0.003	4.678	–	0.003	1.170
	Thorium	–	–	2	–	–	0.043	–	–	0.022
	Uranium	1,223	1,311	1,152	38.722	41.823	37.280	0.032	0.032	0.032
	Total	1,246	1,341	1,185	38.803	41.943	42.129	0.031	0.031	0.036
	Totals	**1,333**	**1,420**	**1,262**	**41.563**	**43.346**	**43.014**	**0.031**	**0.031**	**0.034**

Note: Dashes indicate no data reported for this facility type and nuclide. Dashes indicate no data reported for the year shown.

* Intakes grouped by nuclide. Intakes involving multiple nuclides were grouped into "mixed." Nuclides where fewer than 10 individuals had intakes were grouped as "other."

** The number of internal depositions represents the number of internal dose records with positive results reported for each individual.

Exhibit B-18a: Distribution of TED by Labor Category, CY 2023.

TOTAL EFFECTIVE DOSE (TED)
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Agriculture	26	5	–	–	–	–	–	–	–	–	–	31	16%	5	0.083	0.017
Construction	3,357	2,106	232	57	11	1	–	–	–	–	–	5,764	42%	2,407	119.494	0.050
Laborers	1,043	369	63	6	–	1	–	–	–	–	–	1,482	30%	439	22.738	0.052
Management	6,110	1,746	104	31	9	2	2	–	–	–	–	8,004	24%	1,894	73.147	0.039
Miscellaneous	6,865	844	50	16	2	1	–	–	–	–	–	7,778	12%	913	34.417	0.038
Production	2,559	1,837	258	80	15	–	–	–	–	–	–	4,749	**46%**	2,190	131.660	0.060
Scientists	19,520	4,597	318	79	13	4	2	–	–	–	–	**24,533**	20%	**5,013**	193.628	0.039
Service	5,093	1,406	115	52	1	–	–	–	–	–	–	6,667	24%	1,574	70.171	0.045
Technicians	6,601	2,296	444	185	64	19	2	–	–	–	–	9,611	31%	3,010	**262.088**	**0.087**
Transport	848	85	14	13	–	–	–	–	–	–	–	960	12%	112	8.576	0.077
Unknown	11,923	855	57	7	1	–	–	–	–	–	–	12,843	7%	920	34.038	0.037
Totals	**63,945**	**16,146**	**1,655**	**526**	**116**	**28**	**6**	**–**	**–**	**–**	**–**	**82,422**	**22%**	**18,477**	**950.040**	**0.051**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-18b: Distribution of TED by Labor Category, CY 2024.

TOTAL EFFECTIVE DOSE (TED)
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Agriculture	23	4	–	–	–	–	–	–	–	–	–	27	15%	4	0.058	0.014
Construction	3,787	1,786	190	39	17	1	–	–	–	–	–	5,820	35%	2,033	94.995	0.047
Laborers	1,046	328	30	2	–	1	–	–	–	–	–	1,407	26%	361	14.638	0.041
Management	6,386	1,304	83	20	9	5	3	–	–	–	–	7,810	18%	1,424	60.418	0.042
Miscellaneous	7,529	640	43	5	1	–	–	–	–	–	–	8,218	8%	689	22.757	0.033
Production	2,750	1,691	223	115	14	–	–	–	–	–	–	4,793	**43%**	2,043	133.362	0.065
Scientists	21,220	3,805	308	86	8	3	2	–	–	–	–	**25,432**	17%	**4,212**	170.537	0.040
Service	5,055	1,394	123	71	1	1	–	–	–	–	–	6,645	24%	1,590	76.887	0.048
Technicians	6,930	2,114	466	263	77	26	7	–	–	–	–	9,883	30%	2,953	**308.260**	**0.104**
Transport	773	85	19	7	–	–	–	–	–	–	–	884	13%	111	7.819	0.070
Unknown	13,143	819	87	8	–	–	–	–	–	–	–	14,057	7%	914	37.277	0.041
Totals	**68,642**	**13,970**	**1,572**	**616**	**127**	**37**	**12**	**–**	**–**	**–**	**–**	**84,976**	**19%**	**16,334**	**927.008**	**0.057**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-18c: Distribution of TED by Labor Category, CY 2025.

TOTAL EFFECTIVE DOSE (TED)
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site/Contractor	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Agriculture	31	3	–	–	–	–	–	–	–	–	–	34	9%	3	0.031	0.010
Construction	3,765	1,276	187	70	18	9	4	–	–	–	–	5,329	29%	1,564	107.279	0.069
Laborers	990	188	32	3	1	1		–	–	–	–	1,215	19%	225	12.255	0.054
Management	5,450	1,136	87	30	6	5	1	–	–	–	–	6,715	19%	1,265	53.911	0.043
Miscellaneous	8,885	699	49	8	1	–	–	–	–	–	–	9,642	8%	757	25.821	0.034
Production	2,488	1,146	180	88	27	1	–	–	–	–	–	3,930	**37%**	1,442	106.274	0.074
Scientists	20,050	2,770	260	68	15	4	4	–	–	–	–	**23,171**	13%	**3,121**	142.018	0.046
Service	5,031	1,108	110	73	14	5	–	–	–	–	–	6,341	21%	1,310	83.140	0.063
Technicians	6,732	1,555	445	286	83	23	24	–	1	–	–	9,149	26%	2,417	**326.267**	**0.135**
Transport	792	54	19	1	–	–	–	–	–	–	–	866	9%	74	4.635	0.063
Unknown	17,732	2,141	137	19	2	–	–	–	–	–	–	20,031	11%	2,299	80.625	0.035
Totals	**71,946**	**12,076**	**1,506**	**646**	**167**	**48**	**33**	**–**	**1**	**–**	**–**	**86,423**	**17%**	**14,477**	**942.256**	**0.065**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-19: Internal Dose by Labor Category, CY 2023–2025.

Labor Category	No. of Individuals with Measurable CED* 2023	No. of Individuals with Measurable CED* 2024	No. of Individuals with Measurable CED* 2025	Collective CED Dose (person–rem) 2023	Collective CED Dose (person–rem) 2024	Collective CED Dose (person–rem) 2025	Average Measurable CED (rem) 2023	Average Measurable CED (rem) 2024	Average Measurable CED (rem) 2025
Construction	236	252	11	7.576	8.458	0.076	0.032	**0.034**	0.007
Laborers	78	78	19	3.125	2.627	0.263	0.040	**0.034**	0.014
Management	114	127	4	3.600	3.532	0.011	0.032	0.028	0.003
Miscellaneous	7	5	5	0.197	0.063	0.063	0.028	0.013	0.013
Production	**390**	**432**	5	**11.145**	**12.841**	0.009	0.029	0.030	0.002
Scientists	219	235	15	6.782	7.694	0.068	0.031	0.033	0.005
Service	21	27	1	0.494	0.716	0.028	0.024	0.027	0.028
Technicians	127	163	25	4.096	4.337	4.808	0.032	0.027	**0.192**
Transport	21	13	14	1.452	0.313	0.235	**0.069**	0.024	0.017
Unknown	120	88	**1,163**	3.096	2.765	**37.453**	0.026	0.031	0.032
Totals	**1,333**	**1,420**	**1,262**	**41.563**	**43.346**	**43.014**	**0.031**	**0.031**	**0.034**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

* The number of internal depositions represents the number of internal dose records with positive results reported for each individual.

Exhibit B-20: Dose Distribution by Labor Category and Occupation, CY 2025.

Labor Category	Occupation	Less than Meas.	Meas. To 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (person–rem)	Avg. Meas. TED (rem)
Agriculture	Groundskeepers	30	3	–	–	–	–	–	–	–	–	–	33	9%	3	0.031	0.010
	Misc. Agriculture	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
Construction	Carpenters	403	177	44	13	3	1	–	–	–	–	–	641	37%	238	20.399	0.086
	Electricians	1,236	254	45	29	4	1	–	–	–	–	–	1,569	21%	333	26.100	0.078
	Masons	48	14	–	–	–	–	–	–	–	–	–	62	23%	14	0.236	0.017
	Mechanics/Repairers	633	261	23	16	11	4	4	–	–	–	–	952	34%	319	28.893	0.091
	Miners/Drillers	25	3	–	–	–	–	–	–	–	–	–	28	11%	3	0.138	0.046
	Misc. Repair/Construction	689	344	28	6	–	3	–	–	–	–	–	1,070	36%	381	16.377	0.043
	Painters	158	46	5	–	–	–	–	–	–	–	–	209	24%	51	1.629	0.032
	Pipe Fitter	573	177	42	6	–	–	–	–	–	–	–	798	28%	225	13.507	0.060
Laborers	Handlers/Laborers/Helpers	990	188	32	3	1	1	–	–	–	–	–	1,215	19%	225	12.255	0.054
Management	Admin. Support & Clerical Sec.	520	58	1	–	–	–	–	–	–	–	–	579	10%	59	1.193	0.020
	Manager - Administrator	4,917	1,078	86	30	6	5	1	–	–	–	–	6,123	20%	1,206	52.718	0.044
	Sales	13	–	–	–	–	–	–	–	–	–	–	13	–	–	–	–
Miscellaneous	Military	64	–	–	–	–	–	–	–	–	–	–	64	–	–	–	–
	Miscellaneous	8,821	699	49	8	1	–	–	–	–	–	–	9,578	8%	757	25.821	0.034
Production	Machine Setup/Operators	339	172	29	10	–	–	–	–	–	–	–	550	38%	211	13.271	0.063
	Machinists	150	21	9	14	3	–	–	–	–	–	–	197	24%	47	8.061	0.172
	Misc. Precision/Production	417	94	22	10	1	–	–	–	–	–	–	544	23%	127	10.223	0.080
	Operators, Plant/ System/Util.	1,218	725	96	45	22	1	–	–	–	–	–	2,107	42%	889	64.282	0.072
	Sheet Metal Workers	327	131	24	9	1	–	–	–	–	–	–	492	34%	165	10.359	0.063
	Welders and Solderers	37	3	–	–	–	–	–	–	–	–	–	40	8%	3	0.078	0.026
Scientists	Doctors and Nurses	31	1	–	–	–		–	–	–	–	–	32	3%	1	0.010	0.010
	Engineer	5,871	743	79	23	9	2	2	–	–	–	–	6,729	13%	858	46.781	0.055
	Health Physicist	345	62	3	–	–	–	–	–	–	–	–	410	16%	65	1.696	0.026
	Misc. Professional	9,954	1,647	146	31	4	2	1	–	–	–	–	11,785	16%	1,831	74.132	0.040
	Scientist	3,849	317	32	14	2	–	1	–	–	–	–	4,215	9%	366	19.399	0.053
Service	Firefighters	409	22	–	–	–	–	–	–	–	–	–	431	5%	22	0.221	0.010
	Food Service Employees	–	–	1	–	–	–	–	–	–	–	–	1	**100%**	1	0.107	0.107
	Janitors	294	7	1	2	–	–	–	–	–	–	–	304	3%	10	1.183	0.118
	Misc. Service	3,285	885	107	70	14	5	–	–	–	–	–	4,366	25%	1,081	78.459	0.073
	Security Guards	1,043	194	1	1	–	–	–	–	–	–	–	1,239	16%	196	3.170	0.016
Technicians	Engineering Technicians	1,572	176	37	10	–	–	–	–	–	–	–	1,795	12%	223	13.732	0.062
	Health Technicians	150	24	3	–	–	–	–	–	–	–	–	177	15%	27	1.203	0.045
	Misc. Technicians	1,754	295	61	28	8	4	6	–	1	–	–	2,157	19%	403	46.192	0.115
	Radiation Monitors/Techs.	1,123	663	200	115	21	6	3	–	–	–	–	2,131	47%	1,008	118.101	0.117
	Science Technicians	920	282	130	129	51	13	13	–	–	–	–	1,538	40%	618	**136.477**	**0.221**
	Technicians	1,213	115	14	4	3	–	2	–	–	–	–	1,351	10%	138	10.562	0.077
Transport	Bus Drivers	2	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–
	Equipment Operators	97	21	11	1	–	–	–	–	–	–	–	130	0.25	33	2.775	0.084
	Misc. Transport	295	5	2	–	–	–	–	–	–	–	–	302	2%	7	0.509	0.073
	Truck Drivers	398	28	6	–	–	–	–	–	–	–	–	432	8%	34	1.351	0.040
Unknown	Unknown	17,732	2,141	137	19	2	–	–	–	–	–	–	**20,031**	11%	**2,299**	80.625	0.035
Totals		**71,946**	**12,076**	**1,506**	**646**	**167**	**48**	**33**	**–**	**1**	**–**	**–**	**86,423**	**17%**	**14,477**	**942.256**	**0.065**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-21: Internal Dose Distribution by Site and Nuclide, CY 2025.

Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)

Site	Nuclide*	Meas. To 0.020	0.020 – 0.100	0.100 – 0.250	0.250 – 0.500	0.500 – 0.750	0.750 – 1.000	1.0 – 2.0	2.0 – 3.0	3.0 – 4.0	4.0 – 5.0	>5.0	Total Indiv. With Meas. CED	Collective CED (person–rem)	Avg. CED (rem)
Idaho	Americium	–	1	–	–	–	–	–	–	–	–	–	1	0.028	0.028
Lawrence Livermore National Laboratory	Americium	1	–	–	–	–	–	–	–	–	–	–	1	0.014	0.014
	Hydrogen-3	–	2	–	–	–	–	–	–	–	–	–	2	0.053	0.026
Los Alamos National Laboratory	Hydrogen-3	25	–	–	–	–	–	–	–	–	–	–	25	0.041	0.002
	Plutonium	1	–	1	–	–	1	–	–	1	–	–	4	4.678	**1.170**
	Uranium	8	–	–	–	–	–	–	–	–	–	–	8	0.011	0.001
Nevada National Security Site	Other	3	1	–	–	–	–	–	–	–	–	–	4	0.040	0.010
Oak Ridge: Oak Ridge National Laboratory	Plutonium	–	2	–	–	–	–	–	–	–	–	–	2	0.057	0.028
Oak Ridge: Y-12 National Security Complex	Thorium	–	2	–	–	–	–	–	–	–	–	–	2	0.043	0.022
	Uranium	614	468	66	4	–	–	–	–	–	–	–	**1,152**	**37.280**	0.032
	Mixed	2	1	–	–	–	–	–	–	–	–	–	3	0.084	0.028
Paducah Gaseous Diffusion Plant	Uranium	3	–	–	–	–	–	–	–	–	–	–	3	0.043	0.014
	Uranium	–	1	–	–	–	–	–	–	–	–	–	1	0.041	0.041
Sandia National Laboratories	Other	7	–	–	–	–	–	–	–	–	–	–	7	0.028	0.004
Savannah River Site	Hydrogen-3	2	–	–	–	–	–	–	–	–	–	–	2	0.006	0.003
Uranium Mill Tailings Remedial Action Project	Uranium	30	15	–	–	–	–	–	–	–	–	–	45	0.567	0.013
Totals		**696**	**493**	**67**	4	–	1	–	–	1	–	–	**1,262**	**43.014**	**0.034**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

Exhibit B-22: Extremity Dose Distribution by Site, CY 2025.

Site	No. Meas. Dose	Meas. to 0.100	0.100 – 1.0	1.0 – 5.0	5.0 – 10.0	10.0 – 20.0	20.0 – 30.0	>30.0	Total Monitored*	No. with Meas.	No. Above Monitoring Threshold (5 rem)**	Collective Extremity Dose (person–rem)	Avg. Meas. Extremity Dose (rem)
Ames National Laboratory	74	90	–	–	–	–	–	–	164	90	–	2.099	0.023
Argonne National Laboratory	4,627	135	10	7	2	–	–	–	4,781	154	2	35.169	0.228
Brookhaven National Laboratory	2,764	26	9	–	–	–	–	–	2,799	35	–	3.465	0.099
Fermi National Accelerator Laboratory	1,136	7	2	–	–	–	–	–	1,145	9	–	0.540	0.060
Grand Junction Site	25	–	–	–	–	–	–	–	25	–	–	–	–
Hanford: Hanford Field Office	7,596	136	166	10	–	–	–	–	7,908	312	–	64.006	0.205
Hanford: Pacific Northwest National Laboratory	2,606	241	67	14	1	–	–	–	2,929	323	1	59.613	0.185
Idaho	4,777	1,192	486	131	20	6	–	–	6,612	1,835	**26**	667.842	0.364
Kansas City National Security Campus	213	16	–	–	–	–	–	–	229	16	–	0.235	0.015
Lawrence Berkeley National Laboratory	589	58	18	4	–	–	–	–	669	80	–	16.253	0.203
Lawrence Livermore National Laboratory	4,289	17	49	–	–	–	–	–	4,355	66	–	13.742	0.208
Los Alamos National Laboratory	11,058	2,353	830	271	24	2	–	–	**14,538**	**3,480**	**26**	**1,107.669**	0.318
National Energy Technology Laboratory	99	17	1	–	–	–	–	–	117	18	–	0.595	0.033
National Laboratory of the Rockies	5	1	–	–	–	–	–	–	6	1	–	0.010	0.010
Nevada National Security Site	1,238	2	7	–	–	–	–	–	1,247	9	–	3.409	0.379
Oak Ridge: East Tennessee Technology Park	225	–	–	–	–	–	–	–	225	–	–	–	–
Oak Ridge: Oak Ridge Institute for Science and Education	84	–	–	–	–	–	–	–	84	–	–	–	–
Oak Ridge: Oak Ridge National Laboratory	5,800	105	95	49	11	8	1	–	6,069	269	20	381.953	1.420
Oak Ridge: Y-12 National Security Complex	7,973	28	21	14	–	–	–	–	8,036	63	–	39.344	0.625
Office of Secure Transportation	297	–	–	–	–	–	–	–	297	–	–	–	–
Paducah Gaseous Diffusion Plant	1,503	1	–	–	–	–	–	–	1,504	1	–	0.024	0.024
Pantex Plant	4,252	162	170	41	1	–	–	–	4,626	374	1	147.164	0.393

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.

* Represents the total number of monitoring records. The number of individuals provided extremity monitoring cannot be determined.

** All extremity doses above 5 rem were for the upper extremities (hands and forearms). DOE annual limit for extremities is 50 rem. 10 CFR 835.402(a)(1)(ii) requires extremity monitoring for a shallow dose equivalent to the skin or extremity of 5 rem or more in a year.

*** Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP in addition to several smaller facilities not associated with a DOE site.

Exhibit B-22: Extremity Dose Distribution by Site, CY 2025. (continued)

Site	No. Meas. Dose	Meas. to 0.100	0.100 – 1.0	1.0 – 5.0	5.0 – 10.0	10.0 – 20.0	20.0 – 30.0	>30.0	Total Monitored*	No. with Meas.	No. Above Monitoring Threshold (5 rem)**	Collective Extremity Dose (person–rem)	Avg. Meas. Extremity Dose (rem)
Portsmouth Gaseous Diffusion Plant	2,316	–	–	–	–	–	–	–	2,316	–	–	–	–
Princeton Plasma Physics Laboratory	282	3	–	–	–	–	–	–	285	3	–	0.055	0.018
Sandia National Laboratories	1,839	23	31	3	–	–	–	1	1,897	58	1	167.204	**2.883**
Savannah River National Laboratory	537	80	73	8	–	–	–	–	698	161	–	40.301	0.250
Savannah River Site	6,507	352	446	105	14	1	–	–	7,425	918	15	498.664	0.543
Separations Process Research Unit	15	–	–	–	–	–	–	–	15	–	–	–	–
SLAC National Accelerator Laboratory	2,307	–	–	–	–	–	–	–	2,307	–	–	–	–
Thomas Jefferson National Accelerator Facility	1,556	–	–	–	–	–	–	–	1,556	–	–	–	–
Uranium Mill Tailings Remedial Action Project	109	–	–	–	–	–	–	–	109	–	–	–	–
Waste Isolation Pilot Plant	835	–	–	–	–	–	–	–	835	–	–	–	–
West Valley Cleanup Alliance	432	3	–	–	–	–	–	–	435	3	–	0.037	0.012
Service Center Personnel***	129	23	16	12	–	–	–	–	180	51	–	26.440	0.518
Totals	**78,094**	**5,071**	**2,497**	**669**	**73**	**17**	**1**	**1**	**86,423**	**8,329**	**92**	**3,275.833**	**0.393**

Note: Boxed values (gray background) indicate the greatest value in each column. Dashes indicate no data reported for the year shown.
* Represents the total number of monitoring records. The number of individuals provided extremity monitoring cannot be determined.
** All extremity doses above 5 rem were for the upper extremities (hands and forearms). DOE annual limit for extremities is 50 rem.
10 CFR 835.402(a)(1)(ii) requires extremity monitoring for a shallow dose equivalent to the skin or extremity of 5 rem or more in a year.
*** Includes personnel at NNSA Albuquerque complex, Oak Ridge, and WIPP in addition to several smaller facilities not associated with a DOE site.

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