

DOE Occupational Radiation Exposure: 2015 Annual Report
Exhibit A-1. Labor Categories and Occupation Codes.

The following is a list of the Occupation Codes that are reported with each individual's dose record to the DOE Radiation Exposure Monitoring System (REMS) in accordance with DOE Order 231.1B. 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 Reporting Guide, Table 7, and represent a subset of the occupations listed in the Department of Commerce's Standard Occupational Classification (SOC) Manual (1980).

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
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	1	Unknown

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit A-2. Organizations Reporting to DOE REMS, 2011-2015.

The following is a list of all organizations reporting to the DOE REMS from 2011-2015.

The list provides the Site groupings used in this report as well as the organization reporting code and name.

Site	Org. Code	Organization Name	2011	2012	2013	2014	2015
Albuquerque	OST3100	Office of Secure Transportation	-	-	●	●	●
Ames Laboratory	1000503	Ames Laboratory (Iowa State)	●	●	●	●	●
Argonne National Laboratory (ANL)	1000703	Argonne National Laboratory	●	●	●	●	●
Brookhaven National Laboratory (BNL)	1001003	Brookhaven National Laboratory	●	●	●	●	●
DOE Headquarters	1500000	DOE Headquarters	●	-	-	-	-
	1504001	DOE Headquarters	-	●	●	●	●
	1523016	SPRU-NY (Building remediation)	●	●	●	●	●
Energy Technology Engineering Center	8001003	Boeing North America, Inc. - Research	●	●	●	●	-
Fermi National Accelerator Lab. (FERMI)	1002503	Fermilab	●	●	●	●	●
Hanford	4700805	Bechtel National Corporation	●	●	●	●	●
	4701001	DOE, Office of River Protection	●	●	●	●	●
	4702004	Advance Technology Laboratories	●	●	●	●	●
	4707104	Washington River Protection Solutions, LLC	●	●	●	●	●
	NA-2000	NNSA - Visitors	-	-	●	●	●
	NA-2100	NNSA - Management and Support Personnel	●	●	●	●	●
	NA-2101	NNSA - Mgmt. & Support Personnel: MELE Assoc.	●	●	●	●	●
	NA-2110	NNSA - North and South America	●	●	●	●	●
	NA-2120	NNSA - Europe, Africa and the Middle East	●	●	●	●	●
	NA-2130	NNSA - Asia and Members of the Former Soviet	●	●	●	●	-
	7500503	Battelle - PNNL	●	●	●	●	●
	7500605	Washington Closure Hanford	●	●	●	●	●
	7502504	AdvanceMed Hanford	●	●	●	●	●
	7505004	Fluor Hanford, Inc.	●	-	-	-	-
	7505055	Lockheed Martin Services, Inc.	-	-	●	-	-
	7505214	Mission Support Alliance (MSA)	●	●	●	●	●
	7505304	CH2M Hill Plateau Remediation Company	●	●	●	●	●
	7506001	DOE-Richland Field Office	●	●	●	●	●
Idaho Site	3004001	Idaho Field Office	-	-	-	●	●
	3004402	BBWI - AMWTP	●	-	-	-	-
	3004404	BBWI Service Subs	-	-	-	●	●
	3005003	INL - BEA, LLC - Research	●	●	●	●	●
	3005004	INL - BEA, LLC - Services	●	●	●	●	●
	3005009	INL - BEA, LLC - Security	●	●	●	●	●
	3005012	INL - BEA, LLC - Production	●	●	●	●	●
	3006002	INL - CWI - Projects	●	●	●	●	●
	3006004	ICP - CWI - Subcontractors	●	●	●	●	●
	3006005	ICP - CWI - Support	●	●	●	●	●
	3006016	ICP - CWI - Construction Subs	●	●	●	●	●
Kansas City Plant	0531002	Honeywell FM & T/KC Production	●	●	●	●	●
Lawrence Berkeley National Lab. (LBNL)	8003003	Lawrence Berkeley National Laboratory	●	●	●	●	●
Lawrence Livermore National Lab. (LLNL)	0580403	Lawrence Livermore National Laboratory	●	●	●	●	●
	8004003	Lawrence Livermore National Laboratory	●	-	-	-	-
	0580701	LLNL - DOE Site Office	●	●	●	●	●

Site	Org. Code	Organization Name	2011	2012	2013	2014	2015
	0580503	LLNL - Nevada	●	●	●	●	●
Los Alamos National Lab. (LANL)	0540001	NNSA Los Alamos Site Office	●	●	●	●	●
	0544003	Los Alamos National Laboratory	●	●	●	●	●
	0544809	Protection Technologies Los Alamos	●	●	●	●	●
	0544904	Johnson Controls, Inc.	●	●	●	●	●
National Renewable Energy Laboratory	2806003	National Renewable Energy Laboratory	●	●	●	●	●
Nevada National Security Site	0501001	NNSA Service Center	●	●	●	●	●
	0520001	NNSA Nevada Site Office	●	●	●	●	●
	0521104	Bechtel Nevada - Amador Valley	●	●	●	●	●
	0521204	Bechtel Nevada - Las Vegas	●	●	●	●	●
	0521304	Bechtel Nevada - Los Alamos	●	●	●	●	●
	0521405	Bechtel Nevada - NTS	●	●	●	●	●
	0521416	Bechtel Nevada - NTS - subcontractors	●	●	●	●	●
	0521503	Bechtel Nevada - Special Tech Lab.	●	●	●	●	●
	3500000	National Security Technologies, LLC (NSTec)	●	-	-	-	-
	3501204	Bechtel Nevada - Las Vegas	●	-	-	-	-
	3501405	NSTec - NTS	●	-	-	-	-
	3507514	Nevada Miscellaneous Contractors - NSTec	●	-	-	-	-
	3508004	Nye County Sheriff - NSTec	●	●	●	●	●
	3508703	SAIC - NV	●	●	●	-	-
	3509009	Wackenhut Services, Inc. - NSTec	●	-	-	-	-
	9700000	Yucca Mountain Project - NSTec	●	-	-	-	-
New Brunswick Laboratory	1004031	New Brunswick Laboratory - Research	●	●	●	●	●
Oak Ridge Site	4004203	Oak Ridge Inst. For Science & Educ. (ORISE)	●	●	●	●	●
	4004501	Oak Ridge Office	●	●	-	-	-
	4004525	SEC Oak Ridge	●	●	●	-	-
	4004526	LATA Sharp	●	-	●	-	-
	4003602	UT-Battelle: ORNL-Isotek	●	●	●	●	●
	4004602	UT-Battelle: Foster Wheeler	●	●	-	-	-
	4004602	Wastren Advantage, Inc.	-	-	●	●	●
	4005104	USEC: Oak Ridge, K25	●	●	●	●	●
	4006002	UCOR	●	●	●	●	●
	4006503	UT-Battelle - ORNL	●	●	●	●	●
	4006510	Bechtel Jacobs - ORNL	●	●	-	-	-
	4006510	UCOR	-	-	-	●	●
	4007509	Wackenhut Services	●	●	-	-	-
	4007509	UCOR	●	●	●	●	●
	4007509	National Strategic Protective Services	-	-	●	-	-
	4008010	Bechtel-Jacobs, Y-12	●	●	-	-	-
	4008010	UCOR	●	●	●	●	●
	4018102	BWXT LLC, Y-12	●	●	-	-	-
	4018102	CNS, LLC, Y-12	-	-	-	●	●
Paducah Gaseous Diff. Plant (PGDP)	4007002	Swift & Staley Team	-	●	●	●	●
	6203004	LATA Environmental Services	-	-	●	●	●
	6203004	Paducah Remediation Services	●	●	-	-	-
	6203106	Uranium Disposition Services - Paducah Sub	●	●	●	-	-
	6203106	B&W Conversions Services, LLC	-	-	●	●	●
	6203204	Swift & Staley Mech Contr, Inc. - Paducah	●	-	-	-	-

Site	Org. Code	Organization Name	2011	2012	2013	2014	2015
Pantex Plant (PP)	0510001	B & W Pantex - PXSO/NNSA and DOE Couriers	●	●	●	-	-
	0510001	CNS Pantex	-	-	-	●	●
	0514004	Battelle - Pantex	●	●	●	-	-
	0514004	CNS Pantex	-	-	-	●	●
	0515002	B & W Pantex	●	●	●	-	-
	0515002	CNS Pantex	-	-	-	●	●
	0515006	B & W Pantex - Subcontractors	●	●	●	-	-
	0515006	CNS Pantex	-	-	-	●	●
	0515009	B & W Pantex - Security Forces	●	●	●	-	-
	0515009	CNS Pantex	-	-	-	●	●
Portsmouth Gaseous Diff. Plant (PORTS)	6202106	Uranium Disposition Services - Portsmouth Sub	●	●	●	●	●
	6202204	Wastren - Portsmouth Services	●	●	●	●	●
	6202304	FLUOR B & W Portsmouth	●	●	●	●	●
Princeton Plasma Physics Laboratory	1005003	Princeton Plasma Physics Laboratory	●	●	●	●	●
Sandia National Laboratories (SNL)	0578003	Sandia National Laboratories	●	●	●	●	●
Savannah River Site (SRS)	8500505	Bechtel Construction - SR	●	●	●	●	●
	8500516	Miscellaneous SRS Construction Subs	●	●	●	●	●
	8501002	Savannah River Nuclear Solutions, Inc.	●	-	-	-	-
	8501042	SRR Operations	●	●	●	●	●
	8501044	SRR Service Subs	●	●	●	●	●
	8505501	Savannah River Field Office	●	●	●	●	●
	8505504	Misc. DOE Contractors - SR	●	●	●	●	●
	8505525	Savannah River Nuclear Solutions, Inc.	●	-	●	-	●
	8505526	SR Construction - Parsons Subcontractors	●	●	●	●	●
	8509003	Univ. of Georgia Ecology Laboratories	●	-	●	●	●
	8509509	Wackenhut Services, Inc. - SRNS	●	●	●	●	●
	8511002	Savannah River Nuclear Solutions, Inc.	●	●	●	●	●
	8511004	SRNS Service Subs	●	●	●	●	●
	8511005	SRNS Construction	●	●	●	●	●
	8511006	SRNS Construction Subs	●	●	●	●	●
Separations Process Research Unit	1522005	DeNuke Services: SPRU LA	●	●	-	-	-
	1523016	NY SPRU	●	●	●	●	●
SLAC National Accelerator Facility	8008003	Stanford Linear Accelerator Center	●	●	●	●	●
Thomas Jefferson National Accelerator Facility	1509521	Jefferson Laboratory - DOE Employees	-	-	-	●	●
	1509503	Thomas Jefferson National Accelerator Facility	-	-	-	●	●
	4004501	Jefferson Laboratory	-	●	●	-	-
	4009503	Thomas Jefferson National Accelerator Facility	●	●	●	-	-
Uranium Mill Tailings Remediation Action Project	3260645	Uranium Mill Tailings Remedial Action - Moab	●	●	●	●	●
Waste Isolation Pilot Plant	0590001	Washington TRU Solutions LLC-WIPP	-	-	-	-	●
	0701001	Carlsbad Field Office	●	-	●	-	●
	0702003	LANL - WIPP	●	-	●	-	●
	0703104	Washington TRU Solutions LLC-WIPP	●	●	●	●	●
	0703109	Santa Fe Protective Services - WIPP	●	-	●	-	●
	0703114	WTS Subcontractors - WIPP	●	-	●	-	●
	0703124	WTS - Small Subs	●	-	●	-	-
	0704003	Sandia National Laboratories - WIPP	●	-	●	-	-
West Valley Project	4539004	West Valley Nuclear Services, Inc. (WVNS)	●	●	●	●	●
Pittsburg Naval Reactor Office	6007504	PNR - BAPL & BPMI-P	●	●	●	●	●

Site	Org. Code	Organization Name	2011	2012	2013	2014	2015
	6008003	PNR - BAPL & BPML-P	●	●	●	●	●
	6009003	Naval Reactors - Idaho	●	●	●	●	●
Schenectady Naval Reactor Office	9004003	Knolls Atomic Power Laboratory	●	●	●	●	●
	9005003	Knolls Atomic Power Laboratory	●	●	●	●	●
	9005004	Knolls Atomic Power Laboratory	●	●	●	●	●

DOE Occupational Radiation Exposure: 2015 Annual Report Exhibit A-3. Facility Type Codes.

The following is a list of Facility Type Codes reported to REMS in accordance with the REMS 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.

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

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-1. Site Dose Data - 2013.

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 Laboratory	0.730	- -	24	- -	0.030	- -	-	- -
Argonne National Laboratory	13.091	-38% ▼	74	-39% ▼	0.177	2% ▲	61%	18% ▲
Brookhaven National Laboratory	6.988	-12% ▼	194	13% ▲	0.036	-23% ▼	-	- -
Energy Technology Engineering Center	0.479	- -	57	- -	0.008	- -	-	- -
Fermi National Accelerator Laboratory	19.750	24% ▲	175	-15% ▼	0.113	46% ▲	8%	70% ▲
Hanford: Hanford Site	50.081	-14% ▼	715	-23% ▼	0.070	11% ▲	29%	299% ▲
Hanford: Office of River Protection	18.228	-15% ▼	448	8% ▲	0.041	-22% ▼	-	- -
Hanford: Pacific Northwest National Laboratory	14.550	-18% ▼	403	68% ▲	0.036	-51% ▼	-	- -
Idaho National Laboratory	71.814	17% ▲	1,437	14% ▲	0.050	2% ▲	-	- -
Kansas City Plant	0.001	- -	1	- -	0.001	- -	-	- -
Lawrence Berkeley National Laboratory	0.623	- -	9	- -	0.069	- -	-	- -
Lawrence Livermore National Laboratory	8.475	-35% ▼	103	-21% ▼	0.082	-17% ▼	28%	25% ▲
Los Alamos National Laboratory	138.734	-1% ▼	1,703	18% ▲	0.081	-16% ▼	15%	-56% ▼
National Renewable Energy Laboratory	0.068	- -	5	- -	0.014	- -	-	- -
Nevada National Security Site	3.218	-25% ▼	89	-11% ▼	0.036	-16% ▼	-	- -
New Brunswick Laboratory	0.012	- -	1	- -	0.012	- -	-	- -
Oak Ridge: East Tennessee Technology Park	0.040	- -	4	- -	0.010	- -	-	- -
Oak Ridge: Oak Ridge Institute for Science and Education	0.083	- -	6	- -	0.014	- -	-	- -
Oak Ridge: Oak Ridge National Laboratory	74.531	-5% ▼	642	-16% ▼	0.116	12% ▲	15%	-1% ▼
Oak Ridge: Y-12 National Security Complex	50.136	-15% ▼	1,337	-5% ▼	0.037	-10% ▼	1%	33% ▲
Office of Secure Transportation	0.176	- -	9	- -	0.020	- -	-	- -
Paducah Gaseous Diffusion Plant	6.450	8% ▲	92	-19% ▼	0.070	32% ▲	-	- -
Pantex Plant	21.829	-34% ▼	330	-3% ▼	0.066	-32% ▼	-	- -
Portsmouth Gaseous Diffusion Plant	8.634	22% ▲	102	-24% ▼	0.085	61% ▲	-	- -
Princeton Plasma Physics Laboratory	0.339	- -	58	- -	0.006	- -	-	- -
Sandia National Laboratories	4.260	-1% ▼	115	-6% ▼	0.037	5% ▲	-	- -
Savannah River Site	88.623	-39% ▼	1,472	-28% ▼	0.060	-15% ▼	4%	-29% ▼
Separations Process Research Unit	2.927	401% ▲	50	117% ▲	0.059	131% ▲	-	- -
SLAC National Accelerator Laboratory	0.281	- -	10	- -	0.028	- -	-	- -
Thomas Jefferson National Accelerator Facility	1.503	-23% ▼	48	-44% ▼	0.031	36% ▲	-	- -
Uranium Mill Tailings Remedial Action Project	7.407	-3% ▼	55	-37% ▼	0.135	53% ▲	-	- -
Waste Isolation Pilot Plant	0.552	- -	32	- -	0.017	- -	-	- -
West Valley Demonstration Project	12.901	39% ▲	101	17% ▲	0.128	18% ▲	4%	- -
Service Center Personnel*	0.035	- -	3	- -	0.012	- -	-	- -
Totals	627.549	-13% ▼	9,904	-5% ▼	0.063	-8% ▼	10%	-22% ▼

Note: Boxed values (gray background) indicate the greatest value in each column.

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

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-2. Site Dose Data - 2014.

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 Laboratory	0.873	-	33	-	0.026	-	-	-
Argonne National Laboratory	16.492	26% ▲	84	14% ▲	0.196	11% ▲	67%	10% ▲
Brookhaven National Laboratory	7.282	4% ▲	129	-34% ▼	0.056	57% ▲	-	-
Energy Technology Engineering Center	0.489	-	69	-	0.007	-	-	-
Fermi National Accelerator Laboratory	11.070	-44% ▼	193	10% ▲	0.057	-49% ▼	-	-
Hanford: Hanford Site	40.715	-19% ▼	659	-8% ▼	0.062	-12% ▼	19%	-36% ▼
Hanford: Office of River Protection	14.653	-20% ▼	412	-8% ▼	0.036	-13% ▼	-	-
Hanford: Pacific Northwest National Laboratory	14.634	1% ▲	479	19% ▲	0.031	-15% ▼	5%	-
Idaho National Laboratory	86.202	20% ▲	1,174	-18% ▼	0.073	47% ▲	11%	-
Kansas City Plant	0.022	-	11	-	0.002	-	-	-
Lawrence Berkeley National Laboratory	0.463	-	8	-	0.058	-	-	-
Lawrence Livermore National Laboratory	8.353	-1% ▼	108	5% ▲	0.077	-6% ▼	7%	-74% ▼
Los Alamos National Laboratory	95.436	-31% ▼	1,401	-18% ▼	0.068	-16% ▼	13%	-14% ▼
National Renewable Energy Laboratory	0.107	-	7	-	0.015	-	-	-
Nevada National Security Site	5.638	75% ▲	116	30% ▲	0.049	34% ▲	-	-
New Brunswick Laboratory	0.023	-	2	-	0.012	-	-	-
Oak Ridge: East Tennessee Technology Park	0.004	-	1	-	0.004	-	-	-
Oak Ridge: Oak Ridge Institute for Science and Education	0.210	-	23	-	0.009	-	-	-
Oak Ridge: Oak Ridge National Laboratory	71.304	-4% ▼	618	-4% ▼	0.115	-1% ▼	19%	30% ▲
Oak Ridge: Y-12 National Security Complex	59.296	18% ▲	1,326	-1% ▼	0.045	19% ▲	3%	125% ▲
Office of Secure Transportation	0.090	-	5	-	0.018	-	-	-
Paducah Gaseous Diffusion Plant	10.306	60% ▲	139	51% ▲	0.074	6% ▲	-	-
Pantex Plant	31.084	42% ▲	305	-8% ▼	0.102	54% ▲	10%	-
Portsmouth Gaseous Diffusion Plant	10.302	19% ▲	95	-7% ▼	0.108	28% ▲	11%	-
Princeton Plasma Physics Laboratory	0.693	-	123	-	0.006	-	-	-
Sandia National Laboratories	5.982	40% ▲	88	-23% ▼	0.068	84% ▲	-	-
Savannah River Site	93.027	5% ▲	1,584	8% ▲	0.059	-2% ▼	-	-
Separations Process Research Unit	9.338	219% ▲	76	52% ▲	0.123	110% ▲	-	-
SLAC National Accelerator Laboratory	0.246	-	9	-	0.027	-	-	-
Thomas Jefferson National Accelerator Facility	4.452	196% ▲	42	-12% ▼	0.106	239% ▲	12%	-
Uranium Mill Tailings Remedial Action Project	7.756	5% ▲	61	11% ▲	0.127	-6% ▼	14%	-
Waste Isolation Pilot Plant	0.034	-	3	-	0.011	-	-	-
West Valley Demonstration Project	13.424	4% ▲	112	11% ▲	0.120	-6% ▼	-	-
Service Center Personnel*	0.103	-	6	-	0.017	-	-	-
Totals	620.103	-1% ▼	9,501	-4% ▼	0.065	3% ▲	10%	2% ▲

Note: Boxed values (gray background) indicate the greatest value in each column.

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

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-3. Site Dose Data - 2015.

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 Laboratory	1,247	43% ▲	39	18% ▲	0.032	21% ▲	-	-
Argonne National Laboratory	14,767	-10% ▼	82	-2% ▼	0.180	-8% ▼	51%	-24% ▼
Brookhaven National Laboratory	3,345	-54% ▼	134	4% ▲	0.025	-56% ▼	-	-
Energy Technology Engineering Center	0.068	- -	3	- -	0.023	- -	-	-
Fermi National Accelerator Laboratory	16,640	50% ▲	235	22% ▲	0.071	23% ▲	-	-
Hanford - Hanford Site	62,612	54% ▲	687	4% ▲	0.091	48% ▲	51%	172% ▲
Hanford - Office of River Protection	38,608	163% ▲	648	57% ▲	0.060	68% ▲	3%	-
Hanford - Pacific Northwest National Laboratory	12,581	-14% ▼	461	-4% ▼	0.027	-11% ▼	-	-
Idaho Site	123,232	43% ▲	1,331	13% ▲	0.093	26% ▲	19%	73% ▲
Kansas City Plant	0.020	- -	12	- -	0.002	- -	-	-
Lawrence Berkeley National Laboratory	0.796	- -	11	- -	0.072	- -	-	-
Lawrence Livermore National Laboratory	7,602	-9% ▼	106	-2% ▼	0.072	-7% ▼	27%	281% ▲
Los Alamos National Laboratory	97,209	2% ▲	1,135	-19% ▼	0.086	26% ▲	24%	85% ▲
National Renewable Energy Laboratory	0.028	- -	4	- -	0.007	- -	-	-
Nevada National Security Site	5,045	-11% ▼	98	-16% ▼	0.051	6% ▲	-	-
New Brunswick Laboratory	0.000	- -	-	- -	0.000	- -	-	-
Oak Ridge - East Tennessee Technology Park	0.059	- -	4	- -	0.015	- -	-	-
Oak Ridge - Oak Ridge Institute for Science and Education	0.122	- -	10	- -	0.012	- -	-	-
Oak Ridge - Oak Ridge National Laboratory	59,802	-16% ▼	598	-3% ▼	0.100	-13% ▼	17%	-11% ▼
Oak Ridge - Y-12 National Security Complex	57,783	-3% ▼	1,200	-10% ▼	0.048	8% ▲	2%	-22% ▼
Office of Secure Transportation	0.029	- -	2	- -	0.014	- -	-	-
Paducah Gaseous Diffusion Plant	7,058	-32% ▼	337	142% ▲	0.021	-72% ▼	-	-
Pantex Plant	22,618	-27% ▼	301	-1% ▼	0.075	-26% ▼	8%	-16% ▼
Portsmouth Gaseous Diffusion Plant	4,716	-54% ▼	59	-38% ▼	0.080	-26% ▼	-	-
Princeton Plasma Physics Laboratory	0.623	- -	126	- -	0.005	- -	-	-
Sandia National Laboratory	5,284	-12% ▼	99	12% ▲	0.053	-21% ▼	-	-
Savannah River Site	94,871	2% ▲	1,882	19% ▲	0.050	-14% ▼	-	-
Separations Process Research Unit	69,291	642% ▲	149	96% ▲	0.465	278% ▲	78%	-
SLAC National Accelerator Laboratory	0.069	- -	2	- -	0.034	- -	-	-
Thomas Jefferson National Accelerator Facility	3,153	-29% ▼	47	12% ▲	0.067	-37% ▼	-	-
Uranium Mill Tailings Remedial Action Project	7,177	-7% ▼	86	41% ▲	0.083	-34% ▼	-	-
Waste Isolation Pilot Plant	0.161	- -	12	- -	0.013	- -	-	-
West Valley Demonstration Project	28,107	109% ▲	122	9% ▲	0.230	92% ▲	34%	-
Site Office Personnel*	0.011	- -	1	- -	0.011	- -	-	-
Totals	744,734	20% ▲	10,023	5% ▲	0.074	14% ▲	22%	120% ▲

Note: Boxed values (gray background) indicate the greatest value in each column.

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

DOE Occupational Radiation Exposure: 2015 Annual Report
Exhibit B-4. Internal Dose by Site, 2013-2015.

Site	No. of Individuals with Measurable CED* 2013	No. of Individuals with Measurable CED* 2014	No. of Individuals with Measurable CED* 2015	Collective CED Dose (person-rem) 2013	Collective CED Dose (person-rem) 2014	Collective CED Dose (person-rem) 2015	Average Measurable CED 2013	Average Measurable CED 2014	Average Measurable CED 2015
Argonne National Laboratory	8	9	3	0.242	0.179	0.129	0.030	0.020	0.043
Hanford: Hanford Site	5	-	4	0.012	-	0.034	0.002	-	0.008
Hanford: Pacific Northwest National Laboratory	2	4	-	0.008	0.113	-	0.004	0.028	-
Idaho National Laboratory	10	9	3	0.275	0.266	0.061	0.028	0.030	0.020
Lawrence Livermore National Laboratory	2	5	4	0.024	0.208	0.080	0.012	0.042	0.020
Los Alamos National Laboratory	10	17	31	1.804	0.143	0.144	0.180 ◀	0.008	0.005
Oak Ridge: East Tennessee Technology Park	1	-	-	0.012	-	-	0.012	-	-
Oak Ridge: Oak Ridge National Laboratory	1	9	2	0.012	0.764	0.186	0.012	0.085 ◀	0.093 ◀
Oak Ridge: Y-12 National Security Complex	1,115 ◀	1,078 ◀	1,041 ◀	39.221 ◀	49.000 ◀	48.493 ◀	0.035	0.045	0.047
Paducah Gaseous Diffusion Plant	-	2	4	-	0.039	0.086	-	0.020	0.022
Pantex Plant	10	8	2	0.014	0.014	0.003	0.001	0.002	0.002
Savannah River Site	13	10	4	0.138	0.371	0.013	0.011	0.037	0.003
Separations Process Research Unit	-	-	3	-	-	0.084	-	-	0.028
Uranium Mill Tailings Remedial Action Project	45	48	45	2.925	2.974	2.104	0.065	0.062	0.047
Waste Isolation Pilot Plant	-	1	-	-	0.011	-	-	0.011	-
Totals	1,222	1,200	1,146	44.687	54.082	51.417	0.037	0.045	0.045

Note: Boxed values (gray background) indicate the greatest value in each column.

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

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-5. Neutron Dose Distribution by Site, 2015.

Site	No. Meas. Dose	Meas < 0.1	0.1 - 0.25	0.25 - 0.5	0.5 - 0.75	0.75 - 1.0	1-2	>2	Total Monitored *	No. of Individuals with Meas. Dose	% of Individuals with Meas. Dose	Collective Neutron Dose (person-rem)	Avg. Meas. Neutron Dose (rem)
Ames Laboratory	158	-	-	-	-	-	-	-	158	-	-	-	-
Argonne National Laboratory	1,952	-	-	-	-	-	-	-	1,952	-	-	-	-
Brookhaven National Laboratory	3,006	4	-	-	-	-	-	-	3,010	4	0%	0.026	0.006
Energy Technology Engineering Center	6	-	-	-	-	-	-	-	6	-	-	-	-
Fermi National Accelerator Laboratory	1,291	10	-	-	-	-	-	-	1,301	10	1%	0.380	0.038
Hanford: Hanford Site	3,621	431	-	-	-	-	-	-	4,052	431	11%	5.169	0.012
Hanford: Office of River Protection	2,582	14	-	-	-	-	-	-	2,596	14	1%	0.534	0.038
Hanford: Pacific Northwest National Laboratory	2,437	1	-	-	-	-	-	-	2,438	1	0%	0.020	0.020
Idaho National Laboratory	6,499	21	9	-	-	-	-	-	6,529	30	0%	2.138	0.071
Kansas City Plant	100	-	-	-	-	-	-	-	100	-	-	-	-
Lawrence Berkeley National Laboratory	866	-	-	-	-	-	-	-	866	-	-	-	-
Lawrence Livermore National Laboratory	8,092	50	1	-	1	1	-	-	8,145	53	1%	2.569	0.048
Los Alamos National Laboratory	8,839	508	106	39	14	2	-	-	9,508	669	7%	55.780	0.083
National Renewable Energy Laboratory	8	-	-	-	-	-	-	-	8	-	-	-	-
Nevada National Security Site	2,089	5	1	-	-	-	-	-	2,095	6	0%	0.300	0.050
New Brunswick Laboratory	20	-	-	-	-	-	-	-	20	-	-	-	-
Oak Ridge: East Tennessee Technology Park	358	1	-	-	-	-	-	-	359	1	0%	0.014	0.014
Oak Ridge: Oak Ridge Institute for Science and Education	91	-	-	-	-	-	-	-	91	-	-	-	-
Oak Ridge: Oak Ridge National Laboratory	3,848	162	21	5	-	-	-	-	4,036	188	5%	9.983	0.053
Oak Ridge: Y-12 National Security Complex	5,814	3	-	-	-	-	-	-	5,817	3	0%	0.094	0.031
Office of Secure Transportation	345	-	-	-	-	-	-	-	345	-	-	-	-
Paducah Gaseous Diffusion Plant	2,751	35	-	-	-	-	-	-	2,786	35	1%	1.444	0.041
Pantex Plant	3,284	24	-	-	-	-	-	-	3,308	24	1%	0.963	0.040
Portsmouth Gaseous Diffusion Plant	2,535	11	4	-	-	-	-	-	2,550	15	1%	0.837	0.056
Princeton Plasma Physics Laboratory	380	-	-	-	-	-	-	-	380	-	-	-	-
Sandia National Laboratories	1,969	5	-	-	-	-	-	-	1,974	5	0%	0.160	0.032
Savannah River Site	6,099	113	24	6	-	-	-	-	6,242	143	2%	11.259	0.079
Separations Process Research Unit	231	-	-	-	-	-	-	-	231	-	-	-	-
SLAC National Accelerator Laboratory	1,969	1	-	-	-	-	-	-	1,970	1	0%	0.030	0.030
Thomas Jefferson National Accelerator Facility	1,168	-	-	-	-	-	-	-	1,168	-	-	-	-
Uranium Mill Tailings Remedial Action Project	128	-	-	-	-	-	-	-	128	-	-	-	-
Waste Isolation Pilot Plant	609	-	-	-	-	-	-	-	609	-	-	-	-
West Valley Demonstration Project	363	-	-	-	-	-	-	-	363	-	-	-	-
Service Center Personnel**	399	-	-	-	-	-	-	-	399	-	-	-	-
Totals	73,907	1,399	166	50	15	3	-	-	75,540	1,633	2%	91.700	0.056

Note: Boxed values (gray background) indicate the greatest value in each column.

*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.

DOE Occupational Radiation Exposure: 2015 Annual Report
Exhibit B-6a. Distribution of TED by Facility Type - 2013.

TOTAL EFFECTIVE DOSE (TED)																
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)																
Facility Type	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Accelerator	6,407	270	48	28	1	1	-	-	-	-	-	6,755	5%	348	26.420	0.076
Fuel/Uranium Enrichment	880	21	-	-	-	-	-	-	-	-	-	901	2%	21	0.329	0.016
Fuel Processing	585	120	16	9	2	-	-	-	-	-	-	732	20%	147	11.100	0.076
Maintenance and Support	11,130	1,988	341	127	25	15	7	-	-	-	-	13,633	18%	2,503	193.298	0.077 ◀
Reactor	75	14	5	1	-	-	-	-	-	-	-	95	21%	20	1.452	0.073
Research, General	24,527	2,535	382	159	14	12	2	-	-	-	-	27,631 ◀	11%	3,104 ◀	204.351 ◀	0.066
Research, Fusion	357	59	-	-	-	-	-	-	-	-	-	416	14%	59	0.349	0.006
Waste Processing/Management	4,041	1,215	242	72	5	-	-	-	-	-	-	5,575	28% ◀	1,534	103.804	0.068
Weapons Fabrication and Testing	7,675	1,496	188	23	1	-	-	-	-	-	-	9,383	18%	1,708	72.688	0.043
Other	6,000	434	24	2	-	-	-	-	-	-	-	6,460	7%	460	13.758	0.030
Totals	61,677	8,152	1,246	421	48	28	9	-	-	-	-	71,581	14%	9,904	627.549	0.063

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-6b. Distribution of TED by Facility Type - 2014.

TOTAL EFFECTIVE DOSE (TED)																
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)																
Facility Type	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Accelerator	6,501	277	63	14	1	-	-	-	-	-	-	6,856	5%	355	22.339	0.063
Fuel/Uranium Enrichment	1,030	40	-	-	-	-	-	-	-	-	-	1,070	4%	40	0.156	0.004
Fuel Processing	664	181	12	1	-	-	-	-	-	-	-	858	23%	194	7.127	0.037
Maintenance and Support	11,511	1,938	256	94	23	7	-	-	-	-	-	13,829	17%	2,318	149.085	0.064
Reactor	61	15	6	4	-	-	-	-	-	-	-	86	29%	25	2.703	0.108 ◀
Research, General	27,594	2,282	427	169	38	8	6	-	-	-	-	30,524 ◀	10%	2,930 ◀	225.368 ◀	0.077
Research, Fusion	285	125	-	-	-	-	-	-	-	-	-	410	30% ◀	125	0.743	0.006
Waste Processing/Management	3,891	1,145	262	104	2	-	-	-	-	-	-	5,404	28%	1,513	113.069	0.075
Weapons Fabrication and Testing	8,289	1,391	211	58	8	-	-	-	-	-	-	9,957	17%	1,668	90.897	0.054
Other	6,118	313	20	-	-	-	-	-	-	-	-	6,451	5%	333	8.616	0.026
Totals	65,944	7,707	1,257	444	72	15	6	-	-	-	-	75,445	13%	9,501	620.103	0.065

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report
Exhibit B-6c. Distribution of TED by Facility Type - 2015.

TOTAL EFFECTIVE DOSE (TED)																
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)																
Facility Type	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Accelerator	6,678	310	59	14	-	-	-	-	-	-	-	7,061	5%	383	22.652	0.059
Fuel/Uranium Enrichment	756	43	-	-	-	-	-	-	-	-	-	799	5%	43	0.329	0.008
Fuel Processing	649	205	13	-	-	-	-	-	-	-	-	867	25%	218	7.374	0.034
Maintenance and Support	11,283	1,772	285	81	41	20	11	-	-	-	-	13,493	16%	2,210	176.856	0.080
Reactor	67	16	9	1	-	-	-	-	-	-	-	93	28%	26	2.407	0.093
Research, General	27,141	2,449	397	129	46	13	3	-	-	-	-	30,178 ◀	10%	3,037 ◀	213.113	0.070
Research, Fusion	312	128	-	-	-	-	-	-	-	-	-	440	29%	128	0.647	0.005
Waste Processing/Management	3,935	1,392	349	149	29	16	27	-	-	-	-	5,897	33% ◀	1,962	213.490 ◀	0.109 ◀
Weapons Fabrication and Testing	8,487	1,311	192	45	5	-	-	-	-	-	-	10,040	15%	1,553	81.217	0.052
Other	6,209	396	37	28	2	-	-	-	-	-	-	6,672	7%	463	26.649	0.058
Totals	65,517	8,022	1,341	447	123	49	41	-	-	-	-	75,540	13%	10,023	744.734	0.074

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-7a. Collective TED by Site and Facility Type - 2013.

Site	Accelerator	Fuel/Uranium Enrichment	Fuel Fabrication	Fuel Processing	Maintenance and Support	Reactor	Research, General	Research, Fusion	Waste Processing/Management	Weapons Fabrication and Testing	Other	Totals
Ames Laboratory	-	-	-	-	-	-	0.730	-	-	-	-	0.730
Argonne National Laboratory	-	-	-	-	-	-	13.091	-	-	-	-	13.091
Brookhaven National Laboratory	4.530	-	-	-	1.850	0.035	0.121	-	0.452	-	-	6.988
Energy Technology Engineering Center	-	-	-	-	-	-	-	-	-	-	0.479	0.479
Fermi National Accelerator Laboratory	19.750	-	-	-	-	-	-	-	-	-	-	19.750
Hanford: Hanford Site	-	-	-	-	42.908	-	-	-	-	-	7.173	50.081
Hanford: Office of River Protection	-	-	-	-	3.872	-	-	-	11.903	-	2.453	18.228
Hanford: Pacific Northwest National Laboratory	-	-	-	-	-	-	14.550	-	-	-	-	14.550
Idaho National Laboratory	-	-	-	-	-	-	71.814	-	-	-	-	71.814
Kansas City Plant	-	-	-	-	-	-	-	-	-	0.001	-	0.001
Lawrence Berkeley National Laboratory	-	-	-	-	-	-	0.623	-	-	-	-	0.623
Lawrence Livermore National Laboratory	-	-	-	-	-	-	8.475	-	-	-	-	8.475
Los Alamos National Laboratory	0.122	-	-	-	136.881	-	0.209	-	-	-	1.522	138.734
National Renewable Energy Laboratory	-	-	-	-	-	-	0.068	-	-	-	-	0.068
Nevada National Security Site	-	-	-	-	3.218	-	-	-	-	-	-	3.218
New Brunswick Laboratory	-	-	-	-	-	-	0.012	-	-	-	-	0.012
Oak Ridge: East Tennessee Technology Park	-	0.040	-	-	-	-	-	-	-	-	-	0.040
Oak Ridge: Oak Ridge Institute for Science and Education	-	-	-	-	-	-	0.083	-	-	-	-	0.083
Oak Ridge: Oak Ridge National Laboratory	-	-	-	-	-	-	74.531	-	-	-	-	74.531
Oak Ridge: Y-12 National Security Complex	-	-	-	-	-	-	-	-	-	50.136	-	50.136
Office of Secure Transportation	-	-	-	-	-	-	-	-	-	-	-	-
Paducah Gaseous Diffusion Plant	-	0.289	-	-	-	-	6.161	-	-	-	-	6.450
Pantex Plant	-	-	-	-	-	-	-	-	-	21.829	-	21.829
Portsmouth Gaseous Diffusion Plant	-	-	-	-	-	-	8.634	-	-	-	-	8.634
Princeton Plasma Physics Laboratory	-	-	-	-	-	-	-	0.339	-	-	-	0.339
Sandia National Laboratories	0.240	-	-	-	0.147	1.261	0.654	0.010	0.305	0.573	1.145	4.335
Savannah River Site	-	-	-	11.100	4.373	-	4.550	-	67.345	0.149	1.019	88.536
Separations Process Research Unit	-	-	-	-	-	-	-	-	2.927	-	-	2.927
SLAC National Accelerator Laboratory	0.281	-	-	-	-	-	-	-	-	-	-	0.281
Thomas Jefferson National Accelerator Facility	1.503	-	-	-	-	-	-	-	-	-	-	1.503
Uranium Mill Tailings Remedial Action Project	-	-	-	-	-	-	-	-	7.407	-	-	7.407
Waste Isolation Pilot Plant	-	-	-	-	-	-	-	-	0.552	-	-	0.552
West Valley Demonstration Project	-	-	-	-	-	-	-	-	12.901	-	-	12.901
Service Center Personnel*	-	-	-	-	-	-	0.023	-	0.012	-	-	0.035
Totals	26.420	0.329	-	11.100	193.298	1.452	204.351	0.349	103.804	72.688	13.758	627.549

Note: Boxed values (gray background) indicate the greatest value in each column.

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

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-7b. Collective TED by Site and Facility Type - 2014.

Site	Accelerator	Fuel/Uranium Enrichment	Fuel Fabrication	Fuel Processing	Maintenance and Support	Reactor	Research, General	Research, Fusion	Waste Processing/Management	Weapons Fabrication and Testing	Other	Totals
Ames Laboratory	-	-	-	-	-	-	0.873	-	-	-	-	0.873
Argonne National Laboratory	-	-	-	-	-	-	16.492	-	-	-	-	16.492
Brookhaven National Laboratory	6.146	-	-	-	0.714	0.032	0.051	-	0.339	-	-	7.282
Energy Technology Engineering Center	-	-	-	-	-	-	-	-	-	-	0.489	0.489
Fermi National Accelerator Laboratory	11.070	-	-	-	-	-	-	-	-	-	-	11.070
Hanford: Hanford Site	-	-	-	-	38.977	-	-	-	-	-	1.738	40.715
Hanford: Office of River Protection	0.010	-	-	-	3.835	-	-	-	7.914	-	2.894	14.653
Hanford: Pacific Northwest National Laboratory	-	-	-	-	-	-	14.634	-	-	-	-	14.634
Idaho National Laboratory	-	-	-	-	-	-	86.202	-	-	-	-	86.202
Kansas City Plant	-	-	-	-	-	-	-	-	-	0.022	-	0.022
Lawrence Berkeley National Laboratory	-	-	-	-	-	-	0.463	-	-	-	-	0.463
Lawrence Livermore National Laboratory	-	-	-	-	-	-	8.353	-	-	-	-	8.353
Los Alamos National Laboratory	0.010	-	-	-	94.007	-	0.063	-	-	-	1.356	95.436
National Renewable Energy Laboratory	-	-	-	-	-	-	0.107	-	-	-	-	0.107
Nevada National Security Site	-	-	-	-	5.638	-	-	-	-	-	-	5.638
New Brunswick Laboratory	-	-	-	-	-	-	0.023	-	-	-	-	0.023
Oak Ridge: East Tennessee Technology Park	-	0.004	-	-	-	-	-	-	-	-	-	0.004
Oak Ridge: Oak Ridge Institute for Science and Education	-	-	-	-	-	-	0.210	-	-	-	-	0.210
Oak Ridge: Oak Ridge National Laboratory	-	-	-	-	-	-	71.304	-	-	-	-	71.304
Oak Ridge: Y-12 National Security Complex	-	-	-	-	-	-	-	-	-	-	59.296	59.296
Office of Secure Transportation	-	-	-	-	-	-	-	-	-	0.090	-	0.090
Paducah Gaseous Diffusion Plant	-	0.152	-	-	-	-	10.154	-	-	-	-	10.306
Pantex Plant	-	-	-	-	-	-	-	-	-	31.084	-	31.084
Portsmouth Gaseous Diffusion Plant	-	-	-	-	-	-	10.302	-	-	-	-	10.302
Princeton Plasma Physics Laboratory	-	-	-	-	-	-	-	0.693	-	-	-	0.693
Sandia National Laboratories	0.405	-	-	-	0.576	2.671	0.721	0.050	0.934	0.150	0.475	5.982
Savannah River Site	-	-	-	7.127	5.338	-	5.313	-	73.330	0.255	1.664	93.027
Separations Process Research Unit	-	-	-	-	-	-	-	-	9.338	-	-	9.338
SLAC National Accelerator Laboratory	0.246	-	-	-	-	-	-	-	-	-	-	0.246
Thomas Jefferson National Accelerator Facility	4.452	-	-	-	-	-	-	-	-	-	-	4.452
Uranium Mill Tailings Remedial Action Project	-	-	-	-	-	-	-	-	7.756	-	-	7.756
Waste Isolation Pilot Plant	-	-	-	-	-	-	-	-	0.034	-	-	0.034
West Valley Demonstration Project	-	-	-	-	-	-	-	-	13.424	-	-	13.424
Service Center Personnel*	-	-	-	-	-	-	0.103	-	-	-	-	0.103
Totals	22.339	0.156	-	7.127	149.085	2.703	225.368	0.743	113.069	90.897	8.616	620.103

Note: Boxed values (gray background) indicate the greatest value in each column.

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

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-7c. Collective TED by Site and Facility Type - 2015.

Site	Accelerator	Fuel/Uranium Enrichment	Fuel Fabrication	Fuel Processing	Maintenance and Support	Reactor	Research, General	Research, Fusion	Waste Processing/ Management	Weapons Fabrication and Testing	Other	Totals
Ames Laboratory	-	-	-	-	-	-	1.247	-	-	-	-	1.247
Argonne National Laboratory	-	-	-	-	-	-	14.767	-	-	-	-	14.767
Brookhaven National Laboratory	2.440	-	-	-	0.577	0.010	0.030	-	0.288	-	-	3.345
Energy Technology Engineering Center	-	-	-	-	-	-	-	-	-	-	0.068	0.068
Fermi National Accelerator Laboratory	16.640	-	-	-	-	-	-	-	-	-	-	16.640
Hanford: Hanford Site	-	-	-	-	57.571	-	-	-	-	-	5.041	62.612
Hanford: Office of River Protection	-	-	-	-	11.579	-	-	-	10.725	-	16.304	38.608
Hanford: Pacific Northwest National Laboratory	-	-	-	-	-	-	12.581	-	-	-	-	12.581
Idaho National Laboratory	-	-	-	-	-	-	123.232	-	-	-	-	123.232
Kansas City Plant	-	-	-	-	-	-	-	-	-	0.020	-	0.020
Lawrence Berkeley National Laboratory	-	-	-	-	-	-	0.796	-	-	-	-	0.796
Lawrence Livermore National Laboratory	-	-	-	-	-	-	7.602	-	-	-	-	7.602
Los Alamos National Laboratory	-	-	-	-	95.987	-	0.041	-	-	-	1.181	97.209
National Renewable Energy Laboratory	-	-	-	-	-	-	0.028	-	-	-	-	0.028
Nevada National Security Site	-	-	-	-	5.045	-	-	-	-	-	-	5.045
Oak Ridge: East Tennessee Technology Park	-	0.059	-	-	-	-	-	-	-	-	-	0.059
Oak Ridge: Oak Ridge Institute for Science and Education	-	-	-	-	-	-	0.122	-	-	-	-	0.122
Oak Ridge: Oak Ridge National Laboratory	-	-	-	-	-	-	35.784	-	24.018	-	-	59.802
Oak Ridge: Y-12 National Security Complex	-	-	-	-	-	-	-	-	-	57.783	-	57.783
Office of Secure Transportation	-	-	-	-	-	-	-	-	-	0.029	-	0.029
Paducah Gaseous Diffusion Plant	-	0.270	-	-	-	-	5.256	-	1.532	-	-	7.058
Pantex Plant	-	-	-	-	-	-	-	-	-	22.618	-	22.618
Portsmouth Gaseous Diffusion Plant	-	-	-	-	-	-	4.716	-	-	-	-	4.716
Princeton Plasma Physics Laboratory	-	-	-	-	-	-	-	0.623	-	-	-	0.623
Sandia National Laboratories	0.350	-	-	-	0.258	2.397	0.917	0.024	0.472	0.197	0.669	5.284
Savannah River Site	-	-	-	7.374	5.839	-	5.983	-	71.719	0.570	3.386	94.871
Separations Process Research Unit	-	-	-	-	-	-	-	-	69.291	-	-	69.291
SLAC National Accelerator Laboratory	0.069	-	-	-	-	-	-	-	-	-	-	0.069
Thomas Jefferson National Accelerator Facility	3.153	-	-	-	-	-	-	-	-	-	-	3.153
Uranium Mill Tailings Remedial Action Project	-	-	-	-	-	-	-	-	7.177	-	-	7.177
Waste Isolation Pilot Plant	-	-	-	-	-	-	-	-	0.161	-	-	0.161
West Valley Demonstration Project	-	-	-	-	-	-	-	-	28.107	-	-	28.107
Service Center Personnel*	-	-	-	-	-	-	0.011	-	-	-	-	0.011
Totals	22.652	0.329	-	7.374	176.856	2.407	213.113	0.647	213.490	81.217	26.649	744.734

Note: Boxed values (gray background) indicate the greatest value in each column.

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

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-8. Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Accelerator Facilities, 2015.

ACCELERATORS

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

Site/Contractor	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Fermi National Accelerator Lab	1,066	179	45	11	-	-	-	-	-	-	-	1,301	18% ◀	235 ◀	16.640 ◀	0.071 ◀
Thomas Jefferson Natl. Accel. Facil.	1,115	35	9	3	-	-	-	-	-	-	-	1,162	4%	47	3.153	0.067
SLAC National Accelerator Laboratory	1,968	2	-	-	-	-	-	-	-	-	-	1,970	0%	2	0.069	0.035
Brookhaven National Laboratory	2,066	77	5	-	-	-	-	-	-	-	-	2,148 ◀	4%	82	2.440	0.030
Sandia National Laboratories	419	17	-	-	-	-	-	-	-	-	-	436	4%	17	0.350	0.021
Los Alamos National Laboratory	36	-	-	-	-	-	-	-	-	-	-	36	0%	0	0.000	0.000
Office of Secure Transportation	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Thomas Jefferson Site Office-DOE Employees	6	-	-	-	-	-	-	-	-	-	-	6	0%	0	0.000	0.000
Washington River Protection Solutions LLC	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Totals	6,678	310	59	14	-	-	-	-	-	-	-	7,061	5%	383	22.652	0.059

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-9. Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Fuel Facilities, 2015.

FUEL FACILITIES

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

Site/Contractor	Less than Meas.	Meas. 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
ENRICHMENT																
URS/CH2MHill - Oak Ridge (UCOR): ETPP	355	4	-	-	-	-	-	-	-	-	-	359	1%	4	0.059	0.015
Swift and Staley Team	400	39	-	-	-	-	-	-	-	-	-	439	9%	39	0.270	0.007
National Strategic Protective Services: NSPS	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Totals	756	43	-	-	-	-	-	-	-	-	-	799	5%	43	0.329	0.008
FABRICATION																
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROCESSING																
Savannah River Nuclear Solutions	461	157	12	-	-	-	-	-	-	-	-	630	27%	169	6.236	0.037
SRNS Construction	31	25	1	-	-	-	-	-	-	-	-	57	46%	26	0.751	0.029
SRNS Service Subs	25	7	-	-	-	-	-	-	-	-	-	32	22%	7	0.130	0.019
Wackenhut Services Inc. - SR	109	12	-	-	-	-	-	-	-	-	-	121	10%	12	0.232	0.019
Bechtel Construction - SR	1	1	-	-	-	-	-	-	-	-	-	2	50%	1	0.009	0.009
Savannah River Field Office	15	3	-	-	-	-	-	-	-	-	-	18	17%	3	0.016	0.005
Los Alamos National Laboratory	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Misc. DOE Contractors - SR	2	-	-	-	-	-	-	-	-	-	-	2	0%	0	0.000	0.000
SR construction - Parsons Subcontractors	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
SRNS Construction Subs	3	-	-	-	-	-	-	-	-	-	-	3	0%	0	0.000	0.000
Totals	649	205	13	-	-	-	-	-	-	-	-	867	25%	218	7.374	0.034

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-10. Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Maintenance and Support, 2015.

MAINTENANCE AND SUPPORT

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

Site/Contractor	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
CH2M Hill Plateau Remediation Company (CHPRC)	825	334	39	19	17	15	8	-	-	-	-	1,257	34%	432	53.948	0.125
Los Alamos National Laboratory	5,111	773	189	59	24	5	3	-	-	-	-	6,164	17%	1,053	95.896	0.091
SRR Operations	5	6	1	1	-	-	-	-	-	-	-	13	62%	8	0.654	0.082
Advanced Technologies and Laboratories Int'l	13	12	4	1	-	-	-	-	-	-	-	30	57%	17	1.328	0.078
Sandia National Laboratories	383	3	1	-	-	-	-	-	-	-	-	387	1%	4	0.258	0.065
NSTec - Las Vegas	593	47	10	-	-	-	-	-	-	-	-	650	9%	57	3.254	0.057
SRNS Construction	16	6	1	-	-	-	-	-	-	-	-	23	30%	7	0.360	0.051
NSTec - NTS	862	23	4	-	-	-	-	-	-	-	-	889	3%	27	1.294	0.048
NNSA Nevada Site Office	143	10	-	-	-	-	-	-	-	-	-	153	7%	10	0.418	0.042
Washington River Protection Solutions LLC	533	224	22	1	-	-	-	-	-	-	-	780	32%	247	10.151	0.041
Savannah River Nuclear Solutions	276	132	5	-	-	-	-	-	-	-	-	413	33%	137	4.600	0.034
Centerra-Nevada	218	1	-	-	-	-	-	-	-	-	-	219	0%	1	0.028	0.028
Mission Support Alliance	930	125	9	-	-	-	-	-	-	-	-	1,064	13%	134	3.623	0.027
Wackenhut Services Inc. - SR	25	2	-	-	-	-	-	-	-	-	-	27	7%	2	0.039	0.020
Centerra-Nevada Subcontractors Lockheed	18	1	-	-	-	-	-	-	-	-	-	19	5%	1	0.017	0.017
Navarro-Intera LLC	42	2	-	-	-	-	-	-	-	-	-	44	5%	2	0.034	0.017
Wastren Advantage, Inc.	15	6	-	-	-	-	-	-	-	-	-	21	29%	6	0.100	0.017
Savannah River Field Office	39	5	-	-	-	-	-	-	-	-	-	44	11%	5	0.077	0.015
Brookhaven National Laboratory	742	41	-	-	-	-	-	-	-	-	-	783	5%	41	0.577	0.014
NNSA Los Alamos Site Office	108	7	-	-	-	-	-	-	-	-	-	115	6%	7	0.084	0.012
SRNS Construction Subs	4	5	-	-	-	-	-	-	-	-	-	9	56%	5	0.062	0.012
SRR Service Subs	2	1	-	-	-	-	-	-	-	-	-	3	33%	1	0.010	0.010
Protection Technologies Los Alamos	8	1	-	-	-	-	-	-	-	-	-	9	11%	1	0.007	0.007
SRNS Service Subs	60	5	-	-	-	-	-	-	-	-	-	65	8%	5	0.037	0.007
Argonne National Laboratory	3	-	-	-	-	-	-	-	-	-	-	3	0%	0	0.000	0.000
Battelle - Pantex	20	-	-	-	-	-	-	-	-	-	-	20	0%	0	0.000	0.000
Battelle - PNNL	26	-	-	-	-	-	-	-	-	-	-	26	0%	0	0.000	0.000
Bechtel Construction - SR	2	-	-	-	-	-	-	-	-	-	-	2	0%	0	0.000	0.000
Centerra-Nevada Subcontractors	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
DOE Headquarters	103	-	-	-	-	-	-	-	-	-	-	103	0%	0	0.000	0.000
DOE-Richland Field Office	5	-	-	-	-	-	-	-	-	-	-	5	0%	0	0.000	0.000
Misc. DOE Contractors - SR	9	-	-	-	-	-	-	-	-	-	-	9	0%	0	0.000	0.000
NNSA Albuquerque Complex	13	-	-	-	-	-	-	-	-	-	-	13	0%	0	0.000	0.000
NSTec - Livermore Operations	6	-	-	-	-	-	-	-	-	-	-	6	0%	0	0.000	0.000
NSTec - Los Alamos	19	-	-	-	-	-	-	-	-	-	-	19	0%	0	0.000	0.000
NSTec - NTS subcontractors	71	-	-	-	-	-	-	-	-	-	-	71	0%	0	0.000	0.000
NSTec - Special Tech. Lab	19	-	-	-	-	-	-	-	-	-	-	19	0%	0	0.000	0.000
Nye County Sheriff	5	-	-	-	-	-	-	-	-	-	-	5	0%	0	0.000	0.000
Office of Secure Transportation	2	-	-	-	-	-	-	-	-	-	-	2	0%	0	0.000	0.000
UT-Battelle ORNL	6	-	-	-	-	-	-	-	-	-	-	6	0%	0	0.000	0.000
Washington Closure Hanford LLC (WCH)	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Westinghouse Hanford Company	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Totals	11,283	1,772	285	81	41	20	11	-	-	-	-	13,493	16%	2,210	176.856	0.080

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-11. Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Reactor Facilities, 2015.

REACTOR FACILITIES																
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)																
Site/Contractor	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Sandia National Laboratories	54	15	9	1	-	-	-	-	-	-	-	79	32%	25	2.397	0.096
Brookhaven National Laboratory	13	1	-	-	-	-	-	-	-	-	-	14	7%	1	0.01	0.01
Totals	67	16	9	1	-	-	-	-	-	-	-	93	28%	26	2.407	0.093

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-12. Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Research, General, 2015.

RESEARCH, GENERAL

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

Site/Contractor	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
ICP - CWI - Support	54	6	2	3	1	-	-	-	-	-	-	66	18%	12	2.342	0.195
Argonne National Laboratory	1,867	50	16	7	5	2	2	-	-	-	-	1,949	4%	82	14.767	0.180
ICP - CWI - Projects	664	172	40	36	23	6	-	-	-	-	-	941	29%	277	43.676	0.158
ICP - CWI - Subcontractors	220	45	4	7	4	1	-	-	-	-	-	281	22%	61	8.219	0.135
INL - BEA LLC - Security	54	8	5	1	-	-	-	-	-	-	-	68	21%	14	1.736	0.124
UT-Battelle ORNL	3,126	287	54	22	11	3	-	-	-	-	-	3,503	11%	377	33.251	0.088
BWCS-Portsmouth	234	17	7	2	-	-	-	-	-	-	-	260	10%	26	2.274	0.087
BBWI Service Subs	613	163	80	8	-	-	-	-	-	-	-	864	29%	251	20.633	0.082
Fluor/B&W - Portsmouth	2,089	24	9	-	-	-	-	-	-	-	-	2,122	2%	33	2.442	0.074
Lawrence Livermore National Laboratory	7,753	84	12	1	-	1	1	-	-	-	-	7,852	1%	99	7.219	0.073
Lawrence Berkeley Laboratory	855	9	2	-	-	-	-	-	-	-	-	866	1%	11	0.796	0.072
INL - BEA LLC - Research	259	38	8	2	-	-	-	-	-	-	-	307	16%	48	3.379	0.070
ICP - CWI - Construction Subs	12	1	-	-	-	-	-	-	-	-	-	13	8%	1	0.068	0.068
INL - BEA LLC - Services	2,757	468	87	33	2	-	-	-	-	-	-	3,347	18%	590	39.146	0.066
B & W Conversion Services LLC - Paducah	177	56	13	-	-	-	-	-	-	-	-	246	28%	69	3.978	0.058
Sandia National Laboratories	345	13	3	-	-	-	-	-	-	-	-	361	4%	16	0.917	0.057
INL - BEA LLC - Production	350	56	12	2	-	-	-	-	-	-	-	420	17%	70	3.927	0.056
Lawrence Livermore National Laboratory Nevada	195	6	1	-	-	-	-	-	-	-	-	202	3%	7	0.383	0.055
URS/CH2MHill - Oak Ridge (UCOR): ETPP	212	56	4	1	-	-	-	-	-	-	-	273	22%	61	2.533	0.042
Los Alamos National Laboratory	63	1	-	-	-	-	-	-	-	-	-	64	2%	1	0.041	0.041
Ames Laboratory (Iowa State)	119	39	-	-	-	-	-	-	-	-	-	158	25%	39	1.247	0.032
BATTELLE - PNNL	1,690	388	28	2	-	-	-	-	-	-	-	2,108	20%	418	11.669	0.028
Battelle -PNNL- Subs	237	29	-	1	-	-	-	-	-	-	-	267	11%	30	0.812	0.027
Savannah River Nuclear Solutions	482	210	10	1	-	-	-	-	-	-	-	703	31%	221	5.631	0.025
Brookhaven National Laboratory	10	2	-	-	-	-	-	-	-	-	-	12	17%	2	0.030	0.015
Idaho Field Office	215	7	-	-	-	-	-	-	-	-	-	222	3%	7	0.106	0.015
LATA Environmental Services of Kentucky	420	12	-	-	-	-	-	-	-	-	-	432	3%	12	0.179	0.015
SRNS Construction	47	11	-	-	-	-	-	-	-	-	-	58	19%	11	0.138	0.013
Oak Ridge Institue for Science & Education	81	10	-	-	-	-	-	-	-	-	-	91	11%	10	0.122	0.012
Univ. of Georgia Ecology Laboratory	10	1	-	-	-	-	-	-	-	-	-	11	9%	1	0.012	0.012
Isotek (Bldg 3019)	66	1	-	-	-	-	-	-	-	-	-	67	1%	1	0.011	0.011
SRNS Service Subs	42	16	-	-	-	-	-	-	-	-	-	58	28%	16	0.141	0.009
FLUOR Paducah Deactivation Project	1,241	137	-	-	-	-	-	-	-	-	-	1,378	10%	137	1.099	0.008
Pacific Northwest Site Office	19	13	-	-	-	-	-	-	-	-	-	32	41%	13	0.100	0.008
Wackenhut Services Inc. - SR	64	3	-	-	-	-	-	-	-	-	-	67	4%	3	0.024	0.008
National Renewable Energy Laboratory	4	4	-	-	-	-	-	-	-	-	-	8	50%	4	0.028	0.007
SRR Operations	4	1	-	-	-	-	-	-	-	-	-	5	20%	1	0.007	0.007
Misc. DOE Contractors - SR	2	4	-	-	-	-	-	-	-	-	-	6	67%	4	0.025	0.006
SRNS Construction Subs	5	1	-	-	-	-	-	-	-	-	-	6	17%	1	0.005	0.005
Bechtel Construction - SR	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Lawrence Livermore National Laboratories	91	-	-	-	-	-	-	-	-	-	-	91	0%	0	0.000	0.000
National Strategic Protective Services: NSPS	101	-	-	-	-	-	-	-	-	-	-	101	0%	0	0.000	0.000
New Brunswick Laboratory - Research	20	-	-	-	-	-	-	-	-	-	-	20	0%	0	0.000	0.000
NNSA Los Alamos Site Office	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Savannah River Field Office	9	-	-	-	-	-	-	-	-	-	-	9	0%	0	0.000	0.000
SRR Service Subs	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
USEC - Oak Ridge	92	-	-	-	-	-	-	-	-	-	-	92	0%	0	0.000	0.000
Wastren - Portsmouth Services	168	-	-	-	-	-	-	-	-	-	-	168	0%	0	0.000	0.000
Totals	27,141	2,449	397	129	46	13	3	-	-	-	-	30,178	10%	3,037	213.113	0.070

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-13. Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Research, Fusion, 2015.

RESEARCH, FUSION

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

Site/Contractor	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Sandia National Laboratories	56	2	-	-	-	-	-	-	-	-	-	58	3%	2	0.024	0.012 ◀
Princeton Plasma Physics Laboratory	254	126	-	-	-	-	-	-	-	-	-	380 ◀	33% ◀	126 ◀	0.623 ◀	0.005
Los Alamos National Laboratory	2	-	-	-	-	-	-	-	-	-	-	2	0%	0	0.000	0.000
Totals	312	128	-	-	-	-	-	-	-	-	-	440	29%	128	0.647	0.005

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-14. Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Waste Processing, 2015.

WASTE PROCESSING

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

Site/Contractor	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
SPRU-NY (Building remediation)	82	48	19	27	14	14	27	-	-	-	-	231	65%	149	69.291	0.465
West Valley Nuclear Services Inc.	241	39	37	31	13	2	-	-	-	-	-	363	34%	122	28.107	0.230
TRU Waste Processing Center - ORNL	94	70	55	33	2	-	-	-	-	-	-	254	63%	160	24.018	0.150
Sandia National Laboratories	51	2	2	-	-	-	-	-	-	-	-	55	7%	4	0.472	0.118
Energy Solutions - UMTRA Project - Moab	42	59	22	5	-	-	-	-	-	-	-	128	67%	86	7.177	0.083
Bechtel Construction - SR	153	236	57	23	-	-	-	-	-	-	-	469	67%	316	24.486	0.077
Savannah River Nuclear Solutions	316	131	31	10	-	-	-	-	-	-	-	488	35%	172	11.337	0.066
SRR Operations	906	383	95	15	-	-	-	-	-	-	-	1,399	35%	493	30.895	0.063
SRNS Construction	53	27	3	2	-	-	-	-	-	-	-	85	38%	32	1.758	0.055
Washington River Protection Solutions LLC	725	207	23	3	-	-	-	-	-	-	-	958	24%	233	10.561	0.045
Advanced Technologies and Laboratories Int'l	19	4	-	-	-	-	-	-	-	-	-	23	17%	4	0.151	0.038
Wackenhut Services Inc. - SR	179	48	2	-	-	-	-	-	-	-	-	229	22%	50	1.893	0.038
SRR Service Subs	37	9	1	-	-	-	-	-	-	-	-	47	21%	10	0.371	0.037
Brookhaven National Laboratory	45	8	-	-	-	-	-	-	-	-	-	53	15%	8	0.288	0.036
SRNS Service Subs	62	21	1	-	-	-	-	-	-	-	-	84	26%	22	0.770	0.035
Savannah River Field Office	44	3	-	-	-	-	-	-	-	-	-	47	6%	3	0.086	0.029
Misc. S.R.S. Const. Subcontractors	14	4	-	-	-	-	-	-	-	-	-	18	22%	4	0.100	0.025
Misc. DOE Contractors - SR	3	1	-	-	-	-	-	-	-	-	-	4	25%	1	0.023	0.023
B & W Conversion Services LLC - Paducah	211	79	1	-	-	-	-	-	-	-	-	291	27%	80	1.532	0.019
Washington TRU Solutions LLC-WIPP	549	11	-	-	-	-	-	-	-	-	-	560	2%	11	0.149	0.014
Wastren Advantage, Inc.	18	1	-	-	-	-	-	-	-	-	-	19	5%	1	0.013	0.013
WTS Subcontractors - WIPP	44	1	-	-	-	-	-	-	-	-	-	45	2%	1	0.012	0.012
Bechtel National Corporation	2	-	-	-	-	-	-	-	-	-	-	2	0%	0	0.000	0.000
Carlsbad Field Office	18	-	-	-	-	-	-	-	-	-	-	18	0%	0	0.000	0.000
DOE-Richland Field Office	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Los Alamos National Lab - WIPP	4	-	-	-	-	-	-	-	-	-	-	4	0%	0	0.000	0.000
Los Alamos National Laboratory	3	-	-	-	-	-	-	-	-	-	-	3	0%	0	0.000	0.000
Mission Support Alliance	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Santa Fe Protective Services (WIPP)	4	-	-	-	-	-	-	-	-	-	-	4	0%	0	0.000	0.000
SR construction - Parsons	2	-	-	-	-	-	-	-	-	-	-	2	0%	0	0.000	0.000
SR construction - Parsons Subcontractors	7	-	-	-	-	-	-	-	-	-	-	7	0%	0	0.000	0.000
SRNS Construction Subs	4	-	-	-	-	-	-	-	-	-	-	4	0%	0	0.000	0.000
Washington Closure Hanford LLC (WCH)	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Totals	3,935	1,392	349	149	29	16	27	-	-	-	-	5,897	33%	1,962	213.490	0.109

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-15. Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Weapons Fabrication, 2015.

WEAPONS FABRICATION

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

Site/Contractor	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
SRNS Construction	33	3	-	1	-	-	-	-	-	-	-	37	11%	4	0.333	0.083
CNS, LLC - Pantex	2,848	227	54	16	3	-	-	-	-	-	-	3,148	10%	300	22.604	0.075
CNS, LLC - Y-12	4,528	1,030	138	28	2	-	-	-	-	-	-	5,726	21%	1,198	57.746	0.048
Sandia National Laboratories	130	9	-	-	-	-	-	-	-	-	-	139	6%	9	0.197	0.022
URS/CH2MHill - Oak Ridge (UCOR): Y-12	89	2	-	-	-	-	-	-	-	-	-	91	2%	2	0.037	0.019
Office of Secure Transportation	336	2	-	-	-	-	-	-	-	-	-	338	1%	2	0.029	0.015
PXSO/NNSA and DOE Couriers	13	1	-	-	-	-	-	-	-	-	-	14	7%	1	0.014	0.014
SRNS Service Subs	9	1	-	-	-	-	-	-	-	-	-	10	10%	1	0.010	0.010
Savannah River Nuclear Solutions	282	24	-	-	-	-	-	-	-	-	-	306	8%	24	0.227	0.009
Kansas City Plant	88	12	-	-	-	-	-	-	-	-	-	100	12%	12	0.020	0.002
CNS, LLC - Security	73	-	-	-	-	-	-	-	-	-	-	73	0%	0	0.000	0.000
CNS, LLC - Subcontractors	53	-	-	-	-	-	-	-	-	-	-	53	0%	0	0.000	0.000
Los Alamos National Laboratory	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Savannah River Field Office	3	-	-	-	-	-	-	-	-	-	-	3	0%	0	0.000	0.000
SRR Operations	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Totals	8,487	1,311	192	45	5	-	-	-	-	-	-	10,040	15%	1,553	81.217	0.052

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-16. Distribution of TED by Facility Type Listed in Descending Order of Average Measurable TED for Other, 2015.

OTHER																
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)																
Site/Contractor	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Washington River Protection Solutions LLC	483	83	25	22	2	-	-	-	-	-	-	615	21%	132	16.057	0.122
SRNS Construction	84	28	1	3	-	-	-	-	-	-	-	116	28%	32	1.865	0.058
Washington Closure Hanford LLC (WCH)	782	49	3	3	-	-	-	-	-	-	-	837	7%	55	2.907	0.053
SRNS Service Subs	73	11	2	-	-	-	-	-	-	-	-	86	15%	13	0.634	0.049
Office of River Protection	101	5	1	-	-	-	-	-	-	-	-	107	6%	6	0.221	0.037
DOE-Richland Field Office	437	18	2	-	-	-	-	-	-	-	-	457	4%	20	0.683	0.034
CH2M Hill Plateau Remediation Company (CHPRC)	284	43	2	-	-	-	-	-	-	-	-	329	14%	45	1.450	0.032
Sandia National Laboratories	437	21	1	-	-	-	-	-	-	-	-	459	5%	22	0.669	0.030
Cabrera Services	3	3	-	-	-	-	-	-	-	-	-	6	50%	3	0.068	0.023
Wackenhut Services Inc. - SR	9	1	-	-	-	-	-	-	-	-	-	10	10%	1	0.019	0.019
Los Alamos National Laboratory	3,036	73	-	-	-	-	-	-	-	-	-	3,109	2%	73	1.181	0.016
Savannah River Nuclear Solutions	306	55	-	-	-	-	-	-	-	-	-	361	15%	55	0.839	0.015
Advanced Technologies and Laboratories Int'l	12	1	-	-	-	-	-	-	-	-	-	13	8%	1	0.013	0.013
Wastren Advantage, Inc.	5	1	-	-	-	-	-	-	-	-	-	6	17%	1	0.013	0.013
Savannah River Field Office	16	3	-	-	-	-	-	-	-	-	-	19	16%	3	0.029	0.010
Mission Support Alliance	70	1	-	-	-	-	-	-	-	-	-	71	1%	1	0.001	0.001
Battelle - PNNL	5	-	-	-	-	-	-	-	-	-	-	5	0%	0	0.000	0.000
Bechtel Construction - SR	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
Bechtel National Corporation	21	-	-	-	-	-	-	-	-	-	-	21	0%	0	0.000	0.000
CSC Hanford Occupational Health Services	27	-	-	-	-	-	-	-	-	-	-	27	0%	0	0.000	0.000
Misc. DOE Contractors - SR	3	-	-	-	-	-	-	-	-	-	-	3	0%	0	0.000	0.000
NNSA Los Alamos Site Office	2	-	-	-	-	-	-	-	-	-	-	2	0%	0	0.000	0.000
Office of Secure Transportation	4	-	-	-	-	-	-	-	-	-	-	4	0%	0	0.000	0.000
Protection Technologies Los Alamos	1	-	-	-	-	-	-	-	-	-	-	1	0%	0	0.000	0.000
SRNS Construction Subs	2	-	-	-	-	-	-	-	-	-	-	2	0%	0	0.000	0.000
SRR Operations	3	-	-	-	-	-	-	-	-	-	-	3	0%	0	0.000	0.000
SRR Service Subs	2	-	-	-	-	-	-	-	-	-	-	2	0%	0	0.000	0.000
Totals	6,209	396	37	28	2	-	-	-	-	-	-	6,672	7%	463	26.649	0.058

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report
Exhibit B-17. Internal Dose by Facility Type and Nuclide, 2013-2015.

Facility Type	Nuclide*	No. of Individuals with Measurable CED** 2013	No. of Individuals with Measurable CED** 2014	No. of Individuals with Measurable CED** 2015	Collective CED Dose (person-rem) 2013	Collective CED Dose (person-rem) 2014	Collective CED Dose (person-rem) 2015	Average Measurable CED (rem) 2013	Average Measurable CED (rem) 2014	Average Measurable CED (rem) 2015
Accelerator	Total	-	-	-	-	-	-	-	-	-
Fuel Fabrication	Total	-	-	-	-	-	-	-	-	-
Fuel Processing	Plutonium	4	3	2	0.013	0.011	0.006	0.003	0.004	0.003
	Total	4	3	2	0.013	0.011	0.006	0.003	0.004	0.003
Fuel/Uranium Enrichment	Uranium	1	-	-	0.012	-	-	0.012	-	-
	Total	1	-	-	0.012	-	-	0.012	-	-
Maintenance and Support	Americium	-	1	3	-	0.048	0.027	-	0.048	0.009
	Hydrogen-3	5	3	16	0.005	0.007	0.035	0.001	0.002	0.002
	Plutonium	5	2	2	1.697	0.095	0.014	0.339 ◀	0.048	0.007
	Uranium	2	11	13	0.106	0.040	0.101	0.053	0.004	0.008
	Total	12	17	34	1.808	0.190	0.177	0.151	0.011	0.005
Other	Americium	3	-	-	0.008	-	-	0.003	-	-
	Uranium	-	1	1	-	0.001	0.001	-	0.001	0.001
	Total	3	1	1	0.008	0.001	0.001	0.003	0.001	0.001
Reactor	Total	-	-	-	-	-	-	-	-	-
Research, Fusion	Total	-	-	-	-	-	-	-	-	-
Research, General	Americium	12	16	4	0.386	0.417	0.092	0.032	0.026	0.023
	Californium	1	1	-	0.032	0.010	-	0.032	0.010	-
	Hydrogen-3	2	4	1	0.008	0.010	0.012	0.004	0.003	0.012
	Mixed	1	4	2	0.012	0.274	0.255	0.012	0.069	0.128 ◀
	Other	1	2	-	0.012	0.089	-	0.012	0.045	-
	Plutonium	6	3	1	0.186	0.272	0.017	0.031	0.091 ◀	0.017
	Uranium	1	10	4	0.012	0.659	0.086	0.012	0.066	0.022
	Total	24	40	16	0.648	1.731	0.542	0.027	0.043	0.034
Waste Processing/Mgmt.	Americium	-	2	-	-	0.035	-	-	0.018	-
	Mixed	-	-	1	-	-	0.015	-	-	0.015
	Plutonium	1	2	2	0.003	0.120	0.069	0.003	0.060	0.035
	Uranium	45	48	45	2.925	2.974	2.104	0.065	0.062	0.047
	Total	46	52	48	2.928	3.129	2.188	0.064	0.060	0.046
Weapons Fab. and Testing	Hydrogen-3	7	1	2	0.035	0.006	0.007	0.005	0.006	0.004
	Mixed	44	48	30	0.394	1.277	0.681	0.009	0.027	0.023
	Uranium	1,081 ◀	1,038 ◀	1,013 ◀	38.841 ◀	47.737 ◀	47.815 ◀	0.036	0.046	0.047
	Total	1,132	1,087	1,045	39.270	49.020	48.503	0.035	0.045	0.046
	Totals	1,222	1,200	1,146	44.687	54.082	51.417	0.037	0.045	0.045

Note: Boxed values (gray background) indicate the greatest value in each column.

*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.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-18a. Distribution of TED by Labor Category - 2013.

TOTAL EFFECTIVE DOSE (TED)																
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)																
Labor Category	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Agriculture	61		1									62	2%	1	0.147	0.147 ◀
Construction	3,031	953	142	40	2	1						4,169	27%	1,138	63.352	0.056
Laborers	988	242	54	7								1,291	24%	303	17.652	0.058
Management	6,959	627	52	19	1							7,658	9%	699	28.638	0.041
Miscellaneous	4,429	578	79	34		1						5,121	14%	692	39.304	0.057
Production	2,061	1,057	212	56	7	5	6					3,404	39% ◀	1,343	103.059	0.077
Scientists	18,733	1,818	130	48	6	6						20,741 ◀	10%	2,008 ◀	87.729	0.044
Service	3,435	420	20	3								3,878	11%	443	14.857	0.034
Technicians	6,317	1,418	331	124	32	14	3					8,239	23%	1,922	175.760 ◀	0.091
Transport	1,078	67	20	9								1,174	8%	96	8.678	0.090
Unknown	14,585	972	205	81		1						15,844	8%	1,259	88.373	0.070
Totals	61,677	8,152	1,246	421	48	28	9					71,581	14%	9,904	627.549	0.063

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report
Exhibit B-18b. Distribution of TED by Labor Category - 2014.

TOTAL EFFECTIVE DOSE (TED)																
Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)																
Labor Category	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Agriculture	56	1										57	2%	1	0.050	0.050
Construction	3,348	903	164	59	5	2						4,481	25%	1,133	76.127	0.067
Laborers	1,010	237	52	17	6							1,322	24%	312	24.592	0.079
Management	6,374	587	39	14	1							7,015	9%	641	24.144	0.038
Miscellaneous	8,783	654	111	19	3	1						9,571	8%	788	42.451	0.054
Production	2,035	937	215	90	14	3						3,294	38%	1,259	106.103	0.084
Scientists	18,416	1,705	147	23	3	3						20,297	9%	1,881	73.307	0.039
Service	4,027	407	23	6								4,463	10%	436	14.810	0.034
Technicians	6,048	1,336	345	129	25	6	6					7,895	23%	1,847	168.229	0.091
Transport	1,087	47	14	13	2							1,163	7%	76	8.872	0.117
Unknown	14,760	893	147	74	13							15,887	7%	1,127	81.418	0.072
Totals	65,944	7,707	1,257	444	72	15	6					75,445	13%	9,501	620.103	0.065

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report
Exhibit B-18c. Distribution of TED by Labor Category - 2015.

TOTAL EFFECTIVE DOSE (TED)

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

Labor Category	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Agriculture	70	5										75	7%	5	0.126	0.025
Construction	3,434	1,050	204	66	9	2	1					4,766	28%	1,332	92.133	0.069
Laborers	945	179	66	48	20	11	1					1,270	26%	325	57.799	0.178 ◀
Management	6,815	687	50	16	1		1					7,570	10%	755	28.745	0.038
Miscellaneous	4,315	363	114	34	6							4,832	11%	517	43.809	0.085
Production	2,328	963	213	68	27	8	7					3,614	36% ◀	1,286	119.379	0.093
Scientists	19,805	1,938	152	44	2	1	1					21,943 ◀	10%	2,138 ◀	85.592	0.040
Service	4,585	515	36	10	1	1						5,148	11%	563	23.077	0.041
Technicians	6,624	1,371	371	119	52	24	30					8,591	23%	1,967	233.457 ◀	0.119
Transport	1,019	72	23	6	3	1						1,124	9%	105	10.042	0.096
Unknown	15,577	879	112	36	2	1						16,607	6%	1,030	50.575	0.049
Totals	65,517	8,022	1,341	447	123	49	41					75,540	13%	10,023	744.734	0.074

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-19. Internal Dose by Labor Category, 2013-2015.

Labor Category	No. of Individuals with Measurable CED* 2013	No. of Individuals with Measurable CED* 2014	No. of Individuals with Measurable CED* 2015	Collective CED Dose (person-rem) 2013	Collective CED Dose (person-rem) 2014	Collective CED Dose (person-rem) 2015	Average Measurable CED (rem) 2013	Average Measurable CED (rem) 2014	Average Measurable CED (rem) 2015
Construction	232	224	193	6.695	8.657	8.542	0.029	0.039	0.044
Laborers	53	59	64	3.134	4.227	4.929	0.059	0.072	0.077 ◀
Management	106	95	94	3.714	3.581	4.541	0.035	0.038	0.048
Miscellaneous	15	20	9	0.836	0.649	0.221	0.056	0.032	0.025
Production	338 ◀	329 ◀	325 ◀	15.073 ◀	20.191 ◀	18.847 ◀	0.045	0.061	0.058
Scientists	177	166	171	4.196	5.044	4.130	0.024	0.030	0.024
Service	43	36	33	1.684	1.621	1.166	0.039	0.045	0.035
Technicians	119	121	111	5.264	4.727	4.288	0.044	0.039	0.039
Transport	30	27	27	2.026	2.214	1.465	0.068 ◀	0.082 ◀	0.054
Unknown	109	123	119	2.065	3.171	3.288	0.019	0.026	0.028
Totals	1,222	1,200	1,146	44.687	54.082	51.417	0.037	0.045	0.045

Note: Boxed values (gray background) indicate the greatest value in each column.

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

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-20. Dose Distribution by Labor Category and Occupation, 2015.

Labor Category	Occupation	Less than Meas	Meas 0 - 0.10	0.10 - 0.25	0.25 - 0.50	0.50 - 0.75	0.75 - 1.00	1 - 2	2 - 3	3 - 4	4 - 5	>5	Total Monitored	Percent of Monitored with Meas. TED	No. with Meas. TED	Collective TED (Person-rem)	Avg. Meas. TED (rem)
Agriculture	Forest Workers	-	3	-	-	-	-	-	-	-	-	-	3	100%	3	0.056	0.019
	Groundskeepers	54	2	-	-	-	-	-	-	-	-	-	56	4%	2	0.070	0.035
	Misc. Agriculture	16	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-
Construction	Carpenters	264	86	35	18	-	1	-	-	-	-	-	404	35%	140	16.033	0.115
	Electricians	1,153	252	35	10	4	-	-	-	-	-	-	1,454	21%	301	17.270	0.057
	Masons	15	13	1	-	-	-	-	-	-	-	-	29	48%	14	0.840	0.060
	Mechanics/Repairers	488	158	34	4	-	-	-	-	-	-	-	684	29%	196	10.753	0.055
	Miners/Drillers	85	2	-	-	-	-	-	-	-	-	-	87	2%	2	0.033	0.016
	Misc. Repair/Construction	958	387	61	12	1	-	-	-	-	-	-	1,419	32%	461	24.541	0.053
	Painters	115	30	2	-	2	-	-	-	-	-	-	149	23%	34	2.281	0.067
	Pipe Fitter	356	122	36	22	2	1	1	-	-	-	-	540	34%	184	20.382	0.111
Laborers	Handlers/Laborers/Helpers	945	179	66	48	20	11	1	-	-	-	-	1,270	26%	325	57.799	0.178
Management	Admin. Support & Clerical Sec.	1,667	93	5	2	-	-	-	-	-	-	-	1,767	6%	100	3.440	0.034
	Manager - Administrator	5,145	594	45	14	1	-	1	-	-	-	-	5,800	11%	655	25.305	0.039
	Sales	3	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
Miscellaneous	Military	30	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
	Miscellaneous	4,285	363	114	34	6	-	-	-	-	-	-	4,802	11%	517	43.809	0.085
Production	Machine Setup/Operators	107	136	45	9	-	-	-	-	-	-	-	297	64%	190	14.589	0.077
	Machinists	145	19	5	1	-	-	-	-	-	-	-	170	15%	25	1.907	0.076
	Misc. Precision/Production	489	166	33	10	-	-	-	-	-	-	-	698	30%	209	13.410	0.064
	Operators, Plant/ System/Util.	1,325	590	118	47	26	8	7	-	-	-	-	2,121	38%	796	84.860	0.107
	Sheet Metal Workers	231	48	10	1	1	-	-	-	-	-	-	291	21%	60	4.037	0.067
	Welders and Solderers	31	4	2	-	-	-	-	-	-	-	-	37	16%	6	0.576	0.096
Scientists	Doctors and Nurses	68	-	-	-	-	-	-	-	-	-	-	68	-	-	-	-
	Engineer	6,370	555	35	18	-	-	1	-	-	-	-	6,979	9%	609	25.217	0.041
	Health Physicist	419	66	9	1	1	-	-	-	-	-	-	496	16%	77	3.674	0.048
	Misc. Professional	7,257	832	73	19	1	-	-	-	-	-	-	8,182	11%	925	37.195	0.040
Service	Scientist	5,691	485	35	6	-	1	-	-	-	-	-	6,218	8%	527	19.506	0.037
	Firefighters	560	38	-	-	-	-	-	-	-	-	-	598	6%	38	0.569	0.015
	Food Service Employees	5	2	-	-	-	-	-	-	-	-	-	7	29%	2	0.054	0.027
	Janitors	372	20	3	2	-	-	-	-	-	-	-	397	6%	25	1.478	0.059
	Misc. Service	2,037	293	24	8	1	1	-	-	-	-	-	2,364	14%	327	15.951	0.049
Technicians	Security Guards	1,611	162	9	-	-	-	-	-	-	-	-	1,782	10%	171	5.025	0.029
	Engineering Technicians	1,736	165	22	1	1	1	1	-	-	-	-	1,927	10%	191	10.640	0.056
	Health Technicians	162	89	18	1	2	-	-	-	-	-	-	272	40%	110	7.320	0.067
	Misc. Technicians	2,111	224	63	27	17	11	21	-	-	-	-	2,474	15%	363	72.072	0.199
	Radiation Monitors/Techs.	926	568	178	62	21	10	5	-	-	-	-	1,770	48%	844	97.408	0.115
	Science Technicians	615	142	18	1	-	-	-	-	-	-	-	776	21%	161	7.564	0.047
Transport	Technicians	1,074	183	72	27	11	2	3	-	-	-	-	1,372	22%	298	38.453	0.129
	Bus Drivers	6	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-
	Equipment Operators	190	44	6	6	2	1	-	-	-	-	-	249	24%	59	6.181	0.105
	Misc. Transport	396	7	-	-	1	-	-	-	-	-	-	404	2%	8	0.640	0.080
	Pilots	10	2	5	-	-	-	-	-	-	-	-	17	41%	7	0.759	0.108
Unknown	Truck Drivers	417	19	12	-	-	-	-	-	-	-	-	448	7%	31	2.462	0.079
	Unknown	15,577	879	112	36	2	1	-	-	-	-	-	16,607	6%	1,030	50.575	0.049
Totals		65,517	8,022	1,341	447	123	49	41	-	-	-	-	75,540	13%	10,023	744.734	0.074

Note: Boxed values (gray background) indicate the greatest value in each column.

DOE Occupational Radiation Exposure: 2015 Annual Report
Exhibit B-21. Internal Dose Distribution by Site and Nuclide, 2015.

Number of Individuals Receiving Radiation Doses in Each Dose Range (rem)																
Site	Nuclide*	Meas. 0-0.02	0.02- 0.10	0.10- 0.25	0.25- 0.50	0.50- 0.75	0.75- 1.00	1.0- 2.0	2.0- 3.0	3.0- 4.0	4.0- 5.0	>5.0	Total Individ. with Meas. CED	Collective CED (person-rem)	Avg. CED (rem)	
Argonne National Laboratory	Americium	-	2	-	-	-	-	-	-	-	-	-	2	0.048	0.024	
Argonne National Laboratory	Mixed	-	1	-	-	-	-	-	-	-	-	-	1	0.081	0.081	
Hanford: Hanford Site	Americium	3	-	-	-	-	-	-	-	-	-	-	3	0.027	0.009	
Hanford: Hanford Site	Plutonium	1	-	-	-	-	-	-	-	-	-	-	1	0.007	0.007	
Idaho National Laboratory	Americium	1	1	-	-	-	-	-	-	-	-	-	2	0.044	0.022	
Idaho National Laboratory	Plutonium	1	-	-	-	-	-	-	-	-	-	-	1	0.017	0.017	
Lawrence Livermore National Laboratory	Other	2	2	-	-	-	-	-	-	-	-	-	4	0.080	0.020	
Los Alamos National Laboratory	Hydrogen-3	16	-	-	-	-	-	-	-	-	-	-	16	0.035	0.002	
Los Alamos National Laboratory	Plutonium	1	-	-	-	-	-	-	-	-	-	-	1	0.007	0.007	
Los Alamos National Laboratory	Uranium	13	1	-	-	-	-	-	-	-	-	-	14	0.102	0.007	
Oak Ridge: Oak Ridge National Laboratory	Hydrogen-3	1	-	-	-	-	-	-	-	-	-	-	1	0.012	0.012	
Oak Ridge: Oak Ridge National Laboratory	Mixed	-	-	1	-	-	-	-	-	-	-	-	1	0.174	0.174 ◀	
Oak Ridge: Y-12 National Security Complex	Mixed	21	5	2	-	-	-	-	-	-	-	-	28	0.678	0.024	
Oak Ridge: Y-12 National Security Complex	Uranium	459	423	107	23	1	-	-	-	-	-	-	1,013 ◀	47.815 ◀	0.047	
Paducah Gaseous Diffusion Plant	Uranium	3	1	-	-	-	-	-	-	-	-	-	4	0.086	0.022	
Pantex Plant	Mixed	2	-	-	-	-	-	-	-	-	-	-	2	0.003	0.002	
Savannah River Site	Hydrogen-3	2	-	-	-	-	-	-	-	-	-	-	2	0.007	0.004	
Savannah River Site	Plutonium	2	-	-	-	-	-	-	-	-	-	-	2	0.006	0.003	
Separations Process Research Unit	Mixed	1	-	-	-	-	-	-	-	-	-	-	1	0.015	0.015	
Separations Process Research Unit	Plutonium	-	2	-	-	-	-	-	-	-	-	-	2	0.069	0.034	
Uranium Mill Tailings Remedial Action Project	Uranium	13	26	6	-	-	-	-	-	-	-	-	45	2.104	0.047	
Totals		542	464	116	23	1	-	-	-	-	-	-	1,146	51.417	0.045	

Note: Boxed values (gray background) indicate the greatest value in each column.

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

DOE Occupational Radiation Exposure: 2015 Annual Report

Exhibit B-22. Extremity Dose Distribution by Site, 2015.

Site	No. Meas. Dose	Meas. 0-0.1	0.10-1	1-5	5-10	10-20	20-30	>30	Total Monitored*	No. with Meas.	No. Above Monitoring Threshold (5 rems)**	Collective Extremity Dose (person-rem)	Avg. Meas. Extremity Dose (rem)
Ames Laboratory	157	1							158	1		0.030	0.030
Argonne National Laboratory	1,908	12	18	11	2	1			1,952	44	3	51.580	1.172
Brookhaven National Laboratory	2,992	7	10	1					3,010	18		4.440	0.247
Energy Technology Engineering Center	6								6				
Fermi National Accelerator Laboratory	1,297	3	1						1,301	4		0.230	0.058
Hanford: Hanford Site	3,853	52	77	54	15	1			4,052	199	16	273.145	1.373
Hanford: Office of River Protection	2,042	239	253	60	2				2,596	554	2	212.250	0.383
Hanford: Pacific Northwest National Laboratory	1,974	400	56	8					2,438	464		39.112	0.084
Idaho National Laboratory	5,160	906	370	91	2				6,529	1,369	2	327.650	0.239
Kansas City Plant	98	2							100	2		0.070	0.035
Lawrence Berkeley National Laboratory	849	6	5	4	2				866	17	2	28.521	1.678
Lawrence Livermore National Laboratory	8,106	15	22	2					8,145	39		17.789	0.456
Los Alamos National Laboratory	8,342	785	311	64	6				9,508	1,166	6	292.233	0.251
National Renewable Energy Laboratory	8								8				
Nevada National Security Site	2,085	5	3	1	1				2,095	10	1	11.656	1.166
New Brunswick Laboratory	20								20				
Oak Ridge: East Tennessee Technology Park	359								359				
Oak Ridge: Oak Ridge Institute for Science and Education	91								91				
Oak Ridge: Oak Ridge National Laboratory	3,892	27	81	30	5	1			4,036	144	6	155.034	1.077
Oak Ridge: Y-12 National Security Complex	5,745	27	36	9					5,817	72		33.220	0.461
Office of Secure Transportation	345								345				
Paducah Gaseous Diffusion Plant	2,786								2,786				
Pantex Plant	3,169	43	76	20					3,308	139		74.661	0.537
Portsmouth Gaseous Diffusion Plant	2,550								2,550				
Princeton Plasma Physics Laboratory	377		3						380	3		1.400	0.467
Sandia National Laboratories	1,974								1,974				
Savannah River Site	5,325	205	572	132	6	2			6,242	917	8	514.322	0.561
Separations Process Research Unit	221	5	5						231	10		2.860	0.286
SLAC National Accelerator Laboratory	1,969		1						1,970	1		0.129	0.129
Thomas Jefferson National Accelerator Facility	1,156		12						1,168	12		4.060	0.338
Uranium Mill Tailings Remedial Action Project	128								128				
Waste Isolation Pilot Plant	609								609				
West Valley Demonstration Project	330	11	21	1					363	33		6.270	0.190
Service Center Personnel***	399								399				
Totals	70,322	2,751	1,933	488	41	5			75,540	5,218	46	2,050.662	0.393

Note: Boxed values (gray background) indicate the greatest value in each column.

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

** All extremity doses above 5 rems were for the upper extremities (hands and forearms). DOE annual limit for extremities is 50 rems.

10 CFR 835.402(a)(1)(ii) requires extremity monitoring for a shallow dose equivalent to the skin or extremity of 5 rems or more in a year.

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