

Annual Fire Protection Program Summary for Calendar Year 2013



UNITED STATES DEPARTMENT OF ENERGY

Summary Provided by:

Office of Environmental Protection, Sustainability Support
and Corporate Safety Analysis

Office of Environment, Health, Safety and Security

June 2015



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Please note: Organizations not shown in Figures 4–6 reported either zero or insignificant losses for the year.

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Foreword

This report, required by Department of Energy (DOE) Order 231.1B, *Environment, Safety and Health Reporting*, is the primary source for quantifying fire and fire-related monetary losses of properties, facilities, and equipment across the DOE Complex.

The data for Calendar Year 2013 were extracted from the DOE Fire Protection Reporting System, with the following organizations reporting into the database:

Ames Laboratory
Argonne National Laboratory
Brookhaven National Laboratory
East Tennessee Technology Park
Fermi National Accelerator Laboratory
Idaho National Laboratory
Kansas City Plant
Lawrence Berkeley National Laboratory
Lawrence Livermore National Laboratory
Los Alamos National Laboratory
National Renewable Energy Laboratory
Nevada Test Site
Oak Ridge National Laboratory
Office of River Protection
Pacific Northwest National Laboratory
Paducah Gaseous Diffusion Plant
Pantex Plant
Portsmouth Gaseous Diffusion Plant
Princeton Plasma Physics Laboratory
Richland Operations Office
Sandia National Laboratory
Savannah River Site
Stanford Linear Accelerator Laboratory
Strategic Petroleum Reserves
Thomas Jefferson National Accelerator Facility
Waste Isolation Pilot Plant
West Valley Demonstration Project
Y-12 Plant

Organizations are required to report by April 30th of each year; however, the Office of Environment, Health, Safety and Security (EHSS) accepts data through the end of May.

In 1999, the Annual Summary reporting process was automated to streamline data collection and provide a comprehensive look at element activities, making it possible to view all responses since 1991 at the Site, Operations, Lead Program Secretarial Office, and Headquarters levels.

In 2007, a new Fire Protection Reporting System was designed by the Office of Corporate Safety Analysis and implemented across the DOE Complex. This allows sites to submit their information on a real-time basis instead of annually.

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The Fire Protection Reporting System is located at:

<http://energy.gov/ehss/policy-guidance-reports/databases/fire-protection-database>. [Password required.]

EHSS continues to work with the DOE Fire Safety Committee to improve the data submission system and the content of the annual report to improve its utility.

Glossary

Headquarters Organizational Elements:

NNSA	National Nuclear Security Administration
SC	Science
FE	Fossil Energy
NE	Nuclear Energy
EM	Environmental Management
PMA	Power Marketing Administrations ¹
EE	Energy Efficiency & Renewable Energy
LM	Legacy Management
EHSS	Environment, Health, Safety and Security

Field/Area/Site Organizational Elements:

CAO	Carlsbad Area Office
CH	Chicago Operations Office
GFO	Golden Field Office
DOE-ID	Idaho Operations Office
KCSO	Kansas City Site Office
LSO	Livermore Site Office
LASO	Los Alamos Site Office
NETL	National Energy Technology Laboratory
NPR	Naval Petroleum Reserves
NSO	Nevada Site Office
ORO	Oak Ridge Operations Office
ORP	Office of River Protection
PXSO	Pantex Site Office
RL	Richland Operations Office
SSO	Sandia Site Office
SRO	Savannah River Operations Office
SPR	Strategic Petroleum Reserve Office ²
YSO	Y-12 Site Office

¹ Power Marketing Administration organizations are the Bonneville Power Administration (BPA); Southeastern Power Administration (SEPA); Southwestern Power Administration (SWPA); and the Western Area Power Administration (WAPA).

² Strategic Petroleum Reserve Office sites include: Bayou Choctaw, Big Hill, Bryan Mound, and West Hackberry.

Site Abbreviations:

ALA	Ames Laboratory
ANL	Argonne National Laboratory
AEMP	Ashtabula Environmental Management Project
BAPL	Bettis Atomic Power Laboratory
BNL	Brookhaven National Laboratory
ETTP	East Tennessee Technology Park
FNAL	Fermi National Accelerator Laboratory
FEMP	Fernald Environmental Management Project
HAN	Hanford Site ³
INL	Idaho National Laboratory
KAPL	Knolls Atomic Power Laboratory
KCP	Kansas City Plant
KSO	Kesselring Site Operations
KAFB	Kirtland Air Force Base
LBNL	Lawrence Berkeley National Laboratory
LLNL	Lawrence Livermore National Laboratory
LANL	Los Alamos National Laboratory
NETL	National Energy Technology Laboratory
NREL	National Renewable Energy Laboratory ⁴
NRF	Naval Reactors Facilities
NTS	Nevada National Security Site ⁵
ORISE	Oak Ridge Institute for Science and Education
ORNL	Oak Ridge National Laboratory
TWPC	TRU Waste Processing Center
PTX	Pantex Plant
PGDP	Paducah Gaseous Diffusion Plant ⁶
PNNL	Pacific Northwest National Laboratory
PORTS	Portsmouth Gaseous Diffusion Plant ⁶
PPPL	Princeton Plasma Physics Laboratory
SLAC	SLAC National Accelerator Laboratory
SNL-NM	Sandia National Laboratories, New Mexico
SNL-CA	Sandia National Laboratories, California
SRS	Savannah River Site
TJNAF	Thomas Jefferson National Accelerator Facility
WIPP	Waste Isolation Pilot Plant
WVDP	West Valley Demonstration Project
Y-12	Y-12 Plant
YMP	Yucca Mountain Project

The format below is used throughout the report to identify various DOE elements:

DOE field organization (abr.)/Site (abr.)

Example: LASO/LANL

³ Hanford Site includes the Pacific Northwest National Laboratory and Office of River Protection.

⁴ National Renewable Energy Laboratory includes the Wind Site.

⁵ Nevada National Security Site includes Amador Valley Operations, Las Vegas Operations, Nevada-Los Alamos Operations, Nevada-Special Technology Laboratory, Washington Aerial Measurements Operation, and Nevada-EG&G Wolburn NV.

⁶ On July 1, 1993, a lease agreement took effect between the DOE and the United States Enrichment Corporation (USEC) essentially transferring all ownership responsibilities to USEC.

Definitions

The following terms are from archived DOE Manual M 231.1-1A, *Environment, Safety, and Health Reporting Manual*. Other definitions come from the archived DOE Order 5484.1, *Environmental Protection, Safety and Health Protection Information Reporting Requirements*, to clarify key concepts. Section references to these documents are given at the end of each definition.

Property Value / Valuation: The approximate replacement value of all DOE-owned buildings/facilities and equipment. Included are the cost of all DOE-owned supplies and average inventory of all source and special nuclear materials. Excluded are the cost of land, land improvements (such as sidewalks or roads), and below ground facilities not susceptible to damage by fire or explosion (such as major water mains and ponds). (APPENDIX C, DOE M 231.1-1A)

Total valuation is obtained by combining information from the Facility Information Management System (FIMS), and the Property Information Database System (PIDS). FIMS is the Department's official repository of real property data, whereas PIDS provides the means for reporting DOE and contractor held property for sensitive items and equipment (\$5– \$25K and greater than \$25K).

Estimated Loss: Monetary loss determination is based on all estimated or actual costs to restore DOE facility and equipment to pre-occurrence conditions irrespective of whether this is in fact performed. The estimate includes: (1) any necessary nuclear decontamination; (2) restoration in areas that received water or smoke damage; (3) any loss reductions for salvage value; and (4) any lost revenue experienced as a result of the accident. The estimate excludes: (1) down time; and (2) any outside agency payments. Losses sustained on private property are not reportable, even if DOE is liable for damage and loss consequences resulting from the occurrence. (APPENDIX C, DOE M 231.1-1A)

Fire Loss: All damage or loss sustained as a consequence of (and following the outbreak of) fire shall be classified as a fire loss. Exceptions are as follows: (1) burnout of electric motors and other electrical equipment through overheating from electrical causes shall be considered a fire loss only if self-sustained combustion exists after power is shut off. (APPENDIX C, DOE M 231.1-1A)

Loss Rate: Unit of comparison in *cents* loss per \$100 of valuation (facilities and equipment)

Executive Summary

In 2013, DOE experienced no fire-related fatalities, and only one injury at Sandia National Laboratory when a technician sustained tissue damage to his left hand when a detonator he was disassembling exploded. There were 73 fire loss events in CY2013 (a 6% drop from the 78 events reported in CY2012), which resulted in an estimated \$1.6 million in total DOE fire losses. These total losses were approximately 15% less than last year (\$1.8 million).

There were 17 non-fire related losses (leaks, spills or inadvertent releases) in CY2013 (a 43% decrease from the 30 reported in CY 2012). However, the 17 events resulted in \$642,000 in losses, an 86% increase from the \$346,000 reported in CY2012.

Loss comparisons among DOE sites are performed by normalizing data against total facility and property value (or valuation). Total DOE valuation decreased during CY2013 approximately 2 percent (from \$106.1 Billion to \$104.4 billion). The overall CY2013 fire loss rate for reporting sites was approximately 0.21 cents for each \$100 in total site valuation, an increase of 0.03 cents from CY2012. Recurring costs for fire protection were \$194 million in CY2013, which is approximately 9% more than was spent last year (\$178 million). On a ratio of cost to total valuation, the DOE spent approximately 19 cents per \$100 in valuation for recurring fire protection activities for those sites reporting into the Fire Protection Program database, compared with 17 cents in CY2012.

DOE Property Loss Experience

Property and facility value estimates serve as a common denominator for comparing annual summary fire loss rates, which include actual fire events and fire suppression system actuations. In CY2013, the total DOE valuation decreased approximately 2% to \$104.4 billion.

DOE elements reported 73 fire loss events during CY2013, which accounted for a total year-end fire loss of \$1.6 million. This represents a 6% decrease in the number of fire loss events from CY2012 (78), and a 14% reduction in fire losses from last year (\$1.8 million). For comparison, the National Fire Protection Association's (NFPA) *Fire Loss in the United States During 2013* reports that the number of loss events at industry, utility, and defense properties was down 6% from CY2012, with the dollar losses also decreasing by 6%.

DOE's fire loss rate for CY2013, as reported into the Fire Protection Reporting System, was approximately 0.21 cents loss per \$100 of total valuation. This is an increase of .03 cents over the CY2012 of 0.18 cents per \$100.

While the 17 non-fire related loss events represented a 43% decline from CY2012 (30), the associated losses increased 86% to \$642,091 from last year's total of \$345,900. These events included system leaks, spills, and other inadvertent releases/discharges.

Four costly events occurred at LANL when four 2010-era Viking sprinkler heads failed in two buildings, resulting in a total of \$525,000 (\$100K, \$25K, \$300K, \$100K) in water damage and clean-up costs. Additionally, at LLNL, a fire in a spent HF + HNO₃ "pickling tank" liner was caused by the tank heater and resulted in costs of \$125,000.

The property loss events have been categorized in Table 1 below.

Table 1
DOE Fire Protection Property Loss Events

Loss Category	Fire Loss Type	Number of Events	Property Loss Amount
Fire-Related	Fire/Smoke – Building	31 Events	\$ 884,007
	Fire/Smoke – Other	25 Events	\$ 649,585
	Fire/Smoke – Brush	15 Events	\$ 18,750
	Fire/Smoke – Vehicle	2 Events	\$ 20,000
	Total Fire-Related:	73 Events	\$1,572,342
Non-Fire-Related*	Leaks, Spills, Releases	17 Events	\$642,091
	Total Fire- and Non-Fire-Related:	90 Events	\$2,214,433
None**	No Fire Loss Type Recorded	20 Events	\$9,093
	Total Losses:	110 Events	\$2,223,526

* Small subset of non-fire losses (leaks, spills, releases) attributable to automatic water-based suppression systems only

** No Fire Loss Type recorded in the Fire Protection database

Trending of fire loss data indicates that a small number of incidents constitutes the majority of dollar losses reported to the DOE. Sixteen of the 90 fire and non-fire incidents this year resulted in loss figures exceeding \$10,000 per event. These incidents accounted for \$2,074,282 (93%) of the total dollar losses for the entire Complex. A summary of notable and costly fire and inadvertent actuation events includes:

PTX: A fire in an electrical power panel was extinguished by the Fire Department (FD) with portable extinguishers. The electrical system tripped breakers and smoke detectors activated alarms prompting the FD response. All electrical power to the computer facility was lost. Most of the dollar loss was from lost production.

Loss: \$502,150

ANL: The Argonne FD was dispatched to investigate a 911 call by building occupants. Smoke was observed coming from a substation located in the electrical room. The FD determined the substation would need to be electrically isolated; however, while waiting for the isolation, a single sprinkler head above the substation automatically actuated.

Loss: \$364,000

LANL: Four 2010-era, Viking M08 165F sprinkler heads failed, prompting water-flow alarms and FD responses which resulted in extensive water damage to programmatic electrical equipment and clean-up costs. Causal investigation concluded that the sprinkler heads were subject to ambient temperatures greater than 100° F between their manufacture and their installation at LANL, leading to premature failure.

Loss: \$525,000

INL-EM: A fire was ignited in the west trough of the north box line. The INL FD responded and decided to allow the fire to self-extinguish as it was contained to the trough and was not spreading beyond its boundaries. No fire damage was sustained in the trough or to the facility; however, 14 HEPA filters required for ventilation were replaced due to soot-loading from the fire.

Loss: \$160,719

SRS: The SRS FD responded to a call-in fire. Fire crews arrived to heavy smoke conditions and the fire was extinguished. The building A/C unit malfunctioned and ignited the plastic trim of the A/C unit, causing the burning trim to fall to the floor, ignite combustibles and spread.

Loss: \$160,163

LLNL: The LLNL FD responded to a sprinkler flow alarm and extinguished a fire in a spent HF + HNO₃ “pickling tank” liner. Fire damage was limited to the affected tank and an adjacent laminar flow exhaust plenum. The FD determined that the fire was started by the tank heater.

Loss: \$125,000

Personnel Injuries

There was one fire protection-related personnel injury reported by DOE during CY2013. On December 13, 2013, at Sandia National Laboratory, a technician suffered tissue damage to his left hand while disassembling a detonation device after an explosives test was terminated due to loss of communication with the transmitter. The injury required stitches.

Notable Events from the Occurrence Reporting and Processing System (ORPS)

The following events may or may not have resulted in financial loss to DOE, but were deemed to be significant when reported into ORPS.

- ETTP: An Operating Emergency was declared when a power loss to ventilation equipment resulted in overheating and smoke, which activated a fire-suppression sprinkler in Room 327 of the radiation-controlled TRU Waste Processing Center. No contamination was identified.
- LLNL: An Operational Emergency was declared due to a vegetation fire near the entrance of the Site 300 Small Firearms Training Facility. The fire burned over 20 acres of property, but no structures were damaged.
- SNL: A Significance Category 2 event occurred when a technician suffered tissue damage to his left hand while disassembling a detonation device after an explosives test was terminated due to loss of communication with the transmitter. The technician believed the detonator was not armed; however, an unintended detonation occurred, resulting in the injury.
- HAN: A Significance Category 2 event occurred at the Richland Plutonium Finishing Plant when Engineering determined there were two conditions which represented impairments to required fire barriers: 1) non-compliant penetration of a wall for electrical service cabling; and 2) wall damage resulting from contact between a door and brackets supporting conduit.

Table 2

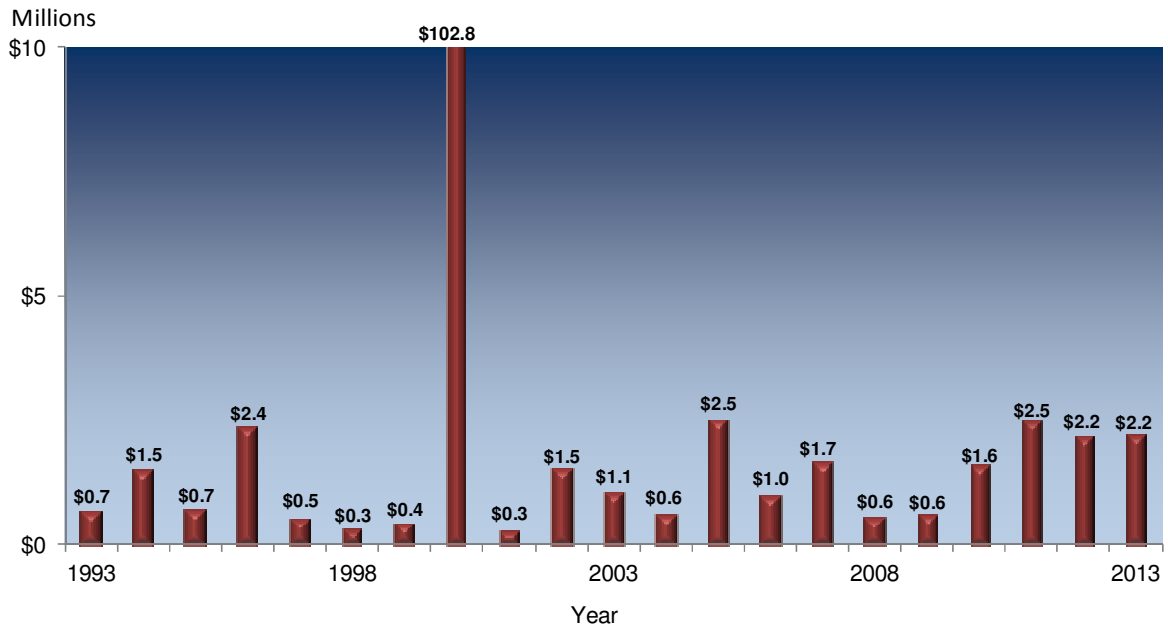
DOE Loss History from 1950 to Present

Year	Valuation (Millions of Dollars)	Fire Loss (Dollars)	Fire Loss Rates (Cents per \$100 Valuation)	Previous 5-year average (Cents per \$100 Valuation)
1950	1,800.00	496,439	2.76	–
1951	2,177.10	356,115	1.64	–
1952	3,055.10	805,707	2.64	–
1953	4,081.00	575,572	1.41	–
1954	6,095.90	375,874	0.62	–
1955	6,954.20	455,788	0.66	1.81
1956	7,364.10	3,147,423	4.27	1.39
1957	7,973.20	1,476,599	1.85	1.92
1958	8,102.50	751,825	0.93	1.76
1959	10,301.80	1,197,901	1.16	1.67
1960	10,708.60	1,401,051	1.31	1.77
1961	11,929.90	5,856,055	4.91	1.91
1962	12,108.80	3,313,364	2.74	2.03
1963	13,288.90	1,376,054	1.04	2.21
1964	14,582.80	1,351,035	0.93	2.23
1965	15,679.30	3,850,069	2.46	2.18
1966	16,669.00	856,973	0.51	2.41
1967	17,450.90	2,782,934	1.59	1.53
1968	18,611.90	869,083	0.47	1.31
1969	20,068.30	28,054,334	13.98	1.19
1970	22,004.30	1,700,792	0.77	3.80
1971	24,155.80	1,936,049	0.80	3.47
1972	26,383.50	920,651	0.35	3.52
1973	27,166.70	2,375,688	0.87	3.27
1974	28,255.50	1,179,877	0.42	3.36
1975	31,658.30	5,252,349	1.66	0.64
1976	35,512.70	2,292,576	0.65	0.82
1977	39,856.10	3,613,984	0.91	0.79
1978	47,027.10	17,477,979	3.72	0.90
1979	50,340.80	2,541,023	0.50	1.47
1980	54,654.70	8,545,935	1.56	1.49
1981	59,988.80	4,643,488	0.77	1.47
1982	65,360.40	4,200,968	0.64	1.49
1983	70,484.40	10,497,062	1.49	1.44
1984	82,166.90	6,467,320	0.79	0.99
1985	86,321.84	4,129,297	0.48	1.05
1986	82,787.52	5,295,292	0.64	0.83
1987	91,927.20	3,010,829	0.33	0.81
1988	92,998.00	8,303,120	0.89	0.74
1989	107,948.00	7,505,551	0.70	0.63
1990	115,076.00	17,470,746	1.52	0.61
1991	118,868.68	2,428,805	0.20	0.81
1992	118,267.06	3,653,554	0.31	0.73
1993	119,826.25	3,018,534	0.25	0.72
1994	124,350.29	3,403,650	0.27	0.60
1995	120,321.68	1,632,466	0.14	0.51
1996	113,471.00	6,025,832	0.53	0.23
1997	102,947.24	6,112,887	0.59	0.30
1998	99,127.79	1,378,788	0.14	0.36
1999	110,858.47	2,911,040	0.26	0.33
2000*	102,514.01	103,174,122	10.06	0.33
2001	103,215.56	505,586	0.05	2.32
2002	98,779.44	2,461,847	0.25	2.22
2003	70,812.80	1,075,309	0.15	2.15
2004	72,601.95	622,613	0.09	2.16
2005	74,951.25	2,537,565	0.34	2.12
2006	64,547.05	997,805	0.15	0.17
2007	67,382.01	1,674,515	0.25	0.20
2008	60,576.55	573,161	0.09	0.20
2009	63,569.89	623,299	0.10	0.18
2010	74,417.99	1,608,762	0.22	0.19
2011	101,351.17	2,471,088	0.24	0.16
2012	106,074.31	1,872,860	0.18	0.18
2013	104,409.59	2,223,526	0.21	0.17

*The CY2000 fire loss increase was primarily due to the Cerro Grande fire at LANL.

Figure 1

DOE Property and Facility Fire Loss Amounts since 1993



Note: CY2011 total DOE fire losses exclude LANL range fire; CY2000 total DOE fire losses included \$100 million LANL range fire loss.

Figure 2

Major Fire Loss Events

Number of fire or fire-related events resulting in losses of \$10,000 or greater in CY2013

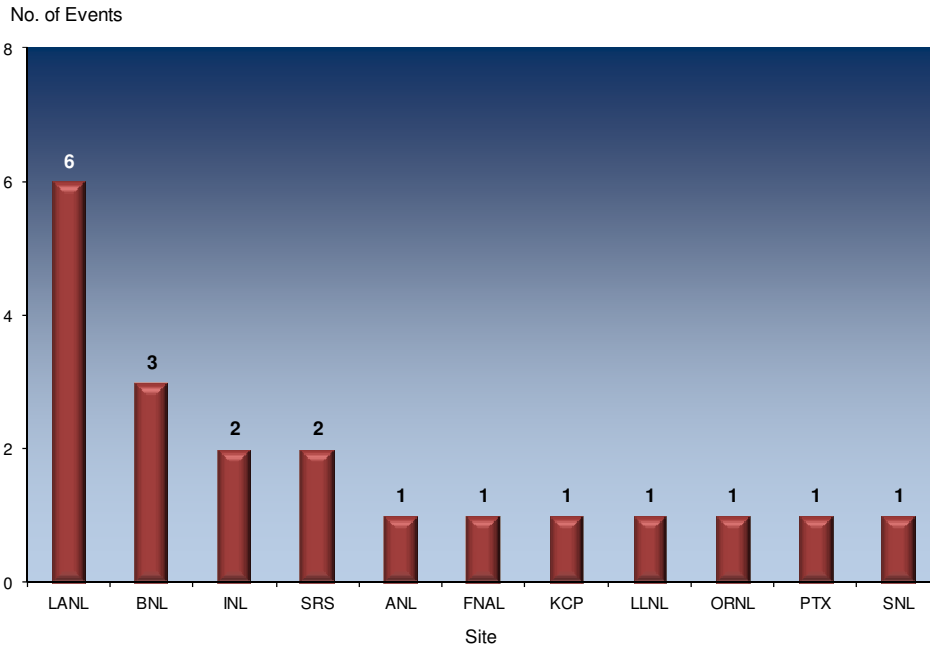


Figure 3

DOE Total Valuation since 1965 Rate in cents per \$100 of valuation

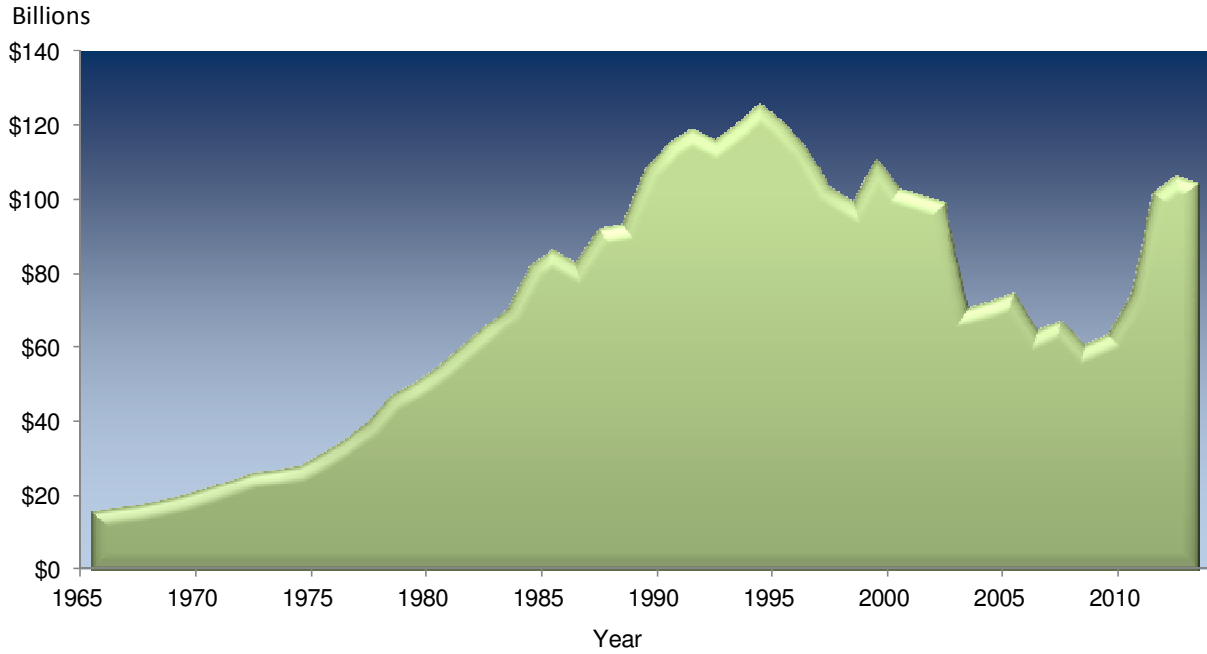


Figure 4

DOE Fire Loss Rates

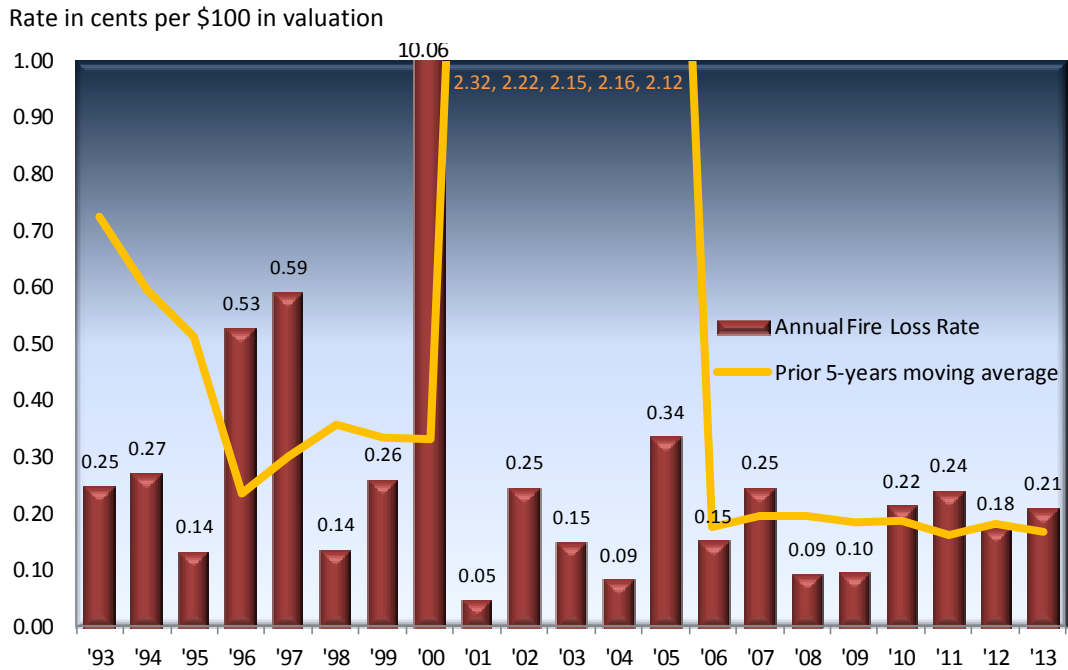


Figure 5

Fire Loss Amounts by Site

CY2013 total losses from fire or fire-related events resulting in a \$10,000 or greater loss per event

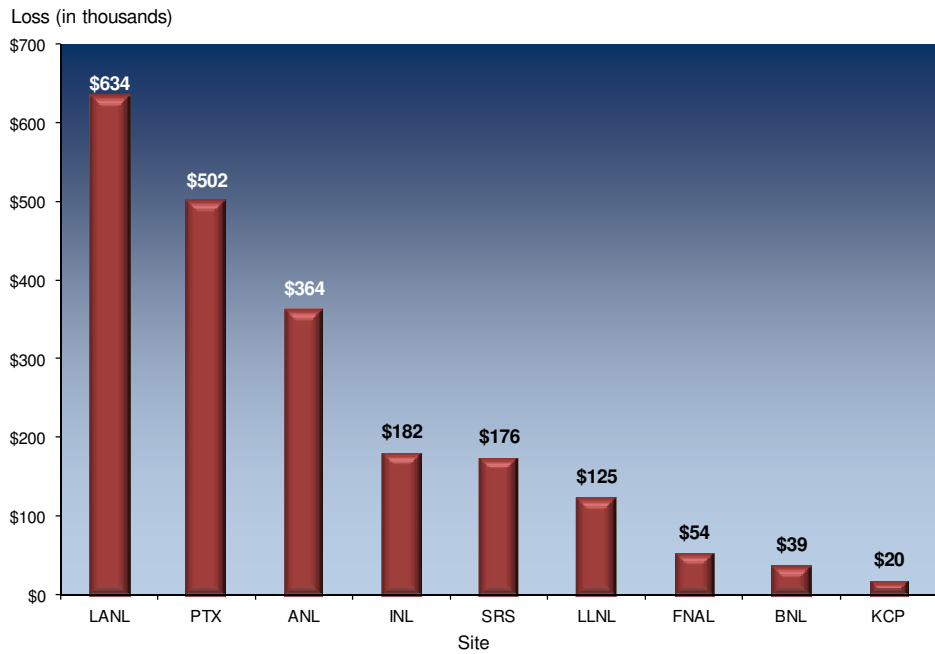
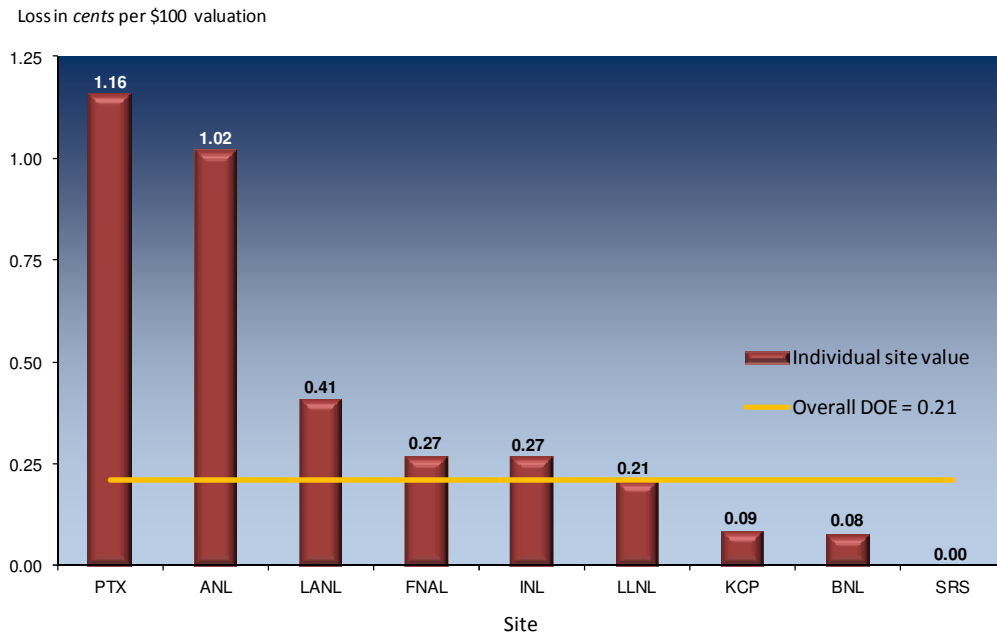


Figure 6

Fire Loss Rates by Site

Loss in cents per \$100 of valuation during CY2012 for those sites posting greater than a \$10,000 loss per event



Summary of Major Fire Damage Incidents

Table 3 provides a description of the five most significant individual major (exceeding \$10,000 per event) DOE fire losses during CY2013. Ten different sites posted 11 major fire events resulting in losses greater than \$10,000 per event. The five most significant events (losses exceeding \$100,000 per event) are provided below and account for about 82% of the total DOE annual fire losses.

Table 3
Summaries of Major Fire Loss Events

Loss Type	Location	Description	Dollar Loss
Fire/Smoke (Building)	PTX	A fire in an electrical power panel was extinguished by the FD with portable extinguishers. The electrical system tripped breakers and smoke detection activated alarms resulting in the FD response. There was a loss of all electrical power to the computer facility. Most of the dollar loss was from lost production.	\$502,150
Fire/Smoke (Other)	ANL	The Argonne FD was dispatched to investigate a 911 call by building occupants. Smoke was observed coming from a substation located in the electrical room. The FD determined the substation would need to be electrically isolated; however, while waiting for the isolation a single sprinkler head above the substation automatically actuated.	\$364,000
Fire/Smoke (Other)	INL-EM	A fire was ignited in the west trough of the north box line. The INL FD responded and decided to allow the fire to self extinguish as it was contained to the trough and was not spreading beyond its boundaries. Although no fire damage was sustained in the trough or to the facility, due to soot-loading from the fire, 14 HEPA filters required for ventilation were replaced.	\$160,719
Fire/Smoke (Building)	SRS	The SRS FD responded to a reported call-in fire. Fire crews arrived to heavy smoke conditions and the fire was extinguished. The building A/C unit malfunctioned and ignited the plastic trim of the A/C unit, causing the burning trim to fall to the floor, ignite combustibles on the floor, and spread.	\$160,163
Fire/Smoke (Building)	LLNL	The LLNL FD responded to a sprinkler flow alarm and extinguished a fire in a spent HF + HNO ₃ "pickling tank" liner. Fire damage was limited to the affected tank and an adjacent laminar flow exhaust plenum. The fire department determined that the fire was started by the tank heater.	\$125,000

Automatic Water-Based Suppression System Performance

In CY2013, Departmental facilities experienced inadvertent actuations of 22 wet-pipe suppression systems resulting in approximately \$714,000 in losses. Of the 22, nine were due to weather-related events (freezing), five were due to power outages or electrical fluctuations, four were caused by sprinkler head failure, three were due to other/unknown causes, and two were caused by employee error.

The five most significant events (exceeding \$10,000 per incident) representing 91% of the losses are noted below in Table 4.

Table 4

Major Water-Based Fire System Inadvertent Actuations

Loss Type	Location	Description	Dollar Loss
Leaks/Spills/Releases	LANL	Four 2010-era Viking M08 165°F sprinkler heads failed, resulting in water-flow alarm and FD response. Costs were the result of extensive water damage to programmatic electrical equipment and clean-up costs. Causal investigation concluded that the sprinkler heads were subject to ambient temperatures > 100°F between the manufacturer and installation at LANL, leading to premature failure.	\$300,000 \$100,000 \$100,000 \$25,000
Fire/Smoke (Building)	LLNL	The LLNL FD responded to a sprinkler flow alarm and extinguished a fire in a spent HF + HNO ₃ “pickling tank” liner. Fire damage was limited to the affected tank and an adjacent laminar flow exhaust plenum. The FD determined that the fire was started by the tank heater.	\$125,000

Non-Water-Based Fire Suppression System Performance

Chlorofluorocarbons, including Halon, are regulated under the 1991 Clean Air Act because of their detrimental impact on the ozone layer. The Environmental Protection Agency has published implementation regulations to prohibit Halon production, establish container labeling requirements, impose Federal procurement restrictions and Halon taxes, issue requirements for the approval of alternative agents, and list essential areas where Halon protection is considered acceptable.

DOE policy, as stated in the May 5, 1993 Memorandum, DOE F 132S.8, *Managed Phase Out of Halon Fixed Fire Suppression Systems*, does not allow the installation of any new Halon systems. Field organizations have been requested to aggressively pursue alternative fire suppression agents to replace existing systems and to effectively manage expanding Halon inventories. The long-term goal is the gradual replacement of all Halon systems.

In CY2013, DOE maintained 156 active Halon systems in operation containing approximately 52,010 pounds of Halon. The number of active Halon systems decreased 4% from the 162 systems active in CY2012, while active inventory amounts increased slightly from CY2012 levels of 51,487 pounds of the agent.

There was one inadvertent actuation of a non-water based suppression system, as described in Table 5 below.

Table 5

Automatic Non-Water Based System Actuations

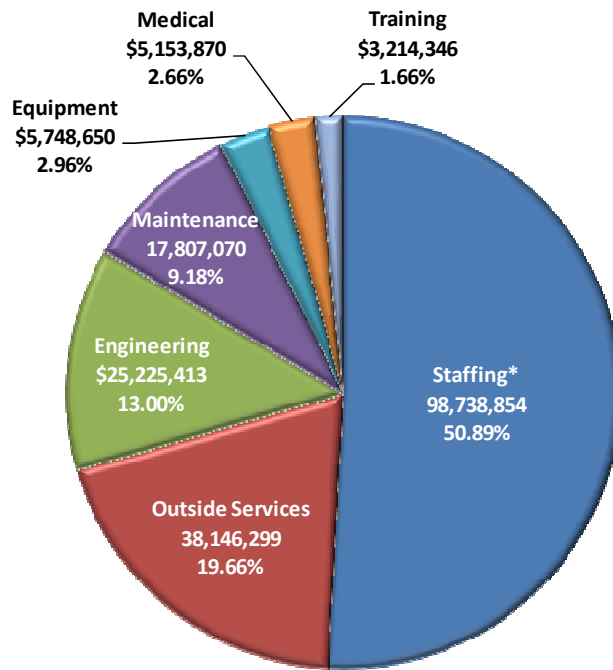
Loss Type	Location	Description	Dollar Loss
Leaks/Spills/Releases	LANL	Inadvertent actuation of an FM-200 fire extinguishing system protecting a Conex box enclosure. A test smoke generator used for testing smoke detectors produced enough smoke to migrate within the enclosure and activate the system.	\$2,500

Recurring Fire Protection Program Costs

Yearly or recurring fire protection costs for CY2013 were \$194,034,503 for those sites reporting into the Fire Protection Program database. On a ratio of cost to replacement property value (recurring cost rate), the DOE spent approximately 0.19 cents per \$100 valuation for recurring fire protection activities at those sites compared with 0.17 cents in CY2012.

Figure 7 shows the CY2013 recurring cost distribution by activity. Figure 8 lists the recurring cost rates in cents per \$100 in valuation by DOE sites. It should be noted that not all recurring cost activities were consistently reported, such as outside contracts and maintenance activities.

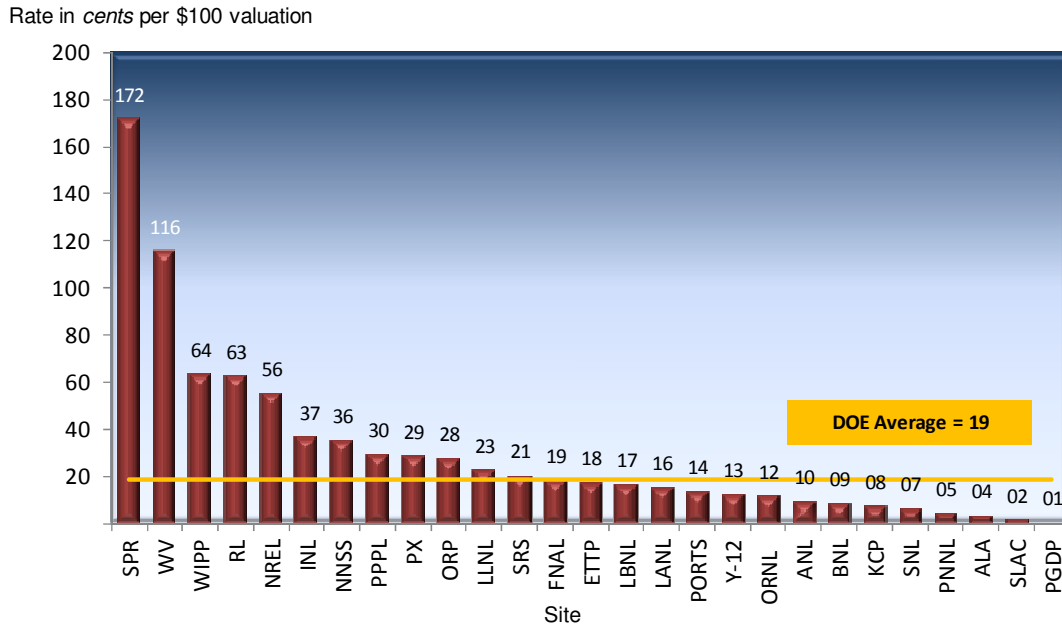
Figure 7
Recurring Fire Protection Program Costs by Activity



* Fire Department Activities

Figure 8

Recurring Fire Protection Program Cost Rates by Site



Fire Department Activities

Number of Responses:

In CY2013, DOE experienced 2,786 Fire Department responses. This represents a 56% decrease from the 6,270 FD responses in CY2012. See Table 6 below for a summary of FD responses for CY2013.

Table 6

Fire Department Responses

Fire	169
Hazardous Materials	128
Other Emergency	463
Other Non-Emergency	1,033
Medical	993
Total	2,786

Comparing these data to the actual type of response is difficult since sites do not report incident responses in a consistent fashion. The Fire Protection Committee continues to examine the use of a standard reporting format which complies with the National Fire Protection Association's Guide 901, *Uniform Coding for Fire Protection*, which could be linked to other DOE incident reporting programs.

Summary provided by:

Office of Environmental Protection, Sustainability Support
and Corporate Safety Analysis

