

M 680 Corrected

No.	Environment, Safety and Health Standard Set for LBNL
1	07 USC, Chapter 6, 136 et seq., FIFRA (Federal Insecticide, and Rodenticide Act)
2	07 USC Chapter 54, 2131-2157, Animal Welfare Act (Transportation, Sale, and Handling of Certain Animals)
3	15 USC, Chapter 53, 2601-2692, Toxic Substances Control Act
4	16 USC, Chapter 1, Subchapter LXI, Sections 432 and 433, American Antiquities Act
5	16 USC, Chapter 1A, Subchapter I, Section 469(a)(1) and Subchapter II, Section 470 et seq., National Historic Preservation Act
6	16 USC, Chapter 1B, sections 470aa and ee, Archeological Preservation Act
7	16 USC, Chapter 1A, Subchapter II, Part A, 470 h-2 Historic Properties Owned or Controlled by Federal Agencies
8	16 USC, Chapter 5a 668 et seq. - Eagle Protection Act and Chapter 7,703 et seq. - Migratory Bird Treaty Act
9	16 USC, Chapter 35, 1531 et seq., Federal Endangered Species Act
10	25 USC, Chapter 32, 3001 et seq., Native American Graves Protection and Repatriation
11	33 USC, Chapter 26, 1311 et seq., Clean Water Act
12	42 USC, Chapter 82, 6901 et seq., Resource Conservation and Recovery Act (RCRA), as amended
13	42 USC, Chapter 85, 7401 et seq., Clean Air Act (CAA), as amended
14	42 USC, Chapter 103, Section 9601 et seq., CERCLA, as amended
15	42 USC, Chapter 116, 11021-11023. Emergency Planning and Community Right to Know
16	42 USC, Chapter 133, 13101 – 13109 Pollution Prevention Act of 1990
17	49 USC, Chapter 51, 5101 et seq., Hazardous Materials Transportation
18	07 CFR 331, Possession, Use, and Transfer of Select Agents and Toxins
19	07 CFR 355, Endangered Species, Regulations Concerning Terrestrial Plants
20	09 CFR, Chapter I, Animal and Plant Inspection Service, Department of Agriculture
21	09 CFR, 121, Possession, Use, and Transfer of Select Agents and Toxins
22	10 CFR 71, Subparts D,E,F, (71.31 - 71.77),Transportation of radioactive materials-package approval
23	10 CFR 20, Subpart K, Section 20, 2005, Disposal of Specific Wastes
24	10 CFR 20, Subpart K, Section 20, 2003, Disposal by Release into Sanitary Sewerage
25	10 CFR 708, DOE Contractor Employee Protection Program
26	10 CFR 745, DOE, Protection of Human Subjects
27	10 CFR 820, Procedural Rules for Department of Energy Nuclear Activities
28	10 CFR 830, Nuclear Safety Management
29	10 CFR 835, Occupational Radiation Protection
30	10 CFR 850 Chronic Beryllium Disease Prevention Program
31a	10 CFR 851, Worker Safety and Health Program

31b	<p>The following standards are incorporated by reference¹ in 10 CFR 851.</p> <p>10 CFR 850, Chronic Beryllium Disease Prevention Program</p> <p>29 CFR 1904.4 - 1904.11, 1904.29 - 1904.33, 1904.44, and 1904.46, Recording and Reporting Occupational Injuries and Illnesses</p> <p>29 CFR 1910, Occupational Safety and Health Standards, excluding 29 CFR 1910.1096, Ionizing Radiation</p> <p>29 CFR 1915, Shipyard Employment</p> <p>29 CFR 1917, Marine Terminals</p> <p>29 CFR 1918, Safety and Health Regulations for Longshoring</p> <p>29 CFR 1926, Safety and Health Regulations for Construction</p> <p>29 CFR 1928, Occupational Safety and Health Standards for Agriculture</p> <p>ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices (2005) when the ACGIH Threshold Limit Values are lower (more protective) than permissible exposure limits in 29 CFR 1910. When the ACGIH TLVs are used as exposure limits, contractors must nonetheless comply with the other provisions of any applicable expanded health standard found in 29 CFR 1910.</p>
31c	<p>ANSI Z88.2, American National Standard for Respiratory Protection (1992)</p> <p>ANSI Z136.1, Safe Use of Lasers (2000)</p> <p>ANSI Z49.1, Safety In Welding, Cutting, and Allied Processes, Sections 4.3 and E4.3 (1999)</p> <p>NFPA 70, National Electrical Code (2005)</p> <p>NFPA 70E, Standard for Electrical Safety in the Workplace (2004)</p> <p>ASME Boilers and Pressure Vessel Code, Sections I - XII including applicable Code Cases (2004)</p> <p>ASME B31, Code for Pressure Piping as follows:</p> <p>B31.1 (2001), Power Piping</p> <p>B31.1a (2002), Addenda to ASME B31.1 (2001)</p> <p>B31.2, Fuel Gas Piping (1968)</p> <p>B31.3, Process Piping (2002)</p> <p>B31.4, Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids (2002)</p> <p>B31.5 (2001), Refrigeration Piping and Heat Transfer Components</p> <p>B31. Sa (2004), Addenda to ASME B31. 5 (2001)</p> <p>B31.8, Gas Transmission and Distribution Piping Systems (2003)</p> <p>B31.8S, Managing System Integrity of Gas Pipelines (2001)</p> <p>B31. 9, Building Services Piping (1996)</p> <p>B31.11, Slurry Transportation Piping Systems (2002)</p> <p>B31 G, Manual for Determining Remaining Strength of Corroded Pipelines (1991)</p>
31d	<p>DOE M 231.1-1A, Environment, Safety and Health Reporting Manual (September 4, 2004)</p> <p>DOE M 440.1-1A, DOE Explosives Safety Manual, Attachment 2, Contractor Requirements Document</p>
32	10 CFR 1008, Records Maintained on Individuals (Privacy Act)
33	10 CFR 1021, National Environmental Policy Act Implementing Procedures
34	10 CFR 1022, Compliance with Floodplain/Wetlands Environmental Review Requirements
35	21 CFR, Chapter II, Drug Enforcement Administration, Department of Justice, Controlled Substances
36	21 CFR 361.1, Radioactive Drugs for Certain Research Uses
37	29 CFR 1630.13, Prohibited Medical Examinations and Inquiries
38	29 CFR 1630.14, Medical Examinations and Inquiries Specifically Permitted
39	<p>36 CFR, National Park Service, Department of the Interior, Parts:</p> <p>63 - Inclusion in National Register</p> <p>65 - Historic Landmarks</p> <p>68 - Preservation of Architectural Integrity</p> <p>79 - Federally Owned Archeological Collections</p>

	¹ The version of a standard referenced in 10 CFR 851 may become outdated. LBNL monitors health and safety standards for changes, and as appropriate will list current versions of standards referenced in 10 CFR 851 in its "Sufficient" Work Smart Standards. To the extent that there may be differences between versions, the 10 CFR 851- enforceable versions are those listed below in these "Necessary" Work Smart Standards.
40	40 CFR, Air Programs, Parts: 50 - National Primary and Secondary Ambient Air Quality Standards 54 - Prior Notice of Citizen Suits 60 - Standards of Performance, New Stationary Sources 61 - NESHAPs, applicable subparts 63 - National Emission Standards for Hazardous Air Pollutants for Source Categories 68 - Chemical Accident Prevention Provisions 82 - Protection of Stratospheric Ozone
41	40 CFR 110, Discharge of Oil
42	40 CFR 112, Oil Pollution Prevention
43	40 CFR 116, Designation of Hazardous Substances
44	40 CFR 117, Determination of Reportable Quantities for Hazardous Substances
45	40 CFR 122, NPDES System
46	40 CFR 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants
47	40 CFR 246, Source Separation for Materials Recovery Guidelines
48	40 CFR 247, Comprehensive Procurement Guideline for Products Containing Recovered Materials (Federal Agency Recycling Programs)
49	40 CFR 260 - 279, Hazardous Waste
50	40 CFR 280, Underground Storage Tanks
51	40 CFR 300,(CERCLA) National Oil and Hazardous Substances Pollution Contingency Plan
52	40 CFR 302, (CERCLA) Designation, Reportable Quantities, and Notification
53	40 CFR 355, Emergency Planning and Notification (SARA Title III)
54	40 CFR 370, Hazardous Chemical Reporting, Community Right To Know
55	40 CFR 372, Toxic Chemical Release Reporting, Community Right To Know
56	40 CFR 401, Subpart N, Effluent Guidelines and Standards, General Provisions
57	40 CFR 403, Subpart N, General Pretreatment Regulations for Existing and New Sources of Pollution
58	40 CFR 433, Metal Finishing Point Source Category
59	40 CFR 720, Premanufacture Notification
60	40 CFR 761, Polychlorinated Biphenyls (PCB)
61	40 CFR 763, Subpart E, U. S. EPA Asbestos-Containing Materials in Schools, Asbestos Hazard Emergency Response Act (AHERA). Reference to asbestos clearance sample limit of less than 70 structures per square millimeter only. Does not include sampling protocol or procedures.
62	42 CFR 73, Select Agents and Toxins
63	43 CFR, Part 3 - Preservation of American Antiquities, and Part 7 - Protection of Archeological Resources
64	43 CFR, Part 10 - Native American Graves Protection and Repatriation Regulations
65	45 CFR 46, DHHS, Protection of Human Subjects
66	48 CFR 936.602-70(a)(8), Architect - Engineer Services DOE Selection Criteria, Construction and Architect - Engineer (A-E) contracts
67	49 CFR 40, Procedures for Workplace Drug Testing Programs
68	49 CFR, Subtitle B, Other Regulations Relating to Transportation, Chapter I, Research And Special Programs Administration, Department Of Transportation

69	49 CFR 382, Controlled Substances and Alcohol Use and Testing
70	49 CFR 397, Subpart D, 101 and 103, Routing of Class 7 Radioactive Materials
71	50 CFR 17 and 222, Endangered Species Act Rules
72	50 CFR 402, Endangered Species Act
73	California Health and Safety Code, Division 20, Chapter 6.95, Article 1, Hazardous Materials Release Response Plans and Inventory
74	California Health and Safety Code, Division 104, Part 7 (Retail Food Facilities) Chapter 4 (Retail Food Practices-California Uniform Retail Food Facilities Law [CURFFL])
75	California Public Resources Code, Division 13, California Environmental Quality Act (CEQA), and 14 CCR, Division 6, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act
76	08 CCR, Division 1, Chapter 4, Subchapter 1, Unfired Pressure Vessel Safety Orders
77	08 CCR, Division 1, Chapter 4, Subchapter 4, Construction Safety Orders (for all construction safety unless 29 CFR 1926 is more strict)
78	08 CCR, Division 1, Chapter 4, Subchapter 7, General Industry Safety Orders, Group 3, General Plant Equipment Procedures and Special Operations, Article 12, Tree Work, Maintenance or Removal, 3427. Safe Work Procedures
79	13 CCR Division 2, Chapter 6, Article 3, 1160 - 1167, for activities relating to the offering of hazardous materials for transportation by commercial carriers
80	17 CCR, Division 1, Chapter 5, Subchapter 4, Group 3, Article 6, Special Requirements for Radiographic Operations 30330-30337
81	17 CCR Division 3, Air Resources (stationary and mobile sources)
82	19 CCR, Division 2, Chapter 4, Hazardous Material Release Reporting, Inventory and Response Plans
83	19 CCR Division 2, Chapter 4.5, California Accidental Release Prevention Program (Cal ARP)
84	22 CCR, Division 2, Subdivision 1, Chapter 3, 12000 (c), Chemicals Known to the State to Cause Reproductive Toxicity (consensus listing solely referenced to define reproductive toxins)
85	22 CCR Division 4.5, Chapter 10, Article 2, 66260.1 et seq., Hazardous Waste Regulation
86	CCR Title 23 CCR Division 3, Chapter 9, Waste Discharge Reports and Requirements, and Chapter 9.2, Sections 2250, 2251, 2260, Reportable Quantities and Reporting Requirements, discharges of non-AEA materials to waters of the state
87	23 CCR Division 3, Chapter 16, Underground Storage Tank Regulations
88	24 CCR, Building Standards (for facilities design, only), Parts: .2 - California Building Code (for fire protection-life safety) .3 - California Electrical Code .4 - California Mechanical Code .5 - California Plumbing Code .6 - California Energy Code .7 - California Elevator Safety Construction Code .9 - California Fire Code (for fire protection-life safety) .12 - California Reference Standards Code
89	California Fish and Game Code, 1601-1616, Floodplains and Wetlands
90	California Health and Safety Code, Division 5, sections 5410, 5411, and 5411.5, Reporting discharge of sewage or other waste to waters of the state
91	California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control
92	California Health and Safety Code, Division 20, Chapter 6.67, Aboveground Storage of Petroleum, to the extent involving discharges or potential discharges to waters of the state
93	California Health and Safety Code, Division 20, Chapter 6.7, Underground Storage of Hazardous Substances
94	California Health and Safety Code, Division 20, Chapter 6.95, Article 2, Hazardous Materials Management

95	California Health and Safety Code, Division 26, Air Resources, California Clean Air Act
96	California Health and Safety Code, Division 104, Part 14, 117600-118360 California Medical Waste Management Act
97	California Labor Code, Division 4, Workers' Compensation and Insurance
98	California Public Resources Code, Division 30,40000 et seq., California Integrated Waste Management Act of 1989
99	California Vehicle Code, Division 11, Rules of the Road
100	California Water Code, Division 7, Water Quality, to the extent involving discharges or potential discharges of non-AEA materials to waters of the state
101	SWRCB Water Quality Order #2006-003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems
102	SWRCB Water Quality Order #97-003-DWQ, Statewide General Permit Requirements for Stormwater Discharges Associated with Industrial Activity
103	SWRCB Water Quality Order #99-008-DWQ, Statewide General Permit Requirements for Construction Stormwater Discharges
104	DOE O 150.1, Continuity Programs, Attachment 1 Contractor Requirements Document
105	DOE O 151.IC, Comprehensive Emergency Management System, Attachment 2, Contractor Requirements Document
106	DOE O 225.1A, Accident Investigations (Cooperation with DOE investigation only)
107	DOE M 231.1-1A, Environment, Safety and Health Reporting Manual, Attachment 2, Contractor Requirements Document
108	DOE M 231.1-2, Occurrence Reporting and Processing of Operations Information, Attachment 2, Contractor Requirements Document
109	DOE N 234.1, Reporting of Radioactive Sealed Sources, Attachment 2, Contractor Requirements Document
110	DOE O 414.IC, Quality Assurance, Attachment 1, Contractor Requirements Document
111	DOE O 420.IB, Facility Safety, Attachment 2, Contractor Requirements Document, Chapter II (Fire Protection) and Chapter IV (Natural Phenomena Hazards Mitigation)
112	DOE O 420.2C, Safety of Accelerator Facilities, Paragraph 3C- Exemptions/Equivalencies, and Contractor Requirements Document
113	DOE O 435.1, Radioactive Waste Management, Attachment 1, Contractor Requirements Document
114	<p>DOE M 435.1-1, Radioactive Waste Management Manual, applicable chapters and sections listed below:</p> <p>Chapter I- All sections except that DOE orders incorporated by reference are applicable only to the extent they were adopted site-wide in the Berkeley Lab Necessary and Sufficient Set of standards.</p> <p>Chapter III sections: A and B, D except for (4) relative to disposal facility requirements, F, G, H and I, (J, K, O, and P only when an off-site option for Berkeley Lab TRU waste has been identified by DOE and the off-site facility has established a WAC applicable to Berkeley Lab), L, N(1), N(2), N(3), Q(1), Q(2) except that ventilation exhaust monitoring is limited to MW6 and MW7 as specified in the HWHF SAD</p> <p>Chapter IV sections: A, B, D, and F, G except for 1(d) relative to disposal facility requirements, H(1), H(2), I, J, K and L, M, N, N(2), O and R(1) except that ventilation exhaust monitoring is limited to MW6 and MW7 as specified in the HWHF SAD</p>
115	DOE O 440.2B, Aviation Management and Safety, Contractor Requirements Document, Parts A and B
116	DOE O 442.1A Department of Energy Employee Concerns Program, Attachment 1, Contractor Requirements Document

118	DOE O 443.1B, Protection of Human Subjects, Attachment 1, Contractor Requirements Document, except for duplicate reporting requirements already covered in ES&H Standards 10 CFR 745, (DOE) Protection of Human Subjects, and 45 CFR 46, (DHHS), Protection of Human Subjects
119	DOE O 450.1A, Environmental Protection Program, Contractor Requirements Document
120	DOE P 450.2A, Identifying, Implementing and Complying with Environment, Safety and Health Requirements
121	DOE P 450.4, Safety Management System Policy
122	DOE M 450.4-1, Integrated Safety Management System Manual, Attachment 1, Contractor Requirements Document
123	DOE 450.2, Integrated Safety Management
124	DOE P 456.1 - Secretarial Policy Statement on Nanoscale Safety
125	DOE O 460.IC, - Packaging and Transportation Safety, Attachment 1, Contractor Requirements Document sections: 1 3a, for on site and intra-lab offsite transportation as addressed in TSD 3b and c, for onsite transportation as addressed in TSD 4 and 5 7 for onsite transportation by complying with TSD
126	DOE-EM-STD-5502-94 Hazard Baseline Documentation
127	ACGIH Ventilation Manual (Applicable Sections)
128	ANSI N43.2, Sections 6.2.1.1, 6.2.1.2, 6.2.1.3, 6.2.2.1.4, 6.2.2.3, 6.2.2.3.1, 6.2.2.3.3, 6.2.2.3.4, 6.2.2.3.5, 7.5, 8.1
129	ANSI N43.3, Definitions, Sections 4.1,5.1.1,5.1.2,5.1.4,5.1.6.4,5.1.5.2,5.1.5,7,9.1,9.2,9.4, Annex C
130	ANSI Z 13 3 .1-2000, American National Standard for Arboricultural Operations - Pruning, Repairing, Maintaining, and Removing Trees, and Cutting Brush - Safety Requirements, Sections 6.7.6 - 6.7.6.11
131	ANSI Z136.2-1997, American National Standard for the Safe Use of Optical Fiber Communication Systems Utilizing Laser Diode and LED Sources
132	ANSI Z358.1-2004, Standard for Emergency Eyewash and Shower Equipment, (Applicable sections). Note: (1) Testing frequency to be quarterly, not weekly; (2) LBNL has NOT adopted provisions in the standard dealing with the temperature of the delivered flushing fluid.
133	ASME B30.2, Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist) (2001)
134	ASME B30.17, Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist) (2003)
135	ASME B30.5, Mobile and Locomotive Cranes (2004)
136	ASME B30.9, Slings (2003)
137	ASME B30.10, Hooks (1999)
138	ASME B30.11, Monorails and Underhung Cranes (2004)
139	ASME B30.16, Overhead Hoists (Underhung) (2003)
140	ASME B30.20, Below-the-Hook Lifting Devices (2003)
141	ASME B30.21, Manually Lever Operated Hoists (1999)
142	ASME B56.1, Low Lift and High Lift Trucks (2004)
143	ASME B56.6, Rough Terrain Forklift Trucks (2002)
144	ASME Boiler and Pressure Vessel Code (for non-research applications)
145	Compressed Gas Association (CGA) Pamphlet S - 1.1 and 1.2, Pressure Relief
146	National Fire Protection Association, Applicable National Fire Codes
147	BAAQMD Regulations 1 through 12, BAAQMD Manual of Procedures
148	Title 10, Central Contra Costa Sanitary District Code, Source Control (Pre-treatment)

149	City of Berkeley Municipal Code, Title 15, Chapters 15.04, 15.08, and 15.12, Hazardous Materials Management, to the extent sovereign immunity has been waived by federal act
150	City of Berkeley Municipal Code 16.12.30-32-34, Permits and deposits for well construction, installation, destruction or modification and for soil boring/probe/grab and ground water sampling (except AEA materials)
151	City of Berkeley Municipal Code 17.20, Reduction of Storm Water Pollution (except discharges of AEA materials)
152	City of Berkeley Ordinance 6715, provision prohibiting transportation on specified streets at which Purge Chamber Openings are located
153	City of Berkeley Noise Ordinance, Chapter 13.40 "Community Noise". Limit to referenced noise levels only
154	East Bay Municipal Utility District (EBMUD) Ordinance No. 311A -03, (except AEA discharges). NOTE: Berkeley Lab annually accepts radiation discharge standards voluntarily
155	Oakland Municipal Ordinance 12024, City of Oakland Creek Protection, Storm Water Management, and Discharge Control Ordinance, (except discharges of AEA materials)
156	Oakland Municipal Code, 8.12.020, Adopting California Health and Safety Code Division 20, Chapter 6.95, Article 2, to the extent involving prevention of accidental releases to air, and to the extent sovereign immunity has been waived by federal act
157	City of Oakland Planning Code, Title 17, Performance Standards, Chapter 17.120.050, limited to referenced noise levels in Tables A, B, and C
158	California Emergency Services Act 2006, Article 9.5, Disaster Preparedness, Subsection 8607, Standardized Emergency Management System, where applicable
159	Homeland Security Presidential Directive (HSPD)-5: National Incident Management System
160	California Water Code, 13800 - 13806, State Water Resources Control Board requirement for adoption of Model Well Ordinance by state and local agencies (as applicable at LBNL except AEA materials)
161	LBNL Asbestos Management Program
162	Integrated Worker Health and Safety Program for Beryllium Activities at LBNL, 8/1/2000
163	LBNL Biosafety Manual ²
164	LBNL Control Procedures for Peroxidizable Compounds
165	LBNL Project and Design Management Procedures Manual, RD 3.22, Lateral Force Design Criteria (Seismic Safety) Rev 9
166	LBNL Fire Protection Program
167	LBNL Health and Safety Manual (Except Chapter 21, Radiation Safety), PUB 3000
168	United States Housing and Urban Development (HUD), "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing," June 1995 <u>Chapter 12</u> (Paint Removal Methods); Section IV, A-E; and Section V, C. (Note: Excluding references to other HUD Guideline Chapters and work site preparation levels) <u>Chapter 14</u> (Cleaning). (Note: Excluding references to other HUD Guideline Chapters and reference to containment) <u>Chapter 15</u> (Clearance). (Note: Excluding Section IV, A-C and Table 15.1; Section V; and Section IX). However, "clearing" work sites following lead related work and applying prescribed clearance levels to work at the Lab will be implemented at the discretion of the Berkeley Lab.
169	US. Department of Health and Human Services (HHS), Public Health Service, Centers for Disease Control and Prevention (CDC) and National Institutes of Health (NIH), Biosafety in Microbiological and Biomedical Laboratories (BMBL), 5th Edition, February 2007
170	International Air Transportation Association (IATA) Dangerous Goods Regulations
² As implemented per the revised LBNL Biosafety Manual (projected manual revision completion date of June 30, 2009 as noted in the LBNL Biosafety Program Review Corrective Action Plan, dated 9/5/08.	

END OF ES&H STANDARDS FOR LBNL