|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Nuclear power plant accidents and incidents with multiple fatalities and/or more than US$100 million in property damage, 1952-2011** | | | | | |
| **Date** | **Location** | **Description** | **Deaths** | **Cost (in millions 2006 $US)** | [**INES level**](http://en.wikipedia.org/wiki/International_Nuclear_Events_Scale) |
| 01961-01-03January 3, 1961 | [Idaho Falls](http://en.wikipedia.org/wiki/Idaho_Falls), [Idaho](http://en.wikipedia.org/wiki/Idaho), [United States](http://en.wikipedia.org/wiki/United_States) | Explosion at [SL-1](http://en.wikipedia.org/wiki/SL-1) prototype at the [National Reactor Testing Station](http://en.wikipedia.org/wiki/National_Reactor_Testing_Station). All 3 operators were killed when a control rod was removed too far. | 3 | 22 | 4 |
| 01966-10-05October 5, 1966 | [Frenchtown Charter Township](http://en.wikipedia.org/wiki/Frenchtown_Charter_Township), [Michigan](http://en.wikipedia.org/wiki/Michigan), [United States](http://en.wikipedia.org/wiki/United_States) | Partial core meltdown of the Fermi 1 Reactor at the [Enrico Fermi Nuclear Generating Station](http://en.wikipedia.org/wiki/Enrico_Fermi_Nuclear_Generating_Station). No radiation leakage into the environment. | 0 |  |  |
| 01969-01-21January 21, 1969 | [Lucens reactor](http://en.wikipedia.org/wiki/Lucens_reactor), [Vaud](http://en.wikipedia.org/wiki/Vaud), [Switzerland](http://en.wikipedia.org/wiki/Switzerland) | On January 21, 1969, it suffered a loss-of-coolant accident, leading to a partial core meltdown and massive radioactive contamination of the cavern, which was then sealed. | 0 |  | 4 |
| 01975-01-011975 | Sosnovyi Bor, [Leningrad Oblast](http://en.wikipedia.org/wiki/Leningrad_Oblast), [Russia](http://en.wikipedia.org/wiki/Russia) | There was reportedly a partial nuclear meltdown in [Leningrad nuclear power plant](http://en.wikipedia.org/wiki/Leningrad_nuclear_power_plant) reactor unit 1. |  |  |  |
| 01975-12-07December 7, 1975 | [Greifswald](http://en.wikipedia.org/wiki/Greifswald), [East Germany](http://en.wikipedia.org/wiki/East_Germany) | Electrical error causes fire in the main trough that destroys control lines and five main coolant pumps | 0 | 443 | 3 |
| 01976-01-05January 5, 1976 | [Jaslovské Bohunice](http://en.wikipedia.org/wiki/KS_150), [Czechoslovakia](http://en.wikipedia.org/wiki/Czechoslovakia) | Malfunction during fuel replacement. Fuel rod ejected from reactor into the reactor hall by coolant (CO2).[[17]](http://en.wikipedia.org/wiki/Nuclear_and_radiation_accidents#cite_note-16) | 2 |  | 4 |
| 01977-02-22February 22, 1977 | [Jaslovské Bohunice](http://en.wikipedia.org/wiki/KS_150), [Czechoslovakia](http://en.wikipedia.org/wiki/Czechoslovakia) | Severe corrosion of reactor and release of radioactivity into the plant area, necessitating total decommission | 0 | 1,700 | 4 |
| 01979-03-28March 28, 1979 | [Three Mile Island](http://en.wikipedia.org/wiki/Three_Mile_Island_accident), [Pennsylvania](http://en.wikipedia.org/wiki/Pennsylvania), [United States](http://en.wikipedia.org/wiki/United_States) | Loss of coolant and partial core meltdown due to operator errors. There is a small release of radioactive gasses. See also [Three Mile Island accident health effects](http://en.wikipedia.org/wiki/Three_Mile_Island_accident_health_effects). | 0 | 2,400 | 5 |
| 01984-09-15September 15, 1984 | Athens, [Alabama](http://en.wikipedia.org/wiki/Alabama), [United States](http://en.wikipedia.org/wiki/United_States) | Safety violations, operator error, and design problems force a six year outage at Browns Ferry Unit 2. | 0 | 110 |  |
| 01985-03-09March 9, 1985 | Athens, [Alabama](http://en.wikipedia.org/wiki/Alabama), [United States](http://en.wikipedia.org/wiki/United_States) | Instrumentation systems malfunction during startup, which led to suspension of operations at all three [Browns Ferry](http://en.wikipedia.org/wiki/Browns_Ferry_Nuclear_Power_Plant) Units | 0 | 1,830 |  |
| 01986-04-11April 11, 1986 | Plymouth, [Massachusetts](http://en.wikipedia.org/wiki/Massachusetts), [United States](http://en.wikipedia.org/wiki/United_States) | Recurring equipment problems force emergency shutdown of Boston Edison’s [Pilgrim Nuclear Power Plant](http://en.wikipedia.org/wiki/Pilgrim_Nuclear_Power_Plant) | 0 | 1,001 |  |
| 01986-04-26April 26, 1986 | [Chernobyl](http://en.wikipedia.org/wiki/Chernobyl_disaster), [Ukrainian SSR](http://en.wikipedia.org/wiki/Ukrainian_SSR) | Overheating, steam explosion, fire, and meltdown, necessitating the evacuation of 300,000 people from Kiev and dispersing radioactive material across Europe (see [Chernobyl disaster effects](http://en.wikipedia.org/wiki/Chernobyl_disaster_effects)) | 56 direct; 4,000 cancer[[18]](http://en.wikipedia.org/wiki/Nuclear_and_radiation_accidents#cite_note-iaea-17) | 6,700 | 7 |
| 01986-05-04May 4, 1986 | Hamm-Uentrop, [Germany](http://en.wikipedia.org/wiki/Germany) | Experimental [THTR-300](http://en.wikipedia.org/wiki/THTR-300) reactor releases small amounts of fission products (0.1 GBq Co-60, Cs-137, Pa-233) to surrounding area | 0 | 267 |  |
| 01987-03-31March 31, 1987 | Delta, [Pennsylvania](http://en.wikipedia.org/wiki/Pennsylvania), [United States](http://en.wikipedia.org/wiki/United_States) | [Peach Bottom units 2 and 3](http://en.wikipedia.org/wiki/Peach_Bottom_Nuclear_Generating_Station) shutdown due to cooling malfunctions and unexplained equipment problems | 0 | 400 |  |
| 01987-12-19December 19, 1987 | Lycoming, [New York](http://en.wikipedia.org/wiki/New_York), [United States](http://en.wikipedia.org/wiki/United_States) | Malfunctions force Niagara Mohawk Power Corporation to shut down Nine Mile Point Unit 1 | 0 | 150 |  |
| 01989-03-17March 17, 1989 | Lusby, [Maryland](http://en.wikipedia.org/wiki/Maryland), [United States](http://en.wikipedia.org/wiki/United_States) | Inspections at [Calvert Cliff Units 1 and 2](http://en.wikipedia.org/wiki/Calvert_Cliffs_Nuclear_Power_Plant) reveal cracks at pressurized heater sleeves, forcing extended shutdowns | 0 | 120 |  |
| 01992-03-01March 1992 | Sosnovyi Bor, [Leningrad Oblast](http://en.wikipedia.org/wiki/Leningrad_Oblast), [Russia](http://en.wikipedia.org/wiki/Russia) | An accident at the Sosnovy Bor nuclear plant leaked radioactive gases and iodine into the air through a ruptured fuel channel. |  |  |  |
| 01996-02-20February 20, 1996 | Waterford, [Connecticut](http://en.wikipedia.org/wiki/Connecticut), [United States](http://en.wikipedia.org/wiki/United_States) | Leaking valve forces shutdown [Millstone Nuclear Power Plant](http://en.wikipedia.org/wiki/Millstone_Nuclear_Power_Plant) Units 1 and 2, multiple equipment failures found | 0 | 254 |  |
| 01996-09-02September 2, 1996 | Crystal River, [Florida](http://en.wikipedia.org/wiki/Florida), [United States](http://en.wikipedia.org/wiki/United_States) | Balance-of-plant equipment malfunction forces shutdown and extensive repairs at [Crystal River Unit 3](http://en.wikipedia.org/wiki/Crystal_River_3_Nuclear_Power_Plant) | 0 | 384 |  |
| 01999-09-30September 30, 1999 | [Ibaraki Prefecture](http://en.wikipedia.org/wiki/Ibaraki_Prefecture), [Japan](http://en.wikipedia.org/wiki/Japan) | [Tokaimura nuclear accident](http://en.wikipedia.org/wiki/Tokaimura_nuclear_accident) killed two workers, and exposed one more to radiation levels above permissible limits. | 2 | 54 | 4 |
| 02002-02-16February 16, 2002 | [Oak Harbor, Ohio](http://en.wikipedia.org/wiki/Oak_Harbor,_Ohio), [United States](http://en.wikipedia.org/wiki/United_States) | Severe corrosion of control rod forces 24-month outage of [Davis-Besse reactor](http://en.wikipedia.org/wiki/Davis-Besse_Nuclear_Power_Plant) | 0 | 143 | 3 |
| 02004-08-09August 9, 2004 | [Fukui Prefecture](http://en.wikipedia.org/wiki/Fukui_Prefecture), [Japan](http://en.wikipedia.org/wiki/Japan) | Steam explosion at [Mihama Nuclear Power Plant](http://en.wikipedia.org/wiki/Mihama_Nuclear_Power_Plant) kills 5 workers and injures 6 more | 5 | 9 | 1 |
| 02011-03-11March 11, 2011 | [Fukushima](http://en.wikipedia.org/wiki/Fukushima_Daiichi_nuclear_disaster), [Japan](http://en.wikipedia.org/wiki/Japan) | A tsunami flooded and damaged the 5 active reactor plants. Loss of backup electrical power led to overheating, meltdowns, and evacuations.[[19]](http://en.wikipedia.org/wiki/Nuclear_and_radiation_accidents#cite_note-CBS_News-18) | 3[[20]](http://en.wikipedia.org/wiki/Nuclear_and_radiation_accidents#cite_note-19) |  | 7[[21]](http://en.wikipedia.org/wiki/Nuclear_and_radiation_accidents#cite_note-20) |