

UKRAINE REACTOR INCIDENTS TABLE

(CHORNOBYL, KHMELNYTSKYI, RIVNE, SOUTH UKRAINE,
ZAPORIZHZHYA)

Effective February 1999, NIS Nuclear Profiles started using new criteria for selecting material for the Reactor Incidents Table. Reactor incidents must be rated INES 2 or greater to merit a table entry, and must be rated INES 3 to merit an abstract. For more information, please see the [NIS Nuclear Profiles Nuclear Power Plant Entry Guidelines](#).

CHORNOBYL NUCLEAR POWER PLANT

Unit	Date	Problem	INES	Radiation	Injury	Shut Down?	Source
1	11/28/96	Radiation leak while undergoing repairs	0	Y	N	--	M. Bohdanov, <i>Uryadovyy Kuryer</i> (Kiev), 4 July 1996
3	4/24/96	Radiation leak while air filters were replaced	1	Y	--	--	"Small Radiation Release at Chornobyl," Reuters, 25 April 1996
1	11/17/95	Pieces of fuel element leaked into cooling water	3	Y 200 Rad/hour	1 receives heavy dose	--	"Cover-up Charged in Worker Contamination at Chornobyl-1," <i>Nucleonics Week</i> , 14 March 1996, pp. 2-3
3	5/31/95	Water leak from reactor circuit	--	--	--	Unit already shut down for repairs	<i>Molod Ukrainy</i> , 2 June 1995, p.1; in FBIS-SOV-95-109.
3	1/29/95	Emergency cooling system leak	--	N	--	2 days	"Chernobylskaya AES v Yanvarye," <i>Vestnik Chornobylya</i> , February 1995, p. 2
1	4/94	Fuel spillage when a crane dropped a container	--	--	--	Temporary shut down	David R. Marples, "Nuclear Power in Ukraine: A Look at a Troubled Industry," <i>The Ukrainian Weekly</i> , 1 January 1995, p.2
3	4/94	Cooling system defect	--	--	--	Temporary shut down	David R. Marples, "Nuclear Power in Ukraine: A Look at a Troubled Industry," <i>The Ukrainian Weekly</i> , 1 January 1995, p.2

For entry criteria, [click here](#).

KHMELNYTSKY NUCLEAR POWER PLANT

Unit	Date	Problem	INES	Radiation	Injury	Shut Down?	Source
1	10/29/97	Two malfunctions in the reactor's cooling system	--	--	--	Yes	UNIAN, 29 October 1997; in FBIS-SOV-97-302
1	8/30/97	Fault inside electricity generator	--	N	--	1 day	UNIAN, 30 August, 1997; in FBIS-SOV-97-242. UNIAN, 1 September 1997; in FBIS-SOV-97-244
1	6/30/97	Defect in auxiliary transformer on a 330 kV transmission cable	--	N	--	90 minutes	UNIAN, 1 July 1997; in FBIS-SOV-97-182
1	12/9/96	Flaw in turbine regulating system caused a power fluctuation in the turbogenerator, which decreased pressure in Unit 1	0	N	N	Emergency shutdown for one day	Interfax, 10 December 1996, in FBIS-SOV-96-239
1	10/12/96	Water leak	0	N	N	3 days	UNIAN, 14 October 1996, in BBC Monitoring Service, 18 October 1996
1	7/26/96	Steam pipe burst	3	Y	1 killed	--	Chrystyna Lapychak, "Two Accidents at Ukrainian Plant Kill Worker, Release Radiation," OMRI Daily Digest, 26 July 1996
1	7/26/96	Radioactive water leaks into nitroglycerine storage area	3	Y	N	--	Chrystyna Lapychak, "Two Accidents at Ukrainian Plant Kill Worker, Release Radiation," OMRI Daily Digest, 26 July 1996
1	1/21/96	Short circuit shuts down reactor	--	--	--	Online 2/19/96	Interfax, 19 February 1996, in "Russia: No.1 Unit at Khmelnytsky Nuclear Plant Back in Operation," BBC Monitoring Service, 23 February 1996
1	1/11/96	Failure of ...	--	Y	N	--	"AFS Radiation"

		purification system releases radiation					Leak," <i>Eastern Economist</i> , 15 January 1996, p.18
1	12/19/96	Hydrogen leak in cooling unit	0	N	N	6 hours	"Znovy Zaymannya Na AES: Tsyoho Razy Vodnyu," <i>Holos Ukrainy</i> , 21 December 1995, p.1
1	9/30/95	Hydrogen leak in cooling unit	--	--	--	2 days	"Ukraine: Khmelnytsky Nuclear Power Plant Back to Full Capacity," BBC Monitoring Service, in Reuter Insurance Briefing
1	8/7/95	False alarm shuts down reactor	--	--	--	1 day	"Otklyuchen Turbogenerator Pervogo Energobloka Khmelnytsky AES," <i>Segodnya</i> , 22 August 1995, p.1
1	1/16/95	Power supply failure of transducers	--	N	--	--	"Reactor at Khmelnytsky Nuclear Plant Shut Down After Mishap," OMRI Daily Digest, vol.1, no. 12, 17 January 1995
1	7/21/94	Shut-off signal turns on during tests	--	--	--	No; signal fixed two days later	"Nuke Plant Malfunction Causes Scare," <i>Intelnews</i> , July 1994
1	7/19/94	Problem in pipeline system	--	--	--	Power output reduced for several hours	"Nuke Plant Malfunction Causes Scare," <i>Intelnews</i> , July 1994

For entry criteria, [click here](#).

RIVNE NUCLEAR POWER PLANT

Date	Problem	INES	Radiation	Injury	Shut Down?	Source
9/21/97	Problem in the video monitoring system	--	N	--	Delay in reloading of fuel	UNIAN, 22 September 1997; in FBIS-SOV-97-265
8/2/97	Cooling system failure	1	N	--	All power suspended for one day	AFP, 8 August 1997; in FBIS-SOV-97-220

6/4/97	Damaged cooling system in the reactor's main transformer	--	N	--	Unscheduled shutdown, maintenance continued	UNIAN, 5 June 1997; in FBIS-SOV-97-156
2/2/97	Failure of the turbine protection system	--	N	--	Output reduced 50%	UNIAN, 22 February 1997; in FBIS-SOV-97-036
5/16/96	Leak of radioactive coolant	--	N	--	10 days (occurred during a planned shutdown)	UPI, 20 May 1996; in "Two Nuclear Reactors Stopped," Executive News Service, 20 May 1996
3/16/96	Turbogenerator shut down	0	N	--	Output reduced 50% for 36 hours	UNIAN, 16 March 1996; in BBC Monitoring Service, 22 March 1996
9/21/95	Water leak in turbo-generator	--	N	--	1 of 2 generators temporarily shut down	"Ukraine: Output at Ukraine's Rivne Power Station Hit by Shutdown," BBC Monitoring Service," 29 September 1995
9/21/95	Emergency protection system shuts down reactor	--	N	--	Temporarily shut down	"Ukraine: Output at Ukraine's Rivne Power Station Hit by Shutdown," BBC Monitoring Service," 29 September 1995
2/19/95	Partially shut down when false signal warned of damage to generator	0	--	--	Output reduced 60%. Repaired until 3/10/95	UNIAN, 20 February 1995; in FBIS-SOV-95-034.
9/7/94	Hydrogen leak from generator casting	0	N	--	Turbine later restarted	UNIAN, 8 September 1994; in FBIS-SOV-94-175.
6/28/94	Overheated ball-bearing stops Unit 2	--	N	--	Reduced output 50%	UNIAN, 29 June 1994; in FBIS-SOV-94-127.

For entry criteria, [click here](#).

[SOUTH UKRAINE NUCLEAR POWER PLANT](#)

Unit	Date	Problem	INES	Radiation	Injury	Shut Down?	Source
1	8/29/97	Fault in the cooling system allowed water to penetrate high voltage units	--	--		--	2 days UNIAN, 30 August 1997; in FBIS-SOV-97-042 "AFS"

								Blocks Repaired," <i>Eastern Economist</i> , 8 September 1997, p. 16
3	6/3/97	Examination of a flaw in the turbine equipment	--	N	--	Capacity declined	UNIAN, 4 June 1997; in FBIS-SOV-97-155	
2	2/5/97	Non-radioactive water leaked into the underground areas of the reactor	--	N	--	Yes	UNIAN, 5 February 1997; in FBIS-SOV-97-007	
1	12/24/96	Emergency shutdown during safety system tests	--	N	--	--	"Ukraine Shuts Down Nuke Reactor," <i>Washington Post</i> , 24 December 1996	
5 (??)	12/24/96	Emergency shutdown during safety system tests	--	N	--	--	"Ukraine Shuts Down Nuke Reactor," <i>Washington Post</i> , 24 December 1996	
3	10/30/96	Rise in radiation when reactor cover removed during repairs	--	Y 32 Ci	N	Under routine repairs for 37 days	UNIAN, 30 October 1996; in FBIS-SOV-96-211.	
1	9/4/96	Breakdown of purification system of turbine condenser	--	N	--	Power reduced 20%	Intelnews, 5 September 1996, in "Accident Occurs at Pirdenno-Uraysk Nuclear Plant 4 Sep."	
3	6/9/96	Sample of hydrogen ignites after being removed from cooling system	0	N	--	5 hours	Interfax, 10 June 1996	
2	2/12/96	Fault in oil pump	--	--	--	Shut down	"Nuclear Power Plants Pushed to Compensate for Cut from Power Grid," <i>Post-Soviet Nuclear and Defense Monitor</i> , 12 March 1996	

							pp. 7-8
3	1/3/96	Radioactive vapor released	1	Y	N	Off line for 7 days	Associated Press, 8 January 1996
--	12/95	Radioactive liquid leaked into ground	1	Y	--	--	<i>Source Book: Soviet Designed Nuclear Plants in Russia, Ukraine, Lithuania, Armenia, the Czech Republic, Slovakia, Hungary, and Bulgaria</i> 1996, p. 132
1	8/10/95	Technical failure	0	N	N	Restarted 8/14/96	"Reactor at Nuclear Plant Fails: No Leakage," ITAR-TASS, 11 August 1995
3	6/10/95	Minor leak in generator gasket	--	N	N	Shut down hours before scheduled repairs	Chrystyna Lapychak, "Ukraine Nuclear Power Plant Shuts Down After Minor Leak," OMRI Daily Digest, vol.1, no. 3, 12 June 1995
1	2/17/95	Pump fails	--	--	--	1 day	Viktor Demidenko and Mikhail Melnik, ITAR-TASS, 18 February 1995; in FBIS-SOV-95-034.
2	11/1/94	Pipeline problems in turbine section	0	N	--	--	Moscow Mayak Radio Network, 1 November 1994; in FBIS-SOV-94-212.

For entry criteria, [click here](#).

ZAPORIZHZHYA NUCLEAR POWER PLANT

5	10/31/97	Faulty unit in the turbine compartment	--	N	--	Output declined	UNIAN, 1 November 1997; in FBIS-SOV-97-305. UNIAN, 3 November 1997; in FBIS-SOV-97-307
---	----------	--	----	---	----	-----------------	---

5	9/24/97	Hydrogen leak in the cooling system of an electrical generator	--	N	--	6 days	UNIAN, 25 September 1997; in FBIS-SOV-97-268. UNIAN, 1 October 1997; in FBIS-SOV-97-274
2	9/23/97	Operational fault	--	N	--	Decline to 90% output	UNIAN, 23 September 1997; FBIS-SOV-97-266
6	9/21/97	Two water leaks; one resulting from a defect in pressure regulation equipment; the second in a major automatic control component	--	N	--	3 days	UNIAN, 22 September 1997; in FBIS-SOV-97-265
2	9/19/97	Malfunctioning electrical transformer	--	N	--	Overnight	UNIAN, 20 September 1997; in FBIS-SOV-97-263
3	8/29/97	Fault in the turbine unit	--	N	--	Decline to 80% output	UNIAN, 29 August 1997; in FBIS-SOV-97-241
5	7/3/97	Defect in turbogenerator vibration control system; flaw in waterproof seal of installation component causing steam leak into reactor compartment casing	--	N	--	Yes	UNIAN, 3 July 1997; in FBIS-TEN-97-184
2	6/10/97	Reduction of cooling water into one of the turbine chambers	--	N	--	Decline to 370 MW	UNIAN, 10 June 1997; in FBIS-SOV-97-161
2	6/5/97	Regulation flaw caused the stoppage of a cooling pump	--	N	--	Decline to 55 %	UNIAN, 5 June 1997; in FBIS-SOV-97-156
2	5/19/97	Malfunction in an electric transformer	--	N	--	Yes	UNIAN, 19 May 1997; in FBIS-TEN-97-139. AFP, 19 May 1997; in FBIS-TEN-97-006-L
1	5/15/97	Flaw in the turbine cooling equipment	--	N	--	Output reduced from 1,000 to 770 MW	UNIAN, 16 May 1997; in FBIS-SOV-97-136
2	4/25/97	Fault within the main	--	N	--	Yes	UNIAN, 25 April

		circulation pump					1997; in FBIS-SOV-97-115
4	4/15-16/97	Hydrogen leak in the generator cover in the turbine room	--	N	--	10.5 hours	Interfax, 16 April 1997; in FBIS-TEN-97-106
4	4/13/97	Malfunctioning control rod	--	N	--	1 day	Interfax, 14 April 1997; in FBIS-SOV-97-104. "Problems at Ukrainian Nuclear Plant Fixed," RFE/RL Newline, vol. 1, no. 11, 15 April 1997
6	4/8/97	Water leak caused by a fault in the reactor cover, which caused steam to escape into a sealed area	--	N	--	5 days	UNIAN, 8 April 1997; in FBIS-SOV-97-098
6	4/4/97	Turbine fault, failure of a feeding unit at the second steam generator	--	N	--	4 days	<i>Financial Times East European Energy Report</i> , no. 67, March 1997, p. 27. Interfax, 4 April 1997; in FBIS-SOV-97-094
6	3/30/97	Malfunctioning turbogenerator, faulty regulator on a cooling pump	--	N	--	4 hours	UNIAN, 31 March 1997; in FBIS-SOV-97-090. Kiev Radio Ukraine World Service, 31 March 1997; in FBIS-SOV-97-090
3	3/27/97	Faulty linkage between the turbine generator and the exciter	--	N	--	--	Interfax, 27 March 1997; in FBIS-SOV-97-086
2	1/30/97	Increase in the water level in the steam generator caused main pump to switch off	--	N	--	2 hours	UNIAN, 31 January 1997; in FBIS-SOV-97-022
1	1/25/97	Steam leak from a damaged auxiliary pipe into sealed area	--	N	--	5 days	UNIAN, 25 January 1997; in FBIS-SOV-97-017
3	1/14/97	A malfunction in an electronic circuit in one of the cooling pumps caused the pump to stop	--	N	--	3 hours	UNIAN, 14 January 1997; in FBIS-SOV-97-010

4	12/6/96	Oil leak in turbogenerator	--	N	--	2 days	BBC Monitoring Service, 13 December 1996
1	12/1/96	Faulty element in the generator's auxiliary system	--	N	--	several hours	UNIAN, 2 December 1996; in BBC Monitoring Service, 3 December 1996
4	11/17/96	Fault in the oil line supplying the turbogenerator bearings	--	N	--	12 hours	ITAR-TASS, 19 November 1996; in FBIS-SOV-96-255
3	5/20/96	Cooling system leak	--	N	--	--	UPI, 20 May 1996; in Executive News Service, 20 May 1996
2	5/4/96	Coolant system leak	--	--	--	--	Peter Coryn, "Borated Coolant Leaks onto Stud Bolts of Zaporizhzhya Reactor Head," <i>Nucleonics Week</i> , 16 May 1996, p. 14
1	4/6/96	Steam leak	0	--	--	2 days	"Steam Leak Shuts Reactor at Key Ukraine Station," Reuters, 6 April 1996
3	3/27/96	Problems with hermetic seal	0	--	--	4 days	"Viklyucheno 3-y Enerhblok ZAES," <i>Holos Ukrainy</i> , 29 March 1996, p. 1
6	2/18/96	Breakdown of steam generator	--	--	--	--	"Russia: Conflicting Reports on Stoppage at Zaporizhzhya Nuclear Power Plant," UNIAN, 23 February 1996
3	1/31/96	Breakdown in control system	--	--	--	--	UNIAN, 31 January 1996; in BBC Monitoring Service, 2 February 1996
5	12/7/95	Drop in water level in 3rd steam generator	--	N	--	--	"Zupyeneno 5-y Enerhoblok Zaporizhkoï AES," <i>Holos Ukrainy</i> , 9 December 1995, p. 1
1	12/4/95	Water leak and radiation increase under hermetic cover	--	--	--	4 days	UNIAN, 5 December 1995; in BBC Monitoring Service, 7

							December 1995
4	12/4/95	Radioactive steam released	0	Y	--	Shut down	Chrystyna Lapychak, "Radioactive Leak Prompts Reactor Shutdown at Ukrainian Plant," OMRI Daily Digest, 6 December 1995
6	11/6/95	Fault in steam generator	--	--	--	10 days	UNIAN, 16 November 1995; in FBIS-SOV-95-222.
1	4/22/95	Radioactive steam released	1-3	Y	--	--	UNIAN, 22 April 1995; in FBIS-SOV-95-078.
3	2/5/95	Lack of lubricating oil in circulation pumps	0	--	--	Output reduced by half	UNIAN, 6 February 1995; in FBIS-SOV-95-025.
--	9/7/94	Fault in steam generator	0	--	--	Temporarily shut down	UNIAN, 8 September 1994; in FBIS-SOV-94-175.
--	8/94	6 "episodes" at Zaporizhzhya NPP	0	--	--	--	"Six 'Episodes' at Zaporizhzhya AES in August," FBIS-SOV-94-185.
5	5/21/93	Fire	--	N	1 killed and 1 hurt	Unit 5 was already shut down for refueling	<i>Nuclear News</i> , July 1993, p. 48.