NUCLEAR MONITOR

A PUBLICATION OF WORLD INFORMATION SERVICE ON ENERGY (WISE)
AND THE NUCLEAR INFORMATION & RESOURCE SERVICE (NIRS)

wise
World Information Service on Energy
founded in 1978

NUCLEAR INFORMATION & RESOURCE SERVICE
www.nirs.org

MARCH 25, 2011 | No. 725

MONITORED THIS ISSUE:

"REACTORS DON'T HAVE LIFETIMES, THEY ONLY HAVE LICENSING PERIODS"

On March 11, while sending the Nuclear Monitor special issue 'Chernobyl – Chronology of a disaster' it became clear that not all Japanese nuclear reactors safely switched off after the devastating earthquake and following Tsunami.

At this moment we feel we have nothing else to add than quotes from nuclear proponents about how safe nuclear power is, how non-existent the chances of a major incident resulting from a loss-of-coolant accident and the fact that even then no off-site consequences would be possible.

"A nuclear power plant is infinitely safer than eating because 300 people choke to death on food every year."
- Dixie Lee Ray. Washington governor and Atomic Energy Commission chairwoman; 1977. Quoted in Christopher Cerf and Victor Navasky, comps., The Experts Speak: The Definitive Compendium of Authoritative Misinformation, p. 216, 1984

"We are now in the process of updating the standards on the basis of lessons learnt from that Tsunami", Godoy, acting head of engineering safety at the IAEA, 31 January 2007, after the December 2006 tsunami temporarily flooded a reactor in India.

TEPCO-Safety Measures
Source: http://www.tepco.co.jp/en/challenge/energy/nuclear/safety-e.html

The safety measures at nuclear power plants derive directly from our top priority: "To ensure that, under all conceivable circumstances, the community will be protected from hazardous radioactive substances."

To that end, we have thoroughly incorporated the "defense in depth concept," which is the foundation of genuine safety. Thus, safety measures are built in at every stage of the process.

Defense in Depth

1. Measures to prevent unexpected events
* All designs provide margins of safety capable of withstanding even natural disasters.
* Strict quality control at every stage, from design to construction to operation.
* In addition to the elaborate regular inspections that take place every year, interlock and fail-safe systems are incorporated at every turn to prevent erroneous operations or actions.

2. Measures to prevent the escalation of unexpected events
* Detection devices to detect abnormalities immediately
* Equipment that automatically and safely shuts the reactor down

3. In the extremely unlikely event of an accident
[to prevent release of radioactive substances]
* Emergency Core Cooling System (ECCS)
* Airtight structure of the primary containment vessel and the reactor building

Anti-Earthquake Measures
* Designed for the Largest Conceivable Earthquake
* Before constructing a nuclear power plant, the site is carefully studied for previous earthquake records and geological features. This study establishes that there is no active fault under the site. Then, the building, the equipment, the piping, and other equipment are all designed to withstand the strongest possible earthquake in the area.

Hard-to-Shake Structure
* Reactor buildings are built directly on solid bedrock after all soil has been removed. Furthermore, the reinforced concrete walls are far thicker than those used in other buildings. The building itself is a strong dice-like structure. Therefore, in the event of an earthquake, reactor buildings shake far less than an ordinary building.

Automatic Shutdown
* Seismic detecting devices in the reactor building are designed to automatically shut the reactor down if they sense an earthquake of level 5 or greater.

*** Operation / Skills Training**
In addition to the many safety measures related to plant and equipment, the operators and maintenance personnel receive periodic strict and thorough training on the job and in the training center. Every effort is made to ensure safe operation.

Excerpts from: International Atomic Energy Agency (IAEA): *Basis Safety Principles for Nuclear Power Plants* (75-INSAG-3 Rev. 1, INSAG-12);

49. The strategy for defence in depth is twofold: first, to prevent accidents and second, if prevention fails, to limit the potential consequences of accidents and to prevent their evolution to more serious conditions. Defence in depth is generally structured in five levels. (…) If one level were to fail, the subsequent level comes into play, and so on. Special attention is paid to hazards that could potentially impair several levels of defence, such as fire, flooding or earthquakes. Precautions are taken to prevent such hazards wherever possible and the plant and its safety systems are designed to cope with them.
(…)
181. Of the extreme external hazards, seismic events receive special attention owing to the extent to which they can jeopardize safety. A nuclear power plant is protected against earthquakes in two ways: by siting it away from areas of active faulting and related potential problems such as susceptibility to soil liquefaction or landslides; and by designing the physical barriers and the safety systems contributing to the defence in depth of the plant to bear the vibratory loads associated with the most severe earthquake that could be expected to occur in its vicinity, on the basis of historical input and tectonic evidence. This is termed the design basis earthquake. Seismic design of plant structures, components and systems is carried out using response function methods, making use of a frequency spectrum for the design basis earthquake that is appropriate to the site. Seismic design takes account of soil–structure interaction, the potential amplification and modification of seismic motion by the plant structures, and interaction between components, systems and structures. The design ensures that the failure of non-safety-related equipment in an earthquake would not affect the performance of safety equipment.

"Although we are not building many nuclear power plants, we are able to permanently increase our most important final product, electrical energy. We are doing it by the excellence of our work: by keeping our units online longer, by increasing their power, by reducing the number of incidents and by avoiding accidents."

Adrej Stritar, President European Nuclear Society, in Nuclear Europe Worldscan Spring 2002 Edition, p.5

"Basically, nuclear power plant systems have two primary functions: power generation and environmental protection. The latter includes all the systems to minimize releases into the environment in all conceivable cases". Ann S. Bisconti and Antti Ruuskanen in: "Nuclear language - a guide to clarity"; Nuclear Europe Worldscan, July/August 1998

"Reactors don't have lifetimes, they only have licensing periods." Howard Cantor, previous director of the Office of Fissile Materials Disposition at the US's DoE, 14 September 1998

"It would be paradoxical in this situation if the world were to continue burning ever more hydrocarbon resources, which could have much more valuable uses, and were to leave in the earth uranium and thorium resources which can hardly be of any other peaceful use than as fuel in nuclear reactors". Hans Blix, then IAEA Director General, on September 4, 1997, speaking on the sustainable energy challenge. IAEA Press release 97/18, 4 September 1997

"Nuclear power is safe. It doesn't contain pollutants." New US Energy Secretary Bill Richardson, successor of Federico Pena. World Environment News, 26 August 1998

John Graham (former president of the American Nuclear Society, and vice president in charge of environment, safety and health for British Nuclear Fuels' US subsidiary) is quoted by Nigel Hawkes in Science Briefing, in The Times of London, June 2, 1997, as saying: *"People predisposed to cancer should be given radiation throughout their lives... I believe that one day radiation will become part of our daily exercise regime."*

"If a simple and pain-free cure for cancer is found, most impacts and therefore the costs of the nuclear fuel chain can become negligible." Yoshio Matsuki (staff member of the IAEA Division of Nuclear Installation Safety) and Russell Lee (director of Center for Energy and Environmental Analysis, Oak Ridge USA) in an article comparing different energy risks. IAEA Bulletin 1, 1999.

"After the accident at Three Mile Island nuclear power plant on march 28, 1979, and before any credible study could be completed, a "blue-ribbon" presidential commission publicly expressed confidence that radioactive exposure of residents downwind of the ill-fated reactor were too low for radiogenic health effects to be detectable. Subsequently, a prestigious research team

fro Columbia University was commissioned to conduct a health study among the population around the plant. It was paid for by a litigation settlement fund, financed by the nuclear operator's insurers. The supervising court imposed strict conditions on the investigators with regards to how doses should be estimated. Predictably, the Columbia University study, reviewed and approved by the industry's attorneys, found no evidence that radiation releases from the Three Mile Island nuclear facility had influenced cancer risks during the limited period of follow-up, 1975-1985. Six years later, however, and based on the same health data, Wing et al. established tat radioactive exposure were significantly associated with excess cancer incidence, Their report presented evidence that the dose estimates used in the Columbia University analysis had been too low. This challenge to an authoritative finding, publicized earlier as "definitive" and "state of the art", by a new analysis with superior epidemiologic sensitivity, was met wit scathing rejection by the mainstream literature."

International Journal of Occupational and Environmental Health, Jul/ Sept.2007; Manipulating Public Health Research.

"Turning now to nuclear safety and security, we have seen a very significant improvement in the safety performance of the nuclear industry since the Chernobyl disaster nearly 25 years ago. This reflects factors including improved design, better operating procedures, a strengthened and more effective regulatory environment and the emergence of a strong safety culture."

Yukiya Amano, IAEA Director General, at the UN General Assembly in New York, USA, on 8 November 2010

I'm convinced that all the risks of nuclear power – accidents at power stations, keeping track of the fuel that can be turned into bombs, the problems of wastes, of transporting the fuels, can be managed but their management is simplified if nuclear power stations are confined to a relatively small number of what I call nuclear parks".

Dr. Alvin Weinberg, Director of Oak Ridge National Laboratory, in The Observer, 1977

Our global challenge is to minimize the impact on environment while satisfying the electricity needs of the world. Nuclear energy plays an important role in fulfilling this objective because it protects the environment, provides much needed energy and makes sustainable living possible".

International Nuclear Forum, December 2000, at the COP Summit in The Hague, Netherlands

"The important conclusion is that the reactor adds only a small and arguably insignificant amount to the individual and societal risk which all of us run in our everyday lives. Arguably there is little point in further reductions to the risk posed by such plant since the additional expenditure on safety provisions would be difficult to justify in terms of benefit to society"

J.H. Gittus, Sizewell B Power station in Atom (UKAEA), February 1986: Risk assessment for the PWR.

"This is a sustainable, sensible and supportable alternative to burning our environmental boats. Its not a threat from the past –it's the way forward" British Energy 's Peter Hollins , 16 October 2000, European Nuclear Council

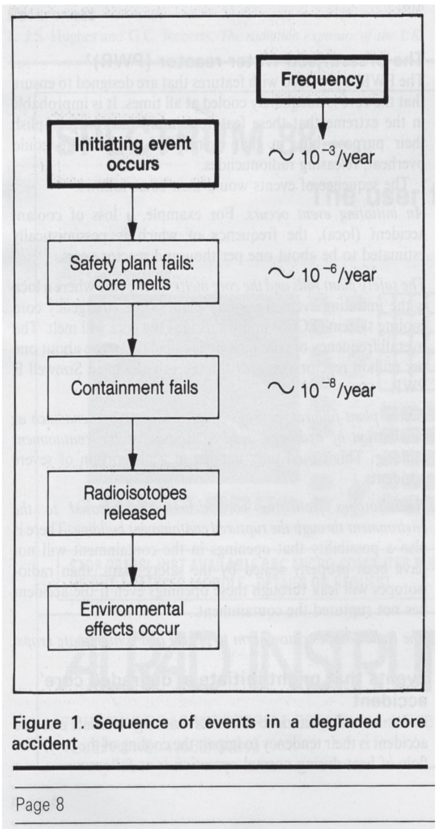


Figure 1. Sequence of events in a degraded core accident

Page 8

"Nuclear power is absolutely safe", Cloette Lewiner, President of European Nuclear Society, De Gelderlander (Nl), 27 April 1993

WNA Charter of Ethics
"The important conclusion is that the reactor adds only a small and arguably insignificant amount to the individual and societal risk which all of us run in our everyday lives. Arguably there is little point in further reductions to the risk posed by such plant since the additional expenditure on safety provisions would be difficult to justify in terms of benefit to society"

J.H. Gittus, Sizewell B Power station in Atom (UKAEA), February 1986: Risk assessment for the PWR.

"This is a sustainable, sensible and supportable alternative to burning our environmental boats. Its not a threat from the past –it's the way forward"

British Energy 's Peter Hollins , 16 October 2000, European Nuclear Council

"Nuclear power is absolutely safe",
Cloette Lewiner, President of European Nuclear Society, De Gelderlander (Nl), 27 April 1993

WNA Charter of Ethics

The World Nuclear Association has established a Charter of Ethics to serve as a common credo amongst its Member organizations. This affirmation of values and principles summarizes the responsibilities of the nuclear industry and the surrounding legal and institutional framework that has been constructed through international cooperation to fulfil President Eisenhower's seminal vision of 'Atoms for Peace'.

We, the Members of the World Nuclear Association, affirm:

Premises
Our belief that sustainability must be the guiding principle of global development – requiring worldwide policies that meet the needs and aspirations of the present generation without compromising the opportunity of future generations to fulfil their needs and aspirations;

Our confidence that nuclear power is a 'sustainable development' technology because its fuel will be available for multiple centuries, its safety record is superior among major energy sources, its consumption causes virtually no pollution, its use preserves valuable fossil resources for future generations, its costs are competitive and still declining, and its waste can be securely managed over the long-term;

Our conviction that nuclear technology is a unique and indispensable tool of sustainable global development –
• Unparalleled in its capacity to generate electricity cleanly, safely and on a large scale for a rapidly expanding world population whose future depends on the availability of environmentally sound energy resources; and
• Highly beneficial and cost-effective in worldwide efforts to promote agricultural productivity, eradicate virulent pests, protect livestock health, preserve food, develop water resources, enhance human nutrition, improve medical diagnosis and treatment, and advance environmental science;
Our recognition that nuclear science is proving equally valuable in supporting industrial societies and in helping the world's poorest countries to advance;
Our keen awareness of the need to strengthen and sustain public confidence, both in the reliability of nuclear technology and in the people and institutions responsible for using it;

Principles
Our commitment to ensuring that nuclear technology is used safely and peacefully;
Our resolve to prevent and expose unsafe or illicit practices regarding nuclear material and to use all necessary precautions to protect individuals, society and the environment from any harmful radiological effects arising from nuclear material during use, storage, transport and waste disposal;
Our adherence to the principle and practice of transparency regarding all types of civil nuclear activity, insofar as there exists a demonstrable public interest in the availability of such information and consistent with the public interest in protecting:
• Commercially valuable knowledge; and
• The confidentiality integral to full and candid participation in voluntary systems of review and exchange designed to enhance and maintain nuclear safety;

Our strong support for the work performed –

• By governments, through the International Atomic Energy Agency (IAEA), to promulgate nuclear safety standards for the worldwide nuclear industry and to ensure that there has been no spread of nuclear weapons arising from the civil nuclear fuel cycle; and
• In industry, through the World Association of Nuclear Operators (WANO), to develop and maintain, using a comprehensive system of technical exchange and operational peer review, a rigorous safety culture at nuclear facilities worldwide;

Our shared obligation to support the work of the World Nuclear Association in providing an essential means by which participants in the global nuclear industry share knowledge, coordinate efforts to advance best-practice internationally, assemble and publish reliable information on nuclear power, and achieve sound representation in world forums that shape the policy and public environment in which the industry operates;

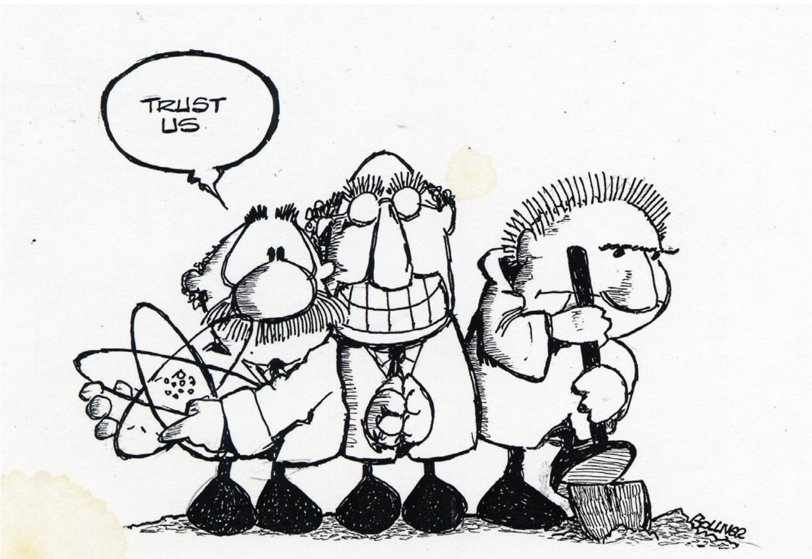
International Legal Obligations
Our individual and common responsibility to uphold respective international legal commitments embodied in –

• The IAEA statute; safeguards agreements concluded pursuant to the Treaty on the Non-Proliferation of Nuclear Weapons; and regional and bilateral accords providing for IAEA verification;

• The Convention on Nuclear Safety; the Convention on the Physical Protection of Nuclear Material; the Convention on Early Notification of a Nuclear Accident; the Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency; the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter; and the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management; and
• Other international treaties and conventions that contribute to ensuring the safe and peaceful use of nuclear technology throughout the world;

Public Policy

Our intention to cooperate, in a spirit of partnership, with those engaged in the research, development and operation of other technologies that yield energy without adverse effect on the biosphere; and
Our determination to promote, as a matter of ethical principle and urgent public need, an ongoing debate on energy resources that focuses citizens and governments alike on the real choices facing humankind and on the severe dangers – for the prospects of global development and for the biosphere – if decision-making on this fundamental policy is shaped by ideology and myth rather than by science and facts.



Excerpts from: *"Safety of Nuclear Power Reactors",* World Nuclear Association, http://www.world-nuclear.org/info/inf06.html (updated January 2011)

(…) Those responsible for nuclear power technology in the west devoted extraordinary effort to ensuring that a meltdown of the reactor core would not take place, since it was assumed that a meltdown of the core would create a major public hazard, and if uncontained, a tragic accident with likely fatalities.

In avoiding such accidents the industry has been outstandingly successful. In over 14,000 cumulative reactor-years of commercial operation in 32 countries, there have been only two major accidents to nuclear power plants - Three Mile Island and Chernobyl, the latter being of little relevance outside the old Soviet bloc.

It was not until the late 1970s that detailed analyses and large-scale testing, followed by the 1979 meltdown of the Three Mile Island reactor, began to make clear that even the worst possible accident in a conventional western nuclear power plant or its fuel could not cause dramatic public harm. The industry still works hard to minimize the probability of a meltdown accident, but it is now clear that no-one need fear a potential public health catastrophe.

The decades-long test and analysis program showed that less radioactivity escapes from molten fuel than initially assumed, and that this radioactive material is not readily mobilized beyond the immediate internal structure. Thus, even if the containment structure that surrounds all modern nuclear plants were ruptured, it would still be highly effective in preventing escape of radioactivity.

It is the laws of physics and the properties of materials that preclude disaster, not the required actions by safety equipment or personnel. In fact, licensing approval now requires that the effects of any core-melt accident must be confined to the plant itself, without the need to evacuate nearby residents.

(…) The two significant accidents in the 50-year history of civil nuclear power generation are:

Three Mile Island (USA 1979) where the reactor was severely damaged but radiation was contained and there were no adverse health or environmental consequences
Chernobyl (Ukraine 1986) where the destruction of the reactor by steam explosion and fire killed 31 people and had significant health and environmental consequences. The death toll has since increased to about 56.

(…) One mandated safety indicator is the calculated probable frequency of degraded core or core melt accidents. The US Nuclear Regulatory Commission (NRC) specifies that reactor designs must meet a 1 in 10,000 year core damage frequency, but modern designs exceed this. US utility requirements are 1 in 100,000 years, the best currently operating plants are about 1 in 1 million and those likely to be built in the next decade are almost 1 in 10 million.

(…) Regulatory requirements today are that the effects of any core-melt accident must be confined to the plant itself, without the need to evacuate nearby residents.

The main safety concern has always been the possibility of an uncontrolled release of radioactive material, leading to contamination and consequent radiation exposure off-site. Earlier assumptions were that this would be likely in the event of a major loss of cooling accident (LOCA) which resulted in a core melt. Experience has proved otherwise in any circumstances relevant to Western reactor designs. In the light of better understanding of the physics and chemistry of material in a reactor core under extreme conditions it became evident that even a severe core melt coupled with breach of containment could not in fact create a major radiological disaster from any Western reactor design. Studies of the post-accident situation at Three Mile Island (where there was no breach of containment) supported this.

(…) Flooding
Nuclear plants are usually built close to water bodies, for the sake of cooling. The site licence takes account of worst case flooding scenarios as well as other possible natural disasters and, more recently, the possible effects of climate change. As a result, all the buildings with safety-related equipment are situated on high enough platforms so that they stand above submerged areas in case of flooding events.

Excerpts from: *"Nuclear Power Plants and Earthquakes"*, World Nuclear Association, http://www.world-nuclear.org/info/inf18.html (updated 18 March 2011)

(..) Tsunamis
Large undersea earthquakes often cause tsunamis - pressure waves which travel very rapidly across oceans and become massive waves over ten meters high when they reach shallow water, then washing well inland. The December 2004 tsunamis following a magnitude 9 earthquake in Indonesia reached the west coast of India and affected the Kalpakkam nuclear power plant near Madras/Chennai. When very abnormal water levels were detected in the cooling water intake, the plant shut down automatically. It was restarted six days later.

Even for a nuclear plant situated very close to sea level, the robust sealed containment structure around the reactor itself would prevent any damage to the nuclear part from a tsunami, though other parts of the plant might be damaged. No radiological hazard would be likely.

On Niigata chuetsu-oki earthquake and consequences for Kashiwazaki-Kariwa nuclear power plant.
"An analysis on the background of the shortage of personnel for the initial fire-fighting activities revealed that the personnel on duty on holidays at the Kashiwazaki-Kariwa NPP failed to give instructions to organize the in-house fire brigade, due to the following reasons: i) Personnel for the in-house fire brigade, including the fire-fighting crew, were not stationed at the site on holidays or at night; ii) The fire brigade was not automatically organized when an earthquake occurred, but was called upon as needed whenever a fire broke out because it was not assumed that fires would break out at the same time as the occurrence of earthquake; and additionally, iii) The telephone line was congested."

p.63, 2007-2008 edition, Nuclear Safety White Paper, Summary, March 2009, The Nuclear Safety Commission, Japan. Viewed 24 march 2011. http://www.nsc.go.jp/NSCenglish/publication_pdf/2007-2008WhitePaper.pdf

Website: Korea Hydro & Nuclear Power Co., Ltd., 23 March 2011. http://www.khnp.co.kr/en/040103

The Korea Hydro & Nuclear Power Co., Ltd. has applied the SSE (Safe Shutdown Earthquake) measure to 20 percent of gravity, 0.2g on operational and constructing nuclear power plants. But, stochastically SSE means that there is only one earthquake in almost every 10,000 years , so, compared with the 40 years of a nuclear power plant's lifetime, there is no chance of an earthquake within the scheduled operation period of a nuclear power plan.

"What I have heard, is that the Saudi Arabians are paying Greenpeace to campaign against Nuclear Power. Well it wouldn't surprise me at all"

James Lovelock, interview with 'Creel commission', added 26-08-2005

In January 1986, KEMA releases study for Dutch government which is in the process of getting a license for construction of new reactors. KEMA is one of the countries leading institutes on energy technology and nuclear safety issues.

Conclusion of the study:

"Even if all safety systems fail, when reactor is not cooled and radioactivity is released (meltdown), the consequences will be 'limited': there will be no deaths, drinking water is under no threat and agricultural consequences will be limited for the next two months. There will be no need for evacuations, only the advice to stay indoors."

ANP (Dutch press agency), 8 January 1986

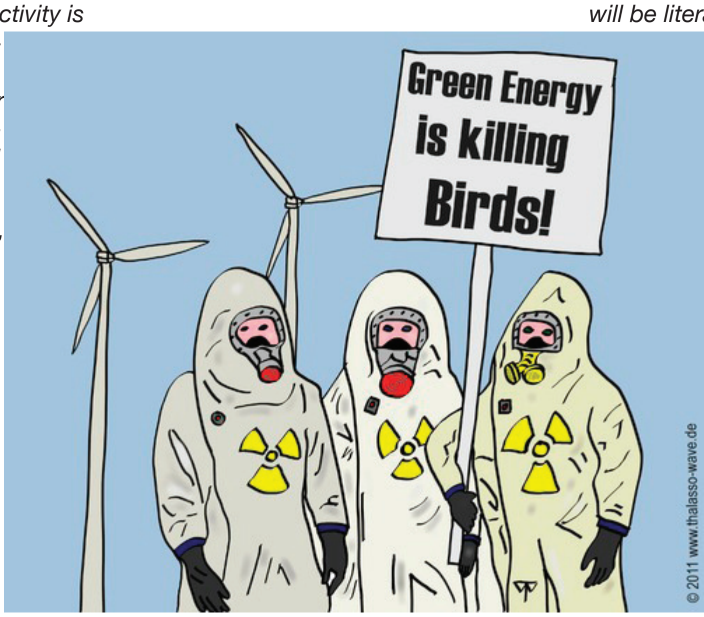
David Kydd, spokesperson IAEA, after earthquake Japan 1999 and after saying that none of the 434 nuclear power plants have experienced major problems because of earthquakes. He says nuclear power plants are built with *"tremendously strengthened foundations and structural features to ensure that they can withstand the biggest conceivable earthquake."*
I.H.T. 9 November 1999

"Judging from testimony and data still available, the possibility that the reactor reached a critical state is extremely high". Tepco's Akio Komori in 2007 after revealing that five dislodged control rods probably caused a criticality accident that could have lasted 7,5 hours at Unit 3 of Fukushima-1 in 1978. World Nuclear News Daily, 27 March 2007)

"Our basic risk studies showed that human error accounts for one-third to one-half of all accidents". Darrell Eisenhut, deputy-director of NRC's office of nuclear reactor regulation. Time (USA), 2 June 1986

"As the country which has experienced most the most earthquakes in the world, Japan has implemented many measures in preparation of the 'big one'. Preparations have included installing sensitive monitoring devices in all Japanese nuclear plants which will trigger automatic shutdown if there are violent earth movements."

Atom (UKAEA), Jan/Febr 1995: Japan's reactors unaffected by earthquake.



"Because of construction delays at Rokkashomura, at least one utility, Tokyo Electric Power, has sought, and won from the Nuclear Safety Commission, approval to build a spent fuel storage facility at Fukushima-I."

Atom (UKAEA), Mar/April 1994: World-wide industry eyes the expanding market.

"Why is there so much concern about the risks of energy production – and those of nuclear energy in particular? The question is not as trivial as it might appear. As a first approximation, the answer is probably that the nuclear industry made a mess of its public relations from the word go. If, from the beginning, we had stressed the fact that the design of nuclear stations virtually eliminated the chance that anything can go wrong, the public perception of nuclear power might have been different today. Instead, for 40 years, widely publicized studies of reactor safety have concentrated masochistically on risk –and, in particular, on the vanishingly small chance that a major loss of coolant could result in core damage, release of fission products, and loss of life."

James Daglish, IAEA, in: Atom (UKAEA), July 1985

"If we do not invest in renewables now, I do see the time coming when a choice will be literally forced on us between a nuclear-fission economy and the greenhouse". Michael Oppenheimer, Environmental Defense Fund, Newsweek, 25 July 1988(!)

"Nuclear may need climate change more than climate change needs nuclear." Conclusion of Nucleonics Week of the European Commission meeting about "Nuclear in a changing world", October 1998. Nucleonics Week, 22 October 1998

WISE/NIRS NUCLEAR MONITOR

The Nuclear Information & Resource Service was founded in 1978 and is based in Washington, US. The World Information Service on Energy was set up in the same year and houses in Amsterdam, Netherlands. NIRS and WISE Amsterdam joined forces in 2000, creating a worldwide network of information and resource centers for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues.

The WISE/NIRS Nuclear Monitor publishes international information in English 20 times a year. A Spanish translation of this newsletter is available on the WISE Amsterdam website (www.antenna.nl/wise/esp). A Russian version is published by WISE Russia and a Ukrainian version is published by WISE Ukraine. The WISE/NIRS Nuclear Monitor can be obtained both on paper and in an email version (pdf format). Old issues are (after two months) available through the WISE Amsterdam homepage: www.antenna.nl/wise.

Receiving the WISE/NIRS Nuclear Monitor

US and Canada based readers should contact NIRS for details of how to receive the Nuclear Monitor (address see page 11). Others receive the Nuclear Monitor through WISE Amsterdam.
For individuals and NGOs we ask a minimum annual donation of 100 Euros (50 Euros for the email version). Institutions and industry should contact us for details of subscription prices.

WISE AMSTERDAM/NIRS

ISSN: 1570-4629

Editorial team: Dirk Bannink and Peer de Rijk

Next issue of the Nuclear Monitor (#726) will again be mailed out

The “Elfi Gmachl Foundation for a Nuclear-free Future” / PLAGE-Salzburg supports the Nuclear Monitor financially.
See: http://www.plage.cc (not available in English (yet))

WISE/NIRS offices and relays

WISE Amsterdam
P.O. Box 59636
1040 LC Amsterdam
The Netherlands
Tel: +31 20 612 6368
Fax: +31 20 689 2179
Email: wiseamster@antenna.nl
Web: www.antenna.nl/wise

NIRS
6930 Carroll Avenue, Suite 340
Takoma Park, MD 20912
Tel: +1 301-270-NIRS
(+1 301-270-6477)
Fax: +1 301-270-4291
Email: nirsnet@nirs.org
Web: www.nirs.org

NIRS Southeast
P.O. Box 7586
Asheville, NC 28802
USA
Tel: +1 828 675 1792
Email: nirs@main.nc.us

WISE Argentina
c/o Taller Ecologista
CC 441
2000 Rosario
Argentina
Email: wiseros@ciudad.com.ar
Web: www.taller.org.ar

WISE Austria
c/o Plattform gegen Atomgefahr
Roland Egger
Landstrasse 31
4020 Linz

Austria
Tel: +43 732 774275; +43 664 2416806
Fax: +43 732 785602
Email: post@atomstopp.at
Web: www.atomstopp.com

WISE Czech Republic
c/o Jan Beranek
Chytalky 24
594 55 Dolni Loucky
Czech Republic
Tel: +420 604 207305
Email: wisebrno@ecn.cz
Web: www.wisebrno.cz

WISE India
42/27 Esankai Mani Veethy
Prakkai Road Jn.
Nagercoil 629 002, Tamil Nadu
India
Email: drspudayakumar@yahoo.com;

WISE Japan
P.O. Box 1, Konan Post Office
Hiroshima City 739-1491
Japan

WISE Russia
Moskovsky prospekt 120-34
236006 Kaliningrad
Russia
Email: ecodefense@rambler.ru
http://www.anti-atom.ru

WISE Slovakia
c/o SZOPK Sirius
Katarina Bartovicova
Godrova 3/b
811 06 Bratislava
Slovak Republic
Tel: +421 905 935353
Email: wise@wise.sk
Web: www.wise.sk

WISE South Africa
c/o Earthlife Africa Cape Town
Maya Aberman
po Box 176
Observatory 7935
Cape Town
South Africa
Tel: + 27 21 447 4912
Fax: + 27 21 447 4912
Email: coordinator@earthlife-ct.org.za
Web: www.earthlife-ct.org.za

WISE Sweden
c/o FMKK
Tegelviksgatan 40
116 41 Stockholm
Sweden
Tel: +46 8 84 1490
Fax: +46 8 84 5181
Email: info@folkkampanjen.se
Web: www.folkkampanjen.se

WISE Ukraine
P.O. Box 73
Rivne-33023
Ukraine
Tel/fax: +380 362 237024
Email: ecoclub@ukrwest.net
Web: www.atominfo.org.ua

WISE Uranium
Peter Diehl
Am Schwedenteich 4
01477 Arnsdorf
Germany
Tel: +49 35200 20737
Email: uranium@t-online.de
Web: www.wise-uranium.org

WISE/NIRS NUCLEAR MONITOR

c/o WISE Amsterdam
PO Box 59636
1040 LC Amsterdam
Netherlands

PRINTED MATTER
MATIERE IMPRIME

PRIORITY
PRIORITAIRE

TPG Post
Port betaald