



Austria



7th NATIONAL REPORT

under the

**CONVENTION ON
NUCLEAR SAFETY**

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7th National Report of Austria under the Convention on Nuclear Safety
in accordance with Article 5

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7th National Report of AUSTRIA

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for the CNS Review Meeting 2017

August 2016

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INTRODUCTION

1. About this report

The form of the Austrian National Report for the CNS Conference 2017 follows the structure given in guideline INFCIRC/572/Rev. 5. On the basis of the 2014 National Report, its content has been updated, in particular taking into account all recent changes of the legislative and regulatory framework and recent upgrades of the Austrian TRIGA research reactor.

Austria would like to recall, that it reports since the first review cycle under the Convention on Nuclear Safety on its research reactor on a voluntary basis.

As Austria was involved in the Working Group on Effectiveness and Transparency, which was established during the Second Extraordinary Meeting in response to the Fukushima Daiichi nuclear accidents and as Austria also contributed actively to the negotiations for the Vienna Declaration on Nuclear Safety (VD), this report also intends to reflect the spirit of the VD to continuously improve nuclear safety in regard to its research reactor.

2. General outline of Austria's national policy on nuclear safety

Austria has never operated a nuclear power plant and has no intention to do so in the future. Thus, Austria's high interest in the safety of nuclear facilities, except for the domestic nuclear activities as described in chapter 7.6, relates primarily to environmental and health concerns arising from the operation of nuclear power plants in Austria's neighbourhood.

Already in 1978, the Austrian electorate decided in a referendum not to start the operation of the constructed nuclear power plant (BWR) in Zwentendorf. Shortly thereafter, on 15 December 1978, the Austrian parliament passed the Law on the Prohibition of the Use of Nuclear Fission for Energy Generation in Austria [BGBl.¹ No. 676/1978: Bundesgesetz über das Verbot der Nutzung der Kernspaltung für die Energieversorgung in Österreich]. This position was strengthened by the Chernobyl accident in 1986 which substantially increased the opposition of the political parties and the public at large against nuclear power. Austria was at the time among those countries in Central Europe which were most affected by the Chernobyl accident.

In 1999, the Austrian parliament passed unanimously the Constitutional Law on a Nuclear-free Austria [BGBl. I No. 149/1999: Bundesverfassungsgesetz für ein atomfreies Österreich]. It stipulates, inter alia, that installations which serve for energy generation by nuclear power must not be constructed or, if they already exist, come on line. Furthermore, the law prohibits the transport of fissile materials for purposes of nuclear power generation or disposal unless this conflicts with international obligations.

In view of the high risks emanating from nuclear installations, especially from nuclear power plants, Austria attaches utmost importance to international efforts to harmonise and steadily increase nuclear safety. Consequently, Austria has undertaken a number of bilateral activities with neighbouring countries with regard to the exchange of information on nuclear safety matters. It does not only comprise operational information on nuclear installations but also

¹ Bundesgesetzblatt = Federal Law Gazette

early warning schemes in the case of nuclear incidents or accidents and mutual assistance for the prevention or mitigation of effects from such radiological events.

Being a Member State of the European Union, Austria has contributed and will continue to contribute to all activities which aim at continuously improving nuclear safety. For example Austria has been actively involved in the preparation as well as in the implementation and the follow-up of the stress tests for European nuclear power plants.

Within the limits of a small country with no nuclear power programme Austria endeavours to contribute also on international level to continuously improve nuclear safety, with the involvement in the preparation of the Diplomatic Conference under the CNS, which agreed on the Vienna Declaration on Nuclear Safety on 9 February 2015, being a prominent and the most recent example. It is with this attitude that Austria will participate in the peer review process of the Convention on Nuclear Safety.

ARTICLE BY ARTICLE REVIEW

Obligations

General provisions

Article 6 (Existing nuclear installations)

Nuclear Installations in the broader sense

Currently, Austria operates no nuclear installations as defined in Article 2 of the Convention. There are only two facilities which can be seen as nuclear installations in the broader sense:

- one centralised waste management and interim storage facility and
- one research reactor.

The waste management and interim storage facility is covered by the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. The Austrian TRIGA research reactor is currently only covered by the Code of Conduct on the Safety of Research Reactors, which has no reporting obligation. However, this installation is a nuclear installation as defined in the European Nuclear Safety Directive (see chapter 7.2.1). Thus the research reactor will be treated within this report. Reporting on the different articles of this Convention is on a voluntary basis according to section E of INFCIRC/572/Rev.5.

In the 1970s, a nuclear power plant was constructed in Zwentendorf, but in consequence of the negative outcome of the referendum in 1978, it was subsequently not put into operation. All nuclear fuel elements were removed in the late 1980s.

6.1 Atominstitut (ATI)

The Atominstitut, which is an Institute of the Technische Universität Wien (TU Wien), operates a TRIGA Mark II research reactor. It has a maximum steady state thermal output of 250 kW and pulsing capabilities up to 250 MW. Being in operation since March 1962, the reactor is exclusively used for basic and applied academic research and teaching purposes. Being the closest research reactor to the IAEA headquarters, it is also frequently used by IAEA staff for development and calibration of safeguards instruments. In October/November 2012 all irradiated fuel elements from the core and the spent fuel storage were shipped to the Idaho National Lab and replaced by 77 19,9% enriched standard TRIGA fuel elements. With this new core the TRIGA reactor Vienna went critical on 27 November 2012. These fuel elements will be returned to the USA after 2025, if the parties of the contract agree upon an extension. Presently, the total number of fuel elements in the core is 76 (plus 9 fuel elements in the in-pool storage racks plus 5 fresh fuel elements in the fuel storage). The total activity of these fuel elements after one year of cooling time is 7.27×10^{13} Bq and after ten years approx. 1.5×10^{13} Bq. The Atominstitut has a total spent fuel storage capacity of 168 fuel elements.

The modernization of the reactor instrumentation, the control system, the primary and secondary cooling circuit and the reactor control room took place from 2014 till November 2015. The new systems are tested until October 2016. A new licence is obligatory for any further reactor operation.

Financially and legally, the Technische Universität Wien (TU Wien) is an independent body since the year 2004.

Specific Reporting under the Vienna Declaration on Nuclear Safety

- The modernization of the reactor instrumentation, the control system, the primary and secondary cooling circuit and the reactor control room took place from 2014 till November 2015. The new systems are tested until October 2016. A new licence is obligatory for any further reactor operation.

Legislation and regulation

Article 7 (Legislative and regulatory framework)

The legislative and regulatory framework comprises the legal areas of radiation protection, installation safety, safeguards and physical protection of nuclear material and nuclear facilities. As Austria is a Federal State, a number of federal (Bund), provincial (Länder) and district authorities (Bezirksverwaltungsbehörden) are involved in the regulation of these matters.

Reflecting pertinent European legislation Austria intends to invite an IRRS Mission for 2018.

7.1 Law Prohibiting the Use of Nuclear Fission for Energy Purposes, Constitutional Law on a “Nuclear-free Austria”

As outlined in the Introduction, the use of nuclear energy for peaceful purposes in Austria has significantly been influenced by the passing of the Law Prohibiting the Use of Nuclear Fission for Energy Purposes in 1978 and of the Constitutional Law on a “Nuclear-free Austria” in 1999.

The Constitutional Law on a “Nuclear-free Austria” prohibits the construction and operation of installations for the production of energy by means of nuclear fission as well as – with some exemptions – the transport of fissile materials in Austria. Where an international obligation exists, the international obligation would prevail. The use of installations for research and development activities is compatible with the quoted constitutional law.

7.2 Radiation Protection and Nuclear Safety Legislation

7.2.1 Radiation Protection Act

The Radiation Protection Act [BGBl. No. 227/1969, Strahlenschutzgesetz] regulates the handling of radiation sources, the operation of facilities and the radiation monitoring; this includes licensing, protection of workers and population, radioactive waste, natural radioactive material and radiological emergency management. It has been amended several times since 2002 for implementing Euratom legislation and – together with the adjoining ordinances – fully implements the following EU directives into national law:

- EU Council Directive 96/29/Euratom laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation (OJ No. L 159 of 29 June 1996),
- EU Council Directive 90/641/Euratom on the operational protection of outside workers exposed to the risk of ionizing radiation during their activities in controlled areas (OJ No. L 349/21 of 13 December 1990),
- EU Council Directive 2003/122/Euratom on the control of high-activity sealed radioactive sources and orphan sources (OJ No. L 346/57 of 31 December 2003).
- EU Council Directive 2014/87/Euratom (OJ No. L 219/42 of 25 July 2014) amending Directive 2009/71/Euratom establishing a Community framework for the nuclear safety of nuclear installations (OJ No. L 172/18 of 2 July 2009)
- EU Council Directive 2011/70/Euratom establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (OJ No. L 199/48 of 2nd August 2011).

The latest amendment of the Radiation Protection Act in the year 2015 transposed obligations of the Council Directive 2011/70/Euratom on establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste. The changes covered:

- general principles of the national policy in waste management,
- provisions for the national programme and
- public participation in the decision making process.

It may be recalled, that it was already reported in the 2013 report under CNS, that the Federal Ministry of Science, Research and Economy has the sole responsibility for nuclear installations and particle accelerators within universities and research institutions of the Austrian Academy of Sciences (formerly: Ministry of Science and Research in agreement with the Ministry of Agriculture, Forestry, Environment and Water Management) as a competent authority responsible for licencing and supervision in accordance with Art. 43 of the Austrian Radiation Protection Act.

At the moment the Radiation Protection Act and the Radiation Protection Ordinances are under revision in order to transpose the EC Council Directive 2013/59/Euratom laying down basic safety standards for the protection against the dangers arising from exposure to ionising radiation into national law.

7.2.2 General Radiation Protection Ordinance

The General Radiation Protection Ordinance [BGBl. II No. 191/2006: Allgemeine Strahlenschutzverordnung] has been amended in year 2015 in order to transpose the obligations of the Council Directive 2011/70/Euratom on establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste into Austrian legislation. This latest amendment addresses the following key issues:

- provisions for the construction of waste management facilities,
- provisions for the organisation and safety of waste management facilities,
- provisions for record keeping and obligations for notifications to the competent authority,

- requirements for radiation protection officers,
- provisions for the information of the public regarding waste management.

7.2.3 Ordinance for Interventions in Case of Radiological Emergencies and in Case of Lasting Exposure

The Ordinance for Interventions in case of Radiological Emergencies and in case of Lasting Exposure [BGBl. II No. 145/2007: Interventionsverordnung] entered into force on 26 June 2007. It aimed at the transformation of the following EU Council Directives into national law:

- Title IX of the EU Council Directive 96/29/EURATOM (see above, 7.2.1),
- EU Council Directive 89/618/EURATOM on informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency (OJ No. L 357/31 of 7 December 1989).

The ordinance contains regulations in connection with interventions in case of radiological emergencies and in case of lasting exposure from a past radiological emergency or a past practice (see also Article 16 of this report). These include inter alia significant releases of radioactive material due to accidents involving facilities or practices, accidents during the transport of radioactive material or terrorist acts using radioactive material.

7.2.4 Ordinance on the Shipment of Radioactive Waste 2009

The Ordinance on the Shipment of Radioactive Waste 2009 [BGBl. II Nr. 47/2009: Radioaktive Abfälle-Verbringungsverordnung] entered into force on 19 February 2009. With this ordinance, the EU Council Directive 2006/117/EURATOM on the supervision and control of shipments of radioactive waste and spent fuel was implemented in national law.

The major changes are the following:

- The procedure for the shipment of radioactive waste between Member States is simplified.
- The consistency with other Community and international provisions had to be guaranteed, in particular with the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management to which the Community acceded on 2 January 2006.
- The scope of the council directive is also extended to shipments of spent fuel whether it is intended for disposal or for reprocessing.

7.2.5 Other Radiation Protection Ordinances

Radiation Protection Ordinance for Applications in Medicine

The Radiation Protection Ordinance for Applications in Medicine [BGBl. II No. 409/2004: Medizinische Strahlenschutzverordnung] entered into force on 1 January 2005. This ordinance was amended on 28 June 2010 [BGBl. II No. 197/2010: Änderung der Medizinischen Strahlenschutzverordnung].

Radiation Protection Ordinance for Air Crew

The Radiation Protection Ordinance for Air Crew [BGBl. II No. 235/2006: Strahlenschutzverordnung fliegendes Personal] entered into force on 1 July 2006. It comprises a set of special regulations for the radiation protection of persons who perform a function on board of an aircraft. Under this ordinance, aircraft operators are obliged to conduct an estimation and, in case of a possible exceedance of 1 mSv, an assessment of the dose of the air crew.

Ordinance for Naturally Occurring Radioactive Material

The Ordinance for Naturally Occurring Radioactive Material [BGBl. II Nr. 2/2008: Natürliche Strahlenquellen-Verordnung] entered into force on 7 January 2008. The ordinance contains regulations for the protection of persons against increased exposure due to practices with natural radioactive sources (in accordance with the Radiation Protection Act) with the exemption of the concerns of air crew where a separate ordinance has been enacted.

7.3 Nuclear Non-Proliferation Act

The 2013 Nuclear Non-Proliferation Act [BGBl. I Nr. 42/2013: Sicherheitskontrollgesetz 2013] regulates safeguards, nuclear export controls and the physical protection of nuclear material and nuclear facilities.

7.4 Act on the Transport of Dangerous Goods

The Act on the Transport of Dangerous Goods [BGBl. I No. 145/1998 as amended: Bundesgesetz über die Beförderung gefährlicher Güter und über eine Änderung des Kraftfahrtgesetzes 1967 und der Straßenverkehrsordnung 1960 (Gefahrgutbeförderungsgesetz - GGBG)] regulates transport operations.

7.5 The licensing system and the inspection, assessment and enforcement process governing the safety of nuclear installations

In general – due to Austria's federal structure – the responsibility for licensing under the Radiation Protection Act is shared between federal (Bund) as well as regional (Länder) authorities.

The licensing authority for the Atominstitut in Vienna is the Federal Ministry of Science, Research and Economy. The construction and the operation of installations for the handling of radioactive materials and radiation emitting devices require a license according to the Articles 5 to 8 of the Radiation Protection Act. The Radiation Protection Ordinance contains further provisions for the licensing procedure. The licensing procedure is also subject to the provisions of the General Administrative Procedures Act.

According to Article 5 of the Radiation Protection Act the design of installations with higher potential risk needs to be licensed prior to the beginning of the construction in order to save costs and facilitate the subsequent licensing procedure. According to Article 6 an operating license is granted if the installation has been constructed in compliance with the specified conditions and obligations, if the radiation protection officer has been nominated and if the regular operation of the installation entails no hazard from ionising radiation. A license further needs safety assessment, final safety analyses and a concept for emergency preparedness. Article 7 regulates the licensing procedure for facilities with a lower potential risk, beyond of

the scope of this convention. A concept for decommissioning and dismantling, a concept for the recycling or reuse of radioactive substances and the management of radioactive waste are obligatory for any installation.

According to Article 17, the operation of all installations licensed under this law is regularly inspected by the licensing authority in order to ensure that the facility keeps the state of the art. In case of endangerment of the human health and life and if the requirements of the license are not observed, the competent authority may prohibit the further operation.

According to Article 18 of the Radiation Protection Act, in case of imminent danger from an installation, the authorities have to take all appropriate measures to avert the danger. They may issue promptly enforceable provisional injunctions and, after consulting the radiation protection officer of the installation, have to proceed in accordance with Article 4 of the 1950 Act on the Enforcement of Administration Decisions [BGBl. No. 53/1991: Verwaltungsvollstreckungsgesetz].

Any malfeasance or breach of these provisions is fined according to Article 39.

7.6 Radioactive Substances, Nuclear Fuels and Radiation Emitting Devices

According to the Radiation Protection Act, any handling of radioactive material or use of any other radiation emitting devices need a license if legally binding exemption levels are exceeded (see 7.5).

Handling of radioactive material means the extraction, production, storage, carriage, delivery, supply, import, export, processing, use or disposal of radioactive material or any other activity resulting in the emission of radiation.

Specific requirements in regulations foresee exemptions from licensing for activities involving radioactive materials if they entail no radiation hazards. Similar exemptions relate to the carriage of radioactive materials, provided it complies with the appropriate transport regulations, and also to installations used for military purposes (research and testing). The design of devices containing radioactive materials or of radiation-emitting equipment may be approved by the authority in accordance with strict legal requirements. Such an approval may simplify the licensing procedures.

The possession of radioactive materials or of radiation-emitting equipment which is exempt from licensing under the Radiation Protection Act has to be reported. There are exemptions from the requirement to report, e.g. in case that radioactive material is below given limits of activity, or for the transport of radioactive materials when it is in compliance with the relevant transport regulations.

With the amendment of the Radiation Protection Act in 2004, the EU Directive of the control of high-activity sealed radioactive sources and orphan sources was transformed into Austrian law (see above, 7.2.1). Moreover, the provision of deliberate illegal handling of radioactive material was a part of this transformation of the corresponding European regulation into national law. In addition, a central register for radioactive sources, licensing and emergencies was established.

According to the Radiation Protection Act the owner of radiation sources above exemptions limits has to make a notification to the Central Register of Radioactive Sources. The owner is also obliged to report on the status of the radioactive sources every year. If this annual reporting is missing, the competent authority has to initiate adequate measures to investigate the status of the radiation sources.

7.7 Regulation of Transport

IAEA's Regulations for the Safe Transport of Radioactive Material (SSR-6 former TS-R-1) are incorporated in the UN Recommendations on the Transport of Dangerous Goods. They are put into legally binding force by the following modal conventions to which Austria is a party:

- the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR)
- the Regulation Concerning the International Carriage of Dangerous Goods by Rail (RID), Annex C to the Convention Concerning the International Carriage by Rail (COTIF)
- the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN)
- the SOLAS Convention with the International Maritime Dangerous Goods (IMDG) Code
- the Convention on International Civil Aviation with its Annex 18 and the ICAO-Technical Instructions for the Safe Transport of Dangerous Goods by Air.

All these regulations are applicable for national and international transport of dangerous goods in Austria

- either by themselves
- or by reference
 - in the Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 or
 - in the Austrian Act on the Transport of Dangerous Goods (GGBG).

This Act also establishes the institutional framework for the administration and enforcement of the said regulations.

Article 8 (Regulatory body)

Regulatory and Supervisory Authorities

In Austria, the legislative and executive powers are divided between the federal state ("Bund") and the provinces ("Länder"). Under the general clause of Art. 15 of the Federal Constitutional Law, the legislative and executive powers are vested in the Länder, with the exception of all matters which are explicitly listed in Art. 10 to 12 of the Federal Constitutional Law.

The competent authority for the TRIGA Reactor of the Atominstitut in Vienna in the sense of this Convention is the Federal Ministry of Science, Research and Economy. The competent authority for the physical protection of nuclear material and facilities in use is the Federal Ministry of Interior.

Other ministries as well as the provincial authorities are also involved in the nuclear safety and physical protection of nuclear material, but not in the sense of this convention.

The Federal Ministers are responsible for the application of the pertinent provisions of the Radiation Protection Act with regard to:

- nuclear reactors,
- production of nuclear fuels or processing of irradiated nuclear fuels,
- particle accelerators,
- design approval for special devices containing radiation sources; this can replace a license under certain circumstances,
- approval of medical practitioners and hospitals.

8.1 The Federal Ministry of Agriculture, Forestry, Environment and Water Management

(Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft)

The Federal Ministry of Agriculture, Forestry, Environment and Water Management is responsible for radiation protection, but not for radiation matters in the medical field and food-stuff. The Minister is also responsible for issues relating to the management of radioactive waste, including the siting, construction and operation of storage facilities. Finally, the Federal Ministry of Agriculture, Forestry, Environment and Water Management is responsible for general affairs of nuclear co-ordination.

8.2 The Federal Ministry of Science, Research and Economy

(Bundesministerium für Wissenschaft, Forschung und Wirtschaft)

The Federal Ministry of Science, Research and Economy is the competent authority for the licensing of construction, operation and also for the inspection of nuclear installations and particle accelerators within the scope of university and research institutions of the Austrian Academy of Sciences. In addition, it is responsible for the co-ordination and strategic orientation of energy research except nuclear energy as there is no nuclear energy plant in operation (and even would not be allowed by constitutional law) and development in general and nuclear research in particular.

In his capacity as the National Nuclear Non-proliferation Authority under the 2013 Nuclear Non-Proliferation Act, the Federal Minister of Science, Research and Economy is responsible for the implementation of Austria's international safeguards undertakings, in particular where they go beyond the system of Euratom safeguards, and for export controls regarding nuclear material, equipment, technology and non-nuclear material.

Under the 2011 Foreign Trade Act [BGBl. I No. 26/2011 as amended: Außenhandelsgesetz 2011], the Minister is responsible for the control of exports, brokering and transit of nuclear-related "dual use" goods. In addition, the Minister is responsible for a limited number of matters concerning the safety of nuclear installations, e.g. pressure vessels and power engines.

8.3 The Federal Ministry of the Interior

(Bundesministerium für Inneres)

The Federal Ministry of the Interior is responsible for issuing licenses on the physical protection of nuclear material and facilities in use, storage and transport, including protective measures against interference or encroachment by unauthorised third persons [Safeguards

Act, Part 3]. Moreover it is responsible for the coordination of the national crisis and disaster protection management and international disaster relief.

8.4 Other authorities

The Federal Ministry of Health and Women's Affairs (Bundesministerium für Gesundheit und Frauen)

The Federal Ministry of Health and Women's Affairs is responsible for radiation matters in the medical field and with regard to foodstuffs.

The Federal Ministry of Justice (Bundesministerium für Justiz)

The Federal Ministry of Justice is responsible for all legal matters relating to the Act on Liability for Damage caused by Radioactivity.

The Federal Ministry for Transport, Innovation and Technology (Bundesministerium für Verkehr, Innovation und Technologie)

The Federal Ministry for Transport, Innovation and Technology is the authority competent for the transport of dangerous goods (including radioactive materials) by all means of transport, for the shipments of radioactive materials and the transport security measures with regard to a radiologically significant carriage of nuclear materials (Act on the Transport of Dangerous Goods, in line with respective international agreements such as e.g. ADR). In this regard it is also responsible for the approval of packages and shipments of radioactive materials. This Ministry is the competent authority for the implementation and interpretation of IAEA's regulations for the safe transport of radioactive materials (SSR-6) as well as for the legislation enforcing these regulations.

The Federal Ministry of Labour, Social Affairs and Consumer Protection (Bundesministerium für Arbeit, Soziales und Konsumentenschutz)

Work inspections under relevant focus are in the competence of the Federal Ministry of Labour, Social Affairs and Consumer Protection.

Regional and district Authorities (Landesbehörden und Bezirksverwaltungsbehörden)

In general, the provincial authorities are responsible for the implementation of Parts I - III of the Radiation Protection Act, except where the Law explicitly provides that the Federal Ministry is in charge. The latter is the case for all facilities in the sense of this convention. The district authorities are the competent ones for the commercial operation (Gewerbebetrieb).

These authorities issue i.e. licenses for the handling of radioactive material. Each licensee is inspected by the competent authority on a regular basis. As a part of this inspection process, the records about the balance of radioactive material and radioactive waste are subject to critical scrutiny.

With the amendment of the Administrative Reform Act [BGBl. I No. 65/2002] the Independent Administration Senate (Unabhängiger Verwaltungssenat) has been introduced on the Countries' level as the competent appeal court for administrative decisions of district authorities.

Article 9 (Responsibility of the license holder)

In Austria each activity with radioactive material exceeding the exemption limits needs a license. The license holder must fulfil specific requirements, conditions and obligations laid down in connection with the operating license. The licensee is responsible for any breach towards the authority. In particular the license holder is responsible for the following issues:

- assessment and implementation of arrangements for the radiological protection of exposed persons,
- critical examination of plans for installations from the point of view of radiation protection,
- preparation of written instructions for work activities,
- information and training of exposed persons in the field of radiation protection,
- regular checks on the effectiveness of protective devices and techniques,
- periodic calibration of measuring instruments and periodic checks on the serviceability and the correct use,
- on-site emergency planning.

9.1 Nuclear Third Party Liability

The liability for nuclear installations and nuclear substances is governed by the Act on Liability for Damage Caused by Radioactivity² of 1999. The Act covers any damage to persons or property resulting from ionizing radiation through nuclear installations, nuclear substances and radionuclides. Further coverable damages are the costs of the removal of impairments to the environment and the costs of preventing measures undertaken to avert immediate danger originating from nuclear installations, nuclear substances or radionuclides. In this context, impairment to the environment is defined as any interference with the environment, which lastingly alters the latter in such a way that it differs noticeably from natural processes either in quantity, in quality or in the temporal respect. Only the impairment which is of some significance is to be compensated.

The liability both of the operator of a nuclear installation and the carrier of nuclear substances does in principle not presuppose any negligence on their part. Accordingly the Act lays down as a rule the strict liability of the said persons. The operator of a nuclear installation is liable for all harm caused by operating the installation. Not only damages resulting from an accident during operation are covered, but also any damages in the ordinary course of operation (i.e. without any sudden incident). The carrier of nuclear substances is liable for damages caused by an accident during carriage. In addition he has to remedy any other harm caused during carriage (thus likewise independently of a possible incident).

The Act on Liability for Damage Caused by Radioactivity of 1999 designates in principle the unlimited liability of the person liable.

The Act also provides liability rules for the handling of radionuclides. Also in these cases the amount of compensation is in principle unlimited. The holder of the radionuclide, however, is

² Bundesgesetz über die zivilrechtliche Haftung für Schaden durch Radioaktivität (Atomhaftungsgesetz 1999 – AtomHG 1999, BGBl. I No. 170/1998)

liable only if he is to be blamed for negligence, since in these cases damage normally cannot reach dimensions comparable to those caused by nuclear installations or the substantially more dangerous nuclear material. Due to the yet given specific danger of radionuclides the burden of proof is shifted from the injured party to the holder of the radionuclide.

Furthermore, the Act abandons the principle of „channelling” of nuclear liability currently governing the international conventions on the subject-matter. That means that compensation cannot only be claimed from the operator of an installation, but the injured party can also take legal action against third parties, e.g. the supplier and the constructor. This is meant to make sure that the person injured can recover all damages even if it is more than the operator can pay.

To provide security for the claims of possible injured parties, the Act on Liability for Damage Caused by Radioactivity of 1999 obliges the following persons to effect liability insurances: the operator of a nuclear installation situated in Austria, the carrier of nuclear substances and the holder of a radionuclide with an activity of more than 370 GBq. Minimum amounts insured shall guarantee that all foreseeable hazards can be covered.

Taking into consideration that Austria is a party neither to the Paris Convention nor to the Vienna Convention, § 23 of the Act contains special rules for international cases. Whereas pursuant to § 48 of the Austrian Act on Private International Law non-contractual damage claims are governed by the law of the state, in which the act causing the damage was committed, § 23 (1) of the Act on Liability for Damage Caused by Radioactivity of 1999 provides that the person injured by ionizing radiation can demand that Austrian law be applied to claims for damages which occurred in Austria. If vice versa the incident causing the harm has taken place in Austria and thus Austrian law is applicable, damages which occurred abroad are only covered according to Austrian law as far as compensation is also provided for by the personal statute - usually the *lex patriae* - of the injured party.

Concerning the Paris and the Vienna Conventions on Liability for Nuclear Damage, Austria has mainly two concerns: First the maximum liability amounts seem to be insufficient; in contrast the Austrian Act on Liability for Damage Caused by Radioactivity of 1999 provides for unlimited liability combined with obligatory liability insurance covering relatively high amounts of damage. Secondly the channelling of liability according to which only operators and not also suppliers can be held liable seems inadequate. Above that, the prescription rules and the rules regarding the place of jurisdiction are to the detriment of potential victims.

General Safety considerations

For the following Articles 10 – 14, information on the only Austrian research reactor, the TRIGA reactor administered by the Technische Universität Wien, is provided:

Article 10 (Priority to safety)

As during the past 51 years of operation the Atominstitut continues to apply the highest possible safety standards both to organisational and technical aspects. The safety systems are currently being upgraded and fulfil the present international safety requirements. It should be mentioned that the TRIGA reactor Vienna is the only TRIGA reactor in Europe with a digital I&C system with analogue back up which was totally renewed in 2015. The safety of the facility is subjected to periodical inspection from daily, weekly, monthly, quarterly and annual

inspections, some of them in the presence of an independent expert assigned by the government. The regulatory aspects are aimed at prioritising safety.

Since November 2012 there are no more high enriched fuel elements located at the Austrian research reactor, only low enriched ones.

In modernizing the reactor instrumentation and several other components in 2014 to 2015 the safety of the operation of the only research reactor in Austria has been increased. Apart from the annual audit the Competent Authority is obliged to review the safety of the site before giving a licence. International expertise is used.

Article 11 (Financial and human resources)

The TRIGA research reactor is embedded in the Atominstitut of the Technische Universität Wien. Thus, the TU Wien provides funds for staff, equipment, research and safety of the facility. The regular budget plus additional third party income assure the profound financing to operate the reactor in a safe and efficient way; overall priority is given to the safety of the TRIGA reactor.

During the past years a transition took place in the reactor management due to retirement. The continuation of knowledge was assured by several years of overlapping between the old and new management. Thus, the human resources aspect has been resolved in an optimal procedure. In the years 2014 to 2015 the reactor instrumentation and control systems have been renewed, thus the reactor is currently operated in a testing period until October 2016. After licencing, it is foreseen to set the reactor in full operation again.

Article 12 (Human factors)

Self-assessment of human and organisational factors has been carried out during the reporting period by evaluating all log book entries for the entire operation time and classifying and analysing all entries. In total 4800 entries during 52 years of operation (until 2014) were evaluated and classified into 12 reactor systems, as identified during a recent IAEA conference. From this data base, important insights about component failures and human errors were extracted and have led to various improvements in organisation and operation.

The personnel of the Austrian research reactor is improving its competences by taking part in courses, workshops and Conferences as well.

Article 13 (Quality assurance)

A facility specific quality assurance program has already been established three decades ago and adapted and improved according to needs. This program has also been transferred to other TRIGA stations due to close cooperation (see also article 12). According to national regulations, the license holder is subject to an annual audit program which is the basis for the prolongation of the operating license. This audit is controlled by independent national experts.

In relation to these annual supervisions, the Federal Ministry of Science, Research and Economy approved the PSR submitted by the Atominstitut with several conditions. Corresponding to these conditions and their implementation, the reactor instrumentation and control systems as well as several other components were replaced or renewed between 2014 and 2015.

Article 14 (Assessment and verification of safety)

According to Article 17 of the Radiation Protection Act, the licensing authorities regularly carry out inspections of the facilities, in order to control the compliance with respective laws and specific requirements from the granted license (see Article 7.2). The licensing authority for the Atominstitut in Vienna is the Federal Ministry of Science, Research and Economy.

The Atominstitut of the Technische Universität Wien submitted the Periodic Safety Review (PSR) at the end of 2014. In May 2015 the Federal Ministry of Science, Research and Economy approved the PSR, but demanded improvements of all systems and components. This could be achieved together with the planned new reactor instrumentation, which is completed by now.

Reporting obligations regarding events in nuclear facilities are regulated by the General Radiation Protection Ordinance, by the international Convention on Early Notification of a Nuclear Accident (IAEA/Emercon) and the European Council Decision 87/600/Euratom (ECURIE) respectively. At national level, incidents and accidents in nuclear facilities have to be reported to the licensing authority and to the Federal Ministry of Agriculture, Forestry, Environment and Water Management. The reporting obligations at international level have to be fulfilled by the Federal Ministry of Agriculture, Forestry, Environment and Water Management (see also article 16).

Specific Reporting under the Vienna Declaration on Nuclear Safety

- The Atominstitut of the Technische Universität Wien submitted the Periodic Safety Review (PSR) at the end of 2014. In May 2015 the Federal Ministry of Science, Research and Economy approved the PSR, but demanded improvements of all systems and components. This could be achieved together with the planned new reactor instrumentation, which is completed by now.

Article 15 (Radiation protection)

The Radiation Protection Act and the General Radiation Protection Ordinance form the legal basis for operational radiation protection in Austria. This legislation aims at protecting human life and health and the environment against the danger of ionising radiation. It is based on the recommendations of the International Commission on Radiological Protection (ICRP) and implements the internationally agreed principles of justification of a practice, optimisation of radiation exposure and dose limitation. After the amendment of the Radiation Protection Act and the publication of the new Radiation Protection Ordinances, the provisions of the Basic Safety Standards Directive 96/26/Euratom are fully implemented in Austrian national law. Further radiation protection requirements are defined in non-binding national standards and specific obligations are stated in the construction and operation licences granted to each operator of nuclear facilities. All activities must be performed in accordance with radiation protection regulations.

The Austrian radiation protection legislation requires optimisation in line with the ALARA principle as a fundamental principle for limiting the radiation exposure of the workers and the public (Article 4 of the Radiation Protection Act and Article 3 of the General Radiation Protection Ordinance). It is the responsibility of the license holder to define and implement opti-

misation and to implement a system for control. Depending on the level of estimated collective dose, a dose relevant task has to be controlled by a radiation protection officer. During the annual inspections according to Article 17 of the Radiation Protection Act the supervisory authority also controls how optimisation is implemented.

According to the Radiation Protection Ordinance, the dose limit for individuals of the population is set to 1 mSv per year and the dose limit for occupational exposure to 20 mSv per year. These dose limits are in line with international standards. The Ordinance defines dose, limits, dose constraints and activities to ensure that the dose limits are not exceeded. The dose limits and working conditions for underage persons and pregnant women are laid down in Article 12 of the General Radiation Protection Ordinance. As a general rule, the Radiation Protection Act states that pregnant women and underage persons may not be assigned to any work which would result in being occupationally exposed workers (Art. 30). Nursing women may not be assigned to any work that contains handling with radioactive materials subject to licensing when there is an imminent danger of incorporation.

In the licence application for construction and operation of a facility for handling radioactive material or radiation emitting devices, the technical measures, i.e., barriers and air filters, which are taken to reduce exposure from radioactive discharges, must comply with the ALARA principle. These measures are explicitly stated as obligations when granting the licence. The release of radionuclides to atmosphere and water bodies is monitored by the licence holder and supervised by the licensing authority. The inspection of the nuclear installations by the authorities concerning emission and immission is set up of two parts: inspection of the quality of the internal control by the operator and independent surveillance by examination of samples taken by the authority. Investigative measurements by the authorities of gaseous and liquid emissions and the internal surveillance by the operators show that maximum permissible levels never were exceeded. Also environmental monitoring in the surroundings did not detect any inadmissibly gamma dose rates or immissions during operation of the research reactor.

Article 16 (Emergency preparedness)

16.1 National emergency arrangements

Article 36l., 37 and 38 of the Radiation Protection Act set forth the general principles concerning interventions, radiation monitoring and counter measures to be taken in the case of a radiological emergency.

The detailed requirements are given in the Ordinance on Interventions in Case of Radiological Emergencies and in Case of Lasting Exposure which has been enacted in June 2007. *Inter alia*, regulations for the following areas of radiological emergency management are provided:

- definition of intervention levels and a checklist of countermeasures to be taken into account in different phases of an emergency which provides the basis for a specific catalogue of counter measures in Austria,
- criteria for updating emergency plans at federal and at provincial level,
- regulations for education, training, individual dosimetric monitoring and medical surveillance of intervention teams,
- criteria for planning and conducting emergency exercises.

In accordance with the legislation, the responsibilities for off-site emergency management for events in Austria or abroad are summarised in the following table:

Institution	Responsibilities
Federal Ministry of Agriculture and Forestry, Environment and Water Management	<ul style="list-style-type: none"> • Evaluation of the consequences of radiological and nuclear emergencies • Decision on countermeasures (with involvement of the Federal Ministry of Health and Women's Affairs) • Environmental monitoring • Competent Authority for international information exchange (ECURIE, Convention on Early Notification and bilateral agreements)
Federal Ministry of Health and Women's Affairs	<ul style="list-style-type: none"> • Food monitoring • Management of iodine prophylaxis
Federal Ministry of the Interior	<ul style="list-style-type: none"> • Coordination of the National Crisis and Disaster Protection Management as well as the international disaster relief
Federal Ministry of Interior	<ul style="list-style-type: none"> • Federal Alarm Centre • Serving as national information platform • 24/7 Contact Point for information exchange with foreign countries (ECURIE, Convention on Early Notification and bilateral agreements)
Nine Austrian Provinces	<ul style="list-style-type: none"> • Implementation of countermeasures

The requirements of the Ordinance on Interventions in case of Radiological Emergencies and in case of Lasting Exposure has been fulfilled. This includes a catalogue of counter measures in Austria and an update of the federal emergency plans in accordance with recommendations of IAEA (EPR-METHOD-2003). The majority of the Austrian provinces have already updated their emergency plans at provincial level on basis of the new federal plans.

The exchange of information in case of a radiological or nuclear emergency with the competent authorities in the neighbouring countries is guaranteed by three information systems: Austria fulfils the obligations of the Convention on Early Notification of Nuclear Accidents (IAEA), is part of the ECURIE information exchange system organised by the EC and has bilateral agreements with the neighbouring countries operating nuclear power plants. In addition, the bilateral and regional co-operation have been extended within the last years, including an automatic exchange of information between emergency centres relevant for assessing the impact of a radiological or nuclear accident (such as dose rate measurements and source term information) and joint emergency exercises.

Different provisions have been made for informing the Austrian population in case of a radiological or nuclear emergency. In case of an emergency, urgent information for the public together with the recommendations of counter measures will be provided by the competent fed-

eral authorities. In addition, the National Crisis and Disaster Protection Management will be extended by representatives of the Austrian Broadcast Corporation and the Austrian Press Agency, if necessary. A call centre for answering questions from the public has been established. Printed guides for advance information of the public are available free of charge (also available on the internet) and will periodically be updated. According to the Ordinance on Interventions in Case of a Radiological Emergency, additional information prior and in case of a radiological emergency in accordance with the Council Directive 89/618/Euratom will be provided on the internet (www.strahlenschutz.gv.at).

Several types of emergency exercises on international, bilateral, national and local level help to improve the emergency preparedness system and keep the emergency personnel trained.

16.2 Radiation Monitoring Systems

According to § 37 of the Austrian Radiation Protection Act, the Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) operates an automatic radiation monitoring system.

The Austrian Radiation Early Warning System (Strahlenfrühwarnsystem) continuously monitors ambient gamma dose rates with more than 300 measuring stations throughout the country. In addition, 10 aerosol monitoring stations have been installed near the Austrian borders. The measurement data of these automatic on-line systems are transmitted to the National Centre at BMLFUW and also to nine provincial centres located in the provincial capitals. The on-line data of about 100 stations of this system are accessible to the general public via internet (www.strahlenschutz.gv.at) and on the Austrian Broadcast (ORF) Teletext service.

Additional measuring data can be imported from mobile and air-borne radiation survey units of the Federal Ministry of the Interior.

Data gathered by the Radiation Early Warning System are exchanged on-line with the corresponding systems in most of the neighbouring countries (Slovenia, Slovakia, Czech Republic, Hungary, Germany and Switzerland) on the basis of bilateral agreements. In parallel, exchange of these data is run on European level via the EURDEP system between the EU member states.

In addition, a laboratory-based monitoring network, financed by the BMLFUW and the Ministry of Health, performs a radionuclide-specific routine monitoring of air, precipitation, surface water bodies, feed- and foodstuffs. An emergency sampling concept for the case of radiological emergencies was updated.

BMLFUW is also obliged to operate adequate decision support systems (i.e. RODOS) based on meteorological forecast data. The information provided by the accident country (source term, other release parameters) is the basis for a prognosis of possible consequences. The environmental monitoring measurement results and the results of the decision support systems provide the basis for assessing the radiological situation and deciding on-countermeasures.

Safety of installations

For the following Articles 17 - 19 information on the only Austrian Research Reactor, the TRIGA reactor administered by the Technische Universität Wien, is provided:

Article 17 (Siting)

All site relevant parameters are compiled in the Safety Analysis Report (SAR). The site for the TRIGA reactor Vienna has been selected in 1959 and the SAR contains all original expertise relevant for the site selection. Since the first issue in 1962 the SAR has been updated in 1975, 1986, 2006, 2010 and 2013. These updates reflect the progress in technical, legal and organisational procedures. The latest update was performed in April 2013. A new SAR version is under preparation and will be submitted after completion the installation and testing of the new instrumentation and control systems. Therefore the present issue of the SAR reflects the actual safety of the TRIGA reactor Vienna including factors relevant for sub-paragraph (i) and (ii).

The safety impact on individuals, society and the environment has been extensively compiled in the SAR. In this report the impact of the reactor operation of the TRIGA reactor Vienna on individuals, society and the environment was evaluated in detail and found to be negligible during any operation mode. Recently a diploma thesis on that subject has been completed and the previous negligible results have been confirmed.

In addition all necessary relevant information is provided upon request to outside parties in order to provide the basis for an independent evaluation of any reactor operational impact.

Specific Reporting under the Vienna Declaration on Nuclear Safety
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Article 18 (Design and construction)

The TRIGA reactor Vienna has been designed and several times upgraded for the defence-in-depth (DiD) concept to prevent accident occurrences and release of radioactivity. Since initial criticality, the I&C system has been replaced four times. The TRIGA Vienna has a fully computerised I&C system which was totally renewed in 2015. The area monitoring system and the environmental monitoring system are fully computerised and all relevant operational data are electronically stored. Defence-in-depth was a major issue for the operation license of the TRIGA reactor Vienna.

Due to its special fuel composition (which is U-Zr-H), the TRIGA reactor is an inherently safe reactor with an ultra-prompt negative temperature coefficient of the fuel which even allows transient operation (prompt criticality) as routine operation.

These so called reactor pulses are routinely performed for special experiments within the academic research program. Presently, about 36 TRIGA reactors operate world-wide with more than 1400 reactor-years of experience and no major incident or accident has so far been experienced with any TRIGA type reactor. Nevertheless, an extensive in-service-inspection (ISI) and maintenance program is carried out at the TRIGA reactor Vienna. The overall scope of this program is summarised in a manual available at the Institute of Atomic and Subatomic Physics. Experience from this program has been transferred to other TRIGA reactors world-wide through IAEA Technical Cooperation Projects.

Specific Reporting under the Vienna Declaration on Nuclear Safety

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Article 19 (Operation)

The operation license is based on a detailed SAR which has been updated several times during the past according to any modifications in the reactor systems (i.e. reactor instrumentation and control system, ventilation system, area monitoring system). The latest SAR dates to December 2010 and is currently being updated.

The SAR includes all operational limits and conditions (OLC) derived from the safety analysis and also including operational experience. Typical OLC's are i.e. excess nominal power, excess fuel or water temperature, short reactor period, any failure of PC components in the I&C system. In addition, any deviation from the nominal value is announced by an optical and acoustical alarm and thus allowing the operator to start any counteraction before an OLC is reached.

Detailed written procedures for operation, testing, maintenance and re-inspection exist and are regularly updated. These documents are available in electronic form as internal reports. Most of these reports are also available in English and have been a basis for the IAEA for implementation in overseas TRIGA type reactors through the TC Program.

Written procedures exist in the reactor operation manual for responding to operational occurrences and to accidents. Necessary engineering and technical support in safety related fields are available at the institute and through the Technische Universität Wien. Besides the in-house workshops business relations have been established with qualified institutions, companies and research institutes to respond to any technical problem which cannot be solved by the in-house facilities.

The license holder is obliged to report any incidents of safety significance to the regulatory body. In addition, the TRIGA reactor Vienna is a member of the incident reporting system of the IAEA (IRSRR) and has established a model reporting and evaluation system which has been transferred to other TRIGA reactors through the IRSRR.

Operational experience is collected and shared among the TRIGA reactors worldwide as well as through the IAEA with the international research reactor community. The Atominstitut is member of the

- TRIGA community (meets regularly)
- Arbeitsgemeinschaft Forschungsreaktoren (AFR - meets twice a year)
- Research Reactor Operators Group (RROG - meets once a year)
- Research Reactor Fuel Management Group (RRFM - meets once a year),
- International Group on Research Reactor (IGORR - meets every 18 month)
- European Atomic Energy Society (EAES - meets once a year)
- International Nuclear Security Education Network (INSEN – meets yearly)

The international experience is constantly exchanged and updated at these meetings. The result of this information exchange is reflected in the overall technical and organisational status of the Vienna TRIGA facility.

Specific Reporting under the Vienna Declaration on Nuclear Safety

- The operation license for the TRIGA research reactor is based on a detailed SAR which has been updated several times during the past according to any modifications in the reactor systems (i.e. reactor instrumentation and control system, ventilation system, area monitoring system). The latest SAR dates to April 2013 and is currently being updated.
- International experience is constantly exchanged and updated at these meetings. The result of this information exchange is reflected in the overall technical and organisational status of the Vienna TRIGA facility.

ACTIVITIES AND ACHIEVEMENTS REGARDING THE IMPROVEMENT OF SAFETY

Major achievements and changes since CNS Review Conference 2014

- Implementation of EU Council Directive 2009/70/Euratom establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (OJ No. L 199/48 of 2nd August 2011)

ANNEXES

Annex 1: Bilateral agreements in the field of nuclear safety and radiation protection

Annex 2: Multilateral agreements in the field of nuclear safety and radiation protection

Annex 1

Bilateral Agreements in the Field of Nuclear Safety and Radiation Protection

Belarus

Agreement on the exchange of information in the field of nuclear safety and radiation protection

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Republik Belarus über den Austausch von Informationen aus dem Bereich der nuklearen Sicherheit und des Strahlenschutzes)

BGBI. III 175/2005 entered into force on 19 September 2005.

Czech Republic

Protocol between the Government of the Republic of Austria and the Government of the Czech Republic amending the Agreement between the Government of the Republic of Austria and the Government of the Czechoslovak Socialist Republic to settle Issues of Common Interest in connection with Nuclear Safety and Radiation Protection.

(Protokoll zwischen der Regierung der Republik Österreich und der Regierung der Tschechischen Republik zur Änderung des Abkommens zwischen der Regierung der Republik Österreich und der Regierung der Tschechoslowakischen Sozialistischen Republik zur Regelung von Fragen gemeinsamen Interesses im Zusammenhang mit der nuklearen Sicherheit und dem Strahlenschutz)

BGBI. III No. 71/2008, entered into force on 1 July 2008.

Agreement on mutual assistance in the event of disasters or serious accidents

(Vertrag zwischen der Republik Österreich und der Tschechischen Republik über die gegenseitige Hilfeleistung bei Katastrophen oder schweren Unglücksfällen)

BGBI III No. 215/2000, entered into force on 1 November 2000.

Germany

Agreement on an exchange of information and experience in the field of radiation protection

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Bundesrepublik Deutschland über Informations- und Erfahrungsaustausch auf dem Gebiet des Strahlenschutzes)

BGBI. No. 128/1989 as amended in BGBI. No. 892/1994, entered into force on 11 December 1994.

Agreement on mutual assistance in the event of disasters or serious accidents
(Abkommen zwischen der Republik Österreich und der Bundesrepublik Deutschland über die gegenseitige Hilfeleistung bei Katastrophen oder schweren Unglücksfällen)
BGBl. No. 489/1992, entered into force on 6 August 1992.

Hungary

Agreement on the settlement of questions of mutual interest in connection with nuclear installations

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Ungarischen Volksrepublik zur Regelung von Fragen gemeinsamen Interesses im Zusammenhang mit kerntechnischen Anlagen)
BGBl. No. 454/1987, entered into force on 22 September 1987.

Agreement on mutual assistance in the event of disasters or serious accidents
(Abkommen zwischen der Republik Österreich und der Republik Ungarn über die gegenseitige Hilfeleistung bei Katastrophen oder schweren Unglücksfällen)
BGBl. III No. 76/1998, entered into force on 1 July 1998.

Liechtenstein

Agreement on mutual assistance in the event of disasters or serious accidents
(Abkommen zwischen der Republik Österreich und dem Fürstentum Liechtenstein über die gegenseitige Hilfeleistung bei Katastrophen oder schweren Unglücksfällen)
BGBl. No. 758/1995, entered into force on 1 January 1996.

Poland

Agreement on an exchange of information and co-operation in the field of nuclear safety and radiation protection
(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Republik Polen über Informationsaustausch und Zusammenarbeit auf dem Gebiet der nuklearen Sicherheit und des Strahlenschutzes)
BGBl. No. 643/1990, entered into force on 1 December 1990.

Russia

Agreement between Austria and the former USSR concerning early notification and information in the case of nuclear accidents and the exchange of information related to nuclear installations
(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Union der Sozialistischen Sowjetrepubliken über die frühzeitige Benachrichtigung bei einem nuklearen Unfall und den Informationsaustausch über Kernanlagen)
BGBl. No. 130/1990 as amended in BGBl. No. 257/1994, entered into force on 26 March 1990 and 9 March 1994.

Slovakia

Agreement between Austria and Slovakia concerning questions of mutual interest in connection with nuclear safety and radiation protection
(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Slowakischen Republik zur Regelung von Fragen gemeinsamen Interesses im Zusammenhang mit der nuklearen Sicherheit und dem Strahlenschutz)
BGBl. No. 565/1990 as amended in BGBl. No. 1046/1994, entered into force on 1 January 1995.

Agreement on co-operation and mutual assistance in the event of disasters

(Vertrag zwischen der Republik Österreich und der Slowakischen Republik über die Zusammenarbeit und die gegenseitige Hilfeleistung bei Katastrophen)

BGBI. III No. 155/98, entered into force on 1 November 1998.

Slovenia

Agreement on an early exchange of information in the case of radiological dangers and on questions of mutual interest in the field of nuclear safety and radiation protection

(Abkommen zwischen der Republik Österreich und der Republik Slowenien über den frühzeitigen Austausch von Informationen bei radiologischen Gefahren und über Fragen gemeinsamen Interesses aus dem Bereich der nuklearen Sicherheit und des Strahlenschutzes)

BGBI. III No. 176/1998, entered into force on 1 December 1998.

Agreement on co-operation in the field of prevention and mutual assistance in the event of disasters or serious accidents

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Republik Slowenien über die Zusammenarbeit bei der Vorbeugung und gegenseitigen Hilfeleistung bei Katastrophen oder schweren Unglücksfällen)

BGBI. III No. 87/1998, entered into force on 1 July 1998.

Switzerland

Agreement on an exchange of information in the field of nuclear safety and radiation protection

(Abkommen zwischen der Regierung der Republik Österreich und dem Schweizerischen Bundesrat über den frühzeitigen Austausch von Informationen aus dem Bereich der nuklearen Sicherheit und des Strahlenschutzes)

BGBI. III No. 201/2000, entered into force on 1 January 2001.

Agreement on mutual assistance in the event of disasters or serious accidents

(Vertrag zwischen der Republik Österreich und der Schweizerischen Eidgenossenschaft über die gegenseitige Hilfeleistung bei Katastrophen oder schweren Unglücksfällen)

BGBI III No. 29/2002, entered into force on 1 March 2002.

Tajikistan

Agreement between Austria and the former USSR concerning early notification and information in the case of nuclear accidents and exchange of information related to nuclear installations (to the extent applicable to Tajikistan)

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Union der Sozialistischen Sowjetrepubliken über die frühzeitige Benachrichtigung bei einem nuklearen Unfall und den Informationsaustausch über Kernanlagen)

BGBI. No. 130/1990 and BGBI. III No. 4/1998, entered into force on 12 January 1998.

Ukraine

Agreement on an exchange of information and co-operation in the field of nuclear safety and radiation protection

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Ukraine über Informationsaustausch und Zusammenarbeit auf dem Gebiet der nuklearen Sicherheit und des Strahlenschutzes)

BGBI. III No. 152/1998, entered into force on 18 August 1998.

Annex 2

Multilateral Agreements in the Field of Nuclear Safety and Radiation Protection

UN / IAEA

Convention on Early Notification of a Nuclear Accident

(Übereinkommen über die frühzeitige Benachrichtigung bei nuklearen Unfällen)
BGBl. No. 186/1988, entered into force on 20 March 1988.

Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

(Übereinkommen über Hilfeleistung bei nuklearen Unfällen oder strahlungsbedingten Notfällen)
BGBl. No. 87/1990, entered into force on 22 December 1989.

Convention on Nuclear Safety

(Übereinkommen über nukleare Sicherheit)
BGBl. III No. 39/1998, entered into force on 24 November 1997.

Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

(Gemeinsames Übereinkommen über die Sicherheit der Behandlung abgebrannter Brennstäbe und die Sicherheit der Behandlung radioaktiver Abfälle)
BGBl. III No. 169/2001, entered into force on 11 September 2001.

Convention on the Physical Protection of Nuclear Material

(Übereinkommen über den physischen Schutz von Kernmaterial)
BGBl. No. 53/1989, 31 January 1989.
(Änderung des Übereinkommen über den physischen Schutz von Kernmaterial)
BGBl. No. 74/2016, Teil III, 27. April 2016.

UN / ECE

Convention on Environmental Impact Assessment in a Transboundary Context

(Übereinkommen über die Umweltverträglichkeitsprüfung im grenzüberschreitenden Rahmen)
BGBl. III No. 201/1997, entered into force on 10 September 1997.

Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context

(Protokoll über die strategische Umweltprüfung zum Übereinkommen über die Umweltverträglichkeitsprüfung im grenzüberschreitenden Rahmen)
BGBl. III No. 50/2010, entered into force on 11 July 2010.

Convention on the Transboundary Effects of Industrial Accidents

(Übereinkommen über die grenzüberschreitenden Auswirkungen von Industrieunfällen)
BGBl. III No. 119/2000, entered into force on 19 April 2000.

Convention on the Protection and Use of Transboundary Watercourses and International Lakes

(Übereinkommen zum Schutz und zur Nutzung grenzüberschreitender Wasserläufe und internationaler Seen)

BGBI. No. 578/1996, entered into force on 23 October 1996.

Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention)

(Übereinkommen von Aarhus über den Zugang zu Informationen, die Öffentlichkeitsbeteiligung an Entscheidungsverfahren und den Zugang zu Gerichten in Umweltangelegenheiten samt Erklärung)

BGBI. III No. 88/2005, entered into force in 2005.

OTHER

Council of Europe, European Outline Convention on Transfrontier Co-operation between Territorial Communities or Authorities

(Europäisches Rahmenübereinkommen über die grenzüberschreitende Zusammenarbeit zwischen Gebietskörperschaften)

BGBI. No. 52/1983, entered into force in 1983.

Danube River Protection Convention

Convention on Co-operation for the Protection and Sustainable Use of the Danube River

(Übereinkommen über die Zusammenarbeit zum Schutz und zur verträglichen Nutzung der Donau)

BGBI. III No. 139/1998, entered into force on 22 October 1998.

Alpine Convention

Convention on the Protection of the Alps

(Übereinkommen zum Schutz der Alpen)

BGBI. No. 477/1995 entered into force in 1995.

C.E.I. Convention

Cooperation Agreement on the Forecast, Prevention and Mitigation of Natural and Technological Disasters among the Government of the Republic of Austria, the Government of the Republic of Croatia, the Government of the Republic of Hungary, the Government of the Republic of Italy, the Government of the Republic of Poland, the Government of the Republic of Slovenia

(Abkommen über die Zusammenarbeit bei der Vorhersage, Verhütung und Milderung von Natur- und technologischen Katastrophen im Rahmen der Zentraleuropäischen Initiative (ZEI) zwischen der Regierung der Republik Österreich, der Regierung der Republik Ungarn, der Regierung der Italienischen Republik, der Regierung der Republik Slowenien, der Regierung der Republik Kroatien und der Regierung der Republik Polen)

BGBI. No. 228/2002 entered into force on 1 August 1994.

