

REPORT

for the period 1 June 2010 to 31 May 2015, made by the **Government of Finland**, in accordance with article 22 of the Constitution of the International Labour Organisation, on the measures taken to give effect to the provisions of the

Radiation Protection Convention, 1960, No. 115
ratification of which was registered on 16 October 1978.

Observation 2010

1. Article 3, paragraph 1 and Article 6, paragraph 1 of the Convention. Effective protection of workers in the light of available knowledge; maximum permissible doses.

The EU directive laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation has been updated in 2013 (Basic Safety Standards (BSS) directive; 2013/59/EURATOM). The directive also contains provisions on dose limits for workers. The requirements of the directive must be implemented into national legislation by 6 February 2018. In the same context, Finnish radiation legislation will undergo a comprehensive reform. The Central Organisation of Finnish Trade Unions SAK is involved in the sub-working group that deals with the sections concerning workers.

Dose limits for the work related radiation exposure are enacted by the Finnish Radiation Decree 1512/1991 (Chapter 1, Section 3 Dose limits in radiation work): The effective dose caused to a worker by radiation work shall not exceed an average of 20 millisieverts (mSv) per year reckoned over a period of five years, nor 50 mSv in any one year. The annual equivalent dose in the lens of the eye shall not exceed 150 mSv, nor shall the annual equivalent dose at any point on the hands, feet or skin exceed 500 mSv. These dose limits are based on the Council Directive 96/29/Euratom.

The new Council Directive (2013/59/Euratom) repealing the earlier directive 96/29/Euratom, published in the Official Journal of the European Union in January 17, 2014 for protection against the dangers arising from exposure to ionizing radiation, states new dose limits of radiation workers stricter than the present dose limits in Finland. Requirements of the new directive shall be implemented into national legislation before 6th February, 2018. The process for the implementation of the new Directive has been started by Ministry of Social Affairs and Health.

According to the new directive (article 9) the new on the effective dose for occupational exposure shall be 20 mSv in any single year. However, in special circumstances or for certain exposure situations specified in national legislation, a higher effective dose of up to 50 mSv may be authorised by the competent authority in a single year, provided that the average annual dose over any five consecutive years, including the years for which the limit has been exceeded, does not exceed 20 mSv. The limit on the equivalent dose for the lens of the eye shall be 20 mSv in a single year or 100 mSv in any five consecutive years subject to a maximum dose of 50 mSv in a single year, as specified in national legislation. The limit on the equivalent dose for the skin shall be 500 mSv in a year, this limit shall apply to the dose averaged over any area of 1 cm², regardless of the area exposed.

2. Article 12. Medical examinations.

The EU directive laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation has been updated in 2013 and has to be implemented nationally by 6.2.2018. In the same context, a comprehensive reform of Finnish radiation legislation will be implemented. The directive also contains provisions on protection of outside workers. The Central Organisation of Finnish Trade Unions SAK is involved in the sub-working group that deals with the sections concerning workers.

According to the current Finnish legislation (Radiation Act 1512/1991, Chapter 9, Section 33), medical surveillance of workers engaged in radiation work shall be governed by the provisions of the Occupational Health Care Act (743/1978) and by the regulations issued pursuant to the said Act concerning health examinations for persons engaged in work involving special health risks. The medical surveillance of category A workers to ascertain the fitness for work of a worker to be assigned to category A work shall be executed by the approved medical practitioner before the radiation work begins and in the course of work at least once a year.

Radiation and Nuclear Safety Authority (STUK) has observed two times in its regulatory inspections during years 2010-2015 that health surveillance of a radiation worker belonging to the category A was neglected, after which STUK gave an order to correct failure of duty to the responsible party of the use of radiation. Regular inspections are conducted by STUK based on graded approach with 2-5 years intervals. STUK has no observations that this kind of negligences would have been manifested especially among short-term workers. However, STUK will pay more attention to this aspect in its future inspections.

3. Article 14. Alternative employment or other measures offered for maintaining income where continued assignment to work involving exposure is medically inadvisable

Occupational health care experts assist employers and employees in matters related to health at the workplace. Occupational health care monitors the health of those exposed to radiation by performing periodic medical examinations, and, if stopping the exposure is necessary due to health detriments, gives a recommendation of that to the employer. If the employer has no clear solution how the worker could continue working without compromising their health, it is common practice now to organise a consultation with the worker, the employer and an expert of occupational health care, as well as a safety and health representative or a shop steward or some other support person. If the workplace is unable to offer a task where the worker could continue without exposure to noise or vibration, the accident insurance company can compensate for costs incurred from vocational rehabilitation, for example from retraining for a work where there is no exposure. If vocational rehabilitation is not an option due to for example age or other illnesses limiting a person's ability to work, disability pension is a possible solution. During the inspections, the occupational safety and health authority monitors that the statutory periodic medical examinations have been performed on the workers at risk of exposure.

4. Part V of the report form. Application in practice.

The organisation of occupational health and its statutory medical examinations are supervised with occupational safety inspections. According to the inspection guidelines, if the employer has neglected to arrange medical examinations in work that presents a special risk of illness, the inspector issues an improvement notice to the workplace. According to the statistics of the Social Insurance Institution of Finland (Kela), annually about a million medical examinations are

performed in occupational health care. In 2011 17%, and in 2012 20% of the examinations were performed because of a special risk of illness.

I Legislation and regulations

- Radiation Act (592/1991) was amended by Act (15.6.2012/326) to forbid the sunbed (solarium device) use for the minors, i.e. persons that are below 18 years of age.
- Radiation Act (592/1991) was amended by Act (28.6.2013/500) to implement the requirements of the Directive 2011/70/Euratom, that establishes a Community framework for the responsible and safe management of spent fuel and radioactive waste.
- Radiation Act (592/1991) will be amended in 2015 (4.12.2014/HE 320/2014,). Authorization to give STUK's requirements will be enacted in several sections of Radiation Act.
- Council Directive (2013/59/Euratom) came into force in January 17, 2014 for protection against the dangers arising from exposure to ionizing radiation. Requirements of this directive will be implemented into Finnish legislation before 6th February, 2018, as defined by European Commission.
- Radiation and Nuclear Safety Authority (STUK) has issued the following new Radiation Safety Guides (ST Guides), Decisions and pursuant to the Radiation Act 592/1991 section 70. ST Guides are general instructions for the radiation users and by following these guides the level of the safety defined on radiation legislation can be achieved. 21 of these guides were revisions of the old ones, and 5 are totally new ones (Guides ST 1.10, ST 1.11, ST 3.8, ST 5.7 and ST 8.1).
 - Safety in radiation practices. Guide ST 1.1 (23.5.2013).
 - Warning signs for radiation sources. Guide ST 1.3 (9.12.2013). TRANSLATION IN ENGLISH WILL BE AVAILABLE SOON.
 - Radiation user's organization. Guide ST 1.4 (2.11.2011).
 - Exemption of radiation use from safety licensing. Guide ST 1.5 (12.9.2013).
 - Radiation protection training in health care. Guide ST 1.7 (10.12.2012).
 - Qualifications and radiation protection training of persons working in a radiation user's organization. Guide ST 1.8 (17.2.2012).
 - Design of rooms for radiation sources. Guide ST 1.10 (14.7.2011).
 - Security arrangements of radiation sources. Guide ST 1.11 (9.12.2013).
 - Safety in radiotherapy. Guide ST 2.1 (18.4.2011).
 - Dental X-ray examinations in health care. Guide ST 3.1 (13.6.2014).

- X-ray examination in health care. Guide ST 3.3 (8.12.2014). TRANSLATION IN ENGLISH WILL BE AVAILABLE SOON.
- Radiation safety in mammography examinations. Guide ST 3.8 (25.1.2013).
- Radiation safety in industrial radiography. Guide ST 5.6 (9.3.2012).
- Shipments of radioactive waste. Guide ST 5.7 (6.6.2011).
- Radioactive wastes and discharges. Guide ST 6.2 (3.10.2014). TRANSLATION WILL BE READY SOON.
- Radiation safety in nuclear medicine. Guide ST 6.3 (14.1.2013).
- Monitoring of radiation exposure. Guide ST 7.1 (14.8.2014).
- Application of maximum values for radiation exposure and principles for the calculation of radiation doses. Guide ST 7.2 (8.8.2014).
- Calculation of the dose caused by internal radiation. Guide ST 7.3 (13.6.2014).
- The dose register and data reporting. Guide ST 7.4 (8.12.2014).
- Medical surveillance of occupationally exposed workers. Guide ST 7.5 (13.6.2014).
- Radiation safety in veterinary x-ray examinations. Guide ST 8.1 (20.3.2012).
- Radiation safety requirements and regulatory control of sunbed devices. Guide ST 9.1 (1.7.2013). In Finnish
- Radiation safety in practices causing exposure to natural radiation. Guide ST 12.1 (2.2.2011).
- The radioactivity of building materials and ash. Guide ST 12.2 (17.12.2010).
- Radiation safety in aviation. Guide ST 12.4 (1.11.2013).

<https://www.finlex.fi/fi/viranomaiset/normi/555001/>

II

Nothing new to report

III

– STUK has issued the following decisions (mainly in Finnish):

- Acceptability requirements for radiotherapy equipments. Decision no. 20/3020/2010. (7.4.2011) (in Finnish)

- Reference levels for patient radiation exposure in computed tomography examinations of adults. Decision no. 2/3020/2013. (23.5.2013) (in English, pdf-file)
 - Acceptability requirements for equipment used in nuclear medicine. Decision no. 9/3020/2013. (5.7.2013) (in Finnish)
 - Clearance levels for radioactive materials. Decision no. 4/3020/2013. (11.9.2013) (in Finnish)
 - Exemption values for radioactive substances. Decision no. 5/3020/2013. (11.9.2013) (in Finnish)
 - The use of electrical apparatus emitting ionizing radiation at a voltage lower than 30 kV is exempt from safety licensing. Decision no. 6/3020/2013. (11.9.2013) (in Finnish)
 - The use of electrical apparatus emitting ionizing radiation at a voltage lower than 5 kV is exempt from safety licensing. Decision no. 7/3020/2013. (11.9.2013) (in Finnish)
 - Acceptability requirements for X-ray equipment used in health care. Decision no. 11/3020/2013. 19 May 2014. TRANSLATION AVAILABLE in English
 - Reference levels for the patient's radiation exposure for conventional X-ray examinations of adults. Decision no. 9/3020/2014. 26 June 2014. TRANSLATION AVAILABLE in English (pdf-file)
 - Change of conventional dental X-ray practices exempt from a safety licence to practices requiring a safety licence. Decision no. 5/3020/2014. 5 August 2014. TRANSLATION AVAILABLE in English (pdf-file)
 - Activity limits for radioactive waste released to sewer system, air, incineration plant or landfill site. Decision no. 4/3020/2014. (27.10.2014) (in Finnish)
 - Reference levels for patient's radiation exposure for nuclear medicine examinations. Decision 1/3020/2015. (23.2.2015) (in Finnish).
- STUK has issued also the following guidebooks (mainly in Finnish):
- Quality control guidance for nuclear medicine equipment. (2010) TRANSLATION AVAILABLE in English
 - Quality control of dental X-ray practice and radiation shielding of exposure room. (2010)
 - The use of cone beam computed tomography (CBCT) equipment. (2011)
 - Guidelines for paediatric CT examinations. (2013) TRANSLATION AVAILABLE in English

- Transportation of radioactive materials. (2013)
- Quality control guide for mammography. (2014)
- Installation of wireless base station antennas. (2014)
- Justification of examinations including exposure to radiation – guide to physicians responsible for treatment. (2015)

IV-V

Nothing new to report

VI

A copy of this report has been sent to the following labour market organisations

1. The Confederation of Finnish Industries (EK)
2. The Central Organization of Finnish Trade Unions (SAK)
3. The Finnish Confederation of Professionals (STTK)
4. The Confederation of Unions for Professional and Managerial Staff in Finland (AKAVA)
5. The Commission for Local Authority Employers (KT)
6. The State Employer's Office (VTML)
7. The Federation of Finnish enterprises

Statements of the labour market organisations:

Central Organisation of Finnish Trade Unions (SAK)

The Ministry of Social Affairs and Health has appointed a steering group in January 2015 to prepare the comprehensive reform of the radiation legislation. The objective is to implement the new EU directive on radiation safety. In this context, the aim is to update provisions on official supervision, administrative coercive measures, sanctions and appeals. The comprehensive reform in question also contains provisions on protecting the workers from ionising radiation. At this stage, SAK has nothing to add to the earlier comments submitted in 2010.