ČESKÝ METROLOGICKÝ INSTITUT

Czech Metrology Institute
Okružní 31, 638 00 Brno

1. ------IND- 2018 0337 CZ- EN- ------ 20180803 --- --- PROJET

Executive summary for the EC (not part of this legislation)

'Measuring instruments used to monitor activity and concentration of effluents from nuclear facilities, from nuclear raw material mining or processing facilities, from the processing or application of radioactive materials, and from radioactive waste processing plants, and to determine environmental radiation exposure due to effluents'—modules for discontinuous measurement of activity or concentration by sampling that require specific test procedures are placed on the market and put into use in the Czech Republic pursuant to Act No 505/1990 on metrology, as amended.

The subject of this notified regulation is to lay down metrological and technical requirements for this measuring instruments. This regulation also stipulates tests for type approval and verification.

(End of executive summary.)

Contact person: Mgr. Tomáš Hendrych

Phone:545 555 414

PUBLIC DECREE

As the authority with substantive and territorial jurisdiction in the matter of laying down metrological and technical requirements for legally controlled measuring instruments and stipulating the testing methods for type approval and verification of legally controlled measuring instruments pursuant to § 14(1) of Act No 505/1990, on metrology, as amended (hereinafter the 'Metrology Act'), and in accordance with the provisions of § 172 et seq. of Act No 500/2004, the Code of Administrative Procedure (hereinafter the 'CAP'), the Czech Metrology Institute (hereinafter the 'CMI') commenced ex officio proceedings on 26 February 2016 pursuant to § 46 of the CAP, and, based on supporting documents, issues the following:

I.

DRAFT GENERAL MEASURE

number:0111-OOP-C072-16

laying down the metrological and technical requirements for legally controlled measuring instruments, including testing methods for type approval and verification of the following legally controlled measuring instruments:

'Measuring instruments used to monitor activity and concentration of effluents from nuclear facilities, from nuclear raw material mining or processing facilities, from the processing or application of radioactive materials, and from radioactive waste processing plants, and to

determine environmental radiation exposure due to effluents'—modules for discontinuous measurement of activity or concentration by sampling that require specific test procedures

1 Basic definitions

For the purposes of this general measure, the terms and definitions according to VIM and VIML[1)] and the following definitions apply:

1.1
sample

for the purposes of this document, what is being addressed is the material part of the measured medium, a part that typically has a particular property required for measurement. A sample is either part of a liquid (typically liquid samples) or a suitable carrier with part of the medium bound to it (particulate or aerosol samples from air attached to a mechanical filter, or specific materials absorbed into suitable absorbers, typically mostly gaseous forms containing iodine, hydrogen or carbon). Measurement of the sample leads to this property of the medium being determined with sufficient accuracy (taking into account the ratio of the amount of the medium that passed through the sampling apparatus to the total amount of the medium). For the purposes of this document, property is defined as the activity or specific (volume, mass) activity of the medium. Here, the medium is air or water. In order to determine the properties of the medium, the sample can be measured in its entirety, or in parts, or can be subjected to further (chemical) analysis.

1.2
sampling apparatus

a measuring system module. It must be precisely identifiable and a separate evaluation pursuant to prescribed requirements is required to confirm its functionality. It is intended for sampling liquids in order to determine activities in facility effluents or in the environment where a specific sampling procedure is prescribed. The sampled part of the medium may have a variety of chemical forms, and this form may need to be changed in the sampling apparatus for sampling purposes.

NOTE Sampling may be continuous or discrete. The sampling apparatus must contain a flow meter with the meter's indications accessible on a remote indication device.

1.3
indication device

the part of the meter that displays results of measurement of flow rate or flow volume (or the mass of the medium that has flowed through), either continuously or upon request.

1.4
built-in sampling apparatus

a sampling apparatus installed in the circuit of the measured medium. If the sample is taken from a location other than where the meter is installed, the properties of this circuit (supply line) must be taken into account during testing.

1.5
controlled sampling

the flow rate of the medium is controlled according to specific sampling requirements

---

[1)] TNI 01 0115 International Vocabulary of Metrology—Basic and General Concepts and Associated Terms (VIM) and International Vocabulary of Legal Metrology (VIML) are part of the technical harmonisation compendium ‘Terminology in the field of metrology’, which is publicly available at www.unmz.cz.

1.6
proportional sampling
sampling is controlled so that flow rate is proportional to some variable (e.g. the flow through the sampling apparatus is proportional to airflow in a ventilation chimney). The proportionality factor remains constant during the measurement cycle.

1.7
constant sampling
sampling is controlled so that the flow is time-independent

1.8
capture efficiency
the likelihood that a defined entity in a medium passing through a sampling apparatus will become part of the sample

1.9
capture medium
a mechanical filter, or cartridge containing an absorbent material, or a cuvette with an absorbent liquid.If the sample is a proportionally captured part of the tested medium (usually a liquid), it is placed directly into a suitable container.

1.10
aerosols
a suspension of solid or liquid particles in air or gas

1.11
aerodynamic equivalent diameter
the diameter of a sphere with unit density that has the same gravitational settling velocity as the given particle

1.12
activity median aerodynamic diameter (AMAD)
the aerodynamic diameter of particles for which 50 % of particle activity is related to dimensions smaller (or greater) than this diameter

2 Metrological requirements

2.1 Medium flow control

A sampling apparatus with controlled sampling must permit flow of the measured medium, monitor and if needed control the sampling rate over the entire measurement range. The properties of the medium, method and range of flow control or sampling, the properties of the surrounding environment, and other requirements for reliable operation must be stipulated by the manufacturer. Given the wide range of possible influencing conditions, these conditions and permitted tolerances depend on agreement between the manufacturer and the user.

2.2 Rated operating conditions

The manufacturer must stipulate the type of measured media, its operating conditions, especially its temperature, pressure, and permitted content of inhomogeneities (solid particles, aerosols, bubbles, chemical composition). The manufacturer must also specify the sampling method and required physical and chemical properties of the medium and the sampled part of the medium.

2.3 Measurement range

The manufacturer must stipulate the range of flow of the medium within which the sampling apparatus is functional, and any error responses if the flow is outside this range. The manufacturer must stipulate how the amount of medium that has flowed through is indicated (volume, in the case of gases, including the values of stipulated quantities, or its mass).

2.4 Maximum permissible error

The maximum permissible error in indicated volume flow depends on the sampling purpose and method. The manufacturer must stipulate the maximum permissible error for each assumed purpose.

Special attention must be paid to the possible effect on measurement of clogging of sampling routes (installed meters), filters, and valves and to eliminate such additional errors.

3 Technical requirements

3.1 Mechanical properties

Mechanical properties must enable the sampling apparatus to function reliably for the entire duration of its expected operation. They must permit convenient replacement of the capture medium without adulterating samples. During replacement of the capture medium, measurement of volume flow must not be affected.

3.2 Pump

The pump is an important element for controlling flow through the sampling apparatus. Its design must permit permanent and reliable operation when used as intended. If flow is controlled by manipulating the pump motor, a suitable design must eliminate the influence of interfering signals on its operation (for example pulses in the power grid or interference with a wireless connection). It must be ensured that the pump is not overloaded and that a temperature increase will not affect the medium's physical properties.

If the pump is installed as an auxiliary element outside the sampling apparatus, it must reliably ensure sufficient medium availability during all sampling modes.

The manufacturer must specify the properties of the medium for which the pump is suited (especially content of particulates or other inhomogeneities). When using the sampling apparatus, this specification must be taken into account.

3.3 Power

The sampling apparatus may be powered by the electrical grid or by an internal source. For some especially important uses (nuclear power plants, etc.), power requirements are part of safety regulations. Grid power must not affect measurement accuracy outside of permitted limits during expected grid deficiencies, and internal power must facilitate operation for the entire duration of the period between maintenance dates (capture medium replacement).

3.4 Pipes and fittings

Pipes and fittings must facilitate representative sampling of the medium. Unobstructed passage must be guaranteed for the medium along the entire route to the sampling apparatus. Pipes and fittings must not change the nature of the operating medium.

3.5 Flow control

The flow of the medium through the sampling apparatus must be controlled at every instant of operation in a manner that ensures the sample is representative. If this is not possible, the apparatus must switch to an error mode (to report an error, and if needed to cease sampling).

3.6 Sample capture mechanism

The efficiency of collection into the capture medium must be known at every moment. In the case of mechanical collection, an appropriate capture medium (filter type) must be chosen that will capture particles of the expected size and composition. In the case of chemical sorption, a filler (cartridge) type must be chosen that is suited to the expected chemical composition of the retained entity and guarantees sufficient temporal stability of the sorbent and retained entity for the entire duration of the sampling cycle until measurement of the sample has been completed. If the retained entity is chemically treated prior to capture (via a chemical reaction), constant efficiency of this reaction must be ensured for the entire duration of the sampling cycle. Errors caused by changes in capture efficiency must not exceed the maximum permissible error in the entire sampling, transport and measurement procedure.

3.7 Resistance of the apparatus to external influences

The scope and type of external influences and the degree of resistance to them is agreed upon by the manufacturer and customer.

3.8 Electromagnetic environment

Sampling apparatuses are in principle intended for a class E2 electromagnetic environment (industrial). Depending on customer requirements, a different environment may also be defined: however, the manufacturer must define the appropriate class for which type approval is requested prior to commencing testing.

The apparatus must be capable of resisting the following electromagnetic conditions:

- electrostatic discharges;
- radiated high-frequency electromagnetic fields;
- shocks;
- rapid electrical surges (transients).

3.9 Measuring instrument safety

The sampling apparatus must be designed and installed so that it cannot pose a threat to individuals in its immediate vicinity. The apparatus must be installed in a way that prevents unauthorised access to stored flow control parameters. An instrument measuring the total amount of medium flow must stop at the final value during any sampling outage.

4 Measuring instrument labels

4.1 Markings on the measuring instrument

The measuring instrument must have a data plate with at least the following information:

a) model and serial number;
b) in the case of external power, the power voltage;
c) type-approval mark.

Following its installation in the measurement system, these marks need not be routinely accessible.

4.2 Official mark placement

The official mark is situated so that it is visible upon cursory examination. It may be situated beside the data plate, on the face of the indication device, or in the installation location near the instrument in a manner that makes it clear that the mark relates to the installed measuring instrument.

5 Type approval of the measuring instrument

During type approval, the following tests are performed:

- external inspection;
- a test of constancy of the configured medium flow;
- a test of the correct control of the medium flow;
- a test of the response to increased resistance of the medium flow (increased pressure differential at the filter);
- a leak test;
- a test that the medium flow amount is measured correctly;
- a check of sampling efficacy;
- a check of chemical treatment efficacy (if it is part of the sampling apparatus);
- a test of resistance to environmental influences (climatic tests);
- tests of elecromagnetic resistance and effects of power supply.

5.1 External inspection

The following shall be assessed during an external inspection:

- completeness of technical documentation;
- the completeness and condition of the sampling apparatus according to supplied technical documentation.

5.2 Test conditions during type approval

Tests performed under reference conditions must be performed under the following conditions (normal test conditions):

- initial running time ≤ 30 minutes;
- ambient temperature 18–22 °C;
- relative air humidity 50 %–75 %;
- air pressure 86–106 kPa;
- power voltage U_N ±1 %;
- sampling flow rate—nominal flow rate ±5 %;
- control elements set for normal operation.

5.3 Basic functional tests

5.3.1 Configured medium flow permanency test

A device for measuring volume or a flow meter calibrated for the given measurement conditions with accuracy better than 2 % (k = 2) is installed into the liquid flow circuit (of the measured medium). If the medium is a liquid, the flow can be determined using measuring containers, or the amount of (sampled) liquid can be determined by weighing it.

The flow pump is switched on, and following a 30-minute initial running period the flow is measured after 1, 5, 10, and 100 hours have passed. Instead of flow, the amount of medium collected (capture medium) can be read. Read values must not differ from the rated flow or prescribed amount of capture medium by more than 5 %.

5.3.2 Medium flow control test

The sampling apparatus is connected to piping before the inflow of the tested medium, and a control signal is connected to the flow control input (the control signal depends on the design of the sampling apparatus; either there are built-in terminals for analogue control, or control takes place digitally via an input to the control computer). The test is performed according to the procedure in 5.3.1. The control signal is configured so that the flow is at the lower value of the measurement range of the sampling apparatus, and then at a minimum of eight additional points up to the upper limit of the measurement range. The test points must be spaced equally (so that every quarter of the measurement range contains at least two test points). Measured values of immediate flow through the sampling apparatus or the amount of capture medium taken off are compared with prescribed values (if not agreed upon otherwise by the manufacturer and customer, prescribed values are proportional to the quantity controlled). The difference between values at each point must not be greater than 10 %.

5.3.3 A test of response to increased resistance along the sampling route (reduced pressure at the filter)

This test is performed only for a sampling apparatus in gas (air). The purpose of this test is to determine the increase in the pressure drop at the filter causing a 10 % decline from the air flow rate under normal conditions. An acceptable minimum pressure drop that can cause a 10 % decline from the rated flow rate must be agreed upon by the manufacturer and user.

The flow meter is inserted in front of the monitor, and an adjustable limiter (for example a valve) is inserted between the flow meter and the monitor input. A calibrated pressure sensor is placed after the capture medium at the point stipulated by the manufacturer so that it measures the pressure drop in the monitor caused by air flow.

The rated flow rate is measured during the specified pressure drop in the capture medium, then the adjustable limiter is configured to achieve a median flow rate value 10 % below the rated flow rate under normal test conditions. Under these conditions, the conventionally true value of the sampling flow rate is measured.

Under these conditions, the measured pressure drop and flow rate must meet the requirements.

5.3.4 Air leak test

Air or gas leakage prior to the flow rate meter must be less than 5 % of the rate flow rate.

The size of the leak is measured using two volume meters or flow rate meters; they must be mutually calibrated to an accuracy greater than 1 %. One meter is situated before the apparatus and the second in the direction of flow past the filter holder or another capture device and immediately before the flow rate meter built into the apparatus. A series of 10 consecutive measurements are performed at suitable time intervals. The median values of flow rates measured before and after must not differ by more than 5 % during a normal sampling period. If needed, corrections for air pressure differences are performed.

NOTE This test can be replaced by an air-tightness test performed on the apparatus. Air pressure is increased in the sealed apparatus, and an appropriate pressure meter is used to monitor the pressure drop for at least 10 minutes. A calculation involving the amount of air sealed in the apparatus and the amount that escaped will determine the true amount of air that has escaped under the given conditions. The value must not exceed 1 % of the flow under routine conditions.

5.3.5 A test that the medium flow amount is measured correctly

If the sample is part of the measured medium (this concerns liquids, where the sampled amount is the sample), the measuring instrument must count the entire amount of medium that has passed through. The deviation from the correct medium flow amount value must not exceed 10 %.

The procedure is the same as in Article 5.3.2. If flow is controlled, the test must be performed at both extremes of the measurement range and at a minimum of seven other points within the measurement range. If the tested medium is gas (air), evaluation of stipulated quantities must be taken into account

(volume under current conditions, under standard conditions or evaluation of the mass of gas that has passed through).

5.3.6 Sampling effectiveness (for gaseous media)

Requirements

Capture efficacy must not differ by more than 10 % from the value stipulated by the manufacturer for the given particle size.

Particle size

Particle diameter and the range of sizes used to measure capture efficacy of the sampling apparatus must be agreed upon by the manufacturer and users, for example, depending on the diameter of monitored aerosols, the capture efficacy of filter media depending on particle size, etc.

Aerosol types

Various aerosol types are suitable for use in capture efficacy tests, for example:

- non-radioactive aerosols with particles containing a fluorescent indicator;
- non-radioactive aerosols containing latex or polystyrene balls;
- radioactive aerosols.

Test method

Capture efficacy is tested by bringing an air sample containing particles with the suitable median aerodynamic diameter to the sampling pipe inlet. Particle separation may have a small geometric standard deviation. The sampling apparatus operates under normal test conditions, for example flow rate.

After the sampling apparatus has been switched off, the amount of aerosol collected on the capture medium is determined. The total amount of aerosol at the monitor inlet is also determined. This is performed using an independent measurement of the sample amount of aerosol or by determining:

- the amount of aerosols collected on interior surfaces of supply pipes and other surfaces of the air circuit in front of the capture medium;
- the amount of aerosols past the capture medium.

Determining sampling efficacy

The sampling efficacy of the (E_m) of the monitor is calculated as follows:

$$E_m = \frac{C_M}{C_T} \times 100 \quad (1)$$

where C_M ..... is the amount collected on the capture medium;

C_T ..... is the total amount of aerosol that has entered the monitor during the test.

It is recommended that the total amount of aerosol (C_T) be determined by an alternative method as the median of obtained values. These methods include measuring the concentration of aerosols entering the apparatus using various measuring techniques, for example a spectrophotometer, a particle analyser, referenced sampling, etc.

If the entire sampled aerosol is determined using the total amount of substance collected in the monitor, the total amount of aerosol (C_T) (activity, mass, or number of particles) is as follows:

$$C_T = C_M + C_U + C_D \quad (2)$$

where C_U ..... is the amount re-released from interior surfaces of the air circuit before the capture medium;

C_D ..... is the amount deposited past the capture medium.

5.3.7 Chemical treatment efficacy test

This test concerns only the sampling apparatus where prior to capture or during sampling part of the medium undergoes a chemical change.

The efficacy of the chemical treatment and capture of the treated sample is stipulated by the manufacturer. This efficacy must not diverge by more than 10 % from the declared value.

The test procedure depends on the chemical form of the sampled medium and the changed chemical form. Two procedures can be used:

1) An initial chemical compound marked with a standardised amount of the measured (or analogous) radionuclide is introduced into the inlet pipes of the sampling apparatus (or part thereof that performs the chemical change). The efficacy of the change in chemical composition and capture are determined through direct measurement of the capture medium.
2) An inactive initial chemical compound is introduced into the inlet pipes of the sampling apparatus (or part thereof that performs the chemical change). The efficacy of the change and capture medium are determined through chemical analysis. Chemical analysis can also be performed in the output pipe (or at the outlet of the part performing the chemical change) to determine the content of the remaining initial compound. In this case capture efficacy is determined chemically or via a chemical evaluation independent of this test.

5.3.8 Test of resistance to environmental influences

These tests are performed in a climate control chamber with an open circuit if the medium is a gas (air), and with a closed circuit if the medium is a liquid.

Because the sampling apparatus can be used in various environments, the range of operating conditions is specified by the manufacturer.

The apparatus is placed in a climate control chamber and put into operation. Climactic conditions are set pursuant to paragraph 5.2. Media flow is set to its operating value.If flow is controlled, the value is set to the bottom third of the measurement range.

a) The set value is maintained for at least four hours, and then the required number of flow measurements is made. The internal meter measuring the amount that has flowed through is used to determine flow rate. If the apparatus is intended for sampling a liquid and does not contain a flow meter, an external instrument measuring flow rate or amount that has flowed through must be used.

b) Temperature tests

   The lower operating temperature limit and temperature change are then set so that the rate of change is not greater than 10 °C per hour. Once the set temperature has been reached, Article 5.3.5 is followed.

   The temperature of the climate control chamber is set to the upper operating limit with a rate of temperature change of at most 10 °C per hour. Once a stable temperature has been reached, a procedure analogous to that in a) is followed.

   Differences in flow rate at temperature limits compared to normal test conditions must not exceed 10 %.

c) Test of resistance to changes in air humidity

   This test is performed only if the apparatus can be expected to have significant sensitivity to air humidity.

   The test can be performed at a temperature of +35 °C and relative humidity of 90 %. A permitted deviation of ±10 % of the value is in addition to the permitted deviation caused by temperature alone.

5.3.9 Power supply

When supply voltage changes from 88 % to 110 % of the rated voltage, the flow rate of the medium must not change by more than ±5 %. The test is performed after connection to test equipment by changing supply voltage over the indicated range. The flow rate of the medium is measured pursuant to Article 5.3.2. Measurement is performed once equilibrium has been reached after the voltage change.

When power supply frequency changes from 47 Hz to 51 Hz, the flow rate of the medium must not change by more than ±10 %. The test procedure is the same as for the supply voltage test. This test need not be performed if the apparatus is powered by an inverter.

5.3.10 Electromagnetic immunity and interference

5.3.10.1 Radiated power line disturbances

The apparatus is operated under normal conditions. A measuring receiver with detector is used to measure the level of disturbances on the power line for the phase and neutral conductor. The measurement range is from 0.15 MHz to 30 MHz. The quasi-peak values of radiated disturbances must not exceed 56 dBµV (0.15 to 5 MHz) and 60 dBµV (5 to 30 MHz).

5.3.10.2 Radiated fields

The level of radiation at 10 m must not exceed 30 dBµV/m (30 to 230 MHz) and 37 dBµV (230 to 1 000 MHz).

5.3.10.2 Resistance to electrostatic discharge

The test is performed using the air method on a non-conductive surface and the contact method on the conductive parts of the apparatus. The degree of rigour is 4 kV using the contact method and 8 kV using the air method.

Discharges must not affect operation of the apparatus.

5.3.10.3 Resistance to pulse groups

Pulse groups are introduced directly into individual load and neutral (L, N) power conductors and into the protective earthing (PE) conductor.

Pulse properties: pulse group width 15 ms, period 300 ms, pulse group repetition frequency 5 kHz, duration of positive and negative pulses 1 minute per conductor.Amplitude: 2 kV.

Pulse groups must not affect operation of the apparatus.

5.3.10.4 Resistance to electrical voltage surge

The test is performed by introducing a surge between the load and neutral (L, N) conductors and between (L, N) and the PE conductor.

Surge properties: shape 1.2/50 µs (open-circuit voltage), 8/20 µs (short-circuit current), phase of the injected signal relative to grid 0°, 90°, 270°, positive and negative polarity, a series of 5 surges. Amplitude ±1 kV (between L and N), ±2 kV (between L/N and the PE conductor).

Surges must not affect operation of the apparatus.

5.3.10.5 Resistance to conducted electromagnetic interference

The test is performed for electromagnetic interference in the 150 kHz to 80 MHz frequency range, with 80 % modulation (1 kHz), with a 10 V degree of rigour.

Electromagnetic interference must not affect operation of the apparatus.

5.3.10.6 Voltage dips and interruptions

The test is performed for the following phenomena:

a) a short interruption (for 5 000 ms);
b) a voltage dip to 40 % U_τ (100 ms);
c) voltage dip to 70 % U_τ (10 ms);
d) a short interruption (10 ms)

Operation can cease during the test if it is restored automatically or through operator intervention. The measuring instrument must indicate that it has ceased operation.

6 Initial verification

6.1 Visual inspection

A visual inspection is performed to check whether the apparatus is not obviously damaged and whether supply and outlet pipes and fixtures are no showing obvious signs of leakage.

6.2 Functional tests

6.2.1 Test equipment accuracy requirements

The measuring instrument used to check the flow amount or flow rate must have a measurement accuracy better than ±2 %. For the stability and linearity test, an internal flow rate or flow volume meter can be used, if prior to verification this internal measuring instrument is calibrated to the given accuracy.

6.2.2 Tests of sampling route efficacy (installed apparatus)

If sampling takes place at a location different from where the sampling apparatus is installed, and the medium is conducted through pipes, the sampling efficacy of the sampling route must be checked during initial verification. For a gaseous medium the test is performed pursuant to Article 5.3.6. However, given the variability of possible physical and chemical forms of samples collected by these sampling apparatuses, this test procedure cannot be generalised.

The test can be replaced by an expert assessment that will prove that the supply pipes cannot affect the composition of the sampled medium with respect to the content of the entity under examination.

6.2.3 A test that the medium flow amount is measured correctly

Performed pursuant to Article 5.3.4. This test can be replaced by a flow rate test or with proof that the measuring instrument flow rate was calibrated at an authorised facility.

6.2.4 Medium flow control test

Performed pursuant to Article 5.3.2. This test cannot be replaced if flow through the apparatus is controlled (see 1.5).

6.2.5 Air leak test

Performed pursuant to Article 5.3.4.

6.2.6 Chemical treatment efficacy test

Performed pursuant to Article 5.3.7.

7 Subsequent verification

For subsequent verification, the same tests as during initial verification are performed, with the exception of the sampling route efficacy test (6.2.2). This test is performed only when design changes have taken place along the sampling route.

8 Measuring instrument check

When checking measuring instruments pursuant to § 11a of the Metrology Act at the request of an entity that could be affected by its incorrect measurement, Chapter 7 is followed. The maximum permissible error used is 1.25 times the maximum permissible errors pursuant to Chapter 7.

9 Notified standards

To specify metrological and technical requirements for measuring devices and to specify verification and type approval test methods stemming from this Measure of a General Nature, the CMI notifies Czech technical standards, other technical standards or technical documents of international or foreign organisations or other technical documents containing detailed technical requirements (hereinafter ‘notified standards’). The CMI shall publish a list of these notified standards attached to the relevant measures, together with the general measure, in a manner accessible to the public (on www.cmi.cz).

Compliance with notified standards or parts thereof is considered, to the extent and under the conditions stipulated by a general measure, to be compliance with the requirements stipulated by this measure to which these standards or parts thereof apply.

Compliance with notified standards is one way of demonstrating compliance with the requirements. These requirements may also be met by using another technical solution guaranteeing an equivalent or higher level of protection of legitimate interests.

II.

G R O U N D S

The CMI issues, pursuant to § 14(1)(j) of the Metrology Act, towards the implementation of § 6(2), § 9(1), § 9(9) and § 11a(3) of the Metrology Act, this general measure, stipulating metrological and technical requirements for the specified measuring instruments and test methods for the type approval and verification of the specified measuring instruments—'Measuring instruments used to monitor activity and concentration of effluents from nuclear facilities, from nuclear raw material mining or processing facilities, from the processing or application of radioactive materials, and from radioactive waste processing plants, and to determine environmental radiation exposure due to effluents'—modules for discontinuous measurement of activity or concentration by sampling that require specific test procedures and methods during type approval and during the verification of these specified measuring instruments.

Decree No 345/2002, stipulating measuring instruments for mandatory verification and measuring instruments subject to type approval, as amended, classifies this type of measuring instrument as a measuring instrument subject to type approval and verification under item 8.1 in the Annex’s 'List of Specified Measuring Device Types'.

This legislation (Measure of a General Nature) will be presented in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 defining the procedure for the provision of information in the field of technical regulations and of rules on Information Society services.

III.

I N S T R U C T I O N S

In accordance with § 172(l), in conjunction with § 39(l) CAP, the CMI has stipulated a time limit for comments of 30 days as of the date of posting on the official notice board. Comments submitted after this time limit will not be considered.

The persons concerned are hereby invited to comment on this draft Measure of a General Nature. With a view to the provisions of § 172(4) CAP, the comments shall be submitted in writing.

In accordance with § 174(l) CAP in conjunction with § 37(l) CAP, it must be clear who is making the comments, which measure of a general nature they concern, how it contradicts legislation or how the measure of a general nature is inaccurate, and they must be signed by the person making them.

The supporting documents for this draft Measure of a General Nature may be consulted at the Czech Metrology Institute, Legal Metrology Department, Okružní 31, 638 00 Brno, after making arrangements by telephone.

This general measure shall be posted for 15 days.

...…….....

RNDr.Pavel Klenovský

Director-General

Person responsible for accuracy: Mgr. Tomáš Hendrych

Posted on:

Signature of the authorised person confirming posting:.....

Removed on:

Signature of the authorised person confirming removal:.....