



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL FOR ENERGY

Directorate D - Nuclear energy, safety and ITER  
D.3 – Radiation protection and nuclear safety

## **EURATOM TREATY ARTICLE 35-36**

### **MEETING OF EXPERTS OF COMPETENT AUTHORITIES OF THE MEMBER STATES**

**14 OCTOBER 2020**  
**WEBEX TELECONFERENCE**

#### *Minutes*

- Chairpersons**    **Mr Michael Hübel, European Commission DG ENER D3**  
                          **Mr Vesa Tanner, European Commission DG ENER D3**
- Participants**    **Experts from the EU Member States**  
                          **Officials of the European Commission (DGs Energy (ENER) and**  
                          **Joint Research Centre (JRC))**
- Secretaries**     **Mr Vesa Tanner, European Commission DG ENER D3**  
                          **Ms Elena Diaconu, European Commission DG ENER D3**

(Full list of participants in Annex 2)

#### **1. OPENING AND ADOPTION OF THE AGENDA**

On behalf of the European Commission, the Head of Unit of ENER D3 Mr Michael Hübel welcomed everyone to attend the Webex conference and opened the meeting at 09:30 on 14 October 2020.

Mr Hübel briefly informed the meeting about the effects of the Covid-19 restrictions on the Commission work and the recent results of the audit carried out at the Radiation protection and nuclear safety unit.

It was agreed that the Commission provides the chairperson and secretariat for the meeting.

#### **2. ADOPTION OF THE AGENDA**

A provisional agenda had been sent to the nominated participants in advance, along with the preparatory documents. The proposed agenda (Annex 1) was adopted.

### **3. MINUTES AND PENDING ISSUES OF THE EURATOM ART. 35-36 EXPERTS' MEETING 2018**

Mr Vesa Tanner (DG ENER D3) presented the minutes of the previous Art. 35-36 Experts' Meeting in 2018, which had been distributed to the participants in advance. There was no discussion on this matter.

### **4. COMMISSION ARTICLE 35 VERIFICATION PROGRAMME**

#### **4.1. Verifications carried out 2018 - 2020**

Mr Tanner presented the verifications carried out between 2018 and 2020. This period included verifications in two nuclear power plants (Almaraz and Paks), one nuclear fuel reprocessing facility (La Hague), seven population centres (Sofia, Lisbon, Stockholm, Athens, Zagreb, Tallinn and Vienna) and three areas of special interest (Palomares, Fabro and Tito Scalo). On each verification, Mr Tanner highlighted the main observations by the Commission. Based on the verifications, he made also the following general remarks:

- Verification teams did not identify any serious deficiencies in implementing Art. 35 during this period.
- There has been good progress on mobile (terrestrial/airborne) monitoring.
- There has been good progress on using mathematical methods for detector efficiency calibration.
- Lack of qualified laboratory staff is a common problem.
- A few recurrent recommendations can be identified:
  - There are still deficiencies in gaseous iodine monitoring in population centres.
  - On-line dose rate information is still not available on all national authority websites.
  - Long-term trend graphs for the HPGe-detector energy, efficiency and resolution stability are not maintained in all laboratories.
  - Some laboratories still don't have a Laboratory Information Management System (LIMS), but are using paper log sheets for sample management.
  - Sample management procedures in an emergency situation are not sufficiently developed in all laboratories.

All finalised verification reports and possible Member States' comments are available at the DG ENER Radiation protection website<sup>1</sup>.

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<sup>1</sup> <https://ec.europa.eu/energy/en/verifications-radiation-monitoring-eu-countries>

#### **4.2. Planned verifications 2020 - 2022**

Ms Elena Diaconu (DG ENER D3) described the Commission planning criteria for verifications and outlined the 10 verifications, which are planned to be carried out in 2020-2022. The programme is reviewed every six months.

Mr Reimund Stapel (Germany) informed that in 2022 there will be only three nuclear reactors operating in Germany that these are going to be shut down in 2022, and the Commission should take this into account when deciding on the planned mission to Germany in 2022. Mr Tanner replied that the nuclear facility does not need to be operational during the verification; the Commission may carry out a verification in any facility, which has been granted a radioactive discharge authorisation.

Regarding the verification in Galicia, Spain in 2021, Ms Sofía Luque (Spain), pointed out that in Galicia the verification is to the environmental monitoring arrangements, and not to discharges, as there are no radioactive discharges there.

#### **4.3. Regular review of verifications 2013 - 2019**

Mr Tanner outlined the verification review process, which the Commission is currently carrying out. The purpose of this work is to review the verifications carried out in 2013-2019 in order to decide, whether the Commission has received sufficient information on the implementation of its recommendations, and to provide a basis for drafting the regular report on the verification programme.

The main review questions are following:

- Is there an existing exposure situation?
- Have there been changes in the status of the verified facility (shut-down, decommissioning, BREXIT, etc.)
- Are there recommendations, which have not been implemented?
- Has the Commission received sufficient information after the verification?
- Should the Commission request updated information?
- Does the available information support further action in terms of Article 35?

### **5. EU STUDY "INVENTORY OF MEMBER STATES' ENVIRONMENTAL RADIOACTIVITY MONITORING SYSTEMS"**

Mr Jean-Yves Balandier (Institute for Radioelements (IRE)) presented the current status of the project.

Ms Margarida Malta from Portugal inquired to clarify why the requirements from RS-G-1.8 were used and not just the recommendation 2000/473/EURATOM.

Mr Balandier replied that in the frame of the ongoing study, it was decided to perform a comparison with the IAEA guidelines on top of the one with the EC recommendations, as it is also a way for comparing the different monitoring practices between the different EU Member States by considering international guidelines. The IAEA documents are guidelines, not requirements, thus the recommendations that could be raised from this

comparison should be taken as possible ways of improvements and will reflect only the contractors position, not the one of the EC. This will be indicated in the disclaimer to be added in the final reports, as requested by the contract.

## **6. STATUS OF THE RADD RADIOACTIVE DISCHARGE DATABASE**

Ms Mónica Vela García and Ms Iuliana Anisim (DG ENER D3) presented the status of the RADD radioactive discharge database. The current administrator of the RADD is Ms Iuliana Anisim (since retirement of Mr Stefan van der Stricht in May 2020); in the future Ms Mónica Vela-García will also be an administrator.

The data providers can communicate with the RADD administrators using the functional mailbox address ([ENER-D3-RADD-DATABASE@ec.europa.eu](mailto:ENER-D3-RADD-DATABASE@ec.europa.eu)). The RADD Upload Tool is ready to replace the on-line submission functionality of RADD with a module based on modern software. However, the visual tutorial has not, due to the Covid-19 crisis, been put into production for the 2019 submissions.

A one-day training seminar will be organised for RADD data providers in 2021.

## **7. DEVELOPMENT OF THE REM DATABASE**

Mr Marc De Cort (DG JRC Ispra) presented the improvements on the REM database introduced since 2018, in particular concerning the data submission tool, training courses and system administration. The status of data submissions for 2018-2020 was outlined together with the trends observed.

Mr De Cort also informed the meeting participants about the actions taken after the data breach, which occurred in February 2020. After data security review and improvements, the on-line facility is expected to be functional again in November 2020.

Mr De Cort presented also the new features of the REM data submission tool and the new on-line data query system. On the latter, he requested assistance from the Experts to review the new software user-friendliness and functionality before it is made available to the public.

Mr Josef Peter (Germany) asked if it makes sense to send data for 2019 by email now, or should they wait until the DST is online again. Mr De Cort replied that both options are valid and it is up to the Member States to choose the most convenient option for the 2019 monitoring data submission.

Related to the submission of the REM Portuguese data, Ms Margarida Malta mentioned that a new regulatory body entered into force on 2 April 2019, and it has not been possible to coordinate all obligations within the partners.

## **8. ICS-REM EXERCISES, LESSONS LEARNED AND THEIR IMPLICATIONS**

Mr Mikael Hult (DG JRC Geel) introduced the radiological support activities carried out by the radionuclide metrology team at JRC-Geel. This includes organisation of intercomparisons, proficiency tests, training courses for laboratory staff, workshops and

production of reference materials for radioactivity monitoring. All proficiency tests are described in detail in reports available on the REMON website<sup>2</sup>. A new condensed and straightforward overview report is available on-line<sup>3</sup>.

Mr Hult also discussed the future challenges of the JRC metrology group. These include for example the following:

- Increased support to non-nuclear Member States to measure radioactivity properly
- Growing number of requests for environmental proficiency tests
- Need for improved decay data for medical radioisotopes
- Need for proficiency test for other types of matrices (e.g. building materials) than those mentioned in the Euratom Treaty (air, water, food, soil) and radionuclides (nuclear medicine)
- Replacing departing expert radiochemists
- Budget cuts following Brexit and Covid-19 crisis in maintaining equipment and personnel

Mr Viktor Jobbagy (DG JRC Geel) presented two radioactivity in water proficiency tests carried out by the JRC in 2018 and 2019 (radon and gross alpha/beta). Mr Jobbagy discussed the test methodology and presented the results. Most laboratories performed in a satisfactory manner, but there are also laboratories, who fail to reach the required accuracy. Mr Jobbagy outlined also possible reasons for poor results encountered. In the case of radon, it is easily lost due to the inert nature of this gas. This may lead to reporting too low values. The gross counting methods are highly dependent on the radionuclides used for calibration and are extremely unreliable for general monitoring. The spread in results for all large-scale gross alpha/beta proficiency tests carried out so far is not satisfactory. Therefore, it was unfortunate that this year's training course and workshop on gross counting techniques had to be cancelled due to the Covid-19 situation.

## **9. DISCUSSION ON FUTURE METROLOGY SUPPORT FROM JRC TO MEMBER STATE LABORATORIES**

Ms Katarzyna Sobiech-Matura (DG JRC Geel) presented the following:

- Preliminary replies to the questionnaire sent to radiological laboratories in the Member States in order to map their needs for metrology support, especially linked to analysis of radioactivity in food. A full report will be available by the end of 2020.

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<sup>2</sup> <https://remon.jrc.ec.europa.eu/Services/Proficiency-Tests>

<sup>3</sup> <https://ec.europa.eu/jrc/en/publication/radioactivity-monitoring-how-jrc-verifies-results-monitoring-within-european-union>

- Updates of the JRC input to the relevant European standards EN 17216 (Determination of activity concentrations of radium-226, thorium-232 and potassium-40 in construction products) and EN 17462 (Determination of the radionuclides iodine-131, caesium-134 and caesium-137 in feed).
- Update on the upcoming proficiency test REM2020PT (NORM in building materials), which is being prepared at the JRC Geel. Laboratories can register before the end of 2020.

A discussion on the future needs of Member States and their laboratories took place. The Experts identified the following as good topics for future proficiency tests, reference materials and training courses:

- Natural uranium in water
- C-14 in vegetables
- Pb-210 and Po-210 in water
- Rn in water
- Sr-90 in milk and/or milk powder

There was support to the JRC suggestion to investigate possibilities to organise proficiency tests on sampling and measuring “difficult to measure” radionuclides relevant in building materials in connection with decommissioning of nuclear power plants.

Mr Tanner invited the Experts to inform the Commission on further ideas on new proficiency tests.

## **10. EUROPEAN ATLAS OF NATURAL RADIATION: PUBLICATION AND ONLINE VERSION**

Ms Giorgia Cinelli (JRC Ispra) presented the new European Atlas of Natural Radiation. This Atlas is an encyclopaedia of natural radiation: it describes the different sources of radioactivity and presents the current state of knowledge on this topic. It contains a collection of maps of Europe that show the levels of natural background radiation from various sources (cosmic radiation, terrestrial radionuclides and radiation, indoor radon). It provides reference values, as well as harmonised data for the scientific community and national competent authorities. In addition, it provides an opportunity for the public to familiarise itself with natural radioactivity, to be informed about levels of natural radioactivity caused by different sources, and to have a balanced view of the annual dose received by the world’s population.

Ms Cinelli informed that the Atlas is now available in both digital and paper form.<sup>4</sup>

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<sup>4</sup> <https://remon.jrc.ec.europa.eu/About/Atlas-of-Natural-Radiation>

## **11. OTHER DISCUSSION/INFORMATION ITEMS**

### **11.1. Cs-137 in wood pellets found in Bulgaria**

Ms Rositza Totzeva (Bulgaria) presented the results of Cs-137 monitoring in wood pellets and wood ash in Bulgaria. She informed, that the production and use of wood pellets has greatly increased in order to reduce harmful emissions, but their use may lead to increase of the content of radionuclides in the soil, and hence in drinking water. It may lead to increase of the exposure of the population. There is no European regulation (guide or recommendation) on this matter, but in a few countries (Japan for example) national guidance exists.

Mr Christian Katzlberger (Austria) mentioned that he understood that Latvia would soon have a new regulation for imported wood for combustion.

Mr Pål Andersson (Sweden) informed that Sweden has issued guidance on this matter.

Mr Hübel invited the Experts to inform the Commission if they have established national guidance on the radioactivity risks associated with the use of wood pellets or wood ash.

### **11.2. Cs-137 in wild boar in Sweden**

Mr Pål Andersson (Sweden) presented the results of Cs-137 monitoring in wild boar in Sweden. He indicated, that since wild boar is a new animal in Sweden (migrated species), its hunting activity has created a new pathway of Cs-137 to the human population, which needs to be monitored. Sweden has established a monitoring campaign of wild boar meat on those areas where there are elevated levels of Cs-137 ground contamination. Elevated activity concentrations have been found, but they appear to be strongly dependent on the hunting time, i.e. showing low values between August and October, and on the seasonal availability of food. Also in the Netherlands it has been suggested that the (seasonal) availability of certain food types was a possible source for the uptake of Cs-137 in boar.

### **11.3. New EURDEP Administrative Arrangement**

Mr Tanner presented the new Administrative Arrangement, which the Commission has adopted in order to create a stronger formal basis for the EURDEP data exchange co-operation. The Commission will contact each EURDEP data provider organisation in order to sign the new Arrangement.

Mr Tanner presented the text of Arrangement, outlined the most important sections and informed about the practicalities of the on-going signature process.

Mr Ondřej Chochola from Czechia asked if there were some possibility to change the form of transmission of EURDEP data in future (e.g. web services). Mr Tanner replied, that if needed, technical developments will be done and they will be reflected in the Arrangement by updating Annex A.

#### **11.4. Policy for the Art. 35 verification reports website**

Mr Tanner reviewed the current arrangements for making information on the Commission Art. 35 programme available to the public via the DG Energy website<sup>5</sup>. Verification reports are placed on the website 6 weeks after they have been sent officially to the verified country. The page contains the following:

- Introductory text
- Art. 35 verification reports since 1999 (Technical reports, Main findings and Follow-up reports, including translations)
- European Parliament report on Art. 35 years 2008-2012
- European Parliament report on Art. 35 years 1990-2007
- Commission Communication on the practical arrangements for the conduct of verification visits in Member States (2006/C 155/02)

Mr Tanner indicated that the Commission finds the current webpage content adequate, but would like to remove those verification reports, which are older than 20 years. This would be better in line with the Commission general policy on websites. The Experts approved the proposal.

Sweden inquired about the availability of the reports older than 20 years. Mr Tanner replied that these would be kept in the Commission archives and can be provided on a specific request.

#### **12. ANY OTHER BUSINESS**

Ms Rositza Totzeva (Bulgaria) inquired about the future work of the Art. 35/36 working group. Mr Tanner and Mr De Cort replied, that the Commission would indeed like to restart this working group, but so far it has not been possible due to other work.

#### **13. CLOSE**

Chairman Mr Hübel suggested organising the next Art. 35-36 Experts' Meeting already in 2021, if a physical meeting can be organised.

DG ENER will produce the draft meeting minutes and distribute them to the participants for comments. The final minutes will thereafter be distributed to all competent authorities. It was also agreed to distribute all the meeting presentations to the participants via the AGM system.

Chairman Mr Hübel thanked the participants and closed the meeting at 16:30 on 14 October 2020.

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<sup>5</sup> [https://ec.europa.eu/energy/topics/nuclear-energy/radiation-protection/radioactivity-environment/verifications-radiation-monitoring-eu-countries\\_en](https://ec.europa.eu/energy/topics/nuclear-energy/radiation-protection/radioactivity-environment/verifications-radiation-monitoring-eu-countries_en)

**Annexes**

Annex 1 Meeting agenda

Annex 2 List of meeting participants

## EURATOM TREATY ARTICLE 35-36

### MEETING OF EXPERTS OF COMPETENT AUTHORITIES OF THE MEMBER STATES

14 OCTOBER 2020  
WEBEX CONFERENCE

#### AGENDA

- (1) Open and welcome (*M. Hübel, DG ENER*) (09:30 CET)
- (2) Adoption of the agenda
- (3) Minutes and pending issues of the Euratom Art. 35-36 Experts' Meeting 2018 (*V. Tanner, DG ENER*)
- (4) Commission Article 35 verification programme
  - 4.1 Verifications carried out 2018 - 2020 (*V. Tanner, DG ENER*)
  - 4.2 Planned verifications 2020 - 2022 (*E. Diaconu, DG ENER*)
  - 4.3 Regular review of verifications 2013 - 2019 (*V. Tanner, DG ENER*)
- (5) EU study "Inventory of Member States' environmental radioactivity monitoring systems" (*J-Y. Balandier, IRE*)
- (6) Status of the RADD radioactive discharge database (*M. Vela Garcia / I. Anisim, DG ENER*)
- (7) Development of the REM database (*M. De Cort, DG JRC*)
- (8) ICS-REM exercises, lessons learned and their implications (*M. Hult / V. Jobbagy, DG JRC*)
- (9) Discussion on future metrology support from JRC to Member State laboratories (*M. Hult / K. Sobiech-Matura, DG JRC*)
- (10) European Atlas of Natural Radiation: Publication and online version (*G. Cinelli, DG JRC*)
- (11) Other discussion/information items
  - 11.1 Cs-137 in wood pellets found in Bulgaria (*R. Totzeva, Bulgaria*)
  - 11.2 Cs-137 in wild boar in Sweden (*P. Andersson, Sweden*)
  - 11.3 New EURDEP Administrative Arrangement (*V. Tanner, DG ENER*)
  - 11.4 Policy for the Art. 35 verification report website (*V. Tanner, DG ENER*)
- (12) Any other business
- (13) Close (16:30 CET)

## EURATOM TREATY ARTICLE 35-36

### MEETING OF EXPERTS OF COMPETENT AUTHORITIES OF THE MEMBER STATES

14 OCTOBER 2020

#### LIST OF PARTICIPANTS

<b>County</b>	<b>Name</b>	<b>Email</b>
Austria	KATZLBERGER, Christian	<i>christian.katzlberger@ages.at</i>
Belgium	CLAES, Jurgen	<i>jurgen.claes@fanc.fgov.be</i>
Belgium	NOOTENS, Sylvain	<i>sylvain.nootens@fanc.fgov.be</i>
Belgium	BIERMANS, Geert	<i>geert.biermans@fanc.fgov.be</i>
Bulgaria	KAMENOVA-TOTZEVA, Rositza	<i>r.totzeva@ncrrp.org</i>
Croatia	KRČA, Sanja	<i>skrca@mup.hr</i>
Croatia	ŠOŠTARIĆ, Sonja	<i>ssostaric2@mup.hr</i>
Croatia	STAUDACHER, Matko	<i>mstaudacher@mup.hr</i>
Cyprus	TZORTZIS, Michalakis	<i>mtzortzis@dli.mlsi.gov.cy</i>
Czechia	CHOCHOLA, Ondřej	<i>ondrej.chochola@sujb.cz</i>
Czechia	VARMUZA, Jan	<i>jan.varmuza@sujb.cz</i>
Denmark	ANDERSSON, Kasper	<i>kgan@dtu.dk</i>
Estonia	LEPASSON, Monika	<i>monika.lepasson@keskkonnaamet.ee</i>
Finland	VESTERBACKA, Pia	<i>pia.vesterbacka@stuk.fi</i>
France	MORIN, Maxime	<i>maxime.morin@irsn.fr</i>
France	PLANCQUE, Gabriel	<i>gabriel.plancque@asn.fr</i>
Germany	PETER, Josef	<i>josef.peter@bfs.de</i>
Germany	STAPEL, Reimund	<i>reimund.stapel@bmu.bund.de</i>
Greece	KEHAGIA, Konstantina	<i>kkehagia@eeae.gr</i>
Hungary	KAPITANY, Sandor	<i>kapitanys@haea.gov.hu</i>
Ireland	O'TOOLE, Simon	<i>s.otoole@epa.ie</i>
Italy	BOLOGNA, Luciano	<i>luciano.bologna@isinucleare.it</i>
Italy	FONTANI, Sonia	<i>sonia.fontani@isinucleare.it</i>
Lithuania	MOLIS, Juozas	<i>j.molis@aaa.am.lt</i>

Luxembourg	LECOMTE, Marielle	<i>marielle.lecomte@ms.etat.lu</i>
Luxembourg	BREUSKIN, Patrick	<i>patrick.breuskin@ms.etat.lu</i>
Netherlands	TANZI, Cristina	<i>crisrina.tanzi@rivm.nl</i>
Netherlands	KNETSCH, Gert-jan	<i>gert-jan.knetsch@rivm.nl</i>
Poland	JAZGARSKI, Mariusz	<i>jazgarski@paa.gov.pl</i>
Portugal	MALTA, Margarida	<i>margarida.malta@apambiente.pt</i>
Romania	ANA, Gherasim	<i>ana.gherasim@anpm.ro</i>
Spain	SANCHEZ, Teresa	<i>msh@csn.es</i>
Spain	MARTINEZ, Pablo	<i>pablo.martinez@csn.es</i>
Spain	LUQUE, Sofía	<i>slh@csn.es</i>
Sweden	ANDERSSON, Pål	<i>pal.andersson@ssm.se</i>

<b>Invited experts</b>	<b>Name</b>	<b>Email</b>
Institute for Radioelements (IRE)	BALANDIER, Jean-yves	<i>jean-yves.balandier@ire.eu</i>
Institute for Radioelements (IRE)	DELÉCAUT, Grégory	<i>gregory.delecaut@ire-elit.eu</i>

<b>European Commission</b>	<b>Name</b>	<b>Email</b>
ENER D3	HÜBEL, Michael	<i>michael.huebel@ec.europa.eu</i>
ENER D3	VELA GARCIA, Monica	<i>monica.vela-garcia@ec.europa.eu</i>
ENER D3	TANNER, Vesa	<i>vesa.tanner@ec.europa.eu</i>
ENER D3	DIACONU, Elena Luminita	<i>elena.diaconu@ec.europa.eu</i>
ENER D3	MRVOS, Maja	<i>maja.mrvos@ec.europa.eu</i>
ENER D3	ANISIM, Iuliana	<i>iuliana.anisim@ec.europa.eu</i>
JRC G10	DE CORT, Marc	<i>marc.de-cort@ec.europa.eu</i>
JRC G10	CINELLI, Giorgia	<i>giorgia.cinelli@ec.europa.eu</i>
JRC G2	HULT, Mikael	<i>mikael.hult@ec.europa.eu</i>
JRC G2	JOB BAGY, Viktor	<i>viktor.jobbagy@ec.europa.eu</i>
JRC G2	SOBIECH-MATURA, Katarzyna	<i>katarzyna.sobiech-matura@ec.europa.eu</i>