**Pytania do 8. Raportu Polski na JC**

| Lp | Kraj | Artykuł | Sekcja/strona raportu | Pytanie | Odpowiedź |
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| **1** | Canada | Article 21.1 | F-1 | The report states that, "To ensure that each license holder meets its responsibility, the obligation of submitting of relevant quarterly reports is usually imposed on him by the license conditions and regulatory inspection are performed for verification." Under what circumstances would a licence holder not be required to submit quarterly reports? | The obligation of submitting of relevant quarterly reports is typically imposed on entities holding license for the operation of nuclear facilities or radioactive waste repository. In this case, a graded approach is applied, meaning that activities posing greater risks are generally subject to these reporting requirements as part of their license conditions. Reports submitted less frequently than quarterly could be required for activities or facilities that pose a lower risk to the public and the environment. |
| **2** | Canada | Article 5 | G (pg. 54) | Page 54 of Poland's National Report states that safety recommendations and corrective actions were provided in a periodic safety report that was approved by the President of the National Atomic Energy Agency in 2023. Please elaborate on some of the safety recommendations provided in the periodic safety review for MARIA RR and corrective actions determined by the licensee. | The periodic safety review report, resulting from the second PSR for the MARIA research reactor, was submitted in 2024 to the President of the PAA for approval and is still under evaluation and revision by the PAA staff. The review process is ongoing. In 2023, the President of the PAA approved two periodic safety review reports for the spent nuclear fuel storage facilities operated by the Radioactive Waste Management Plant (ZUOP). As a result of these reviews, a number of corrective actions were identified, including the replacement of the control and measurement equipment used to monitor water levels in the storage tanks, the development of an aging management program covering the monitoring of safety-related systems in line with environmental conditions, the removal of water from the storage pool and refilling the tanks with water that meets the |

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| | | | | | requirements for storing spent nuclear fuel, the assessment of the technical condition of the pool liner, and the preparation of an updated version of the safety report. |
| **3** | Canada | Article 12.1 | H (pg. 64) | Regarding the observed release to tritium from the National Radioactive Waste Repository in Różan, what new safety measures have been implemented based on the updated safety report? | For many years, detailed monitoring of tritium activity concentrations has been conducted by the Polish Geological Institute at the National Radioactive Waste Repository in Różan and its surrounding area. The results of these measurements indicate that elevated tritium concentrations occur within the repository area, with a decreasing trend. The reduction in tritium concentrations is consistent with the natural half-life decay process of the H-3 isotope, as well as the variability of hydrological and meteorological conditions, including atmospheric precipitation, which influence groundwater concentrations. Tritium concentrations in groundwater around the repository do not exceed levels that could pose a threat, and drinking water from the municipal water supply exhibits very low concentrations, well below the permissible limits set by regulations on drinking water quality (100 $Bq/dm^3$).<br>Considering the above results, there is no need for additional measures, as tritium concentrations remain within permissible limits and are systematically, though not uniformly, decreasing. Therefore, the continuation of tritium monitoring in groundwater and drinking water is sufficient and allows for ongoing surveillance, ensuring the safety of the repository area and its surroundings. In addition, at the request of the National Atomic Energy Agency (PAA), independent environmental monitoring is conducted around the repository, including the measurement of tritium |

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| | | | | | concentration in groundwater. The measurement results are consistent with those submitted by the repository operator. |
| **4** | Canada | Article 15.1 | H (pg.67) | Both a systematic safety assessment and an environmental assessment are required, under Article 15, to assess the safety of facilities. If environmental assessments are included, this should be explicitly mentioned when using the term "safety assessments", does this encompass an environmental assessment as well, as per the requirements of Article 15? | According to the Act on Sharing Information on the Environment and its Protection, Public Participation in Environmental Protection, and on Environmental Impact Assessments, decisions on granting construction license for nuclear installations and radioactive waste repositories have to be preceded by environmental permit issued on the basis of environmental impact assessment. The President of the PAA issues an opinion on the scope of the report on the environmental impact assessment and on the environmental permit with regards to nuclear safety and radiation protection. The environmental permit for nuclear energy facilities (e.g. radioactive waste repositories operated for nuclear energy purposes) is issued by the General Directorate for Environmental Protection, and for the facilities that are not nuclear energy facilities (e.g. research reactors), by regional director for environmental protection. Therefore, the environmental assessment is a prerequisite to the application to the PAA, which includes further safety assessments. |
| **5** | Canada | Article 13.1.3 | G (pg. 65) | Does polish government or industry take proactive steps to make information available to the public regarding waste management facilities (e.g. online, reports, social media, etc.)? | In accordance with the Atomic Law, Radioactive Waste Management Plant (ZUOP) is obliged to carry out informational activities. Therefore, active communication efforts related to the scope of ZUOP's operations are undertaken.<br>In compliance with the legal requirements, ZUOP prepares annual reports on the status of nuclear safety and radiological protection at the National Radioactive Waste Repository in Różan (Mazowieckie province), the status of nuclear safety and radiological protection at |

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| | | | | | the nuclear facilities located at the Radioactive Waste Management Plant in Otwock and about impact of activities performed by ZUOP on human health and the environment. These documents contain information on the radiological protection status, its impact on human health and the environment, as well as the quantity and isotopic composition of radioactive substance releases from the repository into the environment.<br>The reports are made available to the public on the plant's website and on social media profiles (Facebook, LinkedIn). Additionally, in accordance with the Atomic Law, ZUOP publishes a biannual bulletin dedicated to the activities of the National Radioactive Waste Repository, which is sent to the residents of the Różan municipality.<br>To provide objective information regarding the disposal of radioactive waste and maintain transparency in its operations, ZUOP regularly collaborates with the Radiological Protection Committee, a local government body in the municipality where the repository is located. As part of this cooperation, regular meetings with committee representatives are organized.<br>Several times a year, ZUOP offers individuals the opportunity to visit the National Radioactive Waste Repository. ZUOP also collaborates with universities and institutions, allowing students and employees of various organizations to see how the Plant handles radioactive waste.<br>In addition, ZUOP carries out educational activities aimed at all age groups.<br>Additionally, the government prepared an educational campaign aimed at sharing the knowledge on the radioactive waste management, which involved social |

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| **6** | Canada | Article 25.2 | Annex IV (p.90) | The report notes that Poland has signed, ratified and implemented the Vienna convention on Civil Liability for Nuclear Damage. Has Poland considered joining the Convention on Supplementary Compensation for Nuclear Damage ? | Yes, Poland plans to join the Convention on Supplementary Compensation for Nuclear Damage (CSC) to expand treaty relations concerning civil liability for nuclear damage to countries that are not parties to the 1963 Vienna Convention or the 1988 Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention. The Ministry of Industry is currently conducting analyses related to the planned accession to the CSC. In the near future, an application will be submitted to the European Commission to initiate the process of obtaining the consent of the Council of the European Union for Poland's accession to this Convention, due to the EU's competence in the |
| **7** | Canada | Article 27 | I (pg.71) | If there is spent fuel under agreement to be sent to Russia, the report should indicate if alternatives are being explored. Does Poland still have spent fuel from research reactors it is intending to send to Russia or has it considered alternatives in light of geopolitical circumstances? | In correlation with the rules of Council Directive 2011/70/Euratom, the preferred option for Poland is spent fuel disposal in the Polish territory.<br><br>Agreement with Russian Federation gives the possibility to send into Russia only Russian origin spent fuel. |
| **8** | Czech Republic | Planned Activities | A/6 | The document contains information that the original fuel from the EWA reactor was shipped back to the Russian Federation - the assumption is that, similarly to the fuel from the Czech Republic, it was/will be reprocessed and HLW should be transported back - how is | Poland has signed and executed an agreement with the Russian Federation, which outlines the permanent disposal of high-level waste from the reprocessing of spent nuclear fuel on Russia territory. |

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| | | | | Poland prepared for reception and what is the expected procedure? | |
| **9** | Czech Republic | General | A/7 | The document contains a description of the National Radioactive Waste Repository (NRWR) – located in Różan - how Poland is prepared for the operation phase of the considered NPP with RAW production? (probably as part of the National Plan and the Polish Nuclear Power Program) | Yes, the new facilities are planned. A dry storage facility for spent nuclear fuel is planned to be constructed on the nuclear power plant site, where the fuel will be transferred once it has been cooled in the spent fuel pool. Additionally, Poland is preparing for the development of a new near-surface repository for low and medium-level radioactive waste. It has been decided that the Różan repository will remain operational until the new facility is opened. The site selection process for the new near-surface repository is currently underway. |
| **10** | Czech Republic | Article 20 | E/34 | The text contains an analysis and description of the development of regulatory body capacities for future deployment for NPP licensing - taking into account the current non-existence of NPP in Poland - how training is carried out? | Regarding the PAA employees who will take part in the licensing of the first Polish nuclear power plant, the training program is selected according to the competences held by the employees and the competencies needed to perform activities during the licensing process.<br>For newly employed staff, the first element of training is general training for all employees responsible for assessment (functioning of regulatory body, legal framework and requirements, nuclear energy and nuclear physics, nuclear safety and radiological protection). The second stage is specialized training closely related to the tasks performed, which are selected individually for employees, e.g. regarding the usage of a specific computational code (like TRACE or MELCOR) or the operation and assessment of a specific nuclear power plant system. |

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| | | | | | Moreover, for some specializations, the PAA organizes on-the-job training in cooperation with other regulators, i.e. the employee is delegated to work for the nuclear regulator from another country for a period of 2 to 6 months - in recent years, this particularly concerned candidates for nuclear regulatory inspectors, staff conducting safety analyses, and staff assessing electrical power and I&C systems.<br><br>The training is carried out by more experienced PAA employees, as well as in cooperation with nuclear regulators in other countries and by professional entities. |
| **11** | Czech Republic | Article 22 | F/43, 44 | The text contains information that the operator must secure conditions, including financial ones, until decommissioning - is the preparation of a decommissioning program and an estimate of costs part of the licensing process, according to which the operator creates the necessary reserve? | Yes, the preparation of a decommissioning program and cost estimates is an integral part of the licensing process, through which the operator ensures the creation of the necessary financial reserve. Before submitting an application for a license to construct, commission, or operate a nuclear facility, the head of the organizational unit prepares a decommissioning program for the facility and presents it to the PAA President for approval, along with the license application. During the operation of the nuclear facility, the decommissioning program must be updated at least once every five years, or immediately upon the completion of its operation if it was not previously addressed in the program. The updated decommissioning program, along with a cost forecast for the decommissioning of the facility, must be submitted to the PAA President for approval. A license |

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| | | | | | may be granted to an organizational unit that has the necessary financial resources to ensure nuclear safety, radiological protection, physical security, and safeguards for nuclear materials throughout all stages of the nuclear facility's operation, until the completion of its decommissioning. |
| **12** | Czech Republic | Planned Activities | B/12 | With regard to the design of the MARIA reactor - what is the plan for decommissioning the beryllium from the reactor? How will this material be characterized and what is the expected disposal procedure with regard to toxicity? | Beryllium blocks from the MARIA reactor, as radioactive waste requiring special treatment, will be transferred to the ZUOP. Beryllium blocks and the separator from the EWA research reactor are stored in a special container, made with grey cast iron with austenitic steel covering, at the ZUOP facility in Otwock, and the same technology is proposed. The visual and dosimetric characterization and dismantling will be performed according to the MARIA reactor's internal procedure. |
| **13** | Australia | Article 19 | System of Licencing | Regarding the statement that, "the PAA issues the licenses and accepts the notifications and registrations relating to the activities/practices from 1- 16. Notifications on 1,2,15 and 16 are also accepted by the Director of a district mining office and almost all other points are accepted by the State Regional Sanitary Inspector." What does being subject to notification mean in practice? Is this a reporting function of the activities that occurred within a period - why is it reported to multiple organisations rather than just the singular regulatory authority that licenced the operator? If the PAA and the NRI are undertaking the regulatory functions, at least for items 1 - 16, do those other | Notifications are in accordance with graded approach the lowest layer of the licensing system. In accordance with article 5 section 16 of the Atomic Law Act an exposure-related activity referred to in Article 4, Section 1 which requires notification may be undertaken if no objection is raised by the PAA President by administrative decision within 30 days of the notification submission date and no later than 2 years after the date specified in the notification for commencing the exposure-related activity. According to Article 5 section 17 the notification on performing an exposure-related activity, as referred to in Article 4, Section 1, shall include:<br>1) the designation of the organisational entity making the notification, its registered office and address;<br>2) in the case of entrepreneurs, the number in the register of entrepreneurs in the National Court Register |

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| | | | | notified persons perform any function in relation to those licenced activities? (Considering they are not responsible for the licencing and authorisation of each activity) | and the tax identification number (NIP), if the entity has such numbers;<br>3) the determination of the type, scope and location of the activity subject to notification, as well as the activity concentration or the activity of the sources of ionising radiation, which the activity subject to notification will involve;<br>4) the determination of the anticipated exposure of workers and members of the public resulting from the performed activity subject to notification;<br>5) the justification for undertaking the activity subject to notification and the planned methods of monitoring and optimisation of exposure;<br>6) the indication of the date of commencing the activity subject to notification.<br>Article 5 section 18 states that if a notification needs to be supplemented, the President of the Agency shall require the notifier, by way of an order, to complete the notification within a specified term. Then section 19 indicates that the President of the Agency shall raise an objection, by way of an administrative decision, if:<br>1) performing the activity subject to notification is prohibited, or requires the licence or registration referred to in Article 4, Section1;<br>2) the content of the notification indicates that performing the activity subject to notification might breach the requirements of radiation protection under relevant legislation;<br>3) the notifier has not completed the notification within the specified time limit. According to Article 5 section 20 the President of the Agency shall maintain a register of organisational entities performing the exposure-related activities referred to in Article 4, Section 1, |

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| | | | | | requiring notification. The PAA and the NRI are undertaking the regulatory functions only for those activities that require notification indicated in the article 4 section 1 of the atomic law (from 1 – 17). There is clear and distinct division of competences between authorities without duplication of competences.<br><br>Director of a district mining office and the State Regional Sanitary Inspectors are competent for receiving notifications regarding activities that involve exposure to natural ionizing radiation in workplaces (Article 4 section 1a.) Regional Mining Authority –receives notifications regarding activities that involve exposure to natural ionizing radiation in workplaces subject to supervision by mining supervisory authorities i.e. exposure-related activities involving:<br>(1) - extraction of crude petroleum and natural gas,<br>(2) - extraction of metal ores, with the exception of uranium ores,<br>(15) - work in workplaces, in which, despite the action taken in accordance with the principle of optimisation, the indoor radon concentration inside these workplaces exceeds the reference level referred to in Article 23b (to some workplaces supervised by the mining authorities),<br>(16) - work in underground workplaces, in which, despite the action taken in accordance with the principle of optimisation, the level of potential alpha energy concentration of short-lived decay products of radon in those workplaces indicated the possibility of a |

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| | | | | | worker being exposed to an effective dose exceeding 1 mSv (millisievert) a year. State Regional Sanitary Inspectorate receives notifications regarding activities that involve exposure to natural ionizing radiation in workplaces, not subject to supervision by mining supervisory authorities. As a result in accordance with article 63 of the Atomic Law Act the supervision and control of the exposure-related activities is exercised by NRIs, State Regional Sanitary Inspectors and the director of the district mining office within the scope of activity of which the given authority is notified. There is no duplication of the competences. |
| **14** | Germany | Article 32 | Section D - p.19 | Section D contains a description of the national repository Różan (NRWR). For closure of the facility an initial concept for the retrieval of legacy waste and stored LL-LILW has recently been prepared. This concept has not been presented in the national report. Can you give some more information on the retrieval concept? Especially what are the main challenges? | Some of the legacy waste is located in a facility with thick walls made of brick divided into chambers. To retrieve this waste, ZUOP should use equipment to create access through the brick walls and retrieve the waste chamber by chamber. The main challenges will involve extracting the legacy waste from one of the filled facilities, which has a well-like shape and is 5 meters deep.<br>It is assumed that some of the waste will be extracted using machines (remotely), but the need to involve workers in less accessible areas, where access to the waste may be difficult, is not ruled out. These tasks must be carried out within the KSOP area in appropriately prepared temporary facilities, ensuring the safety of workers and the general public. |
| **15** | Germany | Article 22 | Section F - p.43 | According to Atomic Law the financial resources are a condition to hold a license for operating a nuclear facility. The research reactor Maria is named as | The Maria research reactor is funded by:<br>- Ministry of Science,<br>- Ministry of Industry,<br>- incomes from the commercial market. |

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| | | | | an example. How is the research reactor funded and does it include the funding for the management of produced radioactive wastes? | The funding includes the management of produced radioactive waste, but it does not cover the costs of future decommissioning of the reactor. These costs will be covered by state budget.<br><br>Additionally in accordance with article 33, paragraph 1 of the Atomic Law Act, to ensure nuclear safety and radiological protection in the country when using ionizing radiation under normal conditions and during radiological events, the minister responsible for energy resources may grant targeted subsidies for activities related to the decommissioning of research reactors. |
| **16** | Germany | Article 13 | Section H - p.65, Annex 1 | The issue of public involvement and information on any planned facility or activity is guaranteed by law. In Annex 1 e. g. the projects closing NRWR in Różan, site selection near surface repository NSRWR and deep geologic repository DRWR are listed. Public involvement is a challenge for each of these projects. Is there a participation strategy in which formats like transparent information, dialogue and consultations are embedded? Is there continuous support on a national and/or a local level e. g. a citizens' committee? Do the various projects influence each other? | Two of the principles for the radioactive waste and spent nuclear fuel management in Poland are:<br><br>• transparency of the activities and providing the public with information;<br>• ensuring participation of the public in the decision-making process.<br>None of the projects mentioned in the question can be successfully carried out without cooperation with local communities. This cooperation and open dialogue are included in each of the main activities in the management of radioactive waste.<br><br>The principles of informing the public and the participation of the public in the decision-making process concerning the radioactive waste and spent nuclear fuel management are regulated by the following acts of legislation: |

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| | | | | | • Act on Sharing Information on the Environment and its Protection, Public Participation in Environmental Protection, and on Environmental Impact Assessments<br>• Atomic Law Act. |
| **17** | Sweden | Article 32.1.2 | p.10, SFM practices | It is stated that LEU fuel assemblies introduced to the MARIA RR reactor core have been removed before reaching 60 % burnup. What is the rationale to set a limit for 60 % burn-up? | Nuclear regulator set fuel operating limits and such a value has been indicated (to be precise, the limit is 5880 MWh which corresponds to a burnout of about 56% not 60%). The limits set by the PAA results from safety analysis conducted by the operator and the fuel manufacturer. A limit 60% burn-up was recommended by MR HEU fuel manufacturer, it was confirmed by analysis and by actual operation conditions. Value of 60% ensures balance between nuclear material effective utilization and physical condition of barrier FA (fuel assembly). NCBJ plans to conduct fuel tests including measurement of fission product releases from fuel element claddings to determine a safe burnout level associated with a safe level of fission product releases. |
| **18** | Sweden | Article 32.1.4 | p.15, Fig.4 | / To facilitate reading of Polands next report under the Joint Convention it is suggested to include in figure 4 also explanatory text informing what the numbers 1,2, 3, 3a, 8, 8a represent (corresponding to information about the facilities in Rozan, bottom of p.19). | Thank you for suggestion, which we will certainly take it into consideration in preparation Poland's next report under the Joint Convention. |
| **19** | Sweden | Article 32.2.4 | p.23, table 9 | Table 9 indicates in row No. 2 that about 8 900 kg of depleted U is stored at OTWOCK. Could you please explain from which activity this material orgins? | Depleted uranium is used as shielding against radiation in transport and working containers (radiographic devices) and in shields for highly active sources used in medicine. These containers are handed over to the Radioactive Waste Management Plant (ZUOP) as radioactive waste. |

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| **20** | Sweden | Article 32.2.5 | p.23, last para<br>p.51, 1st para<br>p.3 List of acronym | It is stated that the EWA RR building is used as the headquarters of the RWMP, and that additionally the ZUOP's technical infrastructure, such as class I laboratory, class Z laboratory<br>and shredding unit are located in this building.<br>The text could be interpreted such that RWMP and ZUOP are two different organisations. However, the list of acronyms indicates that ZUOP and RWMP is one and the same organisation. Could you please clarify? | RWMP and ZUOP refer to the same organization. We will make sure to clarify this in the text of the next report to avoid any misunderstanding. Thank you for pointing this out. |
| **21** | Sweden | Article 19.2.6 | p.30, Allocation of responsibilities, | It is stated that the Radioactive Waste Management Plant (i.e. ZUOP) is the only legal entity in Poland designated to carry out collection, treatment, conditioning, interim storage and – above all – the activities ensuring the permanent feasibility of radioactive waste and spent nuclear fuel disposal.<br>What arrangements are envisaged in the future if and when nuclear reactors are constructed and operated. Will the mandate of ZUOP be expanded to cover also management and spent fuel and "nuclear" waste from operation and decommissioning of the reactors? | In accordance with Article 48d of the Atomic Law, the head of the organizational unit carrying out activities related to the commissioning, operation, or decommissioning of a nuclear facility in which radioactive waste has been generated, is responsible for transferring this waste for disposal in a solid state. This means that all "nuclear" waste arising from the operation and decommissioning of nuclear reactors must be processed by the nuclear reactor operator and transferred in a solid form to the Radioactive Waste Management Plant (ZUOP), which will serve as the operator of the disposal site. The spent fuel will be stored in a dry storage facility at the nuclear power plant, managed by the plant's operator, and will be transferred to a disposal site once the deep geological repository becomes available. |
| **22** | Sweden | Article 20 | p.37, Transparency in | The report contains extensive information about transparency requirements directed to PAA and how PAA executes this responsibility. In | According to the Atomic Law Act, the Director of ZUOP publishes on the website, no less frequently than every 12 months, information regarding: |

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| | | | regulatory activities | relation to this, are there any corrresponding transparency requirements on other organisations/licensees, e.g. ZUOP? | 1. The impact of activities performed by ZUOP on human health and the environment, as well as the magnitude and isotopic composition of radioactive substance releases into the environment related to these activities (Article 32c(2)),<br>2. The state of nuclear safety and radiation protection of ZUOP's nuclear facilities, their impact on human health and the natural environment, and the magnitude and isotopic composition of radioactive substance releases from nuclear facilities into the environment (Article 35a(2)),<br>3. The state of radiation protection of the National Radioactive Waste Repository in Różan, its impact on human health and the environment, and the magnitude and isotopic composition of radioactive substance releases from the repository into the environment (Article 55c(2)(1)).<br>This document not only fulfills the above-mentioned obligations but also serves as evidence of ZUOP's commitment to minimizing the impact of its activities on human health and the environment, as well as the effectiveness of the procedures and safety measures implemented to ensure the proper level of radiation protection. The document is published on the ZUOP website at the beginning of the year and is prepared based on measurements conducted at ZUOP during the preceding year.<br>Based on research and measurements conducted by ZUOP at specified intervals, reports are submitted to the President of the PAA. The scope and frequency of these reports are defined in permits or legal acts. Based on the collected information and reports, the President |

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| | | | | | of the PAA publishes the results on the website within the scope regulated by legal provisions.<br>Anyone may obtain information in written form from the head of the organizational unit performing activities involving exposure related to the operation or closure of a radioactive waste repository (head of the unit). In a manner analogous to that outlined above, the Atomic Law Act regulates the provision of information to the public regarding nuclear facilities. |
| **23** | Ireland | General | Challenge | Ireland notes Poland's progress in embarking on a nuclear new build programme but has identified the development of a Geological Disposal Facility for spent nuclear fuel as a challenge that must be considered. | Thank you for highlighting this important challenge. We appreciate Ireland's recognition of the need to develop a Geological Disposal Facility for spent nuclear fuel, and we remain fully committed to addressing this issue as part of our continued efforts. |
| **24** | Ireland | Article 20 | Page 38 | Ireland suggests that the extensive provision of information to the public on nuclear safety and radiological protection by the PAA be considered an area of good practice. | Thank you for the thoughtful suggestion. We appreciate your recognition of the public information and outreach activities carried out by the PAA as a good practice. We are committed to transparency and continuous improvement in our efforts to inform and engage the public on nuclear safety and radiological protection. |
| **25** | Ireland | Article 25 | Page 49 | Ireland notes the frequency of exercises for hazard Category II and Category IV, when was an exercise related to a transport accident last performed? | Last exercise related to a transport accident was held on March 28-30, 2023 in Lubuskie Province. The scenario involved an emergency raised from serious collision of spent nuclear fuel transportation. |
| **26** | Ireland | Article 20 | page 35 | How is the PAA addressing the challenges in the recruitment and retention of relevant expertise within their organisation? | In terms of recruitment, PAA undertakes a number of activities related to acquiring highly qualified staff: it conducts promotional and recruitment activities and cooperates with universities. Moreover, when searching for candidates, PAA often uses paid job portals. An additional element is ensuring competitive remuneration in the labor market compared to private companies. |

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| | | | | | Nuclear regulatory employees are encouraged to share their knowledge and experiences. Some of the training is conducted by more experienced employees, and a person with more experience is often appointed to support the development of a newly hired employee - this applies in particular to candidates for nuclear regulatory inspectors, where each candidate is assigned an experienced inspector as an internship supervisor. To support this process, the PAA will launch an electronic knowledge database in 2025, which will enable efficient and effective discovery and use of knowledge contained in field reports and other technical forms relevant to nuclear safety. |
| **27** | Ireland | Article 17 | Page 68 | Is there a timeline in place for the closure of the Rozan Facility and the opening of the NSRWR? | The date specified in the National Plan for the start of operation of the new near-surface radioactive waste repository (NSPOP) is 2033, while the closure of the repository in Różan is planned for 2040. Due to difficulties in finding a location for the NSPOP, new timelines for the commissioning of the new repository and the closure of the Różan repository will be presented in an update to the National Plan. It has been decided that the Rożan repository will remain operational until the new facility is opened. The site selection process for the new near-surface repository is currently underway. |
| **28** | Ireland | Article 32 | Waste Arisings p. 12 | Is there a plan to consolidate and store/dispose of the spent high-activity gamma sources of Soviet origin on users premises in Poland? | Spent high-activity gamma sources are collected from their users and stored at ZUOP facilities. |

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| **29** | Ireland | General | Section K | Ireland notes that the regulator participates in joint initiatives to identify and address licensing challenges for new types of reactors. Are any new nuclear technologies under consideration for deployment in Poland at this time? | Regarding large nuclear power plants, Poland prepares for the construction of AP-1000 reactors. PEJ, the company responsible for the construction of the nuclear power plant, has already obtained an environmental decision for the selected site and is now preparing to submit an application to the PAA for a nuclear power plant construction license.<br>In case of SMR – currently (January 2025), Orlen Synthos Green Energy, which is developing the BWRX-300 reactor technology in Poland, is the most advanced in terms of work on site selection and preparation of an application for a nuclear power plant construction license. As various investors are also considering the construction of Nuward and Rolls-Royce SMR reactors in Poland, PAA is also participating in the Joint Early Review project of the Nuward reactor and the observation of the GDA process of the Rolls-Royce SMR, which is taking place in the UK. |
| **30** | Ireland | General | General comment | Ireland thanks Poland for its comprehensive national report. | Thank you for the kind words and for acknowledging the efforts put into Poland's national report. We greatly appreciate your recognition of the comprehensiveness of the document. It encourages us to continue our commitment to transparency and cooperation in the field of spent fuel and radioactive waste management. |
| **31** | Russian Federation | Article 10 | Section F, p. 63 | Have you got any plans for reprocessing of spent fuel projects? | There are no such plans at present. |
| **32** | Russian Federation | Article 20 | p. 36 | Are there any considered strategies or plans in case of human resource issues? | Yes |
| **33** | Indonesia | Article 32 | Section B | Storage of radium sources in brass containers were deemed unsafe and this method is no longer used. What is the current method used? What is the | Sources collected in the past were immobilized with glass in the brass containers and then placed in additional storage containers as shown in Fig. 3 of the national report, and are now safely stored at ZUOP |

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| | | | | further treatment of existing waste packages that have been deemed unsuitable? | facilities. The brass containers containing immobilized radium sources are hence secured by safe storage containers. |
| **34** | Indonesia | Article 32 | Section B | As per the Atomic Energy Act (section E) the regulatory body is headed by the president of PAA (National Atomic Energy Agency). While as an executing/promoting agency, it is carried out by an agency licensed by PAA (ZUOP, NCBJ). To what extent are the duties and powers of the President of the PAA in the implementation of nuclear power in Poland? As a regulator and supervisor only or also implementer (i.e. installation and mining operations)? | The scope of activities of the PAA's President includes the tasks that involve ensuring nuclear safety and radiation protection in the country, i.e. exercising regulatory control and supervision of the activities leading to actual or potential ionising radiation exposure of people and the environment. As such, the duties and powers of the PAA's President do not include the implementation of nuclear power in the country in ways that are not strictly related to regulatory and supervisory activities. |
| **35** | Indonesia | Article 32 | Section B | Duties and authorities for waste management and waste generators are clear. What if there is a case when the waste/radioactive material is not known to have ownership (orphan source/ MORC)? who is responsible for decontamination, recovery and waste management? | If abandoned radioactive substance has been found, including an orphan source, then the actions aimed at the elimination of the hazard and the radiation emergency consequences are directed by the voivode of the region where such event has happened, in cooperation with the State Voivodship Sanitary Inspector, implementing appropriate intervention measures established in the voivodship emergency plan (Article 86 of Atomic Law Act). In such event, the PAA's President performs activities to identify nuclear materials, sources, radioactive waste and other radioactive substances of illicit or unknown origin, and the receipt, transport, storage and disposal of such materials, sources, waste and substances is carried out by the Radioactive Waste Management Plant (Article 86c of Atomic Law Act). |
| **36** | Indonesia | Article 32 | Section A | The first research reactor "EWA" (pool type) 10 MWt (first criticality date | Currently, the reactor facility (technology hall) houses radioisotope laboratories and a shredding installation; |

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| | | | | 1958/06/14), used for isotopes production and physical experiments in horizontal channels, was shut down and the fuel was removed in 1995. The decommissioning of reactor, which started in 1997, reached the status referred to as “end of phase two” in 2002. This means that nuclear fuel and all irradiated structures and components, the activity of which could have been hazardous from the perspective of radiological protection, have been removed from the reactor.<br>What is the end state for the decommissioning of EWA reactor? Will it be a greenfield or intended to be other function (museum, etc)? | therefore, decommissioning the reactor to a so-called greenfield state is unjustified. |
| **37** | Indonesia | Article 29 | Section A | On page 7, sub-chapter iii. National Radioactive Waste Repository (NRWR)-located in Różan it says that “The NRWR has been in operation since 1961, and it is the only facility of its kind in Poland.”<br>How is the NRWR accommodate low to medium activity/ short half-life waste with its existing capacity?<br>Is there any plan to build a new waste storage facility? What is the particular reason for that? | The current storage capacity of the facilities at the National Radioactive Waste Repository (NRWR) allows for the disposal of LILW-SL (low- and intermediate-level short-lived waste) for another 10 years or more. Due to the implementation of Poland's nuclear energy program, efforts are underway to prepare for the construction of a new repository, as outlined in the tasks of the National Plan. |
| **38** | Netherlands, Kingdom of the | Article 19 | Section E | Could you clarify what PAA means and spell it out fully? Could you also clarify the responsibilities of the nuclear | PAA is the abbreviation of Państwowa Agencja Atomistyki, which in english is translated as National Atomic Energy Agency. The National Atomic Energy Agency (PAA) is the nuclear regulatory body. |

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| | | | | regulatory body vis-à-vis the National Atomic Energy Agency? | |
| **39** | Netherlands, Kingdom of the | Article 32 | Section B | Has Poland requested a follow up for the ARTEMIS mission of 2017? Or has the follow up been addressed during the IRRS-mission of 2023? | Poland has not requested a follow up for the ARTEMIS mission from 2017. As it was discussed during the IRRS mission in 2023, Poland would like to send in 2025 request to the IAEA to organize new ARTEMIS mission. |
| **40** | Netherlands, Kingdom of the | Article 20 | Section E | Could you elaborate on what measures have been taken to address the IRRS-recommendation in 2023 that "the Government should review the governmental and legal framework to ensure that the President of the PAA is effectively independent in safety related decision making and has functional separation from entities having responsibilities or interests that could unduly influence decision making"? | Nuclear energy matters have been transferred from the Ministry of Climate and Environment to the newly created Ministry of Industry, and therefore minister responsible for energy matters no longer supervises PAA President. |
| **41** | Netherlands, Kingdom of the | Article 24.3 | Section F | Article 24(3) states 'Each Contracting Party shall take appropriate steps to ensure that during the operating lifetime of a regulated nuclear facility, in the event that an unplanned or uncontrolled release of radioactive materials into the environment occurs, appropriate corrective measures are implemented to control the release and mitigate its effects'. How are 'appropriate corrective measures are implemented' part of article 24(3)? From the text under article 24, it is clear that monitoring systems are in place; but, in the event of an unplanned/uncontrolled release of | In the case of ZUOP nuclear facilities, the probability of releasing radioactive materials into the atmosphere is extremely low. The EWA research reactor, currently undergoing decommissioning, and the spent nuclear fuel storage facilities do not contain nuclear fuel. All irradiated structures and components from the reactor that could pose a threat in terms of nuclear safety and radiation protection have been removed. The procedure for responding to an emergency is described in an internal document—the facility's emergency response plan. ZUOP continuously monitors and identifies radiation hazards and situations that could lead to such hazards. This is achieved using dosimetric systems supported by telemetry systems that assist in |

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| | | | | radioactive materials, what corrective measures are implemented to control the release and mitigate its effects? | detecting and identifying radiation hazards (e.g., fire alarm systems, access control systems, CCTV, etc.).<br>In the event of a radiological incident at ZUOP, the relevant facility emergency response plans are implemented. Annex 4 to the Regulation of the Council of Ministers of August 9, 2022, on the scope of the environmental radiation monitoring program developed and implemented by organizational units classified in Category I or II hazard levels, specifies the scope of environmental radiation monitoring in the event of a radiological incident. The measurements include:<br>• Measurement of the ambient dose equivalent rate of ionizing radiation H*(10) and gamma radiation spectrum measurements—results recorded with a higher frequency than under normal conditions,<br>• Neutron radiation dose measurements,<br>• Identification and measurement of the radioactive concentration of gamma-emitting radionuclides present in atmospheric aerosol samples,<br>• Measurement of the radioactive concentration of HTO in water vapor—performed with greater frequency than under normal conditions,<br>• Measurement of the radioactive concentration of Cs-137, Cs-134, Sr-90, Pu-238, Pu-239+240, HTO in soil moisture, as well as C-14, U-238, U-235, U-234 in soil. Additionally, identification and determination of the radioactive concentration of other gamma-emitting radionuclides present in samples from locations on the ZUOP site where mobile radiometric measurements of the ambient dose equivalent rate (H*(10)) or gamma radiation spectrometry have identified the highest levels of artificial radionuclide contamination on the ground. |

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| | | | | | In case of the MARIA research reactor this issue is regulated by the Regulation of the Council of Ministers on the types of intervention measures introduced in the outer zone and the operational values of intervention levels constituting the basis for the introduction of these measures in the outer zone (Journal of Laws of 2020, item 2247). |
| **42** | Netherlands, Kingdom of the | Article 32.2.2 | and Article 32.1.2, Section D and B | Spent fuel assemblies (SFAs) are currently stored in the technological pool of the MARIA research reactor. When are the first SFAs expected to be removed from the pool and how are they expected to be processed and stored? | NCBJ plans that SFA processing will involve placing in stainless steel capsules filled with helium to reduce corrosion. The storage pool has enough space to store the fuel for the next 20 years. NCBJ does not plan to completely fill the spent fuel pool. The first SFAs are expected to be removed from the pool in 2030. By that time, NCBJ will be ready to transport bare or encapsulated fuel in accordance with ZUOP requirements. The ZUOP has 2 wet storage facilities where fuel can be stored. They are expected to be processed and stored in accordance with the Regulation of the Council of Ministers on Radioactive Waste and Spent Nuclear Fuel (Journal of Laws of 2022, item 1320) by ZUOP. |
| **43** | Netherlands, Kingdom of the | Article 32.1.4 | Section B | According to the text under article 32(iv), the Radioactive Waste Management Plant (ZUOP) is responsible for collection, segregation, treatment, conditioning and storage/final disposal of all radioactive waste arising in Poland. What waste acceptance system does ZUOP utilize for the acceptance and management of radioactive waste? And does this waste acceptance system take interdependencies between waste generation and management steps (e.g. | Waste generators collect, segregate and store radioactive waste in a manner suitable for further transport and processing. Radioactive waste collected by ZUOP are generally unconditioned. It is only segregated and stored in accordance with legal requirements. Waste collected by ZUOP from producers is verified in accordance with procedures outlined in the integrated management system. At subsequent stages of waste handling at ZUOP, the waste is verified by an independent ZUOP unit that does not participate in the further stages of radioactive waste management. After verification, waste is directed to the appropriate |

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| | | | | collection, treatment, conditioning, interim storage) into account? | processing method. Each processing method has its own set of acceptance criteria for waste to be processed. |
| **44** | Netherlands, Kingdom of the | Article 32.1.4 | Section B | ZUOP owns three systems for liquid radioactive waste volume reduction. Currently, two of them are in operation: evaporation method and the reverse osmosis method. However, the third system - volume reduction system with using synthetic inorganic sorbents (BaCO3 and K4[Fe(CN)6]) is maintained to be ready for use if needed. For what specific purpose is the third system utilized that cannot be (efficiently) accomplished with the other two radioactive waste volume reduction systems? | The method is maintained for emergency situations, e.g., in the case of the generation of large volumes of low-activity wastewater with parameters preventing treatment by other methods, such as due to salinity levels (dry residue) exceeding the threshold concentrations permissible for the evaporative and reverse osmosis methods. Since the method was withdrawn from technological operations, there has been no need to use it. Part of the existing infrastructure (chemical reactor tank, pumps, transfer pipelines) is used for the short-term storage of liquid waste awaiting processing. |
| **45** | Belgium | Article 20 | E, p.36 | Has Poland a plan B if they can't hire enough staff to fulfill their tasks? | If it is not possible to employ an appropriate number of employees to perform regulatory tasks, e.g. related to licensing, it is possible to use the support of external expert units - authorized by the President of the PAA (the PAA must approve the units that may provide technical support). Currently, PAA can benefit from the support of over 10 domestic and international TSO units. |
| **46** | Belgium | Article 32 | B, p.9 | Is the legislation about spent fuel sufficiently built for nuclear expansion? | The legislation regarding the spent fuel aspects covers in detail the responsibilities related to the spent fuel management, including the physical protection, the funding aspects and the amount of the contribution to cover the costs of final handling of spent fuel and radioactive waste for the organizational units that have received the license for operation of nuclear power |

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| **47** | Switzerland | Article 25 | Section F, pages 47-49 | What feedback has there been on the changes made to emergency plans as a result of the amendment to the law? | After carrying out analyses operator of the radioactive waste processing facility and the near-surface repository of radioactive waste has sent feedback that in the case of a radiation emergency at the facility, there will be no radioactive releases resulting in the activation of the off-site emergency plan. |
| **48** | Switzerland | Article 32 | Section B, page 12 | The report states that “Most of the spent high-activity gamma sources are returned to the supplier abroad, but a number of them, mainly of Soviet origin, still remain on the user’s premises, or are stored at ZUOP storage facilities in Otwock.” Is there a plan to return the remaining high-activity gamma sources to the supplier as well? | Spent high-activity gamma sources transferred by users are stored at ZUOP facilities. Currently, there are no plans to return them to the producers. |
| **49** | Switzerland | Article 13 | Section H, Page 65 | The report provides information about the possibility of public involvement within the siting of facilities. It would be interesting to know more about the experiences with public involvement and if there would be public interest. | There is no opportunity to make significant progress in the siting of facilities without the cooperation of local communities. This cooperation and ongoing dialogue are essential components of all activities related to the management of radioactive waste. Poland has |

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| | | | | | recognized that one of the key challenges in public perception of radioactive waste management is a lack of knowledge. To address this, we have decided to provide our society with extensive information about radioactive waste management and its associated facilities. As part of our broader campaign on nuclear energy, we also launched a dedicated initiative focused specifically on radioactive waste management. To engage the public, we utilized social media, held meetings, organized open days at the Różan repository, and published reports and informational materials. |
| **50** | Switzerland | Article 16 | Section H, page 67 | It would be interesting to know how many inspections were taken per year in the National Radioactive Waste Repository in Różan and which procedures they cover. | Between 2021 and 2024, the PAA conducted an average of 3 inspections per year at the National Radioactive Waste Repository in Różan. These inspections covered topics such as the technical condition of buildings, the transport of radioactive waste to the repository, radiological protection, the integrated management system or radioactive waste records. |
| **51** | Ukraine | Article 32.1.4 | Section B | What are the requirements for containers used to transport liquid radioactive waste, taking into account chemical properties of liquid (chemical activity, toxicity), radionuclide components? | Liquid waste mainly originates from the Maria Reactor (transported via pipeline) and the Radioactive Waste Management Plant (ZUOP).<br><br>Very small amounts (from research and medicine), on the order of a few liters with very low activity levels, are transported as excepted packages in containers meeting ADR requirements. The requirements for containers used for the transport of liquid radioactive waste are specified in international regulations, to which Poland is a signatory, concerning the transport of hazardous materials, including: |

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| | | | | | • Annex A to the Agreement on the International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws of 2023, item 891),<br>• Regulations for the International Carriage of Dangerous Goods by Rail (RID), Annex C to the Convention concerning International Carriage by Rail (COTIF) (Journal of Laws of 2023, item 789),<br>• European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) (Journal of Laws of 2023, item 1167),<br>• ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air,<br>• The International Maritime Dangerous Goods (IMDG) Code.<br><br>These regulations outline the requirements for the construction of containers, the scope of testing that containers must undergo, and the principles for the approval of shipments of radioactive materials, including liquid radioactive waste. |
| **52** | Ukraine | Article 32.1.4 | Section B | Are there practices in your country to manage liquid radioactive waste containing tritium? If so, what technologies are used for this purpose? | ZUOP does not have dedicated technologies for this type of waste. Liquid waste containing tritium is processed in the evaporative installation (similarly to other liquid waste). |
| **53** | Ukraine | Article 28 | Section J | What practices are in place for the management of “orphan sources” in Poland? | In cases involving orphan sources of unknown origin, such as those resulting from illegal trade, the activities of an entity that became insolvent after ceasing operations, or environmental contamination by an unknown perpetrator, the responsibility for managing |

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| | | | | | these materials falls to the State. The Radioactive Waste Management Plant is tasked with collecting, transporting, processing, storing, or disposing of such radioactive waste or substances, with the costs for these services covered by the national budget (Article 119a of the Atomic Law Act). |
| **54** | Greece | Article 9 | p. 58 and Section J, p. 72 | Have waste acceptance criterial been established for accepting waste and DSRS at the NRWR for storage and final management? | Requirements for the disposal and storage of radioactive waste are described in national regulations, procedures and NRWR instructions. The main criterion is the activity of the source. LIL gamma sources are stored at the National Radioactive Waste Repository (KSOP). |
| **55** | Greece | Article 18 | Section E, p. 29-30 | Do inspections include environmental assessments of radioactive releases from the Research Reactors and the institutional facilities producing waste? If yes, how are such inspections - assessments performed? | Yes, inspections do include environmental assessments of radioactive releases from research reactors and institutional facilities producing waste. Inspectors monitor the status of radiological protection at the research reactor and at facilities where waste is generated, ensuring compliance with safety standards and regulations. These inspections involve evaluating the protection measures in place to prevent any harmful environmental impact from radioactive releases, the review of real-time data recorded by the NetView program regarding the activity of releases through the stack to the atmosphere, including iodine, aerosols, gases, and activity in the secondary circuit water. The recorded data should be compared with the alarm thresholds specified in the Shift Change Log of the Dosimetrist. Additionally, data regarding the releases are included in the quarterly reports submitted to the PAA. |
| **56** | Greece | Article 32.2.2 | Section D, p. 23 | Do facility's decommissioning programs/arrangements consider contaminated / activated structural | The 1996 decommissioning plan for the EWA reactor includes the full scope of decommissioning, including various dismantling technologies, anticipated |

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| | | | | materials? Has the decommissioning of other institutions (e.g. isotope production facilities) considered in the design phase of the NRWR? | techniques for decontaminating structural components, and the management of radioactive waste.<br>The National Radioactive Waste Repository (NRWR) was established in 1961, at a time when nuclear facility decommissioning programs were not included in Polish legislation. |
| **57** | Greece | Article 32.2.2 | Section D, p. 17-19 | ZUOP owns three systems for liquid radioactive waste volume reduction. Also there are 3 tanks for I-131 waste. Do these tanks accept I-131 waste from hospitals performing iodine therapies? | Due to the short half-life of the iodine-131 isotope, which is 8 days, hospitals do not transfer this isotope to ZUOP. Hospitals have established internal procedures for handling such waste. |
| **58** | Greece | Article 1 | Section B, p. 10 | The spent fuel management policy does not mention explicitly the return of the spent fuel to the country of origin (Russian Federation), although SF from EWA and MARIA RR has been shipped back to Russian Federation in the past. Does spent fuel disposal in the Polish territory is the only final management option? What are the time frames for the establishment of the SF disposal facility? | In line with the provisions of Council Directive 2011/70/Euratom, Poland's preferred approach for managing spent fuel is its disposal within the country. There is sufficient time for the construction of a deep geological repository (DGR), which will be needed approximately fifty years after the start of operation of the first nuclear power plant. |
| **59** | Greece | General | Introduction, p.7 | Long lived (LL) waste is awaiting to be placed in a deep geological repository. What is the progress status of the DGR planning and establishment? What is the maximum storage period (years) of LL waste at the Rozan NRWR? | The task of constructing a Deep Geological Repository (DGR) has been included in the National Plan. In the coming years, the procedure for selecting a safe location for the DGR is planned to begin. After the closure of the NRWR, LL waste will be transferred to other ZUOP facilities and stored there until the DGR becomes operational |
| **60** | Belarus | Article 7 | Section G. Safety of Spent Fuel | What measures are planned to be taken to ensure safety when managing spent | Poland has many years of experience in managing spent nuclear fuel from the MARIA reactor. Currently, we are preparing two wet storage facilities in Otwock-Świerk to |

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| | | | Management, p. 55 | nuclear fuel from the MARIA research reactor? | safely house the spent nuclear fuel from MARIA until it can be transferred to the deep geological repository (DGR). |
| **61** | Belarus | Article 24 | Section F. Other General Safety Provisions, p. 46 | What are the sizes of radiation monitoring zones around the radioactive waste processing facility and the near-surface repository of radioactive waste? How are these zones determined? | The size of the radiation monitoring zone for ZUOP has been determined based on the "Program for Monitoring Releases of Radioactive Substances into the Environment and Environmental Monitoring around the Ewa Reactor and Storage Facilities 19 and 19A." The size of these zones does not exceed the area of the nuclear center in Świerk.<br>The size of the radiation monitoring zone around the repository and the scope of measurements were determined based on the "Hydrogeological and Environmental Radiological Monitoring Program at the National Radioactive Waste Repository (KSOP) in Różan and its Surroundings,"<br>Measurements of radioactive substances include, among others, water from the Narew River, soil, and grass, as well as measurements of ionizing radiation dose rates around the repository (approximately 10 meters from the fence). Monitoring zones extend up to several hundred meters.<br><br>Radiation monitoring around radioactive waste processing facility is conducted in an area about three kilometer from the facility and in the nearby town Otwock, about 6 kilometers from the facility. The location of measurement points have been determined in the fixed places to compare data from previous years. |
| **62** | Belarus | Article 32 | Section D. Inventories | How often is the inventory of radioactive waste implemented at radioactive waste | Director of ZUOP conducts, at least once a year, an inspection to verify the compliance of the radioactive waste with the information provided in the inventory |

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| | | | and Lists, p. 20 | management facilities, and how are attributive characteristics verified? | card. During such an inspection, information characterizing radioactive waste or spent nuclear fuel and the packages containing them is checked, including radiological measurements of the packages with radioactive waste or spent nuclear fuel. Information regarding actions taken in the management of radioactive waste or spent nuclear fuel is verified, as well as the results of the inspection verifying the compliance of the radioactive waste status with the information provided in the inventory card. |
| **63** | Belarus | Article 32 | Section B. Policies and Practices, p. 11 | How long can a radioactive waste producer accumulate it prior to transferring it to a radioactive waste processing facility? What approaches to minimizing radioactive waste are implemented by radioactive waste producers and radioactive waste management facilities? | The producers of the waste are required to define the period of storing the waste at their premises in the application for the storage of radioactive waste. Due to the costs of disposing of radioactive waste at ZUOP, producers try to minimize its volume (the disposal cost at ZUOP depends, among other things, on the mass/volume of the received radioactive waste). |
| **64** | Belarus | Article 32 | Section B. Policies and Practices, p. 10 | Is the introduction of new facilities for spent nuclear fuel and radioactive waste management being considered in view of the planned construction of a new NPP? If yes, which ones? | Yes, We have a plans to constructed, close to the site of NPP, the dry repository for spent fuel from NPP.<br><br>We are also preparing for construction of new near surface repository for law and medium radioactive waste. |
| **65** | Belarus | Article 32 | Section B. Policies and Practices, p. 9-10 | Have the IAEA ARTEMIS mission recommendations, included in the updated National Plan for the Management of Radioactive Waste and Spent Nuclear Fuel, been implemented at present? | The IAEA ARTEMIS mission recommendations are included in the updated National Plan for the Management of Radioactive Waste and Spent Nuclear Fuel. They are in the implementation. |
| **66** | Belarus | Article 32 | Section A. Introduction, p. 6 | How are large-sized solid radioactive waste (structural elements) generated as a result of the EWA reactor | Currently, no new radioactive waste is being generated in connection with the decommissioning of the EWA research reactor. All structural elements located in the |

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| | | | | decommissioning and operation of the MARIA reactor fragmented and in what form are they stored?<br>How are spent high-level gamma radiation sources managed? | spent nuclear fuel storage facility (facility no 19) originate from past dismantling activities. Some elements have been subjected to fragmentation, while others have been disposed of in their entirety. In the case of the MARIA reactor, solid structural elements are being processed on an ongoing basis (in accordance with the procedures in force at ZUOP) and transported to the radioactive waste repository in Różan.<br>The spent high-level gamma radiation sources are stored in biological shielding. |
| **67** | Belarus | Article 12 | Annex I, p.80 | How do dangerous weather events such as Storm Boris affect the safety of the National Radioactive Waste Repository in Różan? What actions are taken by responsible persons to assess and minimize possible negative consequences of the natural hazards that have occurred? | There was no impact on safety of NRWR from extreme weather conditions. Such events are analyzed in SAR for NRWR. During adverse weather conditions (e.g., storms, strong winds), all activities related to the movement of radioactive waste are suspended. |
| **68** | Belarus | Article 12 | Annex I, p.80 | Has the method of closing the National Radioactive Waste Repository in Różan been chosen? When is it planned to develop the concept of the Repository closure? | According to National Plan statement the method of closing the National Radioactive Waste Repository in Różan will be prepared in 2030-2032. |
| **69** | Belarus | Article 12 | Annex I, p.80 | Please, provide information on the current state of radiation safety of the National Radioactive Waste Repository in Różan and the forecast of the radiation situation in the repository and in the surrounding area for the near, medium and long term. | The results of environmental and contamination measurements, conducted as part of monitoring and radiological protection at the National Radioactive Waste Repository in Różan and its surroundings, are consistent with levels recorded in other parts of Poland. These results indicate that there is no radiation threat to personnel or the surrounding area. Based on both current and historical measurements, it is expected that |

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| | | | | | these levels will remain stable in the near and distant future. |
| **70** | Belarus | Article 12 | Annex I, p.80 | Is it planned to conduct a comprehensive engineering and radiation survey of the National Radioactive Waste Repository in Różan and when? | A comprehensive engineering and radiation survey was conducted between 2019-2024 for the update of NRWR Operational Safety Report. Furthermore, in 2029, a periodic safety assessment of the radioactive waste repository will be conducted. |
| **71** | Bulgaria | Article 32 | Page 10, Page 17, Page 18 | Could you give us some information concerning the capacity of the MARIA research reactor technological pool (in Świerk) for storing spent nuclear fuel ? Could you specify for what period of time the capacity of that facility is sufficient to store spent fuel assemblies from the MARIA research reactor ? / Could you give us some information concerning the capacity of the MARIA research reactor technological pool (in Świerk) for storing spent nuclear fuel ? Could you specify for what period of time the capacity of that facility is sufficient to store spent fuel assemblies from the MARIA research reactor ? | The MARIA RR technology pool is capable of holding up to 450 SFA with operational access to them. It currently holds 156 SFA. Depending on the MARIA RR usage (campaigns, power levels, maintenance outages, etc.) it is possible to collect SFA removed from the core over the next 20 years of operation. |
| **72** | Hungary | Article 19.3 | Section E | In carrying out the review, assessment and verification tasks, the PAA may use of external consultant organizations and experts. What are the legal requirements for external consultants and experts (e.g. professional qualifications and experience, membership of a chamber of commerce, academic degree, ...)? How are they selected in practice? | The requirements for external expert are outlined in Article 66a of the Atomic Law Act. In accordance with this article, once the necessary conditions are met, a laboratory or expert organization may obtain authorization from the President of the PAA.<br>The requirements are as follows:<br>1. The laboratory or expert organization must not be: a) Designers, manufacturers, suppliers, or installers, or b) Representatives of entities involved in the design, construction, or |

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| | | | | | operation of a nuclear power plant, or c) Financially or organizationally linked to entities mentioned above<br>2. The laboratory or expert organization must have the necessary personnel and appropriate equipment to properly perform the technical tasks related to the requested scope of authorization;<br>3. The employees designated to carry out tasks related to the requested scope of authorization must have the required knowledge and experience in the relevant field;<br>4. The laboratory or expert organization must guarantee the impartial execution of the tasks related to the requested scope of authorization.<br>5. Laboratories or expert organizations wishing to obtain authorization from the President of the Agency must submit an application for authorization in the specified scope, accompanied by documents confirming that all the requirements are met. |
| **73** | Hungary | Article 19.3 | Section E | The Polish Penal Code provides that anyone who possesses, uses, produces, reprocesses, collects or trades radioactive materials or ionising sources without permission or violation of the conditions laid down is liable to imprisonment for a period of six months to eight years. What legal action will the authority take if the licence holder does not have a valid licence? After all, there are several | Different types of enforcement actions may be taken. If any hazard to nuclear safety and radiation protection has been identified during the inspection, then, to remove that hazard, nuclear regulatory authorities shall issue orders or prohibitions that will ensure the removal of such a hazard.<br>The head of the organizational entity, who without the required license shall be subject to a fine (art.123), imposed by the President of the PAA. Operation without a valid license does not constitute the crime by itself. Additional circumstance must take place in order |

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| | | | | administrative steps between operating without a licence and imprisonment. | to constitute the crime in accordance with Polish Penal Code e.g. such operation may pose a threat to the life or health of many people or to property in large-scale. |
| **74** | Hungary | Article 20.2 | Section E | On the basis of this analysis the plans and costs of the staff development were identified till the end of 2014. According to those estimates the number of jobs in PAA should be increased by 39 new positions. How many of the 39 employees recruited in 2015 are still working for the Authority? In which areas is the Authority understaffed? | Of the employees hired until 2015, approximately 15 remained employed until 2024. At the same time, new employees were hired and trained to replace employees who changed their place of employment. The Polish nuclear energy program, which was updated in 2020, assumes that by 2033 PAA will have 110 experts, including previously hired employees. Currently, the PAA employs all the necessary staff to conduct regulatory assessments, but in 2025 and in the coming years it intends to additionally employ candidates for nuclear regulatory inspectors (profile mainly: energy, nuclear eng., or mechanical eng.) and technical assessment workers (material eng., structural eng., and nuclear eng.). |
| **75** | Saudi Arabia | General | K | What are the proposed challenges, the proposed good practices and Area of good Performance? because according to the guidelines regarding the form and structure of national reports (INFCIRC/604/Rev.5), the proposed challenges, the proposed good practices and Area of good Performance … etc. are recommended to be stated in section K | Currently, the main challenges are connected with all the activities aimed at the site selection process for the new near surface repository, especially regarding the public involvement and social acceptance, and maintaining an adequate level of human resources by PAA in the face of the new build program. The proposed good practice is participation of the representatives of PAA in joint initiatives with other regulatory authorities to identify and address licensing challenges for new types of reactors, as well as conducting pre-licensing dialogue with potential investors. The proposed area of good performance is conducting periodic safety reviews for two spent fuel storages operated by ZUOP, for |

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| | | | | | which the reports were approved by PAA's President in 2023. |
| **76** | United States of America | General | Section D, p. 19 | The National Report indicates that Low Level Waste and Intermediate Level Waste is managed by the Radioactive Waste Management Plant (ZUOP) and is stored or disposed at Rozan. Only waste with short life isotopes are disposed in the National Radioactive Waste Repository disposal facility. Yet it seems that the plans are to extract the waste upon closure of the NRWR and then dispose them in a new LILW storage or disposal facility. Could Poland please clarify the future plans? | In 2004, a Report on the safety of the closure of the Różan Repository was created, in which various closure options for the KSOP were analyzed, along with the activities that would need to be carried out to close it and ensure long-term safety. The report analyzed different closure variants for the KSOP (including combinations of options), covering both the removal of all waste and attempts to restore the area to its original state.<br>To select the most optimal solution, the "Best Possible Option" (BPO) method was used. This is a schematic evaluation of factors such as: health and safety of employees and the public, environmental hazards, technological possibilities, socio-economic and financial issues.<br>The concept involving the removal and/or transfer of waste to a new repository entails the extraction of waste, dosimetric measurements, and re-characterization, followed by segregation and, depending on the obtained inventory characteristics, possible processing for storage or disposal in compliance with current requirements.<br>It is assumed that some of the waste will be extracted using machines (remotely), but the need to involve workers in less accessible areas, where access to the waste may be difficult, is not ruled out. These tasks must be carried out within the KSOP area in appropriately prepared temporary facilities, ensuring the safety of workers and the general public. |

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| **77** | United States of America | General | Section D, p. 23 | The EWA Research Reactor is the only facility that is being decommissioned. It has undergone stages 1 and 2. Currently the building is being used as the Radioactive Waste Management Plant headquarters and contains ZUOP laboratories. How will the current use affect the completion of Stage 3 of decommissioning, that includes unrestricted use? | No final decisions have been made regarding decommissioning of the EWA reactor.<br>If the planned decommissioning works affect the structure of the office building, which is connected to the reactor hall, this could result in additional costs and workload. Therefore, the current use of the building as the headquarters of the Radioactive Waste Management Plant (ZUOP) and its laboratories may influence the planning and implementation of Stage 3, depending on the requirements related to demolition and any potential structural constraints. |