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INTEGRATED REGULATORY REVIEW SERVICE (IRRS)

FOLLOW-UP MISSION

TO

THE REPUBLIC OF POLAND

Warsaw, Poland

16 to 23 June 2017

DEPARTMENT OF NUCLEAR SAFETY AND SECURITY

IAEA Integrated Regulatory Review Service IRRS

PAA PAŃSTWOWA AGENCJA ATOMISTYKI

Integrated
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REPORT OF THE
INTEGRATED REGULATORY REVIEW SERVICE (IRRS) FOLLOW-UP MISSION
TO
THE REPUBLIC OF POLAND

INTEGRATED REGULATORY REVIEW SERVICE (IRRS) MISSION

FOLLOW-UP REPORT

TO

POLAND

Mission dates: *16 to 23 June 2017*
Regulatory body *Państwowa Agencja Atomistyki (PAA)*
Location: *Warsaw, Poland*
Organized by: *IAEA*

IRRS REVIEW TEAM

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IAEA-2017

The number of recommendations, suggestions and good practices is in no way a measure of the status of the national infrastructure for nuclear and radiation safety. Comparisons of such numbers between IRRS reports from different countries should not be attempted.

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EXECUTIVE SUMMARY

At the request of the Government of Poland, an international team of senior safety experts met with representatives of the host country (Poland) from 16 to 23 June 2017 to conduct an Integrated Regulatory Review Service (IRRS) follow-up mission. The purpose of the IRRS follow-up mission was to review Poland's progress against the recommendations and suggestions identified in the initial IRRS mission (which occurred on 15 to 25 April 2013). The mission took place at the Państwowa Agencja Atomistyki (PAA) Headquarters in Warsaw.

The IRRS review team consisted of five senior regulatory experts from IAEA Member States, two IAEA staff members, one IAEA administrative assistant, and one observer from the European Commission. In addition, a representative from IAEA's Technical Cooperation Department attended a portion of the mission.

PAA is the national nuclear regulator for Poland, and is responsible for all aspects of regulating nuclear safety and security and radiation safety (with the exceptions of machine-produced radiation used in diagnostic medicine and radiation protection of patients).

In 2009, Poland approved a National Energy Policy, which included the introduction of nuclear power. The Polish Nuclear Power Program (PNPP) was adopted in 2014 and provides the basic structure and activities to be undertaken in order to implement nuclear power in Poland. At the time of the follow-up mission, updates to the PNPP were being developed for 2017 issuance. Current estimates are for the first nuclear power plant to come on-line by 2028-2029. Consequently, PAA is in a growth process to expand its scope and programs to address the regulation of nuclear power plant safety, while maintaining its focus on the safety of current activities.

The IRRS team carried out a review of the progress made on each recommendation and suggestion that is documented in the 2013 IRRS mission report. These recommendations and suggestions cover the following areas: responsibilities and functions of the government; the global nuclear safety regime; responsibilities and functions of the regulatory body; the management system of the regulatory body; the activities of the regulatory body, including authorization, review and assessment, inspection, and the development and content of regulations and guides; emergency preparedness and response; and the regulatory infrastructure being developed to support the introduction of a nuclear power programme. To assess progress, the IRRS team conducted a series of interviews and discussions with PAA staff and reviewed the advance reference material provided by PAA. In addition, the IRRS team met with representatives from the Ministry of Energy, the Chief Sanitary Inspectorate, and the Radioactive Waste Management Plant.

Overall, the IRRS review team concluded that Poland, through the PAA, has been responsive to each recommendation and suggestion made in 2013, and continues to place appropriate focus on implementing a framework that provides for effective protection of public health and safety. All 15 recommendations and all 16 suggestions identified in 2013 have been closed. The team offered three new suggestions for PAA consideration, one related to the integrated management system (IMS), one related to emergency planning zones, and one related to clarifying clearance level guidance.

Since 2013, PAA has taken positive steps to:

- Establish strategic objectives and links between objectives and resource planning (staffing and external support strategies);
- Develop PAA's IMS;

- Establish resources for technical support;
- Strengthen internal safety culture;
- Develop international cooperation in the aspects of building competences and gaining experiences from foreign regulators; and
- Increase communication with the public and stakeholders.

Thus, PAA has made significant progress on near-term activities and initiatives, to enhance its ability to plan and execute PAA's mission, while adapting in a timely and effective manner to a dynamic environment (including development of the PNPP and the National Plan on Radioactive Waste and Spent Nuclear Fuel Management). As was the case in 2013, the development of PAA over the next few years will be an on-going challenge for PAA. PAA plans to continue to leverage its efforts to fully implement activities and initiative (such as the IMS), identify new initiatives and processes, and align the agency to reflect regulatory activities related to the PNPP. The IRRS team believes that sustained commitment by the PAA staff towards these actions will ensure PAA's ability to continue to deliver its mission. The IRRS team concluded that PAA management and staff appropriately recognize and are committed to such continued focus.

An IAEA press release was issued following the mission.

Throughout the mission, the IRRS team received full cooperation from all parties involved. In particular, PAA staff was very open in the discussions and provided the fullest practicable assistance.

I. INTRODUCTION

At the request of the Government of Poland, an international team of senior safety experts met representatives of the regulatory body of the host country National Atomic Energy Agency of the Republic of Poland (PAA) from 16 June to 23 June 2017 to conduct an Integrated Regulatory Review Service (IRRS) Follow-up mission. The purpose of the follow-up mission is to review the implementation of the recommendations and suggestions given to the Government of Poland during the IRRS Mission in April 2013. The follow-up mission was formally requested by the Government of Poland in December 2015. A preparatory meeting was conducted on 7 March 2017 at the IAEA Headquarters in Vienna to discuss the purpose, objectives and detailed preparations of the review in connection with regulated facilities and activities in Poland and their related safety aspects.

The IRRS review team consisted of five senior regulatory experts from five IAEA Member States, two IAEA staff members and one IAEA administrative assistant. The IRRS review team carried out the review in the areas covered by the main mission in April 2013.

Poland prepared a national follow-up report addressing the findings of the initial mission. The follow-up report and supporting documentation were provided to the IRRS team as advance reference material (ARM) for the mission. During the mission the IRRS team performed a systematic review of all topics by reviewing the advance reference material, additional information, and by conducting interviews with management and staff of PAA.

All through the mission the IRRS team received excellent support and cooperation from PAA.

II. OBJECTIVE AND SCOPE

The purpose of this IRRS follow-up mission was to conduct a review of the implementation of the recommendations and suggestions given to the Government of Poland during the IRRS Mission in April 2013 and to exchange information and experience in the areas covered by the IRRS. The IRRS review scope included all facilities and activities regulated by PAA. The review was carried out by comparison of existing arrangements against the IAEA safety standards.

It is expected that the IRRS mission will facilitate regulatory improvements in Poland and other Member States from the knowledge gained and experiences shared between PAA and IRRS reviewers and through the evaluation of the effectiveness of the PAA regulatory framework for nuclear and radiation safety.

The key objectives of this mission were to enhance the national legal, governmental and regulatory framework for nuclear and radiation safety, and national arrangements for emergency preparedness and response through:

a) providing an opportunity for continuous improvement of the national regulatory body;

b) providing the host country (regulatory body and governmental authorities) with a review of its regulatory issues;

c) providing the host country (regulatory body and governmental authorities) with an objective evaluation of the progress in the development of its regulatory infrastructure with respect to IAEA safety standards;

d) promoting the sharing of experience and exchange of lessons learned among senior regulators;

e) providing key staff in the host country with an opportunity to discuss regulatory practices with IRRS Review Team members who have experience of other regulatory practices in the same field;

f) providing the host country with recommendations and suggestions for improvement;

g) providing other states with information regarding good practices identified in the course of the review;

h) providing reviewers from Member States and IAEA staff with opportunities to observe different approaches to regulatory oversight and to broaden knowledge in their own field (mutual learning process);

i) contributing to the harmonization of regulatory approaches among states;

j) promoting the application of IAEA Safety Requirements; and

k) providing feedback on the use and application IAEA safety standards.

III. BASIS FOR THE REVIEW

A) PREPARATORY WORK AND IAEA REVIEW TEAM

At the request of the Government of Poland, a preparatory meeting for the Integrated Regulatory Review Service (IRRS) was conducted at IAEA Headquarters in Vienna, Austria, on 7 March 2017. The preparatory meeting was carried out by the appointed Team Leader Robert Lewis, Deputy Team Leader Craig Lavender and IAEA representatives, Ms Olga Makarovska and Craig Reiersen.

The IRRS mission preparatory team had discussions regarding regulatory programmes and policy issues with the senior management of PAA represented by Ms Monika Kaczynska, Head of PAA Chairman's Office and Michal Koc Head of International Cooperation and Strategy Unit, President's Office. The discussions resulted in agreement that the regulatory functions covering the following facilities and activities were to be reviewed by the IRRS follow-up mission:

- Research Reactors,
- Waste management (policy and strategy, predisposal and disposal) and waste management facilities;
- Radiation sources facilities and activities;
- Decommissioning;
- Nuclear power embarking;
- Selected policy issues.

Mr Michal Koc made presentations on the national context, the current status of PAA and the progress made by PAA since the initial mission of April 2013.

IAEA staff presented the IRRS principles, process and methodology of conducting a follow-up IRRS mission. This was followed by a discussion on the tentative work plan for the implementation of the follow-up mission in Poland in June 2017.

The proposed IRRS review team composition (senior regulators from Member States to be involved in the review) was discussed and the size of the IRRS review team was tentatively confirmed. Logistics including meeting and work space, counterparts and Liaison Officer identification, lodging and transport arrangements were also addressed.

The PAA Liaison Officer for the preparatory meeting and the IRRS follow-up mission was Mr Michal Koc.

PAA provided the IAEA (and the review team) with the advance reference material for the review in April 2017 and additional materials in May 2017. In preparation for the mission, the IAEA review team members conducted a review of the advance reference material and provided their initial review comments to the IAEA Team Coordinator and Team Leader prior to the follow-up mission.

B) REFERENCES FOR THE REVIEW

The relevant IAEA safety standards and the Code of Conduct on the Safety and Security of Radioactive Sources were used as review criteria. A list of IAEA publications used as the reference for this mission is given in Appendix VII.

C) CONDUCT OF THE REVIEW

An opening IRRS review team meeting was conducted on Thursday 15 June, in Warsaw by the IRRS Team Leader and the IRRS IAEA Team Coordinator to discuss the general overview, the focus areas and specific issues of the mission, to clarify the basis for the review and the background and objectives of the IRRS and to agree on the methodology for the review and the evaluation among all reviewers. They also presented the agenda for the mission.

The Liaison Officer Mr Michal Koc was present at the initial IRRS review team meeting on 15 June 2017 afternoon, in accordance with the IRRS guidelines, and presented logistical arrangements planned for the mission.

The reviewers also reported their first impressions of the advance reference. General approaches for mission conclusions drafting were agreed.

The IRRS entrance meeting was held on Friday 16 June 2017, with the participation of PAA President Mr. Andrzej Przybycin, senior management and staff and Mr Józef Sobolewski, Director of the Department of Nuclear Energy at the Ministry of Energy. Opening remarks were made by the Team Leader Mr Robert Lewis. Mr Michal Koc gave an overview of PAA's activities and PAA's response to the 2013 mission findings.

During the mission, a review was conducted for all the mission scope areas with the objective of reviewing the Government and PAA's response to the recommendations and suggestions identified during the original mission. The review was conducted through meetings, interviews and discussions regarding the national practices and activities.

The IRRS review team performed its activities based on the mission programme given in Appendix II.

The IRRS exit meeting was held on Friday 23 June 2017 where the IRRS Team Leader Mr. Robert Lewis presented the results of the follow-up mission highlighting the main findings. This was followed by the statement by PAA President Andrzej Przybycin in response to the Team Leader's presentation. Closing remarks were made by Olga Makarovska on behalf of the Director of the Division of Radiation, Transport and Waste Safety, Department of Nuclear Safety and Security.

An IAEA press release was issued at the end of the mission.

1. RESPONSIBILITIES AND FUNCTIONS OF THE GOVERNMENT

Note: At the time of the IRRS follow-up mission, the Polish Government was actively pursuing significant amendments to the Atomic Law Act (ALA) to bring it into conformity with EURATOM requirements and to enact several other changes. These planned ALA amendments are directly relevant to the closure of multiple recommendations and suggestions in the 2013 IRRS report. These include R1, R2, R3, R14, R15 and S4.

By June 2017, the ALA amendments had made significant progress. Consultations are complete with interested Government Ministries, offices and agencies, as well as with the public; and the amendments were submitted to the Council of Ministers. In June, the amendments are scheduled to be considered by different committees of Council of Ministers and the Council. When accepted by the Council of Ministers, the draft will be notified to the European Commission for recommendation and submitted to the Parliament. The amendments are expected to be enacted by the Parliament by the end of 2017.

As there appears to be high confidence that the ALA amendments will be enacted in the near future, in formulating the below observations and conclusions, the IRRS team made an assumption that the ALA will pass as drafted.

1.1. NATIONAL POLICY AND STRATEGY FOR SAFETY

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R1	**Recommendation: The government should adopt a single, clear document expressing the policy and strategy for safety.**

Changes since the initial IRRS mission

Recommendation 1: In 2016 the Council of Ministers accepted a report prepared by Ministry of Energy on the implementation of the PNPP 2014-2015, to which PAA contributed. Currently, the Ministry of Energy conducts work on the revision of PNPP. Poland defined a policy and strategy for safety in a document entitled "Principles and strategic directions of activities related to the provision of nuclear safety and radiological protection in Poland", which will be endorsed by the government as an attachment to the revised PNPP. Adoption of the revised PNPP, along with its attachment on policy and strategy, by the Council of Ministers is expected to be completed by the end of 2017. Afterwards, PNPP will be revised every four years.

The draft document covers the following topics:

- safety principles (the fundamental safety objective is mentioned in this part);
- description of the legislative framework on the national and international level;
- description of the current state of nuclear safety and radiological protection; and
- strategic directions of action of all involved public administrations.

ALA amendments have also been prepared dealing with these questions. They identify the responsibilities of the various stakeholders involved (ministries, agencies, etc.) in defining and implementing the strategy.

The scope of the strategic document covers all the items that should be taken account of, according to requirement 1 of GSR Part 1 (Rev. 1). Some of them are described in greater detail in PAA's internal documents like "Action Plan on enhancing safety culture in PAA" or the "Human Resources

Development Program". The purpose of the follow-up mission is to review the implementation of the recommendations and suggestions given to the Government of Poland during the IRRS Mission in April 2013.

Status of the finding in the initial mission

Recommendation 1 is closed on the basis of progress made and confidence in effective completion, as the document on policy and strategy has been prepared and is expected to be endorsed by the Government by the end of 2017.

1.2. ESTABLISHMENT OF A FRAMEWORK FOR SAFETY

There were no findings in this area in the initial IRRS mission.

1.3. ESTABLISHMENT OF A REGULATORY BODY AND ITS INDEPENDENCE

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R2	**Recommendation: The Government should develop procedures and requirements to ensure that removal of persons with executive safety responsibility within PAA is not subject to unwarranted political influence.**

Changes since the initial IRRS mission

Recommendation 2: The ALA amendments introduce additional rules on tenure and dismissal of the PAA President. According to the amendments the President will be appointed by the Prime Minister for a 5-year term and may be reappointed only once. The Amendments contains a closed list of cases in which the President may be dismissed by the Prime Minister. They are as follows:

- Gross violation of the law
- A final conviction for an intentionally committed offence or fiscal offence
- A judgment banning the President from occupying managerial positions or holding posts of special responsibility in the administrative bodies of the State
- Illness which permanently prevents from performing duties
- Resignation
- Rejection by the Prime Minister of the annual report on the activity of the President and evaluation of nuclear safety and radiological protection.

During the mission, PAA confirmed that the PAA President is the only person inside PAA having executive safety responsibility. The Vice-President is a deputy to the President and does not detain specific safety responsibilities. PAA staff members are civil servants protected against abusive dismissal by their statute based on the civil service Act.

Status of the finding in the initial mission

Recommendation 2 is closed on the basis of progress made and confidence in the effective completion, as the proposed measures prevent unwarranted political removal of persons with executive safety responsibility within PAA.

1.4. RESPONSIBILITY FOR SAFETY AND COMPLIANCE WITH REGULATIONS

There were no findings in this area in the initial IRRS mission.

1.5. COORDINATION OF AUTHORITIES WITH RESPONSIBILITIES FOR SAFETY WITHIN THE REGULATORY FRAMEWORK

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S1	**Suggestion: PAA should establish or revisit agreements and rules of functioning with other government authorities involved in the regulation of facilities and activities in order to coordinate regulatory activities. One specific example is that the President of PAA and the Chief Sanitary Inspector should revisit the Agreement of Cooperation to enhance coordination on the regulation of the medical use of ionization radiation.**

Changes since the initial IRRS mission

Suggestion 1: PAA reviewed its current agreements with 13 administration bodies to identify the need for making changes or setting up new agreements. As a result of the review, the decision has been made to update its agreements with the Chief Sanitary Inspector, the Army and the State Mining Authority. The agreement with the Chief Sanitary Inspector has already been replaced with a new agreement signed in April 2017. The new agreement contains rules on exchange of inspection schedules, inspection protocols, and information according to the irregularities revealed during inspection. The agreement introduces the possibility of planning and conducting joint inspections.

In accordance with the ALA, PAA interacts with other administrative authorities in performing supervision and control of nuclear safety and radiological protection of facilities and activities; interaction takes place in particular with the Office of Technical Inspection, State Fire Service, bodies of Inspectorate of Environmental Protection, bodies of Building Control, bodies of State Sanitary Inspection, Labour Inspection and Internal Security Agency. The ALA defines the principles of coordination and cooperation between the authorities mentioned above by setting up a coordination system of control and supervision of facilities and activities.

Status of the finding in the initial mission

Suggestion 1 is closed, on the basis that a review was conducted for the agreements and rules of functioning with other government bodies, that led to revision of three agreements, to enhance coordination and cooperation in regulation of facilities and activities. A revised agreement with the Chief Sanitary Inspector was also established.

1.6. SYSTEM FOR PROTECTIVE ACTIONS TO REDUCE EXISTING OR UNREGULATED RADIATION RISKS

There were no findings in this area in the initial IRRS mission.

1.7. PROVISIONS FOR THE MANAGEMENT OF RADIOACTIVE WASTE

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R3	**Recommendation: The Government should put in place measures that prohibit the involvement of the operator or the PAA in the management of the decommissioning**

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
	fund.
S2	**Suggestion: In view of the planned 2022 closure of the National Radioactive Waste Depository in Różan, the government is encouraged to accelerate the production of the National Plan for RW and SNF management, and of the siting process for the new surface repository for low and intermediate level waste.**
R4	**Recommendation: The Government should ensure adequate resources for the timely removal of the non-segregated historical waste of Facility 2 and Facility 3 of the National Radioactive Waste Depository in Różan.**

Changes since the initial IRRS mission

Recommendation 3: Under the ALA Amendments, at article 38d:

- The PAA President will be replaced by the Minister of Energy in receiving reports on the contributions made to the decommissioning fund and permitting withdrawals from it; and
- The PAA President can suspend the nuclear power plant operator's operations, following a request by the Minister of Energy, in cases of excessive delay by the operator in making a contribution to the fund.

With resolution No 195 of 16th October 2015, the Council of Ministers has approved the *National Plan* of *Radioactive Waste* and *Spent Nuclear Fuel Management*. The Plan provides, among others, for modifications in the current financing system of management of radioactive waste and spent nuclear fuel by:

- updating the legal framework in the range of radioactive waste and spent fuel management, as well as decommissioning of nuclear power plants;
- implementing the financing system of final management of radioactive waste and spent nuclear fuel from nuclear energy, as well as providing funding for decommissioning of nuclear power plants.

More specifically, this involves:

- changing the rules in order to divide the financial resources gathered for funding the management of radioactive waste and spent nuclear fuel and the decommissioning of nuclear power plant into two parts:
  - Disposal Fund of Radioactive Waste and Spent Nuclear Fuel funded by operators of nuclear power facilities;
  - Decommissioning Fund;
- developing and implementing requirements on Disposal Fund of Radioactive Waste and Spent Nuclear Fuel and Decommissioning Fund into the legal system;
- designating the supervisory institution for Disposal Fund and Decommissioning Fund;
- designing and implementing requirements into the legal system on actualization of the sum of contributions to Disposal Fund and Decommissioning Fund.

According to Ministry of Energy, the identification of a supervising institution will be explored in 2018 and a proposal should be ready in 2019.

The National Plan of Radioactive Waste and Spent Nuclear Fuel Management gives some details on the mechanisms governing the decommissioning fund:

- *Funds [...] will come from quarterly payments to the funds, made by the operator of the nuclear power plant and revenues resulting from investments of the fund resources, that are **permitted by law**. The financial resources accumulated in both funds will be excluded from the operator's bankruptcy estate. These funds will be exempt from the enforcement procedure.*
- *The Fund for Decommissioning of the Nuclear Power Facility which is a nuclear power plant will remain the **responsibility** of the operator of the nuclear power plant, but the payment will be possible after obtainment of a positive opinion of the institution acting as the fund supervisor".*

PAA representatives explained that the operator, whilst being the owner of the decommissioning fund, could only use it in the way prescribed by the ALA. The IRRS team believes that the measures restricting the possible actions of the operator on the decommissioning fund it has under its responsibility are appropriate for preventing its involvement in the management of the fund. The IRRS team notes that with the future provisions of the ALA, the PAA President does not intervene in the management of the fund.

Suggestion 2: In accordance with the *National Plan* of *Radioactive Waste* and *Spent Nuclear Fuel Management*, siting activities for new surface repository have been intensified. Specifically, in 2015 studies on potential locations began and one potential safe site for the new repository was identified. In 2016 four other prospective locations were examined. Detailed research will be continued in 2017. These actions are in line with suggestion 2.

Recommendation 4: Facilities No 2 and 3, located in National Radioactive Waste Depository in Różan, were closed prior to 1975. The IRRS team was informed that currently, there is no possibility to open them in a direct way. The opening of those facilities, the retrieval of the wastes and their processing will be performed in the phase of final closure of the repository, which was originally planned for 2020 and has been rescheduled to the period 2025-2029 in the *National Plan* of *Radioactive Waste* and *Spent Nuclear Fuel Management*. This will be preceded by preparatory phases, covering the selection of the technical options and the development of the concept. According to PAA, this time shift in closing the repository does not pose safety problems, since the present operation of the plant has been authorized on the basis of the existing safety report and a new safety report will be produced by 2019, which shall take account of the possible ageing of the facilities. Would a new safety issue arise, PAA could ask the operator to take action without waiting for 2019.

With respect to the financial resources allocated to National Radioactive Waste Depository closure, parts of those resources will be dedicated to completion of the various preparatory works. According to representatives of Ministry of Energy and Radioactive Waste Management Plant (ZUOP), these sums are based on the data available when the plan was elaborated and could be revised for the next edition of the Plan (due in 2019). The IRRS team was informed that funds for safety assessments necessary for closure of existing NRWR reports will be secured by the Ministry of Energy.

The IRRS team did not look at technical details, but is of the opinion that the framework set up by the ALA, the official regulations and the National Plan of Radioactive Waste and Spent Nuclear Fuel Management has created the conditions necessary for the timely removal of the non-segregated historical waste of Facility 2 and Facility 3 in Różan. The IRRS team noted that Poland has also requested an upcoming IAEA ARTEMIS mission.

Status of the finding in the initial mission

Recommendation 3 is closed on the basis of progress made and confidence in the effective completion, as the measures taken prohibit the involvement of the operator and PAA in the management of the decommissioning fund**.**

Suggestion 2 is closed on the basis of progress made and confidence in the effective completion, as the *National Plan* of *Radioactive Waste* and *Spent Nuclear Fuel Management* has been produced, and the siting process for the new surface repository has progressed.

Recommendation 4 is closed on the basis of progress made and confidence in effective completion, as adequate resources will be available for the timely removal of the non-segregated historical waste of Facility 2 and Facility 3 of the National Radioactive Waste Depository in Różan.

1.8. COMPETENCE FOR SAFETY

There were no findings in this area in the initial IRRS mission.

1.9. PROVISION OF TECHNICAL SERVICES

There were no findings in this area in the initial IRRS mission.

2. THE GLOBAL SAFETY REGIME

2.1. INTERNATIONAL OBLIGATIONS AND ARRANGEMENTS FOR INTERNATIONAL COOPERATION

There were no findings in this area in the initial IRRS mission.

2.2. SHARING OF OPERATING EXPERIENCE AND REGULATORY EXPERIENCE

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S3	**Suggestion: The regulatory body PAA should establish an internal process for using the feedback from operating experience, incidents and accidents in Poland as well as in other countries.**

Changes since the initial IRRS mission

Suggestion 3: A procedure was issued for creating and submitting periodic reports on the events at nuclear power plants. Since 2014, reports have been issued each quarter providing operational feedback information to staff. Reports are based on international databases including Conex, European Clearinghouse, the IAEA/NEA International Reporting System for Operating Experience (IRS). The PAA holds meetings to discuss the reports. The IRRS team was informed that the meetings are held at least once a year, minutes of these meetings are not prepared, meeting presentations are disseminated for involved PAA staff. At these meetings, decisions can be made about the use of the operational feedback. An example of the use of feedback according to the procedure was provided. The Report for the 3rd quarter of 2014 included the analysis of the case from US NRC "potential Teflon material degradation in containment penetrations, mechanical seals and other components". At that time MARIA research reactor license application for operation was under review by PAA. As the MARIA research reactor used Teflon seals, PAA requested the applicant to describe the in-service inspection procedure to control Teflon seals. The implementation of the licensee in-service inspection procedure for Teflon seals control was inspected by PAA during year 2015 and 2016.

Operational feedback information regarding facilities and activities is collected, analysed and used as part of PAA's regulatory activities. An example of such use was provided for an incident regarding a lost radioactive source in 2015. PAA's comprehensive regulatory actions included:

- dissemination of the information to the users of similar sources;
- imposing requirements on the licensee that included additional training and safety procedures revision;
- overseeing the implementation of these additional requirements;
- requesting selected facilities to make self-assessments;
- performing unannounced inspections to these selected facilities;
- publishing a guide (recommendations) for the security of radioactive sources; and
- proposing amendments to the ALA.

The IRRS team discussed with the PAA counterparts, how the existing practice of operational feedback use for other facilities could be included when updating internal procedures.

Status of the finding in the initial mission

Suggestion 3 is closed on the basis of progress made and confidence in effective completion as PAA has established internal processes for using feedback from operating experience for nuclear power plants, and has effective practices for other facilities and activities.

3. RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY

3.1. ORGANIZATIONAL STRUCTURE OF THE REGULATORY BODY AND ALLOCATION OF RESOURCES

There were no findings in this area in the initial IRRS mission.

3.2. EFFECTIVE INDEPENDENCE IN THE PERFORMANCE OF REGULATORY FUNCTIONS

There were no findings in this area in the initial IRRS mission.

3.3. STAFFING AND COMPETENCE OF THE REGULATORY BODY

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R5	**Recommendation: PAA should further develop a staffing plan for the current and future scope of regulatory functions that aligns the number of staff necessary and the essential knowledge, skills and abilities for them to implement the organizational goals and priorities. Such a staffing plan should leverage internal resources and external support.**
S4	**Suggestion: PAA should consider reviewing the availability of external support across the range of technical and other disciplines needed to support the delivery of regulatory functions relating to the NPP programme, especially the early steps of the licensing process (review of site documentation; organizational capability and preliminary safety analysis report).**

Changes since the initial IRRS mission

Recommendation 5: In 2017 PAA prepared a new Human Resources Development (HRD) Program for the years 2017 - 2019. It includes a diagnosis of human resource management, sets priorities, describes fields of human resources management and indicates annual objectives. It incorporates the strategic objectives and tasks of PAA, along with the priorities identified for civil service by the Head of Civil Service, as well as the IAEA guidelines.

The present HRD Programme includes a description of mechanisms for developing management skills, building a learning organizational culture, recruiting new employees and introducing them to work. In addition to this program, a staffing plan has been prepared, which describe the tasks of:

- forecasting the need for employees and the evolution of the labor market;
- comparing needs and possible supply;
- implementing optimization of human resources.

The process will lead to the creation of databases for succession planning, management positions, and technical competencies. The plan includes a schedule of these tasks for the years 2017 and 2018. By the end of 2017, all the databases are expected to exist.

The needs for recruitment were based on analysis of time and resources required for licensing, and based on experience of other regulatory bodies in "nuclear" countries (taking into consideration the numerical amount of employees). Hiring and retaining highly skilled workers was one of the key elements of the employment strategy in PAA.

The IRRS team observes that the staffing plan covering the period 2017-2018 defines an appropriate approach to define its present and future needs.

The IRRS team noted that additional work to identify human resource needs for key support activities such as the management system is still needed for periods after 2018. The IRRS team made a suggestion in this regard under Section 4.3 (SF1).

Suggestion 4: PAA has signed a number of agreements with foreign nuclear regulators and international organizations to access data and capabilities (computer programs). PAA recognizes the need for highly qualified and competent technical support organizations capable of assuring necessary technical service in the licensing process. The agreements enabled PAA to sign further agreements with Polish organizations that were interested in obtaining the computer programs.

In 2016 PAA signed agreements giving access to computer codes on specific conditions with the Institute of Heat Engineering of the Warsaw University of Technology (ITCPW), University of Science and Technology (AGH) and the National Centre for Nuclear Research (NCBJ). These agreements oblige the partners to cooperate, to work on nuclear safety and increase expertise in safety assessment. In this way PAA managed to stimulate Polish organizations to work in specific areas of interest in safety assessment important to PAA.

Recently, PAA's university and research institute partners have been performing analyses related to thermal hydraulics, neutronics, severe accidents, nuclear waste, and seismicity. These efforts will grow capacity for organizations and staff who may be responsible for assessing safety reports and developing related procedures. This resulted in creation of procedures and PAA staff increasing its knowledge and competence.

Although the staff has increased its competence, PAA anticipates that professional support on specific tasks will still be needed especially in structural analysis, welding, I&C or electrical systems.

In cases of emergent, short term resource needs, the ALA provides for an accelerated process to engage necessary resources by granting a status of an expert organization in specific fields.

In order to overcome difficulties encountered by expert institutions in developing the skills necessary to assist PAA in technical fields, PAA and the Ministry of Energy, supported by research institutes, prepared an amendments to the ALA allowing for the creation of TSOs financed by the state budget.

Status of the finding in the initial mission

Recommendation 5 is closed on the basis of progress made and confidence in effective completion, as PAA has established a staffing plan for the current and future scope of regulatory functions.

Suggestion 4 is closed on the basis that PAA has reviewed the availability of external support across the range of disciplines needed to support its functions relating to the NPP programme and has started to establish agreements and contracts with several technical organizations.

3.4. LIAISON WITH ADVISORY BODIES AND SUPPORT ORGANIZATIONS

There were no findings in this area in the initial IRRS mission.

3.5. LIAISON BETWEEN THE REGULATORY BODY AND AUTHORIZED PARTIES

There were no findings in this area in the initial IRRS mission.

3.6. STABILITY AND CONSISTENCY OF REGULATORY CONTROL

There were no findings in this area in the initial IRRS mission.

3.7. SAFETY RELATED RECORDS

There were no findings in this area in the initial IRRS mission.

3.8. COMMUNICATION AND CONSULTATION WITH INTERESTED PARTIES

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S5	**Suggestion: The regulatory body PAA should prepare a strategy for increasing transparency with the public about risks and incidents in the different facilities and activities subject to its regulations.**

Changes since the initial IRRS mission

Suggestion 5: The ALA requires PAA to publish all information regarding radiological incidents and other events which may be of significance for public health and protection of the environment. Reports are being published regularly on the PAA's Public Information Bulletin, which is easily accessible via Internet (www.bip.paa.gov.pl).

PAA also provides any public information on demand to the applicant (except confidential information or personal data).

PAA prepared and has started implementation of the Communication Strategy for 2014-2018. The strategy is a complex document with an implementation programme. The document has a twofold goal: increasing the public awareness of the roles and responsibilities of the PAA and strengthening swift and accurate communication in case of radiation event. One of the pillars of the strategy is to increase transparency of communication with the public on risks and incidents in the different facilities and activities subject to its regulations.

The strategy also stipulates rules and procedures of communication in case of a radiological event.

The Communication Strategy and its summary are available on the internal web service of the agency. The IRRS team was informed that all the staff of PAA has taken part in meetings promoting the Communication Strategy.

Since 2013 PAA has appointed a lead spokesperson who is responsible for communication during the radiological events and maintaining day-to-day relation with media. In cases where prompt communication is necessary, PAA has also an official Twitter account. To support work of the Spokesperson, PAA is continuously training a number of Expert Speakers who may present their opinions when there is media interest.

The IRRS team had the opportunity to look at the information provided on PAA's website; this site gives access to

- annual and quarterly reports on the level of radioactive releases near the Polish nuclear facilities and on events occurring at them;
- short movies explaining to the general public how nuclear and radiation risks are handled, what the role of PAA is and the procedures it uses.

It is the opinion of the IRRS team that the set of measures that PAA has implemented is an effective way of ensuring transparency with the public about risks and incidents.

Status of the finding in the initial mission

Suggestion 5 is closed on the basis that PAA has prepared a strategy for increasing transparency with the public about risks and incidents in the regulated facilities and activities.

4. MANAGEMENT SYSTEM OF THE REGULATORY BODY

4.1. IMPLEMENTATION AND DOCUMENTATION OF THE MANAGEMENT SYSTEM

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R6	**Recommendation: PAA should reflect the safety goals throughout its management system documentation and identify the processes used to achieve its mission, vision, and goals, including;** **1) a process for internal communication;** **2) an explicit process for organizational change; and** **3) an explicit method for performing management system reviews.**
R7	**Recommendation: PAA senior management should promote an awareness of internal safety culture and ensure that it is appropriately reflected within its management system.**

Changes since the in the initial IRRS mission

Recommendation 6: PAA has developed the management system focusing on three areas:

- Implementation of process management;
- Development of the Management System Manual; and
- Establishing a Safety Policy.

Processes carried out by PAA were identified in 2014. In 2015 PAA received an IAEA advisory expert mission on the integrated management system (IMS).

In 2016 PAA launched a project with the goal to implement an IMS. The project is divided into three phases with an end date of October 30th, 2019. A coordinator for the implementation of the IMS was appointed in 2016. The coordinator is the team leader for the project and the team consists of representatives from all departments.

In 2016 the processes that had been identified in 2014 were revised. The processes are classified into 3 categories; operational (core), management, and administrative (supporting). The hierarchy of processes includes processes and sub-processes. Process and sub-process owners have been appointed. The management system manual was approved in December 2016. The Safety Policy is a part of the management system approved by PAA top management.

The strategic objectives have been revised and are emphasized in the annual plan. The main safety goals, activities and indicators are included in the annual plan. Process owners are responsible for insuring that PAA mission, and safety goals are reflected in process charts and operating procedures.

- PAA has not documented a separate process for internal communication. The IRRS team was told that PAA made a decision not to have a separate process for internal communication but instead incorporate internal communication where ever it is appropriate in the IMS. PAA has focused on enhancing internal communication and is working on improvement of channels and rules of communication. The document “Code of best practices for internal communication” has been prepared by the President’s Office. PAA has also included internal communication in the Communication Strategy for 2014-2018.

- Within the management system, PAA has described organizational change as a sub-process located under the process of integrated management. The steps are described in a document, and additional documents describe the principles of change management and include the management of change form.
- Review and assessment of the management system is one of the sub processes of the integrated management process. The management system review is described on a general level in a process chart and further in a procedure. A more comprehensive management system review was conducted in 2016. It covered collection and analysis of comprehensive data and information on the functions of the management system. The 2017 review was further expanded and included evaluation of safety culture and leadership.

Recommendation 7: To meet the recommendation PAA set three main goals:

- To analyze international experience on building a safety culture;
- To develop a PAA action plan on strengthening internal safety culture; and
- To integrate safety culture and the PAA management system.

In order to strengthen safety culture PAA has reviewed international experience and performed focus group discussions in 2014-15. The objective was to identify the level of understanding and a base-line. In 2015 PAA invited an IAEA advisory expert mission on safety culture aspects to discuss how to evaluate safety culture. Together with the IAEA experts, PAA analyzed methods for evaluating and enhancing safety culture. The experts also facilitated PAA in establishing a long term action plan on safety culture 2017-2019. PAA senior management took part in study visits regrading safety culture and IMS (Sweden -SSM, United Kingdom – ONR, Switzerland – ENSI). Following study visit, PAA started closer bilateral cooperation in the field of safety culture with the Swiss Regulatory Body ENSI. Regular discussion meetings within the staff are also performed within the organization. Safety culture is included in PAA's Management System Manual. Priority for safety is also taken into account during work on PAA processes and internal procedures. The IRRS team observed that PAA senior leadership is proactively prioritizing safety culture throughout PAA's activities and processes, and recognizes the value of continued focus on safety culture.

Status of the finding in the initial mission

Recommendation 6 is closed on the basis of progress made and confidence in the effective completion, as PAA has done comprehensive work in the development of an integrated management system. Work on the management system needs to be continued, including the manual, processes, and documentation.

Recommendation 7 is closed, on the basis that senior management has promoted safety culture at PAA and safety culture is reflected in the management system.

4.2. MANAGEMENT RESPONSIBILITY

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R8	**Recommendation: The PAA should appoint an individual with responsibility and authority for the coordination of the development and implementation of the management system.**

Changes since the initial IRRS mission

Recommendation 8: Within PAA the tasks concerning maintaining, review and assessment, improvement, and reporting on performance of the IMS are assigned to the President's Office. Responsibility for the coordination of the MS is appointed to the Coordinator of the President's Office. Resolution of any potential conflicts between requirements and within the processes of the management system is the responsibility of the top management of PAA. The Director General has overall responsibility for the management system of PAA. This is stated in the civil service law.

Status of the finding in the initial mission

Recommendation 8 is closed, on the basis that PAA has appointed an individual with responsibility and authority for the coordination of the development and implementation of the management system.

4.3. RESOURCE MANAGEMENT

There were no findings in this area in the initial IRRS mission.

New observation from the follow-up mission

PAA has identified implementation of the Integrated Management System as a strategic objective. PAA is running a project on implementing an IMS that ends in 2019. PAA currently has an appropriate number of qualified staff running this project. PAA did not provide evidence that the IMS will continue to be utilized and resourced after the project ends. The IRRS team believes that the IMS represents an organizational support function that is essential to PAA fulfilling its regulatory functions and mission.

FU Mission RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
Observation: *It is unclear whether the IMS will continue to be utilized and resourced after the current project ends in 2019*	
(1)	**BASIS: Requirement 4.14 of GSR Part 1 (Rev 1) states that** *"The regulatory body shall establish and implement a management system whose processes are open and transparent. The Management system of the regulatory body shall be continuously assessed and improved".*
(2)	**BASIS: Requirement 4.11 of GSR Part 1 (Rev 1)states that** *"The regulatory body has to have appropriate qualified and competent staff. A human resources plan shall be developed that states the number of staff necessary and the essential knowledge, skills and abilities for them to perform all the necessary regulatory functions."*
SF1	**Suggestion: PAA should consider the planning, budgeting, and resource needs to support ongoing implementation of the Integrated Management system.**

5. AUTHORIZATION

5.1. GENERIC ISSUES

There were no findings in this area in the initial IRRS mission.

5.2. AUTHORIZATION OF RESEARCH REACTORS

There were no findings in this area in the initial IRRS mission.

5.3. AUTHORIZATION RADIOACTIVE WASTE MANAGEMENT FACILITIES

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S6	**Suggestion: The PAA should use the opportunity presented by the new NPP initiatives to develop a plan for issuing internal guidance documents for various types of repository activities with respect to siting, design construction, operation, closure and institutional control after closure.**

Changes since the initial IRRS mission

Suggestion 6: PAA issued a document, "Principles of issue of organization and technical recommendations by the President of National Atomic Energy Agency," which explains the process to issue guidance documents. This document describes, *inter alia*, the topics of the Recommendations (guides) in the field of radioactive waste management. Recommendations will be related to siting of the radioactive waste repository (with respect to geographical, environmental and socio-economic factors), waste acceptance criteria for disposal into surface repository, scope of safety report of radioactive waste repository as well as safety of facilities and installations for radioactive waste storage. According to the "Principles," issue of additional Recommendations is expected in the fields of operation and closure of radioactive waste repositories and environmental monitoring for repositories.

The date of issue of specific organizational and technical Recommendations is decided by the President of the PAA. This decision is based, among other things, on the schedule of implementation of the PNPP. PAA provided the Division's plan on development of recommendations.

Status of the finding in the initial mission

Suggestion 6 is closed, on the basis that the procedure for guidance document (Recommendation) development, which includes the list of Recommendations to be developed, exists.

5.4. AUTHORIZATION OF RADIATION SOURCES FACILITIES AND ACTIVITIES

There were no findings in this area in the initial IRRS mission.

6. REVIEW AND ASSESSMENT

6.1. GENERIC ISSUES

There were no findings in this area in the initial IRRS mission.

6.2. REVIEW AND ASSESSMENT FOR RESEARCH REACTORS

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R9	**Recommendation: As part of the upgrading of MARIA research reactor to comply with the ALA by 2015, PAA should conduct a full safety evaluation of the application.**
S7	**Suggestion: The PAA should develop procedures covering the review and assessment of new facilities, design modification and SAR amendments for research reactors.**
R10	**Recommendation: The PAA should establish internal management controls to ensure that official records related to licensing activity for research reactors are retained.**

Changes since the initial IRRS mission

Recommendation 9: In December 2014 the National Centre for Nuclear Research applied for the licence renewal for operation of the MARIA research reactor. Together with the application, the following relevant documentation was submitted:

- Safety Analysis Report;
- Operating procedures;
- Emergency plan;
- Integrated management system.

PAA has collaborated with the National Centre for Nuclear Research for a period of one year prior to formal submission of the application to ensure the regulatory requirements and expectations were well understood. Between December 2014 and March 2015 a complete safety evaluation of the application and safety documentation was conducted. The regulatory body recorded the results and basis of their decisions deriving from the reviews and assessments in a Safety Evaluation Report. On this basis Licence No. 1/2015/Maria allowing the operation of the MARIA research reactor was issued on 31 March 2015 to the National Centre for Nuclear Research. The license is valid until March 31, 2025 and includes many associated conditions with which the National Centre for Nuclear Research must comply, e.g. to perform periodical safety review not less frequently than once in four years. This is a conservative condition compared to the 10 yearly PSR requirement to ensure that timely assessment is conducted by virtue of ageing effects on the reactor.

Suggestion 7: In order to implement this suggestion, PAA has carried out an analysis of other countries' procedures as well as the relevant IAEA safety guides in respect of safety review. The "Procedure for issuing consent for modernization and modification" covers the entire process of issuing permits for the modernization and modification of systems, structures and components of a nuclear facility which are important for nuclear safety and radiation protection. It describes also the process for review and assessment of documentation enclosed with the application for the consent for

modernization and modification. In the case of changes to the SAR and other licensing basis documentation changes, a license amendment is required. The procedure that covers this is "Issuing licenses with regards to activity connected with nuclear facilities". The evidence underpinning closure of this suggestion is the procedures themselves, which have been finalised and issued. The procedure associated with issuing of licenses also identifies further phases that will require issue of a licence in respect of new facilities, such as construction licence, commissioning licence etc., although in this respect those phases are in the future. PAA recognise that additional guidance to underpin safety review activities with respect to these further phases will need to be developed as the nuclear power programme advances.

Recommendation 10: PAA has developed an internal instruction on the management of documents which addresses the activities related to licencing of nuclear facilities including research reactors. The instruction describes the flow of documents from receipt of the application through the internal document circulation route up to the archiving process. This internal instruction is issued and PAA demonstrated the ability to retrieve official records related to the licensing activity of the Maria research reactor undertaken in 2014.

In 2017 PAA plans to implement a computer based document management system (EZD). A project team and a group of coordinators were established by the Director General Orders No. 2 & 3 dated 24th February 2017. The project team is responsible for refinement of the system to address the needs and requirements of PAA. The group of coordinators is formed with the representation of one person from each PAA organizational unit. Initially coordinators will be trained in EZD usage after which they will train the members of their origin unit. The system is expected to be fully implemented by January 2018. With all the evidence of progress made by PAA in maintaining the records in a retrievable manner, this demonstrates fulfilment of this recommendation.

Status of the finding in the initial mission

Recommendation 9 is closed, on the basis that as part of the upgrading of MARIA research reactor to comply with the ALA by 2015, PAA has conducted a full safety evaluation of the application.

Suggestion 7 is closed, on the basis that PAA has developed procedures covering the review and assessment of new facilities, design modification and SAR amendments for research reactors, where relevant.

Recommendation 10 is closed, on the basis that PAA has established internal management controls to ensure that official records related to licensing activity for research reactors are retained.

6.3. REVIEW AND ASSESSMENT FOR WASTE MANAGEMENT FACILITIES

There were no findings in this area in the initial IRRS mission.

6.4. REVIEW AND ASSESSMENT FOR RADIATION SOURCES FACILITIES AND ACTIVITIES

There were no findings in this area in the initial IRRS mission.

7. INSPECTION

7.1. GENERIC ISSUES

There were no findings in this area in the initial IRRS mission.

7.1.1. INSPECTION APPROACHES, METHODS AND PLANS

There were no findings in this area in the initial IRRS mission.

7.1.2. INSPECTION PROCESS AND PRACTICE

There were no findings in this area in the initial IRRS mission.

7.1.3. INSPECTORS

There were no findings in this area in the initial IRRS mission.

7.2. INSPECTION OF RESEARCH REACTORS

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R11	**Recommendation: PAA should perform periodic inspections at the EWA site to confirm that the authorized party had been in compliance with regulatory requirements, and the decommissioning activities had been performed safely.**

Changes since the initial IRRS mission

Recommendation 11: Inspection of the EWA reactor has now been included into the inspection plan approved by the PAA President. The EWA research reactor was operational between the years 1958 – 1995. The reactor decommissioning process started in 1997 and reached the state where nuclear fuel and all irradiated structures and components whose activity level might have been hazardous from the perspective of radiological protection, were removed from the reactor in 2002. Utilizing a graded approach informed by the risk posed by the EWA reactor, inspections are carried out once in every five years. The scope of inspections addresses mainly dosimetry measurements in the reactor building and the efficiency of the ventilation system. Additionally, regulatory supervision is conducted by evaluation of quarterly reports prepared by the licensee and production of regulatory notes by PAA. PAA demonstrated that such regulatory notes resulted in taking appropriate corrective actions in the associated areas requiring regulatory intervention.

Status of the finding in the initial mission

Recommendation 11 is closed, on the basis that PAA has set up a systematic inspection programme and has performed periodic inspections at the EWA site to confirm that the authorized party has been in compliance with regulatory requirements, and the decommissioning activities have been performed safely.

7.3. INSPECTION OF WASTE MANAGEMENT FACILITIES

There were no findings in this area in the initial IRRS mission.

7.4. INSPECTION OF RADIATION SOURCES FACILITIES

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R12	**Recommendation: The regulatory body PAA should develop procedures and guidance for medical facilities in addition to the current use of checklists. Such procedures and guidance should address inspections of medical facilities and the performance of survey measurements in complex circumstances.**

Changes since the initial IRRS mission

Recommendation 12: PAA issued an amended procedure (Instruction) for performing inspection and it addresses inspections of medical facilities and the performance of survey measurements for radiotherapy (accelerators and brachytherapy) and nuclear medicine facilities. The IRRS team was informed that in the first part of the inspection the check list is not used; the inspector examines the overall safety environment and is not limited to the check list. The special part of the inspection protocol blank named "Additional information" is prepared for inspection observations that are not listed in the check lists. Inspectors are encouraged not to be limited by check lists but to rely on their expertise when the specific items should be examined or appear during the inspection visit. Examples of inspection protocols that included measurements were provided, specifically measurements of dose rate for accelerator radiotherapy facility (from 08.05.2017) and surface contamination for nuclear medicine facility (from 29.02.16).

Status of the finding in the initial mission

Recommendation 12 is closed, on the basis that procedures for medical facilities in addition to the current use of checklists are established, and addresses the performance of survey measurements and is implemented.

8. ENFORCEMENT

8.1. ENFORCEMENT POLICY AND PROCESS

There were no findings in this area in the initial IRRS mission.

8.2. ENFORCEMENT IMPLEMENTATIONS

There were no findings in this area in the initial IRRS mission.

9. REGULATIONS AND GUIDES

9.1. GENERIC ISSUES

There were no findings in this area in the initial IRRS mission.

9.2. REGULATIONS AND GUIDES FOR RESEARCH REACTORS

There were no findings in this area in the initial IRRS mission.

9.3. REGULATIONS AND GUIDES FOR WASTE MANAGEMENT FACILITIES

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R13	**Recommendation: Government should use the opportunity presented by the new NPP initiative to bring their regulations in line with IAEA standards on RW and SNF management, in order to enhance safety and transparency, and to develop a methodology on deriving waste acceptance criteria for disposal.**
S8	**Suggestion: In its PNPP activities, the Government should consider that any delay in deciding on a firm waste management strategy may have consequences not only for the development of the waste package and its content, but also for establishing the necessary funds, since it will not be clear on the basis of what scenario the provisions will have to be calculated.**

Changes since the initial IRRS mission

Recommendation 13: In 2014 the ALA was amended. This amendment transposed into the Polish legal system provisions of the European Council Directive 2011/70/EURATOM of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste. To implement the amendments, two new Regulations of Council of Ministers were issued. The first one, on radioactive waste and spent nuclear fuel (replacing the regulation on radioactive waste and spent fuel management from 2002), describes in detail the following issues:

- methods for radioactive waste qualification into categories and sub-categories;
- inventory records;
- conditions for the storage of radioactive waste or spent nuclear fuel;
- detailed requirements for the facilities, premises and packaging designed for the storage of radioactive waste;
- detailed requirements for storage facilities for spent nuclear fuel;
- detailed requirements for specific kind of repositories during its construction and operation;
- detailed requirements for radioactive waste preparation for disposal, etc.

The second regulation, on periodic safety review of radioactive waste repositories, includes the following issues:

- review of design solutions and technical documentation of a repository and changes introduced to it since the previous periodical assessment;

- review of barriers, construction and installation elements of a repository which are important for ensuring safety and radiological protection;
- identification of processes of ageing of barriers, construction and installation elements of a repository which are important for ensuring safety and radiological protection;
- experience and conclusions gained from operations of assessing repository and other radioactive waste disposals and scientific researches;
- review of integrated management system;
- emergency plans and emergency response system, etc.

The Regulations also include the scope of periodic safety review report.

A draft of a PAA President Recommendation (guide) on waste acceptance criteria (WAC) for near surface disposal was prepared. The guide describes the process for development of WAC (including development methodology), the list of WAC should be taken into account and requirements on integrated management system.

The above-mentioned new regulations and draft Recommendations (guide) are developed on the basis of IAEA standards including GSR Part 5, as indicated in the terms of reference. The IRRS team was informed that self-assessment was done as part of the ARTEMIS mission preparation and no noncompliance with the IAEA safety standards on the safety of radioactive waste and spent nuclear fuel were found by PAA staff. For clearance of radioactive material and radioactive waste exemption levels are used but this is not explicitly stated.

The IRRS team noticed that work for the regulations review and revision to put them in line with IAEA standards should be continued on the constant basis as international standards are periodically revised. The example is standards that are mentioned in the above mentioned terms of reference: WS-R-4 and WS-R-1 are superseded by SSR-5, GS-G-3.4 will be superseded by new guide that is now under development.

Suggestion 8: The National Plan of Radioactive Waste and Spent Nuclear Fuel Management was issued in 2015. This plan includes waste management strategy including provisions for the necessary establishment of funds based on forecasts of radioactive waste generation. For more details see Section 1.7.

Status of the findings in the initial mission

Recommendation 13 is closed, on the basis that new RW and SNF regulations are in line with IAEA standards and methodology on deriving waste acceptance criteria for disposal is drafted by PAA.

Suggestion 8 is closed, on the basis that radioactive waste management strategy is established in the National Plan of Radioactive Waste and Spent Nuclear Fuel Management**.**

New observation from the follow-up mission

Release of radioactive material from regulatory control is part of the PAA regulatory practice. According to the para. 8 in connection with para. 12 of the Regulation of Council of Ministers on radioactive waste and spent nuclear fuel; if the radioactivity levels of the material become lower than exemption levels, the operator can classify the material as non-radioactive waste (that is, the material ceases to be radioactive waste). The operator then records its decision and its proposed method for further management of this non-radioactive waste according to the procedure approved by the PAA during the licensing process. According to the para. 14.2 of the Regulation PAA inspectors verify "whether the decision to classify such waste as non-radioactive waste was justified and whether the

selected method of further handling of this waste was justified". However, there is no additional guidance in Poland related to the concept of clearance.

FOLLOW UP MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
Observation: *According to the general Polish legal approach to the activities authorization exemption levels are used for clearance of radioactive material but there is no additional guidance related to the concept of clearance.*	
(1)	**BASIS: GSR Part 3 Req. 8 "Exemption and clearance" states that** *"…The regulatory body shall approve which sources, including materials and objects, within notified practices or authorised practices may be cleared from regulatory control."*
(2)	**BASIS: GSR Part 1 (Rev.1) Req. 22 "Stability and consistency of regulatory control" states that** *"…In connection with its reviews and assessments and its inspections, the regulatory body shall inform applicants of the objectives, principles and associated criteria for safety on which its requirements, judgements and decisions are based."*
SF2	**Suggestion: PAA should consider providing guidance for the use of exemption and clearance levels.**

9.4. REGULATIONS AND GUIDES FOR RADIATION SOURCES FACILITIES AND ACTIVITIES

There were no findings in this area in the initial IRRS mission.

10. EMERGENCY PREPAREDNESS AND RESPONSE – REGULATORY ASPECTS

10.1. GENERAL REQUIREMENTS

Assessment of hazards (threats)

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R14	**Recommendation: To implement a graded approach to establishing and maintaining adequate arrangements for preparedness and response the Government should establish regulations on the categorization of threats in accordance with GS-R-2 and liaise with relevant organizations, to conduct the assessment of hazards at the national level.**

Changes since the initial IRRS mission

Recommendation 14: The ALA amendments provide a clear categorisation of threats. The categorisation as proposed is largely in conformity with the related table I of GSR Part 7, which supersedes GS-R-2, and is also used as the basis for the requirements (graded approach). The threat category V as proposed by the ALA amendments is however extended to include all abroad facilities in threat categories I at 300 km distance from the Polish territory.

Status of the findings in the initial mission

Recommendation 14 is closed on the basis of progress made and confidence in effective completion, as a draft amendment to the ALA containing a threat categorisation which is essentially in line with GSR Part 7 (which supersedes GS-R-2) is awaiting becoming effective no later than 1 January 2018.

10.2. FUNCTIONAL REQUIREMENTS

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S9	**Suggestion: PAA should consider how to enhance and formalize the involvement of CEZAR staff in the licencing and inspection processes.**

Changes since the initial IRRS mission

Suggestion 9: PAA has established two internal documents formalising the involvement of CEZAR staff in the licensing and inspection processes:

- *Procedure for issue of licenses with regard to activity associated with nuclear facilities*, Procedure no. 001/DBJ, 14.06.2017
- *Procedure for conducting of regulatory inspections with regard to nuclear safety, radiological and physical safety by nuclear regulatory inspectors of the Nuclear Safety department*, Procedure no. 010/DBJ, 14.06.2017

These documents describe the process by which involvement of CEZAR staff in inspection and licensing activities is sought and establish the responsibilities and tasks of that staff.

For the licensing process, after the nomination of a "project manager" by the head of the Nuclear Safety Department, the project manager decides on whether or not CEZAR staff is to be involved in the process. The main criteria used here is whether or not the request could have an impact on EPR issues or lead to releases of radioactive material. During the weekly management meetings, activities of each department are discussed, including the level of involvement of CEZAR and other departments in the licensing process. If necessary, the decision of the project manager can be overruled by heads of department. The IRRS team was informed that roughly 10 to 15% of all requests treated by the Nuclear Safety Department will involve the CEZAR staff. Typical examples where the advice of CEZAR staff was sought are the relicensing of the Maria research reactor and the transport of spent nuclear fuel.

The procedure also stipulates the tasks to be performed by the CEZAR staff:

- analysis of the emergency scenarios and their environmental consequences off-site;
- control of the on-site emergency plan.

With respect to the inspection process, when establishing the yearly inspection programme, one inspection for each relevant installation is selected which will include the aspects of Emergency Preparedness and Response (EPR). For this inspection, the preparation is performed in collaboration between the inspector(s) and the CEZAR staff. Important to note is the fact that the CEZAR staff are in this perspective considered as specialist, as they are not mandated as nuclear inspectors.

Verifications performed by the CEZAR staff include the internal processes related to EPR, equipment mentioned in the on-site emergency plan, personnel and training. After the inspection, a single report is sent out by the lead inspector, including the input from the CEZAR staff. Possible remarks and corrective actions imposed by the inspection report or enforcement actions are followed-up by the inspector, while the analysis and acceptance of the responses of all EPR related remarks is performed by the CEZAR staff.

Status of the findings in the initial mission

Suggestion 9 is closed on the basis that involvement of CEZAR staff in the licencing and inspection processes was formalized through the procedures no. 001/DBJ and no. 010/DBJ.

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S10	**Suggestion**: **The Government should consider enhancing the bilateral agreements with the Russian Federation and Belarus to reflect the potential new NPPs situated near the Polish border.**

Changes since the initial IRRS mission

Suggestion 10: The IRRS team was informed that since the IRRS mission in 2013, actions have been initiated to reactivate the 1994 bilateral agreement between Poland and Belarus. PAA reports on annual meetings between PAA and Gosatomnadzor in 2013, 2014 and 2015. During these meetings, issues related to EPR and specifically in relation to the NPP under construction at Ostrovets have been taken up. The IRRS team was informed that CEZAR personnel participate explicitly in these meetings. Bilateral meeting in 2016 was postponed due to Gosatomnadzor activities related to IAEA review missions in Belarus (IRRS in October 2016 and SEED in January 2017). A next meeting is scheduled for September 2017.

Given the suspension of the construction of the Kaliningrad NPP, further strengthening bilateral cooperation with the Russian Federation in EPR is not considered urgent by PAA. The IRRS team was informed that bilateral information exchange with the Russian authorities is running correctly.

Status of the findings in the initial mission

Suggestion 10 is closed on the basis that bilateral contacts and discussions with Belarus have been intensified and systematised. Process of enhancement of the bilateral agreement with the Russian Federation will be continued when Kaliningrad NPP construction is resumed.

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
R15	**Recommendation: The Government should establish regulations on emergency planning zones around facilities in threat categories I and II in accordance with GS-R-2.**

Changes since the initial IRRS mission

Recommendation 15: The draft ALA amendments provide for requirements on emergency planning zones around facilities in threat categories I and II, in accordance with GSR Part 7, which supersedes GS-R-2. The draft amendment mentions clearly that accident scenarios having a probability of 10^{-7}/y have to be taken as reference to define the emergency planning zones.

The draft amendment modifying article 86 provides for the operating entities to fix the actual sizes of the different emergency planning zones, which still have to be confirmed by PAA.

This article also provides for PAA fixing Operational Intervention Levels (OILs) through secondary regulations and the IRRS team was informed that a preliminary project for this secondary regulation exists. OILs for evacuation, relocation and Iodine Thyroid Blocking (ITB) are included in this preliminary draft, in accordance with IAEA guidance on the subject. The IRRS team notes that sheltering is not foreseen in this draft document.

According to current provisions, this secondary regulation would enter into force by August 2018.

Status of the findings in the initial mission

Recommendation 15 is closed on the basis of progress made and confidence in effective completion as Poland is in the process of finalising an amendment to the ALA containing provisions in relation to emergency planning zones around facilities in threat categories I and II are in line with the requirements of GSR Part 7.

New observation from the follow-up mission

Additionally to the observations above, the IRRS team noted that the criteria for establishment of the precautionary action zone and the urgent protection zone provided in the draft amendment to the ALA are general. The IRRS team observed that the secondary regulations, as currently drafted, also do not contain any additional criteria or guidance for the operating entities on how to fix the sizes of the emergency planning zones. In relation to this, the below suggestion is made.

FOLLOW UP MISSION RECOMMENDATIONS AND SUGGESTIONS AND GOOD PRACTICE	
Observation: *Only general provisions currently exist in the amendment to the ALA related to the definition of the emergency planning zones.*	
(1)	**BASIS: GSR Part 7 Req. 5.38 states that** *"For facilities in category I or II, arrangements shall be made for effectively making decisions on and taking urgent protective actions, early protective actions and other response actions off the site in order to achieve the goals of emergency response, on the basis of a graded approach and in accordance with the protection strategy. The arrangements shall be made with account taken of the uncertainties in and limitations of the information available when protective actions and other response actions have to be taken to be effective, and shall include the following:* *(a) The specification of off-site emergency planning zones and emergency planning distances for which arrangements shall be made at the preparedness stage for taking protective actions and other response actions effectively. These emergency planning zones and emergency planning distances shall be contiguous across national borders, where appropriate, …"*
SF3	**Suggestion: PAA should consider developing guidance on emergency planning zone sizing in more detail than the general provisions of the ALA.**

10.3. REQUIREMENTS FOR INFRASTRUCTURE

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S11	**Suggestion: To ensure a high degree of availability and reliability of all equipment, communication systems and facilities necessary to perform off-site response, PAA should establish its own quality assurance programme which should also include requirements for the test and calibration of the early warning system.**

Changes since the initial IRRS mission

Suggestion 11: With respect to the Early Warning System (EWS), the IRRS team was informed that a contract exists with an external company (TD Electronics) to cover the complete technical follow-up, maintenance and repair of the detection stations. This company is granted a read-only access to the PAA server on which the measurement data are stored, allowing a supervision of the technical performance of the network. In case problems are detected, the external company has the obligation to intervene and restore the functionality, according to the Service Level Agreement (SLA) in the contract within 5 working days. Penalties are foreseen in case this is not respected. Telecommunications and power supply are also covered by this contract.

Additionally to restoring functionality ("repair"), a preventive yearly visit of every station ("maintenance") is foreseen in the contract. This yearly visit includes a calibration test using a calibration source. All activities of the external company are clearly documented. PAA reports overall data availability for the EWS of 99% over 2016 and 100% in the first quarter of 2017.

With respect to other equipment and systems used in EPR, the IRRS team was informed that several documents provide for their quality assurance and availability:

- Regulation of the Council of Ministers of 23/12/2002 on Requirements regarding dosimetric (i.e. portable) equipment;
- PAA's Management System manual; and
- CEZAR Procedure no. 1, 3 and 4.

The Regulation on dosimetric equipment requires that all portable radiologic detection instruments are calibrated at least annually (in cases when the equipment have an inner calibration source – once every two years). The IRRS team was shown several test reports for the portable instruments used by CEZAR, as well as the 2016 invoice for the verification of 12 instruments.

The IMS manual and more specifically the 3 mentioned CEZAR procedures detail the tasks to be performed by the duty officer, which include a weekly verification of availability and functionality of all emergency equipment, including (portable) monitors, computers, communication and connectivity. If required, corrective actions must be implemented and hierarchy has to be informed in case these corrective actions fail.

All activities of the duty officer are clearly documented.

Status of the findings in the initial mission

Suggestion 11 is closed on the basis that all relevant elements of a quality assurance programme, including documentation, are implemented to ensure a high availability and reliability of the equipment and systems used for emergency response.

11. TAILORED MODULE FOR COUNTRIES EMBARKING ON NUCLEAR POWER (SSG-16)

11.1. INTRODUCTION TO TAILORED MODULE FOR COUNTRIES EMBARKING ON NUCLEAR POWER

There were no findings in this area in the initial IRRS mission.

11.2. CONSIDERATION OF ELEMENTS OF SSG-16

There were no findings in this area in the initial IRRS mission.

11.2.1. SSG-16 Element 01 National Policy and Strategy

There were no findings in this area in the initial IRRS mission.

11.2.2. SSG-16 Element 02 Global nuclear safety regime

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S12	**Suggestion: PAA should consider extending bilateral exchange agreements to share experiences with other countries embarking on, or expanding, its NPP programme.**

Changes since the initial IRRS mission

Suggestion 12: PAA is systematically developing international cooperation programmes aiming to reinforce its preparedness to serve as the national regulator of a nuclear power programme. The 2013 IRRS mission suggestion to develop bilateral cooperation with countries embarking or expanding their nuclear power programmes has been and continues to be implemented to current PAA activities. PAA is cooperating with neighbouring countries developing their nuclear energy sector (Slovakia), those planning such a development (Czech Republic) or those building their first nuclear power plant (Belarus). PAA is also developing cooperation with countries which are or intend to extend their nuclear programs (United Kingdom, Canada, Sweden, Finland, France, Romania and USA). Memoranda of Understanding have been already signed with: United Kingdom, Canada, France, Switzerland, Romania, and are being negotiated with Sweden and Finland.

In 2015 PAA extended the agreement with US Nuclear Regulatory Commission (NRC) on exchange of technical information and cooperation between the regulatory bodies (initially signed in 2010) for a further year. Subsequently a new 5-year agreement was signed in September 2016 during The General Conference of the International Atomic Energy Agency (IAEA) in Vienna**.**

Poland proposed an increase in cooperation, especially with countries which are expanding their nuclear power programmes such as the United States, Canada, United Kingdom, France, Finland, and South Korea. Poland became a member of the Regulatory Cooperation Forum (RCF), which is a forum of nuclear power regulators that promotes the sharing of regulatory knowledge and experience, and became an active receiver of assistance from Regulatory Cooperation Forum since 2014. A significant and successful project that was launched and is being continued is the On-the-Job-Training Programme

(OJT), giving PAA inspectors and safety analysis specialists the possibility to learn first-hand by observing and participating in the regulatory activities of foreign regulators. During 2015 twelve OJT visits were undertaken, with a further six in 2016. For 2017 there is one OJT already implemented, three OJT exchanges approved and a further five more currently being negotiated. Furthermore a program of study visits for the PAA management team to advanced foreign regulators gives insight into the different regulatory organizations and approaches. To date, such special study visits were made to the regulatory bodies in Sweden, France, United Kingdom, Spain and Switzerland. PAA presented various elements of evidence of the activities carried out and planed through the bilateral co-operation activities with countries expanding their nuclear power programmes as well as embarking countries. As a result, PAA has been able to establish a number of regulatory documents and train the regulatory staff in diverse regulatory activities and processes. This has resulted in better preparation of PAA to undertake regulatory responsibilities during implementation of a nuclear power programme with the necessary competencies and resources. The arrangements that PAA have out in place with other regulators in terms of international co-operation are particularly impressive and will result in PAA being well positioned to address the challenges that initiating an NPP programme will pose.

Status of the findings in the initial mission

Suggestion 12 is closed, on the basis that PAA has extended bilateral exchange agreements to share experiences with other countries embarking on, or expanding, their NPP programme.

11.2.3 SSG-16 Element 03 Legal framework

There were no findings in this area in the initial IRRS mission.

11.2.4 SSG-16 Element 04 Regulatory framework

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S13	**Suggestion: PAA should consider clarifying the steps necessary in the licensing process to elaborate on the existing provisions of the ALA, and communicate them internally and externally.**
S14	**Suggestion: PAA should consider defining a strategy for production or endorsement of internal guidance which specifies the principles, requirements and associated criteria for safety used to inform regulatory judgements, decisions and actions taken during the review and assessment of material submitted as part of licence applications.**
S15	**Suggestion: PAA should consider strengthening its pre-licensing interactions with prospective NPP applicants to support a shared understanding of regulatory expectations.**

Changes since the initial IRRS mission

Suggestion 13: PAA has prepared Communication Strategy for the 2014-2018 and commenced its implementation. One of the main focal points of the strategy is communication on the role of the PAA in the PNPP, including explanation of the licensing process. This has been achieved through production and publication of a number of informative materials, such as:

- A multimedia presentation regarding the general role of the National Atomic Energy Agency and on their specific role in the Polish nuclear energy programme

- Educational films on:

  a. Safety requirements in Nuclear Power Plants
  b. Safety requirements in Waste Repositories

- Multimedia presentations and leaflets on:

  a. Site selection process for a nuclear power station
  b. Construction licensing process for a nuclear power station

These presentations and educational films have been promoted on PAA's website and shared on the internet. They are also communicated to several stakeholders involved in the Polish nuclear energy programme, and evidence shows that these presentations have been viewed over a thousand times. In addition, two training workshops for PAA staff targeted at clarification of the licensing process have been delivered. Although this suggestion was targeted at clarifying the steps necessary in the licensing process to elaborate on the existing provisions of the ALA, PAA has extended this strategy to cover more subjects and processes.

Suggestion 14: PAA has established a strategy for development of guides (recommendation) that can be used internally and externally. These specify the principles, requirements and related safety criteria which are used for informing the judgement**,** decisions, and actions taken by the regulatory body, during the review and evaluation of documents submitted as part of applications, including those required for granting of the license. In addition, PAA has developed documents for PAA employees as well as for the external stakeholders describing their regulatory role in relation to existing and planned nuclear facilities. These include:

- Principles of issue of organization and technical recommendations
- Series of regulatory guides on siting of nuclear facilities
- Issued procedure on inspection process with series of 30 guidelines for routine inspections.
- Issued procedures related to modifications and modernisation and start-up of nuclear facilities.
- Draft of procedure on review of siting report for nuclear facility for the purposes of preliminary opinion on the planned location of the nuclear facility.

Several of these guides (recommendations) have been produced and issued and a programme for those yet to be produced exists, and is informed by the milestone at which these guides will be required.

Suggestion 15: PAA meets representatives of the company responsible for preparing the investment process and construction of the first Polish Nuclear Power Plant, PGE EJ1 (Polish Energetic Group Nuclear Energy) at the senior managerial and working (expert) level. Expert meetings have been primarily focused on the siting activities of PGE EJ1, and at least 5 meetings in the past 3 years have taken place concerning site selection. A further five meetings have taken place in the first quarter of 2017. PAA has also participated in meetings organized by PGE EJ1 at two potential sites, Żarnowiec and Lubiatowo-Kopalin. In 2014 PAA and PGE EJ1` staff participated in a "Siting application review workshop" organised by PAA. The workshop was delivered by staff from the US NRC International Regulatory Development Partnership and the main goal of the workshop was to educate participants into the potential site hazards that can be encountered and considered. In addition, there have also been meetings dedicated to topics of the integrated management system and safety analyses. Given the status of the nuclear power programme in Poland currently, and the fact that a technology or potential licensee decision has not yet been made, the current actions towards implementation of this suggestion is fulfilled.

Status of the findings in the initial mission

Suggestion 13 is closed, on the basis that PAA has clarified the steps necessary in the licensing process to elaborate on the existing provisions of the ALA, and communicate them internally and externally.

Suggestion 14 is closed, on the basis that: PAA has defined a strategy for production of internal guidance which specifies the principles, requirements and associated criteria for safety used to inform regulatory judgements, decisions and actions taken during the review and assessment of material submitted as part of licence applications.

Suggestion 15 is closed, on the basis that PAA has taken steps to strengthen its pre-licensing interactions with prospective NPP applicants to support a shared understanding of regulatory expectations.

11.2.5 SSG-16 Element 05 Transparency and openness

There were no findings in this area in the initial IRRS mission.

11.2.6 SSG-16 Element 06 Funding and financing

There were no findings in this area in the initial IRRS mission.

11.2.7 SSG-16 Element 07 External support organizations and contractors

There were no findings in this area in the initial IRRS mission.

11.2.8 SSG-16 Element 08 Leadership and management for safety

There were no findings in this area in the initial IRRS mission.

11.2.9 SSG-16 Element 09 Human resources development

2013 MISSION RECOMMENDATIONS AND SUGGESTIONS	
S16	**Suggestion: The government should consider strategies and mechanisms to enable PAA to attract and retain high quality trained personnel.**

Changes since the initial IRRS mission

Suggestion16: In 2016 the Council of Ministers accepted a report prepared by Ministry of Energy on the implementation of the PNPP 2014-2015, to which PAA contributed. The report required the Minister of Energy to prepare an update of the Programme to be delivered by the end of 2017. In the scope of the update, it is expected that mechanisms that continue to allow PAA to attract and retain highly qualified personnel and ensure sufficient financial resources for this will be considered.

Taking the recommendation into account PAA in 2013 prepared a HRDP for years 2013 - 2015, which included mechanisms to attract and retain PAA's personnel. In 2017 a new HRDP for years 2017 - 2019 was prepared. It includes human resource management priorities, incorporates the strategic objectives and tasks of the PAA, the priorities identified for Civil Service, as well as the IAEA guidelines. Implementing HRDP policy requires all employees, in addition to their competence, to acquire new skills and competences such as knowledge management, risk management, planning, monitoring progress and reporting in the management process. The Programme is focused on

motivation actions such as training and openness to new ideas coming from the employees, bonuses to give employees a sense that their efforts are appreciated, regular feedback system, financial and non-financial awards and reorganization of positions, so that people derive more satisfaction from work.

In the field of training and competence development HRD Program includes:

- examination of training needs;
- Individual Professional Development Plans;
- post-training implementation support (follow up);
- evaluation of training effectiveness;
- cascading knowledge.

To attract the employees a wide range of tools for competence building is offered:

- Internal and external training courses and workshops;
- On the Job Training (OJT) to various regulatory bodies and international organizations;
- specialised training courses (e.g. courses for Radiological Protection Inspectors);
- specialised training in Probabilistic and Deterministic Safety Analysis;
- training programmes as part of the mandate of the Nuclear Regulatory Inspectors;
- higher education of staff (e.g. Higher studies and Post Graduate studies in Nuclear Power, Thermal Power Engineering, Project Management);
- study visits to foreign regulatory bodies;
- coaching / mentoring.

PAA's is also preparing a Comprehensive Training Programme for the staff including individual development plans.

The IRRS team recognizes that in the PNPP Poland has identified that it should be a priority to retain the experienced staff in the nuclear regulatory body, and in particular to prevent loss of regulatory staff to the NPP operator or other nuclear institutions. To this end, the PNPP states that the emoluments of the experts of the nuclear regulatory body need to be gradually increased so that the remuneration of regulatory body staff become comparable to the nuclear industry. The IRRS team agrees that strategies are necessary that recognize the importance of ensuring the regulatory programme remains adequately staffed and qualified.

Status of the finding in the initial mission

Suggestion 16: is closed on the basis of progress made and confidence in effective completion, and strategies and plans to assist PAA to attract and retain high quality trained personnel have been introduced.

11.2.10 SSG-16 Element 10 Research for safety and regulatory purposes

There were no findings in this area in the initial IRRS mission.

11.2.11 SSG-16 Element 11 Radiation protection

There were no findings in this area in the initial IRRS mission.

11.2.12 SSG-16 Element 12 Safety assessment

There were no findings in this area in the initial IRRS mission.

11.2.13 SSG-16 Element 13 Safety of radioactive waste, spent fuel management and decommissioning

There were no findings in this area in the initial IRRS mission.

11.2.14 SSG-16 Element 14 Emergency preparedness and response (regulatory aspects)

There were no findings in this area in the initial IRRS mission.

11.2.15 SSG-16 Element 15 Operating Organization

There were no findings in this area in the initial IRRS mission.

11.2.16 SSG-16 Element 16 Site survey, site selection and evaluation

There were no findings in this area in the initial IRRS mission.

11.2.17 SSG-16 Element 17 Design safety

There were no findings in this area in the initial IRRS mission.

11.2.18 SSG-16 Element 19 Transport Safety

There were no findings in this area in the initial IRRS mission.

11.2.19 SSG-16 Element 20 Interfaces with nuclear security

There were no findings in this area in the initial IRRS mission.

APPENDIX I - LIST OF PARTICIPANTS

INTERNATIONAL EXPERTS			
1.	LEWIS Robert	U.S. Nuclear Regulatory Commission UNITED STATESOFAMERICA	Robert.Lewis@nrc.gov
2.	DEVOS Jacques	Senior Expert FRANCE	jb.devos@numericable.fr
3.	FRANZÉN Anna	Swedish Radiation Safety Authority SWEDEN	anna.franzen@ssm.se
4.	LAVENDER Craig	Office of Nuclear Regulation UNITED KINGDOM	craig.lavender@onr.gov.uk
5.	SONCK Michel	Federal Agency for Nuclear Control BELGIUM	michel.sonck@fanc.fgov.be
6.	STOCKMANN Ynte	Observer Joint Research Centre EUROPEAN COMMISSION	ynte.stockmann@ec.europa.eu
IAEA STAFF MEMBERS			
1.	MAKAROVSKA Olga	Division of Radiation Transport and Waste Safety	O.Makarovska@iaea.org
2.	SHAH Zia Hussain	Division of Nuclear Installation Safety	Z.H.Shah@iaea.org
3.	SWOBODA Zumi	Division of Radiation Transport and Waste Safety	Z.Swoboda@iaea.org
LIAISON OFFICER			
1.	Michał Koc	Liaison Officer Head of International Cooperation and Strategy Unit, President's Office National Atomic Energy Agency of the Republic of Poland	michal.koc@paa.gov.pl

APPENDIX II - MISSION PROGRAMME

IRRS MISSION PROGRAMME		
15 June Thursday		
IRRS Initial Team Meeting		
14:00 - 17:15	Opening remarks by the IRRS Team Leader (Mr Robert Lewis) Introduction by IAEA Self-introduction of all attendees IRRS Process and report writing (IAEA) Schedule (TL, IAEA) First impression from team members arising from the Advanced Reference Material (ARM) (all Team members): Presentations Administrative arrangements (PAA Liaison Officer, IAEA): Detailed Mission Programme	PAA room 117 Participants: the IRRS Team, Liaison Officer
17:15 -19:00	Groups prepare for interviews; Module Leaders prepare TL presentation for the Entrance Meeting (if necessary)	PAA room 117 Participants: the IRRS Team
16 June Friday		
IRRS Entrance Meeting		
09:00 – 12.00	09:00 Arrival, registration, 09:30 Welcoming Address PAA President and Director of Department of Nuclear Energy at Ministry of Energy 9:50 Self-introduction of PAA Liaison officer and counterparts of each module 10:20 Opening remarks by IRRS Team Leader. Expectations for the Mission 10:35 Self-introduction of IAEA mission members 11:00 PAA presentation – Overview of the Polish regulatory approach since 2013 11:30 Photo session	PAA room 26 Participants: High Level Government Official, PAA Management, Liaison Officer and staff, Official from relevant organizations, the IRRS Team
12:00 – 13:00	Lunch	
13:00 – 15:00	Interviews with other agencies (MoH, ME, radioactive waste operator) as needed	Counterparts and Offices according the interviews schedule
15:00 – 17:00	Interviews and Discussions with Counterparts (parallel discussions)	Counterparts and Offices according the interviews schedule

IRRS MISSION PROGRAMME		
17:00 - 18:00	Daily IRRS Review Team meeting	PAA room 117 Participants: the IRRS Team + the LO
19:00 – 22:00	Welcome dinner hosted by PAA President	
17 June Saturday		
Daily Discussions / Interviews		
09:00 – 16:00	Interviews and discussions with counterparts (parallel discussions)	Counterparts and Offices according the interviews schedule
12:00 – 13:00	Lunch	
16:00 – 17:00	Written preliminary finding (conclusions) delivery to the Team Leader copied to IAEA Coordinator	PAA room 117 IRRS Team
17:00 – 18:00	Daily IRRS Review Team meeting/ Discussion of the preliminary findings (conclusions)	PAA room 117 Participants: the IRRS Team + the LO
20:00 – 24:00	Report conclusions drafting	IRRS Team
18 June Sunday		
Daily Discussions / Interviews		
09:00 – 12:00	Follow-up Interviews as needed	Counterparts and Offices according the interviews schedule
12:00 – 13:00	Lunch	
13:00 – 17:00	Report preparation	PAA room 117 IRRS Team
17:00	Written final finding (conclusions) delivery to the Team Leader copied to IAEA Coordinator	IRRS Team
17:00 – 18:00	Daily IRRS Review Team Meeting: conclusions discussions	PAA room 117 Participants: the IRRS Team + the LO
20:00 – 24:00	Report drafting	IRRS Team
19 June Monday		
Daily Discussions / Interviews		
09:00 – 12:00	Interviews with other agencies (MoH, ME, radioactive waste operator) Report preparation	Counterparts and Offices according the interviews schedule
12:00 – 13:00	Lunch	
13:00 – 15:00	Policy issue discussion: parallel sessions if needed.	Venue, Counterparts and Offices: TBD
15:00 – 16:00	Discussion of the interviews with ME, GIS, ZUOP and revising conclusions (if necessary)	PAA room 117 Participants: the IRRS Team
16:00 – 17:00	Individual discussion of findings with counterparts	Counterparts and Offices according the interviews

IRRS MISSION PROGRAMME		
		schedule
17:00 – 18:00	Daily IRRS Review Team Meeting: conclusions discussions, cross reading division among the Team	PAA room 117 Participants: the IRRS Team + the LO
20:00 – 24:00	Report revision	IRRS Team
20 June Tuesday		
Daily Discussions/ Interviews (if needed)		
09:00 – 12:00	Team members cross reads and discusses report draft	PAA room 117 IRRS Team
12:00 – 13:00	Lunch	
13:00 – 16:00	Collective reading and revising the draft report	PAA room 117 IRRS Team
16:00 – 17:00	Executive summary revision	PAA room 117 TL, DTL, TC, DTC
17:00 – 18:00	Revision of the report and submission of the report to IRRS Administrative assistant	IRRS Team
20:00 – 24:00	Submission of the report to the Host – PAA for review	TC, DTC
21 June Wednesday		
Daily Discussions		
09:00 – 16:00	PAA reviews the draft	PAA staff and concerned organizations.
09:00 – 13:00	Social event	IRRS Team
13:00 – 17:00	Executive summary and exit presentation finalization Press release draft preparation	PAA room 117 TL, DTL, TC, DTC and AF
17:00	Written comments **provided by the Host**	TL, DTL, TC and DTC
17:00 – 18:00	Discussion of Host's comments	PAA room 117 IRRS Team alone
18:00 – 19:00	Preparation of the press release	Press-officer, TL, DTL, TC and DTC
22 June Thursday		
Daily Discussions		
09:00 – 10:00	Review of amendments based on host's comments	PAA room 117 IRRS Team alone
10:00 12:00	Discussion with the Host (if necessary)	PAA room 117 IRRS Team and counterparts
12:00 13:00	Lunch	
13:00 – 17:00	Report finalization by the Team and handover the report to PAA	PAA room 117 IRRS Team
	Press release finalization	

IRRS MISSION PROGRAMME		
23 June Friday		
Exit Meeting		
09:00 – 11:00	Government official opening remarks	PAA room 26 Participants: Government Officials, PAA Management, LO and staff, the IRRS Team
	Main findings of the IRRS mission (Team Leader)	
	Remarks by PAA in response to the Mission findings.	
	IAEA Official Closing remarks delivery by IAEA TC	

APPENDIX III - MISSION COUNTERPARTS

	IRRS Experts	PAA Lead Counterpart	PAA Support Staff
1.	**LEGISLATIVE AND GOVERNMENTAL RESPONSIBILITIES**		
	Jacques Devos Robert Lewis Olga Makarovska	Andrzej Przybycin Piotr Korzecki	Marcin Zagrajek R1 S3 Karol Sieczak R2 R3 Jacek Łatka R2 R3 Monika Skotniczna S1 Ernest Staroń S4 Monika Kaczyńska S5 Józef Strojny S5 Artur Wdowczyk R5 Andrzej Chwas (ME) S2 R4 Krzysztof Madaj (ZUOP) S2 R4 Marcin Banach (ZUOP) S2 R4
2.	**GLOBAL NUCLEAR SAFETY REGIME**		
	Jacques Devos Robert Lewis Olga Makarovska	Andrzej Przybycin Piotr Korzecki	Marcin Zagrajek Monika Skotniczna
3.	**RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY**		
	Jacques Devos Robert Lewis Olga Makarovska	Andrzej Przybycin Piotr Korzecki	Marcin Zagrajek R1 S3 Karol Sieczak R2 R3 Jacek Łatka R2 R3 Monika Skotniczna S1 Ernest Staroń S4

IRRS Experts		PAA Lead Counterpart	PAA Support Staff
			Monika Kaczyńska S5 Józef Strojny S5 Artur Wdowczyk R5
4.	**MANAGEMENT SYSTEM OF THE REGULATORY BODY**		
	Anna Franzén	Artur Wdowczyk	Monika Kaczyńska R6 R7 R8 Katarzyna Kaczmarczyk R6 R7 R8
5.	**AUTHORIZATION, REVIEW AND ASSESSMENT, INSPECTION, ENFORCEMENT, REGULATIONS AND GUIDES RELATED TO RADIOACTIVE SOURCE, RADIOACTIVE WASTE AND MEDICAL AND NON MEDICAL**		
	Olga Makarovska	Robert Truszkowski S6, R13, S8 (Radioactive Waste) Monika Skotniczna R12 (Sources)	Barbara Zielińska S6, R13, S8 Monika Szmigiera R12 Katarzyna Doner R12 Agnieszka Jaworska-Sobczak R12 Andrzej Chwas (ME) S8 Krzysztof Madaj (ZUOP) S8 Marcin Banach (ZUOP) S8 Wojciech Skweres (GIS) R12
6.	**AUTHORIZATION, REVIEW AND ASSESSMENT, INSPECTION, ENFORCEMENT, REGULATIONS AND GUIDES RELATED TO RESEARCH REACTORS AND TAILORED MODULE FOR COUNTRIES EMBARKING ON NUCLEAR POWER**		
	Craig Lavender Zia Hussain Shah	Marcin Zagrajek S14 S15 (Tailored Module) Andrzej Głowacki R9 S7 R10 R11 (Research Reactors)	Michał Koc S12 Monika Kaczyńska S13 Józef Strojny S13 Andrzej Głowacki S14 S15 Robert Truszkowski S14 S15 Mateusz Pietruszewski S14 S15 Artur Wdowczyk S16

IRRS Experts		PAA Lead Counterpart	PAA Support Staff
7.	**EMERGENCY PREPAREDNESS AND RESPONSE**		
	Michel Sonck	Krzysztof Dąbrowski	Karol Łyskawiński Michał Zuba

APPENDIX IV - RECOMMENDATIONS (R) AND SUGGESTIONS (S) FROM THE IRRS MISSION THAT REMAIN OPEN

None

APPENDIX V - RECOMMENDATIONS (RF), SUGGESTIONS (SF) AND GOOD PRACTICES (GPF) FROM THE 2017 IRRS FOLLOW-UP MISSION

Section	Module	RF/SF/GPF	Recommendations, Suggestions or Good Practices
4.3	**MANAGEMENT SYSTEM OF THE REGULATORY BODY**	**SF1**	**Suggestion: PAA should consider the planning, budgeting, and resource needs to support ongoing implementation of the Integrated Management system.**
9.3	**REGULATIONS AND GUIDES**	**SF2**	**Suggestion: PAA should consider providing guidance for the use of exemption and clearance levels.**
10.2	**EMERGENCY PREPAREDNESS AND RESPONSE**	**SF3**	**Suggestion: PAA should consider developing guidance on emergency planning zone sizing in more detail than the general provisions of the ALA.**

APPENDIX VI - REFERENCE MATERIAL PROVIDED BY PAA

1. Draft amendment to Atomic Law Act art 1 point 106 (56)
2. Draft amendment to Atomic Law Act art 1 point 103 (106)
3. Draft amendment to Atomic Law Act art. 1 point 51
4. PROCEDURE no. 005DBJ
5. Draft amendment to Atomic Law Act art. 39r
6. Management System Manual
7. Analysis of international experience in building of culture of safety
8. Order No 11 establishing PAA IMS Project Team
9. Order No 9 on implementation of IMS
10. Principles of issue of organizational and technical recommendations of the PAA President
11. License no. 12015 Maria of March 31st, 2015
12. Procedure for Issue of Permit for Modernization and Permit for Re-Launching of a Nuclear Facility
13. Office instruction of PAA
14. PROTOCOL/ No. 1/2014/ZUOP
15. Instruction for Inspection of Radiological Protection by Nuclear Regulatory Inspectors
16. Atomic Law Act of 29 October 2000 Chapter 7
17. Regulation of the Council of Ministers of December 14th, 2015 on Radioactive Waste and Spent Nuclear Fuel
18. Regulation of the Council of Ministers of December 14th, 2015 on periodic assessment of safety of a RW repository
19. Draft amendment to Atomic Law Act art 1 point 95
20. Procedure for Issue of Licenses with regard to Activity Associated with Nuclear Facilities
21. Procedure for Conducting of Regulatory Inspections with Regard to Nuclear Safety
22. Protocol /No. 1/2014/NCBJ
23. Protocol/ No. 3/2015/NCBJ
24. Protocol /No. 5/2016/MARIANCBJ
25. Draft amendment to Atomic Law Act art 86
26. Annex on communication in crisis situations
27. Human Resources Management Program of PAA for years 2013-15

28. Information bulletin for new employees of PAA
29. Agreement with Chief Sanitary Inspector
30. Code of best practices for internal communication
31. Communication strategy-excerpt-Internal communication
32. Draft of Principles and strategic directions for nuclear safety
33. Framework for the IMS implementation project
34. PAA Action Plan on strengthening of safety culture 2017-2019
35. PAA's Human Resources Development Programme for years 2017-2019
36. Project of amendment into Atomic Law Act chapter 11, annex 4
37. Sample process charts and sub-process charts
38. Sample subprocess charts
39. Justification to the draft amendment of ALA - GSR Part 7
40. Agenda PAA-Belarus May 2013
41. Agenda PAA-Belarus 2014
42. Agenda and Minutes PAA-Belarus 2015
43. PAA Paper on request for RCF support 2014
44. PAA OJT implementation summary
45. PAA Study Visits to Foreign Regulators since 2013
46. PAA Communication Strategy executive summary
47. PAA Communication Strategy - Presentation
48. PAA safety policy
49. PAA REPORT for IRRS Follow-up 2017 05 18
50. PAA Annual Report
51. PL National Report on RW and SPNF Management 2015
52. Draft INIR follow-up mission report June 2016
53. INIR report 2013
54. Staffing plan PAA 2017-2018
55. Polish Nuclear Power Program 2014
56. Atomic Law Act with amended Chapter 7

APPENDIX VII - IAEA REFERENCE MATERIAL USED FOR THE REVIEW

1. No. SF-1 - Fundamental Safety Principles
2. INTERNATIONAL ATOMIC ENERGY AGENCY - Governmental, Legal and Regulatory Framework for Safety General Safety Requirement Part 1(Rev 1) (Vienna2016)
3. INTERNATIONAL ATOMIC ENERGY AGENCY- Leadership and Management for Safety Requirement GSR Part 2 IAEA, Vienna (2016)
4. INTERNATIONAL ATOMIC ENERGY AGENCY – Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, General Safety Requirements Part 3, (2014)
5. INTERNATIONAL ATOMIC ENERGY AGENCY – Safety assessment for facilities and activities, General Safety Requirements Part 4, No. GSR Part 4 (Rev 1), IAEA, Vienna (2016)
6. INTERNATIONAL ATOMIC ENERGY AGENCY – Predisposal Management of Radioactive Waste General Safety Requirement Part 5, No. GSR Part 5, IAEA, Vienna (2009)
7. INTERNATIONAL ATOMIC ENERGY AGENCY – Decommissioning of Facilities General Safety Requirement Part 6, No. GSR Part 6, IAEA, Vienna (2014)
8. INTERNATIONAL ATOMIC ENERGY AGENCY – Preparedness and Response for a Nuclear or Radiological Emergency General Safety Requirement Part 7, No. GSR Part 7, IAEA, Vienna (2015)
9. INTERNATIONAL ATOMIC ENERGY AGENCY - Regulations for the Safe Transport of Radioactive Material Specific Safety Requirements 6, No. SSR 6, IAEA, Vienna (2012)8.
10. INTERNATIONAL ATOMIC ENERGY AGENCY - Organization and Staffing of the Regulatory Body for Nuclear Facilities, Safety Guide Series No. GS-G-1.1, IAEA, Vienna (2002)
11. INTERNATIONAL ATOMIC ENERGY AGENCY - Review and Assessment of Nuclear Facilities by the Regulatory Body, Safety Guide Series No. GS-G-1.2, IAEA, Vienna (2002)
12. INTERNATIONAL ATOMIC ENERGY AGENCY - Regulatory Inspection of Nuclear Facilities and Enforcement by the Regulatory Body, Safety Guide Series No. GS-G-1.3, IAEA, Vienna (2002)
13. INTERNATIONAL ATOMIC ENERGY AGENCY - Documentation for Use in Regulatory Nuclear Facilities, Safety Guide Series No. GS-G-1.4, IAEA, Vienna (2002)
14. INTERNATIONAL ATOMIC ENERGY AGENCY- - Arrangements for Preparedness for a Nuclear or Radiological Emergency, Safety Guide Series No. GS-G-2.1, IAEA, Vienna (2007)
15. INTERNATIONAL ATOMIC ENERGY AGENCY – Criteria for use in Preparedness and Response for a Nuclear or Radiological Emergency, General Safety Guide Series No. GSG-2, IAEA, Vienna (2011)

16. INTERNATIONAL ATOMIC ENERGY AGENCY– Assessment of Occupational Exposure Due to Intake of Radionuclides Safety Guide Series No. RS-G-1.2, IAEA, Vienna (1999)

17. INTERNATIONAL ATOMIC ENERGY AGENCY - Assessment of Occupational Exposure Due to External Sources of Radiation Safety Guide Series No. RS-G-1.3, IAEA, Vienna (1999)

18. INTERNATIONAL ATOMIC ENERGY AGENCY - Building Competence in Radiation Protection and the Safe Use of Radiation Sources, Safety Guide Series No. RS-G-1.4, IAEA, Vienna (2001)

19. INTERNATIONAL ATOMIC ENERGY AGENCY – Classification of Radioactive Waste, General Safety Guide No. GSG-1, IAEA, Vienna (2009)

20. INTERNATIONAL ATOMIC ENERGY AGENCY – Regulatory Control of Radioactive Discharge to the Environment, Safety Guide Series No. WS-G-2.3, IAEA, Vienna (2000)

21. INTERNATIONAL ATOMIC ENERGY AGENCY – Safety Assessment for the Decommissioning of Facilities Using Radioactive Material, Safety Guide Series No. WS-G.5.2, IAEA, Vienna (2009)

22. INTERNATIONAL ATOMIC ENERGY AGENCY – Establishing the Safety Infrastructure for a Nuclear Power Programme Specific Safety Guide No SSG-16, IAEA, Vienna (2011)

23. INTERNATIONAL ATOMIC ENERGY AGENCY - Disposal of Radioactive Waste Specific Safety Requirements 5, No. SSR 5, IAEA, Vienna (2011)

24. INTERNATIONAL ATOMIC ENERGY AGENCY – Review and Assessment of Nuclear Facilities by the Regulatory Body, Safety Guide Series No. GS-G-1.2, IAEA, Vienna (2002)

25. INTERNATIONAL ATOMIC ENERGY AGENCY – Regulatory Inspection of Nuclear Facilities and Enforcement by the Regulatory Body, Safety Guide Series No. GS-G-1.3, IAEA, Vienna (2002)

26. INTERNATIONAL ATOMIC ENERGY AGENCY – Documentation for Use in Regulatory Nuclear Facilities, Safety Guide Series No. GS-G-1.4, IAEA, Vienna (2002)

27. INTERNATIONAL ATOMIC ENERGY AGENCY – Safety of Nuclear Power Plants: Design, Specific Safety Requirement Series SSR-2/1 IAEA, Vienna (2012)

28. INTERNATIONAL ATOMIC ENERGY AGENCY – Safety of Nuclear Power Plants: Operation, Safety Requirement Series No. NS-R-2, IAEA, Vienna (2000)

29. INTERNATIONAL ATOMIC ENERGY AGENCY – Safety of Research Reactors, Safety Requirement Series No. NS-R-4, IAEA, Vienna (2005.)

30. INTERNATIONAL ATOMIC ENERGY AGENCY – Periodic Safety Review of Nuclear Power Plants Specific Safety Guide SSG-25, IAEA, Vienna (2013)

31. INTERNATIONAL ATOMIC ENERGY AGENCY – A System for the Feedback of Experience from Events in Nuclear Installations Safety Guide No. NS-G-2.11, IAEA, Vienna (2006)

APPENDIX VIII - PAA ORGANIZATIONAL CHART