Structure and contents of the National Action Plans (NAcP) responding to the country-specific and other findings of TPR II on Fire Protection at nuclear installations

[As endorsed by ENSREG, 30/10/2025]

Introduction

The final reports of second topical peer review (TPR II) under the Nuclear Safety Directive were issued in the spring of 2025. National areas of good performance and national areas for improvement [as relevant] are described in the 22 individual Country Review Reports (CRR). The review also identified both good practices and challenges at the EU-level, which are detailed in the Summary Report (SR)[1].

According to the Nuclear Safety Directive (recital 23, 3rd paragraph) "*…Member States should establish national action plans for addressing any relevant findings and their own national assessment, taking into account the results of those peer review reports."* The TPR II technical specification (TS) also acknowledges the opportunity to reflect on peer review outcomes stating, "*There are different practices in implementation of fire protection among installations, which gives the opportunity to learn from each other and share experiences*" and that *"...the results of TPR II can lead to new insights"*.

According to the TPR II terms of reference, *"On the basis of the relevant CRR, each country will prepare a specific National Action Plan that will be published … on the ENSREG website. The actions shall be as specific as possible to each installation. A template for the National Action Plan will be provided after the peer review phase".* Furthermore, "*Each country will also inform on the progress of the implementation of the actions included in the action plan based on a follow-up schedule of at least 3 years, as defined in the ENSREG Action Plan."*

It should be recalled that national assessments identified both candidate installations and represented ones[2]. The TS mentions that *"…Insights from the TPR should be transferrable to these represented installations*."

Consequently, the TPR II Summary Report of the TPR Board, endorsed by ENSREG, reiterates these elements from the Directive and the TS: "*The National Action Plan should address the results of the self-assessment and respond to the country specific findings (CSFs) outlined in the country review report."* Furthermore, the Board recommends that *"…participating countries consider how the insights from the TPR, in particular their CSFs, are transferable to their "represented installations" when developing their NAcP. Additionally, the Board encourages participating countries to examine all findings from this peer review - regardless of their categorisation (good practice, area of good performance, area for improvement) - and assess their applicability to enhance fire protection*."

This note details the structure and contents of the NAcPs (template) to help guide the participating countries on reporting, and to aid the subsequent review by the ENSREG working groups. Note that follow-up of the 'EU-level challenges' is to be reported on in the ENSREG Action Plan.

Timing and follow-up of the NAcPs

Participating countries should submit their NAcP to ENSREG WG1 by **31 August 2026**.

[1] The TPR II definitions of 'Good Practice', 'National area of good performance', 'National area for improvement', 'Challenge (EU wide)' are described in Annex II of the Summary Report.

[2] According to the technical specification, the "*term 'represented installations' refers to installations that will not be reported on in the NAR but which are similar to candidate facilities. Insights from the TPR should be transferrable to these represented installations*".

TPR II National Action Plan - POLAND

[The NAcP should consist of the five sections below plus Annex A, although reporting under section 4 is on a voluntary basis. The text in red serves as guidance on the contents and does not form part of the NAcP. Annexes B, C and D are also for information only].

Contents

1. **Introduction**

There is only one nuclear installation in Poland which comes within the scope of the current TPR II – namely the MARIA Research Reactor in Świerk. It has been under review as candidate installation and the site was also visited by the TPR II team on 21 May 2024. In their conclusion from site visit TPR II experts appreciated already implemented and still ongoing improvements programme in the place and still ongoing process for updating of procedures and efforts to strengthen safety culture. The implementation of new and modern provisions, in particular to meet the current fire protection regulations was identified as an area of Good performance of MARIA Research Reactor.

2. **Follow-up of findings from the peer review – national areas for improvement**

2.1 AFI (1) – MARIA Research Reactor - Lack of automatic extinguishing systems

2.1.1 Identified action(s) and implementation progress:

Installing automatic fire suppression systems in places where there is a risk of a fire that could threaten critical infrastructure, meaning Structures, Systems and Components (SSCs elements) of a nuclear facility that are important for nuclear safety and radiation protection. Associated timescale: end of 2029.

The schedule for implementing corrective actions for AFI (1)

Stage	Action	Deadline
I	Location analysis for installing automatic fire extinguishing systems – already started	end of 2027
II	Development of the automatic fire extinguishing system design	end of 2028
III	Installation of automatic fire extinguishing systems	end of 2029

2.1.2 Applicability to represented installations - not applicable

2.2 AFI (2) – MARIA Research Reactor - Lack of compartmentation or compensatory measures between redundant SSCs (UPS, diesel generators)

2.2.1 Identified action(s) and implementation progress:

Fire zone separation between redundant emergency power systems. Associated timescale: end of 2029.

The schedule for implementing corrective actions for AFI (2)

Stage	Action	Deadline
I	Analysis for compartmentation between emergency power systems – already started	end of 2027
II	Development of the fire zones design	end of 2028
III	Construction work	end of 2029

2.2.2 Applicability to represented installations - not applicable

3. Follow-up of other findings resulting from the self-assessment

3.1 Installation MARIA Research Reactor

3.1.1 Fire Safety Analysis

3.1.1.1 Weaknesses identified in the self-assessment *[Short description]*

Weakness identified: The scope of the fire safety analyses performed does not cover scenarios involving combinations of various events. Uncertainties are not taken into account in the fire safety analyses. Neither direct nor indirect consequences for nuclear safety and radiological protection have been evaluated in analysis of impact of a fire (apart from the initiating events themselves).

Implementation progress: Planned review of safety analyses taking fire protection factors into account. Considering fire protection factors as conclusions from emergency drills.

3.1.2 Fire Prevention

not applicable

3.1.3 Passive Fire Protection

3.1.3.1 Weaknesses identified in the self-assessment

Weakness identified: The construction of the building and reactor installations were designed using old standards and technical solutions, preventing its full adaptation to the requirements of current regulations.

Implementation progress: On-going adaptation of the building from the 1970s to current fire protection regulations based on the guidelines of the Fire Protection State Expertise.

3.1.4 Active Fire Protection

3.1.4.1 Weaknesses identified in the self-assessment

Weakness identified: The lack of automatic extinguishing systems wherever there is a risk of fire that could threaten critical infrastructure for nuclear safety and radiological protection.

Implementation progress: Installing automatic fire suppression systems in places where there is a risk of a fire that could threaten critical infrastructure, meaning

Structures, Systems and Components (SSCs elements) of a nuclear facility that are important for nuclear safety and radiation protection. Associated timescale: end of 2029 – see also AFI (1) above.

3.1.4.2 Weaknesses identified in the self-assessment

Weakness identified: No on-site internal Plant Fire Brigade unit

Solution: Plant Fire Brigade is not considered, because of above-standard equipping of the MARIA reactor facility with modern fire protection devices, including a comprehensive fire alarm system, a sound broadcasting system that meets the standards of an audible warning system, and a larger number of portable fire extinguishing equipment units than required. Moreover, constant presence in a 24/7 shift system of internal services capable of taking emergency actions (OGA group) and promptly dispatching external services. As well as cooperation with the nearest units of the Fire Service (time of arrival up to 10 minutes from the call) in the field of training and joint exercises.

4. Consideration of the other findings[3] from the peer review to enhance fire protection

4.1 Applicability of good practices identified in the peer review - not applicable

4.2 Applicability of national areas of good performance in other countries
In MARIA research Reactor, as in reference no. TR-AGP-2 in Annex C, we have formalised arrangements between the reactor facility and the city fire brigade contributes to an effective response in case of a fire. Additionally, we have a rescue and firefighting action plan agreed upon with the local authority, the Mazovian Fire Department headquarters.

4.3 Applicability of national areas of improvement in other countries - not applicable

5. Overall conclusions

Annex A - Summary table of the actions planned/implemented (for completion)

Annex B - Summary of Good Practices (for information)

Annex C - Compilation of National Areas of Good Performance (for information)

Annex D - Compilation of National Areas for Improvement (for information)

[3] The TPR II Summary Report mentions in section 9.2 that *"……. The Board encourages countries to examine all findings from this peer review – regardless of the categorisation (good practice, area of good performance, area for improvement) – and assess their applicability to enhance fire protection*."

Annex A - Summary table of the actions planned/implemented

Section of NAcP	**Reference no of the finding**	**Installation type/name** (as relevant)	**Thematic**	**Finding**	**Action** (specify if planned/underway/completed)	**Deadline**	**Regulatory authority's comment on progress**
2	AFI 1	MARIA Research Reactor	Active Fire Protection	Lack of automatic extinguishing systems	underway	End of 2029	Results of the first version of the analyses regarding the installation of automatic fire extinguishing systems have been submitted to the regulator for review.
2	AFI 2	MARIA Research Reactor	Passive Fire Protection	Lack of compartmentation or compensatory measures between redundant SSCs (UPS, diesel generators)	underway	End of 2029	Results of the preliminary analyses regarding the implementation of compartmentation between redundant SSCs (UPS, diesel generators) have been submitted to the regulator for review.
3	NAR-section 3.1.4	MARIA Research Reactor	Passive Fire Protection	The construction building and reactor installations were designed using old standards and technical solutions, preventing its full adaptation to the requirements of current regulations.	underway	End of 2029	Actions have been taken in accordance with the recommendations provided in the Fire Protection State Expertise.
3	NAR-section 3.5	MARIA Research Reactor	Active Fire Protection	The lack of automatic extinguishing systems wherever there is a risk of fire that could threaten critical infrastructure for nuclear safety and radiological protection.	The same as AFI 1	End of 2029	The same as AFI 1
3	NAR-section 2.7.1	MARIA Research Reactor	Fire Safety Analysis	The scope of the fire safety analyses performed does not cover scenarios involving combinations of various events. Uncertainties are not taken into account in the fire safety analyses. Neither direct nor indirect consequences for nuclear safety and radiological protection have been evaluated in analysis of impact of a fire (apart from the initiating events themselves).	planned	End of 2029	No actions related to the identified issue have been communicated to the regulator to date.
3	NAR-section 3.5	MARIA Research Reactor	Active Fire Protection	No on-site internal Plant Fire Brigade unit.	One measure to address this weakness is to collaborate with an external fire department.	-	There are no national regulations requiring the establishment of an internal fire department. Therefore, the current arrangements involving cooperation with an external fire department are regarded to be adequate and acceptable.

Annex B - Compilation of Good Practices (adapted from Summary report Annex IV. See that report for further details)

Ref. no.	Good Practice
GP-1	'Implementing learning from experience feedback from fire events in non-nuclear settings'
GP-2	'Extensive series of tests carried out to assess the effects of fire on elements (electrical equipment, fire doors, cables, seals, etc.) credited in the fire safety analyses to confirm their assumed resistance to the fire-induced phenomena'
GP-3	'A dynamic system to manage storage area for transient fire loads and other non-combustible materials'
GP-4	'Thermographic cameras installed on worksites, or in case of the failure of a detector, with different detection zones and alarms'

Annex C - Compilation of National Areas of Good Performance (by installation type, adapted from Summary report Annex VI)

Ref. no.	Finding	Identified in the TPR for the installation
ALL/MULTIPLE INSTALLATIONS		
FR-AGP-7	Comprehensive national review after Lubrizol (chemical industry) fire accident resulting in ASN requests and consequently in concrete actions in all nuclear installations.	All installations (FR)
NL-AGP-1	Full-scope fire PSA in all operational states for Level 1 to 3 PSA.	Borssele NPP, HFR RR (NL)
UK-AGP-1	There is an independent verification of hot work in addition to the assessment by the 'Hot Work Selected Person' and review by the 'Hot Work Controller' for enhanced control of work areas.	All installations (UK)
UK-AGP-2	The nuclear sector-wide review of combustible cladding risks instigated by the nuclear regulator, to identify and implement any transferable learning from the Grenfell fire.	All installations (UK)
UK-AGP-4	Implementation of automatic fire suppression system to transporter tug engines across the site.	Sellafield (UK)
NPPs		
BE-AGP-1	A solid process is in place to manage the authorisations to have fire doors opened: the wedge to block the fire door can be collected at the Main Control Room after approval.	Tihange 3 NPP (BE)
BE-AGP-2	The existence of first-intervention teams (composed of operators) and second- intervention teams (composed of professional fire fighters) with proper equipment and, in the case of Tihange NPP-external firefighters quartered opposite the site, ensures an appropriate response to any fire event.	Tihange 3 NPP (BE)
BE-AGP-3	Use of a mobile scanner device with an intuitive IT tool and barcode on items to easily identify equipment or material allowed to be stored.	Tihange 3 NPP (BE)
BE-AGP-4	Implementation of a software tool to easily assess the adequacy of the fire protection measures.	Tihange 3 NPP (BE)
CH-AGP-2	Robustness of the fire detection system against single failure.	NPPs (CH)
CZ-AGP-1	A large professional fire brigade (FRSU) ranging from 12 to 18 depending on the NPP, is deployed on a permanent basis on the NPP site providing fire prevention, firefighting and rescue services.	NPPs (CZ)
CZ-AGP-2	A large modernisation of fire detection system has been carried out with the use of new generation, multi-criteria detectors.	NPPs (CZ)
ES-AGP-1	Implementation of effective flooding protection of critical equipment from the harmful effects of firefighting water extinguishing system.	Almaraz and Cofrentes NPP (ES)

Ref. no.	Finding	Identified in the TPR for the installation
ES-AGP-2	Detailed arrangements for the management of hot works are provided (covering e.g. scope of works, supervision, necessary firefighting equipment).	Cofrentes NPP (ES)
ES-AGP-3	New fire-fighting procedures and training have been implemented as a result of the lessons learnt from conventional industry.	Vandellos 2 NPP (ES)
FI-AGP-1	Use of a battery for powering fire valves and smoke removal valves for a period of at least 10 minutes as a compensatory measure.	Olkiluoto 3 (FI)
FI-AGP-2	Gas detectors are installed in premises where diesel generators are located which signal the leakage of combustible gases from fuel tanks.	Lovisa 1, 2 NPP (FI)
FR-AGP-1	Implementation of door-open alarms for the ones representing a safety risk (PSA based).	Tricastin 900 MWe NPP (FR)
FR-AGP-2	Implementation of thermal cameras on particular worksites providing an alarm in the main control room in order to be alerted of a fire outbreak.	NPPs (FR)
FR-AGP-3	Measures to be taken by the operators in the control room are pre-defined in written instructions (FAIOp).	NPPs (FR)
FR-AGP-4	High-level modelling of the effects of fire (soot, pressure effects…) to confirm the fire resistance of compartmentation elements and Structures, Systems, Components (SSCs) performance.	NPPs (FR)
HU-AGP-1	There is a permanent presence of a well-resourced on-site fire brigade.	Paks NPP (HU)
RO-AGP-1	Since 2022, a professional unit of firefighters (15 firefighters, 3 fire trucks) is deployed on a permanent basis on the Cernavoda NPP site.	Cernavoda NPP Unit 1 (RO)
SE-AGP-1	The design approach of the fire detection and alarm system is robust regarding the separation of redundant trains.	NPPs (SE)
SE-AGP-2	Measures to be taken by the operators in the control room are pre-defined in written instructions for every single fire compartment depending on the area affected. For complex spaces, intervention layouts (rooms, detectors and so on) and fire compartment layouts are complemented with specially developed intervention plans.	Ringhals 3 NPP (SE)
SK-AGP-1	A professional multi-functional fire brigade (minimum 18 staff) is deployed on a permanent basis on the NPP site. In addition, an external fire brigade is available whose intervention is planned in the event of a fire. The effectiveness of the joint intervention is verified via annual drills.	Mohovce 3, 4 NPP (SK)

Ref. no.	Finding	Identified in the TPR for the installation
TR-AGP-1	The presence of a well-resourced on-site fire brigade contributes to responding to fires in a timely and robust manner.	Akkuyu NPP (TR)
UA-AGP-1	An extensive and targeted modernisation programme of fire protection equipment and systems has been undertaken at the NPPs.	NPPs (UA)
UK-AGP-3	Fire doors and hatches which form part of the nuclear fire compartment have position monitoring that initiate an alarm in the MCR if the door is left open.	Hinkley Point C, Sizewell B and 2nd generation AGRs (UK)
RESEARCH REACTORS		
FR-AGP-5	Use of a semi-quantitative fire risk assessment methodology for each of the 600 rooms of the reactor building.	RHF RR (FR)
FR-AGP-6	Modernisation of the facility with significant improvements (both on passive and active components) including the ones in the frame of the PSR.	RHF RR (FR)
HU-AGP-2	A significant number of the staff and reactor operator personnel are certified fire safety engineers.	Budapest Research Reactor (HU)
NL-AGP-2	A systematic approach for combination of hazards is applied.	HFR RR (NL)
PL-AGP-1	Implementation of new and modern provisions, in particular to meet the current fire protection regulations.	MARIA, Świerk (PL)
TR-AGP-2	Formalised arrangements between the reactor facility and the city fire brigade contributes to an effective response in case of a fire.	İTÜ Research Reactor (TR)
DECOMMISSIONING		
IT-AGP-2	Permanent presence on the site of the research reactor under decommissioning of a well-resourced on-site fire brigade.	ESSOR RR - Decommissioning (IT)
SPENT FUEL STORAGE		
CH-AGP-1	Fires resulting from military aircraft crash were considered at the design stage of the spent fuel storage facility and also the radioactive waste storage buildings.	Zwilag SFS (CH)
SI-AGP-1	Fire resulting from large commercial aircraft crash are considered in the design basis in the deterministic studies for storage casks for spent fuel.	Dry SFDS Krško NPP site (SI)
WASTE		
IT-AGP-1	Fires resulting from a military aircraft crash onto waste buildings are considered at the design stage and compliance of the consequential impact with established radiological objectives verified.	OPEC2 and D2 EUREX - Waste (IT)

Annex D - Compilation of National Areas for Improvement (by installation type, adapted from Summary report Annex VII. See also the country CRR for further details including justifications)

Ref. no.	Finding	Identified in the TPR for the Installation
ALL/MULTIPLE INSTALLATIONS		
DK-AFI-2	Fire preventive measures rely to a higher degree on the adherence to operational procedures than on the structural and layout features of the building itself.	Risø site (DK)
LT-AFI-3	A need for standardisation of inspections and functionality testing procedures for fire dampers. Fire dampers must be visually inspected on site for actuation condition and such a method shall be properly addressed in relevant Ignalina NPP operating and maintenance procedures.	All installations (LT)
UK-AFI-3	Holistic Fire Safety Strategies (FSSs) covering fire objectives: nuclear safety, life safety, property protection not currently available for all nuclear facilities.	Sellafield (UK)
NPPs		
BE-AFI-1	The verification and inspection process of the seals in fire resistant concrete dals is implemented but not yet integrated in all the maintenance procedures.	Tihange 3 NPP (BE)
BE-AFI-2	FSA should consider seismically induced fire.	Tihange 3 NPP (BE)
BG-AFI-1	The need for replacement of fire detectors due to ageing management.	Kozloduy Unit 5 NPP (BG)
CH-AFI-2	There are two different systems to support the fire load management. It does not allow to get information efficiently.	Leibstadt NPP (CH)
CH-AFI-4	There is a need to reassess the detection strategy in area/rooms with harsh environment, in particular high radiation, according to the FSA, and consider the adoption of appropriate fire detection solutions where needed.	All NPPs (CH)
CZ-AFI-1	The water fire extinguishing system which protects the cable compartments is obsolete.	Dukovany NPP (CZ)
ES-AFI-1	Licensees to make a better use of fire operational experience database, such as 'FIRE'.	NPPs (ES)
FI-AFI-1	A need to complete replacement of old CO2-gas extinguishing systems, whose design basis does not comply with today's industrial standards.	Olkiluoto 1,2 NPP (FI)
FI-AFI-2	FSA should consider seismically induced fire.	Lovisa 1, 2 & Olkiluoto 1,2 NPP (FI)
HU-AFI-3	Lack of detector for an area with combustible materials temporary storage.	Paks NPP (HU)

HU-AFI-4	Fire detection systems for buildings other than the reactor and turbine buildings and water extraction plant are not seismically qualified and not independent between adjacent compartments. A risk-based justification is not provided.	Paks NPP (HU)
HU-AFI-5	There is a need to reassess the detection strategy in area/rooms with harsh environment, in particular high radiation, according to FSA, and consider the adoption of appropriate fire detection solutions where needed.	Paks NPP (HU)
NL-AFI-1	Several automatic extinguishing systems do not fully comply with the current design requirements and regulations.	Borssele NPP (NL)
NL-AFI-2	The fire detection alarms are not simulated in the control room simulator.	Borssele NPP (NL)
NL-AFI-4	Automatic fire suppression is not guaranteed in case of SSE.	Borssele NPP (NL)
RO-AFI-1	Fire hydrants and piping not yet installed in the Reactor Building of Unit 1.	Cernavoda NPP Unit 1 (RO)
RO-AFI-3	The combination of fire and earthquake events is not systematically considered and documented in all nuclear installations, as applicable.	Cernavoda NPP Unit 1 (RO)
SI-AFI-1	Absence of multiple spurious operation (MSO) in FHA.	Krško NPP (SI)
SK-AFI-1	The intervention time of the intervention units may be delayed due to restricted access to certain rooms.	Mochovce 3,4 NPP (SK)
UA-AFI-1	A need to enhance fire hazard analysis by further development of deterministic analyses to specifically assess the potential consequences of fire events on the performance of the safety functions.	NPPs (UA)
RESEARCH REACTORS		
AT-AFI-1	Absence of fire extinguishing blankets that could prevent fires from developing and causing damage to the infrastructure.	TRIGA Mark II Vienna RR (AT)
HU-AFI-2	No inventory of the flammable materials transported into the facility (e.g. packaging materials, paints).	Budapest Training Reactor (HU)
HU-AFI-1	The site conditions create conflicting responsibilities between the site owner and reactor operator organisation, which complicates the approval processes for certain modifications or corrective actions.	RRs (HU)
HU-AFI-6	Insufficient physical separation between redundant safety-related components (i.e. diesel generators, ventilators).	Budapest Research Reactor (HU)
IT-AFI-1	Based on the FHA results, the fire protection system for RSV TAPIRO has to be improved, in particular with regard to the fire compartmentation and to the ventilation system.	TAPIRO Fast Neutron RR (IT)
NL-AFI-5	Inadequate management and qualification of isolation valves in the reactor building.	Hoger Onderwijs Reactor- HOR (NL)

NL-AFI-6	In the reactor building fire detectors are located only in the ventilation ducts.	Hoger Onderwijs Reactor- HOR (NL)
PL-AFI-1	Lack of automatic extinguishing systems.	MARIA, Świerk (PL)
PL-AFI-2	Lack of compartmentation or compensatory measures between redundant SSCs (UPS, diesel generators).	MARIA, Świerk (PL)
RO-AFI-2	The fire hazard analysis performed in 2013 has not been revised and updated yet. It should be updated as part of Periodic Safety Review of the RR which is currently under development. According to the TPR Team, FHA should be revised at least every 10-years as part of the PSR.	TRIGA Research Reactor in Pitesti (RO)
TR-AFI-1	Need for review and upgrading of the fire safety-related systems in order to adapt to the design requirements in the new regulation on fire safety of nuclear facilities.	İTÜ Research Reactor (TR)
TR-AFI-2	Due to the new regulation on fire safety, the licensee will have to perform a fire safety analysis and hazard assessment. It should include justification of the acceptability of the fire protection measures including the seismic robustness of fire protection equipment.	İTÜ Research Reactor (TR)
FUEL CYCLE FACILITIES		
ES-AFI-2	Need for consideration of the radiological risks in the FHA.	Juzbado FCF (ES)
FR-AFI-1	In the event of fire extinguished with water, the extinguishing water has to be retained and collected within the building concerned or its immediate vicinity. For two buildings out of the eight harbouring uranium-bearing materials, part of the extinguishing water is liable to infiltrate the soil. Thus, these two buildings must undergo improvements in order to retain and recover fire extinguishing effluents. These improvements are taken into account as part of the installation's ongoing periodic safety review.	Framatome Romans fuel fabrication facility (FR)
FR-AFI-2	Improve the implementation of spray water extinguishers regarding the Labour Code requirements. Incompatibilities with the process or particular water-reactive substances should be assessed in order to not degrade the safety of nuclear installations.	La Hague (FR)
NL-AFI-3	No obvious connection between the diverse fire analyses performed with different requirements, guidelines and scenarios depending on the fire analyses.	FCF Urenco (NL)
UK-AFI-1	Lack of systematic consideration of combined or consequential hazards assessment as part of the current safety case.	Springfields Fuels Ltd (UK)
SPENT FUEL STORAGE		

CH-AFI-1	A need for a revision of the fire protection concept into an 'overarching fire protection concept' and detailed building-specific fire protection concepts.	Beznau and Gösgen NPP and Zwibez spent fuel storage (CH)
CH-AFI-3	Necessary to update and supplement the fire protection concepts and associated documentation in accordance with the national fire protection regulations.	Zwilag SFS (CH)
IT-AFI-2	There is a need to strengthen the fire detection provisions in the context of the planned fuel transfer into the new dry storage facility.	ITREC plant - SFS (IT)
IT-AFI-4	There is a need to reassess the fire protection measures to decide whether to install new provisions (e.g. fire dampers, smoke detectors, ventilation ducts, …).	ESSOR Plant- SFS (IT)
LT-AFI-1	A need to install additional equipment that would allow remote monitoring of the situation in SNFSF-1 from INPP main control room.	SNFSF-1 (LT)
SK-AFI-2	There is a need to complete the replacement of external underground fire hydrants with external over-ground fire hydrants.	Interim spent fuel (SK)
SK-AFI-3	Additional work is needed to review the components and replace the cable connections of the fire detection and protection system (FDPS).	Interim spent fuel (SK)
SK-AFI-4	There is a need to re-evaluate the use of voice alarm in the civil structure.	Interim spent fuel (SK)
SK-AFI-5	There is a need to re-evaluate the possibility of controlling important fire equipment (HVAC equipment, ventilation of protected escape routes, fire doors, power shutdown) via the FDPS.	Interim spent fuel (SK)
SK-AFI-6	There is a need to elaborate procedures for the repair, the operability and the identification of fire protection system components.	Interim spent fuel (SK)
DECOMMISSIONING		
DK-AFI-1	Since there are no dampers installed in the ventilation system, the fire in the building can spread through the duct system.	Hot Cell facility - Risø site - Decommissioning (DK)
IT-AFI-3	There is a need to update the fire protection provisions in compliance with technical guide n. 31, in the context of the ongoing licensing process for decommissioning.	ESSOR RR, EUREX FCF - Decommissioning (IT)
UK-AFI-2	No explicit fire loading limits: a proportionate approach is needed to implement the day-to-day management of fire loading with the assessment of fire loadings in the nuclear safety case.	Dounreay Prototype Fast Reactor - Decommissioning (UK)

WASTE STORAGE		
DK-AFI-3	The lack of compartmentation (rooms not everywhere separated by doors and absence of floor to ceiling wall) requires complementary analysis to verify and implement, if necessary, compensatory measures to ensure that fire does not spread from between different activities.	Risø - Waste (DK)
DK-AFI-4	There is a need to implement a system to document the inventory of fire loads (e.g. computer system).	Risø -Waste (DK)
LT-AFI-2	A need to implement solutions to improve the reliability of fire detectors that are operating in hard conditions (for instance, high radiation, humidity) in Solid waste treatment and storage facilities (B3/4 project) and Solid waste storage buildings 157, 157/1.	Waste (LT)