**Table of Concordance - WENRA Reference Levels**

Status: 2017

JV4 Pravilnik o zagotavljanju usposobljenosti delavcev v sevalnih in jedrskih objektih

JV5 Pravilnik o dejavnikih sevalne in jedrske varnosti

JV9 Pravilnik o zagotavljanju varnosti po začetku obratovanja sevalnih ali jedrskih objektov

ZVISJV Zakon o varstvu pred ionizirajočimi sevanji in jedrski varnosti

| **WENRA zahteva (reference level)** | |  | **Prenovljena slovenska zakonodaja** | **Updated slovenian legislation** |
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| **Točka** | **Opis** | **Člen** | **Besedilo člena/odstavka/točke** |  |
| A: | Safety Policy |  |  |  |
| A 1.1 | A written safety policy1 shall be issued by the licensee.  1 A safety policy is understood as a documented commitment by the licensee to a high nuclear safety performance supported by clear safety objectives and targets and a commitment of necessary resources to achieve these targets. The safety policy is issued as separate safety management document or as a visible part of an integrated organisational policy. | JV5 60/1-3 | (1) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora v okviru sistema vodenja pripraviti pisni dokument o svoji varnostni politiki (v nadaljnjem besedilu: varnostna politika), s katerim se zaveže k zagotavljanju visoke stopnje sevalne in jedrske varnosti.  (2) Varnostna politika mora biti izdana kot samostojni dokument ali pomemben del skupne politike organizacije.  (3) Varnostna politika mora:  1. opredeliti investitorjevo oziroma upravljavčevo zavezo, da zagotavlja potrebna sredstva za doseganje zastavljenih ciljev;  2. dajati jasno prednost zagotavljanju varnosti pred vsemi drugimi dejavnostmi v objektu;  3. vsebovati obvezo za stalno izboljševanje varnosti;  4. zahtevati usmeritve za izvajanje varnostne politike in predvideti način spremljanja njene učinkovitosti;  5. vsebovati zastavljene varnostne cilje, oblikovane tako, da jih vodstvo objekta lahko spremlja in po potrebi ukrepa.  6. vsebovati ključne usmeritve glede računalniške varnosti;  7. vsebovati zahteve za stalne izboljšave sevalne in jedrske varnosti na podlagi:  - rednih (stalna dejavnost, katere namen je pregledovanje in analiziranje projekta objekta in njenega obratovanja ter prepoznavanje priložnosti za izboljšave) in celovitih presoj varnosti sevalnega ali jedrskega objekta, pri čemer se upoštevajo obratovalne izkušnje, raziskave s področja sevalne in jedrske varnosti ter nova dognanja v znanosti in tehnologiji;  - pravočasne uvedbe prepoznanih izboljšav, če se te izkažejo za smiselne;  - takojšnjega obravnavanja novih podatkov, ki so lahko pomembni za varnost jedrskega ali sevalnega objekta;  8. vključevati tudi vidike varovanja oziroma nadzora nad jedrskimi snovmi in fizičnega varovanja. | (1) The management of the investor or operator of a radiation or nuclear facility shall as part of the management system make a written safety policy document (hereinafter: safety policy) and thereby bind itself to implementing high levels of radiation and nuclear safety.  (2) Safety policy shall be issued as a separate document or a significant part of the overall policy of the organization.  (3) The safety policy shall:  1. specify the investor’s or operator’s commitment to provide appropriate resources to accomplish the set objectives;  2. establish the clear priority of ensuring safety over all other activities in the facility;  3. contain a commitment to continual advancement of safety;  4. specify safety policy implementation guidelines and set out the method of monitoring its efficiency;  5. contain the set safety objectives, formulated so as to facilitate their monitoring by facility management and allowing for the taking of appropriate measures;  6. contain key policies regarding cyber security;  7. contain requirements for continuous improvement of radiation protection and nuclear safety under:  - regular (permanent activity aimed at reviewing and analyzing facility project and its operation, and identify opportunities for improvement) and comprehensive assessment of the safety of a radiation or nuclear facility, taking into account operating experience, research in the field of nuclear and radiation safety as well as new developments in science and technology;  - the timely introduction of identified improvements, if these prove to be meaningful;  - Immediate treatment of new data that may be relevant for the safety of a nuclear or radiation facility;  8. contain the aspects of protection and control of nuclear materials and safeguards |
| A 1.2 | The safety policy shall be clear about giving safety an overriding priority in all plant activities. | JV5 60/3/2 | 2. dajati jasno prednost zagotavljanju varnosti pred vsemi drugimi dejavnostmi v objektu; | The safety policy shall:  2. establish the clear priority of ensuring safety over all other activities in the facility; |
| A 1.3 | The safety policy shall include a commitment to continuously develop safety. | JV5 60/3/3 | 3. vsebovati obvezo za stalno izboljševanje varnosti; | The safety policy shall:  3. contain a commitment to continual advancement of safety; |
| A 1.4 | The safety policy shall be communicated to all site personnel with tasks important to safety, in such a way that the policy is understood and applied. | JV5 60/4 | (4) Osebje, ki opravlja dela, pomembna za varnost, mora biti seznanjeno z varnostno politiko, jo mora razumeti in jo izvajati. | (4) Safety policy shall be communicated to all facility personnel. Personnel involved in tasks important to safety shall understand safety policy and be involved in its implementation. |
| A 1.5 | Key elements of the safety policy shall be communicated to contractors, in such a way that licensee’s expectations and requirements are understood and applied in their activities. | JV5 60/5 | (5) Z varnostno politiko morajo biti seznanjeni tudi podizvajalci, tako da razumejo pričakovanja upravljavca in jih znajo s svojimi dejavnostmi uresničiti. | (5) The safety policy shall also be communicated to subcontractors, to allow them to understand the operator’s expectations and to meet them in their activities. |
| A 2.1 | The safety policy shall require directives for implementing the policy and monitoring safety performance. | JV5 60/3/4 | 4. zahtevati usmeritve za izvajanje varnostne politike in predvideti način spremljanja njene učinkovitosti; | The safety policy shall:  4. specify safety policy implementation guidelines and set out the method of monitoring its efficiency; |
| A 2.2 | The safety policy shall require safety objectives and targets, clearly formulated in such a way that they can be easily monitored and followed up by the plant management. | JV5 60/3/5 | 5. vsebovati zastavljene varnostne cilje, oblikovane tako, da jih vodstvo objekta lahko spremlja in po potrebi ukrepa. | The safety policy shall:  5. contain the set safety objectives, formulated so as to facilitate their monitoring by facility management and allowing for the taking of appropriate measures; |
| A 2.3 | The safety policy shall require continuous improvement of nuclear safety by means of:  - Identifying and analysing any new information with a timeframe commensurate to its safety significance;  - Regular2 review of the overall safety of the nuclear power plant including the safety demonstration, taking into account operating experience, safety research, and advances in science and technology;  - Timely implementation of the reasonably practicable safety improvements identified;  Continuous improvement applies to all nuclear safety activities and hence it is relevant to all of the issues addressed in this document. Therefore, this requirement is not repeated in the other issues although it is applicable to all of them.  2 Regular is understood as an ongoing activity to review and analyse the plant design and operation and identify opportunities for improvement. Periodic safety review is a complementary tool to verify and follow up this activity in a longer perspective. | JV5 60/3/7, 52/8-9, 66/4 | 7. vsebovati zahteve za stalne izboljšave sevalne in jedrske varnosti na podlagi:  - rednih (stalna dejavnost, katere namen je pregledovanje in analiziranje projekta objekta in njenega obratovanja ter prepoznavanje priložnosti za izboljšave) in celovitih presoj varnosti sevalnega ali jedrskega objekta, pri čemer se upoštevajo obratovalne izkušnje, raziskave s področja sevalne in jedrske varnosti ter nova dognanja v znanosti in tehnologiji;  - pravočasne uvedbe prepoznanih izboljšav, če se te izkažejo za smiselne;  - takojšnjega obravnavanja novih podatkov, ki so lahko pomembni za varnost jedrskega ali sevalnega objekta;  (8) Investitor ali upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da so odločitve, ki vplivajo na sevalno ali jedrsko varnost, sprejete pravočasno in da se pred sprejetjem opravijo analize in posvetovanja, tako da so upoštevani vsi potrebni varnostni vidiki. Zadeve, povezane z varnostjo, morajo pregledati usposobljeni strokovnjaki, ki niso bili neposredno vključeni v pripravo in sprejemanje odločitev.  (9) Investitor ali upravljavec sevalnega ali jedrskega objekta mora zagotoviti sistem za stalno spremljanje ter zagotavljanje sevalne in jedrske varnosti, jo tako vzdrževati in po potrebi izboljševati.  (4) Procesi se morajo izvajati, vrednotiti in stalno izboljševati upoštevajoč tudi povratne informacije. | The safety policy shall:  7. contain requirements for continuous improvement of radiation protection and nuclear safety under:  - regular (permanent activity aimed at reviewing and analyzing facility project and its operation, and identify opportunities for improvement) and comprehensive assessment of the safety of a radiation or nuclear facility, taking into account operating experience, research in the field of nuclear and radiation safety as well as new developments in science and technology;  - the timely introduction of identified improvements, if these prove to be meaningful;  - Immediate treatment of new data that may be relevant for the safety of a nuclear or radiation facility;  (8) The investor or operator of a radiation or nuclear facility shall provide that decisions relevant for radiation or nuclear safety adopted on time and that, before adopting perform analysis and consultation to account for the relevant safety aspects. Any safety-related matters shall be reviewed by qualified experts not directly involved in the preparation or adoption of the decisions.  (9) The investor or operator of a radiation or nuclear facility shall provide system for continuous monitoring and assurance of radiation and nuclear safety, to maintain safety and advance it as required.  (4) Processes shall be implemented, evaluated and constantly improved and feedback shall be also taking into account. |
| A 3.1 | The adequacy and the implementation status of the safety policy shall be evaluated by the licensee on a regular basis, more frequent than the periodic safety reviews. | JV5 60/6 | (6) Investitor ali upravljavec mora v rednih časovnih presledkih, krajših od obdobja med občasnima varnostnima pregledoma, preverjati ustreznost in učinkovitost varnostne politike. | (6) The investor or operator shall, at regular intervals, shorter than the interval of periodic safety inspections, verify the adequacy and efficiency of its safety policy. |
| B: Operating Organisation | |  |  |  |
| B 1.1 | The organisational structure for safe and reliable operation of the plant, and for ensuring an appropriate response in emergencies, shall be justified4 and documented.  4 The arguments shall be provided that the organisational structure supports safety and an appropriate response in emergencies. | JV5 65/1 | (1) Investitor ali upravljavec sevalnega ali jedrskega objekta mora vzpostaviti organizacijsko sestavo, ki zagotavlja varno in zanesljivo obratovanje objekta in primeren odziv ob izrednem dogodku. Treba jo je dokumentirati, njeno učinkovitost pa dokazati in redno vrednotiti. | (1) The investor or operator of a radiation or nuclear facility shall set up an organisational structure to ensure safe and reliable operation of the facility, and an appropriate response in emergencies. The organisational structure shall be documented and its efficiency regularly evaluated. |
| B 1.2 | The adequacy of the organisational structure, for its purposes according to 1.1, shall be assessed when organisational changes are made which might be significant for safety. Such changes shall be justified in advance, carefully planned, and evaluated5 after implementation.  5 A verification that the implementation of the organisational change has accomplished its safety objectives. | JV5 65/3,  64/7 | (3) Izvajanje sprememb v organizacijski sestavi za izvajanje dejavnosti, pomembnih za varno obratovanje sevalnega ali jedrskega objekta ali obvladovanje izrednega dogodka, ki vplivajo ali bi lahko posredno vplivale na vsebino varnostnega poročila, je treba nadzorovati in obvladovati v skladu z zahtevami za odobritev sprememb v objektu iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost. Vsako tako spremembo v organizaciji je treba vnaprej upravičiti v skladu s sedmim odstavkom 64. člena tega pravilnika.  (7) Vsako načrtovano spremembo v številu zaposlenih, ki bi lahko pomembno vplivala na sevalno ali jedrsko varnost, je treba vnaprej upravičiti, načrtovati in po uveljavitvi spremembe tudi oceniti. | (3) Any modifications to the organisational structure set up to implement activities essential to the safe operation of a radiation or nuclear facility or emergency preparedness that influence or may indirectly influence the contents of the safety-analysis report shall be controlled and managed in accordance with the requirements applying to the approval of modifications to the facility pursuant to the act governing protection against ionising radiation and nuclear safety. Each modification to the organisational structureshall be first justified in accordance with Article 64 of these Rules.  (7) Any planned change in headcount, which could have a significant impact on radiation and nuclear safety, shall be justified and assessed in advance and plan the implementation of changes. |
| B 1.3 | Responsibilities, authorities, and lines of communication shall be clearly defined and documented for all staff with duties important to safety. | JV5 65/2 | (2) Investitor ali upravljavec sevalnega ali jedrskega objekta mora v pisni obliki jasno določiti pooblastila, odgovornost, hierarhično povezanost oseb in organizacij ali organizacijskih skupin, ki izvajajo dejavnosti, pomembne za varno obratovanje sevalnega ali jedrskega objekta ali obvladovanje izrednega dogodka. | (2) The investor or operator of a radiation or nuclear facility shall clearly set out and document authorities, responsibilities, hierarchical links between persons, organisations and organisational units involved in activities relevant to safe operation of the radiation or nuclear facility and to emergency management. |
| B 2.1 | The licensee shall ensure that the plant is operated in a safe manner and in accordance with all applicable legal and regulatory requirements. | ZVISJV 63/1  JV5 52/1, 52/4,6 | (1) Investitor ali upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da je objekt voden varno in v skladu z določbami tega zakona.  (1) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora vzpostaviti, izvajati in redno izboljševati učinkovit in celovit sistem vodenja, ki zagotavlja sevalno in jedrsko varnost.  (4) Varnost sevalnega ali jedrskega objekta mora biti najpomembnejši element sistema vodenja in mora prevladati vse druge zahteve. Varnostni vidiki se morajo prioritetno upoštevati pri vseh odločitvah.  (6) Sistem vodenja mora temeljiti na:  - predpisih, ki urejajo jedrsko in sevalno varnosti,  - spoštovanju formalnih dogovorov z zainteresiranimi stranmi,  - standardih in smernicah, za katere se je odločil investitor ali upravljavec sevalnega ali jedrskega objekta. | (1) The management of the investor or operator of a radiation or nuclear facility shall determine the extent of necessary resources (personnel, infrastructure, work environment, information, knowledge, suppliers and financial resources) and the required competencies to carry out their activities and for the establishment, implementation, evaluation and continuous improvement management system and ensuring nuclear and radiation safety.  52.  (1) Management of the investor or operator of a radiation or nuclear facility establish, implement, assessed and continually improved integrated management system that provides radiation and nuclear safety.  (4) The safety of radiation or nuclear facility shall be the most important part of the management system and shall take precedence over all other demands. Safety aspects should be preferably taken into account in all decisions.  (6) The management system should be based on:  - regulations governing nuclear and radiation safety  - compliance with formal agreements with stakeholders,  - standards and guidelines, which decided the investor or operator of a radiation or nuclear facility. |
| B 2.2 | The licensee shall ensure that decisions on safety matters are timely and preceded by appropriate investigation and consultation so that all relevant safety aspects are considered. Safety issues shall be subjected to appropriate safety review, by a suitably qualified independent review function. | JV5, 52/8 | (8) Investitor ali upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da so odločitve, ki vplivajo na sevalno ali jedrsko varnost, sprejete pravočasno in da se pred sprejetjem opravijo analize in posvetovanja, tako da so upoštevani vsi potrebni varnostni vidiki. Zadeve, povezane z varnostjo, morajo pregledati usposobljeni strokovnjaki, ki niso bili neposredno vključeni v pripravo in sprejemanje odločitev. | (8) The investor or operator of a radiation or nuclear facility shall provide that decisions relevant for radiation or nuclear safety adopted on time and that, before adopting perform analysis and consultation to account for the relevant safety aspects. Any safety-related matters shall be reviewed by qualified experts not directly involved in the preparation or adoption of the decisions. |
| B 2.3 | The licensee shall ensure that the staff is provided with the necessary facilities and working conditions to carry out work in a safe manner. | JV5 63/1 | (1) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora določiti obseg potrebnih virov (osebje, infrastruktura, delovno okolje, informacije, znanje, dobavitelji in finančna sredstva) in zahtevanih kompetenc za izvajanje svojih dejavnosti ter za vzpostavitev, izvedbo, ocenjevanje in stalno izboljševanje sistema vodenja ter zagotavljanje sevalne in jedrske varnosti. | (1) The management of the investor or operator of a radiation or nuclear facility shall determine the extent of necessary resources (personnel, infrastructure, work environment, information, knowledge, suppliers and financial resources) and the required competencies to carry out their activities and for the establishment, implementation, evaluation and continuous improvement management system and ensuring nuclear and radiation safety. |
| B 2.4 | The licensee shall ensure that safety performance is continuously monitored through an appropriate review system in order to ensure that safety is maintained and improved as needed. | JV5 52/9 | (9) Investitor ali upravljavec sevalnega ali jedrskega objekta mora zagotoviti sistem za stalno spremljanje ter zagotavljanje sevalne in jedrske varnosti, jo tako vzdrževati in po potrebi izboljševati. | (9) The investor or operator of a radiation or nuclear facility shall provide system for continuous monitoring and assurance of radiation and nuclear safety, to maintain safety and advance it as required. |
| B 2.5 | The licensee shall ensure that relevant operating experience, international development of safety standards and new knowledge gained through R&D-projects are analysed in a systematic way and continuously used to improve the plant and the licensee’s activities. | JV5 52/10 | (10) Investitor ali upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da se obratovalne izkušnje, mednarodni razvoj varnostnih standardov ter nova dognanja na podlagi raziskovalnih dejavnosti sistematično analizirajo in stalno uporabljajo za izboljšanje sevalne in jedrske varnosti objekta, pa tudi dejavnosti osebja. | (10) The investor or operator of a radiation or nuclear facility shall provide for the management of the facility to be carried out according to a documented system of management of all activities that may affect radiation or nuclear safety, including the relevant activities of its suppliers or contractors. |
| B 2.6 | The licensee shall ensure that plant activities and processes are controlled through a documented management system covering all activities, including relevant activities of vendors and contractors, which may affect the safe operation of the plant. | JV5 66/2, 67 | (2) Vodenje procesov in posameznih aktivnosti mora zagotoviti:   1. razvoj in dokumentiranje procesov ter vzdrževanje potrebnih dodatnih dokumentov; 2. uspešne medsebojne povezave med procesi; 3. usklajenost procesne dokumentacije z obstoječimi dokumenti; 4. da so v procesni dokumentaciji določeni vsi potrebni zapisi, ki izkazujejo dosežene rezultate procesov; 5. spremljanje procesov in poročanje o izvajanju procesov; 6. uvajanje izboljšav v procese; 7. usklajenost procesov in njihovih morebitnih sprememb z dolgoročnimi cilji, strategijami, načrti in cilji organizacije.   (1) Investitor ali upravljavec sevalnega ali jedrskega objekta je odgovoren tudi za dela, ki jih zanj pogodbeno opravljajo podizvajalci.  (2) Investitor ali upravljavec sevalnega ali jedrskega objekta mora v sistemu vodenja predvideti nadzor nad procesi ali dejavnostmi po posameznih procesih, ki jih zanj izvajajo pogodbeni podizvajalci. Investitor ali upravljavec sevalnega ali jedrskega objekta mora:  1. zahtevati od svojih pogodbenih podizvajalcev, da vzpostavijo, dokumentirajo in izvajajo sistem vodenja;  2. izvesti presojo podizvajalcev storitev in dobaviteljev opreme in izdelkov;  3. izbirati pogodbene podizvajalce ali dobavitelje na podlagi vnaprej določenih meril;  4. preverjati, če dobavitelji in izvajalci razumejo varnostne zahteve ter če dela izvajajo v skladu z varnostnimi zahtevami;  5. oceniti, če ima podizvajalec sredstva in strokovna znanja za zagotavljanje varnosti ter kakovosti proizvodov ali storitev,  6. zagotoviti, da so proizvodi in storitve podizvajalcev in dobaviteljev v skladu z varnostnimi zahtevami;  7. preverjati, če imajo dobavitelji in podizvajalci nadzor nad svojimi podizvajalci;  8. zagotoviti, da so pogodbene zahteve, vključno z varnostnimi zahtevami, specificirane;  9. s pregledi, preizkušanjem, preverjanjem in validacijo pred sprejetjem, vgradnjo ali obratovalno rabo potrditi, da dejavnosti ali izdelki izpolnjujejo predpisana merila;  10. oblikovati in določiti merila za nabavo izdelkov ter jih dokumentirati. Dobavitelj mora investitorju ali upravljavcu dostaviti dokazila o izpolnjevanju meril pred uporabo izdelka;  11. pri naročilu varnostno pomembnih SSK zahtevati od proizvajalcev oziroma dobaviteljev možnost lastnega nadzora ali nadzora osebja uprave, vključno s pregledi v prostorih proizvajalcev oziroma dobaviteljev. | (2) For each process a designated individual shall be given the authority and responsibility for:  1. developing and documenting the process and maintaining the necessary  supporting documentation;  2. ensuring that there is effective interaction between interfacing processes;  3. ensuring that process documentation is consistent with any existing  documents;  4. ensuring that the records required to demonstrate that the process  results have been achieved are specified in the process documentation;  5. monitoring and reporting on the performance of the process;  6. promoting improvement in the process;  7. ensuring that the process, including any subsequent changes to it, is  aligned with the goals, strategies, plans and objectives of the organization.  (1) The investor or operator of a radiation or nuclear facility shall shall remain responsible for any works executed by subcontractors;  (2) The investor or operator of a radiation or nuclear facility shall in its management plan, provide for supervision of processes or activities under individual processes executed by subcontractors. The investor or operator of a radiation or nuclear facility shal:  1. request that its subcontractors implement, document and operate management systems,  2. carry out assessments of subcontractors and suppliers of services and products,  3. select subcontractors and suppliers according to criteria set in advance,  4. check if suppliers and contractors and understand the safety requirements, and if works are carried out in compliance with safety requirements;  5. assess if the subcontractor has the resources and expertise to ensure the safety and quality of products or services,  6. ensure that the products and services of subcontractors and suppliers are in accordance with safety requirements;  7. check if suppliers and subcontractors have control of their subcontractors;  8. ensure that requirements from contract and safety requirements are specified;  9. checks, testing, verification and validation prior to adoption, installation or operational use to confirm that the activities or the products meet the prescribed criteria;  10. create and develop and specify criteria for product procurement and document them. A supplier shall furnish the investor or operator with documentary evidence of compliance with criteria, prior to the putting of a product into service;  11. when ordering safety-related SSCs, request the manufacturers or suppliers to provide the means for supervision by its staff or Administration staff, including access to the manufacturer’s or supplier’s premises for inspection; |
| B 3.1 | The required number of staff for safe operation6, and their competence, shall be analysed in a systematic and documented way.  6 Operation is defined as all activities performed to achieve the purpose for which a nuclear power plant was constructed (according to the IAEA Glossary). | JV5 64/4 | (4) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora s sistematično analizo določiti potrebno število zaposlenih in njihovo kompetentnost za zagotavljanje sevalne oziroma jedrske varnosti. | (4) Management of the investor or operator shall determine with a systematic analysis the required number of personnel and their competence to provide radiation or nuclear safety. |
| B 3.2 | The sufficiency of staff for safe operation, their competence, and suitability for safety work shall be verified on a regular basis and documented. | JV5 64/5 ZVISJV 62/3 | (5) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora redno in dokumentirano preverjati ustreznost števila zaposlenih ter njihovo kompetentnost za dela, povezana s sevalno oziroma jedrsko varnostjo.  (3) Delodajalec mora zagotavljati redno obnavljanje strokovnega znanja delavcev iz prejšnjega odstavka ter preverjati njihovo usposobljenost, psihofizične lastnosti in odvisnosti od alkohola, mamil ali drugih psihoaktivnih sredstev. | (5) Management of the investor or operator of a radiation or nuclear facility shall regularly check and documented the adequacy of the number of personnel and their competence for work related to radiation or nuclear safety.  (3) An employer must ensure regular updating of the professional knowledge possessed by the workers  referred to in the previous paragraph and check their qualifications, psycho-physical characteristics  and non-addiction to alcohol, drugs or other psychoactive products. |
| B 3.3 | A long-term staffing plan7 shall exist for activities that are important to safety.  7 Long term is understood as 3-5 years for detailed planning and at least 10 years for prediction of retirements etc. | JV5 64/6 | (6) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora pripraviti desetletni načrt zaposlovanja na področjih, pomembnih za sevalno in jedrsko varnost, pri čemer je treba načrt zaposlovanja obnavljati najmanj vsaka tri leta. | (6) Management of the investor or operator of a radiation or nuclear facility shall develop a ten-year plan for personnel in areas relevant for radiation and nuclear safety. Rrecruitment plan shall be renewed at least every three years. |
| B 3.4 | Changes to the number of staff, which might be significant for safety, shall be justified in advance, carefully planned and evaluated after implementation. | JV5 64/7 | (7) Vsako načrtovano spremembo v številu zaposlenih, ki bi lahko pomembno vplivala na sevalno ali jedrsko varnost, je treba vnaprej upravičiti, načrtovati in po uveljavitvi spremembe tudi oceniti. | (7) Any planned change in headcount, which could have a significant impact on radiation and nuclear safety, shall be justified and assessed in advance and plan the implementation of changes. |
| B 3.5 | The licensee shall always have in house, sufficient, and competent staff and resources to understand the licensing basis of the plant (e.g. Safety Analysis Report or Safety Case and other documents based thereon), as well as to understand the actual design and operation of the plant in all plant states. | JV5 64/8 | (8) Investitor ali upravljavec sevalnega ali jedrskega objekta mora imeti zaposlenih zadosti usposobljenih delavcev, ki razumejo projektne osnove sevalnega ali jedrskega objekta in dejanski projekt in obratovanje objekta v vseh njegovih stanjih in ki pripravljajo projektne naloge in merila sprejemljivosti za prepustitev del, povezanih s sevalno ali jedrsko varnostjo, podizvajalcem, nadzorujejo izvajanje teh del in jih po prevzemu tudi ocenjujejo. | (8) The investor or operator of a radiation or nuclear facility shall have personnel sufficiently trained workers who understand the design basis radiation or nuclear facility and the actual design and operation of the facility in all its states and preparing the project task and acceptance criteria for the release of the related radiation or nuclear safety, subcontractors, oversee the implementation of these works and the acceptance of the estimate. |
| B 3.6 | The licensee shall maintain, in house, sufficient and competent staff and resources to specify, set standards manage and evaluate safety work carried out by contractors. | JV5 67/2 | (2) Investitor ali upravljavec sevalnega ali jedrskega objekta mora v sistemu vodenja predvideti nadzor nad procesi ali dejavnostmi po posameznih procesih, ki jih zanj izvajajo pogodbeni podizvajalci. Investitor ali upravljavec sevalnega ali jedrskega objekta mora:  1. zahtevati od svojih pogodbenih podizvajalcev, da vzpostavijo, dokumentirajo in izvajajo sistem vodenja;  2. izvesti presojo podizvajalcev storitev in dobaviteljev opreme in izdelkov;  3. izbirati pogodbene podizvajalce ali dobavitelje na podlagi vnaprej določenih meril;  4. preverjati, če dobavitelji in izvajalci razumejo varnostne zahteve ter če dela izvajajo v skladu z varnostnimi zahtevami;  5. oceniti, če ima podizvajalec sredstva in strokovna znanja za zagotavljanje varnosti ter kakovosti proizvodov ali storitev,  6. zagotoviti, da so proizvodi in storitve podizvajalcev in dobaviteljev v skladu z varnostnimi zahtevami;  7. preverjati, če imajo dobavitelji in podizvajalci nadzor nad svojimi podizvajalci;  8. zagotoviti, da so pogodbene zahteve, vključno z varnostnimi zahtevami, specificirane;  9. s pregledi, preizkušanjem, preverjanjem in validacijo pred sprejetjem, vgradnjo ali obratovalno rabo potrditi, da dejavnosti ali izdelki izpolnjujejo predpisana merila;  10. oblikovati in določiti merila za nabavo izdelkov ter jih dokumentirati. Dobavitelj mora investitorju ali upravljavcu dostaviti dokazila o izpolnjevanju meril pred uporabo izdelka;  11. pri naročilu varnostno pomembnih SSK zahtevati od proizvajalcev oziroma dobaviteljev možnost lastnega nadzora ali nadzora osebja uprave, vključno s pregledi v prostorih proizvajalcev oziroma dobaviteljev. | (2) The investor or operator of a radiation or nuclear facility shall in its management plan, provide for supervision of processes or activities under individual processes executed by subcontractors. The investor or operator of a radiation or nuclear facility shal:  1. request that its subcontractors implement, document and operate management systems,  2. carry out assessments of subcontractors and suppliers of services and products,  3. select subcontractors and suppliers according to criteria set in advance,  4. check if suppliers and contractors and understand the safety requirements, and if works are carried out in compliance with safety requirements;  5. assess if the subcontractor has the resources and expertise to ensure the safety and quality of products or services,  6. ensure that the products and services of subcontractors and suppliers are in accordance with safety requirements;  7. check if suppliers and subcontractors have control of their subcontractors;  8. ensure that requirements from contract and safety requirements are specified;  9. checks, testing, verification and validation prior to adoption, installation or operational use to confirm that the activities or the products meet the prescribed criteria;  10. create and develop and specify criteria for product procurement and document them. A supplier shall furnish the investor or operator with documentary evidence of compliance with criteria, prior to the putting of a product into service;  11. when ordering safety-related SSCs, request the manufacturers or suppliers to provide the means for supervision by its staff or Administration staff, including access to the manufacturer’s or supplier’s premises for inspection; |
| C: Management System | |  |  |  |
| C 1.1 | An integrated management system shall be established, implemented, assessed and continually improved by the licensee. The main aim of the management system shall be to achieve and enhance nuclear safety by ensuring that other demands8 on the licensee are not considered separately from nuclear safety requirements, to help preclude their possible negative impact on nuclear safety.  8 Examples of such demands are health, environmental, security, quality and economic requirements. | JV5 52/1-3 | 1. Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora vzpostaviti, izvajati in redno izboljševati učinkovit in celovit sistem vodenja, ki zagotavlja sevalno in jedrsko varnost. 2. Sistem vodenja iz prejšnjega odstavka mora združevati vse dejavnosti vodenja, vključno z obvladovanjem varnosti, varovanja in kakovosti, varovanjem zdravja in okolja, obvladovanjem gospodarnosti ter upoštevanjem socialnih vidikov, pri čemer varnost ne sme biti ogrožena. 3. Sistem vodenja iz prvega odstavka tega člena mora zagotavljati doseganje in stalno izboljševanje sevalne in jedrske varnosti objekta z:    * usklajevanjem vseh zahtev pri vodenju sevalnega ali jedrskega objekta,    * opisom načrtovanih in sistematičnih ukrepov, potrebnih za izpolnitev vseh zahtev,    * zagotavljanjem, da se zahteve, ki se nanašajo na zdravje, okolje, varovanje, kakovost, gospodarnost in socialne vidike ne obravnavajo ločeno od zahtev sevalne ali jedrske varnosti z namenom, da se prepreči morebitni negativni vpliv drugih zahtev na sevalno ali jedrsko varnost. | (1) Management of the investor or operator of a radiation or nuclear facility establish, implement, assessed and continually improved integrated management system that provides radiation and nuclear safety.  (2) Integrated management system from the previous paragraph shall combine all management activities, including safety, health, environmental, security, quality, human-and-organizational-factor, societal and economic elements, so that safety is not compromised.  (3) Integrated management system from the first paragraph shall developed, applied and continuously improved of nuclear and radiation safety of the facility:  - bringing together in a coherent manner all the necessary elements for safely managing of radiation or nuclear facility  - describing the planned and systematic actions necessary to provide confidence that all requirements are met;  - ensuring that the requirements relating to the health, environmental, security, quality, economic and societal aspects not be treated separately from the requirements for radiation and nuclear safety in order to avoid any negative impact of other requirements on radiation and nuclear safety. |
| C 2.1 | The application of management system requirements shall be graded so as to deploy appropriate resources, on the basis of the consideration of:  - The significance and complexity of each activity and its products;  - The hazards and the magnitude of the potential impact associated with each activity and its products;  - The possible consequences if an activity is carried out incorrectly or a product fails. | JV5 54 | (1) Načelo stopenjskega pristopa zahtev sistema vodenja je treba upoštevati za proizvode, storitve in dejavnosti vseh procesov, povezanih s sevalno ali jedrsko varnostjo.  (2) Merila in zahteve, ki za posamezno stopnjo izhajajo iz stopenjskega pristopa, s katerimi se izrabljajo razpoložljivi viri, morajo biti dokumentirane in vključene v sistem vodenja. Pri tem je treba upoštevati:  – pomembnost in zahtevnost posameznega procesa ali dejavnosti,  – možne nevarnosti, varnostna tveganja in sevalne vplive pri izvajanju procesov ali dejavnosti in  – možne negativne vplive in posledice na varnost v primeru napačne izvedbe procesa ali dejavnosti ali nepričakovanega dogodka med izvedbo. | (1) The graded-approach principle of the management system shall take into account for products, services and activities of all processes related to radiation and nucelar safety.  (2) The criteria and requirements for each stage arising from graded approach, which exploit available resources shall be documented and included in the management system. It shall take into account:  - the importance and complexity of a different process or activity,  - potential hazards, safety hazards and radiation effects in the implementation of processes or activities  - potential harmful impacts and consequences in cases of improper execution of the activity or inappropriate outcomes |
| C 2.2 | The documentation of the management system shall include the following:  - The policy statements of the licensee;  - A description of the management system;  - A description of the organisational structure of the licensee;  - A description of the functional responsibilities, accountabilities, levels of authority and interactions of those managing, performing and assessing work;  - A description of the interactions with relevant external organisations;  - A description of the processes and supporting information that explain how work is to be prepared, reviewed, carried out, recorded, assessed and improved. | JV5 55/1-2 | 1. Sistem vodenja mora biti dokumentiran. 2. Dokumentacija sistema vodenja mora vključevati najmanj:    1. izjavo o usmeritvah in ciljih, vključno z vrednotami in pričakovanji vodstva,    2. varnostno politiko z navedbo, da je prednostna naloga varovanje ljudi in okolja pred viri ionizirajočega sevanja,    3. opis organizacijske sestave investitorja ali upravljavca,    4. opis, kako je sistem vodenja usklajen s predpisi, ki se nanašajo na dejavnost investitorja ali upravljavca,    5. opis odgovornosti, pooblastil ter medsebojnih odnosov med vodenjem, izvajanjem in vrednotenjem posameznih dejavnosti,    6. določitev odgovornosti in potrebnih ureditev za zagotavljanje varnosti,    7. opis glavnih procesov,    8. opis, kako se posamezne dejavnosti pripravijo, pregledajo, izvedejo, dokumentirajo, preverijo in izboljšajo,    9. opis povezav z zunanjimi zainteresiranimi stranmi,    10. opis nadzora nad delom podizvajalcev,    11. opis beleženja in pregleda znanja, informacij in podatkov o vseh zadevah, povezanih z varnostjo, ter opis načina in vodenja hrambe teh zapisov,    12. opis zahtev za zagotavljanje prenosa znanja osebju v različnih fazah objekta. | (1) The management system shall be documented.  (2) Documentation of the management system shall include at least:  1. policy statement and objectives, including the values and expectations of management,  2. security policy stating that the priority is the protection of public and the environment against ionizing radiation sources,  3. description of the organizational structure of the investor or operator,  4. description of how the management system is reconciled with the regulations relating to the activity of the investor or operator,  5. description of the responsibilities, authorisations and relationships between implementation and evaluation of management system activities,  6. determine the responsibilities and the necessary arrangements to ensure safety,  7. description of the main process,  8. description of how the individual activities are developed, reviewed, implemented, documented, verified and improved,  9. description of the links with external stakeholders,  10. description of control the work of subcontractors  11. description of recording and reviewing knowledge, information and data on all matters relating to security, as well as a description of how management and retention of records,  12. description of the requirements for ensuring the transfer of knowledge to personnel in the different phases of the facility. |
| C 2.3 | The documentation of the management system shall be understandable to those who use it. Documents shall be up to date, readable, readily identifiable and available at the point of use. | JV5 55/4 | (4) Dokumentacija sistema vodenja mora biti napisana tako, da jo dobro razumejo tisti, ki jo uporabljajo. Posamezni dokumenti morajo biti obvladovani, veljavni, redno pregledani in posodobljeni, berljivi, takoj prepoznavni in enostavno dosegljivi tam, kjer se uporabljajo. | (4) The documentation of the management system shall be developed to be understandable to those who use it. Documents shall be readable, readily identifiable and available at the point of use. |
| C 3.1 | The licensee shall develop the goals, strategies, plans and objectives of the organization in an integrated manner so that their collective impact on safety is understood and managed. | JV5  61/1-2 | (1) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora določiti strategije, dolgoročne in kratkoročne cilje ter načrte organizacije, ki so v skladu z varnostno politiko organizacije iz prejšnjega člena.  (2) Strategije, dolgoročni in kratkoročni cilji ter načrti organizacije iz prejšnjega odstavka:  - morajo biti izdelani s sodelovanjem vseh zaposlenih;  - ne smejo ogrožati sevalne in jedrske varnosti;  - morajo biti določeni celovito tako, da so njihovi skupni učinki na varnost razumljivi in obvladljivi. | (1) The management of the investor or operator of a radiation or nuclear facility shall determine the strategy, long-term and short-term goals and plans of the organization that are consistent with the organization's security policy from the previous article.  (2) Strategies, long-term and short-term goals and plans of the organization in the previous paragraph:  - shall be produced with the participation of all employees;  - shall not threat nuclear and radiation safety;  - shall be established in a comprehensive way that their overall effects on safety are comprehensible and manageable. |
| C 3.2 | The licensee shall ensure that it is clear when, how and by whom decisions are to be made within the management system.9  9 With respect to operational decisions that impact on nuclear safety. | JV5 55/2/6 | (2) Dokumentacija sistema vodenja mora vključevati najmanj:  6. določitev odgovornosti in potrebnih ureditev za zagotavljanje varnosti, | (2) Documentation of the management system shall include at least:  6. determine the responsibilities and the necessary arrangements to ensure safety, |
| C 3.3 | The licensee shall ensure that management at all levels demonstrate its commitment to the establishment, implementation, assessment and continual improvement of the management system and shall allocate adequate resources to carry out these activities. | JV5 57/1 | (1) Vodstvo na vseh ravneh v organizaciji mora izkazati svojo zavezanost za vzpostavitev, izvajanje, ocenjevanje in stalno izboljševanje sistema vodenja ter mora dodeliti sredstva za izvajanje teh dejavnosti. | (1) Management at all levels in the organization shall demonstrate its commitment to the establishment, implementation, evaluation and continuous improvement of management system and shall allocate resources for the implementation of these activities. |
| C 3.4 | The licensee shall foster the involvement of all staff in the implementation and continual improvement of the management system. | JV5 57/4 | (4) Vodstvo na vseh ravneh mora spodbujati vključevanje vseh zaposlenih v izvajanje in stalno izboljševanje sistema vodenja. | (4) Management at all levels shall promote the involvement of all employees in the implementation and continuous improvement of management system. |
| C 4.1 | The licensee shall determine the amount of Resources10 necessary and shall provide the resources to carry out the activities of the licensee and to establish, implement, assess and continually improve the management system.  10 “Resources” includes individuals, infrastructure, the working environment, information and knowledge, and suppliers, as well as material and financial resources. | JV5 63/1 | (1) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora določiti obseg potrebnih virov (osebje, infrastruktura, delovno okolje, informacije, znanje, dobavitelji in finančna sredstva) in zahtevanih kompetenc za izvajanje svojih dejavnosti ter za vzpostavitev, izvedbo, ocenjevanje in stalno izboljševanje sistema vodenja ter zagotavljanje sevalne in jedrske varnosti. | (1) The management of the investor or operator of a radiation or nuclear facility shall determine the extent of necessary resources (personnel, infrastructure, work environment, information, knowledge, suppliers and financial resources) and the required competencies to carry out their activities and for the establishment, implementation, evaluation and continuous improvement management system and ensuring nuclear and radiation safety. |
| C 5.1 | The processes11 that are needed to achieve the goals, provide the means to meet all requirements and deliver the products of the licensee organisation shall be identified, and their development shall be planned, implemented, assessed and continually improved. The sequence and interactions of the processes shall be determined.  11 This is not understood as a full process orientation of the management system. Also functional or organisational oriented routines and procedures could be used for certain activities together with cross cutting processes for other activities. | JV5  66/1-5 | (1) Investitor ali upravljavec sevalnega ali jedrskega objekta mora prepoznati, vzpostaviti in upravljati procese, ki so potrebni za doseganje varnostnih ciljev organizacije.  (2) Vodenje procesov in posameznih aktivnosti mora zagotoviti:  1. razvoj in dokumentiranje procesov ter vzdrževanje potrebnih dodatnih dokumentov;  2. uspešne medsebojne povezave med procesi;  3. usklajenost procesne dokumentacije z obstoječimi dokumenti;  4. da so v procesni dokumentaciji določeni vsi potrebni zapisi, ki izkazujejo dosežene rezultate procesov;  5. spremljanje procesov in poročanje o izvajanju procesov;  6. uvajanje izboljšav v procese;  7. usklajenost procesov in njihovih morebitnih sprememb z dolgoročnimi cilji, strategijami, načrti in cilji organizacije.  (3) Posamezni proces in spremembe procesov se morajo načrtovati, vzpostaviti in izvajati tako, da varnost ni ogrožena in da so izpolnjene predpisane zahteve.  (4) Procesi se morajo izvajati, vrednotiti in stalno izboljševati tudi ob upoštevanju povratnih informacij.  (5) Zaporedje procesov, povezave in medsebojni vplivi med procesi morajo biti določeni tako, da varnost ni ogrožena. Posebno pozornost je treba nameniti medsebojnim vplivom znotraj organizacije in z zunanjimi organizacijami. | (1) The investor or operator of a radiation or nuclear facility shall identify, establish and operate the processes necessary to achieve safety objectives of organization.  (2) For each process a designated individual shall be given the authority and responsibility for:  1. developing and documenting the process and maintaining the necessary  supporting documentation;  2. ensuring that there is effective interaction between interfacing processes;  3. ensuring that process documentation is consistent with any existing  documents;  4. ensuring that the records required to demonstrate that the process  results have been achieved are specified in the process documentation;  5. monitoring and reporting on the performance of the process;  6. promoting improvement in the process;  7. ensuring that the process, including any subsequent changes to it, is  aligned with the goals, strategies, plans and objectives of the organization.  (3) New processes or modifications to existing processes shall be designed, verified, approved and applied so that safety is not compromised.  (4) Processes shall be implemented, evaluated and constantly improved and feedback shall be also taking into account.  (5) The sequence of processes, connections and interactions between the processes shall be defined so that safety is not compromised. Particular attention should be paid to the interaction within the organization and with external organizations. |
| C 5.2 | The methods necessary to ensure the effectiveness of both the implementation and the control of the processes shall be determined and implemented. | JV5  66/9 | (9) Določeni in izvedeni morajo biti postopki, potrebni za zagotavljanje učinkovitosti uvajanja procesov in nadzora nad njimi. | (9) The methods necessary to ensure the effectiveness of both the implementation and the control of the processes shall be determined and implemented. |
| C 5.3 | Documents12 shall be controlled. Changes to documents shall be reviewed and recorded and shall be subject to the same level of approval as the documents themselves. It shall be ensured that document users are aware of and use appropriate and correct documents.  12 Documents may include: policies; procedures; instructions; specifications and drawings (or representations in other media); training materials; and any other texts that describe processes, specify requirements or establish product specifications. | JV5 66/8  55/3 | (8) Dokumentacija, potrebna za izvajanje procesov iz prvega odstavka tega člena, mora biti nadzorovana. Spremembe dokumentov morajo biti pregledane, shranjene in potrjene na enak način kakor prvotni dokumenti. Zagotoviti je treba, da se uporabljajo pregledani veljavni dokumenti.  (3) Poleg zgoraj navedenih dokumentov lahko dokumentacija sistema vodenja vključuje tudi postopke, navodila, specifikacije, slike, gradivo za usposabljanje in druga besedila, ki opisujejo procese, določajo zahteve ali vzpostavljajo specifikacije izdelkov. | (8) The documents necessary for the implementation of the processes referred to in the first paragraph shall be controlled. Any amendments to these documents shall be reviewed, archived and approved in a manner identical to that applying to the original documents. The application of genuine and reviewed documents shall be guaranteed.  (3) In addition to the above documents may be documents management system shall also include procedures, instructions, specifications, pictures, training materials and other texts that describe processes, specify requirements or establish product specifications. |
| C 5.4 | Records shall be specified in the management system documentation and shall be controlled. All records shall, for the duration of the retention times specified for each record, be readable, complete, identifiable and easily retrievable. | JV5 66/10 | (10) Sistem vodenja mora predvideti zapise o dejavnostih in zagotoviti, da so ti nadzorovani. Vsi veljavni zapisi morajo biti čitljivi, celoviti, prepoznavni in dosegljivi. | (10) The management system shall provide for the recording of activities and control over such records. Throughout their period of validity, all records shall remain legible, integral, identifiable and accessible. |
| C 5.5 | The control of processes, or work performed within a process, contracted to external organizations shall be identified within the management system. The licensee shall retain overall responsibility when contracting any processes or work performed within a process. | JV5 67 | 1. Investitor ali upravljavec sevalnega ali jedrskega objekta je odgovoren tudi za dela, ki jih zanj pogodbeno opravljajo podizvajalci. 2. Investitor ali upravljavec sevalnega ali jedrskega objekta mora v sistemu vodenja predvideti nadzor nad procesi ali dejavnostmi po posameznih procesih, ki jih zanj izvajajo pogodbeni podizvajalci. Investitor ali upravljavec sevalnega ali jedrskega objekta mora: 3. zahtevati od svojih pogodbenih podizvajalcev, da vzpostavijo, dokumentirajo in izvajajo sistem vodenja; 4. izvesti presojo podizvajalcev storitev in dobaviteljev opreme in izdelkov; 5. izbirati pogodbene podizvajalce ali dobavitelje na podlagi vnaprej določenih meril; 6. preverjati, če dobavitelji in izvajalci razumejo varnostne zahteve ter če dela izvajajo v skladu z varnostnimi zahtevami; 7. oceniti, če ima podizvajalec sredstva in strokovna znanja za zagotavljanje varnosti ter kakovosti proizvodov ali storitev, 8. zagotoviti, da so proizvodi in storitve podizvajalcev in dobaviteljev v skladu z varnostnimi zahtevami; 9. preverjati, če imajo dobavitelji in podizvajalci nadzor nad svojimi podizvajalci; 10. zagotoviti, da so pogodbene zahteve, vključno z varnostnimi zahtevami, specificirane; 11. s pregledi, preizkušanjem, preverjanjem in validacijo pred sprejetjem, vgradnjo ali obratovalno rabo potrditi, da dejavnosti ali izdelki izpolnjujejo predpisana merila; 12. oblikovati in določiti merila za nabavo izdelkov ter jih dokumentirati. Dobavitelj mora investitorju ali upravljavcu dostaviti dokazila o izpolnjevanju meril pred uporabo izdelka; 13. pri naročilu varnostno pomembnih SSK zahtevati od proizvajalcev oziroma dobaviteljev možnost lastnega nadzora ali nadzora osebja uprave, vključno s pregledi v prostorih proizvajalcev oziroma dobaviteljev. | (1) The investor or operator of a radiation or nuclear facility shall shall remain responsible for any works executed by subcontractors;  (2) The investor or operator of a radiation or nuclear facility shall in its management plan, provide for supervision of processes or activities under individual processes executed by subcontractors. The investor or operator of a radiation or nuclear facility shal:  1. request that its subcontractors implement, document and operate management systems,  2. carry out assessments of subcontractors and suppliers of services and products,  3. select subcontractors and suppliers according to criteria set in advance,  4. check if suppliers and contractors and understand the safety requirements, and if works are carried out in compliance with safety requirements;  5. assess if the subcontractor has the resources and expertise to ensure the safety and quality of products or services,  6. ensure that the products and services of subcontractors and suppliers are in accordance with safety requirements;  7. check if suppliers and subcontractors have control of their subcontractors;  8. ensure that requirements from contract and safety requirements are specified;  9. checks, testing, verification and validation prior to adoption, installation or operational use to confirm that the activities or the products meet the prescribed criteria;  10. create and develop and specify criteria for product procurement and document them. A supplier shall furnish the investor or operator with documentary evidence of compliance with criteria, prior to the putting of a product into service;  11. when ordering safety-related SSCs, request the manufacturers or suppliers to provide the means for supervision by its staff or Administration staff, including access to the manufacturer’s or supplier’s premises for inspection; |
| C 5.6 | Suppliers of products and services shall be selected on the basis of specified criteria and their performance shall be evaluated. | JV5 67/2 | (2) Investitor ali upravljavec sevalnega ali jedrskega objekta mora v sistemu vodenja predvideti nadzor nad procesi ali dejavnostmi po posameznih procesih, ki jih zanj izvajajo pogodbeni podizvajalci. Investitor ali upravljavec sevalnega ali jedrskega objekta mora:  1. zahtevati od svojih pogodbenih podizvajalcev, da vzpostavijo, dokumentirajo in izvajajo sistem vodenja;  2. izvesti presojo podizvajalcev storitev in dobaviteljev opreme in izdelkov;  3. izbirati pogodbene podizvajalce ali dobavitelje na podlagi vnaprej določenih meril;  4. preverjati, če dobavitelji in izvajalci razumejo varnostne zahteve ter če dela izvajajo v skladu z varnostnimi zahtevami;  5. oceniti, če ima podizvajalec sredstva in strokovna znanja za zagotavljanje varnosti ter kakovosti proizvodov ali storitev,  6. zagotoviti, da so proizvodi in storitve podizvajalcev in dobaviteljev v skladu z varnostnimi zahtevami;  7. preverjati, če imajo dobavitelji in podizvajalci nadzor nad svojimi podizvajalci;  8. zagotoviti, da so pogodbene zahteve, vključno z varnostnimi zahtevami, specificirane;  9. s pregledi, preizkušanjem, preverjanjem in validacijo pred sprejetjem, vgradnjo ali obratovalno rabo potrditi, da dejavnosti ali izdelki izpolnjujejo predpisana merila;  10. oblikovati in določiti merila za nabavo izdelkov ter jih dokumentirati. Dobavitelj mora investitorju ali upravljavcu dostaviti dokazila o izpolnjevanju meril pred uporabo izdelka;  11. pri naročilu varnostno pomembnih SSK zahtevati od proizvajalcev oziroma dobaviteljev možnost lastnega nadzora ali nadzora osebja uprave, vključno s pregledi v prostorih proizvajalcev oziroma dobaviteljev. | (2) The investor or operator of a radiation or nuclear facility shall in its management plan, provide for supervision of processes or activities under individual processes executed by subcontractors. The investor or operator of a radiation or nuclear facility shal:  1. request that its subcontractors implement, document and operate management systems,  2. carry out assessments of subcontractors and suppliers of services and products,  3. select subcontractors and suppliers according to criteria set in advance,  4. check if suppliers and contractors and understand the safety requirements, and if works are carried out in compliance with safety requirements;  5. assess if the subcontractor has the resources and expertise to ensure the safety and quality of products or services,  6. ensure that the products and services of subcontractors and suppliers are in accordance with safety requirements;  7. check if suppliers and subcontractors have control of their subcontractors;  8. ensure that requirements from contract and safety requirements are specified;  9. checks, testing, verification and validation prior to adoption, installation or operational use to confirm that the activities or the products meet the prescribed criteria;  10. create and develop and specify criteria for product procurement and document them. A supplier shall furnish the investor or operator with documentary evidence of compliance with criteria, prior to the putting of a product into service;  11. when ordering safety-related SSCs, request the manufacturers or suppliers to provide the means for supervision by its staff or Administration staff, including access to the manufacturer’s or supplier’s premises for inspection; |
| C 5.7 | Purchasing requirements shall be developed and specified in procurement documents. Evidence that products meet these requirements shall be available to the licensee before the product is used. | JV5 67/2 | (2) Investitor ali upravljavec sevalnega ali jedrskega objekta mora v sistemu vodenja predvideti nadzor nad procesi ali dejavnostmi po posameznih procesih, ki jih zanj izvajajo pogodbeni podizvajalci. Investitor ali upravljavec sevalnega ali jedrskega objekta mora:  1. zahtevati od svojih pogodbenih podizvajalcev, da vzpostavijo, dokumentirajo in izvajajo sistem vodenja;  2. izvesti presojo podizvajalcev storitev in dobaviteljev opreme in izdelkov;  3. izbirati pogodbene podizvajalce ali dobavitelje na podlagi vnaprej določenih meril;  4. preverjati, če dobavitelji in izvajalci razumejo varnostne zahteve ter če dela izvajajo v skladu z varnostnimi zahtevami;  5. oceniti, če ima podizvajalec sredstva in strokovna znanja za zagotavljanje varnosti ter kakovosti proizvodov ali storitev,  6. zagotoviti, da so proizvodi in storitve podizvajalcev in dobaviteljev v skladu z varnostnimi zahtevami;  7. preverjati, če imajo dobavitelji in podizvajalci nadzor nad svojimi podizvajalci;  8. zagotoviti, da so pogodbene zahteve, vključno z varnostnimi zahtevami, specificirane;  9. s pregledi, preizkušanjem, preverjanjem in validacijo pred sprejetjem, vgradnjo ali obratovalno rabo potrditi, da dejavnosti ali izdelki izpolnjujejo predpisana merila;  10. oblikovati in določiti merila za nabavo izdelkov ter jih dokumentirati. Dobavitelj mora investitorju ali upravljavcu dostaviti dokazila o izpolnjevanju meril pred uporabo izdelka;  11. pri naročilu varnostno pomembnih SSK zahtevati od proizvajalcev oziroma dobaviteljev možnost lastnega nadzora ali nadzora osebja uprave, vključno s pregledi v prostorih proizvajalcev oziroma dobaviteljev. | (1) The investor or operator of a radiation or nuclear facility shall shall remain responsible for any works executed by subcontractors;  (2) The investor or operator of a radiation or nuclear facility shall in its management plan, provide for supervision of processes or activities under individual processes executed by subcontractors. The investor or operator of a radiation or nuclear facility shal:  1. request that its subcontractors implement, document and operate management systems,  2. carry out assessments of subcontractors and suppliers of services and products,  3. select subcontractors and suppliers according to criteria set in advance,  4. check if suppliers and contractors and understand the safety requirements, and if works are carried out in compliance with safety requirements;  5. assess if the subcontractor has the resources and expertise to ensure the safety and quality of products or services,  6. ensure that the products and services of subcontractors and suppliers are in accordance with safety requirements;  7. check if suppliers and subcontractors have control of their subcontractors;  8. ensure that requirements from contract and safety requirements are specified;  9. checks, testing, verification and validation prior to adoption, installation or operational use to confirm that the activities or the products meet the prescribed criteria;  10. create and develop and specify criteria for product procurement and document them. A supplier shall furnish the investor or operator with documentary evidence of compliance with criteria, prior to the putting of a product into service;  11. when ordering safety-related SSCs, request the manufacturers or suppliers to provide the means for supervision by its staff or Administration staff, including access to the manufacturer’s or supplier’s premises for inspection; |
| C 5.8 | It shall be confirmed13 that activities and their products meet the specified requirements and shall ensure that products perform satisfactorily in service.  13 Through inspection, testing, verification and validation activities before the acceptance, implementation, or operational use of products. | JV5 67/2 | (2) Investitor ali upravljavec sevalnega ali jedrskega objekta mora v sistemu vodenja predvideti nadzor nad procesi ali dejavnostmi po posameznih procesih, ki jih zanj izvajajo pogodbeni podizvajalci. Investitor ali upravljavec sevalnega ali jedrskega objekta mora:  1. zahtevati od svojih pogodbenih podizvajalcev, da vzpostavijo, dokumentirajo in izvajajo sistem vodenja;  2. izvesti presojo podizvajalcev storitev in dobaviteljev opreme in izdelkov;  3. izbirati pogodbene podizvajalce ali dobavitelje na podlagi vnaprej določenih meril;  4. preverjati, če dobavitelji in izvajalci razumejo varnostne zahteve ter če dela izvajajo v skladu z varnostnimi zahtevami;  5. oceniti, če ima podizvajalec sredstva in strokovna znanja za zagotavljanje varnosti ter kakovosti proizvodov ali storitev,  6. zagotoviti, da so proizvodi in storitve podizvajalcev in dobaviteljev v skladu z varnostnimi zahtevami;  7. preverjati, če imajo dobavitelji in podizvajalci nadzor nad svojimi podizvajalci;  8. zagotoviti, da so pogodbene zahteve, vključno z varnostnimi zahtevami, specificirane;  9. s pregledi, preizkušanjem, preverjanjem in validacijo pred sprejetjem, vgradnjo ali obratovalno rabo potrditi, da dejavnosti ali izdelki izpolnjujejo predpisana merila;  10. oblikovati in določiti merila za nabavo izdelkov ter jih dokumentirati. Dobavitelj mora investitorju ali upravljavcu dostaviti dokazila o izpolnjevanju meril pred uporabo izdelka;  11. pri naročilu varnostno pomembnih SSK zahtevati od proizvajalcev oziroma dobaviteljev možnost lastnega nadzora ali nadzora osebja uprave, vključno s pregledi v prostorih proizvajalcev oziroma dobaviteljev. | (1) The investor or operator of a radiation or nuclear facility shall shall remain responsible for any works executed by subcontractors;  (2) The investor or operator of a radiation or nuclear facility shall in its management plan, provide for supervision of processes or activities under individual processes executed by subcontractors. The investor or operator of a radiation or nuclear facility shal:  1. request that its subcontractors implement, document and operate management systems,  2. carry out assessments of subcontractors and suppliers of services and products,  3. select subcontractors and suppliers according to criteria set in advance,  4. check if suppliers and contractors and understand the safety requirements, and if works are carried out in compliance with safety requirements;  5. assess if the subcontractor has the resources and expertise to ensure the safety and quality of products or services,  6. ensure that the products and services of subcontractors and suppliers are in accordance with safety requirements;  7. check if suppliers and subcontractors have control of their subcontractors;  8. ensure that requirements from contract and safety requirements are specified;  9. checks, testing, verification and validation prior to adoption, installation or operational use to confirm that the activities or the products meet the prescribed criteria;  10. create and develop and specify criteria for product procurement and document them. A supplier shall furnish the investor or operator with documentary evidence of compliance with criteria, prior to the putting of a product into service;  11. when ordering safety-related SSCs, request the manufacturers or suppliers to provide the means for supervision by its staff or Administration staff, including access to the manufacturer’s or supplier’s premises for inspection; |
| C 6.1 | In order to confirm the ability of the processes to achieve the intended results and to identify opportunities for improvement:  - The effectiveness of the management system shall be monitored and measured;  - The licensee shall ensure that managers carry out self-assessment of the performance of work for which they are responsible;  - Independent14 assessments shall be conducted regularly on behalf of the licensee.  14 By an external organisation or by an internal independent  assessment unit. | JV5 69/1, 71, 72/1, 72/5 | (1) Za zagotovitev želenih rezultatov organizacije mora investitor ali upravljavec sevalnega ali jedrskega objekta spremljati in meriti uspešnost sistema vodenja z namenom, da se na podlagi povratnih informacij prepoznajo pomanjkljivosti in prednosti organizacije ter priložnosti za izboljšave in poveča sevalna in jedrska varnost.  Vse ravni vodstva investitorja ali upravljavca sevalnega ali jedrskega objekta morajo redno izvajati samovrednotenja, da se:  - določijo in popravijo pomanjkljivosti z namenom stalnih izboljšav sistema vodenja,  - potrdi, da sistem vodenja zagotavlja predpisano sevalno ali jedrsko varnost,  - krepijo vodenje, varnostna kultura ter zagotavljanje uspešnosti procesov in dejavnosti.  (1) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora zagotoviti, da se v rednih časovnih obdobjih izvajajo neodvisna vrednotenja sistema vodenja, vključno s presojami. Z neodvisnimi vrednotenji se ocenjuje uspešnost sistema vodenja.  (5) Za izvajanje neodvisnih vrednotenj je treba ustanoviti neodvisno organizacijsko enoto ali imenovati posameznika. Za jedrske elektrarne mora biti ta enota oblikovana kot neodvisna organizacijska skupina, ki izvaja neodvisne presoje. | (1) To ensure favourable process outcomes the investor or operator of a radiation or nuclear facility shall monitor and measure the performance management system, in order to be on the basis of feedback, identify weaknesses and strengths of the organization and improvement opportunities and increase the radiation and nuclear safety.  All levels of management of the investor or operator of a radiation or nuclear facility shall carry out self-assessment to:  - determine and correct deficiencies with the aim of continuous improvement of the management system,  - confirm that the management system provides the required radiation and nuclear safety,  - evaluate the performance of work and the improvement of the safety culture.  (1) The management of the investor or operator of a radiation or nuclear facility shall ensure that regularly conduct an independent assesment of the management system, including audits. With the independent assesment is measured the effectiveness of the management system.  (5) The operator of a radiation or nuclear facility shall set up an internal group or an individual responsible for implementation of an independent assessment. In the case of a nuclear power plant, such a group shall be set up as an organisational unit for independent assessment. |
| C 6.2 | An organizational unit shall be established with the responsibility for conducting independent assessments. This unit shall have sufficient authority to discharge its responsibilities. Individuals conducting independent assessments shall not assess their own work. | JV5 72/5-6 | (5) Za izvajanje neodvisnih vrednotenj je treba ustanoviti neodvisno organizacijsko enoto ali imenovati posameznika. Za jedrske elektrarne mora biti ta enota oblikovana kot neodvisna organizacijska skupina, ki izvaja neodvisne presoje.  (6) Neodvisna organizacijska enota ali posameznik iz prejšnjega odstavka mora imeti pooblastila za izvajanje neodvisnih vrednotenj in opravljanje svojih nalog. Organizacijska enota ali posameznik mora imeti možnost neposrednega poročanja vodstvu. | (5) The operator of a radiation or nuclear facility shall set up an internal group or an individual responsible for implementation of an independent assessment. In the case of a nuclear power plant, such a group shall be set up as an organisational unit for independent assessment.  (6) An independent organizational unit or individual referred in the previous paragraph shall be vested with appropriate authorities to carry out its tasks. Organizational unit or individual shall have the possibility of direct management reporting. |
| C 6.3 | The licensee shall evaluate the results of the assessments and take any necessary actions, and shall record and communicate inside the organisation the decisions and the reasons for the actions. | JV5 72/3 | (3) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora oceniti rezultate vrednotenj in ukrepati. Rezultate vrednotenj in ukrepe mora dokumentirati. O rezultatih vrednotenj, ukrepih in vzrokih za ukrepe mora redno seznanjati zaposlene. | (3) The management of the investor or operator of a radiation or nuclear facility shall evaluate the assessment results and take appropriate measures. The results of the evaluations and actions shall be documented. The results of the evaluations, actions and causes of action shall regularly inform personnel. |
| C 6.4 | A management system review shall be conducted at planned intervals to ensure the effectiveness of the management system. | JV5 73/1 | (1) Investitor ali upravljavec sevalnega ali jedrskega objekta mora v načrtovanih obdobjih pregledati sistem vodenja in zagotoviti njegovo uspešnost ter zmožnost izpolnjevanja ciljev organizacije. | (1) The investor or operator of a radiation or nuclear facility shall be conducted at planned intervals to ensure the continuing suitability and effectiveness of the management system and its ability to enable the objectives set for the organization to be accomplished. |
| C 6.5 | The causes of non-conformances shall be determined and remedial actions shall be taken to prevent their recurrence. | JV5 70/1 | (1) Vodstvo investitorja ali upravljavca sevalnega ali jedrskega objekta mora zagotoviti, da so prepoznani vzroki neskladij, dogodkov in varnostnih vprašanj ter ocenjene njihove možne posledice. Pravočasno je treba uvesti popravljalne ukrepe za odpravo vzrokov neskladij in preventivne ukrepe za preprečitev novih ali podobnih neskladij. Spremljati je treba stanje izvedenih popravljalnih in preventivnih ukrepov. O popravljalnih in preventivnih ukrepih je treba poročati ustrezni ravni vodstva organizacije. | (1) The management of the investor or operator of a radiation or nuclear facility shall ensure that the causes of non-conformances shall be determined and remedial actions shall be taken to prevent their recurrence. Timely is necessary to introduce corrective measures to eliminate the causes of non-conformances and preventive actions to prevent new or similar discrepancies. The status and effectiveness of all corrective and preventive actions shall be monitored and reported to management at an appropriate level in the organization. |
| C 6.6 | Improvement plans shall include plans for the provision of adequate resources. Actions for improvement shall be monitored through to their completion and the effectiveness of the improvement shall be checked. | JV5 74/2 | (2) Pri pripravi načrta izboljšav mora investitor ali upravljavec sevalnega ali jedrskega objekta predvideti tudi zagotavljanje ustreznih finančnih, človeških in drugih virov. Nadzorovati mora izvedbo načrta izboljšav, dokler se ta ne zaključi, in preverjati uspešnost izvedenih izboljšav. | (2) Improvement plans of investitor or operator of a radiation or nuclear facility shall include plans for the provision of adequate financial, human or other resources. Actions for improvement shall be monitored through to their completion and the effectiveness of the improvement shall be checked. |
| C 7.1 | Management, at all levels in the licensee organization, shall consistently demonstrate, support, and promote attitudes and behaviours that result in an enduring and strong safety culture. This shall include ensuring that their actions discourage complacency, encourage an open reporting culture as well as a questioning and learning attitude with a readiness to challenge acts or conditions adverse to safety. | JV5 53/1-2 | 1. Investitor ali upravljavec sevalnega ali jedrskega objekta mora s sistemom vodenja:  * zagotoviti, da vodstvo in zaposleni spodbujajo dejavnosti za zagotavljanje varnosti in prispevajo k stalnemu izboljševanju varnostne kulture; * določiti in podpirati želena in pričakovana vedenja in ravnanja, ki spodbujajo močno varnostno kulturo, pri čemer se želena in pričakovana ravnanja in vedenja nanašajo tudi na podizvajalce; * zagotoviti, da posamezniki in skupine varno in uspešno izvajajo naloge, ki se nanašajo na varnost, ob upoštevanju medsebojnih vplivov med posamezniki, tehnologijo in organizacijo; * zagotoviti načine, s katerimi organizacija stalno razvija, nadgrajuje in izboljšuje svojo varnostno kulturo.  1. Posamezniki v organizaciji investitorja ali upravljavca sevalnega ali jedrskega objekta morajo podpirati in spodbujati močno varnostno kulturo s krepitvijo:  * individualne in skupne zavezanosti za varnost; * sprejetja osebne odgovornosti za varnost; * organizacijske kulture, katere vrednote so zaupanje, sodelovanje in odprta komunikacija ter poročanje o človeških in organizacijskih težavah; * poročanja o vseh pomanjkljivostih na SSK z namenom, da ne pride do zmanjšanja varnosti; * hitre potrditve ugotovljenih težav in povratnih informacij za ugotovljene težave ter predlogov za izboljšave; * načinov, s katerimi si organizacija nenehno prizadeva za razvoj in izboljšanje varnosti ter varnostne kulture; * dodeljevanja odgovornosti in pooblastil organizacijam ter posameznikom za varnost na vseh ravneh; * ukrepov za spodbujanje spraševanja, kritičnega razmišljanja in stalnega učenja zaposlenih na vseh ravneh organizacije; * preprečevanja neutemeljenega samozadovoljstva; * skupnega razumevanja ključnih vidikov varnosti in varnostne kulture v organizaciji; * ozaveščenosti o tveganjih in nevarnostih, ki se nanašajo na delo in delovno okolje, ter razumevanja možnih posledic teh nevarnosti; * konzervativnega odločanja pri izvajanju vseh dejavnostih, ki se nanašajo na varnost. | (1) The investor or operator of a radiation or nuclear facility shall with management system:  - provide management and personel to promote activities to ensure the safety and contribute to the continuous improvement of safety culture;  - establish and support the desired and expected behavior and conduct, that promote a strong safety culture, whereby the desired and expected conduct and behavior also apply to subcontractors;  - ensure that individuals and groups safely and successfully carry out the tasks relating to the safety, taking into account the interactions between people, technology and organization;  - provide the means by which the organization is constantly developing, upgrading and improving its safety culture.  (2) Individuals in the organization of the investor or operator of a radiation or nuclear facility shallt support and promote a strong safety culture by strengthening:  - individual and collective commitment to safety;  - the acceptance of personal responsibility for safety  - an organizational culture that supports and encourages trust, collaboration, consultation and communication;  - the reporting of any deficiencies in SSCs to avoid degradation of safety;  - the timely acknowledgement of problems, reporting back and actions taken;  - the ways in which the organization is constantly striving to develop and improve the safety and security culture;  - the allocation of responsibilities and powers of organizations and individuals for safety at all levels  - reinforcing a learning and questioning attitude at all levels of theorganization;  - prevention of discourage complacency  - ensuring a common understanding of the key aspects of safety culture within the organization  - awareness of the risks and dangers related to work and working environment, and to understand the potential consequences of these risks;  - conservative decision making in the implementation of all activities relating to safety. |
| C 7.2 | The management system shall provide the means to systematically develop, support, and promote desired and expected attitudes and behaviours that result in a strong safety culture. The adequacy and effectiveness of these means shall be assessed as part of self-assessments and management system reviews. | JV5 53/1-4 | (1) Investitor ali upravljavec sevalnega ali jedrskega objekta mora s sistemom vodenja:  – zagotoviti, da vodstvo in zaposleni spodbujajo dejavnosti za zagotavljanje varnosti in prispevajo k stalnemu izboljševanju varnostne kulture;  – določiti in podpirati želena in pričakovana vedenja in ravnanja, ki spodbujajo močno varnostno kulturo, pri čemer se želena in pričakovana ravnanja in vedenja nanašajo tudi na podizvajalce;  – zagotoviti, da posamezniki in skupine varno in uspešno izvajajo naloge, ki se nanašajo na varnost, ob upoštevanju medsebojnih vplivov med posamezniki, tehnologijo in organizacijo;  – zagotoviti načine, s katerimi organizacija stalno razvija, nadgrajuje in izboljšuje svojo varnostno kulturo.  (2) Posamezniki v organizaciji investitorja ali upravljavca sevalnega ali jedrskega objekta morajo podpirati in spodbujati močno varnostno kulturo s krepitvijo:  – individualne in skupne zavezanosti za varnost;  – sprejetja osebne odgovornosti za varnost;  – organizacijske kulture, katere vrednote so zaupanje, sodelovanje in odprta komunikacija ter poročanje o človeških in organizacijskih težavah;  – poročanja o vseh pomanjkljivostih na SSK z namenom, da ne pride do zmanjšanja varnosti;  – hitre potrditve ugotovljenih težav in povratnih informacij za ugotovljene težave ter predlogov za izboljšave;  – načinov, s katerimi si organizacija nenehno prizadeva za razvoj in izboljšanje varnosti ter varnostne kulture;  – dodeljevanja odgovornosti in pooblastil organizacijam ter posameznikom za varnost na vseh ravneh;  – ukrepov za spodbujanje spraševanja, kritičnega razmišljanja in stalnega učenja zaposlenih na vseh ravneh organizacije;  – preprečevanja neutemeljenega samozadovoljstva;  – skupnega razumevanja ključnih vidikov varnosti in varnostne kulture v organizaciji;  – ozaveščenosti o tveganjih in nevarnostih, ki se nanašajo na delo in delovno okolje, ter razumevanja možnih posledic teh nevarnosti;  – konzervativnega odločanja pri izvajanju vseh dejavnostih, ki se nanašajo na varnost.  (3) Vodstvo upravljavca sevalnega ali jedrskega objekta mora redno izvajati neodvisna vrednotenja in samovrednotenja varnostne kulture in svojega vodenja.  (4) Vodstvo upravljavca sevalnega ali jedrskega objekta mora z rezultati vrednotenj iz prejšnjega odstavka seznaniti zaposlene ter zagotoviti stalne izboljšave in spodbujati odprto komunikacijo, sodelovanje, spraševanje, kritično razmišljanje ter stalno učenje zaposlenih na vseh ravneh organizacije. | (1) The investor or operator of a radiation or nuclear facility shall with management system:  - provide management and personel to promote activities to ensure the safety and contribute to the continuous improvement of safety culture;  - establish and support the desired and expected behavior and conduct, that promote a strong safety culture, whereby the desired and expected conduct and behavior also apply to subcontractors;  - ensure that individuals and groups safely and successfully carry out the tasks relating to the safety, taking into account the interactions between people, technology and organization;  - provide the means by which the organization is constantly developing, upgrading and improving its safety culture.  (2) Individuals in the organization of the investor or operator of a radiation or nuclear facility shallt support and promote a strong safety culture by strengthening:  - individual and collective commitment to safety;  - the acceptance of personal responsibility for safety  - an organizational culture that supports and encourages trust, collaboration, consultation and communication;  - the reporting of any deficiencies in SSCs to avoid degradation of safety;  - the timely acknowledgement of problems, reporting back and actions taken;  - the ways in which the organization is constantly striving to develop and improve the safety and security culture;  - the allocation of responsibilities and powers of organizations and individuals for safety at all levels  - reinforcing a learning and questioning attitude at all levels of theorganization;  - prevention of discourage complacency  - ensuring a common understanding of the key aspects of safety culture within the organization  - awareness of the risks and dangers related to work and working environment, and to understand the potential consequences of these risks;  - conservative decision making in the implementation of all activities relating to safety.  (3) The management of the operator of a radiation or nuclear facility shall periodically carry out an independent evaluation and self-assessment of safety culture and its management.  (4) The management of the operator of a radiation or nuclear facility shall with the results of the evaluations in the previous paragraph acquain employees and ensure continuous improvement and encourage open communication, collaboration, questioning, critical thinking and continuous learning of employees at all levels of the organization. |
| C 7.3 | The licensee shall ensure that its suppliers and contractors whose operations may have a bearing on the safety of the nuclear facility comply with 7.1 and 7.2 to the appropriate extent. | JV5 53/5 | (5) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da njegovi dobavitelji in podizvajalci, katerih delo lahko vpliva na varnost sevalnega ali jedrskega objekta, izvajajo svoje dejavnosti v skladu s prvim in drugim odstavkom tega člena. | (5) The operator of a radiation or nuclear facility shall ensure that its suppliers and subcontractors whose work can affect the safety of a radiation or nuclear facility, carry out their activities in accordance with the first and second paragraph of this article. |
| D: Training and Authorization of NPP staff | | JV4, UL  RS 74/05 |  |  |
| D 1.1 | The licensee shall establish an overall training policy and a comprehensive training plan on the basis of long-term competency needs and training goals that acknowledges the critical role of safety. The plan shall be kept up to date. | JV4 5/1-2, 5/6 | (1) Upravljavec sevalnega ali jedrskega objekta mora pripraviti strategijo usposabljanja in programe strokovnega usposabljanja delavcev, ki opravljajo dela, pomembna za varnost. Programi morajo vsebovati program začetnega strokovnega usposabljanja za delovno mesto in program stalnega strokovnega usposabljanja delavcev.  (2) Programi strokovnega usposabljanja morajo biti pripravljeni v skladu s strategijo usposabljanja. Celovit plan usposabljanja mora biti pripravljen na podlagi programa strokovnega usposabljanja. Strategija usposabljanja in plan usposabljanja morajo biti pripravljeni na podlagi opredeljenih strokovnih kompetenc s posebnim poudarkom na sevalni in jedrski varnosti.  (6) Upravljavec sevalnega ali jedrskega objekta mora programe iz prvega odstavka tega člena preverjati in obnavljati najmanj vsakih pet let, da se zagotovi njegova usklajenost z vsemi spremembami in dopolnitvami, ki se nanašajo na obratovanje in vzdrževanje sevalnih ali jedrskih objektov ter s predpisi in standardi. | (1) The facility operator of a nuclear or radiation facility must prepare a training strategy and professional training program for employees, engaged in a notifiable work, important for the safety. Programs must include program of initial professional training for the workplace and continuous training program for the workers.  (2) Professional training programs should be prepared in accordance with the training strategy. A comprehensive training plan must be prepared on the bases of professional training program. The training strategy and training plan must be prepared on the basis of determined professional competence with a particular emphasis on radiation and nuclear safety.  (6) The facility operator of a radiation or nuclear facility must review and restore the programs from the first paragraph of this article at least every five years to ensure its compliance with all amendments and supplements relating to the operation and maintenance of radiation and nuclear facilities and with the regulations and standards. |
| D 1.2 | A systematic approach to training shall be used to provide a logical progression, from identification of the competences required for performing a job, to the development and implementation of training programmes including respective training materials for achieving these competences, and to the subsequent evaluation of this training. | JV4 5/3 | (3) Programi strokovnega usposabljanja morajo temeljiti na sistematičnem pristopu, ki obsega ukrepe za doseganje potrebnih kompetenc od prepoznavanja potrebnih znanj in veščin za opravljanje del, prek razvoja in izvedbe usposabljanj vključno z učnimi gradivi do naknadnega pregleda in vrednotenja uspešnosti usposabljanja. | (3) Professional training programs should be based on systematic approach that includes measures to attain the necessary competences, from identifying the necessary knowledge and skills to perform work, through the development and performance of training, including learning materials, to the subsequent review and evaluation of training effectiveness. |
| D 2.1 | Only qualified persons that have the necessary knowledge, skills, and safety attitudes shall be allowed to carry out tasks important to safety. The licensee shall ensure that all personnel performing safety-related duties including contractors have been adequately trained and qualified. | JV4 3/1, 3/3 | (1) Delavci upravljavca sevalnega ali jedrskega objekta in zunanji izvajalci, ki opravljajo dela, pomembna za varnost na objektu, morajo imeti potrebna znanja in veščine. Razumeti morajo pomen svojih dejavnosti na sevalno in jedrsko varnost objekta.  (3) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti primerno usposobljenost in preverjanje usposobljenosti lastnih delavcev in podizvajalcev, ki opravljajo dela, pomembna za varnost. | (1) Workers of the facility operator of the radiation or nuclear facility and outside contractors who are performing work, important for the safety on site, must have the necessary knowledge and skills. They should understand the importance of their activities on radiation and nuclear safety.  (3) The facility operator of a radiation or nuclear facility must provide an appropriate qualification and verification of their employees qualification as well as the qualification of their subcontractors, who are engaged in notifiable work, important for the safety. |
| D 2.2 | The Licensee shall define and document the necessary competence requirements for their staff. | JV4 3/2 | (2) Upravljavec sevalnega ali jedrskega objekta mora določiti in dokumentirati zahteve po znanjih in veščinah za vsako delovno mesto. Zahteve za delovna mesta, kjer se opravljajo dela, pomembna za varnost, morajo vsebovati najmanj:  — ustrezne izobrazbe,  — delovne izkušnje, pridobljene na primerljivem področju dela in na ostalih delovnih področjih ter  — začetno in stalno strokovno usposabljanje. | (2) The facility operator of a radiation or nuclear facility must establish and document the requirements for knowledge and skills for each workplace. Requirements for workplaces, where work in important for the safety, must include at least:  -- appropriate education,  -- work experience in a comparable working area and in other work areas and  -- initial and continuous professional training. |
| D 2.3 | Appropriate training records and records of assessments against competence requirements shall be established and maintained for each individual with tasks important to safety. | ZVISJV 62/5 | (5) Upravljavec sevalnega ali jedrskega objekta mora za vsakega delavca iz drugega odstavka tega člena hraniti zapise o opravljenem usposabljanju vključno z ocenami dosežene strokovne usposobljenosti glede na zahteve za ustrezno delovno mesto. Upravljavec mora te zapise hraniti še eno leto po tem, ko je delavec prenehal delati pri upravljavcu. | (5) The operator of a radiation or nuclear facility must, for each worker referred to in the second paragraph of this Article, keep records of completion of training, including assessments of proficiency achieved in relation to the requirements for a suitable post. The operator must keep these records for one year after the worker ceased to work for the operator. |
| D 2.4 | Staff qualifying for positions important to safety shall undergo a medical examination to ensure their fitness depending upon the duties and responsibilities assigned to them. The medical examination shall be repeated at specified intervals. | JV4 4/1 | (1) Delavci, ki opravljajo dela, pomembna za varnost na delovnih mestih, navedenih v tem pravilniku morajo biti fizično in psihično sposobni za opravljanje teh del in nalog, kar ugotavljajo pooblaščeni zdravniki z zdravstvenim pregledom pred zaposlitvijo in z rednimi zdravstvenimi pregledi med zaposlitvijo. Zdravstveni pregled vključuje tudi preverjanje neodvisnosti od alkohola, mamil ali drugih psihoaktivnih sredstev. | (1) Workers who perform work, important for the safety in positions set out in these Rules, must be physically and psychologically fit to perform such work and duties, as determined by authorised physicians by a medical examination before employment and regular medical examinations during employment. Medical examinations shall also include checking for non-dependence on alcohol, drugs and other psychogenic substances. |
| D 3.1 | Performance based training programmes shall be established for all staff with tasks important to safety.  The programmes shall cover initial training in order to qualify for a certain position and regular refresher training ~~as needed~~. | JV4 5/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora pripraviti strategijo usposabljanja in programe strokovnega usposabljanja delavcev, ki opravljajo dela, pomembna za varnost. Programi morajo vsebovati program začetnega strokovnega usposabljanja za delovno mesto in program stalnega strokovnega usposabljanja delavcev. | (1) The facility operator of a nuclear or radiation facility must prepare a training strategy and professional training program for employees, engaged in a notifiable work, important for the safety. Programs must include program of initial professional training for the workplace and continuous training program for the workers. |
| D 3.2 | All technical staff including on-site contractors shall have a basic understanding of nuclear safety, radiation safety, fire safety, the on-site emergency arrangements and industrial safety. | JV4 3/4 | (4) Vsi delavci upravljavca sevalnega ali jedrskega objekta kot tudi zunanji izvajalci, ki delajo na lokaciji sevalnega ali jedrskega objekta, morajo poznati osnove jedrske varnosti, sevalne varnosti, požarne varnosti, varstva pri delu in pripravljenosti na izredne dogodke. | (4) All employees of the facility operator of a radiation or nuclear facility as well as outside contractors working at the site of the radiation or nuclear facility, should know the basics of nuclear safety, radiation safety, fire safety, occupational safety and emergency preparedness. |
| D 3.3 | Representative simulator facilities shall be used for the training of control room operators to such an extent that the hands-on-training of normal and emergency operating procedures to be used during an accident is effective. The simulator shall be equipped with software to cover normal operation, anticipated operational occurrences, and a range of accident conditions15.  15 This type of simulator is known as a full-scope simulator. | JV4 16/1-3 | (1) Upravljavec jedrske elektrarne mora med začetnim in stalnim strokovnim usposabljanjem operaterjev komandne sobe uporabljati simulator, ki ustreza značilnostim objekta.  (2) Simulator mora omogočati zlasti simulacijo normalnega obratovanja, nenormalnega obratovanja ter obratovanja v primeru nezgod. Upravljavec mora zagotoviti, da so vse izvedene spremembe na opremi jedrske elektrarne oziroma v načinu njenega upravljanja, ki zadevajo obseg simulacije oziroma način upravljanja, v najkrajšem času ustrezno simulirane tudi v simulatorju.  (3) Pri usposabljanju na simulatorju se morajo uporabljati pisni postopki, ki so enaki postopkom v jedrski elektrarni. | (1) The operator of the nuclear power plant must, during the initial and continuous professional training of the control room operators, use the simulator, which corresponds the characteristics of the facility.  (2) Simulator in particular must allow the simulation of normal operation, abnormal operation and operation in case of emergencies. The operator must ensure that any changes, made on the equipment of nuclear power plant or in the way of its control, affecting the scope of the simulation or control mode, are also simulated in the simulator as soon as possible.  (3) In the training on simulator, written procedures, which are identical to the procedures in nuclear power plant, must be used. |
| D 3.4 | For control room operators, initial and annual refresher training shall include training on a representative full-scope simulator. Annual refresher training shall include at least 5 days on the simulator.16  16 Time includes the necessary briefings. | JV4 16/1 | (1) Upravljavec jedrske elektrarne mora med začetnim in stalnim strokovnim usposabljanjem operaterjev komandne sobe uporabljati simulator, ki ustreza značilnostim objekta. | (1) The operator of the nuclear power plant must, during the initial and continuous professional training of the control room operators, use the simulator, which corresponds the characteristics of the facility. |
| D 3.5 | Refresher training for control room operators shall  include especially the following items as  appropriate:  - Plant operation in normal operational states,  selected ~~transients~~ anticipated operational occurences and accident~~s~~ conditions;  - Shift crew teamwork;  - Operational experiences and modifications of plant  and procedures. | JV4 16/4 | (4) Usposabljanje mora vključevati tudi timsko delo operaterjev, obvladovanje normalnega obratovanja, nenormalnega obratovanja ter obratovanja v primeru nezgod, obratovalne izkušnje, izhajajoče iz upravljanja in nadzora jedrske elektrarne ter obravnavo sprememb na objektu in v obratovalnih postopkih. | (4) Training should also include teamwork of the operators, control of normal operation, abnormal operation and operation in case of emergencies/accidents, operating experience, resulting from the management and control of nuclear power plants and consideration of changes on the facility and in operating procedures. |
| D 3.6 | Maintenance and technical support staff including contractors shall have practical training on the required safety critical activities. | JV4 3/5 | (5) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti tudi praktično usposabljanje za dela, pomembna za varnost, za lastne delavce in podizvajalce, ki opravljajo vzdrževalna in druga tehnična dela v objektu. | (5) The facility operator of a radiation or nuclear facility must also provide practical training for work, important for the safety, for their own employees and subcontractors who perform maintenance and other technical work in the facility. |
| D 4.1 | Staff controlling changes in the operational status of the plant shall be required to hold a authorization valid for a specified time period. The licensee shall establish procedures for their staff to achieve this authorization. In the assessment of an individual’s competence and suitability as a basis for the authorization, documented criteria shall be used. | JV4 5/4, 10/4, 11/1-2 | (4) Programi strokovnega usposabljanja delavcev, ki opravljajo v sevalnih ali jedrskih objektih dela, pomembna za varnost, morajo biti opredeljeni v pisnih postopkih za usposabljanje.  (4) Člani komisije sprejmejo končno oceno na sestanku po preverjanju usposobljenosti. Ocena kandidata je lahko »Opravil« ali »Ni opravil«. Oceno »Opravil« dobi kandidat, ki je dosegel vsaj 80 % vseh možnih točk.  (1) Uprava izda delavcu dovoljenje za opravljanje del in nalog, za katere izpolnjuje pogoje, na podlagi poročila komisije o uspešno opravljenem preverjanju usposobljenosti in izpolnitvi drugih predpisanih pogojev.  (2) Komisija na podlagi s preverjanjem izkazane usposobljenosti delavca predlaga Upravi trajanje veljavnosti dovoljenja. Pri prvi pridobitvi dovoljenja komisija predlaga veljavnost dovoljenja za obdobje 12 do 18 mesecev ali največ do 31. decembra naslednjega koledarskega leta. Pri podaljšanjih dovoljenj komisija predlaga veljavnost dovoljenja za obdobje 27 mesecev, če je kandidat pri preverjanju usposobljenosti dosegel med 80 % in vključno 90 % možnih točk, oziroma pet let, če je dosegel več kot 90 % možnih točk. Komisija praviloma predlaga veljavnost dovoljenja do 31. decembra. | (4) The programs of training for workers engaged in radiation or nuclear facility work, important for the safety, must be defined in written procedures for training.  (4) Members of the Commission shall adopt a final evaluation at a meeting following the testing of competence. The evaluation of a candidate may be “Pass” or “Fail”. The evaluation “Pass” shall be awarded to a candidate who has attained at least 80% of all possible points.  (1) The Administration shall issue the worker with a licence to perform tasks and duties for which he fulfils the conditions, on the basis of a report from the Commission of the successful passing of the test of competence and fulfilment of the other conditions laid down.  (2) Based on the testing of the demonstrated competence of the worker, the Commission shall propose to the Administration the duration of validity of the licence. In the first issuing of a licence the Commission shall propose the validity of the licence for a period 12 to 18 months or up to 31 December of the following calendar year. In extensions of licences the Commission shall propose the validity of the licence for a period of 27 months, where the candidate attained between 80% and 90% inclusive of the possible points in the testing of competence, or for five years, if the candidate attained more than 90% of the possible points. The Commission proposes a validity of the license up to 31 December. |
| D 4.2 | If an authorised individual:  - Moves to another position for which an  authorization is required;  - Has been absent from the authorised position  during an extended time period; Re-authorisation  shall be conducted after necessary individual  preparations. | JV4, 8/4, 10/4, 12/1, 13/1,2 | (4) K preverjanju strokovne usposobljenosti za pridobitev dovoljenja za opravljanje določenih del in nalog v sevalnem ali jedrskem objektu upravljavec tega objekta lahko prijavi tudi osebo, ki ni v delovnem razmerju pri upravljavcu tega objekta, če izpolnjuje predpisane pogoje za taka dela in naloge.  (4) Člani komisije sprejmejo končno oceno na sestanku po preverjanju usposobljenosti. Ocena kandidata je lahko »Opravil« ali »Ni opravil«. Oceno »Opravil« dobi kandidat, ki je dosegel vsaj 80 % vseh možnih točk.  (1) Upravljavec sevalnega ali jedrskega objekta ne sme dovoliti opravljati dela na delovnem mestu, za katero se zahteva dovoljenje, delavcu, ki šest mesecev ali več ni opravljal tovrstnih del in v tem času ni opravil programa stalnega strokovnega usposabljanja za to delovno mesto.  (1) Če želi upravljavec sevalnega ali jedrskega objekta obnoviti veljavnost dovoljenja za delavca, ki mu je bilo dovoljenje odvzeto ali mu je prenehalo veljati po določilih prejšnjega člena, mora delavca za obnovitev dovoljenja prijaviti v skladu z 8. členom tega pravilnika.  (2) Upravljavec sevalnega ali jedrskega objekta v primeru iz prejšnjega odstavka Upravo obvesti o programu strokovnega usposabljanja za delavca, ki obnavlja dovoljenje. | (4) The operator may apply for testing of professional competence for obtaining a licence to perform tasks and duties in a radiation or nuclear facility on behalf of a person who is not in employment relationship with the operator of the facility, if he fulfils the conditions for such works and duties.  (4) Members of the Commission shall adopt a final evaluation at a meeting following the testing of competence. The evaluation of a candidate may be “Pass” or “Fail”. The evaluation “Pass” shall be awarded to a candidate who has attained at least 80% of all possible points.  (1) The facility operator of the radiation or nuclear facility should not allow worker to perform tasks at the workplace for which the license is required, if a worker does not perform such tasks for six months or more and in that time does not pursue a program of continuing professional training for that position.  (1) If the operator of a radiation or nuclear facility wishes to renew the validity of the licence for a worker whose licence has been revoked or has expired pursuant to the provisions of the previous article, in order to renew the licence the worker must apply in accordance with Article 8 of these Rules.  (2) The operator of a radiation or nuclear facility shall, in cases referred to in the previous paragraph, inform the Administration of the program of professional training for a worker renewing a licence. |
| D 4.3 | Work carried out by contractor personnel on structures, systems, or components that are important to safety shall be approved and monitored by a suitably competent member of licensee’s staff. | JV9 17/4 | (4) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da vsako dejavnost pri vzdrževanju, preizkušanju ali pregledih varnostno pomembnih SSK, pri katerih delno ali v celoti sodelujejo zunanji podizvajalci, odobri in nadzoruje pristojno osebje upravljavca sevalnega ali jedrskega objekta. | (4) The facility operator of a radiation or nuclear facility shall ensure that any activity in the scope of maintenance, testing or inspection of SSCs important for safety carried out in full or in part by contractor is approved and surveilled by the authorised personnel of the facility operator. |
| E: Design Basis Envelope for Existing Reactors | |  |  |  |
| E 1.1 | The design basis17 shall have as an objective the prevention or, if this fails, the mitigation of consequences resulting from anticipated operational occurrences and design basis accidents ~~conditions~~. Design provisions shall be made to ensure that potential radiation doses to the public and the site personnel do not exceed prescribed limits and are as low as reasonably achievable.  17 The design basis shall be reviewed and updated during the lifetime of the plant (see ref level 11.1). | JV5 18, 19 | Projektne osnove sevalnega ali jedrskega objekta morajo biti razumljivo in sistematično določene, dokumentirane in po potrebi posodobljene med gradnjo, v njegovi celotni obratovalni dobi, med morebitno fazo mirovanja in razgradnjo. Če je objekt odlagališče, pa tudi med dolgoročnim nadzorom po zaprtju, tako da prikazujejo njegovo dejansko stanje.  (1) Upravljavec sevalnega ali jedrskega objekta mora redno in ne le kot del vsakega občasnega varnostnega pregleda preverjati projektne osnove objekta, pri čemer se ta določba smiselno uporablja tudi za izvajalca dolgoročnega nadzora zaprtega odlagališča.  (2) Pregled projektnih osnov je treba opraviti tudi po obratovalnih dogodkih, ki so vplivali na sevalno ali jedrsko varnost, ali ob novih pomembnih informacijah glede sevalne ali jedrske varnosti (npr. ocena lastnosti lokacije, varnostne analize in razvoj varnostnih standardov ali praks).  (3) Pri pregledu projektnih osnov iz prvega ali drugega odstavka tega člena se za prepoznavanje potreb in možnosti izboljšav lahko uporabijo deterministične in verjetnostne varnostne analize ali inženirska presoja, pri čemer se rešitve v projektu primerjajo s predpisanimi zahtevami in dobro prakso.  (4) Glede na varnostno pomembnost rezultatov pregleda iz prvega ali drugega odstavka tega člena mora upravljavec smiselno posodobiti SSK ali izvesti druge ukrepe, potrebne za zagotavljanje sevalne oziroma jedrske varnosti. | The design bases of a radiation or nuclear facility shall be specified in a clear and systematic manner, documented and updated, as appropriate, during the construction, during the period of operation, during the deactivation period, if any, and during decommissioning. In the case of a disposal facility, this provision also applies to the period of long-term surveillance, to reflect the actual condition of the facility.  (1) The operator of a radiation or nuclear facility shall regularly, and not only as a part of each periodic safety inspection, review the facility design bases, while this provision also applies, in a meaningful manner, to the contractor of a long-term surveillance of a closed disposal facility.  (2) Such a review of design bases shall also be carried out following any operational occurrence relevant for radiation or nuclear safety or in cases where new information relevant for radiation or nuclear safety has arisen (e.g. evaluation of site characteristics, safety analysis and the development of safety standards or practices).  (3) In the review of design bases referred to in the first and second paragraphs of this article, deterministic and probabilistic safety analyses or engineering judgement may be employed to identify the needs and opportunities for improvements, as well as comparison of the design solutions with statutory requirements and good practice.  (4) Depending on the safety relevance of the findings of the review referred to in the first and second paragraphs of this article, the operator shall update SSCs as appropriate or undertake any other measures to ensure radiation or nuclear safety. |
| E 2.1 | Defence-in-depth18 shall be applied in order to prevent, or if prevention fails, to mitigate harmful radioactive releases. ~~The design shall therefore provide multiple physical barriers to the uncontrolled~~ ~~release of radioactive materials to the environment, and an adequate protection of the barriers.~~  18 For further information see IAEA SSR-2/1 (2012). | JV5 4/1/9 | Investitor, ki namerava graditi sevalni ali jedrski objekt, ali upravljavec, ki namerava tak objekt razgraditi, mora v projektnih osnovah:  9. z upoštevanjem načela obrambe v globino zagotoviti več nivojev obrambe vključno z nizom fizičnih pregrad za preprečitev in, če je preprečitev neuspešna, omilitev nenadzorovanih izpustov radioaktivnih snovi v okolje, ter s kombinacijo varnostnih funkcij zagotoviti visoko učinkovitost pregrad. | In the design bases, an investor planning to construct a radiation or nuclear facility, or an operator planning to decommission such a facility, shall  9. taking into account the principle of defense-in-depth ensure several levels of defense, including a series of physical barriers to prevent, or in case prevention is not successful, to mitigate uncontrolled releases of radioactive materials into the environment, as well as a combination of safety features that contribute to the effectiveness of the barriers, |
| E 2.2 | The defence-in-depth concept shall be applied to provide several levels of defence including a design that provides a series of physical barriers to prevent uncontroled releases of radioactive material to the environment, as well as a combination of safety features that contribute to the effectiveness of the barriers.  The design shall prevent as far as practicable:  - challenges to the integrity of the barriers;  - failure of a barrier when challenged;  - failure of a barrier as consequence of failure of another barrier. | JV5 4/1/9-12 | (1) Investitor, ki namerava graditi sevalni ali jedrski objekt, ali upravljavec, ki namerava tak objekt razgraditi, mora v projektnih osnovah:  9. z upoštevanjem načela obrambe v globino zagotoviti več ravni obrambe, vključno z nizom fizičnih pregrad za preprečitev in, če je preprečitev neuspešna, omilitev nenadzorovanih izpustov radioaktivnih snovi v okolje, ter s kombinacijo varnostnih funkcij zagotoviti visoko učinkovitost pregrad;  10. zagotoviti, da se prepreči ogroženost celovitosti posamezne fizične pregrade;  11. zagotoviti, da ne bo odpovedala posamezna fizična pregrada med izvajanjem svoje funkcije;  12. zagotoviti, da ne bo porušena fizična pregrada zaradi posledic porušitve druge fizične pregrade; | (1) In the design bases, an investor planning to construct a radiation or nuclear facility, or an operator planning to decommission such a facility, shall  9. taking into account the principle of defense-in-depth ensure several levels of defense, including a series of physical barriers to prevent, or in case prevention is not successful, to mitigate uncontrolled releases of radioactive materials into the environment, as well as a combination of safety features that contribute to the effectiveness of the barriers,  10. ensure the prevention of a compromise of the integrity of individual physical barriers,  11. ensure the prevention of a failure of any physical barrier during its performance of its function,  12. ensure the prevention of a collapse of any physical barrier as a consequence of the collapse of another physical barrier, |
| E 3.1 | During normal operation19, anticipated operational occurrences and design basis accidents, the plant  shall be able to fulfil the ~~following~~ fundamental safety functions20:  - control of reactivity,  - removal of heat from the reactor core and from the spent fuel, and  - confinement of radioactive material.  ~~in the plant states: normal operation, anticipated operational occurrences and design basis accident~~  ~~conditions.~~  19 Normal operation includes startup, power operation, shutting down, shutdown, maintenance, testing and refuelling.  20 Under the conditions specified in the following paragraphs | JV5 P1/1.2/1 | 1. Jedrska elektrarna mora med normalnim obratovanjem (kar vključuje zagon elektrarne, obratovanje na moči, zaustavljanje, zaustavitev, vzdrževanje, preizkušanje in menjavo goriva), pričakovanimi obratovalnimi dogodki in projektnimi dogodki izpolnjevati naslednje varnostne funkcije:  – nadzor reaktivnosti sredice,  – odvod toplote iz reaktorske sredice in izrabljenega goriva,  – zadrževanje radioaktivnih snovi in preprečitev njegovega nenadzorovanega širjenja v okolje. | 1. A nuclear power plant shall during normal operation (including start-up, power operation, shutting down, shutdown, maintenance, testing and refuelling), anticipated operational occurrences and design-basis events achieve the following safety functions:  - control of core reactivity;  - removal of heat from the reactor core and from the spent fuel, and  - containment of radioactive material and prevention of their uncontrolled spread into the environment. |
| E 4.1 | The design basis shall specify the capabilities of the plant to cope with a specified range of plant states21 within the defined radiation protection requirements. Therefore, the design basis shall include the specification for normal operation ~~and transients/~~ anticipated operational occurrences and design accidents ~~conditions~~ from Postulated Initiating Events (PIEs), the safety classification, important assumptions and, in some cases, the particular methods of analysis.  21 Normal operation, anticipated operational occurrences and design basis accident conditions. | JV5 P1/1.1/5 | 5. Projektne osnove morajo določiti potrebne zmogljivosti jedrske elektrarne za obvladovanje vseh stanj objekta, tako da so izpolnjene zahteve varstva pred sevanji. Projektne osnove vključujejo:  – pogoje normalnega obratovanja,  – pogoje med pričakovanimi obratovalnimi dogodki in projektnimi dogodki,  – varnostno klasifikacijo SSK,  – pomembne predpostavke in  – izbrane analitične metode. | 5. The design bases shall determine the necessary capabilities of the nuclear power plant to withstand all the facility states and ensure compliance with the requirements of radiation protection. The design bases shall include:  - normal operational conditions;  - conditions under anticipated operational occurrences and design basis events;  - SSC safety classification;  - substantial assumptions, and  - selected analytical methods. |
| E 4.2 | A list of PIEs shall be established to cover all events that could affect the safety of the plant. From this list, a set of anticipated operational occurrences and design basis accidents ~~events~~ shall be selected using deterministic or probabilistic methods or a combination of both as well as engineering judgement22. The resulting design basis events shall be used to set the boundary conditions according to which the structures, systems and components important to safety shall be designed, in order to demonstrate that the necessary safety functions are accomplished and the safety objectives met.  22 Depending on the specific topic being under review, not all types of insights (deterministic, probabilistic or engineering judgement) may be relevant or needed. | JV5 4/1/1, 10/4, 11/1-2 | (1) Investitor, ki namerava graditi sevalni ali jedrski objekt, ali upravljavec, ki namerava tak objekt razgraditi, mora v projektnih osnovah:  1. izbrati pričakovane obratovalne dogodke in projektne dogodke izmed vseh predpostavljenih začetnih dogodkov v skladu z drugim odstavkom 11. člena tega pravilnika, ki bi lahko vplivali na varnost sevalnega ali jedrskega objekta in katerih verjetnost nastanka ni zanemarljivo nizka;  (4) Robne pogoje za projektiranje SSK, pomembnih za varnost sevalnega ali jedrskega objekta, je treba določiti na podlagi pričakovanih obratovalnih dogodkov in projektnih dogodkov, izbranih v skladu s 1. točko prvega odstavka 4. člena tega pravilnika.  (1) Projektne osnove morajo vključevati predpostavljene začetne dogodke, ki so lahko notranji ali zunanji, povzročeni zaradi človeške dejavnosti ali naravni, katerih verjetnost ni zanemarljivo majhna ali katerih morebitne posledice za okolje, prebivalce ali zaposlene niso zanemarljive.  (2) Pričakovane obratovalne dogodke in projektne dogodke je treba izbrati med vsemi predpostavljenimi začetnimi dogodki z uporabo determinističnih oziroma verjetnostnih metod ali kombinacijo obeh ali z uporabo inženirske presoje tako, da zajamejo vse robne pogoje, ki jih vključujejo predpostavljeni začetni dogodki. | (1) In the design bases, an investor planning to construct a radiation or nuclear facility, or an operator planning to decommission such a facility, shall  1. from the list of all postulated initiating events, select, in accordance with the second paragraph of Article 11 of these Rules, those anticipated operational occurrences and design basis events that may influence the safety of the radiation or nuclear facility and of which the probability of occurrence is not negligibly low,  (4) The boundary conditions for the design of safety-related SSCs of a radiation or nuclear facility shall be specified based on anticipated operational occurrences and design-basis events selected in accordance with item 1 of the first paragraph of Article 4 of these Rules.  (1) The design bases shall include those postulated initiating events, either external or internal, induced by human activity or natural events, the probability of which is not negligibly low or the consequences of which to the environment, population or to personnel are not negligible.  (2) The anticipated operational occurrences and design-basis events shall be selected from all the postulated initiating events according to deterministic or probabilistic methods or combination of both or based on engineering judgment, so as to encompass all the boundary conditions that may be imposed by the postulated initiating events. |
| E 4.3 | The design basis shall be systematically defined and documented to reflect the actual plant. | JV5 18 | Projektne osnove sevalnega ali jedrskega objekta morajo biti razumljivo in sistematično določene, dokumentirane in po potrebi posodobljene med gradnjo, v njegovi celotni obratovalni dobi, med morebitno fazo mirovanja in razgradnjo. Če je objekt odlagališče, pa tudi med dolgoročnim nadzorom po zaprtju, tako da prikazujejo njegovo dejansko stanje. | The design bases of a radiation or nuclear facility shall be specified in a clear and systematic manner, documented and updated, as appropriate, during the construction, during the period of operation, during the deactivation period, if any, and during decommissioning. In the case of a disposal facility, this provision also applies to the period of long-term surveillance, to reflect the actual condition of the facility. |
| E 5.1 | Internal events such as loss of coolant accidents, equipment failures, maloperation and internal hazards, and their consequential events, shall be taken into account in the design of the plant23. The list of events shall be plant specific~~21~~ and take account of relevant experience and analysis from other plants.  23 Additional information on internal hazards is provided in IAEA Safety Standards NS-G-1.7 and NS-G-1.11.  ~~24~~ ~~For a listing of events commonly considered to be taken into account for design basis as a minimum, see Guidance to  Issue F.~~ | JV5 4/1/1, 11/3 | (1) Investitor, ki namerava graditi sevalni ali jedrski objekt, ali upravljavec, ki namerava tak objekt razgraditi, mora v projektnih osnovah:  1. izbrati pričakovane obratovalne dogodke in projektne dogodke izmed vseh predpostavljenih začetnih dogodkov v skladu z drugim odstavkom 11. člena tega pravilnika, ki bi lahko vplivali na varnost sevalnega ali jedrskega objekta in katerih verjetnost nastanka ni zanemarljivo nizka;  (3) Projektni dogodki morajo biti izbrani z upoštevanjem lastnosti objekta ter izkušenj in analiz drugih primerljivih objektov. | (1) In the design bases, an investor planning to construct a radiation or nuclear facility, or an operator planning to decommission such a facility, shall  1. from the list of all postulated initiating events, select, in accordance with the second paragraph of Article 11 of these Rules, those anticipated operational occurrences and design basis events that may influence the safety of the radiation or nuclear facility and of which the probability of occurrence is not negligibly low,  (3) Design bases events shall be selected taking into account the characteristics of the facility and experience and analyses of other comparable facilities. |
| E 5.2 | External hazards shall be taken into account in the design of the plant. In addition to natural hazards25, human made external hazards – including airplane crash and other nearby transportation, industrial activities and site area conditions which reasonably can cause fires, explosions or other threats to the safety of the nuclear power plant – ~~the following types of natural and human made external events hazards~~ shall as a minimum be taken into account in the design of the plant according to site specific conditions:  ~~- extreme~~~~26~~ ~~wind loading~~  ~~- extreme outside temperatures~~  ~~- extreme rainfall, snow conditions and site flooding~~  ~~- extreme cooling water temperatures and icing~~  ~~- earthquake~~  ~~- airplane crash~~  ~~- other nearby transportation, industrial activities and site area conditions which reasonably can cause fires, explosions or other threats to the safety of the nuclear power plant.~~  ~~26~~ ~~Definition of “extreme” is based on historical weather data for the site region~~  25 See Issue T. | JV5 P1/1.1/6 | 6. Projektne osnove morajo upoštevati za elektrarno značilne notranje in zunanje predpostavljene začetne dogodke ter njihove smiselne oziroma še verjetne kombinacije, ki morajo biti obravnavani v skladu z razmerami na lokaciji. Zunanji predpostavljeni začetni dogodki morajo poleg naravnih zunanjih dogodkov iz 5. točke te priloge vsebovati tudi dogodke, ki jih povzroči človek, in sicer vsaj padce letal in druge dogodke na bližnjih prometnih poteh, v industrijskih objektih ali na območju lokacije, ki bi lahko povzročili požare, eksplozije ali drugače ogrožali varnost jedrske elektrarne. | 6. The design bases shall take into account the internal and external initiating events characteristic for the power plant and and their credible and still plausible combinations, which shall be treated in accordance with the site conditions. External postulated initiating events in addition to natural external events referred to in item 5 of this Annex shall also include human made external hazards including airplane crash and other nearby transportation, industrial activities and site area conditions that might lead to fires, explosions or other threats to the safety of the nuclear power plant. |
| E 6.1 | Credible combinations of individual events, including internal and external hazards, that could lead to anticipated operational occurrences or design basis accidents ~~conditions~~, shall be considered in the design. Deterministic and probabilistic assessment as well as ~~E~~engineering judgement ~~and probabilistic methods~~ can be used for the selection of the event combinations. | JV5 11/4 | (4) Projektne osnove morajo poleg posameznih predpostavljenih začetnih dogodkov iz prvega in drugega odstavka tega člena upoštevati tudi verjetne kombinacije notranjih in zunanjih dogodkov, ki lahko vodijo v pričakovane obratovalne dogodke ali projektne dogodke. Pri izbiri kombinacij se lahko uporabi deterministična ali verjetnostna presoja ali inženirska presoja. | (4) In addition to individual postulated initiating events from the first and second paragraph of this article, design bases shall also take into account probable combinations of internal and external events that may lead to anticipated operatinal occurrences or design-basis events. The selection of such combinations may be based on deterministic or probabilistic methods or engineering judgement. |
| E 7.1 | Initiating events shall be grouped into a limited number of categories that correspond to plant states~~24~~ 27, according to their probability of occurrence. Radiological and technical acceptance criteria shall be  assigned to each plant state such that frequent initiating events shall have only minor or no radiological consequences and that events that may result in severe consequences shall be of very low ~~probability~~ frequency.  ~~24~~ ~~See footnote 17~~  27 See footnote 21. | JV5 15 | (1) V projektnih osnovah sevalnega ali jedrskega objekta je treba določiti njegova stanja.  (2) Predpostavljeni začetni dogodki morajo biti glede na verjetnost nastanka zbrani v omejeno število kategorij. Te morajo zajemati pričakovane obratovalne dogodke, projektne nesreče in za jedrske elektrarne razširjene projektne nesreče.  (3) Merila za razvrstitev v kategorije iz prejšnjega odstavka morajo biti za vsako kategorijo določena tako, da imajo pogosti predpostavljeni začetni dogodki majhne ali nikakršne radiološke posledice in da je pogostost dogodkov s težkimi radiološkimi posledicami izredno majhna. | (1) The design bases for a radiation or nuclear facility shall specify the facility states.  (2) According to their probability of occurrence, the postulated initiating events shall be grouped in a limited number of categories. The categories shall include: anticipated operational occurrences, design-basis accidents, and, in the case of nuclear power plants, design extension conditions.  (3) The criteria for classification referred to in the previous paragraph shall be specified, for each category, so as to ensure that frequent postulated initiating events have minor or no radiological consequences, while the frequency of events with severe radiological consequences shall be very low. |
| E 7.2 | Criteria for protection of the fuel rod integrity, including fuel temperature, Departure from Nucleate Boiling (DNB), and cladding temperature, shall be specified. In addition, criteria shall be specified for the maximum allowable fuel damage during any design basis accident ~~event~~. | JV5 P1/1.4/2 | Projekt mora opredeljevati najmanj:  2. merila za zaščito gorivnih srajčk, ki vključujejo:  – temperaturo goriva,  – krizo vrenja, razen za reaktorje, hlajene s plinom,  – temperaturo srajčk,  – celovitost gorivnih elementov, vključno z omejitvijo dovoljenega puščanja cepitvenih produktov med obratovanjem, ki se tudi med nenormalnimi obratovalnimi stanji ne sme opazno povečati,  – največjo dovoljeno poškodbo goriva pri projektnem dogodku, pri čemer mora biti zagotovljeno, da gorivni elementi ostanejo na svojem mestu in da poškodbe ne preprečujejo učinkovitega hlajenja po nesreči; | The design shall specify, as a minimum:  2. fuel-cladding protection criteria, which include:  - fuel temperature;  - departure from nucleate boiling, except for gas-cooled reactors;  - cladding temperature,  - fuel-element integrity including limitation of the release of fission products in operation, which shall not increase notably even in abnormal operating states;  - the maximum allowable fuel damage as a result of a design-basis event, provided that the fuel elements remain in their positions and the damage does not obstruct efficient heat removal following the accident; |
| E 7.3 | Criteria for the protection of the ~~(~~primary~~)~~ coolant pressure boundary shall be specified, including maximum pressure, maximum temperature,  thermal- and pressure transients and stresses. | JV5 P1/1.4/3 | Projekt mora opredeljevati najmanj:  3. merila za zaščito tlačne meje primarnega hladilnega sistema, ki vključujejo:  – največjo temperaturo hladila,  – največji tlak hladila,  – število prehodnih pojavov, ki toplotno ali tlačno obremenjujejo primarni hladilni sistem, hitrost spreminjanja temperatur in tlaka med takimi prehodnimi pojavi, najvišjo in najnižjo doseženo vrednost temperatur in tlakov ipd.,  – napetosti v materialu; | The design shall specify, as a minimum:  3. criteria for primary coolant system pressure-boundary protection, which include:  - the maximum coolant temperature;  - the maximum coolant pressure;  - the number of transients that impose thermal or pressure loading on the primary coolant system, rates of changes of temperature and pressure during such transients, the minimum and maximum temperatures and pressures reached, etc.;  - material stresses; |
| E 7.4 | If applicable, criteria in 7.3 shall be specified as well  for protection of the secondary coolant system. | JV5 P1/1.4/4 | Projekt mora opredeljevati najmanj:  4. za elektrarno s tlačnovodnim reaktorjem tudi merila za zaščito sekundarnega hladilnega sistema, ki vključujejo podobne parametre kakor v prejšnji točki; | The design shall specify, as a minimum:  4. for a pressurised water reactor power plant, criteria for protection of the secondary coolant system, which shall include parameters analogous to those set out in the previous item; |
| E 7.5 | Criteria shall be specified for protection of containment, including temperatures, pressures and leak rates. | JV5 P1/1.4/5 | Projekt mora opredeljevati najmanj:  5. merila za zaščito zadrževalnega hrama, ki vključujejo:  – temperature v zadrževalnem hramu,  – tlak v zadrževalnem hramu,  – netesnost. | The design shall specify, as a minimum:  5. containment-protection criteria, which include:  - temperatures in the containment;  - pressures in the containment;  - leakage. |
| E 8.1 | The initial and boundary conditions shall be specified with conservatism. | JV5 16/2 | (2) Varnostne analize morajo upoštevati:  1. najneugodnejšo enojno odpoved opreme, potrebne za opravljanje varnostnih funkcij, pri čemer ni treba upoštevati možnosti odpovedi pasivnih sestavnih delov, če se dokaže, da je takšna odpoved zelo malo verjetna in da analizirani dogodek ne vpliva na varnostno funkcijo, ki ji je sestavni del namenjen;  2. da mora imeti operater, po tem ko dobi prvo značilno informacijo o dogodku, 30 minut časa do takrat, ko mora narediti svoje prvo dejanje za preprečitev ali ublažitev posledic;  3. konzervativno izbrane začetne in robne pogoje analiziranih scenarijev;  4. delovanje nevarnostnih sistemov, vključno z zunanjim napajanjem, samo takrat, ko ti poslabšajo posledice začetnega dogodka;  5. predpostavko, da bodo varnostni sistemi delovali s tako zmogljivostjo, ki je glede na predpostavljeni začetni dogodek najneugodnejša;  6. vse možne odpovedi, ki nastanejo zaradi predpostavljenega začetnega dogodka;  7. negotovosti, ki vplivajo na rezultate;  8. vrednotenje izvedbe in robustnosti objekta, sistema in njegovih sestavnih delov, če gre za odlagališče radioaktivnih odpadkov;  9. nenamerni vdor človeka, če gre za odlagališče radioaktivnih odpadkov, s poudarkom na zmanjšanju verjetnosti za tak dogodek in možne posledice. Ukrepi za preprečitev tega dogodka ne smejo vplivati na obratovalno varnost in varnost odlagalnega sistema po zaprtju. | (2) Safety analyses shall consider:  1. the most unfavourable single failure of safety-related equipment, where cases of the failure of passive components need not be taken into account if it can be proven that such a failure is highly improbable and that the event under analysis does not compromise the intended safety function of the component,  2. a period of 30 minutes available to the operator from reception of the first characteristic information on an event to the time when the first action to prevent or mitigate the consequences of the event is required,  3. initial and boundary conditions for the analysed scenarios selected in a conservative manner,  4. operability of non-safety-related systems, including off-site power supply, only in the conditions where such systems further aggravate the event consequences,  5. assumption of the least favourable performance of safety systems for the postulated initiating event,  6. any and all potential failures that may develop due to the postulated initiating event,  7. any uncertainties that may affect the results,  8. the evaluation of the performance and robustness of the facility, system and its components, in the case of radioactive waste disposal facility,  9. an inadvertent human intrusion in the case of radioactive waste disposal facility, with a focus on reducing the likelihood of such an event and the possible consequences. Measures to prevent this incident should not affect the operational and post‐closure safety. |
| E 8.2 | The worst single failure28 shall be assumed in the analyses of design basis events. However, it is not necessary to assume the failure of a passive component, provided it is justified that a failure of that component is very unlikely and its function remains unaffected by the PIE.  28 A failure and any consequential failure(s) shall be postulated to occur in any component of a safety function in connection with the initiating event or thereafter at the most unfavourable time and configuration. | JV5 3/2 , 16/2 | (2) Načelo obrambe v globino pomeni, da je treba za določen zaščitni namen pri projektiranju in upravljanju (npr. preprečevanje izpusta radioaktivnih snovi) uporabiti več varnostnih ukrepov, tako da se ta namen doseže, tudi če eden od ukrepov odpove. Varnostne ukrepe je treba predvideti na različnih ravneh obrambe v globino, kjer je to še mogoče smiselno izvesti. Ravni obrambe v globino so določene z naslednjimi cilji:  – preprečevanje nenormalnega obratovanja in okvar,  – nadzor nenormalnega obratovanja in okvar,  – nadzor nad nesrečo z namenom omejiti radiološke izpuste in preprečiti težko poškodbo sredice,  – nadzor nad nesrečo s težko poškodbo sredice z namenom omejiti radiološke izpuste zunaj lokacije elektrarne,  – blaženje posledic velikih radioloških izpustov.  (2) Varnostne analize morajo upoštevati:  1. najneugodnejšo enojno odpoved opreme, potrebne za opravljanje varnostnih funkcij, pri čemer ni treba upoštevati možnosti odpovedi pasivnih sestavnih delov, če se dokaže, da je takšna odpoved zelo malo verjetna in da analizirani dogodek ne vpliva na varnostno funkcijo, ki ji je sestavni del namenjen;  2. da mora imeti operater, po tem ko dobi prvo značilno informacijo o dogodku, 30 minut časa do takrat, ko mora narediti svoje prvo dejanje za preprečitev ali ublažitev posledic;  3. konzervativno izbrane začetne in robne pogoje analiziranih scenarijev;  4. delovanje nevarnostnih sistemov, vključno z zunanjim napajanjem, samo takrat, ko ti poslabšajo posledice začetnega dogodka;  5. predpostavko, da bodo varnostni sistemi delovali s tako zmogljivostjo, ki je glede na predpostavljeni začetni dogodek najneugodnejša;  6. vse možne odpovedi, ki nastanejo zaradi predpostavljenega začetnega dogodka;  7. negotovosti, ki vplivajo na rezultate;  8. vrednotenje izvedbe in robustnosti objekta, sistema in njegovih sestavnih delov, če gre za odlagališče radioaktivnih odpadkov;  9. nenamerni vdor človeka, če gre za odlagališče radioaktivnih odpadkov, s poudarkom na zmanjšanju verjetnosti za tak dogodek in možne posledice. Ukrepi za preprečitev tega dogodka ne smejo vplivati na obratovalno varnost in varnost odlagalnega sistema po zaprtju. | (2) The defence-in-depth principle shall mean the application, in design and operation, of several safety measures for a particular protection purpose (e.g. the prevention of radioactive-material releases) to ensure the achievement of the protection purpose even in the event of a failure of one of the safety measures. Safety measures shall be envisaged at different levels of defense-in-depth as far as reasonably achievable. The levels of defense-in-depth are determined by the following objectives:  – prevention of abnormal operation and failures,  – control of abnormal operation and failures,  – control of the accident in order to limit the radiological releases and prevent severe core damage,  – control of the accident with a severe core damage in order to limit the off-site radiological releases,  – mitigation of consequences of significant radiological releases.  (2) Safety analyses shall consider:  1. the most unfavourable single failure of safety-related equipment, where cases of the failure of passive components need not be taken into account if it can be proven that such a failure is highly improbable and that the event under analysis does not compromise the intended safety function of the component,  2. a period of 30 minutes available to the operator from reception of the first characteristic information on an event to the time when the first action to prevent or mitigate the consequences of the event is required,  3. initial and boundary conditions for the analysed scenarios selected in a conservative manner,  4. operability of non-safety-related systems, including off-site power supply, only in the conditions where such systems further aggravate the event consequences,  5. assumption of the least favourable performance of safety systems for the postulated initiating event,  6. any and all potential failures that may develop due to the postulated initiating event,  7. any uncertainties that may affect the results,  8. the evaluation of the performance and robustness of the facility, system and its components, in the case of radioactive waste disposal facility,  9. an inadvertent human intrusion in the case of radioactive waste disposal facility, with a focus on reducing the likelihood of such an event and the possible consequences. Measures to prevent this incident should not affect the operational and post‐closure safety. |
| E 8.3 | Only ~~safety~~ systems that are suitably safety classified can ~~shall~~ be credited to carry out a safety function. Non-safety classified systems shall be assumed to operate only if they aggravate the effect of the initiating event29.  29 This means that non-safety classified systems are either supposed not to function after the initiator, either supposed to continue to function as before the initiator, depending on which of both cases is most penalising. | JV5 2/71, 16/2/4-5, P1/1.3/, P1/2.1 | 71. varnostni sistem je sistem, potreben za izvedbo varnostne funkcije, ki vključuje tudi podporne sisteme;  (2) Varnostne analize morajo upoštevati:  4. delovanje nevarnostnih sistemov, vključno z zunanjim napajanjem, samo takrat, ko ti poslabšajo posledice začetnega dogodka;  5. predpostavko, da bodo varnostni sistemi delovali s tako zmogljivostjo, ki je glede na predpostavljeni začetni dogodek najneugodnejša;  Priloga 1, 1.3:  Poleg pogojev iz 16. člena tega pravilnika morajo varnostne analize upoštevati:   * za doseganje in vzdrževanje stanja varne zaustavitve samo SSK, ki so klasificirani v skladu s točko 2.1 te priloge; * kot dodatni otežujoči okoliščini za vsa stanja objekta in vse projektne dogodke zaskočeno regulacijsko palico z največjo vrednostjo reaktivnosti, ki je ni mogoče vstaviti v sredico, in izgubo vsega zunanjega napajanja; * za jedrske elektrarne so odkloni iz tretjega odstavka 16. člena dovoljeni le za varnostne analize nesreč, ki presegajo projektne dogodke.   Priloga 1, 2.1 Varnostna klasifikacija SSK:   1. Vse SSK je treba razvrstiti (klasificirati) v varnostne razrede glede na njihovo pomembnost za varnost. SSK morajo biti projektirani, izdelani in vzdrževani tako, da njihova zanesljivost in kakovost ustrezata njihovemu pomenu za jedrsko varnost. 2. Varnostna klasifikacija SSK v varnostne razrede glede na njihovo pomembnost za varnost mora temeljiti na analizah jedrske varnosti, izvedenih na podlagi determinističnih metod, ki jih, kjer je primerno, dopolnjujejo verjetnostne metode in inženirska presoja. 3. Varnostna klasifikacija mora za vsak varnostni razred določati:  * predpise in standarde, uporabljene pri projektiranju, izdelavi, vgradnji in pri pregledih, * zahteve za napajanje v sili in ustreznost SSK v predvidenih pogojih okolja, * razpoložljivost oziroma nerazpoložljivost sistemov, potrebnih za izvedbo varnostne funkcije ob predpostavljenih začetnih dogodkih v varnostnih analizah, ki se izvajajo na podlagi determinističnih metod, * zahteve glede zagotavljanja kakovosti. | 71. Safety system shall mean a system necessary to perform a safety function, including support systems;  (2) Safety analyses shall consider:  4. operability of non-safety-related systems, including off-site power supply, only in the conditions where such systems further aggravate the event consequences,  5. assumption of the least favourable performance of safety systems for the postulated initiating event,  Annex 1, 1.3  In addition to the conditions referred to in Article 16 of these Rules, the safety analyses shall take into account:  - for the purposes of achieving and maintaining the state of safe shutdown, only those SSCs classified according to item 2.1 of this annex;  - as additional aggravating circumstances, in all the facility states and under all design-basis accidents, jamming of the control rod with the highest reactivity value in the fully withdrawn position, and the total blackout of the plant;  - for nuclear power plants, derogations from the third paragraph of Article 16 are only allowed in safety analyses of accidents exceeding design basis events.  Annex 1, 2.1  1. Each SSC shall be classified into a safety class according to its importance to safety. SSCs shall be designed, manufactured and maintained so as to ensure reliability and quality adequate for the importance of the SSC for safety.  2. The classification of SSCs into safety classes according to their importance for safety shall be based on nuclear safety analyses carried out employing deterministic methods and supplemented with probabilistic methods and engineering judgement as appropriate.  3. For each safety class, the safety classification shall specify:  - regulations and standards to be applied in design, manufacture, installation and inspection;  - requirements for emergency power supply and SSC compatibility with anticipated environmental conditions;  - availability/unavailability of systems necessary to achieve a safety function upon initiating events postulated in safety analyses employing deterministic methods;  - quality-assurance requirements. |
| E 8.4 | A stuck control rod shall be considered as an additional aggravating failure in the analysis of design basis accidents ~~events~~30.  30 This assumption is made to ensure the sufficiency of the shutdown margin. The stuck rod selected is the highest worth rod at Hot Zero Power and conservative values of reactor trip reactivity (conservative time delay and reactivity versus control rod ~~CR~~ position dependence) are used. A stuck rod can be handled as single failure in the ~~DBA-~~analysis of design basis accidents (DBAs) if the stuck rod itself is the worst single failure. | JV5  P1/1.3/2 | Poleg pogojev iz 16. člena tega pravilnika morajo varnostne analize upoštevati:  – …  – kot dodatni otežujoči okoliščini za vsa stanja objekta in vse projektne dogodke zaskočeno regulacijsko palico z največjo vrednostjo reaktivnosti, ki je ni mogoče vstaviti v sredico, in izgubo vsega zunanjega napajanja;  – … | In addition to the conditions referred to in Article 16 of these Rules, the safety analyses shall take into account:  - as additional aggravating circumstances, in all the facility states and under all design-basis accidents, jamming of the control rod with the highest reactivity value in the fully withdrawn position, and the total blackout of the plant; |
| E 8.5 | The safety systems shall be assumed to operate at their performance level that is most penalising for the initiator. | JV5, 16/2 | (2) Varnostne analize morajo upoštevati:  1. najneugodnejšo enojno odpoved opreme, potrebne za opravljanje varnostnih funkcij, pri čemer ni treba upoštevati možnosti odpovedi pasivnih sestavnih delov, če se dokaže, da je takšna odpoved zelo malo verjetna in da analizirani dogodek ne vpliva na varnostno funkcijo, ki ji je sestavni del namenjen;  2. da mora imeti operater, po tem ko dobi prvo značilno informacijo o dogodku, 30 minut časa do takrat, ko mora narediti svoje prvo dejanje za preprečitev ali ublažitev posledic;  3. konzervativno izbrane začetne in robne pogoje analiziranih scenarijev;  4. delovanje nevarnostnih sistemov, vključno z zunanjim napajanjem, samo takrat, ko ti poslabšajo posledice začetnega dogodka;  5. predpostavko, da bodo varnostni sistemi delovali s tako zmogljivostjo, ki je glede na predpostavljeni začetni dogodek najneugodnejša;  6. vse možne odpovedi, ki nastanejo zaradi predpostavljenega začetnega dogodka;  7. negotovosti, ki vplivajo na rezultate;  8. vrednotenje izvedbe in robustnosti objekta, sistema in njegovih sestavnih delov, če gre za odlagališče radioaktivnih odpadkov;  9. nenamerni vdor človeka, če gre za odlagališče radioaktivnih odpadkov, s poudarkom na zmanjšanju verjetnosti za tak dogodek in možne posledice. Ukrepi za preprečitev tega dogodka ne smejo vplivati na obratovalno varnost in varnost odlagalnega sistema po zaprtju. | (2) Safety analyses shall consider:  1. the most unfavourable single failure of safety-related equipment, where cases of the failure of passive components need not be taken into account if it can be proven that such a failure is highly improbable and that the event under analysis does not compromise the intended safety function of the component,  2. a period of 30 minutes available to the operator from reception of the first characteristic information on an event to the time when the first action to prevent or mitigate the consequences of the event is required,  3. initial and boundary conditions for the analysed scenarios selected in a conservative manner,  4. operability of non-safety-related systems, including off-site power supply, only in the conditions where such systems further aggravate the event consequences,  5. assumption of the least favourable performance of safety systems for the postulated initiating event,  6. any and all potential failures that may develop due to the postulated initiating event,  7. any uncertainties that may affect the results,  8. the evaluation of the performance and robustness of the facility, system and its components, in the case of radioactive waste disposal facility,  9. an inadvertent human intrusion in the case of radioactive waste disposal facility, with a focus on reducing the likelihood of such an event and the possible consequences. Measures to prevent this incident should not affect the operational and post‐closure safety. |
| E 8.6 | Any failure, occurring as a consequence of a postulated initiating event, shall be regarded to be part of the original PIE. | JV5, 16/2 | (2) Varnostne analize morajo upoštevati:  1. najneugodnejšo enojno odpoved opreme, potrebne za opravljanje varnostnih funkcij, pri čemer ni treba upoštevati možnosti odpovedi pasivnih sestavnih delov, če se dokaže, da je takšna odpoved zelo malo verjetna in da analizirani dogodek ne vpliva na varnostno funkcijo, ki ji je sestavni del namenjen;  2. da mora imeti operater, po tem ko dobi prvo značilno informacijo o dogodku, 30 minut časa do takrat, ko mora narediti svoje prvo dejanje za preprečitev ali ublažitev posledic;  3. konzervativno izbrane začetne in robne pogoje analiziranih scenarijev;  4. delovanje nevarnostnih sistemov, vključno z zunanjim napajanjem, samo takrat, ko ti poslabšajo posledice začetnega dogodka;  5. predpostavko, da bodo varnostni sistemi delovali s tako zmogljivostjo, ki je glede na predpostavljeni začetni dogodek najneugodnejša;  6. vse možne odpovedi, ki nastanejo zaradi predpostavljenega začetnega dogodka;  7. negotovosti, ki vplivajo na rezultate;  8. vrednotenje izvedbe in robustnosti objekta, sistema in njegovih sestavnih delov, če gre za odlagališče radioaktivnih odpadkov;  9. nenamerni vdor človeka, če gre za odlagališče radioaktivnih odpadkov, s poudarkom na zmanjšanju verjetnosti za tak dogodek in možne posledice. Ukrepi za preprečitev tega dogodka ne smejo vplivati na obratovalno varnost in varnost odlagalnega sistema po zaprtju. | (2) Safety analyses shall consider:  1. the most unfavourable single failure of safety-related equipment, where cases of the failure of passive components need not be taken into account if it can be proven that such a failure is highly improbable and that the event under analysis does not compromise the intended safety function of the component,  2. a period of 30 minutes available to the operator from reception of the first characteristic information on an event to the time when the first action to prevent or mitigate the consequences of the event is required,  3. initial and boundary conditions for the analysed scenarios selected in a conservative manner,  4. operability of non-safety-related systems, including off-site power supply, only in the conditions where such systems further aggravate the event consequences,  5. assumption of the least favourable performance of safety systems for the postulated initiating event,  6. any and all potential failures that may develop due to the postulated initiating event,  7. any uncertainties that may affect the results,  8. the evaluation of the performance and robustness of the facility, system and its components, in the case of radioactive waste disposal facility,  9. an inadvertent human intrusion in the case of radioactive waste disposal facility, with a focus on reducing the likelihood of such an event and the possible consequences. Measures to prevent this incident should not affect the operational and post‐closure safety. |
| E 8.7 | The safety analysis shall:  (a) rely on methods, assumptions or arguments which are justified and conservative;  (b) provide assurance that uncertainties and their impact have been given adequate consideration31;  (c) give evidence that adequate margins have been included when defining the design basis to ensure that all the design basis events are covered;  (d) be auditable and reproducible.  ~~The impact of uncertainties, which in specific cases are of importance for the results, shall be addressed in the analysis of design basis events.~~  31 Conservative assumptions, safety factors, uncertainty and sensitivity analysis are means to address uncertainties and their impact on safety assessment. | JV5 16/2-4 | (2) Varnostne analize morajo upoštevati:  1. najneugodnejšo enojno odpoved opreme, potrebne za opravljanje varnostnih funkcij, pri čemer ni treba upoštevati možnosti odpovedi pasivnih sestavnih delov, če se dokaže, da je takšna odpoved zelo malo verjetna in da analizirani dogodek ne vpliva na varnostno funkcijo, ki ji je sestavni del namenjen;  2. da mora imeti operater, po tem ko dobi prvo značilno informacijo o dogodku, 30 minut časa do takrat, ko mora narediti svoje prvo dejanje za preprečitev ali ublažitev posledic;  3. konzervativno izbrane začetne in robne pogoje analiziranih scenarijev;  4. delovanje nevarnostnih sistemov, vključno z zunanjim napajanjem, samo takrat, ko ti poslabšajo posledice začetnega dogodka;  5. predpostavko, da bodo varnostni sistemi delovali s tako zmogljivostjo, ki je glede na predpostavljeni začetni dogodek najneugodnejša;  6. vse možne odpovedi, ki nastanejo zaradi predpostavljenega začetnega dogodka;  7. negotovosti, ki vplivajo na rezultate;  8. vrednotenje izvedbe in robustnosti objekta, sistema in njegovih sestavnih delov, če gre za odlagališče radioaktivnih odpadkov;  9. nenamerni vdor človeka, če gre za odlagališče radioaktivnih odpadkov, s poudarkom na zmanjšanju verjetnosti za tak dogodek in možne posledice. Ukrepi za preprečitev tega dogodka ne smejo vplivati na obratovalno varnost in varnost odlagalnega sistema po zaprtju.  (3) Če se pri varnostnih analizah ne upoštevajo določbe prejšnjega odstavka, mora biti to utemeljeno.  (4) Varnostne analize morajo:  – temeljiti na utemeljenih in konzervativnih metodah, predpostavkah ali argumentih,  – vsebovati zagotovilo, da so negotovosti in njihovi vplivi upoštevani. To zagotovilo je lahko v obliki konzervativnih predpostavk, upoštevanja varnostnih dejavnikov ali analiz negotovosti in občutljivosti,  – dokazati, da so v projektne osnove vključene zadostne varnostne rezerve, ki zagotavljajo pokritost vseh projektnih dogodkov,  – biti preverljive in ponovljive. | (2) Safety analyses shall consider:  1. the most unfavourable single failure of safety-related equipment, where cases of the failure of passive components need not be taken into account if it can be proven that such a failure is highly improbable and that the event under analysis does not compromise the intended safety function of the component,  2. a period of 30 minutes available to the operator from reception of the first characteristic information on an event to the time when the first action to prevent or mitigate the consequences of the event is required,  3. initial and boundary conditions for the analysed scenarios selected in a conservative manner,  4. operability of non-safety-related systems, including off-site power supply, only in the conditions where such systems further aggravate the event consequences,  5. assumption of the least favourable performance of safety systems for the postulated initiating event,  6. any and all potential failures that may develop due to the postulated initiating event,  7. any uncertainties that may affect the results,  8. the evaluation of the performance and robustness of the facility, system and its components, in the case of radioactive waste disposal facility,  9. an inadvertent human intrusion in the case of radioactive waste disposal facility, with a focus on reducing the likelihood of such an event and the possible consequences. Measures to prevent this incident should not affect the operational and post‐closure safety.  (3) Any exemption from the assumptions referred to in the previous paragraph shall be substantiated.  (4) Safety analyses shall:  – rely on methods, assumptions or arguments which are justified and conservative; ,  – provide assurance that uncertainties and their impact have been given adequate consideration. This assurance may take the form of conservative assumptions, safety factors or uncertainty and sensitivity analysis;  – give evidence that adequate margins have been included when defining the design basis to ensure that all the design basis events are covered;  – be auditable and reproducible. |
| E 9.1 | The fail-safe principle shall be considered in the design of systems and components important to safety. | JV5, 3/7, 3/1/6 | (7) Načelo varne odpovedi pomeni, da mora sistem ali sestavni del, pomemben za varnost, po odpovedi samodejno preiti v stanje, ki je varno za objekt.  (1) Pri projektiranju sevalnega ali jedrskega objekta se upoštevajo naslednja načela:  6. načelo varne odpovedi; | (7) The fail-safe principle shall mean the automatic transition of a safety-related system or component into a state safe for the facility following its failure.  (1) The design of a radiation or nuclear facility shall adhere to the following principles:  6. fail-safe principle; |
| E 9.2 | A failure in a system intended for normal operation shall not affect a safety function. | JV5 P1/1.2/2 | 2. Katera koli odpoved v sistemih, namenjenih za normalno obratovanje jedrske elektrarne, ne sme vplivati na varnostne funkcije. | 2. No failure of any system necessary for the normal operation of the nuclear power plant may affect safety functions. |
| E 9.3 | Activations and ~~manoeuvring~~ control of the safety functions shall be automated or accomplished by  passive means such that operator action is not necessary within 30 minutes ~~after~~ of the initiating event. Any operator actions required by the design within 30 minutes ~~after~~ of the initiating event shall be  justified32.  32 The control room staff has to be given sufficient time to understand the situation and take the correct actions. Operator actions required by the design within 30 min after the initiating event have to be justified and supported by clear documented procedures that are regularly exercised in a full scope simulator. | JV5 4/1/15 | (1) Investitor, ki namerava graditi sevalni ali jedrski objekt, ali upravljavec, ki namerava tak objekt razgraditi, mora v projektnih osnovah:  15. zagotoviti, da ima operater jedrske elektrarne ali raziskovalnega reaktorja po tem, ko dobi prvo značilno informacijo o dogodku, 30 minut časa do takrat, ko mora izvesti prvo dejanje za preprečitev ali ublažitev posledic dogodka. V tem času morajo biti varnostne funkcije zagotovljene samodejno ali s pasivnimi sredstvi; | (1) In the design bases, an investor planning to construct a radiation or nuclear facility, or an operator planning to decommission such a facility, shall  15. ensure that the nuclear power plant operator or the operator of a research reactor has a period of 30 minutes from reception of the first characteristic information on an event to the time when the first action to prevent or mitigate the consequences of the event is required. In the meantime, the activations and control of the safety functions shall be automated or accomplished by passive means, |
| E 9.4 | The reliability of the systems shall be achieved by an appropriate choice of measures including the use of proven components33, redundancy, diversity34, physical and functional separation and isolation.  33 Proven by experience under similar conditions or adequately  tested and qualified.  34 The potential for common cause failure, including common mode failure, shall be appropriately considered ~~to~~ ~~determine where diversity should be applied~~ to achieve the necessary reliability. | JV5 3/1, 3/4 3/5, 3/6, 3/8 | (1) Pri projektiranju sevalnega ali jedrskega objekta se upoštevajo naslednja načela:  1. načelo obrambe v globino;  2. načelo enojne odpovedi;  3. načelo neodvisnosti;  4. načelo raznovrstnosti;  5. načelo redundance;  6. načelo varne odpovedi;  7. načelo preverjenih komponent;  8. načelo stopenjskega pristopa.  (4) Načelo neodvisnosti pomeni, da je treba pri projektiranju varnostnih sistemov upoštevati funkcionalno in fizično ločenost. Načelo neodvisnosti pri projektiranju obsega:  – neodvisnost med redundantnimi sestavnimi deli sistema,  – neodvisnost sestavnih delov sistema od vplivov predpostavljenih začetnih dogodkov, tako da tak dogodek ne povzroči izgube funkcionalnosti varnostnega sistema oziroma varnostne funkcije, potrebne za omejitev posledic tega dogodka,  – primerno neodvisnost sistemov in sestavnih delov različnih varnostnih razredov za jedrske elektrarne, klasificiranih v skladu s točko 2.1 priloge 1, ki je sestavni del tega pravilnika, za druge objekte pa glede na njihove projektne osnove,  – neodvisnost med sistemi in sestavnimi deli, ki so pomembni za varnost, in tistimi, ki niso pomembni.  (5) Načelo raznovrstnosti pomeni, da je treba posamezno varnostno funkcijo doseči na različne načine. Tako se zmanjša možnost odpovedi s skupnim vzrokom in poveča zanesljivost. Raznovrstnost je treba uporabiti pri projektiranju za varnost pomembnih sistemov in sestavnih delov, ki imajo različne lastnosti in so namenjeni izvedbi iste varnostne funkcije. Te lastnosti so lahko različni načini delovanja, uporaba različnih fizikalnih pojavov, različni pogoji obratovanja, različni proizvajalci opreme ipd.  (6) Načelo redundance pomeni, da mora biti sistem projektiran tako, da opravi določeno varnostno funkcijo z več enakovrednimi podsistemi ali sestavnimi deli, kakor je to nujno potrebno. Odpoved ali nerazpoložljivost enega podsistema ali sestavnega dela ne sme preprečiti sistemu izvedbe zahtevane varnostne funkcije.  (8) Načelo preverjenih sestavnih delov pomeni, da mora biti zanesljivost sistemov zagotovljena z uporabo preverjenih sestavnih delov. To so tisti sestavni deli, ki so se pod podobnimi obratovalnimi pogoji že dobro obnesli oziroma so ustrezno preizkušeni in kvalificirani. | (1) The design of a radiation or nuclear facility shall adhere to the following principles:  1. defence-in-depth principle;  2. single-failure principle;  3. independence principle;  4. diversity principle;  5. redundancy principle;  6. fail-safe principle;  7. proven-components principle;  8. graded-approach principle.  (4) The independence principle shall mean the observance of functional and physical separation of safety systems in their design. In the design, the independence principle shall include:  – independence between redundant components,  – independence of system components from the effects of the postulated initiating events so as to prevent any loss of functionality of the safety system or of a safety function required to mitigate the consequences of the event,  – appropriate independence of systems and components of different safety classes in nuclear power plants, classified according to Item 2.1 in Annex 1, which is a constituent part of these Rules, and, in other facilities, according to their design bases,  – independence between safety-relevant and non-safety-relevant systems and components.  (5) The diversity principle shall mean the achievement of any individual safety function through different means. This minimises the risk of common-cause failures and maximises reliability. Diversity shall be observed in the design of safety-related systems and components differing in characteristics and intended for the achievement of the same safety function. Such characteristics may involve application of different operational methods, different physical phenomena, different operational conditions, different equipment manufacturers, etc.  (6) The redundancy principle shall mean the designing of a system in such a way as to provide the achievement of a certain safety function through several equivalent subsystems or components in the required manner. Any failure or unavailability of one subsystem or component shall not prevent the system from achieving the required safety function.  (8) The proven-components principle shall mean the ensuring of system reliability through the application of proven components. Proven components shall mean components that have demonstrated their adequacy in similar operational conditions or are appropriately tested and qualified. |
| E 9.5 | For sites with multiple units, appropriate independence between them shall be ensured.35  35 The possibility of one unit supporting another could be considered as far as this is not detrimental for safety. | JV5 3/4, P1.13/5 | (4) Načelo neodvisnosti pomeni, da je treba pri projektiranju varnostnih sistemov upoštevati funkcionalno in fizično ločenost. Načelo neodvisnosti pri projektiranju obsega:  – neodvisnost med redundantnimi sestavnimi deli sistema,  – neodvisnost sestavnih delov sistema od vplivov predpostavljenih začetnih dogodkov, tako da tak dogodek ne povzroči izgube funkcionalnosti varnostnega sistema oziroma varnostne funkcije, potrebne za omejitev posledic tega dogodka,  – primerno neodvisnost sistemov in sestavnih delov različnih varnostnih razredov za jedrske elektrarne, klasificiranih v skladu s točko 2.1 priloge 1, ki je sestavni del tega pravilnika, za druge objekte pa glede na njihove projektne osnove,  – neodvisnost med sistemi in sestavnimi deli, ki so pomembni za varnost, in tistimi, ki niso pomembni.  5. Kadar je na isti lokaciji več sevalnih ali jedrskih objektov, je treba zagotoviti, da so ti med seboj neodvisni. Lahko se dovoli skupna uporaba določenih sistemov ali medsebojnih podpornih sistemov, vendar samo, če taka povezava nima negativnih učinkov na varnost. | (4) The independence principle shall mean the observance of functional and physical separation of safety systems in their design. In the design, the independence principle shall include:  – independence between redundant components,  – independence of system components from the effects of the postulated initiating events so as to prevent any loss of functionality of the safety system or of a safety function required to mitigate the consequences of the event,  – appropriate independence of systems and components of different safety classes in nuclear power plants, classified according to Item 2.1 in Annex 1, which is a constituent part of these Rules, and, in other facilities, according to their design bases,  – independence between safety-relevant and non-safety-relevant systems and components.  5. For sites with multiple radiation or nuclear facilities, the appropriate independent between them shall be ensured. Mutual support by sharring support systems can be considered, as far as this is not detrimental for safety. |
| E 9.6 | The means for shutting down the reactor shall consist of at least two diverse systems. | JV5 P1/1.5 | Za varno zaustavitev reaktorja morata biti na voljo najmanj dva raznovrstna sistema. Vsaj eden od njiju mora biti zmožen iz vsakega stanja objekta in med projektnim dogodkom samostojno in prej kakor v štirih sekundah vrniti reaktor v podkritično stanje z ustrezno rezervo reaktivnosti. Pri tem je treba upoštevati morebitno enojno odpoved.  Podkritičnost mora biti zagotovljena in vzdrževana:  - v reaktorju po njegovi načrtovani zaustavitvi med normalnim obratovanjem in po pričakovanih obratovalnih dogodkih tako dolgo, kot je potrebno;  - v reaktorju po projektnem dogodku po izteku morebitnega prehodnega pojava. Za čas prehodnega pojava, ko podkritičnost ni zagotovljena, morajo biti izpolnjena predvidena tehnična merila sprejemljivosti;  - za skladišče izrabljenega goriva med normalnim obratovanjem, pričakovanimi obratovalnimi dogodki in projektnimi nesrečami. | To ensure safe shutdown of the reactor, at least two diverse systems shall be provided. At least one of these systems shall be capable of autonomously bringing, within four seconds, the reactor into subcritical condition with an appropriate reactivity margin, from any state of the facility and in a design-basis event. This shall be achieved also under the assumption of a single failure.  Sub-criticality shall be ensured and sustained:  - in the reactor after planned reactor shutdown during normal operation and after anticipated operational occurrences, as long as needed;  - in the reactor, after a transient period (if any) following a design basis accident;  - for fuel storage during normal operation, anticipated operational occurrences, and design basis accidents. |
| E 9.7 | At least one of the two systems shall, on its own, be capable of quickly36 rendering the nuclear reactor sub critical by an adequate margin from operational states and in design basis accidents, on the assumption of a single failure.  36 Within 4-6 seconds, i.e. scram system. | JV5 P1/1.5 | Za varno zaustavitev reaktorja morata biti na voljo najmanj dva raznovrstna sistema. Vsaj eden od njiju mora biti zmožen iz vsakega stanja objekta in med projektnim dogodkom samostojno in prej kakor v štirih sekundah vrniti reaktor v podkritično stanje z ustrezno rezervo reaktivnosti. Pri tem je treba upoštevati morebitno enojno odpoved.  Podkritičnost mora biti zagotovljena in vzdrževana:  - v reaktorju po njegovi načrtovani zaustavitvi med normalnim obratovanjem in po pričakovanih obratovalnih dogodkih tako dolgo, kot je potrebno;  - v reaktorju po projektnem dogodku po izteku morebitnega prehodnega pojava. Za čas prehodnega pojava, ko podkritičnost ni zagotovljena, morajo biti izpolnjena predvidena tehnična merila sprejemljivosti;  - za skladišče izrabljenega goriva med normalnim obratovanjem, pričakovanimi obratovalnimi dogodki in projektnimi nesrečami. | To ensure safe shutdown of the reactor, at least two diverse systems shall be provided. At least one of these systems shall be capable of autonomously bringing, within four seconds, the reactor into subcritical condition with an appropriate reactivity margin, from any state of the facility and in a design-basis event. This shall be achieved also under the assumption of a single failure.  Sub-criticality shall be ensured and sustained:  - in the reactor after planned reactor shutdown during normal operation and after anticipated operational occurrences, as long as needed;  - in the reactor, after a transient period (if any) following a design basis accident;  - for fuel storage during normal operation, anticipated operational occurrences, and design basis accidents. |
| E 9.8 | Sub-criticality shall be ensured and sustained:  - in the reactor after planned reactor shutdown during normal operation and after anticipated operational occurrences, as long as needed;  - in the reactor, after a transient period (if any) following a design basis accident37;  - for fuel storage during normal operation, anticipated operational occurrences, and design basis accidents.  37 Technical acceptance criteria have to be fulfilled during a transient period for which sub-criticality is not ensured. | JV5 P1/1.5 | Za varno zaustavitev reaktorja morata biti na voljo najmanj dva raznovrstna sistema. Vsaj eden od njiju mora biti zmožen iz vsakega stanja objekta in med projektnim dogodkom samostojno in prej kakor v štirih sekundah vrniti reaktor v podkritično stanje z ustrezno rezervo reaktivnosti. Pri tem je treba upoštevati morebitno enojno odpoved.  Podkritičnost mora biti zagotovljena in vzdrževana:  - v reaktorju po njegovi načrtovani zaustavitvi med normalnim obratovanjem in po pričakovanih obratovalnih dogodkih tako dolgo, kot je potrebno;  - v reaktorju po projektnem dogodku po izteku morebitnega prehodnega pojava. Za čas prehodnega pojava, ko podkritičnost ni zagotovljena, morajo biti izpolnjena predvidena tehnična merila sprejemljivosti;  - za skladišče izrabljenega goriva med normalnim obratovanjem, pričakovanimi obratovalnimi dogodki in projektnimi nesrečami. | To ensure safe shutdown of the reactor, at least two diverse systems shall be provided. At least one of these systems shall be capable of autonomously bringing, within four seconds, the reactor into subcritical condition with an appropriate reactivity margin, from any state of the facility and in a design-basis event. This shall be achieved also under the assumption of a single failure.  Sub-criticality shall be ensured and sustained:  - in the reactor after planned reactor shutdown during normal operation and after anticipated operational occurrences, as long as needed;  - in the reactor, after a transient period (if any) following a design basis accident;  - for fuel storage during normal operation, anticipated operational occurrences, and design basis accidents. |
| E 9.9 | Means for removing residual heat from the core after shutdown and from spent fuel storage, during and after anticipated operational occurrences and design basis accidents ~~conditions~~, shall be provided taking into account the assumptions of a single failure and the loss of off-site power. | JV5 P1/1.6 | Zagotovljeno mora biti odvajanje zaostale toplote iz sredice rektorja po zaustavitvi iz vseh stanj objekta ter skladišča izrabljenega goriva med pričakovanimi obratovalnimi dogodki in projektnimi dogodki kljub morebitni enojni odpovedi in izgubi zunanjega napajanja. | Residual-heat removal from the reactor core shall be provided following its shutdown from any facility state, as well as for fuel storage during and after anticipated operational occurrences and design basis accidents, even under the assumptions of a single failure and the loss of off-site power. |
| E 9.10 | A containment system shall be provided in order to ensure that any release of radioactive material to the environment in a design basis accident would be below prescribed limits. This system shall include:  - leaktight structures covering all essential parts of the primary system;  - associated systems for control of pressures and temperatures;  - features for isolation;  - features for the management and removal of fission products, hydrogen, oxygen and other substances that could be released into the containment atmosphere. | JV5 P1/1.7/1 | 1. Jedrska elektrarna mora imeti zadrževalni hram, ki mora zagotoviti, da je vsak izpust radioaktivnih snovi v okolje med projektnim dogodkom pod predpisanimi omejitvami. Sistem zadrževalnega hrama mora vključevati:  – neprepustne konstrukcije, v katerih so vsi bistveni deli primarnega reaktorskega hladilnega sistema,  – sisteme za nadzor tlaka in temperature v zadrževalnem hramu,  – naprave za izolacijo, obvladovanje in odstranitev radionuklidov, vodika, kisika in drugih snovi, ki utegnejo biti izpuščene v atmosfero zadrževalnega hrama. | 1. A nuclear power plant shall be fitted with a containment that shall ensure any releases of radioactive substances during a design-basis event into the environment remain below statutory limits. The containment system shall comprise:  -- leaktight structures enclosing all the essential components of the primary reactor-coolant system;  -- containment temperature- and pressure-monitoring systems;  -- devices for isolation, containment and removal of radionuclides, hydrogen, oxygen and other substances that may be released into the containment atmosphere. |
| E 9.11 | Each line that penetrates the containment as part of the reactor coolant pressure boundary or that is connected directly to the containment atmosphere shall be automatically and reliably sealable in the event of a design basis accident. These lines shall be fitted with at least two containment isolation valves arranged in series. Isolation valves shall be located as close to the containment as is practicable. | JV5 P1/1.7/2 | 2. Vsak vod, ki prodira v zadrževalni hram in je del tlačne meje reaktorskega hladila ali povezan neposredno z atmosfero zadrževalnega hrama, se mora samodejno in zanesljivo zapreti ob dogodku, ki vodi v projektno nesrečo. Takšni vodi morajo biti opremljeni z najmanj dvema ustreznima zaporednima izolacijskima ventiloma. Izolacijski ventili morajo biti čim bližje zadrževalnemu hramu, če je to še praktično izvedljivo. | 2. Any line that penetrates the containment and forms a part of the reactor coolant-pressure boundary or is in direct contact with the containment atmosphere shall be isolated automatically and reliably upon any event that leads to a design-basis accident. Each such line shall be fitted with at least two appropriate isolation valves in series. Isolation valves shall be located as close to the containment as practicable. |
| E 9.12 | Each line that penetrates the containment and is neither part of the reactor coolant pressure boundary nor connected directly to the containment atmosphere shall have at least one containment isolation valve. This valve shall be outside the containment and located as close to the containment as practicable. | JV5 P1/1.7/3 | 3. Vsak vod, ki prodira v zadrževalni hram in ni del tlačne meje reaktorskega hladila niti ni neposredno povezan z atmosfero zadrževalnega hrama, mora imeti najmanj en ustrezen izolacijski ventil. Tak ventil mora biti postavljen zunaj zadrževalnega hrama, vendar čim bliže, če je to še praktično izvedljivo. | 3. Any line that penetrates the containment and does not form a part of the reactor coolant-pressure boundary and is not in direct contact with the containment atmosphere shall be fitted with at least one appropriate isolation valve. The isolation valve shall be located outside the containment, as close to the containment as practicable. |
| E 10.1 | Instrumentation shall be provided for measuring all the main variables that can affect the fission process, the integrity of the reactor core, the reactor cooling systems, the containment, and the state of the spent fuel storage. Instrumentation shall also be provided for obtaining any information on the plant necessary for its reliable and safe operation, and for determining the status of the plant in design basis accidents. Provision shall be made for automatic recording38 of measurements of any derived parameters that are important to safety.  38 By computer sampling and/or print outs. | JV5 P1/1.8/1 | 1. Instrumentacija mora zagotavljati meritve vseh glavnih spremenljivk jedrske elektrarne, ki lahko vplivajo na cepitveni proces, celovitost sredice reaktorja, reaktorski hladilni sistem, zadrževalni hram in stanje skladišča z izrabljenim gorivom. Zagotavljati mora tudi zbiranje vseh informacij o elektrarni, ki so potrebne za njeno zanesljivo in varno obratovanje ter določanje stanja elektrarne ob projektnih dogodkih. Vsi parametri, pomembni za varnost, se morajo samodejno zapisovati in shranjevati.. | 1. Instrumentation shall allow measurement of all the main variables of the nuclear power plant that may affect the fission process, the reactor-core integrity, the reactor coolant system the containment and the state of the spent fuel storage. Instrumentation shall also allow the acquisition of all the plant information necessary for safe and reliable operation and for determining the status of the plant in design basis accidents. All safety-related parameters shall be automatically recorded and archived. |
| E 10.2 | Instrumentation shall be adequate for measuring plant parameters and shall be environmentally qualified for the plant states concerned. | JV5 P1/1.8/2 | 2. Instrumentacija in regulacija morata biti kvalificirani za uporabo v vseh okoljskih razmerah, za katere sta predvideni, in medsebojno elektromagnetno združljivi.. | 2. Instrumentation and controls shall be qualified for application under all ambient conditions for which they are intended and shall be mutually electromagnetically compatible. |
| E 10.3 | A main control room shall be provided from which the plant can be safely operated in all its operational states, and from which measures can be taken to maintain the plant in a safe state or to bring it back into such a state after the onset of anticipated operational occurrences and design basis accidents. | JV5 P1/1.9/1 | 1. Glavna komandna soba mora zagotavljati varno upravljanje in nadzor jedrske elektrarne med normalnim obratovanjem, nenormalnim obratovanjem in projektnimi nesrečami. Iz glavne komandne sobe mora biti mogoče izvajati vse ukrepe, potrebne za vzdrževanje elektrarne v varnem stanju in njeno vrnitev v varno stanje po pričakovanem obratovalnem ali projektnem dogodku. | 1. The main control room shall allow safe operation and monitoring of the nuclear power plant in normal operation, abnormal operation and design basis accidents. All actions necessary to keep the plant in a safe condition and the restoring of safe condition upon an anticipated operational occurrence or a design-basis event must be achievable from the main control room. |
| E 10.4 | Devices shall be provided to give in an efficient way visual and, if appropriate also audible indications of operational states and processes that have deviated from normal and could affect safety. Ergonomic factors shall be taken into account in the design of the main control room. Appropriate information shall be available to the operator to monitor the effects of the automatic actions. | JV5 P1/1.9/2-4 | 2. Pri projektiranju glavne komandne sobe morajo biti upoštevana ergonomska merila. Vse potrebne informacije iz instrumentacijske opreme morajo biti predstavljene tako, da je ob nesrečah mogoča pravočasna ocena stanja objekta in varnostnih funkcij.  3. V glavni komandni sobi mora biti zagotovljena ustrezna vizualna in zvočna zaznamba stanj objekta in procesov, ki se razlikujejo od normalnega stanja in lahko vplivajo na varnost.  4. Operaterju morajo biti na voljo ustrezne informacije za nadzor posledic samodejnih dejanj. | 2. The design of a main control room shall follow the principles of ergonomics. All needed information from the instrumentation shall be presented in such a way, that enables timely assessment of the condition of facility and its safety functions during accidents.  3. The main control room shall provide appropriate visual and acoustic indications of the facility and process states that deviate from normal conditions and may affect safety.  4. The operator shall be provided with appropriate information necessary to manage the consequences of automatic actions. |
| E 10.5 | Special attention shall be given to identifying those events, both internal and external to the main control room, which may pose a direct threat to its continued operation, and the design shall provide for reasonably practicable measures to minimize the effects of such events. | JV5 P1/1.9/5 | 5. Predvideti je treba dogodke v jedrski elektrarni in zunaj nje, ki bi lahko ogrozili delo v glavni komandni sobi, ter zagotoviti kar največje zmanjšanje njihovih vplivov. | 5. The design shall envisage those events within and outside the nuclear power plant that might pose threats to the activities in the main control room and minimise their potential impacts. |
| E 10.6 | For times when the main control room is not available, there shall be sufficient ~~instrumentation~~ monitoring and control equipment available, preferably at a single location that is physically, electrically and functionally separate ~~separated~~ from the main control room, so that, if the main control room is unavailable, the reactor can be placed and maintained in a shut down state, residual heat can be removed from the reactor and spent fuel storage, and the essential plant parameters, including the conditions in the spent fuel storages, can be monitored. | JV5 P1/1.9/6 | 6. Če glavna komandna soba ni dostopna, mora biti na voljo pomožna, ki je fizično, električno in funkcionalno ločena od nje. Pomožna komandna soba mora imeti dovolj opreme za spremljanje in nadzor, tako da je iz nje mogoče varno zaustaviti reaktor in ga vzdrževati v zaustavljenem stanju, odvajati zaostalo toploto iz reaktorja in skladišča z izrabljenim gorivom in spremljati bistvene parametre elektrarne, vključno z razmerami v skladišču z izrabljenim gorivom. | 6. In an event of inaccessibility of the main control room, a supplementary control room shall be provided, physically, electrically and functionally separated from the main control room. The supplementary control room shall be fitted with sufficient monitoring and control equipment to allow safe shutdown of the reactor, maintenance of the safe shutdown condition, removal of residual heat from the reactor and spent fuel storage and monitoring of essential plant parameters, including the conditions in the spent fuel storage. |
| E 10.7 | Redundancy and independence designed into the protection system shall be sufficient at least to ensure that:  - no single failure results in loss of protection function; and  - the removal from service of any component or channel does not result in loss of the necessary minimum redundancy. | JV5 P1/1.10/1 | 1. Varovalni sistem mora biti projektiran tako, da je visoko zanesljiv. Upoštevani morata biti načeli redundance in neodvisnosti. Izpolnjeni pa morajo biti najmanj ti pogoji:  - enojna odpoved ne sme povzročiti odpovedi varovalnega sistema,  - izpad katerega koli sestavnega dela ali kanala ne sme povzročiti izgube minimalne potrebne redundance. | 1. The protection system shall be designed for a high level of reliability. The design shall follow the principles of redundancy and independence. The protection system shall meet, as a minimum, the following conditions:  - no single failure shall cause a failure of the protection system;  - no failure of any component or channel shall cause the loss of the minimum required redundancy. |
| E 10.8 | The design shall permit all aspects of functionality of the protection system, from the sensor to the input signal to the final actuator, to be tested in operation. Exceptions shall be justified. | JV5 P1/1.10/2 | 2. Omogočeno mora biti preizkušanje vseh funkcij varovalnega sistema (od merilnih tipal in vhodnih signalov do končnih prožilnikov) med obratovanjem. | 2. The design shall allow the testing of all functions of the protection system (from measurement sensors and input signals to final actuators) in operation. |
| E 10.9 | The design of the reactor protection system shall minimize the likelihood that operator action could defeat the effectiveness of the protection system in normal operation and anticipated operational occurrences. Furthermore, the reactor protection system shall not prevent operators from taking correct actions if necessary in design basis accidents. | JV5 P1/1.10/3 | 3. Kar najbolj mora biti zmanjšana verjetnost, da bi dejanje operaterja preprečilo učinkovitost varovalnega sistema v katerem koli stanju objekta. Varovalni sistem ne sme preprečiti ali izničiti pravilnega dejanja operaterja med projektnim dogodkom. | 3. The risk that an operator’s action may compromise the effectiveness of the protection system in any state of the facility shall be minimised. The protection system shall not prevent or override proper actions by the operator during a design-basis event. |
| E 10.10 | Computer based systems used in a protection system, shall fulfil the following requirements:  - the highest quality of and best practices for hardware and software shall be used;  - the whole development process, including control, testing and commissioning of design changes, shall be systematically documented and reviewed;  - in order to confirm confidence in the reliability of the computer based systems, an assessment of the computer based system by expert personnel independent of the designers and suppliers shall be undertaken; and  - where the necessary integrity of the system cannot be demonstrated with a high level of confidence, a diverse means of ensuring fulfilment of the protection functions shall be provided. | JV5 P1/1.10/4 | 4. Računalniško podprti sistem, ki je del varovalnega sistema, mora izpolnjevati te zahteve:  - strojna in programska oprema morata ustrezati najvišjim zahtevam za kakovost, se kar najbolje obnesti pri uporabi in imeti največjo možno zanesljivost,  - celotni razvojni proces, vključno z nadzorom, preizkušanjem in uvajanjem sprememb projekta, mora biti sistematično pregledan in dokumentiran,  - računalniško podprti sistem mora biti neodvisno strokovno ocenjen, da bi se potrdilo zaupanje v njegovo zanesljivost,  - če ni mogoče doseči visoke stopnje zaupanja v sistem, je treba zagotoviti drugačen način zagotavljanja izpolnitve vseh varovalnih ukrepov, ki se pričakujejo od varovalnega sistema. | 4. The computer-supported system constituting a part of the protection system shall meet the following requirements:  - its hardware and software shall meet the most stringent quality specifications, they shall ensure optimal operational performance and the highest reliability;  - the overall development process, including surveillance, testing and implementation of modifications of the design, shall be systematically reviewed and documented;  - the computer-supported system shall be submitted to an independent expert assessment to verify the confidence level of its reliability;  - if a high level of confidence in the system cannot be achieved, an alternative method of achieving all safety measures expected from the protection system shall be implemented. |
| E 10.11 | It shall be ensured that the emergency power supply is able to supply the necessary power to systems and components important to safety, in any operational state or in a design basis accident, on the assumption of a single failure and the coincidental loss of off-site power. | JV5 P1/1.11 | Zasilni vir električne energije mora biti zmožen napajati s potrebno energijo sisteme in sestavne dele, pomembne za varnost, v vseh stanjih objekta in med projektnim dogodkom. Pri tem se predvidi možnost enojne odpovedi ob istočasni izgubi vsega zunanjega napajanja. | The source of the emergency power supply shall be capable of supplying the necessary power to safety-related systems and components in all facility states and during a design-basis event. This shall also be accomplished under the assumptions of a single failure and a total blackout. |
| E 11.1 | The actual design basis shall regularly39, and when relevant as a result of operating experience and significant new safety information41, be reviewed, using both a deterministic and a probabilistic approach as well as engineering judgement to determine whether the design basis is still appropriate. ~~to identify~~ Based on the results of these reviews needs and opportunities for improvements shall be identified and relevant measures shall be implemented. ~~Reasonably practicable measures shall be taken in a timely manner with respect to backfitting or other measures justified from a safety point of view.~~  39 See RL A2.3.  ~~37~~ ~~Regularly is understood as an ongoing activity to analyse the plant and identify opportunities for improvement. The~~~~periodic safety reviews are complementary tools to verify and follow up on this activity in a longer perspective.~~  ~~Significant new safety information is understood as new insights gained from e.g. site evaluation, safety analyses and~~  ~~the development of safety standards and practices.~~  41 Significant new safety information is understood as new insights gained from e.g. site evaluation, safety analyses and the development of safety standards and practices. | JV5 19 | (1) Upravljavec sevalnega ali jedrskega objekta mora redno in ne le kot del vsakega občasnega varnostnega pregleda preverjati projektne osnove objekta, pri čemer se ta določba smiselno uporablja tudi za izvajalca dolgoročnega nadzora zaprtega odlagališča.  (2) Pregled projektnih osnov je treba opraviti tudi po obratovalnih dogodkih, ki so vplivali na sevalno ali jedrsko varnost, ali ob novih pomembnih informacijah glede sevalne ali jedrske varnosti (npr. ocena lastnosti lokacije, varnostne analize in razvoj varnostnih standardov ali praks).  (3) Pri pregledu projektnih osnov iz prvega ali drugega odstavka tega člena se za prepoznavanje potreb in možnosti izboljšav lahko uporabijo deterministične in verjetnostne varnostne analize ali inženirska presoja, pri čemer se rešitve v projektu primerjajo s predpisanimi zahtevami in dobro prakso.  (4) Glede na varnostno pomembnost rezultatov pregleda iz prvega ali drugega odstavka tega člena mora upravljavec smiselno posodobiti SSK ali izvesti druge ukrepe, potrebne za zagotavljanje sevalne oziroma jedrske varnosti. | (1) The operator of a radiation or nuclear facility shall regularly, and not only as a part of each periodic safety inspection, review the facility design bases, while this provision also applies, in a meaningful manner, to the contractor of a long-term surveillance of a closed disposal facility.  (2) Such a review of design bases shall also be carried out following any operational occurrence relevant for radiation or nuclear safety or in cases where new information relevant for radiation or nuclear safety has arisen (e.g. evaluation of site characteristics, safety analysis and the development of safety standards or practices).  (3) In the review of design bases referred to in the first and second paragraphs of this article, deterministic and probabilistic safety analyses or engineering judgement may be employed to identify the needs and opportunities for improvements, as well as comparison of the design solutions with statutory requirements and good practice.  (4) Depending on the safety relevance of the findings of the review referred to in the first and second paragraphs of this article, the operator shall update SSCs as appropriate or undertake any other measures to ensure radiation or nuclear safety. |
| **Novo** F: Design Extension of existing reactors | |  |  |  |
| F 1.1 | As part of defence in depth, analysis of Design Extension Conditions (DEC) shall be undertaken with  the purpose of further improving the safety of the nuclear power plant by:  - enhancing the plant’s capability to withstand more challenging events or conditions than those considered in the design basis,  - minimising radioactive releases harmful to the public and the environment as far as reasonably practicable, in such events or conditions. | JV5 5/1 | (1) Kot del koncepta obrambe v globino mora upravljavec jedrske elektrarne opraviti analize razširjenih projektnih osnov, s katerimi določi ukrepe za:  1. izboljšanje zmožnosti jedrske elektrarne, da prenese dogodke ali razmere, zahtevnejše od projektnih dogodkov, in  2. omejitev radioaktivnih izpustov, ki bi med dogodki iz prejšnje točke ogrozili ljudi in okolje, kolikor je to še smiselno izvedljivo. | (1) As part of defence in depth, analysis of Design Extension Conditions shall be undertaken with the purpose of further improving the safety of the nuclear power plant by:  1. enhancing the plant’s capability to withstand more challenging events or conditions than those considered in the design basis,  2. minimising radioactive releases harmful to the public and the environment as far as reasonably practicable, in such events or conditions. |
| F 1.2 | There are two categories of DEC:  - DEC A for which prevention of severe fuel damage in the core or in the spent fuel storage can be achieved;  - DEC B with postulated severe fuel damage.  The analysis shall identify reasonably practicable provisions that can be implemented for the prevention of severe accidents. Additional efforts to this end shall be implemented for spent fuel storage with the goal that a severe accident in such storage becomes extremely unlikely to occur with a high degree of confidence.  In addition to these provisions, severe accidents shall be postulated for fuel in the core and, if not extremely unlikely to occur with a high degree of confidence, for spent fuel in storage, and the analysis shall identify reasonably practicable provisions to mitigate their consequences. | JV5 2/46, 5/2-3 | 46. razširjeni projektni dogodek je dogodek ali kombinacija dogodkov z izredno majhno verjetnostjo in težjimi posledicami od projektnih dogodkov oziroma vključuje več odpovedi, kot so predpostavljene pri projektnih osnovah jedrskega objekta. Obstajata dve kategoriji razširjenih projektnih dogodkov:  ‒ razširjeni projektni dogodki kategorije A, pri katerih se lahko zagotovi preprečitev poškodbe goriva v reaktorju ali skladišču z izrabljenim gorivom;  ‒ razširjeni projektni dogodki kategorije B, za katere se predvideva težka poškodba goriva, ki presega projektno poškodbo goriva;  (2) Upravljavec jedrske elektrarne mora določiti predpostavljene težke nesreče in z analizami iz prejšnjega odstavka določiti ukrepe za njihovo preprečevanje oziroma zmanjševanje njihovih posledic.  (3) Določbe prvega in drugega odstavka tega člena se uporabljajo tudi za skladišče z izrabljenim gorivom, pri čemer je treba izvesti vse možne ukrepe, da je verjetnost za težke nesreče v takem objektu izredno majhna. | 46. Design extension conditions event shall mean an event or combination of events with extermely low probability and more severe consequences than design bases events. It can also include multiple failures of SSC in contrast to single failure postulated in the design basis of the nuclear facility. There are two categories of design extension conditions events:  - Design extension conditions categoriy A, for which prevention of severe fuel damage in the reactor or spent fuel storage can be achieved,  - Design extension conditions category B with postulated severe fuel damage, exceeding the design basis fuel damage;  (2) The operator of a nuclear power plant shall be identify postulated severe accident and with analyses referred in the previous paragraph define measures for their prevention or mitigation of their consequences.  (3) The first and second paragraph of this Article shall also apply to the spent fuel storage, for which all possible measures have to be taken with the goal that a severe accident in such storage becomes extremely unlikely to occur. |
| F 2.1 | A set of DECs shall be derived and justified as representative, based on a combination of deterministic and probabilistic assessments as well as engineering judgement. | JV5 P1/4.1/1 | 1. Pripraviti je treba razširjene projektne osnove in jih utemeljiti s kombinacijo determinističnih in verjetnostih metod ter inženirskih ocen. | 1. A set of design extension conditions shall be derived and justified as representative, based on a combination of deterministic and probabilistic assessments as well as engineering judgement. |
| F 2.2 | The selection process for DEC A shall start by considering those events and combinations of events, which cannot be considered with a high degree of confidence to be extremely unlikely to occur and which may lead to severe fuel damage in the core or in the spent fuel storage. It shall cover:  - Events occurring during the defined operational states of the plant;  - Events resulting from internal or external hazards;  - Common cause failures;  Where applicable, all reactors and spent fuel storages on the site have to be taken into account. Events potentially affecting all units on the site, potential interactions between units as well as interactions with other sites in the vicinity shall be covered. | JV5 P1/4.1/2 | 2. Pri določanju razširjenih projektnih osnov kategorije A je treba upoštevati dogodke in kombinacije dogodkov, za katere ni mogoče z visoko stopnjo zaupanja zagotoviti, da so izredno malo verjetni in ki lahko vodijo v težko nesrečo. Pokrivati morajo:  – dogodke med vsemi možnimi obratovalnimi stanji elektrarne;  – dogodke, ki izhajajo iz notranjih in zunanjih predpostavljenih začetnih dogodkov;  – odpovedi s skupnim vzrokom.  Pri pripravi razširjenih projektnih osnov je treba upoštevati vse reaktorje in skladišča izrabljenega goriva na lokaciji. Obravnavani morajo biti vsi dogodki, ki bi lahko hkrati vplivali na več objektov (npr. reaktorjev, skladišč z izrabljenim gorivom) na lokaciji. Prav tako je treba upoštevati morebitne medsebojne vplive med objekti in z drugimi lokacijami v bližini. | 2. The selection process for design extension conditions A shall start by considering those events and combinations of events, which cannot be considered with a high degree of confidence to be extremely unlikely to occur and which may lead to severe fuel damage in the core or in the spent fuel storage. It shall cover:  - events occurring during the defined operational states of the plant;  - events resulting from internal or external hazards;  - common cause failures.  Where applicable, all reactors and spent fuel storages on the site have to be taken into account. Events potentially affecting all units on the site, potential interactions between units as well as interactions with other sites in the vicinity shall be covered. |
| F 2.3 | The set of category DEC B events shall be postulated and justified to cover situations, where the  capability of the plant to prevent severe fuel damage is exceeded or where measures provided are assumed not to function as intended, leading to severe fuel damage. | JV5 P1/4.1/3 | 3. Razširjene projektne osnove kategorije B morajo predvideti in pokrivati dogodke, pri katerih so presežene zmožnosti elektrarne za preprečitev poškodbe goriva, ali pa je do težke nesreče privedla odpoved določenih preventivnih ukrepov (odpoved sistemov, človeške akcije ipd.). | 3. The design extension conditions category B events shall be postulated and justified to cover situations, where the capability of the plant to prevent severe fuel damage is exceeded or where measures provided are assumed not to function as intended, leading to severe fuel damage (e.g. system failures, man induced events, etc.). |
| F 3.1 | The DEC analysis shall:  (a) rely on methods, assumptions or arguments which are justified43, and should not be unduly conservative;  (b) be auditable, paying particular attention where expert opinion is utilized, and take into account uncertainties and their impact;  (c) identify reasonably practicable provisions to prevent severe fuel damage (DEC A) and mitigate severe accidents (DEC B);  (d) evaluate potential on-site and off-site radiological consequences resulting from the DEC (given successful accident management measures);  (e) consider plant layout and location, equipment capabilities, conditions associated with the selected scenarios and feasibility of foreseen accident management actions;  (f) demonstrate, where applicable, sufficient margins to avoid “cliff-edge effects”44 that would result in unacceptable consequences, i.e. for DEC-A severe fuel damage and for DEC-B a large or early radioactive release.  (g) reflect insights from PSA level 1 and 2;  (h) take into account severe accident phenomena, where relevant;  (i) define an end state, which should where possible be a safe state, and, when applicable, associated mission times for SSCs.  43 These methods can be more realistic ~~than for DBA, including~~ up to best estimate. Modified acceptance criteria may be used in the analysis  44 A cliff edge effect occurs when a small change in a condition (a parameter, a state of a system…) leads to a disproportionate increase in consequences. | JV5 P1/4.2/ | Analize razširjenih projektnih osnov morajo:  1. temeljiti na ustreznih metodah, predpostavkah in dokazilih, ki niso nepotrebno konzervativni;  2. biti pregledne, pri čemer mora biti posebna pozornost namenjena uporabi inženirskih ocen; upoštevati je treba negotovosti in njihov vpliv;  3. prepoznati še smiselno izvedljive ukrepe za preprečitev težke poškodbe goriva (kategorija A) in zmanjšanje posledic težkih nesreč (kategorija B);  4. oceniti možne radiološke posledice na lokaciji elektrarne in izven nje zaradi razširjenih projektnih nesreč ob upoštevanju uspešnosti ukrepov za obvladovanje težkih nesreč;  5. upoštevati razpored objektov elektrarne in lokalne razmere, zmožnost opreme, pogoje med izbranimi scenariji in izvedljivost predvidenih ukrepov za obvladovanje nesreč;  6. izkazati, kadar je to mogoče, da obstajajo zadostne rezerve za preprečitev primerov, ko bi majhna sprememba posameznega parametra povzročila težke in nesprejemljive posledice (po angleško »cliff edge effect«), kot so težka poškodba goriva v primeru razširjenih projektnih nesreč kategorije A ali hitri oziroma veliki radioaktivni izpusti v primeru razširjenih projektnih nesreč kategorije B;  7. upoštevati rezultate verjetnostnih varnostnih analiz;  8. upoštevati pojave med težkimi nesrečami, kadar je to potrebno;  9. opredeliti končna stanja po nesreči, ki bi morala biti po možnosti varna stanja, ter čase delovanja SSK, kadar je to potrebno. | The design extension conditions analysis shall:  1. rely on methods, assumptions or arguments which are justified, and should not be unduly conservative;  2. be auditable, paying particular attention where expert opinion is utilized, and take into account uncertainties and their impact;  3. identify reasonably practicable provisions to prevent severe fuel damage (design extension conditions A) and mitigate severe accidents (design extension conditions B);  4. evaluate potential on-site and off-site radiological consequences resulting from the design extension conditions (given successful accident management measures);  5. consider plant layout and location, equipment capabilities, conditions associated with the selected scenarios and feasibility of foreseen accident management actions;  6. demonstrate, where applicable, sufficient margins to avoid “cliff-edge effects” that would result in unacceptable consequences, i.e. for design extension conditions A severe fuel damage and for design extension conditions B a large or early radioactive release.  7. reflect insights from probabilistic safety analysis;  8. take into account severe accident phenomena, where relevant;  9. define an end state, which should where possible be a safe state, and, when applicable, associated mission times for SSCs. |
| F 4.1 | In DEC A, it is the objective that the plant shall be able to fulfil, the fundamental safety functions:  - control of reactivity45,  - removal of heat from the reactor core and from the spent fuel, and  - confinement of radioactive material.  In DEC B, it is the objective that the plant shall be able to fulfil confinement of radioactive material. To this end removal of heat from the damaged fuel shall be established46.  45 Preferably, this safety function shall be fulfilled at all times; if it is lost, it shall be re-established after a transient  period.  46 For the fulfilment (or re-establishment) of the fundamental safety functions in DEC A and DEC B, the use of mobile equipment on-site can be taken into account, as well as support from off-site, with due consideration for the time required for it to be available. | JV5 P1/4.3/1, P1/4.3/2 | 1. Cilj razširjenih projektnih osnov kategorije A je zagotavljanje naslednjih osnovnih varnostnih funkcij:  – stalni nadzor reaktivnosti, razen v primeru krajših prehodnih pojavov, po katerih jo je treba čim prej ponovno vzpostaviti;  – odvod toplote iz sredice in izrabljenega goriva;  – zadrževanje radioaktivnih snovi.  Cilj razširjenih projektnih osnov kategorije B je zagotoviti zadrževanje radioaktivnih snovi. Za ta namen je treba zagotoviti odvajanje toplote iz poškodovanega goriva.  2. Za zagotovitev (ali ponovno vzpostavitev) osnovnih varnostnih funkcij med razširjenimi projektnimi nesrečami kategorije A in B se lahko upoštevata tudi mobilna oprema na lokaciji in podpora zunaj lokacije, vendar je pri tem treba upoštevati čas, ki je potreben, da bo oprema na voljo. | 1. In design extension conditions A, it is the objective that the plant shall be able to fulfil, the fundamental safety functions:  - control of reactivity, if it is lost, it shall be reestablished after a transient period  - removal of heat from the reactor core and from the spent fuel, and  - confinement of radioactive material.  In design extension conditions B, it is the objective that the plant shall be able to fulfil confinement of radioactive material. To this end removal of heat from the damaged fuel shall be established.  2. For the fulfilment (or reestablishment) of the fundamental safety functions in design extension conditions A and design extension conditions B, the use of mobile equipment on-site can be taken into account, as well as support from off-site, with due consideration for the time required for it to be available. |
| F 4.2 | It shall be demonstrated that SSCs47 (including mobile equipment and their connecting points, if  applicable) for the prevention of severe fuel damage or mitigation of consequences in DEC have the capacity and capability and are adequately qualified to perform their relevant functions for the appropriate period of time.  47 SSCs including their support functions and related instrumentation. | JV5 P1/4.3/3 | 3. SSK, vključno z njihovimi podpornimi funkcijami, pripadajočo instrumentacijo, morebitno mobilno opremo in priključnimi točkami, namenjene preprečevanju težke poškodbe goriva ali omilitvi posledic zaradi razširjenih projektnih nesreč, morajo imeti zadostno zmogljivost in biti primerno kvalificirane za izvajanje svojih funkcij v predvidenem času. | 3. It shall be demonstrated that SSCs including mobile equipment and their connecting points, if applicable for the prevention of severe fuel damage or mitigation of consequences in design extension conditions have the capacity and capability and are adequately qualified to perform their relevant functions for the appropriate period of time. |
| F 4.3 | If accident management relies on the use of mobile equipment, permanent connecting points, accessible (from a physical and radiological point of view) under DEC, shall be installed to enable the use of this equipment. The mobile equipment, and the connecting points and lines shall be maintained, inspected and tested. | JV5 P1/4.3/4 | 4. Kadar obvladovanje težkih nesreč temelji na uporabi mobilne opreme, je treba vgraditi stalne priključne točke, ki zagotavljajo uporabo te mobilne opreme. Te priključne točke morajo biti fizično dostopne ter primerno postavljene s stališča varstva pred sevanjem med razširjeno projektno nesrečo. Mobilno opremo, priključne točke in cevne ter kabelske povezave je treba redno vzdrževati, preverjati in preizkušati. | 4. If accident management relies on the use of mobile equipment, permanent connecting points, accessible (from a physical and radiological point of view) under design extension conditions, shall be installed to enable the use of this equipment. The mobile equipment, and the connecting points and lines shall be maintained, inspected and tested. |
| F 4.4 | A systematic process shall be used to review all units relying on common services and supplies (if any), for ensuring that common resources of personnel, equipment and materials expected to be used in accident conditions are still effective and sufficient for each unit at all times. In particular, if support between units at one site is considered in DEC, it shall be demonstrated that it is not detrimental to the safety of any unit. | JV5 P1/4.3/5 | 5. Če je na lokaciji več enot, ki si delijo opremo, osebje ali storitve za primere razširjenih projektnih nesreč, je treba vpeljati sistematične preglede, ki zagotavljajo, da so vsi skupni viri (ljudje, oprema, materiali) učinkoviti in zadostni za vsako enoto v vseh razmerah. Če je med razširjeno projektno nesrečo predvidena podpora med enotami na lokaciji, je treba zagotoviti, da takšni ukrepi niso škodljivi za varnost katere koli enote. | 5. A systematic process shall be used to review all units relying on common services and supplies (if any), for ensuring that common resources (of personnel, equipment and materials) expected to be used in accident conditions are still effective and sufficient for each unit at all times. In particular, if support between units at one site is considered in design extension conditions, it shall be demonstrated that it is not detrimental to the safety of any unit. |
| F 4.5 | The NPP site shall be autonomous regarding supplies supporting safety functions for a period of time until it can be demonstrated with confidence that adequate supplies can be established from off site.. | JV5 P1/4.3/6 | 6. Zagotoviti je treba zadostne količine surovin (npr. goriv) na lokaciji, potrebnih za izvajanje osnovnih varnostnih funkcij elektrarne, za obdobje, dokler ni mogoče pričakovati dobave teh surovin od zunaj. Dolžino tega obdobja je treba vnaprej določiti z visoko stopnjo zaupanja. | 6. The NPP site shall be autonomous regarding supplies supporting safety functions (e.g. fuel supplies) for a period of time until it can be demonstrated with confidence that adequate supplies can be established from off site. |
| F 4.6 | In design extension conditions, sub-criticality of the reactor core shall be ensured in the long term48  and in the fuel storage at any time.  48 It is acknowledged that in case of DEC B, sub-criticality might not be guaranteed during core degradation and later on during some time in a fraction of the corium. | JV5 P1/4.3/7 | 7. Med razširjeno projektno nesrečo je treba zagotoviti dolgoročno podkritičnost sredice in tudi v skladišču z izrabljenim gorivom, razen v izjemnih primerih med taljenjem sredice in še nekaj časa za tem v določenem delu taline. | 7. In design extension conditions, subcriticality of the reactor core shall be ensured in the long term and in the fuel storage at any time. Subcriticality might not be guaranteed during core degradation and later on during some time in a fraction of the corium. |
| F 4.7 | There shall be sufficient independent and diverse means including necessary power supplies available to remove the residual heat from the core and the spent fuel. At least one of these means shall be effective after events involving external hazards more severe than the design basis events. | JV5 P1/4.3/8 | 8. Elektrarna mora imeti na voljo dovolj neodvisnih in raznolikih rešitev (vključno z oskrbo s potrebno pogonsko energijo) za odvajanje zaostale toplote iz sredice in izrabljenega goriva. Vsaj ena od teh rešitev mora biti učinkovita tudi med nesrečami, ki presegajo projektne dogodke in ki jih povzroči zunanji začetni dogodek. | 8. Nuclear power plant shall have sufficient independent and diverse means (including necessary power supplies available) to remove the residual heat from the core and the spent fuel. At least one of these means shall be effective after events involving external hazards more severe than design basis events. |
| F 4.8 | Isolation of the containment shall be possible in DEC. For those shutdown states where this cannot be achieved in due time, severe core damage shall be prevented with a high degree of confidence. If an event leads to bypass of the containment, severe core damage shall be prevented with a high degree of confidence. | JV5 P1/4.3/9 | 9. Med razširjenimi projektnimi nesrečami mora biti zagotovljena možnost izolacije zadrževalnega hrama. Za zaustavitvena stanja, ko zadrževalnega hrama ni mogoče pravočasno izolirati, je treba preprečiti težko poškodbo sredice. Prav tako je treba preprečiti težko poškodbo sredice, kadar dogodek vodi v obvod zadrževalnega hrama. | 9. Isolation of the containment shall be possible in design extension conditions. For those shutdown states where this cannot be achieved in due time, severe core damage shall be prevented. If an event leads to bypass of the containment, severe core damage shall be prevented. |
| F 4.9 | Pressure and temperature in the containment shall be managed | JV5 P1/4.3/10 | 10. Obvladovati je treba tlak in temperaturo v zadrževalnem hramu. | 10. Pressure and temperature in the containment shall be managed. |
| F 4.10 | The threats due to combustible gases shall be managed. | JV5 P1/4.3/11 | 11. Obvladovati je treba tveganja zaradi vnetljivih plinov. | 11. The threats due to combustible gases shall be managed. |
| F 4.11 | The containment shall be protected from overpressure. If venting is to be used for managing the containment pressure, adequate filtration shall be provided. | JV5 P1/4.3/12 | 12. Zadrževalni hram je treba ščititi pred previsokim tlakom. Če se za obvladovanje tlaka v zadrževalnem hramu uporablja odzračevanje, je treba zagotoviti ustrezno filtriranje. | 12. The containment shall be protected from overpressure. If venting is to be used for managing the containment pressure, adequate filtration shall be provided. |
| F 4.12 | High pressure core melt scenarios shall be prevented. | JV5 P1/4.3/13 | 13. Preprečiti je treba scenarije s talitvijo sredice pod visokim tlakom. | 13. High pressure core melt scenarios shall be prevented. |
| F 4.13 | Containment degradation by molten fuel shall be prevented or mitigated as far as reasonably practicable. | JV5 P1/4.3/14 | 14. Poškodbe zadrževalnega hrama, ki bi nastale zaradi talitve goriva, je treba preprečiti ali jih čim bolj omiliti. | 14. Containment degradation by molten fuel shall be prevented or mitigated as far as reasonably practicable. |
| F 4.14 | In DEC A, radioactive releases shall be minimised as far as reasonably practicable.  In DEC B, any radioactive release into the environment shall be limited in time and magnitude as far as reasonably practicable to:  (a) allow sufficient time for protective actions (if any) in the vicinity of the plant; and  (b) avoid contamination of large areas in the long term. | JV5 P1/4.3/15-16 | 15. Radioaktivni izpusti ob razširjenih projektnih nesrečah kategorije A morajo biti tako nizki, kot je to še smiselno izvedljivo.  16. Radioaktivni izpusti ob razširjenih projektnih nesrečah kategorije B morajo biti omejeni glede časa in obsega, kot je to še smiselno izvedljivo, da:  – se zagotovi dovolj časa za izvedbo morebitnih zaščitnih ukrepov v bližini elektrarn, in  – se prepreči širša kontaminacija ozemlja v daljšem obdobju. | 15. In design extension conditions A, radioactive releases shall be minimised as far as reasonably practicable.  16. In design extension conditions B, any radioactive release into the environment shall be limited in time and magnitude as far as reasonably practicable to:  - allow sufficient time for protective actions (if any) in the vicinity of the plant; and  - avoid contamination of large areas in the long term. |
| F 4.15 | Adequately qualified instrumentation shall be available for DEC for determining the status of plant  (including spent fuel storage) and safety functions as far as required for making decisions49.  49 This refers to decisions concerning measures on-site as well as, in case of DEC B, off-site | JV5 P1/4.3/17 | 17. Elektrarna mora imeti na voljo primerno kvalificirano instrumentacijo, ki bo v primeru razširjene projektne nesreče zagotavljala informacije o statusu elektrarne vključno s skladiščem za izrabljeno gorivo in o varnostnih funkcijah, ki so potrebne za odločanje o ukrepih na lokaciji ali tudi izven nje v primeru razširjenih projektnih nesreč kategorije B. | 17. Adequately qualified instrumentations shall be available for design extension conditions for determining the status of plant including spent fuel storage and safety functions as far as required for making decisions on-site as well as off-site in case of design extension conditions B. |
| F 4.16 | There shall be an operational and habitable control room (or another suitably equipped location) available during DEC in order to manage such situations. | JV5 P1/4.3/18 | 18. Za upravljanje razširjenih projektnih nesreč mora biti na voljo komandna soba (ali druga primerno opremljena lokacija) z zmožnostjo nadzora in upravljanja elektrarne tudi v razmerah razširjenih projektnih nesreč. Komandna soba mora zagotavljati dolgoročno bivanje operaterjev tudi v primeru težkih nesreč. | 18. There shall be an operational and habitable control room (or another suitably equipped location) available during design extension conditions in order to manage design externsion conditions. The control room shall provide long-term habitability of operators even in case of severe accidents. |
| F 4.17 | Adequate power supplies during DEC shall be ensured considering the necessary actions and the timeframes defined in the DEC analysis, taking into account external hazards | JV5 P1/4.3/19 | 19. Med razširjenimi projektnimi nesrečami mora elektrarna imeti na voljo zadostne zmogljivosti električnega napajanja, da se zagotovi izvedba potrebnih ukrepov, predvidenih v analizah razširjenih projektnih nesreč za predvideni čas, upoštevajoč tudi zunanje nevarnosti. | 19. Adequate power supplies during design extension conditions shall be ensured considering the necessary actions and the timeframes defined in the design extension conditions analysis, taking into account external hazards. |
| F 4.18 | Batteries shall have adequate capacity to provide the necessary DC power until recharging can be established or other means are in place. | JV5 P1/4.3/20 | 20. Akumulatorji morajo imeti zadostno kapaciteto za zagotavljanje potrebnega enosmernega električnega napajanja do takrat, ko se zagotovi njihovo polnjenje ali se lahko vzpostavijo druge primerne rešitve. | 20. Batteries shall have adequate capacity to provide the necessary DC power until recharging can be established or other means are in place. |
| F 5.1 | The design extension conditions shall regularly50, and when relevant as a result of operating experience and significant new safety information, be reviewed, using both a deterministic and a probabilistic approach as well as engineering judgement to determine whether the selection of design extension conditions is still appropriate. Based on the results of these reviews needs and opportunities for improvements shall be identified and relevant measures shall be implemented.  50 See RL A2.3. | JV5 P1/4.4 | Razširjene projektne osnove je treba redno preverjati, dodatne preglede pa je treba izvajati kot odziv na pomembne obratovalne dogodke ali druge nove pomembne informacije. Pri pregledih razširjenih projektnih osnov je treba za prepoznavanje potreb in možnosti izboljšav uporabljati deterministične in tudi verjetnostne varnostne analize ter inženirske presoje. Na podlagi rezultatov teh pregledov je treba predlagati in izvesti potrebne in smiselne ukrepe ter izboljšave. | The design extension conditions shall regularly, and when relevant as a result of operating experience and significant new safety information, be reviewed, using both a deterministic and a probabilistic approach as well as engineering judgement to determine whether the selection of design extension conditions is still appropriate. Based on the results of these reviews needs and opportunities for improvements shall be identified and relevant measures shall be implemented. |
| G: Safety Classification of Structures, Systems and Components | |  |  |  |
| G 1.1 | All SSCs51 important to safety shall be identified and classified on the basis of their importance for safety.  51 SSCs include software for I&C. | JV5 P1/2.1/1,  2/55 | 1. Vse SSK je treba razvrstiti (klasificirati) v varnostne razrede glede na njihovo pomembnost za varnost. SSK morajo biti projektirani, izdelani in vzdrževani tako, da njihova zanesljivost in kakovost ustrezata njihovemu pomenu za jedrsko varnost.  55. SSK je kratica, ki označuje skupek sestavnih delov, sistemov in konstrukcij. Konstrukcije so pasivni deli, kakršni so zgradbe in ščiti. Sistem tvori več sestavnih delov, ki so sestavljeni tako, da opravljajo določeno (aktivno) nalogo. Med SSK se uvršča tudi programska oprema za instrumentacijo in regulacijo. Če je objekt skladišče ali odlagališče radioaktivnih odpadkov, se med SSK uvrščajo tudi paketi radioaktivnih odpadkov; | 1. Each SSC shall be classified into a safety class according to its importance to safety. SSCs shall be designed, manufactured and maintained so as to ensure reliability and quality adequate for the importance of the SSC for safety.  55. SSC shall be an abbreviation for a set of structures, systems and components. Structures mean passive elements such as buildings and shields. A system means a set of components combined so as to perform an (active) function. The term SSC includes instrumentation and control software. In the case of radioactive waste storage or disposal facility, the term SSC includes the radioactive waste package; |
| G 2.1 | The classification of SSCs shall be primarily based on deterministic methods, complemented where appropriate by probabilistic methods and engineering judgment. | JV5 P1/2.1/2 | 2. Varnostna klasifikacija SSK v varnostne razrede glede na njihovo pomembnost za varnost mora temeljiti na analizah jedrske varnosti, izvedenih na podlagi determinističnih metod, ki jih, kadar je to primerno, dopolnjujejo verjetnostne metode in inženirska presoja. | 2. The classification of SSCs into safety classes according to their importance for safety shall be based on nuclear safety analyses carried out employing deterministic methods and supplemented with probabilistic methods and engineering judgement as appropriate. |
| G 2.2 | The classification shall identify for each safety class:  - The appropriate codes and standards in design, manufacturing, construction and inspection;  - Need for emergency power supply, qualification to environmental conditions;  - The availability or unavailability status of systems serving the safety functions to be considered in deterministic safety analysis;  - The applicable quality requirements | JV5 P1/2.1/3 | 3. Varnostna klasifikacija mora za vsak varnostni razred določati:  – predpise in standarde, uporabljene pri projektiranju, izdelavi, vgradnji in pri pregledih,  – zahteve za napajanje v sili in ustreznost SSK v predvidenih okoljskih razmerah,  – razpoložljivost oziroma nerazpoložljivost sistemov, potrebnih za izvedbo varnostne funkcije ob predpostavljenih začetnih dogodkih v varnostnih analizah, ki se izvajajo na podlagi determinističnih metod,  – zahteve glede zagotavljanja kakovosti. | 3. For each safety class, the safety classification shall specify:  - regulations and standards to be applied in design, manufacture, installation and inspection;  - requirements for emergency power supply and SSC compatibility with anticipated environmental conditions;  - availability/unavailability of systems necessary to achieve a safety function upon initiating events postulated in safety analyses employing deterministic methods;  - quality-assurance requirements. |
| G 3.1 | SSCs important to safety shall be designed, constructed and maintained such that their quality and reliability is commensurate with their classification. | JV5 P1/2.1/1 | 1. Vse SSK je treba razvrstiti (klasificirati) v varnostne razrede glede na njihovo pomembnost za varnost. SSK morajo biti projektirani, izdelani in vzdrževani tako, da njihova zanesljivost in kakovost ustrezata njihovemu pomenu za jedrsko varnost. | 1. Each SSC shall be classified into a safety class according to its importance to safety. SSCs shall be designed, manufactured and maintained so as to ensure reliability and quality adequate for the importance of the SSC for safety. |
| G 3.2 | The failure of a SSC in one safety class shall not cause the failure of other SSCs in a higher safety class. Auxiliary systems supporting equipment important to safety shall be classified accordingly. | JV5 P1/2.4 | Odpoved SSK nižjega varnostnega razreda iz poglavja 2.1 te priloge ne sme povzročiti odpovedi SSK višjega varnostnega razreda. Enako velja za pomožne sisteme, ki podpirajo varnostno pomembno opremo. | The failure of a SSC of a lower safety class referred to in item 2.1 of this Annex shall not cause a failure of a SSC of a higher safety class. The same requirement applies to auxiliary systems that support safety-related equipment. |
| G 4.1 | The design of SSCs important to safety and the materials used shall ~~consider~~ take into account the effects of operational conditions over the ~~plant~~ lifetime of the plant and, when required, the effects of ~~design basis~~ accident~~s~~ conditions on their characteristics and performance. | JV5  P1/2.5/2, P1/2.5/4 | 2. S kvalifikacijskim programom iz prejšnjega odstavka mora upravljavec preveriti in potrditi sposobnost SSK za opravljanje njihove projektne funkcije v celotni dobi, za katero so projektirani.  4. Kvalifikacijski program iz prvega odstavka mora upoštevati obratovalne okoliščine, kot so vibracije, temperatura, tlak, udarec vodnega curka, elektromagnetne motnje, obsevanje, vlaga, potres in kombinacije naštetega. Obratovalne okoliščine zajemajo razmere normalnega obratovanja v celotni projektirani obratovalni dobi, razmere med nenormalnim obratovanjem ter razmere med nesrečami za tiste SSK, ki so med nesrečo potrebne za spremljanje ali obvladovanje dogodka. | 2. The qualification programme referred to in the previous paragraph shall be applied by the operator to confirm the capability of SSCs to achieve their design functions over the entire design service life.  4. The qualification programme referred to in the previous paragraphs shall consider operating conditions such as vibration, temperature, pressure, water-jet impacts, electromagnetic disturbances, irradiation, moisture, earthquake and combinations thereof. Operating conditions shall cover normal operating conditions over the entire design service life, conditions of abnormal operation and the conditions during accidents for those SSCs that are necessary for monitoring or controlling emergency situation. |
| G 4.2 | A qualification procedure shall be adopted to confirm that SSCs important to safety meet throughout their design operational lives the demands for performing their function, taking into account environmental conditions52 over the lifetime of the plant and when required in anticipated operational occurrences and accident conditions.  52 Environmental conditions include as appropriate vibration, temperature, pressure, jet impingement, electromagnetic interference, irradiation, humidity, and combinations thereof. | JV5  P1/2.5/3-4 | 3. Kvalifikacijski program za SSK mora vključevati zbiranje, dokumentiranje in vzdrževanje podatkov, s katerimi se potrjuje, da SSK lahko opravlja svoje varnostne funkcije v celotni dobi, za katero so projektirani.  4. Kvalifikacijski program iz prvega odstavka mora upoštevati obratovalne okoliščine, kot so vibracije, temperatura, tlak, udarec vodnega curka, elektromagnetne motnje, obsevanje, vlaga, potres in kombinacije naštetega. Obratovalne okoliščine zajemajo razmere normalnega obratovanja v celotni projektirani obratovalni dobi, razmere med nenormalnim obratovanjem ter razmere med nesrečami za tiste SSK, ki so med nesrečo potrebne za spremljanje ali obvladovanje dogodka. | 3. The SSC-qualification programme shall include collection, documentation and maintenance of information to confirm the capability of SSCs to achieve their design functions over the entire design service life.  4. The qualification programme referred to in the previous paragraphs shall consider operating conditions such as vibration, temperature, pressure, water-jet impacts, electromagnetic disturbances, irradiation, moisture, earthquake and combinations thereof. Operating conditions shall cover normal operating conditions over the entire design service life, conditions of abnormal operation and the conditions during accidents for those SSCs that are necessary for monitoring or controlling emergency situation. |
| H: Operational Limits and Conditions (OLCs) | |  |  |  |
| H 1.1 | OLCs shall be developed to ensure that plants are operated in accordance with design assumptions and intentions as documented in the Safety Analysis Report (SAR). | JV5 46/1/2 | (1) Obratovalni pogoji in omejitve za varno obratovanje (v nadaljnjem besedilu: obratovalni pogoji in omejitve,) ki so del vsebine varnostnega poročila iz 43. člena tega pravilnika, morajo:  2. zagotavljati varno obratovanje sevalnega ali jedrskega objekta v skladu s projektnimi osnovami in varnostnim poročilom, v primeru odlagališča radioaktivnih odpadkov pa tudi zagotavljati skladnost z zahtevami za varnost po zaprtju, | (1) The operating conditions and limits, for safe operation (hereinafter reffered as operating conditions and limits) as included in the safety-analysis report referred to in Article 43 of these rules shall:  2. ensure safe operation of the radiation or nuclear facility in compliance with design bases and the safety-analysis report, while in the case of a radioactive waste disposal, also ensure compliance with the requirements for safety after its closure; |
| H 1.2 | The OLCs shall define the conditions that must be met to prevent situations that might lead to accidents or to mitigate the consequences of accidents should they occur. | JV5 46/1/3 | (1) Obratovalni pogoji in omejitve za varno obratovanje (v nadaljnjem besedilu: obratovalni pogoji in omejitve,) ki so del vsebine varnostnega poročila iz 43. člena tega pravilnika, morajo:  3. določiti pogoje, ki morajo biti izpolnjeni, da se preprečijo okoliščine, ki lahko vodijo v nesrečo, in ublažijo posledice morebitne nesreče, | (1) The operating conditions and limits, for safe operation (hereinafter reffered as operating conditions and limits) as included in the safety-analysis report referred to in Article 43 of these rules shall:  3. specify conditions that must be fulfilled to prevent the occurrence of circumstances that may lead to an accident and to mitigate consequences of a potential accident; |
| H 2.1 | Each established OLC shall be justified based on plant design, safety analysis and commissioning tests. | JV5,  46/1/1 | (1) Obratovalni pogoji in omejitve za varno obratovanje (v nadaljnjem besedilu: obratovalni pogoji in omejitve,) ki so del vsebine varnostnega poročila iz 43. člena tega pravilnika, morajo:  1. temeljiti na projektnih osnovah, rezultatih preizkusov in varnostnih analizah, ki upoštevajo negotovost teh analiz, | (1) The operating conditions and limits, for safe operation (hereinafter reffered as operating conditions and limits) as included in the safety-analysis report referred to in Article 43 of these rules shall:  1. be based on design bases, testing results and safety analyses, with allowance for the uncertainties of analyses of this kind; |
| H 2.2 | OLCs shall be kept updated and reviewed in the light of experience, the current state of ~~developments in~~ science and technology, and every time modifications in the plant or in the safety analysis warrant it, and changed if necessary. | JV9 3/4 | (4) Obratovalne pogoje in omejitve je treba pregledovati in po potrebi spremeniti v skladu z obratovalnimi izkušnjami, napredkom znanosti in tehnologije ter po vsaki spremembi v objektu, zaradi katere bi bilo to opravičljivo oziroma potrebno. | (4) Operational limits and conditions shall be reviewed and kept updated as appropriate in accordance with operational experience, progress in science and technology and upon any modification to the facility that warrants or requires such updates. |
| H 2.3 | The process for making modifications or temporary modifications of OLCs shall be defined. Such modifications shall be adequately justified by safety analysis and independent safety review. | JV9 34/1, 38  ZVISJV 83/1-3 | Upravljavec sevalnega ali jedrskega objekta mora v skladu s prilogama 7 in 8, ki sta kot prilogi sestavni del tega pravilnika, glede na sevalno in jedrsko varnost obravnavati vsako nameravano spremembo, ki:   1. neposredno vpliva na obratovanje objekta s:    * spremembo SSK ali v procesni programski opremi,    * spremembo obratovalnih pogojev in omejitev,    * spremembo pisnih postopkov ali    * katero koli kombinacijo sprememb, navedenih v prvi do tretji alineji tega odstavka;   (1) Če bi bilo ogroženo zdravje oziroma varnost prebivalstva ali osebja objekta lahko upravljavec sevalnega ali jedrskega objekta vloži vlogo za začasno prekoračitev obratovalnih pogojev ali omejitev, vendar še vedno v okviru varnostnih rezerv, če obstaja velika verjetnost, da se zaradi izpolnjevanja zahtev obratovalnih pogojev in omejitev povzroči:  ‒ nepotrebni prehodni pojav, ki lahko vodi v nesrečo,  ‒ če je objekt jedrska elektrarna, možnost za nenačrtovano zaustavitev v neugodnih vremenskih razmerah ali ob drugih pojavih, ki lahko še poslabšajo že tako slabo stanje električnega omrežja v danem obdobju.  (2) K vlogi iz prejšnjega odstavka mora priložiti kratko obrazložitev, kako bodo zagotovljene varnostne rezerve. Vlogo iz prejšnjega odstavka vloži ustno ali pisno s prošnjo za hitro rešitev. V najmanj 48 urah jo mora dopolniti s prilogami v skladu z zahtevami iz 42. in 43. člena tega pravilnika.  (1) Upravljavec objekta mora vsako nameravano spremembo v zvezi z objektom ali načinom upravljanja z njim ali njegovim obratovanjem, vključno z vzdrževalnimi deli, pregledovanjem, preskušanjem ali uvedbo tehnične, organizacijske ali druge spremembe v zvezi s temi deli (v nadaljnjem besedilu: sprememba), ki vpliva ali bi posredno lahko vplivala na vsebino varnostnega poročila, oceniti glede na njen pomen za sevalno ali jedrsko varnost.  (2) Spremembe so glede na pomen za sevalno ali jedrsko varnost lahko spremembe:  1. o katerih je treba organ, pristojen za jedrsko varnost le obvestiti,  2. katerih izvedbo je treba organu, pristojnemu za jedrsko varnost, priglasiti,  3. ki so pomembne za sevalno ali jedrsko varnost in za katerih izvedbo je treba pridobiti odobritev organa, pristojnega za jedrsko varnost.  (3) K predlogu sprememb iz 3. točke prejšnjega odstavka mora upravljavec objekta priložiti predlog spremembe varnostnega poročila, oceno iz prvega odstavka tega člena in strokovno mnenje pooblaščenega izvedenca za sevalno in jedrsko varnost o vplivu spremembe na sevalno ali jedrsko varnost objekta. | The facility operator of a radiation or nuclear facility shall, in accordance with annexes 7 and 8, which form constituent parts of these Rules and with respect to radiation and nuclear safety, elaborate any intended modification which:  1. directly affects the operation of the facility through:  -- a modification of a SSC or process software;  -- a modification of operational limits and conditions;  -- a modification of written procedures;  -- any combination of the modifications listed in subparagraphs 1 to 3 of this paragraph;  (1) In a case of threats to the health or safety of the general public or the facility personnel, the facility operator of a radiation or nuclear facility may apply to the Administration for a temporary violation of operational limits and conditions, not exceeding the safety margins, in the cases where the compliance with operational limits and conditions would most probably lead to:  - an unnecessary transient that might lead to an accident;  - in the case of a nuclear power plant, to a risk of an unplanned shutdown in unfavourable weather conditions or other conditions and to further deterioration of the poor condition of the electric power grid under such conditions.  (2) The application in the previous paragraph shall be accompanied by a brief explanation how shall be provided safety margins. The application referred in the previous paragraph is transmitted in oral or written form for prompt resolution. The application shall be supplemented, within 48 hours, with appendices set out in articles 42 and 43 of these Rules.  (1) With respect to every intended change relating to the facility or to the management method used or to the operation of the facility, including maintenance work, inspection, testing or the introduction of a technical, organisational or any other change relating to the aforementioned tasks (hereinafter: change), which affect or could indirectly affect the content of the safety analysis report, the operator must evaluate the intended change in relation to its significance for radiation or nuclear safety.  (2) With respect to their significance for radiation or nuclear safety, changes may be:  1. such that it shall be necessary only to notify the authority competent for the nuclear safety,  2. such that the intention of their implementation must be reported to the authority competent for the nuclear safety,  3. of significance for radiation or nuclear safety and for the implementation of which a licence from the authority competent for the nuclear safety must be obtained.  (3) An operator must attach to the proposal of changes referred to in point 3 of the previous paragraph a proposal for the amendments to the safety analysis report, the evaluation referred to in the first paragraph of this Article and an expert opinion from an authorized expert for radiation and nuclear safety about the impact of changes on radiation and nuclear safety of the facility. |
| H 3.1 | The OLCs shall be readily accessible to control room personnel. | JV9 3/3 | (3) Informacije o obratovalnih pogojih in omejitvah morajo biti dostopne za vse delavce, ki upravljajo objekt. V objektih, ki imajo komandno sobo, morajo biti te informacije dostopne v komandni sobi. | (3) Information on the operational limits and conditions shall be accessible to all personnel involved in operating the facility. In the facilities fitted with a control room, such information shall be available in the control room. |
| H 3.2 | Control room operators shall be highly knowledgeable of the OLCs and their technical basis. Relevant operational decision makers shall be aware of their significance for the safety of the plant. | JV9 3/2 | (2) Delavci z dovoljenjem za opravljanje del in nalog upravljanja tehnološkega procesa in njegovega nadzora v sevalnem ali jedrskem objektu morajo biti natančno seznanjeni z vsebino, nameni in tehničnimi osnovami obratovalnih pogojev in omejitev. Delavci, ki opravljajo dela in naloge v zvezi z nadzorom nad upravljanjem tehnološkega procesa v objektu, se morajo zavedati pomembnosti obratovalnih pogojev in omejitev za varnost objekta. | (2) Personnel licenced to operate and monitor the technological process in a radiation or nuclear facility shall be highly knowledgeable on the contents, purposes and technical bases of the operational limits and conditions. Personnel involved in tasks related to the control of the facility operation shall be aware of the significance of operational limits and conditions for the safety of the facility. |
| H 4.1 | OLCs shall cover all operational plant states including power operation, shutdown and refuelling, any intermediate conditions between these states and temporary situations arising due to maintenance ~~&~~ and testing. | JV5 46/2 | (2) Obratovalni pogoji in omejitve morajo biti določeni za vsa obratovalna stanja objekta. Pri jedrski elektrarni ta stanja med drugim zajemajo obratovanje pri moči, stanja zaustavitve in menjave goriva ter vsa morebitna vmesna stanja, pa tudi okoliščine zaradi vzdrževanja ali preizkušanj. | (2) Operating conditions and limits shall be specified for all the operating states of the facility. In the case of a nuclear power plant, such states include the states of power operation, shutdown and refuelling, and any of the intermediate states, as well as any circumstances arising during maintenance and testing. |
| H 5.1 | Adequate margins shall be ensured between operational limits and the established safety systems settings, to avoid undesirably frequent actuation of safety systems. | JV5 48/1 | (1) Med vrednostmi varnostnih mej, mejnimi nastavitvami parametrov varnostnih sistemov, alarmi in obratovalnimi pogoji mora biti predvidena ustrezna razlika, da ni prepogostega proženja varnostnih sistemov. | (1) Appropriate margins shall be provided between the safety-limit values, safety-parameter limiting settings and alarm levels and operating conditions, to avoid frequent undue actuation of safety systems. |
| H 5.2 | Safety limits shall be established using a conservative approach to take uncertainties in the safety analyses into account. | JV5 48/2 | (2) Varnostne meje morajo biti določene konzervativno z upoštevanjem predpostavk in negotovosti varnostnih analiz. | (2) Safety limits shall be determined in a conservative manner, with due consideration of the assumptions and uncertainties of safety analyses. |
| H 6.1 | Limits and conditions for normal operation shall include limits on operating parameters, stipulation for minimum amount of operable equipment, actions to be taken by the operating staff in the event of deviations from the OLCs and time allowed to complete these actions. | JV5 47/1/3-5 | (1) Obratovalni pogoji in omejitve morajo vsebovati:  3. mejne nastavitve parametrov varnostnih sistemov,  4. mejne pogoje obratovanja in zahteve po minimalno delujoči opremi, vključno z zahtevo, koliko SSK, pomembnih za sevalno ali jedrsko varnost, mora obratovati ali biti pripravljenih za obratovanje,  5. potrebne ukrepe pri prekoračitvi obratovalnih pogojev in omejitev ter razpoložljivi čas za izvedbo teh ukrepov, | (1) Operating conditions and limits shall contain:  3. parameter limiting settings for safety systems;  4. limiting conditions for operation and requirements for minimum performance of equipment, including requirements of the extent of operation or the operational readiness of the radiation or nuclear safety related SSCs;  5. necessary measures in cases of exceeded operating conditions and limits, and the time available for taking such measures; |
| H 6.2 | Where operability requirements cannot be met, the actions to bring the plant to a safer state shall be specified, and the time allowed to complete the action shall be stated. | JV5 47/1/5 | (1) Obratovalni pogoji in omejitve morajo vsebovati:  5. potrebne ukrepe pri prekoračitvi obratovalnih pogojev in omejitev ter razpoložljivi čas za izvedbo teh ukrepov, | (1) Operating conditions and limits shall contain:  5. necessary measures in cases of exceeded  operating conditions and limits, and the time available  for taking such measures; |
| H 6.3 | Operability requirements shall state for the various modes of normal operation the number of systems or components important to safety that should be in operating condition or standby condition. | JV5 46/2, 47/1/4 | (2) Obratovalni pogoji in omejitve morajo biti določeni za vsa obratovalna stanja objekta. Pri jedrski elektrarni ta stanja med drugim zajemajo obratovanje pri moči, stanja zaustavitve in menjave goriva ter vsa morebitna vmesna stanja, pa tudi okoliščine zaradi vzdrževanja ali preizkušanj.  (1) Obratovalni pogoji in omejitve morajo vsebovati:  4. mejne pogoje obratovanja in zahteve po minimalno delujoči opremi, vključno z zahtevo, koliko SSK, pomembnih za sevalno ali jedrsko varnost, mora obratovati ali biti pripravljenih za obratovanje, | (2) Operating conditions and limits shall be specified for all the operating states of the facility. In the case of a nuclear power plant, such states include the states of power operation, shutdown and refuelling, and any of the intermediate states, as well as any circumstances arising during maintenance and testing.  (1) Operating conditions and limits shall contain:  4. limiting conditions for operation and requirements for minimum performance of equipment, including requirements of the extent of operation or the operational readiness of the radiation or nuclear safety related SSCs; |
| H 7.1 | If operating personnel cannot ascertain that the power plant is operating within operating limits, or the plant behaves in an unexpected way, measures shall be taken without delay to bring the plant to a safe and stable state. | JV9 4/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora takoj začeti izvajati ukrepe za prehod v varno stanje, določeno v obratovalnih pogojih in omejitvah, če:  1. je ugotovljeno odstopanje od obratovalnih pogojev in omejitev;  2. obratovalno osebje ni prepričano, da je obstoječe obratovanje v mejah, opisanih v obratovalnih pogojih in omejitvah;  3. se objekt ne odziva, kakor je pričakovano. | (1) The facility operator of a radiation or nuclear facility shall, without delay, undertake measures to bring the facility to a safe state as set out in the operational limits and conditions, in the following cases:  1. a deviation from operational limits and conditions is detected;  2. the operating personnel is in any doubt whether the actual operation is within the ranges specified in operational limits and conditions;  3. the facility behaves in an unexpected way. |
| H 7.2 | Plant shall not be returned to service following unplanned shutdown until it has been shown to be safe to do so. | JV9 4/2 | (2) Če se v primeru iz prejšnjega odstavka sevalni ali jedrski objekt zaustavi (v jedrski elektrarni ali raziskovalnem reaktorju zaustavitev verižne reakcije), mora upravljavec pred ponovnim začetkom obratovanja:  1. ugotoviti vzrok okoliščin, ki so povzročile neizpolnjevanje obratovalnih pogojev in omejitev;  2. določiti takojšnje in dolgoročne popravljalne ukrepe za preprečitev ponovitve dogodka in  3. izvesti takojšnje ukrepe iz prejšnje točke ter izpolniti vse zahteve iz obratovalnih pogojev in omejitev za začetek obratovanja. | (2) If the measures referred to in the previous paragraph result in shutdown of the radiation or nuclear facility (in a nuclear power plant or research reactor: shutdown of nuclear chain reaction), the facility operator shall, prior to return to operation:  1. identify the cause of the circumstances that led to the deviation from the operational limits and conditions;  2. determine immediate and long-term corrective measures to prevent recurrence of such an event in the future, and  3. implement immediate measures referred to in the previous point and complete all requirements from operational limits and conditions for return operation. |
| H 8.1 | Minimum staffing levels for shift staff shall be stated in the OLCs. | JV5 47/1/7 | (1) Obratovalni pogoji in omejitve morajo vsebovati:  7. zahtevo glede najmanjšega števila osebja z dovoljenjem, potrebnim za varno obratovanje objekta v različnih stanjih objekta. | (1) Operating conditions and limits shall contain:  7. requirement for the minimum number of licensed personnel to ensure safe operation in different states of the facility. |
| H 9.1 | The licensee shall ensure that an appropriate Surveillance53 program is established and implemented to ensure compliance with OLCs and shall ensure that results are evaluated and retained.  53 The objectives of the surveillance programme are: to maintain and improve equipment availability, to confirm compliance with operational limits and conditions, and to detect and correct any abnormal condition before it can give rise to significant consequences for safety. The abnormal conditions which are of relevance to the surveillance programme include not only deficiencies in SSCs and software performance, procedural errors and human errors, but also trends within the accepted limits, an analysis of which may indicate that the plant is deviating from the design intent. (NS-G-2.6 Para 2.11) | JV9 3/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora vzpostaviti in izvajati ustrezni program obratovanja, vzdrževanja, preizkušanja in pregledov SSK, ki zagotavlja izpolnjevanje zahtev iz obratovalnih pogojev in omejitev, ustrezno analizo in arhiviranje ugotovitev. | (1) The facility operator of a radiation or nuclear facility shall establish and implement an appropriate programme of operation, maintenance, testing and inspection of SSCs to ensure the compliance with the requirements of operational limits and conditions, appropriate evaluation and retention of surveillance results. |
| H 10.1 | In cases of non-compliance with OLC, remedial actions shall be taken immediately to re-establish compliance with OLC requirements. | JV9 4/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora takoj začeti izvajati ukrepe za prehod v varno stanje, določeno v obratovalnih pogojih in omejitvah, če:  1. je ugotovljeno odstopanje od obratovalnih pogojev in omejitev;  2. obratovalno osebje ni prepričano, da je obstoječe obratovanje v mejah, opisanih v obratovalnih pogojih in omejitvah;  3. se objekt ne odziva, kakor je pričakovano. | (1) The facility operator of a radiation or nuclear facility shall, without delay, undertake measures to bring the facility to a safe state as set out in the operational limits and conditions, in the following cases:  1. a deviation from operational limits and conditions is detected;  2. the operating personnel is in any doubt whether the actual operation is within the ranges specified in operational limits and conditions;  3. the facility behaves in an unexpected way. |
| H 10.2 | Reports of non-compliance shall be investigated and corrective action shall be implemented in order to help prevent such non-compliance54 in future.  54 If the actions taken to correct a deviation from OLCs are not as prescribed, including those times when they have not been completed successfully in the allowable outage time, plant shall be deemed to have operated in non-compliance with OLCs. | JV9 9/8, 30/2, P6/4 | (8) Popravljalni ukrepi, izhajajoči iz izsledkov analiz iz prvega odstavka tega člena, morajo biti predlagani, odobreni in izvedeni čim prej. Odpravljati morajo vzroke in izboljšati oslabljene ali nedelujoče varnostne pregrade, ki niso preprečile nastanka dogodka. Vodstvo mora nenehno spremljati seznam ukrepov in sprememb ter roke za njihovo izvedbo. Pri hkratnih zahtevkih za več popravljalnih ukrepov je treba upoštevati prednost zahtevkov glede na varnostno pomembnost degradiranega SSK.  (2) Poleg zahtevanega poročanja iz prejšnjega odstavka mora upravljavec jedrske elektrarne obvestiti upravo o dogodku s seznama iz priloge 6, ki je kot priloga sestavni del tega pravilnika, v 24 urah po začetku ali odkritju tega dogodka. Sporočilo mora biti tudi telefonsko potrjeno.  Priloga 6: Seznam dogodkov, o katerih mora upravljavec jedrske elektrarne izredno poročati:  4. Vsako obratovanje objekta zunaj zahtev obratovalnih pogojev in omejitev:  – med obratovanje zunaj zahtev se šteje tudi, če predpisani ukrepi niso bili izvedeni v predpisanem času in niso bili taki, kot so predpisani,  – upravljavec mora poročati tudi, če je bilo obratovanje zunaj zahtev odkrito šele po tem, ko je že potekel predpisani čas in je bilo odstopanje odpravljeno takoj po odkritju. | (8) Corrective measures resulting from the findings of the analyses referred to in paragraph 1 of this article shall be proposed and implemented as soon as possible. They shall eliminate the causes and improve the weakened or broken safety barrier, which did not prevent the occurrence of an event. Management must continually monitor the list of measures and changes as well as deadlines for their execution. In the case of simultaneous multiple corrective measures, their priority according to the importance of the degraded SSCs for safety shall be taken into account.  (2) In addition to the reporting laid down in the previous paragraph, the facility operator of nuclear power plant shall notify the Administration of any event listed in Annex 6, which is as Annex a constituent part of these Rules, within 24 hours from the occurrence or detection of the event. The report shall also be confirmed by phone.  Annex 6: List of events requiring a special report by the facility operator of a nuclear power plant:  4. Any operation of the facility beyond the operational limits and conditions:  - during operation outside requirements it shall also be considered if regulatory measures were not implemented within the prescribed time and were not such as are prescribed,  - operator shall report if the operating outside the requirements was detected after the prescribed time, and a derogation has been eliminated immediately after discovery. |
| I 1.1 | The operating organisation shall have an Ageing Management Programme55 (AMP) to identify all ageing mechanisms relevant to structures, systems and components (SSCs) important to safety, determine their possible consequences, and determine necessary activities in order to maintain the operability and reliability of these SSCs.  55  Ageing is considered as a process by which the physical characteristics of a structure, system or component (SSC) change with time (ageing) or use (wear-out). An Ageing Management Programme (AMP) should be understood as an integrated approach to identifying, analysing, monitoring and taking corrective actions and document the ageing degradation of structures, systems and components. | JV9 15/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora pripraviti program nadzora staranja, s katerim se prepoznajo mehanizmi staranja vseh SSK, pomembnih za varnost, ugotovijo možne posledice staranja ter določijo nujni ukrepi za ohranitev operabilnosti in zanesljivosti SSK. Program nadzora staranja mora obsegati najmanj naslednje:  1. merila za izbiro SSK, ki so vključeni v program nadzora staranja;  2. izbiro preventivnih dejavnosti za odpravo ali blažitev učinkov staranja;  3. spremljanje sprememb nadzorovanih parametrov v daljšem obdobju za ugotavljanje časovnega poteka staranja SSK;  4. merila sprejemljivosti za nadzorovane učinke staranja;  5. izbiro popravljalnih ukrepov za SSK, ki ne izpolnjujejo meril sprejemljivosti;  6. obvladovanje procesa nadzora staranja;  7. navodila za vrednotenje lastnih in tujih obratovalnih izkušenj o staranju;  8. potrditev, da so preventivni ukrepi primerni in da so bili ustrezni popravljalni ukrepi zaključeni in učinkoviti. | (1) The facility operator of a radiation or nuclear facility shall have an ageing management programme to identify all ageing mechanisms relevant for structures, systems and components (SSCs) important to safety, determine the possible consequences of ageing, and determine necessary activities in order to maintain the operability and reliability of these SSCs. The ageing management programme shall include, as a minimum following:  1. the criteria for the screening of SSCs to be included in the ageing management programme;  2. the selection of preventive activities to eliminate or mitigate the effects of ageing;  3. the monitoring of modifications of monitored parameters over extended periods of time to establish the time trends of SSC ageing;  4. the acceptance criteria for monitored effects of ageing;  5. the selection of corrective measures for those SSCs that do not fulfill the acceptance criteria;  6. control of the process of ageing management,  7. the instructions for the evaluation of in-house and international experience in the field of ageing,  8. confirmation that the preventive measures are adequate and that the appropriate corrective actions have been completed and effective. |
| I 2.1 | The licensee shall assess structures, systems and components important to safety taking into account relevant ageing and wear-out mechanisms and potential age related degradations in order to ensure the capability of the plant to perform the necessary safety functions throughout its planned life, under design basis conditions. | JV9 14 | (1) Upravljavec sevalnega ali jedrskega objekta mora za varnostno pomembne SSK sistematično prepoznavati možne mehanizme staranja in njihove učinke, vključno z obrabo in možno degradacijo, ter sproti spremljati in ocenjevati stanje z vzdrževanjem, preizkušanjem in pregledom SSK.  (2) Upravljavec sevalnega ali jedrskega objekta mora izvajati ukrepe za pravočasno zmanjšanje ali odpravo učinkov staranja. Zagotoviti mora, da so v projektnih osnovah navedene zahteve po izvajanju varnostnih funkcij SSK izpolnjene v celotni obratovalni dobi objekta. | (1) The facility operator of a radiation or nuclear facility shall assess the SSCs important to safety taking into account relevant ageing and wear-out mechanisms and potential age related degradations, and continuously monitor and assess the condition of SSCs, through their maintenance, testing and inspection.  (2) The facility operator of a radiation or nuclear facility shall implement measures to timely detect the inception of ageing effects and to allow for preventive and remedial actions. The facility operator shall ensure that the requirements for the achievement of SSC safety functions throughout the service life of the facility are stated in the design bases. |
| I 2.2 | The licensee shall provide monitoring, testing, sampling and inspection activities to assess ageing effects to identify unexpected behaviour or degradation during service. | JV9 14/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora za varnostno pomembne SSK sistematično prepoznavati možne mehanizme staranja in njihove učinke, vključno z obrabo in možno degradacijo, ter sproti spremljati in ocenjevati stanje z vzdrževanjem, preizkušanjem in pregledom SSK. | (1) The facility operator of a radiation or nuclear facility shall assess the SSCs important to safety taking into account relevant ageing and wear-out mechanisms and potential age related degradations, and continuously monitor and assess the condition of SSCs, through their maintenance, testing and inspection. |
| I 2.3 | The Periodic Safety Reviews shall be used to confirm whether ageing and wear-out mechanisms have been correctly taken into account and to detect unexpected issues. | JV9 44/1/1, P9/4 | (1) Upravljavec sevalnega ali jedrskega objekta, razen odlagališča za rudarsko in hidrometalurško jalovino, za katerega določbe tega poglavja ne veljajo, mora:  1. z občasnim varnostnim pregledom sistematično preveriti skupne učinke staranja objekta, učinke sprememb na objektu, obratovalne izkušnje, tehnične raziskave in napredek, vplive sprememb na lokaciji in vse druge možne vplive na sevalno ali jedrsko varnost;  Priloga 9: Zasnova obsega in vsebine občasnega varnostnega pregleda sevalnega ali jedrskega objekta  ….  Obseg in vsebina  Varnostne vsebine, s katerimi sta določena obseg in vsebina občasnega varnostnega pregleda, so:  Objekt  …  Staranje objekta  … | (1) The facility operator of a radiation or nuclear facility, except for mining and hydrometallurgical tailings repository, for which the provisions of this chapter do not apply shall:  1. by means of Periodic Safety Reviews, systematically verify overall impacts of ageing of the facility, effects of modifications of the facility, operational experiences, technical research and progress, changes at the site and other possible impacts on the radiation or nuclear safety of the facility.  Annex 9: Concept scope and content of the Periodic Safety Review of a radiation or nuclear facility  ….  Scope and contents  Safety factors defining the scope and contents of a Periodic Safety Review include the following:  Facility  ….  4. Facility ageing  …. |
| I 2.4 | In its AMP, the licensee shall take account of environmental conditions, process conditions, duty cycles, maintenance schedules, service life, testing schedules and replacement strategy. | JV9 15/2 | (2) Program nadzora staranja mora upoštevati najmanj naslednje:  1. okoljske razmere;  2. pogoje tehnološkega procesa, v katerem SSK obratuje;  3. število obremenitvenih ciklov;  4. program vzdrževanja, preizkušanja in pregledovanja ter  5. predvideno obratovalno dobo objekta. | (2) The ageing management programme shall consider, as a minimum:  1. environmental conditions;  2. technological process in which the SSC operates;  3. number of duty cycles;  4. the maintenance, testing and inspection programme, and  5. the envisaged operating lifetime of the facility. |
| I 2.5 | The AMP shall be reviewed and updated as a minimum with the PSR, in order to incorporate new information as it becomes available, to address new issues as they arise, to use more sophisticated tools and methods as they become accessible and to assess the performance of maintenance practices considered over the life of the plant. | JV9 15/4 | (4) Upravljavec sevalnega ali jedrskega objekta mora pregledati in posodobiti program nadzora staranja v rednih časovnih presledkih, krajših od obdobja med občasnima varnostnima pregledoma, zato da se vanj vključijo nove informacije in spoznanja ter vpeljejo boljše metode in ocene učinkovitosti programa vzdrževanja, preizkušanja in pregledov SSK v celotni obratovalni dobi objekta. Morebitna sprememba programa mora biti izvedena v skladu s 34., 35. in 36. členom tega pravilnika. | (4) The facility operator of a radiation or nuclear facility shall review and update the ageing management programme in regular time intervals not exceeding the intervals between Periodic Safety Reviews, to incorporate new information and knowledge as it becomes available and to use new methods as they become accessible and to assess the performance of the SSC maintenance, testing and inspection programme throughout the facility operating lifetime. Any possible modifications of the programme shall be implemented in accordance with articles 34, 35 and 36 of these Rules. |
| I 3.1 | Ageing management of the reactor pressure Vessel56 and its welds shall take all relevant factors including embrittlement, thermal ageing, and fatigue into account to compare their performance with prediction, throughout plant life.  56 Or its functional equivalent in other designs | JV9 15/3 | (3) Program nadzora staranja mora za jedrske elektrarne vsebovati nadzor staranja za mehanske, električne in gradbene SSK. Za jedrske elektrarne mora biti v ta program vključen nadzor celotne tlačne meje primarnega sistema, za raziskovalne reaktorje pa vsaj nadzor reaktorske tlačne posode, če ta obstaja, s pripadajočimi zvari. Spremljati je treba najmanj nastanek krhkosti materiala zaradi vpliva nevtronskega fluksa ter proces utrujanja materiala zaradi toplotnih in drugih obremenitev. Izmerjene rezultate je treba primerjati s predvidenimi lastnostmi v celotni obratovalni dobi. | (3) In the case of a nuclear power plant, the ageing management programme shall include the ageing management for mechanical, electrical and civil structure SSCs. In the case of a nuclear power plant, such programme shall include the monitoring of the entire primary system pressure boundary, in the case of a research reactor, at least the monitoring of the reactor pressure vessel, if installed, with associated welds. As a minimum, the embrittlement of materials due to effects of neutron flux and of the material fatigue processes due to thermal and other stresses shall be monitored. The measured results shall be compared with provided levels throughout the facility operating lifetime. |
| I 3.2 | Surveillance of major structures and components shall be carried out to timely detect the inception of ageing effects and to allow for preventive and remedial actions. | JV9 14/2 | (2) Upravljavec sevalnega ali jedrskega objekta mora izvajati ukrepe za pravočasno zmanjšanje ali odpravo učinkov staranja. Zagotoviti mora, da so v projektnih osnovah navedene zahteve po izvajanju varnostnih funkcij SSK izpolnjene v celotni obratovalni dobi objekta. | (2) The facility operator of a radiation or nuclear facility shall implement measures to timely detect the inception of ageing effects and to allow for preventive and remedial actions. The facility operator shall ensure that the requirements for the achievement of SSC safety functions throughout the service life of the facility are stated in the design bases. |
| J: System for Investigation of Events and  Operational Experience Feedback | |  |  |  |
| J 1.1 | The licensee shall establish and conduct a programme to collect, screen, analyse, and document operating experience and events at the plant in a systematic way. Relevant operational experience and events reported by other plants shall also be considered. | JV9 7/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora pripraviti program spremljanja obratovalnih izkušenj, ki mora obsegati najmanj:  1. vrsto, obseg in merila za zbiranje podatkov o lastnih in tujih obratovalnih izkušnjah;  2. način zbiranja in shranjevanja podatkov o lastnih in tujih obratovalnih izkušnjah;  3. način vrednotenja zbranih podatkov;  4. metode analiziranja zbranih podatkov;  5. način izvajanja preventivnih ali popravljalnih ukrepov, izhajajočih iz izsledkov analiz, zato da bi se preprečile degradacije SSK oziroma nastanek ali ponovitev podobnega dogodka v objektu ter  6. zahteve za seznanjanje osebja in vodstva sevalnega ali jedrskega objekta z varnostno pomembnimi obratovalnimi izkušnjami. | (1) The facility operator of a radiation or nuclear facility shall establish and conduct a programme to collect, screen, analyse, and document operational experience, which shall include, as a minimum:  1. the type, scope and criteria of collecting information on in-house and international operational experience;  2. the method of collecting and keeping information on in-house and international operational experience;  3. the method of evaluation of the collected information;  4. the method of analysing of the collected information;  5. the methods of implementing preventive and corrective measures derived from the findings of the analyses in order to prevent the degradation of SSCs or to prevent the occurrence or recurrence of similar events in the facility, and  6. requirements concerning the informing of the personnel and the management of the radiation or nuclear facility on operational experience important to safety. |
| J 1.2 | Operating experience at the plant shall be evaluated to identify any latent safety relevant failures or potential precursors and possible tendencies towards degraded safety performance or reduction in safety margin. | JV9 9/3 | (3) Program spremljanja obratovalnih izkušenj mora omogočiti prepoznavanje dogodkov, ki so se že zgodili, vendar njihove posledice pri poslabšanju sevalne ali jedrske varnosti še niso opazne, prepoznavanje možnih znanilcev dogodkov in možnega poslabšanja sevalne ali jedrske varnosti ali zmanjšanja varnostnih rezerv. | (3) The operational experience feedback programme at the plant shall be evaluated to identify any latent safety relevant failures or potential precursors and possible tendencies towards degraded safety performance or reduction in safety margin. |
| J 1.3 | The licensee shall designate staff for carrying out these programmes, for the dissemination of findings important to safety and - where appropriate – for recommendations on actions to be taken. Significant findings and trends shall be reported to the licensee’s top management. | JV9 6/2, 7/1/5-6, 9/8 | (2) Upravljavec sevalnega ali jedrskega objekta mora določiti osebje za spremljanje obratovalnih izkušenj, ki mu morajo biti zagotovljena ustrezna sredstva, usposabljanje in podpora vodstva.  (1) Upravljavec sevalnega ali jedrskega objekta mora pripraviti program spremljanja obratovalnih izkušenj, ki mora obsegati najmanj:  5. način izvajanja preventivnih ali popravljalnih ukrepov, izhajajočih iz izsledkov analiz, zato da bi se preprečile degradacije SSK oziroma nastanek ali ponovitev podobnega dogodka v objektu ter  6. zahteve za seznanjanje osebja in vodstva sevalnega ali jedrskega objekta z varnostno pomembnimi obratovalnimi izkušnjami.  (8) Popravljalni ukrepi, izhajajoči iz izsledkov analiz iz prvega odstavka tega člena, morajo biti predlagani, odobreni in izvedeni čim prej. Odpravljati morajo vzroke in izboljšati oslabljene ali nedelujoče varnostne pregrade, ki niso preprečile nastanka dogodka. Vodstvo mora nenehno spremljati seznam ukrepov in sprememb ter roke za njihovo izvedbo. Pri hkratnih zahtevkih za več popravljalnih ukrepov je treba upoštevati prednost zahtevkov glede na varnostno pomembnost degradiranega SSK. | (2) The facility operator of a radiation or nuclear facility shall designate personnel for carrying out the monitoring of operational experience and provide such personnel with adequate resources, training and support from the management.  (1) The facility operator of a radiation or nuclear facility shall establish and conduct a programme to collect, screen, analyse, and document operational experience, which shall include, as a minimum:  5. the methods of implementing preventive and corrective measures derived from the findings of the analyses in order to prevent the degradation of SSCs or to prevent the occurrence or recurrence of similar events in the facility, and  6. requirements concerning the informing of the personnel and the management of the radiation or nuclear facility on operational experience important to safety.  (8) Corrective measures resulting from the findings of the analyses referred to in paragraph 1 of this article shall be proposed and implemented as soon as possible. They shall eliminate the causes and improve the weakened or broken safety barrier, which did not prevent the occurrence of an event. Management must continually monitor the list of measures and changes as well as deadlines for their execution. In the case of simultaneous multiple corrective measures, their priority according to the importance of the degraded SSCs for safety shall be taken into account. |
| J 1.4 | Staff responsible for evaluation of operational experience and investigation into events shall receive adequate training, resources, and support from the line management. | JV9 6/2 | (2) Upravljavec sevalnega ali jedrskega objekta mora določiti osebje za spremljanje obratovalnih izkušenj, ki mu morajo biti zagotovljena ustrezna sredstva, usposabljanje in podpora vodstva. | (2) The facility operator of a radiation or nuclear facility shall designate personnel for carrying out the monitoring of operational experience and provide such personnel with adequate resources, training and support from the management. |
| J 1.5 | The licensee shall ensure that results are obtained, that conclusions are drawn, measures are taken, good practices are considered and that timely and appropriate corrective actions are implemented to prevent recurrence and to counteract developments adverse to safety. | JV9 6/3 | (3) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da se na podlagi spremljanja obratovalnih izkušenj iz prvega odstavka tega člena:  ‒ pridobijo podatki o obratovalnih izkušnjah in rezultatih analiz teh obratovalnih izkušenj,  ‒ sprejmejo zaključki,  ‒ upoštevajo dobre izkušnje in  ‒ sprejmejo pravočasni in ustrezni ukrepi, ki bi preprečili ponovitev dogodka ali poslabšanje sevalne ali jedrske varnosti. | (3) The facility operator of a radiation or nuclear facility shall ensure the following outcomes of the monitoring of operational experience referred to in paragraph 1 of this article:  - Obtain operating experience data and results of corresponding analyse;  - conclusions are drawn;  - good practices are considered;  - appropriate corrective actions are implemented to prevent recurrence and to counteract developments adverse to safety. |
| J 2.1 | The information relevant to experience from normal and abnormal operation and other important safety-related information shall be organized, documented, and stored in such a way that it can be easily retrieved and systematically searched, screened and assessed by the designated staff. | JV9 7/3 | (3) Upravljavec sevalnega ali jedrskega objekta ali investitor mora v vseh fazah objekta (umeščanje v prostor, projektiranje, gradnja, poskusno obratovanje, obratovanje, prenehanje obratovanja, razgradnja, zaprtje odlagališč, zaključek morebitnih rudarskih del oziroma dolgoročni nadzor odlagališč) zagotoviti dokumentiranje in shranjevanje obratovalnih izkušenj, izhajajočih iz normalnega in nenormalnega obratovanja, analiz obratovalnih izkušenj, popravljalnih ukrepov, povratnih informacij o popravljalnih ukrepih in drugih informacij, povezanih s sevalno ali jedrsko varnostjo, upoštevajoč dostopnost, možnost sistematičnega iskanja, preglednost in razumljivost prikaza za osebje, ki spremlja obratovalne izkušnje. | (3) The operator of a radiation or nuclear facility or investor shall in all phases of the facility (spatial placement, design, construction, trial operation, operation, definitive cessation of operations, , decommissioning, closure of the landfill, the completion of any mining operations or long-term monitoring of landfills) provide documenting and keeping of operational experience gathered from normal and abnormal operation, analysis of operating experience, corrective actions, feedback information on corrective actions and other important information related to radiation or nuclear safety, with due consideration of the aspects of accessibility, systematic searching, transparency and clear presentation to the personnel involved in monitoring operational experience. |
| J 3.1 | The licensee shall report events of significance to safety in accordance with established procedures and criteria. | JV9 30/1,2,3,6 | (1) Upravljavec sevalnega ali jedrskega objekta mora poročati upravi o dogodkih na objektu v skladu z državnim načrtom, ki ureja zaščito in reševanje ob jedrski nesreči.  (2) Poleg zahtevanega poročanja iz prejšnjega odstavka mora upravljavec jedrske elektrarne obvestiti upravo o dogodku s seznama iz priloge 6, ki je kot priloga sestavni del tega pravilnika, v 24 urah po začetku ali odkritju tega dogodka. Sporočilo mora biti tudi telefonsko potrjeno.  (3) Za druge sevalne ali jedrske objekte uprava v dovoljenju za obratovanje določi seznam dogodkov, o katerih mora upravljavec izredno poročati, ali tak seznam odobri kot del obratovalnih pogojev in omejitev.  (6) Upravljavec jedrskega objekta mora v svoje postopke vključiti navodila za poročanje o dogodkih. | (1) The facility operator of a radiation or nuclear facility shall report to the Administration events in the facility in accordance with the national protection and rescue plan in case of nuclear accident.  (2) In addition to the reporting laid down in the previous paragraph, the facility operator of nuclear power plant shall notify the Administration of any event listed in Annex 6, which is as Annex a constituent part of these Rules, within 24 hours from the occurrence or detection of the event. The report shall also be confirmed by phone.  (3) For other radiation or nuclear facility Administration shall for an operating licence, establish a list of events which shall be specially reported or approved as part of the operational limits and conditions.  (6) The operator of nuclear facility shall include in procedures instructions for reporting events. |
| J 3.2 | Plant personnel shall be required to report abnormal events and be encouraged to report internally near misses relevant to the safety of the plant. | JV9 8/1 | (1) Program spremljanja obratovalnih izkušenj mora od zaposlenih zahtevati poročanje o vseh dogodkih in jih spodbujati tudi k poročanju o manj pomembnih dogodkih in dogodkih brez posledic, o morebitnih problemih, povezanih z odpovedjo opreme, o pomanjkljivostih pri človeškem ravnanju, o pomanjkljivostih v postopkih ali o nedoslednostih v dokumentaciji. Pri tem jim mora biti zagotovljeno, da zaradi poročanja niso deležni negativnih posledic. | (1) The operational experience feedback programme shall require the personnel to report on all the events and encourage them to report on minor events and internal near misses, the potential problems associated with equipment failures, shortcomings in human behavior, shortcomings in the procedures or the inconsistencies in the documentation. The personnel shall not be exposed to risks of sanctions due to such reporting. |
| J 3.3 | Information resulting from the operational experience shall be disseminated to relevant staff and shared with relevant national and international bodies. | JV9 8/2-3 | (2) Z informacijami, pridobljenimi na podlagi obratovalnih izkušenj, mora biti seznanjeno ustrezno osebje, ki je vključeno v procese vzdrževanja, proizvodnje, tehnične podpore, zagotovitve kakovosti, strokovnega usposabljanja, načrt zaščite in reševanja ter fizičnega varovanja sevalnega ali jedrskega objekta.  (3) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti izmenjavo informacij o obratovalnih izkušnjah z ustreznimi mednarodnimi organizacijami in domačimi ali tujimi sevalnimi ali jedrskimi objekti. Vzdrževati mora stike s projektanti, dobavitelji in raziskovalnimi organizacijami, ki so bili vključeni v projektiranje in gradnjo objekta, ter jim po potrebi dati povratne informacije o obratovalnih izkušnjah in od njih pridobivati nasvete ob okvari ali degradaciji SSK ali pa o nadzoru poteka dogodka. Upoštevati je treba tudi ustrezne izkušnje iz drugih industrij. | (2) Information resulting from operational experience shall be disseminated to personnel involved in the processes of maintenance, production, technical support, management system, professional training, protection and rescue plan and physical protection of the radiation or nuclear facility.  (3) The facility operator of a radiation or nuclear facility shall provide for the sharing of information resulting from operational experience with relevant international organisations and with national and foreign radiation or nuclear facilities. The facility operator shall maintain liaison as appropriate with designers, suppliers and research organisations involved in the design and construction of the facility, with the aim of feeding back information on operational experience and obtaining advice, if necessary, in cases of SSC failures or degradation or abnormal events. It shall consider relevant experience from other industries. |
| J 3.4 | A process shall be put in place to ensure that operating experience of events at the plant concerned as well as of relevant events at other plants is appropriately considered in the training programme for staff with tasks related to safety. | JV9 8/2 9/9 | (2) Z informacijami, pridobljenimi na podlagi obratovalnih izkušenj, mora biti seznanjeno ustrezno osebje, ki je vključeno v procese vzdrževanja, proizvodnje, tehnične podpore, zagotovitve kakovosti, strokovnega usposabljanja, načrt zaščite in reševanja ter fizičnega varovanja sevalnega ali jedrskega objekta.  (9) Morebitni popravljalni ukrepi na podlagi analize iz prvega odstavka tega člena morajo vključevati na primer tehnične spremembe, spremembe postopkov in programov, organizacijske ukrepe, usposabljanje osebja ter dejavnosti s področij vzdrževanja, preizkušanja in pregleda SSK. Popravljalni ukrepi morajo biti izvedeni pravočasno in primerno, da se zmanjša verjetnost ponovitve enakega ali podobnega dogodka in izboljša sevalna ali jedrska varnost objekta. Operabilnost SSK se potrdi s primernim preizkušanjem in pregledom po opravljenem popravljalnem ukrepu. Zagotovljeno mora biti preverjanje učinkovitosti popravljalnih ukrepov. | (2) Information resulting from operational experience shall be disseminated to personnel involved in the processes of maintenance, production, technical support, management system, professional training, protection and rescue plan and physical protection of the radiation or nuclear facility.  (9) Corrective actions indicated by the analysis referred to in paragraph 1 of this article, can have various forms which include technical modifications, changes in procedures and programs, administrative measures, personnel training or activities in the field of SSC maintenance, testing and inspection, etc. Corrective actions shall be implemented in a timely manner and properly to decrease the probability of recurrence of the same or similar events and to improve radiation or nuclear safety of the facility. The operability of the SSC shall be certified by the appropriate testing and inspection after completion of corrective action. Verification of the effectiveness of corrective measures has to be guaranteed. |
| J 4.1 | An initial assessment of events important to safety shall be performed without delay to determine whether urgent actions are necessary. | JV9 9/2 | (2) Obratovalne izkušnje iz prejšnjega odstavka, ki so pomembne za sevalno ali jedrsko varnost, je treba ovrednotiti čim prej zaradi nujnosti uvedbe takojšnjih popravljalnih ukrepov. | (2) Operational experience important for radiation or nuclear safety referred to in the previous paragraph shall be assessed without delay in order to promptly implement urgent corrective actions. |
| J 4.2 | The licensee shall have procedures specifying appropriate investigation methods, including methods of human performance analysis. | JV9 9/6 | (6) Za obratovalne izkušnje, pomembne za varnost, mora upravljavec sevalnega ali jedrskega objekta izvesti analizo temeljnega vzroka. Pri izbiri metode take analize mora upoštevati značilnosti dogodka. Upravljavec mora imeti na voljo pisne postopke za ustrezno analizo dogodka, v katere so vključene tudi analize temeljnega vzroka ter metode analiziranja človekovega ravnanja in varnostne kulture. | (6) For operating experience relevant for safety, the operator of a radiation or nuclear facility shall perform root cause analysis. To select the method of such analysis facility operator shall take into account the characteristics of the event. The facility operator shall have written procedures specifying appropriate investigation methods,including including root cause analysis methods and the methods to analyse human performance and safety culture. |
| J 4.3 | Event investigation shall be conducted on a time schedule consistent with the event significance. The investigation shall:  - Establish the complete event sequence;  - Determine the deviation;  - Include direct and root cause analysis;  - Assess the safety significance including potential consequences; and  - Identify corrective actions. | JV9 9/5 | (5) Pri analizi iz prvega odstavka tega člena je treba upoštevati pomembnost dogodka glede na sevalno ali jedrsko varnost objekta, vključno z morebitnimi posledicami. Glede na to mora analiza vsebovati:  1. stanje objekta pred dogodkom;  2. pregled lastnih in tujih obratovalnih izkušenj, pomembnih za obravnavo posameznega dogodka;  3. časovno zaporedje posameznih dogodkov;  4. odstopanja od predvidenega odziva ali ukrepa;  5. analizo prispevnih, neposrednih in temeljnih vzrokov ter  6. izbiro popravljalnih ukrepov in časovnega načrta njihovega izvajanja. | (5) The analysis referred to in paragraph 1 of this article shall consider the importance of the event in relation to radiation or nuclear safety of the facility, including possible consequences. This analysis shall:  1. describe the state of the facility before the event  2. review facility’s own and international operational experience relevant to consider a particular event;  3. establish the complete event time sequence;  4. determine deviations from the anticipated response or action;  5. include the analysis of contributing, direct and root causes, and  6. identify corrective actions and determine the time schedule for their implementation. |
| J 4.4 | The operating organisation shall maintain liaison as appropriate with the organizations (manufacturer, research organization, designer) involved in design and construction, with the aims of feeding back information on operating experience and obtaining advice, if necessary, in case of equipment failures or abnormal events. | JV9 8/3 | (3) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti izmenjavo informacij o obratovalnih izkušnjah z ustreznimi mednarodnimi organizacijami in domačimi ali tujimi sevalnimi ali jedrskimi objekti. Vzdrževati mora stike s projektanti, dobavitelji in raziskovalnimi organizacijami, ki so bili vključeni v projektiranje in gradnjo objekta, ter jim po potrebi dati povratne informacije o obratovalnih izkušnjah in od njih pridobivati nasvete ob okvari ali degradaciji SSK ali pa o nadzoru poteka dogodka. Upoštevati je treba tudi ustrezne izkušnje iz drugih industrij. | (3) The facility operator of a radiation or nuclear facility shall provide for the sharing of information resulting from operational experience with relevant international organisations and with national and foreign radiation or nuclear facilities. The facility operator shall maintain liaison as appropriate with designers, suppliers and research organisations involved in the design and construction of the facility, with the aim of feeding back information on operational experience and obtaining advice, if necessary, in cases of SSC failures or degradation or abnormal events. It shall consider relevant experience from other industries. |
| J 4.5 | As a result of the analysis, timely corrective actions shall be taken such as technical modifications, administrative measures or personnel training to restore safety, to avoid event recurrence and where appropriate to improve safety. | JV9 9/8 | (8) Popravljalni ukrepi, izhajajoči iz izsledkov analiz iz prvega odstavka tega člena, morajo biti predlagani, odobreni in izvedeni čim prej. Odpravljati morajo vzroke in izboljšati oslabljene ali nedelujoče varnostne pregrade, ki niso preprečile nastanka dogodka. Vodstvo mora nenehno spremljati seznam ukrepov in sprememb ter roke za njihovo izvedbo. Pri hkratnih zahtevkih za več popravljalnih ukrepov je treba upoštevati prednost zahtevkov glede na varnostno pomembnost degradiranega SSK. | (8) Corrective measures resulting from the findings of the analyses referred to in paragraph 1 of this article shall be proposed and implemented as soon as possible. They shall eliminate the causes and improve the weakened or broken safety barrier, which did not prevent the occurrence of an event. Management must continually monitor the list of measures and changes as well as deadlines for their execution. In the case of simultaneous multiple corrective measures, their priority according to the importance of the degraded SSCs for safety shall be taken into account. |
| J 5.1 | Periodic reviews of the effectiveness of the OEF process based on performance criteria shall be undertaken and documented either within a self-assessment programme by the licensee or by a peer review team. | JV9 7/4 | (4) Upravljavec sevalnega ali jedrskega objekta mora s samovrednotenjem ali neodvisnim vrednotenjem v rednih časovnih presledkih, krajših od obdobja med občasnima varnostnima pregledoma, preveriti in posodobiti ustreznost programa spremljanja obratovalnih izkušenj iz prvega odstavka tega člena ter pri tem upoštevati prejšnje obratovalne izkušnje. Morebitna sprememba programa spremljanja obratovalnih izkušenj mora biti izvedena v skladu s 34., 35. in 36. členom tega pravilnika. | (4) The operator of a radiation or nuclear facility shall, through self-assessment or peer reviews, in regular time intervals not exceeding the intervals of Periodic Safety Reviews, review and update the appropriateness of the operational experience feedback programme referred to in paragraph 1 of this article, also considering previous operational experience. Any modifications to the operational experience feedback programme shall be implemented in accordance with articles 34, 35 and 36 of these Rules. |
| K: Maintenance, In-service inspection and Functional Testing | |  |  |  |
| K 1.1 | The licensee shall prepare and implement documented programmes of maintenance, testing, surveillance, and inspection of SSCs important to safety to ensure that their availability, reliability, and functionality remain in accordance with the design over the lifetime of the plant. They shall take into account operational limits and conditions and be re-evaluated in the light of experience. | JV9 17/1, 18/2(samo prva točka), 8 | (1) Upravljavec sevalnega ali jedrskega objekta mora med celotno obratovalno dobo objekta, med razgradnjo in med dolgoročnim nadzorom, če gre za odlagališče, z vzdrževanjem, preizkušanjem in pregledi SSK zagotoviti njihovo razpoložljivost, zanesljivost in operabilnost. Operabilnost SSK, ki so pomembni za varnost, mora biti v skladu s projektnimi osnovami.  (2) Obseg in pogostost vzdrževanja, preizkušanja in pregledov SSK po programu iz prejšnjega odstavka morata biti določena na podlagi sistematične analize, ki upošteva najmanj naslednje:  1. obratovalne pogoje in omejitve;  …  (8) Upravljavec sevalnega ali jedrskega objekta mora v rednih časovnih presledkih, krajših od obdobja med občasnima varnostnima pregledoma, pregledati ustreznost programa iz prvega odstavka tega člena glede na obratovalne izkušnje in ga po potrebi posodobiti, upoštevajoč pri tem lastne in tuje obratovalne izkušnje ter napredek v znanosti in tehnologiji. Morebitna sprememba programa vzdrževanja, preizkušanja in pregledov SSK mora biti izvedena v skladu s 34., 35. in 36. členom tega pravilnika. | (1) Throughout the facility operating lifetime, the decommissioning and, in the case of a disposal facility, throughout its long term surveillance, the facility operator of a radiation or nuclear facility shall ensure the availability, reliability and operability of SSCs through maintenance, testing and inspection. The operability of SSCs important for safety shall comply with design bases.  (2) The extent and frequency of SSC maintenance, testing and inspection under the programmes referred to in the previous paragraph shall be determined based on systematic analysis that takes into account, as a minimum:  1. operational conditions and limits;  (8) The facility operator of a radiation or nuclear facility shall, in regular time intervals not exceeding the intervals of Periodic Safety Reviews, review and update the relevance of the programme referred to in paragraph 1 of this article according to operational experience, taking into account in-house and international operational experience and scientific and technological progress. Any modification of the programme of SSC maintenance, testing and inspection shall be implemented in accordance with articles 34, 35 and 36 of these Rules. |
| K 1.2 | The programmes shall include periodic inspections and tests of SSCs important to safety in order to determine whether they are acceptable for continued safe operation of the plant or whether any remedial measures are necessary. | JV9 18/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora pripraviti program vzdrževanja, preizkušanja in pregledov SSK, s katerim se lahko oceni, ali je zagotovljeno varno obratovanje objekta ali pa so potrebni popravljalni ukrepi. Program vzdrževanja, preizkušanja in pregledov SSK mora obsegati najmanj naslednje vsebine:  1. smernice za izbiro SSK, ki se bodo vzdrževali, preizkušali in pregledovali po programu;  2. seznam standardov, uporabljenih pri kvalifikaciji ter ohranjanju kvalifikacije in umerjanju SSK;  3. seznam standardov, uporabljenih pri določanju mej sprejemljivosti pri pregledih SSK;  4. zbiranje podatkov o opravljenem delu, ki omogoča določitev začetnih in ponavljajočih se odstopanj;  5. način analize zbranih podatkov ter  6. določitev meril za morebitno spremembo pogostosti in obsega vzdrževanja, preizkušanja in pregledov SSK, pa tudi sprožanja popravljalnih ukrepov glede na rezultate analiziranih podatkov, da se ohranja zanesljivost, razpoložljivost in operabilnost SSK. | (1) The facility operator of a radiation or nuclear facility shall prepare and implement programmes of SSC maintenance, testing and inspection, in order to determine whether they are acceptable for continued safe operation of the plant or whether any corrective measures are necessary. The programme of SSC maintenance, testing and inspection shall include, as a minimum following content:  1. the guidelines for the screening of SSCs to be maintained, tested and inspected according to the programme;  2. the list of standards to be applied in SSC qualification, maintaining qualification and calibration and determination of acceptance limits in SSC inspection;  3. the list of the standards applied to determine the limits of acceptance in the SSC examinations  4. the collection of information on completed works to allow the establishment of incipient or recurrent deviations;  5. the method of analysis of collected information, and  6. the specification of criteria for possible modification of the frequency and extent of SSC maintenance, testing and inspection, as well as for the undertaking of corrective measures according to the findings of the analysed information, in order to maintain SSC reliability, availability and functionality. |
| K 2.1 | The extent and frequency of preventive maintenance, testing, surveillance and inspection of SSCs shall be determined through a systematic approach on the basis of:  • Their importance to safety;  • Their inherent reliability;  • Their potential for degradation (based on operating experience, research and vendor recommendation);  • Operational and other relevant experience and results of condition monitoring. | JV9 18/2 | (2) Obseg in pogostost vzdrževanja, preizkušanja in pregledov SSK po programu iz prejšnjega odstavka morata biti določena na podlagi sistematične analize, ki upošteva najmanj naslednje:  1. obratovalne pogoje in omejitve;  2. pomembnost naloge, ki jo opravlja SSK za varnost objekta;  3. v zasnovi upoštevano zanesljivost SSK;  4. pogostost obratovanja in okoliščine, v katerih SSK obratuje;  5. rezultate spremljanja stanja SSK;  6. primerno dolga periodična obdobja med posameznimi preizkušanji in pregledi, ki omogočajo pravočasno odkrivanje morebitnih degradacij, še preden SSK ni več operabilen;  7. možnost degradacije glede na lastne in tuje obratovalne izkušnje ter priporočila proizvajalcev opreme in pooblaščenih izvedencev za sevalno in jedrsko varnost. | (2) The extent and frequency of SSC maintenance, testing and inspection under the programmes referred to in the previous paragraph shall be determined based on systematic analysis that takes into account, as a minimum:  1. operational conditions and limits;  2. importance of tasks performed of the SSC to safety of the facility;  3. inherent SSC reliability;  4. frequency of operation and conditions in which a SSC operates;  5. findings of the monitoring of the SSC condition;  6. appropriate intervals between tests and inspections to allow timely detection of any deterioration prior to the loss of SSC operability;  7. potential degradation as indicated by in-house and international operational experience and recommendations by equipment vendors and authorised experts on radiation and nuclear safety. |
| K 2.2 | In-service inspections of nuclear power plants shall be carried out at intervals whose length shall be chosen in order to ensure that any deterioration of the most exposed component is detected before it can lead to failure. | JV9 18/2/6 | (2) Obseg in pogostost vzdrževanja, preizkušanja in pregledov SSK po programu iz prejšnjega odstavka morata biti določena na podlagi sistematične analize, ki upošteva najmanj naslednje:  …  6. primerno dolga periodična obdobja med posameznimi preizkušanji in pregledi, ki omogočajo pravočasno odkrivanje morebitnih degradacij, še preden SSK ni več operabilen;  … | (2) The extent and frequency of SSC maintenance, testing and inspection under the programmes referred to in the previous paragraph shall be determined based on systematic analysis that takes into account, as a minimum:  6. appropriate intervals between tests and inspections to allow timely detection of any deterioration prior to the loss of SSC operability; |
| K 2.3 | Data on maintenance, testing, surveillance, and inspection of SSCs shall be recorded, stored and analysed. Such records shall be reviewed to look for evidence of incipient and recurring failures, to initiate corrective maintenance and review the preventive maintenance programme accordingly. | JV9 18/5-6 | (5) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti dokumentiranje in shranjevanje povratnih informacij o vzdrževanju, rezultatih preizkušanj in pregledov SSK ter drugih informacij, povezanih s sevalno ali jedrsko varnostjo.  (6) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da se podatki iz prejšnjega odstavka sistematično pregledujejo, da se prepoznajo ponavljajoče se ali povečane degradacije SSK. Na podlagi tako ugotovljenih degradacij je treba začeti prediktivno vzdrževanje ali opraviti popravljalne ukrepe. V takem primeru je treba izvesti pregled ustreznosti programa iz prvega odstavka tega člena. | (5) The facility operator of a radiation or nuclear facility shall provide for documenting and archiving of feedback information on SSC maintenance, testing and inspection results and of other information relevant for radiation or nuclear safety.  (6) The facility operator of a radiation or nuclear facility shall provide for systematic review of information referred to in the previous paragraph in order to identify recurring or premature degradation of SSCs. Based on the identified degradations, preservice maintenance or corrective measures shall be undertaken. In such cases, the programme referred to in paragraph 1 of this article shall be reviewed. |
| K 2.4 | The maintenance programme shall be periodically Reviewed57 in light of operating experience, and any proposed changes to the programme shall be assessed to analyse their effects on system availability, their impact on plant safety, and their conformance with applicable requirements.  57  It is anticipated that such reviews are carried out more  frequently than the 10-yearly Periodic Safety Reviews. | JV9 18/8 | (8) Upravljavec sevalnega ali jedrskega objekta mora v rednih časovnih presledkih, krajših od obdobja med občasnima varnostnima pregledoma, pregledati ustreznost programa iz prvega odstavka tega člena glede na obratovalne izkušnje in ga po potrebi posodobiti, upoštevajoč pri tem lastne in tuje obratovalne izkušnje ter napredek v znanosti in tehnologiji. Morebitna sprememba programa vzdrževanja, preizkušanja in pregledov SSK mora biti izvedena v skladu s 34., 35. in 36. členom tega pravilnika. | (8) The facility operator of a radiation or nuclear facility shall, in regular time intervals not exceeding the intervals of Periodic Safety Reviews, review and update the relevance of the programme referred to in paragraph 1 of this article according to operational experience, taking into account in-house and international operational experience and scientific and technological progress. Any modification of the programme of SSC maintenance, testing and inspection shall be implemented in accordance with articles 34, 35 and 36 of these Rules. |
| K 2.5 | The potential impact of maintenance upon plant safety shall be assessed. | JV9 20/1 | (1) Pred vsakim vzdrževalnim posegom mora upravljavec sevalnega ali jedrskega objekta oceniti vpliv vzdrževalnih dejavnosti na varnost sevalnega ali jedrskega objekta in jih dokončno ovrednotiti po vzdrževalnem posegu. | (1) Prior to any maintenance operation, the facility operator of the radiation or nuclear facility shall assess the potential impacts of the maintenance activities on the safety of the radiation or nuclear facility, and, upon the completion of maintenance activity, carry out a final assessment. |
| K 3.1 | SSCs important to safety shall be designed to be tested, maintained, repaired and inspected or monitored periodically in terms of integrity and functional capability over the lifetime of the plant, without undue risk to workers and significant reduction in system availability. Where such provisions cannot be attained, proven alternative or indirect methods shall be specified and adequate safety precautions taken to compensate for potential undiscovered failures. | JV5 8/8 | (8) Za SSK, pomembne za varnost, mora biti zagotovljena možnost vzdrževanja, preizkušanja, popravila in pregleda oziroma občasnega nadzora celovitosti in zmožnosti opravljanja funkcije v celotni obratovalni dobi objekta oziroma, če je to odlagališče, tudi po njegovem zaprtju, brez nepotrebnega tveganja za delavce in zmanjšanja razpoložljivosti teh SSK. Če to ni mogoče, morajo biti predpisane preizkušene alternativne ali posredne metode in primerni ukrepi za izravnavo morebitnih neodkritih napak in njihovih posledic. | (8) Safety-related SSCs shall be provided with the means for maintenance, testing, repairing and inspection, as well as periodic inspection of integrity and functionality throughout the operating life of the facility, and in the case of a repository, also in the period beyond its closure, without exposing workers to undue risks or reducing SSC availability. If this is impracticable, proven alternative methods or indirect methods and appropriate measures shall be laid down to compensate for any undetected failures and their consequences. |
| K 3.2 | Procedures shall be established, reviewed, and validated for maintenance, testing, surveillance and inspection tasks. | JV9 18/3  JV5 66/13 | (3) Upravljavec sevalnega ali jedrskega objekta mora v skladu s programom vzdrževanja, preizkušanja in pregledov SSK zagotoviti pisne postopke za dejavnosti, ki se izvajajo med obratovanjem ter načrtovanim remontom ali nenačrtovano zaustavitvijo objekta. Pisni postopki morajo določati:  1. pooblastila in odgovornosti za opravljanje določene dejavnosti;  2. način dela;  3. primerne metode in standarde za opravljanje dela;  4. uporabo primernega orodja in merilne opreme;  5. zagotavljanje zadostnih zalog rezervnih delov in materiala;  6. zagotavljanje vgradnje samo opreme, ki ustreza veljavnim standardom, specifikacijam ali tehničnim zahtevam;  7. merila za uspešno opravljeno vzdrževanje, preizkušanje in pregled SSK;  8. ukrepe pri odstopanjih od meril iz prejšnje alineje;  9. medsebojno usklajenost vseh dejavnosti in izvajalcev ter  10. druge podrobnosti za delo glede vzdrževanja, preizkušanja in pregledov SSK.  (13) Vsako dejavnost, ki bi lahko vplivala na varnost, je treba izvajati pod nadzorovanimi pogoji z razumljivimi in odobrenimi postopki, navodili in načrti ali drugimi sredstvi. Ta morajo biti validirana pred prvo uporabo in občasno pregledana, da se zagotovita njihova ustreznost in učinkovitost. Osebje, ki izvaja dejavnosti, ki se nanašajo na procese, mora sodelovati v postopku validacije. | (3) The facility operator of a radiation or nuclear facility shall establish written procedures, in accordance with the SSC maintenance, testing and inspection program, for all the tasks to be carried out during operation, planned outage or unplanned shutdown of the facility. The written procedures shall determine:  1. authorisations and responsibilities to carry out specific tasks;  2. important task performed by SSK for safety of the facility;  3. appropriate methods and standards to carry out the works;  4. use of appropriate tools and measurement equipment;  5. sufficient stock of spare parts and materials;  6. providing installation of equipment that meets valid standards, specifications or technical requirements  7. acceptance criteria of successful SSC maintenance, testing and inspection;  8. actions to be taken in response to deviations from the acceptance criteria referred to in the previous subparagraph;  9. coordination of all tasks and personnel involved in the tasks, and  10. other details concerning the works in the scope of SSC maintenance, testing and inspection.  (13) The work performed in each process shall be carried out under controlled conditions, by using approved current procedures, instructions, drawings or other appropriate means that are periodically reviewed to ensure their adequacy and effectiveness. Personnel carrying out the activities relating to the processes shall be involved in the validation process. |
| K 3.3 | A comprehensive work planning and control system shall be implemented to ensure that maintenance, testing, surveillance and inspection work is properly authorized and carried out according to the procedures. | JV9 18/3 | (3) Upravljavec sevalnega ali jedrskega objekta mora v skladu s programom vzdrževanja, preizkušanja in pregledov SSK zagotoviti pisne postopke za dejavnosti, ki se izvajajo med obratovanjem ter načrtovanim remontom ali nenačrtovano zaustavitvijo objekta. Pisni postopki morajo določati:  1. pooblastila in odgovornosti za opravljanje določene dejavnosti;  2. način dela;  3. primerne metode in standarde za opravljanje dela;  4. uporabo primernega orodja in merilne opreme;  5. zagotavljanje zadostnih zalog rezervnih delov in materiala;  6. zagotavljanje vgradnje samo opreme, ki ustreza veljavnim standardom, specifikacijam ali tehničnim zahtevam;  7. merila za uspešno opravljeno vzdrževanje, preizkušanje in pregled SSK;  8. ukrepe pri odstopanjih od meril iz prejšnje alineje;  9. medsebojno usklajenost vseh dejavnosti in izvajalcev ter  10. druge podrobnosti za delo glede vzdrževanja, preizkušanja in pregledov SSK. | (3) The facility operator of a radiation or nuclear facility shall establish written procedures, in accordance with the SSC maintenance, testing and inspection program, for all the tasks to be carried out during operation, planned outage or unplanned shutdown of the facility. The written procedures shall determine:  1. authorisations and responsibilities to carry out specific tasks;  2. important task performed by SSK for safety of the facility;  3. appropriate methods and standards to carry out the works;  4. use of appropriate tools and measurement equipment;  5. sufficient stock of spare parts and materials;  6. providing installation of equipment that meets valid standards, specifications or technical requirements  7. acceptance criteria of successful SSC maintenance, testing and inspection;  8. actions to be taken in response to deviations from the acceptance criteria referred to in the previous subparagraph;  9. coordination of all tasks and personnel involved in the tasks, and  10. other details concerning the works in the scope of SSC maintenance, testing and inspection. |
| K 3.4 | Before equipment is removed from or returned to service, full consideration and approval of the proposed reconfiguration shall be ensured, followed by a documented confirmation of its correct configuration and, where appropriate, functional testing. | JV9 19/2 | (2) Preden SSK preneha obratovati oziroma je vrnjen v obratovanje, mora upravljavec sevalnega ali jedrskega objekta oceniti predvideno spremembo konfiguracije SSK, ki z medsebojno razporeditvijo in nastavitvijo vseh sestavnih delov in programske opreme omogoča operabilnost SSK in jo pisno odobriti. Če je mogoče, je treba delovanje nove konfiguracije tudi preizkusiti. | (2) Before a SSC is removed from or returned to operation, assessment of the proposed reconfiguration which will ensure the SSC functionality through appropriate arrangement and setting of all components and software, shall be ensured by the facility operator of the radiation or nuclear facility, followed by a documented confirmation of its correct configuration. Where appropriate, the functionality of the new configuration shall be tested. |
| K 3.5 | The actions to be taken in response to deviations from the acceptance criteria in the maintenance, testing, surveillance and inspection tasks, shall be defined in the procedures. | JV9 18/3/7-8 | (3) Upravljavec sevalnega ali jedrskega objekta mora v skladu s programom vzdrževanja, preizkušanja in pregledov SSK zagotoviti pisne postopke za dejavnosti, ki se izvajajo med obratovanjem ter načrtovanim remontom ali nenačrtovano zaustavitvijo objekta. Pisni postopki morajo določati:  7. merila za uspešno opravljeno vzdrževanje, preizkušanje in pregled SSK;  8. ukrepe pri odstopanjih od meril iz prejšnje alineje; | (3) The facility operator of a radiation or nuclear facility shall establish written procedures, in accordance with the SSC maintenance, testing and inspection program, for all the tasks to be carried out during operation, planned outage or unplanned shutdown of the facility. The written procedures shall determine:  7. acceptance criteria of successful SSC maintenance, testing and inspection;  8. actions to be taken in response to deviations from the acceptance criteria referred to in the previous subparagraph; |
| K 3.6 | Repairs to SSCs shall be devised, authorized, and carried out as promptly as practicable. Priorities shall be established with account taken first of the relative importance to safety of the defective structure, system, or component. | JV9 20/3 | (3) Morebitne popravljalne ukrepe SSK je treba načrtovati, potrditi in izvesti takoj, ko je to mogoče. Pri tem je treba dati večjo prednost popravljalnim ukrepom SSK, ki so za varnost objekta pomembnejši. | (3) Any repairs to SSCs shall be devised, authorized, and carried out as promptly as practicable. Priorities shall be established with account taken first of the relative importance of the repairs that are of greater importance to the safety of the facility. |
| K 3.7 | Following any event due to which the safety functions and functional integrity of any component or system may have been challenged, the licensee shall identify and revalidate the safety functions and carry out any necessary remedial actions, including inspection, testing, maintenance, and repair, as appropriate. | JV9 21/8 | (8) Po vsakem dogodku, zaradi katerega bi bila lahko oslabljena varnostna funkcija ali operabilnost katere koli SSK, mora upravljavec ponovno oceniti varnostne funkcije in opraviti potrebne popravljalne ukrepe, ki lahko vključujejo tudi pregled SSK, preizkušanje, vzdrževanje ali popravljalne ukrepe za SSK. | (8) Following any event due to which the safety functions and functional integrity of any SSC may have been challenged, the facility operator shall shall identify and revalidate the safety functions and carry out any necessary remedial actions, including SSC inspection, testing, maintenance or repair, as appropriate. |
| K 3.8 | The reactor coolant pressure boundary shall be subject to a system leakage test before resuming operation after a reactor outage in the course of which its leak-tightness may been affected. | JV9 21/2 | (2) Upravljavec jedrske elektrarne ali raziskovalnega reaktorja mora na reaktorskem hladilnem sistemu izvesti:  1. pregled tesnosti pred vsakim ponovnim zagonom reaktorja po opravljenem remontu;  2. tlačni preizkus v vsakem periodičnem obdobju pregledov iz 6. točke drugega odstavka 18. člena tega pravilnika. | (2) The facility operator of a nuclear power plant or a research reactor shall carry out the following on the reactor coolant system:  1. leakage test prior to any restart of the reactor after an outage;  2. system pressure test in each inspection period referred to in subparagraph 6 of paragraph 2 of Article 18 of these Rules. |
| K 3.9 | The reactor coolant pressure boundary shall be subject to a system pressure test at or near the end of each major inspection interval. | JV9 21/2 | (2) Upravljavec jedrske elektrarne ali raziskovalnega reaktorja mora na reaktorskem hladilnem sistemu izvesti:  1. pregled tesnosti pred vsakim ponovnim zagonom reaktorja po opravljenem remontu;  2. tlačni preizkus v vsakem periodičnem obdobju pregledov iz 6. točke drugega odstavka 18. člena tega pravilnika. | (2) The facility operator of a nuclear power plant or a research reactor shall carry out the following on the reactor coolant system:  1. leakage test prior to any restart of the reactor after an outage;  2. system pressure test in each inspection period referred to in subparagraph 6 of paragraph 2 of Article 18 of these Rules. |
| K 3.10 | All items of equipment used for examinations and tests together with their accessories shall be qualified and calibrated before they are used. All equipment shall be properly identified in the calibration records, and the validity of the calibration shall be regularly verified by the licensee in accordance with requirements of the management system. | JV9 21/7 | (7) Oprema, ki se uporablja v sklopu preizkušanja in pregledov SSK, mora biti pred uporabo kvalificirana in umerjena. Biti mora ustrezno navedena v poročilih o umerjanju. Upravljavec objekta mora redno preverjati veljavnost umerjanja v skladu s sistemom vodenja. | (7) All items of equipment used for SSC testing and inspection shall be qualified and calibrated before they are used. All equipment shall be properly identified in the calibration records. The validity of the calibration shall be regularly verified by the facility operator in accordance with the requirements of the management system. |
| K 3.11 | Any in-service inspection (ISI) process shall be Qualified58, in terms of required inspection area(s), method(s) of non-destructive testing, defects being sought and required effectiveness of inspections.  58 The ISI system qualification means to demonstrate that the combination of equipment, inspection procedure and personnel is appropriate for testing of a given inspection area according to a technical specification. It is recommended to uses as reference documents, eg the European Regulators Common Position on NDT Qualification, ENIQ methodology and/or IAEA - EBP-VVER-11 documents. | JV9 18/3, 21/5 | (3) Upravljavec sevalnega ali jedrskega objekta mora v skladu s programom vzdrževanja, preizkušanja in pregledov SSK zagotoviti pisne postopke za dejavnosti, ki se izvajajo med obratovanjem ter načrtovanim remontom ali nenačrtovano zaustavitvijo objekta. Pisni postopki morajo določati:  1. pooblastila in odgovornosti za opravljanje določene dejavnosti;  2. način dela;  3. primerne metode in standarde za opravljanje dela;  4. uporabo primernega orodja in merilne opreme;  5. zagotavljanje zadostnih zalog rezervnih delov in materiala;  6. zagotavljanje vgradnje samo opreme, ki ustreza veljavnim standardom, specifikacijam ali tehničnim zahtevam;  7. merila za uspešno opravljeno vzdrževanje, preizkušanje in pregled SSK;  8. ukrepe pri odstopanjih od meril iz prejšnje alineje;  9. medsebojno usklajenost vseh dejavnosti in izvajalcev ter  10. druge podrobnosti za delo glede vzdrževanja, preizkušanja in pregledov SSK.  (5) Pregled SSK mora biti ustrezno preverjen v skladu s pisnim postopkom iz tretjega odstavka 18. člena tega pravilnika:  1. za zahtevano področje pregleda;  2. glede na metodo neporušne preiskave materiala;  3. za napake in poškodbe, ki se lahko odkrijejo pri pregledu ter  4. za zahtevano učinkovitost in natančnost. | (3) The facility operator of a radiation or nuclear facility shall establish written procedures, in accordance with the SSC maintenance, testing and inspection program, for all the tasks to be carried out during operation, planned outage or unplanned shutdown of the facility. The written procedures shall determine:  1. authorisations and responsibilities to carry out specific tasks;  2. important task performed by SSK for safety of the facility;  3. appropriate methods and standards to carry out the works;  4. use of appropriate tools and measurement equipment;  5. sufficient stock of spare parts and materials;  6. providing installation of equipment that meets valid standards, specifications or technical requirements  7. acceptance criteria of successful SSC maintenance, testing and inspection;  8. actions to be taken in response to deviations from the acceptance criteria referred to in the previous subparagraph;  9. coordination of all tasks and personnel involved in the tasks, and  10. other details concerning the works in the scope of SSC maintenance, testing and inspection.  (5) The SSC inspection shall be appropriately verified in accordance with the written procedures referred to in paragraph 3 of Article 18 of these Rules:  1. in terms of the required inspection areas;  2. in terms of the methods of non-destructive material testing;  3. in terms of defects being sought, and  4. in terms of the required effectiveness and accuracy. |
| K 3.12 | When a detected flaw that exceeds the acceptance criteria is found in a sample, additional examinations shall be performed to investigate the specific problem area in the analysis of additional analogous components (or areas). The extent of further examinations shall be decided with due regard for the nature of the flaw and degree to which it affects the nuclear safety assessments for the plant or component and the potential consequences. | JV9 21/4 | (4) Če se pri pregledu SSK odkrije napaka ali poškodba, ki je zunaj meril za uspešno opravljeni pregled, določenih v pisnih postopkih iz tretjega odstavka 18. člena tega pravilnika, se morajo opraviti dodatni pregledi, ki se osredotočijo na področja ali sestavne dele s podobnimi posebnimi težavami. Obseg nadaljnjih pregledov se določi glede na število in vrsto napak ali poškodb, oceno jedrske varnosti in morebitne posledice. | (4) When a SSC inspection detects a flaw or damage that exceeds inspection acceptance criteria set in the written procedures referred to in paragraph 3 of Article 18 of these Rules, additional examinations shall be performed to investigate the specific problem area or components prone to analogous specific problems. The extent of further examination shall be decided with due regard for the number and nature of flaws or damage, degree to which they affect nuclear safety assessment and potential consequences. |
| K 3.13 | Surveillance measures to verify the containment integrity shall include: a) leak rate tests; b) tests of penetration seals and closure devices such as air locks and valves that are part of the boundaries, to demonstrate their leak-tightness and, where appropriate, their operability; c) inspections for structural integrity (such as those performed on liner and pre-stressing tendons). | JV9 21/3 | (3) Upravljavec jedrske elektrarne ali raziskovalnega reaktorja mora v vsakem periodičnem obdobju iz 6. točke drugega odstavka 18. člena tega pravilnika opraviti pregled tesnosti zadrževalnega hrama s:  1. preizkušanjem pretoka puščanja;  2. preizkusom tesnosti penetracij in zapiral, kot so na primer ventili in zračne komore pri vstopu v zadrževalni hram;  3. preizkusom delovanja zapiral in  4. pregledom celovitosti zadrževalnega hrama. | (3) The facility operator of a nuclear power plant or a research reactor shall, in each inspection period referred to in subparagraph 6 of paragraph 2 of Article 18 of these Rules, carry out a containment integrity examination, involving:  1. the leak rate test;  2. the test of penetration seals and closure devices, such as valves and airlocks at the containment entrance;  3. the functional test of closure devices, and  4. the inspection of containment structural integrity. |
| LM: Emergency Operating Procedures and Severe Accident Management Guidelines | |  |  |  |
| LM 1.1 | A comprehensive set of ~~emergency operating~~ procedures ~~(EOPs)~~ ~~for design basis accidents~~ ~~(DBAs)~~  ~~and beyond design basis accidents (BDBAs)~~, ~~as well as~~ and guidelines including emergency operating procedures (EOPs) and ~~for~~ severe accident management guidelines (SAMGs) shall be provided, covering accident~~s~~ conditions initiated during all operational states.  . | JV9 54 | Upravljavec jedrskega objekta mora pripraviti celovit nabor postopkov in smernic za obvladovanje nesreč, do katerih lahko pride v vseh stanjih objekta. Vsebovati mora najmanj postopke za ravnanje ob nezgodi in smernice za obvladovanje težkih nesreč. | The operator of nuclear and radiation facility shall prepare a comprehensive set of procedures and guidelines for accident management covering accidents initiated during all operational states. It shall contain at least the emergency operating procedures and severe accident management guidelines. |
| LM 2.1 | EOPs shall be provided to cover Design Basis Accidents. These EOPs shall provide instructions for recovering the plant state to a safe condition. | JV9 55/1 | (1) Postopki za ravnanje ob nezgodi morajo vključevati obvladovanje projektnih nesreč in vsebovati postopke za vrnitev objekta v varno stanje. | (1) Emergency operating procedures shall be provided to cover Design Basis Accidents. These emergency operating procedures shall provide instructions for recovering the plant state to a safe condition. |
| LM 2.2 | EOPs with other specific procedures or guidelines, when applicable, shall be provided to cover DEC A ~~Beyond~~ ~~Design Basis Accidents up to, but not including, the onset of core damage~~. The aim shall be to re-establish or compensate for lost safety functions and to set out actions to prevent severe fuel damage in the core or in the spent fuel storage ~~damage~~. | JV9 55/2 | (2) Postopki za ravnanje ob nezgodi morajo, po potrebi skupaj z drugimi postopki in smernicami, vključevati tudi obvladovanje razširjenih projektnih nesreč kategorije A. Izdelani morajo biti tako, da vodijo k ponovni vzpostavitvi varnostnih funkcij oziroma njihovi nadomestni rešitvi. Če je objekt jedrska elektrarna ali raziskovalni reaktor, morajo voditi tudi k izvedbi dejavnosti, ki preprečujejo težko poškodbo gorivnih elementov v sredici ali skladiščih izrabljenega goriva. | (2) Emergency operating procedures with other specific procedures or guidelines, when applicable, shall be provided to cover Design Extension Conditions A. The aim shall be to re-establish or compensate for lost safety functions and to set out actions to prevent severe fuel damage in the core or in the spent fuel storage in nuclear power plant or research reactor. |
| LM 2.3 | SAMGs with other specific procedures or guidelines when applicable, shall be provided to mitigate the consequences of severe accidents for the cases where the response to events including the measures provided by EOPs have not been successful in the prevention of severe fuel ~~core~~ damage. | JV9 55/4 | (4) Smernice za obvladovanje težkih nesreč lahko vključujejo tudi druge postopke in smernice. S smernicami je treba obvladovati posledice težkih nesreč, če pride do poškodbe goriva kljub ukrepom za preprečitev težke poškodbe goriva.. | (4) Severe accident management guidelines with other specific procedures or guidelines when applicable, shall be provided to mitigate the consequences of severe accidents for the cases where the response to events including the measures provided by Emergency operating procedures have not been successful in the prevention of severe fuel damage. |
| LM 2.4 | EOPs for Design Basis Accidents shall be symptom-based or a combination of symptom based and event based59 procedures. EOPs for DEC A shall be ~~only~~ symptom based unless an event based approach can be justified.  59 Event-based EOPs enable the operator to identify the specific event and encompass:  - Information for determining the status of the plant ~~from~~ ~~significant plant parameters~~,  - Automatic actions that will probably be taken as a result of the event,  - Subsequent operator actions directed to returning the reactor to a normal condition or to provide for safe, extended and stable shutdown conditions.  Symptom-based EOPs enable the operator to respond to situations for which there are no procedures to identify accurately the event that has occurred. The decisions for measures to respond to such situations are specified in the procedures with respect to the symptoms and the state of systems of the plant (such as the values of safety parameters and critical safety functions). | JV9 55/3 | (3) Postopki za ravnanje ob nezgodi morajo v delu, ki se nanaša na projektne nesreče, temeljiti na simptomih ali kombinaciji simptomov in prepoznanih dogodkov. V delu, nanašajočem se na razširjene projektne nesreče kategorije A, morajo postopki za ravnanje ob nezgodi temeljiti na ukrepanju na podlagi simptomov, razen če je upravičena uporaba postopkov na podlagi prepoznanih dogodkov. | (3) Emergency operating procedures for Design Basis Accidents shall be based on symptoms or combination of symptoms and identified events. Emergency operating procedures for Design Extension Conditions A shall be symptom based unless an event based approach can be justified. |
| LM 2.5 | The set of procedures and guidelines shall be suitable to manage accident conditions that simultaneously affect the reactor and spent fuel storages, and shall take potential interactions between reactor and spent fuel storages into account. | JV9 55/5 | (5) Postopki in smernice morajo obsegati tudi obvladovanje nesreč, ki hkrati prizadenejo reaktor in skladišča izrabljenega goriva. Upoštevati morajo morebitne medsebojne vplive med reaktorjem in skladišči izrabljenega goriva.. | (5) The set of procedures and guidelines shall be suitable to manage accident conditions that simultaneously affect the reactor and spent fuel storages, and shall take potential interactions between reactor and spent fuel storages into account. |
| LM 2.6 | Possibilities for one unit, without compromising its safety, supporting another unit on the site shall be covered by the set of procedures and guidelines. | JV9 55/6 | (6) V objektih z več enotami na lokaciji morajo postopki in smernice obsegati možnost medsebojne podpore enot, pri čemer pa ne sme biti ogrožena varnost enote, ki je v pomoč drugi. | (6) Possibilities for one unit, without compromising its safety, supporting another unit on the site shall be covered by the set of procedures and guidelines. |
| LM 2.7 | The set of procedures and guidelines shall be such that they are able to be implemented even if all nuclear installations on a site are under accident conditions, taking into account the dependencies between the systems and common resources. | JV9 55/7 | (7) Postopki in smernice morajo biti izvedljivi tudi v primerih, ko bi bili vsi objekti na lokaciji v stanju nesreče, z upoštevanjem medsebojnih odvisnosti sistemov in skupnih virov. | (7) The set of procedures and guidelines shall be such that they are able to be implemented even if all nuclear installations on a site are under accident conditions, taking into account the dependencies between the systems and common resources. |
| LM 3.1 | EOPs shall be developed in a systematic way and shall be supported by realistic and plant specific analysis performed for this purpose. EOPs shall be consistent with other operational procedures, such as alarm response procedures and severe accident management guidelines | JV9 56/1 | (1) Postopki za ravnanje ob nezgodi morajo biti pripravljeni sistematično ter podprti z za ta namen izvedenimi realističnimi in za dani objekt značilnimi analizami. Postopki za ravnanje ob nezgodi morajo biti v skladu z drugimi postopki za obratovanje in s smernicami za obvladovanje težkih nesreč. | (1) Emergency operating procedures shall be developed in a systematic way and shall be supported by realistic and plant specific analysis performed for this purpose. Emergency operating procedures shall be consistent with other operational procedures, such as alarm response procedures and severe accident management guidelines. |
| LM 3.2 | EOPs shall enable the operator to recognise quickly the accident condition to which it applies. Entry and exit conditions shall be defined in the EOPs to enable operators to select the appropriate EOP, to navigate among EOPs and to proceed from EOPs to  SAMGs. | JV9 56/2 | (2) Postopki za ravnanje ob nezgodi morajo omogočiti operaterju hitro prepoznavanje razmer ob nesreči in njihovo obvladovanje. Jasno mora biti določeno, kdaj je treba začeti uporabljati posamezni postopek oziroma ga prenehati uporabljati. Operater ne sme imeti težav pri prehajanju z enega postopka na drugega ali na smernice za obvladovanje težkih nesreč. | (2) Emergency operating procedures shall enable the operator to recognise quickly the accident condition to which it applies. Entry and exit conditions shall be defined in the emergency operating procedures to enable operators to select the appropriate emergency operating procedure, to navigate among emergency operating procedures and to proceed from emergency operating procedures to severe accident management guidelines. |
| LM 3.3 | SAMGs shall be developed in a systematic way using a plant specific approach. SAMGs shall address strategies to cope with scenarios identified by the severe accident analyses60.  60 Analysis aimed at identifying the plant vulnerabilities to severe accident phenomena, assessment of plant capabilities and development of accident management measures, including for containment protection as defined in Issue F (Design Extension of Existing Reactors) in RLs 4.8 to 4.14. It is understood that for these accident conditions also SAMGs shall be developed. | JV9 56/3 | (3) Smernice za obvladovanje težkih nesreč morajo vsebovati opis strategije za obvladovanje scenarijev teh nesreč, kakršne izhajajo iz analiz težkih nesreč, to je analiz, namenjenih ugotavljanju ranljivosti jedrskih objektov pri težkih nesrečah, ocene zmogljivosti jedrskih objektov in načrtovanju ter pripravi ukrepov za obvladovanje težkih nesreč, vključno z zaščito zadrževalnega hrama. | (3) Severe accident management guidelines shall address strategies to cope with scenarios identified by the severe accident analyses. These analyses are designed to identify the plant vulnerabilities to severe accident phenomena, assessment of plant capabilities and development of accident management measures, including containment protection. |
| LM 3.4 | EOPs for design basis accidents shall rely on adequately qualified equipment and instrumentation. EOPs for DEC and SAMGs shall primarily rely on adequately qualified equipment | JV9 56/4-5 | (4) Postopki za ravnanje ob nezgodi v delu, ki se nanaša na projektne dogodke, morajo temeljiti na uporabi ustrezno kvalificirane opreme in instrumentacije.  (5) Postopki za ravnanje ob nezgodi v delu, nanašajočem se na razširjene projektne dogodke kategorije A, ter smernice za obvladovanje težkih nesreč morajo temeljiti predvsem na uporabi vgrajene opreme, kvalificirane kot to določa pravilnik, ki ureja dejavnike sevalne in jedrske varnosti. | (4) Emergency operating procedures for design basis accidents shall rely on adequately qualified equipment and instrumentation.  (5) Emergency operating procedures for Design Extension Conditions A and severe accident management guidelines shall primarily rely on adequately qualified equipment as required in Rules, regulating the radiation and nuclear safety. |
| LM 3.5 | The set of procedures and guidelines shall consider the anticipated on-site conditions, including radiological conditions, associated with the accident conditions they are addressing and the initiating event or hazard that might have caused it. | JV9 56/6 | (6) Postopki in smernice morajo upoštevati pričakovane razmere na lokaciji ob obravnavani nesreči, vključno z radiološkimi razmerami. Upoštevati mora tudi zunanjo nevarnost ali začetni dogodek, ki je povzročil nesrečo. | (6) The set of procedures and guidelines shall consider the anticipated on-site conditions, including radiological conditions, associated with the accident conditions they are addressing and the initiating event or hazard that might have caused it. |
| LM 4.1 | The set of procedures and guidelines ~~EOPs and SAMGs~~ shall be verified and validated in the form in which they will be used in the field, ~~so~~ as far as practicable, to ensure that they are administratively and technically correct for the plant and are compatible with the environment in which they will be used61 and with the human resources available.  61 In particular, expected manual operation of equipment shall be possible | JV9 57/1 | (1) Postopki in smernice iz 55. člena tega pravilnika morajo biti preverjeni in validirani za razmere, ki so čim bolj podobne pričakovanim. S preverjanjem in validiranjem je treba zagotoviti postopkovno in tehnično ustreznost za jedrski objekt in skladnost z okoljem, v katerem se bo uporabljal. Upoštevati je treba tudi možnost ročnega ravnanja z opremo in minimalno razpoložljivost osebja. | (1) The set of procedures and guidelines referred to in Article 55 of these Rules shall be verified and validated in the form in which they will be used in the field, as far as practicable, to ensure that they are administratively and technically correct for the plant and are compatible with the environment in which they will be used. It shall consider expected manual operation of equipment and the minimum of human resources available. |
| LM 4.2 | The approach used for plant-specific validation and verification shall be documented. The effectiveness of incorporating human factors engineering principles in procedures and guidelines shall be judged when validating them. The validation of EOPs shall be based on representative simulations, using a simulator, where appropriate. | JV9 57/2 | (2) Način preverjanja in validiranja postopkov za ravnanje ob nezgodi in smernic za obvladovanje težkih nesreč mora biti dokumentiran. Med preverjanjem in validiranjem je treba presoditi tudi o vplivih človeškega dejavnika. Validiranje mora temeljiti na simulaciji značilnih dogodkov, pri čemer je treba, kjer je to mogoče, uporabiti simulator. | (2) The approach used for plant-specific validation and verification shall be documented. The effectiveness of incorporating human factors engineering principles in procedures and guidelines shall be judged when validating them. The validation shall be based on representative simulations, using a simulator, where appropriate. |
| LM 5.1 | The set of procedures and guidelines ~~EOPs and SAMGs~~ shall be kept updated to ensure that they remain fit for their purpose. | JV9 57/3 | (3) Upravljavec jedrskega objekta mora v rednih časovnih presledkih, krajših od obdobja med občasnima varnostnima pregledoma, s pregledovanjem in posodabljanjem postopkov za ravnanje ob nezgodi in smernic za obvladovanje težkih nesreč zagotoviti, da postopki in smernice vedno ustrezajo svojemu namenu. Pri tem mora upoštevati tudi izkušnje iz vaj in usposabljanj ter spoznanja iz nesreč. | (3) The operator of a nuclear installation shall at regular intervals shorter than the period between periodic safety inspections, review and update emergency operating procedures and severe accident guidelines to ensure that they remain fit for their purpose. It shall also take into account lessons learned from exercises, training and accidents. |
| LM 6.1 | Control room staff ~~Shift personnel and on-site technical support~~ shall be regularly trained and exercised, using full-scope simulators for the EOPs and simulators, where practicable, for the SAMGs. | JV9 58/1 | (1) Osebje komandne sobe mora imeti redne vaje in usposabljanja na simulatorju za uporabo postopkov za ravnanje ob nezgodi in za uporabo smernic za obvladovanje težkih nesreč. | (1) Control room staff shall be regularly trained and exercised, using full-scope simulators for the emergency operating procedures and simulators, where practicable, for the severe accident management guidelines. |
| LM 6.2 | Licensee emergency response staff shall be regularly trained and exercised, commensurate with their expected role in managing an emergency, for situations and conditions covered by the set of procedures and guidelines. | JV9 58/2 | (2) Izvajalci intervencijskih ukrepov morajo redno vaditi in se usposabljati za naloge ob izrednem dogodku. Vaje in usposabljanja morajo upoštevati pogoje in razmere ter zajemati predvideno vlogo posameznikov pri obvladovanju izrednega dogodka v skladu s postopki in smernicami. | (2) Operating organization staff shall be regularly trained and exercised, commensurate with their expected role in managing an emergency, for situations and conditions covered by the set of procedures and guidelines. |
| LM 6.3 | The transition from EOPs to SAMGs for management of severe accidents shall be regularly exercised. | JV9 58/3 | (3) V jedrskih elektrarnah je treba redno izvajati tudi usposabljanje za prehod s postopkov za ravnanje ob nezgodi na smernice za obvladovanje težkih nesreč. | (3) The transition from emergency operating procedures to severe accident management guidelines for management of severe accidents shall be regularly exercised at nuclear power plants. |
| LM 6.4 | Interventions called for in the set of procedures and guidelines ~~SAMGs~~ and needed to restore necessary safety functions, including those which may rely on mobile or off-site equipment, shall be planned for and regularly exercised. The potential unavailability of instruments, lighting and power and the use of protective equipment shall be considered. | JV9 58/4 | (4) V jedrskih elektrarnah je treba načrtovati in redno vaditi ukrepe, ki so predvideni v okviru postopkov in smernic za ponovno vzpostavitev potrebnih varnostnih funkcij, vključno z ukrepi, ki temeljijo na mobilni opremi in opremi, ki ni na lokaciji. Pri tem je treba upoštevati možno nerazpoložljivost instrumentacije, razsvetljave in napajanja ter uporabo zaščitne opreme. | (4) Interventions called for in the set of procedures and guidelines and needed to restore necessary safety functions, including those which may rely on mobile or off-site equipment, shall be planned for and regularly exercised. The potential unavailability of instruments, lighting and power and the use of protective equipment shall be considered. |
| N: Contents and updating of Safety Analysis  Report | | Vse v JV5 |  |  |
| N 1.1 | The Licensee shall provide a SAR62 to demonstrate that the plant fulfils relevant safety requirements and use it as a basis for continuous support of safe operation.  62 A consistent safety document or integrated set of documents constituting the licensing basis of the plant and updated under ~~control~~ supervision of the regulatory body | JV5 42/3, 43/1/4 | (3) Varnostno poročilo mora utemeljeno dokazovati, da objekt v celoti izpolnjuje vse pomembne varnostne zahteve. Vsebovati mora dovolj natančne informacije o objektu, da je mogoče na tej podlagi neodvisno oceniti varnost objekta.  (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  4. opis zasnove projekta in doseganja osnovnih varnostnih ciljev, opis projektnih osnov sevalnega ali jedrskega objekta ter opis, kako je dosežena njihova izpolnitev, | (3) The safety-analysis report shall demonstrate with justification that the facility fulfils relevant safety requirements. The safety report shall convey a clear understanding and traceability of justifications, choices and decisions that affect safety. It shall provide information on the facility at a level of detail allowing independent assessment of the safety of the facility.  (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  4. a description of the facility's design and of the accomplishment of basic safety objectives, a description of the design bases of the radiation or nuclear facility and a description of their methods of fulfilment; |
| N 1.2 | The Licensee shall use the SAR as a basis for assessing the safety implications of changes to the plant or to operating practices. | JV5 42/4 | (4) Upravljavec sevalnega ali jedrskega objekta mora uporabljati varnostno poročilo kot podlago za stalno podporo varnega obratovanja objekta. Varnostno poročilo mora biti tudi podlaga za presojo, kako na varnost objekta vplivajo spremembe na objektu, v okolju ali načinu upravljanja objekta. | (4) The operator of a radiation or nuclear facility shall apply the safety-analysis report as a basis for continuous support of safe operation of the facility. The safety-analysis report shall also serve as a basis for assessment of the potential influences of any modifications to the facility, changes in the environment or methods of the facility's operation on the safety of the facility. |
| N 2.1 | The SAR shall describe the site, the plant layout and normal operation; and demonstrate how safety is achieved. | JV5, 43/1/1 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  1. opis lokacije, splošni opis objekta in njegovega normalnega obratovanja ter opis zagotavljanja varnosti objekta, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  1. a site description, a general description of the facility and its normal operation and a description of how the facility's safety is ensured; |
| N 2.2 | The SAR shall contain detailed descriptions of the safety functions; all safety systems and safety-related structures, systems and components; their design basis and functioning in all operational states, including shut down and accident conditions. | JV5, 43/1/5 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  5. podroben opis varnostnih funkcij, vseh varnostnih sistemov, za varnost pomembnih SSK, njihovih projektnih osnov in opis delovanja vseh za varnost pomembnih SSK v vseh stanjih objekta, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  5. a detailed description of safety functions, of all safety systems, of safety-related SSCs, their design bases and the performance of all safety-related SSCs in all states of the facility; |
| N 2.3 | The SAR shall identify applicable regulations codes and standards. | JV5, 43/1/6 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  6. seznam uporabljenih predpisov in standardov kot podlage za opise in varnostne analize, zajete v varnostnem poročilu, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  6. a list of regulations and standards applied as the basis for descriptions and safety analyses covered in the safety-analysis report; |
| N 2.4 | The SAR shall describe the relevant aspects of the plant organization and the management of safety. | JV5 43/1/7 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  7. opis notranje organiziranosti upravljavca objekta, ki je potrebna za zagotavljanje jedrske varnosti, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  7. a description of the internal organisational set-up of the facility operator intended for the ensuring of nuclear safety; |
| N 2.5 | The SAR shall contain the evaluation of the safety aspects related to the site. | JV5 43/1/8 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  8. oceno varnostnih vidikov, povezanih z umestitvijo objekta v prostor, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  8. an assessment of safety aspects related to the facility's siting; |
| N 2.6 | The SAR shall outline the general design concept and the approach adopted to meet the fundamental safety objectives. | JV5 43/1/4 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  4. opis zasnove projekta in doseganja osnovnih varnostnih ciljev, opis projektnih osnov sevalnega ali jedrskega objekta ter opis, kako je dosežena njihova izpolnitev, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  4. a description of the facility's design and of the accomplishment of basic safety objectives, a description of the design bases of the radiation or nuclear facility and a description of their methods of fulfilment; |
| N 2.7 | The SAR shall include justification that it adequately demonstrates that the plant fulfils relevant safety requirements. The SAR shall describe the safety analyses performed to assess the safety of the plant in response to ~~postulated initiating events~~ anticipated operational occurrences, design basis accidents and  design extension conditions against safety criteria and radiological release limits. Safety margins shall  be described. | JV5  42/3  43/1/9 | (3) Varnostno poročilo mora utemeljeno dokazovati, da objekt v celoti izpolnjuje vse pomembne varnostne zahteve. Varnostno poročilo mora podajati jasno razumevanje in sledljivost utemeljitev, izbir in odločitev, ki vplivajo na varnost. Vsebovati mora dovolj natančne informacije o objektu, da je mogoče na tej podlagi neodvisno oceniti varnost objekta.  (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  9. opis varnostnih analiz za oceno varnosti sevalnega ali jedrskega objekta za pričakovane obratovalne dogodke, projektne dogodke, za jedrske objekte pa tudi za razširjene projektne dogodke ter primerjavo z varnostnimi merili in omejitvami radioloških izpustov. Opisane morajo biti tudi varnostne rezerve, | (3) The safety-analysis report shall demonstrate with justification that the facility fulfils relevant safety requirements. The safety report shall convey a clear understanding and traceability of justifications, choices and decisions that affect safety. It shall provide information on the facility at a level of detail allowing independent assessment of the safety of the facility.  (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  9. a description of safety analyses undertaken to assess the safety of the radiation or nuclear facility in response to anticipated operational occurrences, design-basis events, and for nuclear power plants also the extended design conditions with a comparison against safety criteria and radiological release limits. Safety margins shall be described as well.; |
| N 2.8 | The SAR shall describe the emergency operation procedures and severe accident management guidelines, the inspection and testing provisions, the qualification, and training of personnel, the operational experience feedback programme, and the management of ageing. | JV5 43/1/11,  43/1/14-15 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  11. opis postopkov za ravnanje ob nezgodi in smernic za obvladovanje težkih nesreč v jedrskih objektih, pri katerih lahko pride do težkih nesreč,  14. opis ukrepov za preglede, preizkušanje in nadzor SSK, opis programa za uporabo obratovalnih izkušenj in programa za obvladovanje staranja,  15. opis usposabljanja in izobraževanja zaposlenih, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  11. a description of emergency operating procedures, as well as of severe accident management guidelines for facilities, in which severe accident can occur;  14. a description of the measures providing for SSC inspection, testing and surveillance, a description of the programme of application of operational experiences and a description of the ageing-management programme;  15. a description of the training and education of the personnel; |
| N 2.9 | The SAR shall contain the technical bases for the operational limits and conditions. | JV5 43/1/16 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  16. obratovalne pogoje in omejitve za varno obratovanje, pripravljene v skladu s 46. in 47. členom tega pravilnika, ter tehnične osnove, v katerih so obrazložene strokovne podlage za posamezni obratovalni pogoj ali omejitev, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  16. operating conditions and limits of safe operation compiled in accordance with articles 46 and 47 of these Rules, and technical bases explaining expert bases for each operating condition or limit; |
| N 2.10 | The SAR shall describe the policy, strategy, methods, and provisions for radiation protection. | JV53 43/1/17 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  17. opis strategije varstva pred sevanji, opis metod in ukrepov za zagotavljanje varstva izpostavljenih delavcev pred ionizirajočimi sevanji, vključno z oceno njihovega varstva pred sevanji ter z oceno izpostavljenosti prebivalcev in okolja, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  17. a description of the strategy for protection against radiation, a description of the methods and measures for protection of exposed personnel against ionising radiation, including an assessment of their protection against radiation and an assessment of the population and environment exposure; |
| N 2.11 | The SAR shall describe the on-site emergency preparedness arrangements and the liaison and co-ordination with off-site organizations involved in the response to an emergency. | JV53 43/1/13 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  13. opis načrta zaščite in reševanja objekta ter notranje organizacije upravljavca ob izrednem dogodku in njene usklajenosti z državnim načrtom zaščite in reševanja ob jedrski ali radiološki nesreči, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  13. a description of the protection and rescue plan for the facility and of the operator's internal organisational set-up in emergency events and of alignment with the national protection and rescue plan in case of nuclear or radiological accident; |
| N 2.12 | The SAR shall describe the on-site radioactive waste management provisions. | JV53 43/1/19 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  19. opis programa ravnanja z radioaktivnimi odpadki in izrabljenim gorivom, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  19. a description of the radioactive-waste and spent-fuel management programme; |
| N 2.13 | The SAR shall describe how the relevant decommissioning and end-of-life aspects are taken into account during operation.63  63 Guidance on the specific aspects that need to be addressed in the SAR is given in Chapter XV of the IAEA Safety Guide GS-G-4.1. | JV5 43/1/20 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  20. opis vseh dejavnosti, načrtovanih med obratovanjem objekta, za zaključek njegovega obratovanja in njegovo razgradnjo, | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  20. a description of all activities in the facility's operational phase planned to facilitate termination of operation and decommissioning; |
| N 2.14 | The descriptions, assessments and arrangements mentioned in the SAR shall consider the site as a  whole, to take into account hazards:  - which may challenge all installations within a short period of time;  - which arise from harmful interactions between installations. | JV5 43/2 | (2) Pri opisu in ocenah v varnostnem poročilu je treba obravnavati lokacijo v celoti, upoštevajoč tveganja, ki lahko vplivajo na vse objekte na lokaciji in izhajajo iz medsebojnih škodljivih vplivov med objekti na lokaciji. | (2) The descriptions, assessments and arrangements mentioned in the safety-analysis report shall consider the site as a whole, to take into account hazards, which may challenge all installations within a short period of time and which arise from harmful interactions between installations. |
| N 3.1 | The licensee shall update the SAR to reflect modifications, new regulatory requirements, new information relevant for the safety assessment (including those related to characteristics of the site and the site environment), and relevant standards, ~~as soon as practicable~~ in a timely manner after the new information is available and applicable. | JV5 42/5 | (5) Upravljavec sevalnega ali jedrskega objekta mora vsaj enkrat letno dopolniti varnostno poročilo tako, da vanj vključi izvedene spremembe v objektu in da upošteva pri oceni varnosti objekta vsa nova spoznanja in dejstva, vključno z informacijami glede lastnosti lokacije in njene okolice ter spremembe na podlagi novih upravnih zahtev. Prav tako mora upoštevati pri dopolnjevanju varnostnega poročila lastne izkušnje, nove upravne zahteve oziroma nove ali drugače uporabljene standarde ter razvoj znanosti in tehnologije in to kakor hitro je mogoče po tem, ko so na voljo nove informacije. | (5) The operator of a radiation or nuclear facility shall update the safety-analysis report at least once per year to reflect modifications to the facility, and to consider all new knowledge and facts, including the information related to the characteristics of the site and the site environment, as well as the changes based on new regulatory requirements. The update shall also take into account the operator's own experience, new regulatory requirements, new standards or new ways of utilizing them, and development of science and technology in a timely manner after the new information is available and applicable. |
| O: Probabilistic Safety Analysis | |  |  |  |
| O 1.1 | For each plant design, a specific PSA shall be developed for level 1 and level 2 considering ~~including~~ all ~~modes of~~ ~~operation~~ relevant64 operational states, ~~and all relevant initiating events including internal fire and internal flooding~~ covering fuel in the core and in the spent fuel storage and all relevant internal and external initiating events. External hazards shall be included in the PSA for level 1 and level 2 as far as practicable, taking into account the current state of science and technology. If not practicable, other justified methodologies shall be used to evaluate the contribution of external hazards to the overall risk profile of the plant. ~~Severe weather conditions and seismic events shall be addressed~~~~59~~  ~~59~~ ~~This means that these two hazards shall be included in the PSA, except if a justification is provided for not including~~~~them, based on site-specific arguments on these hazards or on sufficient conservative coverage through deterministic~~  ~~analyses in the design, so that their omission from the PSA does not weaken the overall risk assessment of the plant.~~  64 Relevant means that the considered initiating event (or operational state) is relevant for the risk as determined with the PSA. Adequate screening criteria shall be defined in order to identify the relevant initiating events and operational states. | JV5 16/5, JV9 50/3 | (5) Upravljavec jedrske elektrarne oziroma raziskovalnega reaktorja mora za objekt izdelati verjetnostno varnostno analizo. Če je objekt jedrska elektrarna, mora ta analiza obsegati vse tri ravni.  (3) Verjetnostne varnostne analize morajo vključevati:  1. vsa pomembna stanja objekta; za jedrsko elektrarno so to predvsem stanja od menjave goriva in obratovanja pri nizki moči do obratovanja pri polni moči;  2. vse primerne in smiselne dogodke, začetne dogodke ter notranje in zunanje nevarnosti, ki morajo biti vključeni v prvo raven, če je to primerno in smiselno pa tudi v drugo. Če vključitev v prvo in drugo raven verjetnostnih varnostnih analiz ni izvedljiva, hkrati pa obstaja nezanemarljiva pogostost za tak dogodek ali je dogodek manj pogost in ima težje posledice, je tak dogodek treba obravnavati z drugimi metodami;  3. gorivo v reaktorju in skladišča izrabljenega goriva;  4. vse primerne odvisnosti, vključno s funkcionalnimi odvisnostmi zaradi enakih okoljskih razmer in odvisnosti zaradi drugih skupnih vzrokov;  5. analizo negotovosti in analize občutljivosti pri verjetnostnih varnostnih analizah prve ravni ter analizo občutljivosti ali analize negotovosti pri verjetnostnih varnostnih analizah druge ravni;  6. analize zanesljivosti človeškega dejavnika, upoštevajoč dejavnike, ki lahko vplivajo na delo operaterjev in drugega osebja v vseh analiziranih stanjih elektrarne. | (5) The operator of a nuclear power plant or a research reactor shall carry out a probabilistic safety analysis for the facility. In the case of a nuclear power plant, this shall include all three levels of analysis.  (3) A probabilistic safety analysis shall cover:  1. all the relevant operational modes of the facility; in the case of a nuclear power plant, these operational modes include, in particular, modes ranging from refueling and operation at low power levels up to the full power operation;  2. all the relevant and meaningful events, initiating events, internal and external hazards shall be included in the level 1, where appropriate and reasonable also in level 2. If included in the level 1 and level 2 probabilistic safety assessment is not feasible, and there is negligible frequency of such an event, or an event is less frequent and has more difficult consequences, such an event shall be treated with other methods;  3. the fuel in the reactor and the spent fuel storage;  4. all the relevant dependencies, including functional dependencies based on the physical location of components and common cause dependencies;  5. an analysis of uncertainties and sensitivity analyses of a level 1 probabilistic safety analysis, and a sensitivity or uncertainty analyses of a level 2 probabilistic safety analysis;  6. analyses of human reliability, taking into account the factors which can influence the performance of the operators and other personnel in all the analysed plant operational modes. |
| O 1.2 | PSA shall include relevant dependencies66.  66 Such as functional dependencies, area dependencies (based on the physical location of the components, systems and structures) and other common cause failures. Site aspects and interaction with other units could also be relevant | JV9 50/3/4 | (3) Verjetnostne varnostne analize morajo vključevati:  4. vse primerne odvisnosti, vključno s funkcionalnimi odvisnostmi zaradi enakih okoljskih razmer in odvisnosti zaradi drugih skupnih vzrokov; | (3) A probabilistic safety analysis shall cover:  4. all the relevant dependencies, including functional dependencies based on the physical location of components and common cause dependencies; |
| O 1.3 | The ~~basic~~ Level 1 PSA shall contain sensitivity and uncertainty analyses. The ~~basic~~ Level 2 PSA shall contain sensitivity analyses and, as appropriate, uncertainty analyses. | JV9 50/3/5 | (3) Verjetnostne varnostne analize morajo vključevati:  5. analizo negotovosti in analize občutljivosti pri verjetnostnih varnostnih analizah prve ravni ter analizo občutljivosti ali analize negotovosti pri verjetnostnih varnostnih analizah druge ravni; | (3) A probabilistic safety analysis shall cover:  5. an analysis of uncertainties and sensitivity analyses of a level 1 probabilistic safety analysis, and a sensitivity or uncertainty analyses of a level 2 probabilistic safety analysis; |
| O 1.4 | PSA shall be based on a realistic modelling of plant response, using data relevant for the design, and taking into account human action to the extent assumed in operating and accident procedures. The mission times in the PSA shall be justified. | JV9 50/2 | (2) Analize iz prejšnjega odstavka morajo temeljiti na realističnem modelu odziva sevalnega ali jedrskega objekta na predpostavljene začetne dogodke z uporabo podatkov, ki kažejo dejanski projekt in pisne postopke za obratovanje objekta, upoštevajoč človeške posege. Pri tem uporabljeni akcijski časi (časi, v katerih mora varnostni sistem obratovati, da jedrski objekt doseže varno zaustavitveno stanje, v katerem je reaktor podkritičen in je zagotovljeno odvajanje zaostale toplote, in se lahko izvedejo ukrepi za ohranitev tega stanja) morajo biti utemeljeni in določeni pri merilih uspešnosti izvedbe akcije. | (2) The analysis referred to in the previous paragraph shall be based on a realistic modelling of the response of the radiation or nuclear facility to postulated initiating events and shall use data relevant for the actual design and written procedures for the operation of the facility, with due consideration of human action. Action times (times in which the safety system operation of a nuclear facility reaches a safe shutdown in which the reactor is subcritical and ensure residual heat removal, and may be carried out measures to maintain this status) shall be justified and determined with the benchmarks of implementation of the action. |
| O 1.5 | Human reliability analysis shall be performed, taking into account the factors which can influence the performance of ~~the operators~~ plant staff in all plant states. | JV9 50/3/6 | (3) Verjetnostne varnostne analize morajo vključevati:  6. analize zanesljivosti človeškega dejavnika, upoštevajoč dejavnike, ki lahko vplivajo na delo operaterjev in drugega osebja v vseh analiziranih stanjih elektrarne | (3) A probabilistic safety analysis shall cover:  6. analyses of human reliability, taking into account the factors which can influence the performance of the operators and other personnel in all the analysed plant operational modes. |
| O 2.1 | PSA shall be performed, documented, and maintained according to requirements of the management system of the licensee. | JV9 51/1 | Upravljavec sevalnega ali jedrskega objekta mora verjetnostne varnostne analize iz prvega odstavka prejšnjega člena:  1. izdelati, dokumentirati in vzdrževati v skladu s svojim sistemom vodenja; | The facility operator of a radiation or nuclear facility shall, as concerns the probabilistic safety analysis referred to in paragraph 1 of the previous article:  1. perform, document and maintain the analysis in accordance with the requirements of the management system; |
| O 2.2 | PSA shall be performed according to an up to date proven methodology, taking into account international experience currently available. | JV9 51/3 | Upravljavec sevalnega ali jedrskega objekta mora verjetnostne varnostne analize iz prvega odstavka prejšnjega člena:  3. izdelati in vzdrževati v skladu z najnaprednejšimi mednarodnimi standardi in smernicami ter najboljšo mednarodno prakso; | The facility operator of a radiation or nuclear facility shall, as concerns the probabilistic safety analysis referred to in paragraph 1 of the previous article:  3. perform and maintain the analysis in accordance with current internationally recognised standards and guidelines and with the best international practice; |
| O 3.1 | PSA shall be used to support safety management. The role of PSA in the decision making process shall be defined. | JV9 53/1/1 | (1) Upravljavec jedrske elektrarne mora verjetnostne varnostne analize uporabljati:  1. v delovnih procesih, povezanih s sevalno ali jedrsko varnostjo. Določiti mora vlogo teh analiz pri sprejemanju vseh odločitev, povezanih z varnostjo; | (1) The facility operator of a nuclear power plant shall use probabilistic safety analyses:  1. in working processes relevant to radiation or nuclear safety. The facility operator shall define the role of these analyses in all the decision making processes relevant to safety; |
| O 3.2 | PSA shall be used67 to identify the need for modifications to the plant and its procedures, including for severe accident management measures, in order to reduce the risk from the plant.  67 It is intended that such analyses will be done on a continuous basis, not just every ten years during the Periodic Safety  Review. | JV9 53/1/2 | (1) Upravljavec jedrske elektrarne mora verjetnostne varnostne analize uporabljati:  2. za prepoznavanje potreb po spremembah na objektu in v pisnih postopkih za njegovo obratovanje, vključno s prepoznavanjem potreb za obvladovanje težkih nesreč. Tako mora zmanjševati tveganje zaradi obratovanja objekta; | (1) The facility operator of a nuclear power plant shall use probabilistic safety analyses:  2. to identify needs for modifications to the facility and written procedures for its operation, including the needs for severe accident management measures. In this way, risks due to the facility operation shall be reduced; |
| O 3.3 | PSA shall be used to assess the overall risk from the plant, to demonstrate that a balanced design has been achieved, and to provide confidence that there are no "cliff-edge effects"~~52~~.  ~~52~~ ~~Small deviations in the plant parameters that could give rise to severely abnormal plant behaviour.~~ | JV9 53/1/3 | (1) Upravljavec jedrske elektrarne mora verjetnostne varnostne analize uporabljati:  3. pri ocenjevanju tveganja zaradi obratovanja objekta, da bi prepoznal in dokazoval:  ‒ uravnoteženost in skladnost projektnih osnov objekta s projektnimi načeli,  ‒ stabilnost in predvidljivost odziva objekta na manjše spremembe, tako da majhne spremembe parametrov ne povzročijo nenadzorovanega odziva objekta in njegovih sistemov,  ‒ primernost sprememb v objektu glede na spremembo tveganja, ki jo povzročijo,  ‒ upravičenost sprememb obratovalnih pogojev in omejitev,  ‒ spremembe pisnih postopkov za obratovanje objekta,  ‒ varnostno pomembnost dogodkov. | (1) The facility operator of a nuclear power plant shall use probabilistic safety analyses:  3. in assessing risks involved in the facility operation, in order to identify and demonstrate:  - balance and compliance of the design bases with design principles;  - stability and predictability of the facility response to small deviations in the facility parameters in the way that prevents uncontrolled response of the facility or its systems to such minor deviations;  - adequacy of facility modifications with respect to the changes in risks they entail;  - justification of changes to operational limits and conditions;  - justification of changes of written procedures for the facility operation;  - safety significance of events. |
| O 3.4 | PSA shall be used to assess the adequacy of plant modifications, changes to operational limits and conditions and procedures and to assess the significance of operational occurrences. | JV9 53/1/3 | (1) Upravljavec jedrske elektrarne mora verjetnostne varnostne analize uporabljati:  3. pri ocenjevanju tveganja zaradi obratovanja objekta, da bi prepoznal in dokazoval:  ‒ uravnoteženost in skladnost projektnih osnov objekta s projektnimi načeli,  ‒ stabilnost in predvidljivost odziva objekta na manjše spremembe, tako da majhne spremembe parametrov ne povzročijo nenadzorovanega odziva objekta in njegovih sistemov,  ‒ primernost sprememb v objektu glede na spremembo tveganja, ki jo povzročijo,  ‒ upravičenost sprememb obratovalnih pogojev in omejitev,  ‒ spremembe pisnih postopkov za obratovanje objekta,  ‒ varnostno pomembnost dogodkov. | (1) The facility operator of a nuclear power plant shall use probabilistic safety analyses:  3. in assessing risks involved in the facility operation, in order to identify and demonstrate:  - balance and compliance of the design bases with design principles;  - stability and predictability of the facility response to small deviations in the facility parameters in the way that prevents uncontrolled response of the facility or its systems to such minor deviations;  - adequacy of facility modifications with respect to the changes in risks they entail;  - justification of changes to operational limits and conditions;  - justification of changes of written procedures for the facility operation;  - safety significance of events. |
| O 3.5 | Insights from PSA shall be used as input to development and validation of the safety significant training programmes of the licensee, including simulator training of control room operators. | JV9 53/2/2 | (2) Rezultati verjetnostnih varnostnih analiz se morajo v jedrskih elektrarnah uporabljati pri:  2. razvoju in preverjanju programa strokovnega usposabljanja delavcev, vključno z usposabljanjem operaterjev v komandni sobi na simulatorju jedrske elektrarne. | (2) In nuclear power plants, the results of probabilistic safety analyses shall be used in:  2. the development and validation of the professional training programme for the personnel, including the training of the control room operators on the nuclear power plant simulator. |
| O 3.6 | The results of PSA shall be used to ensure that the items are included in the verification and test programmes if they contribute significantly to risk. | JV9 53/2/1 | (2) Rezultati verjetnostnih varnostnih analiz se morajo v jedrskih elektrarnah uporabljati pri:  1. preverjanju vsebine programov vzdrževanja, preizkušanja in pregledov SSK iz 18. člena tega pravilnika, v katere morajo biti vključeni vsi pomembni dejavniki tveganja; | (2) In nuclear power plants, the results of probabilistic safety analyses shall be used in:  1. the verification of the contents of the SSC maintenance, testing and inspection programmes referred to in Article 18 of these Rules, which shall cover all the significant risk factors; |
| O 4.1 | The limitations of PSA shall be understood, recognized and taken into account in all its use. The adequacy of a particular PSA application shall always be checked with respect to these limitations. | JV9 52/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora pri vsaki uporabi verjetnostnih varnostnih analiz razumeti, prepoznati in upoštevati njihove omejitve. Na podlagi omejitev mora tudi presojati o primernosti uporabe teh analiz. | (1) At each application of probabilistic safety analyses, the facility operator of a radiation or nuclear facility shall understand, recognise and take into account their limitations. The adequacy of a particular probabilistic safety analysis application shall always be checked with respect to these limitations. |
| O 4.2 | When PSA is used, for evaluating or changing the requirements on periodic testing and allowed outage time for a system or a component, all relevant items, including states of systems and components and safety functions they participate in, shall be included in the analysis. | JV9 52/2 | (2) Pri uporabi verjetnostnih varnostnih analiz za preverjanje ali vrednotenje sprememb nadzornih pregledov, preizkušanj in dovoljenega časa za nerazpoložljivost SSK mora upravljavec sevalnega ali jedrskega objekta vključiti v analizo vse možne vplive in pogoje, vključno s stanji in varnostnimi nalogami SSK. | (2) When probabilistic safety analyses are used for verification or evaluation of modifications of surveillance inspections and testing and allowed outage times of SSCs, the facility operator of a radiation or nuclear facility shall include in the analyses all possible influences and conditions, including the states and safety tasks of SSCs. |
| O 4.3 | The operability of components that have been found by PSA to be important to safety shall be ensured and their role shall be recorded in the SAR. | JV5 43/1/4-5,  43/1/10  P1/2.1 | (1) Varnostno poročilo sevalnega objekta, jedrskega objekta ali objekta državne infrastrukture iz zakona, ki ureja varstvo pred ionizirajočimi sevanji in jedrsko varnost, ki se gradi, poskusno obratuje, obratuje, je prenehal obratovati, miruje, se razgrajuje ali se izvaja dolgoročni nadzor in vzdrževanje odlagališč, mora vsebovati:  4. opis zasnove projekta in doseganja osnovnih varnostnih ciljev, opis projektnih osnov sevalnega ali jedrskega objekta ter opis, kako je dosežena njihova izpolnitev,  5. podroben opis varnostnih funkcij, vseh varnostnih sistemov, za varnost pomembnih SSK, njihovih projektnih osnov in opis delovanja vseh za varnost pomembnih SSK v vseh stanjih objekta,  10. opis verjetnostnih varnostnih analiz, pripravljenih v skladu s 16. členom tega pravilnika,  1. Vse SSK je treba razvrstiti (klasificirati) v varnostne razrede glede na njihovo pomembnost za varnost. SSK morajo biti projektirani, izdelani in vzdrževani tako, da njihova zanesljivost in kakovost ustrezata njihovemu pomenu za jedrsko varnost.  2. Varnostna klasifikacija SSK v varnostne razrede glede na njihovo pomembnost za varnost mora temeljiti na analizah jedrske varnosti, izvedenih na podlagi determinističnih metod, ki jih, kadar je to primerno, dopolnjujejo verjetnostne metode in inženirska presoja.  3. Varnostna klasifikacija mora za vsak varnostni razred določati:  - predpise in standarde, uporabljene pri projektiranju, izdelavi, vgradnji in pri pregledih,  - zahteve za napajanje v sili in ustreznost SSK v predvidenih okoljskih razmerah,  - razpoložljivost oziroma nerazpoložljivost sistemov, potrebnih za izvedbo varnostne funkcije ob predpostavljenih začetnih dogodkih v varnostnih analizah, ki se izvajajo na podlagi determinističnih metod,  - zahteve glede zagotavljanja kakovosti. | (1) A safety-analysis report of a radiation facility, nuclear facility or facility of the national infrastructure in accordance with the act governing radiation protection and nuclear safety, under construction, trial operation, operation, following termination of operation, in the safe enclosure mode, under decommissioning or long-term surveillance and maintenance in case of repository, shall contain:  4. a description of the facility's design and of the accomplishment of basic safety objectives, a description of the design bases of the radiation or nuclear facility and a description of their methods of fulfilment;  5. a detailed description of safety functions, of all safety systems, of safety-related SSCs, their design bases and the performance of all safety-related SSCs in all states of the facility;  10. a description of probabilistic safety analyses carried out in accordance with the Article 16 of these Rules;  1. Each SSC shall be classified into a safety class according to its importance to safety. SSCs shall be designed, manufactured and maintained so as to ensure reliability and quality adequate for the importance of the SSC for safety.  2. The classification of SSCs into safety classes according to their importance for safety shall be based on nuclear safety analyses carried out employing deterministic methods and supplemented with probabilistic methods and engineering judgement as appropriate.  3. For each safety class, the safety classification shall specify:  - regulations and standards to be applied in design, manufacture, installation and inspection;  - requirements for emergency power supply and SSC compatibility with anticipated environmental conditions;  - availability/unavailability of systems necessary to achieve a safety function upon initiating events postulated in safety analyses employing deterministic methods;  - quality-assurance requirements. |
| P: Periodic Safety Review | |  |  |  |
| P 1.1 | The licensee shall have the prime responsibility for performing the Periodic Safety Review. | ZVSJV 81/1 | (1) Upravljavec sevalnega ali jedrskega objekta (v nadaljnjem besedilu: upravljavec objekta) mora zagotavljati redno, celovito in sistematično ocenjevanje in preverjanje sevalne oziroma jedrske varnosti objekta z občasnimi varnostnimi pregledi. | (1) The operator of a radiation or nuclear facility (hereinafter: operator) must ensure regular, full and  systematic assessment and examination of radiation or nuclear safety of a facility by periodic safety  review. |
| P 1.2 | The review shall confirm the compliance of the plant with its licensing basis and any deviations shall be resolved. | JV9 44/5,8 | Upravljavec sevalnega ali jedrskega objekta, razen odlagališča za rudarsko in hidrometalurško jalovino, za katerega določbe tega poglavja ne veljajo, mora:  5. z občasnim varnostnim pregledom ugotoviti skladnost z veljavno zakonodajo, projektnimi osnovami, na podlagi katerih je bilo izdano obratovalno dovoljenje, z veljavnimi mednarodnimi varnostnimi standardi in mednarodno prakso;  8. čim prej odpraviti morebitna odstopanja od projekta objekta, ugotovljena med občasnim varnostnim pregledom, upoštevajoč njihovo pomembnost za jedrsko varnost. Odstopanja, ki bi lahko ogrozila jedrsko varnost objekta, morajo biti nemudoma odpravljena; | The facility operator of a radiation or nuclear facility, except for mining and hydrometallurgical tailings repository, for which the provisions of this chapter do not apply shall:  5. with Periodic Safety Review determine compliance with valid legislation, design bases on which it was issued operating licenses, with valid international safety standards and international practice;  8. promptly resolve any deviations from the facility design detected by the Periodic Safety Review with due consideration of their importance for nuclear safety. Derogation that could jeopardize nuclear safety of the facility, shall be resolved without delay; |
| P 1.3 | The review shall identify and evaluate the safety significance of deviations from applicable current safety standards and internationally recognised good practices ~~currently available~~ taking into account operating experience, relevant research findings, and the current state of technology. | JV9 44/6 | Upravljavec sevalnega ali jedrskega objekta, razen odlagališča za rudarsko in hidrometalurško jalovino, za katerega določbe tega poglavja ne veljajo, mora:  6. z občasnim varnostnim pregledom ugotoviti in oceniti varnostno pomembnost odstopanj od veljavnih standardov in najboljše mednarodne prakse, upoštevajoč pri tem lastne in tuje obratovalne izkušnje, pa tudi nova spoznanja, pridobljena pri tehničnih raziskavah in napredku ter upravljanju drugih sevalnih oziroma jedrskih objektov; | The facility operator of a radiation or nuclear facility, except for mining and hydrometallurgical tailings repository, for which the provisions of this chapter do not apply shall:  6. with Periodic Safety Review shall identify and evaluate the safety significance of deviations from applicable current safety standards and internationally recognised good practices, taking into account operating experience, relevant research findings, and the current state of technology and management of other radiation or nuclear facilities; |
| P 1.4 | All reasonably practicable improvement measures shall be ~~taken~~ implemented by the licensee as a result of the review, in a timely manner. | JV9 44/10 | Upravljavec sevalnega ali jedrskega objekta, razen odlagališča za rudarsko in hidrometalurško jalovino, za katerega določbe tega poglavja ne veljajo, mora:  10. čim prej izvesti ukrepe, ki izhajajo iz občasnega varnostnega pregleda; | The facility operator of a radiation or nuclear facility, except for mining and hydrometallurgical tailings repository, for which the provisions of this chapter do not apply shall:  10. take all measures indicated by the results of the Periodic Safety Review, in a timely manner; |
| P 1.5 | An overall assessment of the safety of the plant covering the period until the next PSR shall be provided, and adequate confidence in plant safety for continued operation demonstrated, based on the results of the review in each area. This assessment shall highlight any issues that might limit the future safe operation of the plant and explain how they will be managed. | JV9 44/1, 44/4, 44/7 | Upravljavec sevalnega ali jedrskega objekta, razen odlagališča za rudarsko in hidrometalurško jalovino, za katerega določbe tega poglavja ne veljajo, mora:  1. z občasnim varnostnim pregledom sistematično preveriti skupne učinke staranja objekta, učinke sprememb na objektu, obratovalne izkušnje, tehnične raziskave in napredek, vplive sprememb na lokaciji in vse druge možne vplive na sevalno ali jedrsko varnost;  4. z občasnim varnostnim pregledom opozoriti na probleme, ki bi lahko ogrozili varno obratovanje v prihodnosti, in opisati, kako jih reševati;  7. izdelati celovito oceno varnosti, ki na podlagi strokovne metode ovrednoti vse pozitivne in negativne ugotovitve ter njihov skupni učinek na varnost in prepozna ter predlaga dodatne še smiselne ukrepe; | The facility operator of a radiation or nuclear facility, except for mining and hydrometallurgical tailings repository, for which the provisions of this chapter do not apply shall:  1. by means of Periodic Safety Reviews, systematically verify overall impacts of ageing of the facility, effects of modifications of the facility, operational experiences, technical research and progress, changes at the site and other possible impacts on the radiation or nuclear safety of the facility.  4. with Periodic Safety Review noted problems, which could jeopardize the safe operation in the future, and describe how to resolve them;  7. an overall assessment of the safety of the plant, which on the basis of professional methods evaluate all positive and negative findings and their overall impact on the safety and identify and propose further reasonable measures; |
| P 2.1 | The review shall be made periodically, at least every ten years. | JV9 45/4 | (4) Upravljavec sevalnega ali jedrskega objekta mora opraviti občasni varnostni pregled sevalnega ali jedrskega objekta tako, da vloži vlogo za potrditev poročila o občasnem varnostnem pregledu na upravo najpozneje devet let in šest mesecev po pridobitvi obratovalnega dovoljenja objekta, če je varnostni pregled prvi občasni varnostni pregled, oziroma najpozneje devet let in šest mesecev po potrditvi poročila o predhodnem občasnem varnostnem pregledu. Poročilo o občasnem varnostnem pregledu mora obsegati povzetek opisov uporabljenih metod, celovito oceno varnosti na podlagi tematskih poročil, načrt izvedbe ukrepov na objektu skupaj z utemeljitvami ter v prilogi vse dokumente, ki so sestavni del občasnega varnostnega pregleda. Priloženo mora biti tudi mnenje neodvisnega pooblaščenega izvedenca za sevalno in jedrsko varnost o izvedbi, uporabi metodologije, ugotovitvah in zaključkih občasnega varnostnega pregleda ter vplivih predlaganih ukrepov na sevalno in jedrsko varnost objekta. | (4) The facility operator of a radiation or nuclear facility shall carry out a Periodic Safety Review of the radiation or nuclear facility so that the application for the approval of the report on the Periodic Safety Review is submitted to the Administration within nine years and six months from the issuing of the facility operating licence, in the case of the first Periodic Safety Review, and within nine years and six months from the approval of the report on the previous Periodic Safety Review report, in the case of subsequent Periodic Safety Reviews. The report on a Periodic Safety Review shall include summary descriptions of applied methods, the written final assessment based on topical reports, the plan of implementation of modifications and improvements in the facility with appropriate substantiations, and, as attachments, all the documents constituting parts of the Periodic Safety Review. An expert opinion on the report on implementation, application methodology, findings and conclusions of the periodic safety review and the impact of the proposed measures on radiation and nuclear safety of the facility shall be attached by an authorised expert on radiation and nuclear safety. |
| P 2.2 | The scope of the review shall be clearly defined and justified. The scope shall be as comprehensive as reasonably practical with regard to significant safety aspects of an operating plant and, as a minimum the following ~~areas~~ safety factors shall be covered by the review69:  (1) Plant design;  (2) Actual condition of structures, systems and components (SSCs) important to safety;  (3) Equipment qualification;  (4) Ageing;  (5) Deterministic safety analysis;  (6) Probabilistic safety assessment;  (7) Hazard analysis;  (8) Safety performance;  (9) Use of experience from other plants and research findings;  (10) Organization, the management system and safety culture;  (11) Procedures;  (12) Human factors;  (13) Emergency planning;  (14) Radiological impact on the environment.  ~~- Plant design as built and actual condition of systems, structures and components (including ageing management and equipment qualification);~~  ~~- Site characteristics and the protection against external hazards (see Issue T concerning natural hazards);~~  ~~- Safety analyses and their use;~~  ~~- Operating experience and relevant research findings during the review period and the effectiveness of the system used for experience feed-back;~~  ~~- Organisation, human factors, management system and safety culture;~~  ~~- Organisational arrangements;~~  ~~- Staffing and qualification of staff;~~  ~~- Relevant procedures;~~  ~~- Emergency preparedness;~~  ~~- Radiation protection of the workers and the public as well as the radiological impact on the environment;~~  ~~- Radiological impact on the environment.~~  69 Radiation protection is not regarded as a separate safety factor since it is related to most of the other safety factors. As far as there are other units at the site, interactions between them should also be covered by the review. | JV9 46/1, 46/4, P9 | (1) Vsebina, obseg in metodologija občasnega varnostnega pregleda, ki sta navedena v vlogi iz prvega odstavka prejšnjega člena, morata biti jasno opredeljena in utemeljena. Pri določanju obsega je treba upoštevati pomembnost za varnost.  (4) Zasnova obsega in vsebine občasnega varnostnega pregleda sevalnega ali jedrskega objekta je navedena v prilogi 9, ki je kot priloga sestavni del tega pravilnika.  Priloga 9: Zasnova obsega in vsebine občasnega varnostnega pregleda sevalnega ali jedrskega objekta  Zasnova je prilagojena pripravi obsega in vsebine občasnega varnostnega pregleda jedrske elektrarn. Za druge vrste sevalnih ali jedrskih objektov je treba obseg in vsebino smiselno prilagoditi ali razširiti, upoštevajoč pomembnost posameznih vsebin za varnost objekta, mednarodno prakso in stopenjski pristop.  **Obseg in vsebina**  Varnostne vsebine, s katerimi sta določena obseg in vsebina občasnega varnostnega pregleda, so:  ***Objekt***   1. Projekt objekta 2. Dejansko stanje SSK 3. Kvalifikacija opreme 4. Staranje objekta   ***Varnostne analize***   1. Deterministične varnostne analize objekta 2. Verjetnostne varnostne analize objekta 3. Analize ogroženosti in možnih nevarnosti glede na jedrsko in sevalno varnost   ***Obratovanje in uporaba obratovalnih izkušenj***   1. Obratovalne izkušnje in obratovalni kazalniki lastnega objekta 2. Obratovalne izkušnje drugih objektov ter ugotovitve znanosti in tehnologije za obdobje pregleda   ***Vodenje***   1. Sistemi vodenja in organiziranost upravljavca 2. Varnostna kultura 3. Pisni postopki upravljavca 4. Vpliv dejavnosti osebja – človeški dejavnik 5. Načrt zaščite in reševanja   ***Okolje***   1. Radiološki vplivi na okolje 2. Radioaktivni odpadki in izrabljeno jedrsko gorivo   ***Fizična zaščita***   1. Fizična zaščita   ***Varstvo pred sevanji***   1. Varstvo pred sevanji | (1) The contents, scope and methodology of a Periodic Safety Review indicated in the application referred to in paragraph 1 of the previous article shall be clearly defined and justified. The scope shall be determined with due consideration of importance for safety.  (4) The concept of the scope and content of the Periodic Safety Review of a radiation or nuclear facility are laid down in Annex 9, which forms as Annex a constituent part of these Rules.  Annex 9: Concept scope and content of the Periodic Safety Review of a radiation or nuclear facility  The concept is adapted to the scope and contents of the Periodic Safety Review of a nuclear power plant. In cases of other types of radiation or nuclear facilities, the scope and contents shall be acommodated or extended by analogy, considering importance of different topics for the safety of the facility, international practice and graded approach.  Scope and contents  Safety factors defining the scope and contents of a Periodic Safety Review include the following:  Facility  1. Facility design  2. Actual condition of SSCs  3. Equipment qualification  4. Facility ageing  Safety analyses  5. Deterministic safety analyses of the facility  6. Probabilistic safety analyses of the facility  7. Hazard and risk analyses regarding radiation or nuclear safety  Operation and application of operational experience feedback  8. Operational experience and operational indicators of the facility  9. Operational experience from other facilities and new results of scientific and technological development during the review period  Management  10. Management systems and organisational arrangements of the facility operator  11. Safety culture  12. Facility operator’s written procedures  13. Impacts of the personnel actions - human factor  14. Emergency preparedness plan  Environment  15. Radiation impacts on the environment  16. Radioactive waste and spent nuclear fuel  Safeguards  17. Safeguards  Radiation Protection  18. Radiation Protection |
| P 3.1 | The review shall use an up to date, systematic, and documented methodology, taking into account deterministic as well as probabilistic assessments. | JV9 44/2 | Upravljavec sevalnega ali jedrskega objekta, razen odlagališča za rudarsko in hidrometalurško jalovino, za katerega določbe tega poglavja ne veljajo, mora:  2. pri izvedbi občasnega varnostnega pregleda uporabiti najnovejšo, ustrezno, sistematično in dokumentirano metodologijo, ki temelji na determinističnem, pa tudi verjetnostnem pristopu k analizam in ocenam sevalne in jedrske varnosti; | The facility operator of a radiation or nuclear facility, except for mining and hydrometallurgical tailings repository, for which the provisions of this chapter do not apply shall:  2. in performing Periodic Safety Reviews, use an up to date, systematic, and documented methodology, based on deterministic as well as probabilistic approaches to analyses and assessment of radiation and nuclear safety; |
| P 3.2 | Each area shall be reviewed and the findings compared to the licensing requirements as well as to current safety standards and practices. The safety significance of all findings shall be evaluated using an appropriate approach. A global assessment shall consider all findings (positive and negative) and their cumulative effect on safety, and shall identify what safety improvements are reasonably practicable. | JV9 44/1,5,7 | Upravljavec sevalnega ali jedrskega objekta, razen odlagališča za rudarsko in hidrometalurško jalovino, za katerega določbe tega poglavja ne veljajo, mora:  1. z občasnim varnostnim pregledom sistematično preveriti skupne učinke staranja objekta, učinke sprememb na objektu, obratovalne izkušnje, tehnične raziskave in napredek, vplive sprememb na lokaciji in vse druge možne vplive na sevalno ali jedrsko varnost;  5. z občasnim varnostnim pregledom ugotoviti skladnost z veljavno zakonodajo, projektnimi osnovami, na podlagi katerih je bilo izdano obratovalno dovoljenje, z veljavnimi mednarodnimi varnostnimi standardi in mednarodno prakso;  7. izdelati celovito oceno varnosti, ki na podlagi strokovne metode ovrednoti vse pozitivne in negativne ugotovitve ter njihov skupni učinek na varnost in prepozna ter predlaga dodatne še smiselne ukrepe; | The facility operator of a radiation or nuclear facility, except for mining and hydrometallurgical tailings repository, for which the provisions of this chapter do not apply shall:  1. by means of Periodic Safety Reviews, systematically verify overall impacts of ageing of the facility, effects of modifications of the facility, operational experiences, technical research and progress, changes at the site and other possible impacts on the radiation or nuclear safety of the facility.  5. with Periodic Safety Review determine compliance with valid legislation, design bases on which it was issued operating licenses, with valid international safety standards and international practice;  7. an overall assessment of the safety of the plant, which on the basis of professional methods evaluate all positive and negative findings and their overall impact on the safety and identify and propose further reasonable measures; |
| Q: Plant Modifications | |  |  |  |
| Q 1.1 | The licensee shall ensure that no modification to a nuclear power plant, whatever the reason for it, degrades the plant’s ability to be operated safely.70  70 RL 2.2 specifically addresses modifications to SSCs, all other reference levels relate to all type of modifications in the sense of IAEA SSR-2/2, Para 4.39. | JV9  32/2, | (2) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da je po vsaki spremembi zagotovljeno varno obratovanje objekta in da ne bo nesprejemljivih vplivov na objekt po zaprtju, če gre za odlagališče radioaktivnih odpadkov ali izrabljenega goriva. | (2) The facility operator of a radiation or nuclear facility shall ensure that no modification to the facility degrades its ability to be operated safely and it will not be an unacceptable impact on the facility after the closure in the case of radioactive waste or spent fuel disposal facility. |
| Q 1.2 | The licensee shall control plant modifications using a graded approach with appropriate criteria for categorization according to their safety significance71.  71 Para 4.5 of IAEA Guide NS-G-2.3 contains information about possible categories. | JV9 36 | (1) Upravljavec sevalnega ali jedrskega objekta mora pred nameravano spremembo opraviti varnostno presejanje, s katerim se določijo njene posledice na sevalno oziroma jedrsko varnost. Obseg presejanja je naveden v prilogi 7 tega pravilnika.  (2) Upravljavec sevalnega ali jedrskega objekta mora po varnostnem presejanju iz prejšnjega odstavka opraviti varnostno oceno za spremembe, za katere se z varnostnim presejanjem ugotovi, da sodijo v kategorijo 2 ali 3. Varnostna ocena mora dokazati, da so upoštevani vsi varnostni vidiki spremembe in izpolnjena ustrezna varnostna merila ter da je sprememba v skladu s projektnimi osnovami SSK. Obseg varnostne ocene je naveden v prilogi 8 tega pravilnika.  (3) Varnostne ocene ni treba opraviti za spremembe, za katere se med varnostnim presejanjem ugotovi, da so potrebne zaradi odprave nedvoumne napake, na primer tipkarske napake v dokumentih ali prilagoditve opreme parametrom, ki so že zajeti v veljavnih in potrjenih varnostnih analizah. Take spremembe se obravnavajo kot spremembe kategorije 1.  (4) Spremembo obratovalnih pogojev in omejitev je treba obravnavati kot spremembo kategorije 3, razen spremembe obratovalnih pogojev in omejitev, ki izpolnjujejo pogoje iz prejšnjega odstavka.  (5) Če med obratovanjem objekta pride do nenadnih okoliščin, zaradi katerih bi bilo ogroženo stabilno in varno obratovanje objekta, upravljavec lahko izvede nujno začasno spremembo. Tako spremembo upravljavec obravnava kot spremembo kategorije 1, čeprav jo varnostno presejanje iz prvega odstavka tega člena in varnostna ocena iz drugega odstavka tega člena uvrščata v kategorijo 2. Upravljavec mora varnostno presejanje, varnostno oceno, čas veljavnosti in obvestilo o izvedbi take spremembe dostaviti upravi naslednji delovni dan po izvedbi spremembe. Uprava se do nje opredeli najpozneje v treh delovnih dneh. | (1) The facility operator of a radiation or nuclear facility shall, prior to undertaking a modification, carry out a safety evaluation screening to determine any consequences for radiation or nuclear safety. The scope of the safety evaluation screening is laid down in Annex 7 to these Rules.  (2) Following the safety evaluation screening referred to in the previous paragraph, the facility operator of a radiation or nuclear facility shall carry out a safety assessment of those modifications which are classified in category 2 or 3 based on the safety evaluation screening. The safety assessment shall demonstrate the consideration of all the safety aspects of the modification and its compliance with relevant safety requirements and its compliance with the design bases of the involved SSCs. The scope of the safety assessment is laid down in Annex 8 to these Rules.  (3) A safety assessment is not required in the case of modifications, which are found, through the safety evaluation screening, necessary to remedy an obvious error (e.g.: a typing error in a document, adaptation of equipment to parameters already covered in approved safety analyses). Such modifications shall be treated as modifications of category 1.  (4) Any change of operational limits and conditions shall be treated as a modification of category 3, except those changes of operational conditions and modifications, which fulfill the conditions of the previous paragraph.  (5) If during the operation of the facility sudden circumstances which would endanger a stable and safe operation of the facility occure, the facility operator may carry out an urgent temporary modification. Such a modification shall be treated as a modification of category 1, although the safety evaluation screening reffered to in paragraph one of this Article and the safety assessment reffered to in paragraph two of this Article classify it as modifications of category 2. The facility operator shall transmit the safety evaluation screening, safety assessment, period of validity and notification of implementation of such modifications the next working day after the implementation of modification to the Administration. The Administration shall declare its position to the modification in three working days at the latest. |
| Q 2.1 | The licensee shall establish a process to ensure that all permanent and temporary modifications are properly designed, reviewed, controlled, and implemented, and that all relevant safety requirements are met. | JV9 32/3 | (3) Upravljavec sevalnega ali jedrskega objekta mora imeti vzpostavljen proces obravnavanja sprememb, s katerim zagotovi, da so začasne in stalne spremembe pravočasno in pravilno projektirane, pregledane, nadzirane in izvedene ter da so izpolnjene vse s tem povezane varnostne zahteve, upoštevajoč pri tem lastne in tuje obratovalne izkušnje, pa tudi nova spoznanja, pridobljena pri tehničnih raziskavah in napredku ter upravljanju drugih sevalnih oziroma jedrskih objektov. | (3) The facility operator of a radiation or nuclear facility shall establish a process of assessment of modifications to ensure that all temporary or permanent modifications are timely and properly designed, reviewed, controlled and implemented and that all relevant safety requirements are met, with due account to in-house and international operational experience feedback as well as the progress of technical knowledge and progress and information gathered from the operation of other radiation or nuclear facilities. |
| Q 2.2 | For modifications to SSC, this process shall include the following:  o Reason and justification for modification;  o Design;  o Safety assessment;  o Updating plant documentation and training;  o Fabrication, installation and testing; and  o Commissioning the modification. | JV9 33/2 | (2) Obravnava spremembe mora vsebovati najmanj naslednje:  1. opis vzroka za spremembo in utemeljitev njene upravičenosti;  2. projekt spremembe, vključno z določitvijo predvidene skupinske doze, ki jo prejme osebje med izvedbo spremembe;  3. pregled in oceno v preteklosti že opravljenih sprememb in popravljalnih ukrepov na obravnavanem predmetu spremembe;  4. razvrstitev spremembe v kategorijo v skladu s 35. členom tega pravilnika ter varnostno presejanje in varnostno oceno, če je ta potrebna v skladu s 36. členom tega pravilnika;  5. odobritev uprave, če je ta potrebna;  6. izobraževanje in usposabljanje osebja;  7. preveritev ustreznosti analize požarne nevarnosti oziroma njeno dopolnitev;  8. izdelavo, vgradnjo in preizkušanje po izvedeni spremembi ter posodobitev dokumentacije;  9. izvedbeni načrt spremljanja izvedene spremembe in vrednotenja povratnih informacij;  10. način končne odobritve uporabnosti izvedene spremembe in  11. preveritev usklajenosti z zahtevami za fizično varovanje. | (2) The modification management shall include, as a minimum following:  1. the description of the reason for the modification and its justification;  2. the design of the modification, including the assessment of the expected collective dose of the personnel during of the implementation of the modification;  3. reviews and assessments of modifications and corrective actions undertaken in the past in the area of the elaborated object of modification;  4. categorisation of the modification in accordance with Article 35 of these Rules and safety screening and safety assessment if necessary in accordance with Article 36 of these Rules;  5. approval by the Administration if necessary;  6. education and training of the personnel;  7. verification of the adequacy of the fire hazard analysis or proposal for its amendment;  8. fabrication, installation and testing following the implementation of the modification and updating of the documentation;  9. plan of the monitoring of implemented modification and the evaluation of feedback information;  10. the method of the final approval of the suitability of the implemented modification;  11. verification of compliance with the requirements for the physical protection. |
| Q 3.1 | An initial safety assessment shall be carried out to determine any consequences for safety72.  72 This assessment is performed for the purpose of categorizing the intended modification according to its safety significance. | JV9 36/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora pred nameravano spremembo opraviti varnostno presejanje, s katerim se določijo njene posledice na sevalno oziroma jedrsko varnost. Obseg presejanja je naveden v prilogi 7 tega pravilnika. | (1) The facility operator of a radiation or nuclear facility shall, prior to undertaking a modification, carry out a safety evaluation screening to determine any consequences for radiation or nuclear safety. The scope of the safety evaluation screening is laid down in Annex 7 to these Rules. |
| Q 3.2 | A detailed, comprehensive safety assessment shall be undertaken, unless the results of the initial safety assessment show that the scope of this assessment can be reduced. | JV9 36/2-4 | (2) Upravljavec sevalnega ali jedrskega objekta mora po varnostnem presejanju iz prejšnjega odstavka opraviti varnostno oceno za spremembe, za katere se z varnostnim presejanjem ugotovi, da sodijo v kategorijo 2 ali 3. Varnostna ocena mora dokazati, da so upoštevani vsi varnostni vidiki spremembe in izpolnjena ustrezna varnostna merila ter da je sprememba v skladu s projektnimi osnovami SSK. Obseg varnostne ocene je naveden v prilogi 8 tega pravilnika.  (3) Varnostne ocene ni treba opraviti za spremembe, za katere se med varnostnim presejanjem ugotovi, da so potrebne zaradi odprave nedvoumne napake, na primer tipkarske napake v dokumentih ali prilagoditve opreme parametrom, ki so že zajeti v veljavnih in potrjenih varnostnih analizah. Take spremembe se obravnavajo kot spremembe kategorije 1.  (4) Spremembo obratovalnih pogojev in omejitev je treba obravnavati kot spremembo kategorije 3, razen spremembe obratovalnih pogojev in omejitev, ki izpolnjujejo pogoje iz prejšnjega odstavka. | (2) Following the safety evaluation screening referred to in the previous paragraph, the facility operator of a radiation or nuclear facility shall carry out a safety assessment of those modifications which are classified in category 2 or 3 based on the safety evaluation screening. The safety assessment shall demonstrate the consideration of all the safety aspects of the modification and its compliance with relevant safety requirements and its compliance with the design bases of the involved SSCs. The scope of the safety assessment is laid down in Annex 8 to these Rules.  (3) A safety assessment is not required in the case of modifications, which are found, through the safety evaluation screening, necessary to remedy an obvious error (e.g.: a typing error in a document, adaptation of equipment to parameters already covered in approved safety analyses). Such modifications shall be treated as modifications of category 1.  (4) Any change of operational limits and conditions shall be treated as a modification of category 3, except those changes of operational conditions and modifications, which fulfill the conditions of the previous paragraph. |
| Q 3.3 | Comprehensive safety assessments shall demonstrate all applicable safety aspects are considered and that the system specifications and the relevant safety requirements are met. | JV9 36/2 | (2) Upravljavec sevalnega ali jedrskega objekta mora po varnostnem presejanju iz prejšnjega odstavka opraviti varnostno oceno za spremembe, za katere se z varnostnim presejanjem ugotovi, da sodijo v kategorijo 2 ali 3. Varnostna ocena mora dokazati, da so upoštevani vsi varnostni vidiki spremembe in izpolnjena ustrezna varnostna merila ter da je sprememba v skladu s projektnimi osnovami SSK. Obseg varnostne ocene je naveden v prilogi 8 tega pravilnika. | (2) Following the safety evaluation screening referred to in the previous paragraph, the facility operator of a radiation or nuclear facility shall carry out a safety assessment of those modifications which are classified in category 2 or 3 based on the safety evaluation screening. The safety assessment shall demonstrate the consideration of all the safety aspects of the modification and its compliance with relevant safety requirements and its compliance with the design bases of the involved SSCs. The scope of the safety assessment is laid down in Annex 8 to these Rules. |
| Q 3.4 | The scope, safety implications, and consequences of proposed modifications shall be reviewed by personnel not immediately involved in their design or implementation. | JV9 33/3 | (3) Upravljavec sevalnega ali jedrskega objekta mora za pregled spremembe, njenih posledic ter vpliva na jedrsko in sevalno varnost in razvrščanje sprememb v kategorije zagotoviti neodvisno osebje, ki ni neposredno vključeno v proces načrtovanja, projektiranja in izvedbe sprememb. | (3) The facility operator of a radiation or nuclear facility shall provide independent personnel for the tasks of review of modification, safety implications on radiation and nuclear safety and categorisation of modifications, which is not immediately involved in the processes of the planning, design or implementation of the modifications. The scope, safety implications, and consequences of proposed modifications shall be reviewed by personnel. |
| Q 4.1 | Implementation and testing of plant modifications shall be performed in accordance with the applicable work control and plant testing procedures. | JV9 39/4 | (4) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da je izvedba spremembe in preizkušanje po njeni izvedbi v skladu z načrtom iz 9. točke drugega odstavka 33. člena tega pravilnika in z ustreznimi pisnimi postopki za preizkušanje, ki obravnavajo predmet spremembe SSK. | (4) The facility operator of a radiation or nuclear facility shall ensure that any modification is implemented and tested after implementation in compliance with the plan for implemented modification referred to in subparagraph 9 of paragraph 2 of Article 33 of these Rules and in compliance with written procedures for the testing relevant to the modification of SSCs. |
| Q 4.2 | The impact upon procedures, training, and provisions for plant simulators shall be assessed and any appropriate revisions incorporated. | JV9 39/5 | (5) Upravljavec sevalnega ali jedrskega objekta mora na podlagi sprememb na opremi pripraviti tudi spremembe vsebine pisnih postopkov, ki so povezani z opremo, in morajo postati veljavni hkrati z izvedbo spremembe. Ustrezno izobraževanje ali usposabljanje osebja in morebitne pomembnejše prilagoditve simulatorja, če ta obstaja za ta objekt, morajo biti izvedeni pred uvedbo spremembe. | (5) Based on the modifications of the equipment, the facility operator of a radiation or nuclear facility shall revise the contents of the written procedures concerning equipment; such revisions shall enter into effect at the time of the implementation of the modification. Appropriate education or training of the personnel and any significant adjustments of the simulator, if provided for the facility, shall be implemented prior to the implementation of the modification. |
| Q 4.3 | Before commissioning modified plant or putting plant back into operation after modification, personnel shall have been trained, as appropriate, and all relevant documents necessary for plant operation shall have been updated. | JV9 39/5 | (5) Upravljavec sevalnega ali jedrskega objekta mora na podlagi sprememb na opremi pripraviti tudi spremembe vsebine pisnih postopkov, ki so povezani z opremo, in morajo postati veljavni hkrati z izvedbo spremembe. Ustrezno izobraževanje ali usposabljanje osebja in morebitne pomembnejše prilagoditve simulatorja, če ta obstaja za ta objekt, morajo biti izvedeni pred uvedbo spremembe. | (5) Based on the modifications of the equipment, the facility operator of a radiation or nuclear facility shall revise the contents of the written procedures concerning equipment; such revisions shall enter into effect at the time of the implementation of the modification. Appropriate education or training of the personnel and any significant adjustments of the simulator, if provided for the facility, shall be implemented prior to the implementation of the modification. |
| Q 5.1 | All temporary modifications73 shall be clearly identified at the point of application and at any relevant control position74. Operating personnel shall be clearly informed of these modifications and of their consequences for the operation of the plant.  73 Examples of temporary modifications are temporary bypass lines, electrical jumpers, lifted electrical leads, temporary trip point settings, temporary blank flanges and temporary defeats of interlocks. This category of modifications also includes temporary constructions and installations used for maintenance of the design basis configuration of the plant in emergencies or other unanticipated situations. Temporary modifications in some cases may be made as an intermediate stage in making permanent modifications. IAEA Guide NS-G-2.3, Para 6.1  74 By relevant control position it is meant any control point important for the modified system and also any administrative aspect related to the system in which the temporary modification has been implemented. | JV9 37/2-3 | (2) Začasna sprememba mora biti jasno označena kot začasna že v predlogu ter kot taka obravnavana, ocenjena in razvrščena v kategorijo v skladu s 34., 35. in 36. členom tega pravilnika.  (3) Za začasne spremembe morajo biti izdelani posebni pisni postopki, ki določajo najmanj:  1. osebje, ki lahko začne, odobri, izvede ali odstrani začasno spremembo;  2. nadzor nad dokumentacijo, na katero vpliva začasna sprememba;  3. vodenje evidence in označevanje opreme, ki jo začasna sprememba zadeva;  4. predložitev informacij obratovalnemu osebju;  5. čas veljavnosti in način podaljševanja trajanja začasne spremembe;  6. preverjanje konfiguracije SSK in obveščanje obratovalnega osebja po odstranjeni začasni spremembi. | (2) Any temporary modification shall be clearly designated as temporary in the proposal of modification and treated, assessed and categorised as a temporary modification in accordance with articles 34, 35 and 36 of these Rules.  (3) Specific written procedures shall be developed for temporary modifications and shall determine, as a minimum:  1. the personnel that may initiate, approve, implement or remove a temporary modification;  2. the control of documentation which may be afflected by the temporary modification;  3. the keeping of records and marking of equipment affected by the temporary modification;  4. the presentation of information to the operating personnel;  5. the period of validity and the method of prolongation of the temporary modification;  6. the verification of the SSC configuration and the informing of the operating personnel upon the removal of the temporary modification. |
| Q 5.2 | Temporary modifications shall be managed according to specific plant procedures. | JV9 37/3 | (3) Za začasne spremembe morajo biti izdelani posebni pisni postopki, ki določajo najmanj:  1. osebje, ki lahko začne, odobri, izvede ali odstrani začasno spremembo;  2. nadzor nad dokumentacijo, na katero vpliva začasna sprememba;  3. vodenje evidence in označevanje opreme, ki jo začasna sprememba zadeva;  4. predložitev informacij obratovalnemu osebju;  5. čas veljavnosti in način podaljševanja trajanja začasne spremembe;  6. preverjanje konfiguracije SSK in obveščanje obratovalnega osebja po odstranjeni začasni spremembi. | (3) Specific written procedures shall be developed for temporary modifications and shall determine, as a minimum:  1. the personnel that may initiate, approve, implement or remove a temporary modification;  2. the control of documentation which may be afflected by the temporary modification;  3. the keeping of records and marking of equipment affected by the temporary modification;  4. the presentation of information to the operating personnel;  5. the period of validity and the method of prolongation of the temporary modification;  6. the verification of the SSC configuration and the informing of the operating personnel upon the removal of the temporary modification. |
| Q 5.3 | The number of simultaneous temporary modifications shall be kept to a minimum. The duration of a temporary modification shall be limited. | JV9 37/1 | (1) Upravljavec sevalnega ali jedrskega objekta si mora prizadevati, da je število začasnih sprememb v objektu čim manjše. Časovna veljavnost začasne spremembe mora biti določena in dokumentirana. | (1) The facility operator of a radiation or nuclear facility shall keep the number of simultaneous temporary modifications of the facility to a minimum. The duration of a temporary modification shall be determined and documented. |
| Q 5.4 | The licensee shall periodically review outstanding temporary modifications to determine whether they are still needed. | JV9 37/4 | (4) Upravljavec objekta mora najmanj enkrat na leto pregledati vse začasne spremembe. Preveriti mora skladnost pisnih postopkov, navodil osebju in druge dokumentacije z odobreno začasno spremembo. Pregled mora obsegati tudi oceno nadaljnje potrebe po začasni spremembi, odprave začasne spremembe ali prekvalifikacije v stalno spremembo. Odstranitev začasne spremembe ali prekvalifikacija v stalno spremembo se mora izvesti v skladu s programom in postopki za izvajanje sprememb. | (4) At least once a year, the facility operator of a radiation or nuclear facility shall review all the outstanding temporary modifications. The review shall cover the conformity of written procedures, instructions to personnel and other documents with the approved temporary modification. The review shall also involve the assessment of the need to retain the temporary modification or of the need to transform it into a permanent modification. The removal of a temporary modification or its transformation into a permanent modification shall comply with the programs and procedures for implementing the modification. |
| R: On-site Emergency Preparedness | |  |  |  |
| R 1.1 | The licensee shall provide arrangements for responding effectively to events requiring protective measures at the scene for:  (a) ~~Regaining control of any~~ Controlling an emergency situation arising at their site, following any reasonably foreseeable event, including events related to combinations of ~~non-nuclear and nuclear~~ hazards as well as events involving all nuclear installations and ~~other~~ facilities on the site;  (b) Preventing or mitigating the consequences at the scene of any such emergency: and  (c) Co-operating with external emergency response organizations in preventing adverse health effects ~~in~~to workers and the public. | JV9 59/2 | (2) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti ukrepe za njegov učinkoviti odziv na dogodke, ki zahtevajo zaščitne ukrepe na lokaciji objekta, in sicer za:  1. nadzor izrednih razmer, nastalih na lokaciji objekta po kakršnem koli smiselno predvidljivem dogodku, vključno z dogodki, ki so posledica kombinacij ogroženosti, pa tudi dogodki, ki prizadenejo vse enote in objekte na lokaciji;  2. preprečitev in omilitev posledic dogodkov iz prejšnje alineje;  3. sodelovanje z zunanjimi organizacijami pri preprečevanju škodljivih vplivov za zaposlene in prebivalstvo. | (2) The facility operator of a radiation or nuclear facility shall provide arrangements for responding effectively to events requiring protective measures at the scene for:  1. controlling an emergency situation arising at their site, following any reasonably foreseeable event, including events related to combinations of hazards as well as events involving all nuclear installations and facilities on the site;;  2. preventing and mitigating the consequences of events referred to in the previous subparagraph;  3. cooperation with external emergency response organisations in preventing adverse health effects to workers and the public.R1.1  (3) The operator of a radioactive waste or spent fuel disposal facility shall ensure that the measures referred to in paragraphs 1 and 2 of this article, have no unacceptable effect on the safety of the facility during the period of operation and after its closure. |
| R 2.1 | The licensee shall prepare an on-site emergency plan and establish the necessary organizational structure for clear allocation of responsibilities, authorities, and arrangements for co-ordinating plant activities and co-operating with external response agencies in a timely manner and throughout all phases of an emergency. | JV9 60/1 | (1) Upravljavec sevalnega ali jedrskega objekta, ki mora izdelati načrt zaščite in reševanja objekta, mora zagotoviti potrebno organiziranost za ravnanje ob izrednem dogodku z jasno določenimi odgovornostmi in pristojnostmi izvajalcev intervencijskih ukrepov (v nadaljnjem besedilu: organizacija za obvladovanje izrednega dogodka). Zagotoviti mora vse potrebno za uskladitev dejavnosti ob izrednem dogodku v objektu in za pravočasno sodelovanje z zunanjimi organizacijami ves čas trajanja izrednega dogodka. | (1) The facility operator of a radiation or nuclear facility shall prepare an on-site emergency plan of the facility and ensure the necessary organizational structure for clear allocation of responsibilities, authorities and arragements to personnel (hereinafter referred to as: organisation for emergency management). The facility operator shall take all necessary measures to ensure coordination of on-site and off-site actions in a timely manner and throughout in all phases of an emergency. |
| R 2.2 | The licensee shall provide for: |  |  |  |
| R 2.2 a | (a) Prompt recognition and classification of emergencies, consistent with the criteria set for alerting the appropriate authorities; | JV9 61/1/1 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  1. hitro prepoznavanje in razvrstitev izrednega dogodka v stopnjo nevarnosti glede na merila, določena za obveščanje pristojnih organov; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  1. prompt recognition and classification of emergencies, consistent with the criteria set for alerting the appropriate authorities; |
| R 2.2 b | (b) Timely notification and alerting of response personnel; | JV9 61/1/3 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  3. pravočasno sporočanje in alarmiranje izvajalcev intervencijskih ukrepov; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  3. timely notification and alerting of response personnel; |
| R 2.2 c | (c) Ensuring the safety of all persons present on the site, including the protection of the emergency workers; | JV9 61/1/4 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  4. varnost vseh ljudi na lokaciji objekta, vključno z zaščito izvajalcev intervencijskih ukrepov; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  4. ensuring the safety of all persons present on the site, including the protection of the emergency workers; |
| R 2.2 d | (d) Informing the authorities and the public, including timely notification and subsequent provision of information as required; | JV9 61/1/5 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  5. obveščanje pristojnih državnih organov in javnosti, kar vključuje tudi pravočasno sporočanje in nadaljnje zagotavljanje podatkov, pri čemer morajo biti o izrednem dogodku pristojni državni organ takoj obveščeni uprava, regijski center za obveščanje in Center za obveščanje Republike Slovenije, če gre za izredni dogodek; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  5. informing the authorities and the public, including timely notification and subsequent provision of information as required. In the case of emergency shall be immediately informed Admistration, regional notification center and Center for information of the Republic of Slovenia; |
| R 2.2 e | (e) Performing assessments of the current and foreseeable situation on the technical, & radiological points of view (on and off site); | JV9 61/1/6 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  6. ocenjevanje trenutnega in predvidenega tehničnega stanja objekta in radioloških razmer na lokaciji objekta in v njegovi okolici; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  6. current and foreseeable assessment assessment of the technical condition of the facility and of radiological conditions on-site and off-site; |
| R 2.2 f | (f) Monitoring radioactive releases; | JV9 61/1/9 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  9. spremljanje radioaktivnih izpustov; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  9. monitoring of radioactive releases; |
| R 2.2 g | (g) Treatment and first aid of a limited number of contaminated and/or overexposed workers/persons on site; and | JV9 61/1/10 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  10. oskrbo in prvo pomoč za kontaminirane ali čezmerno obsevane delavce in druge ljudi z območja lokacije sevalnega ali jedrskega objekta; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  10. treatment of and first aid to any contaminated or over-exposed workers and other persons coming from the radiation or nuclear facility site; |
| R 2.2 h | (h) Plant management and damage control75.  75 Understood as urgent mitigatory repairs, controls, and other actions that are carried out, primarily at the site, while the emergency is still in progress. | JV9 61/1/11 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  11. upravljanje objekta, nadzor in izvajanje intervencijskih ukrepov, vključno z gašenjem požarov in izvajanjem popravljalnih ukrepov; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  11. facility management, control and implementation of intervention corrective measures including; fire fighting and implementation of corrective actions; |
| R 2.3 | The site emergency plan shall be based upon an assessment of reasonably foreseeable events and situations that may require protective measures on- or off-site. The plan shall:  - address long-lasting situations;  - clarify how site (and if applicable corporate) resources (human and material) common to several installations are used;  - be co-ordinated with all other involved bodies; The plan shall be capable of extension, should more ~~improbable~~, severe events occur. | JV9 60/2, 60/3/2,3,5, 61/2/1 | (2) Načrt zaščite in reševanja iz prvega odstavka mora biti pripravljen vnaprej in mora temeljiti na oceni ogroženosti, ki vključuje smiselno predvidljive dogodke in druge razmere, ki lahko zahtevajo zaščitne ukrepe na lokaciji objekta ali zunaj nje in vključujejo izpostavitev delavcev in prebivalstva.  (3) Načrt zaščite in reševanja objekta iz prvega odstavka tega člena mora:  …  2. obravnavati tudi dolgotrajne izredne dogodke;  3. določiti, kako se uporabljajo materialna sredstva in človeški viri objekta oziroma upravljavca, ki so skupni več objektom;  …  5. omogočati razširitev v primeru, ko se med izrednim dogodkom zgodi drug dogodek s hujšimi posledicami kot pri potekajočem dogodku.  (2) Načrt zaščite in reševanja mora vsebovati naslednje:  1. koncept zaščite, reševanja in pomoči za vse vrste izrednih dogodkov, usklajen s konceptom zaščite, reševanja in pomoči v državnem načrtu, ki ureja zaščito in reševanje ob jedrski ali radiološki nesreči; | (2) The emergency plan of the facility referred to in the previous paragraph shall be prepared in advance and based on threat assessment. It includes reasonably foreseeable events and other situations that may require safeguards on the location or outside of the facility and include the exposure of workers and the general public.  (3) The emergency plan of the facility referred to in paragraph 1 of this article shall:  2. address long-lasting situations;  3. determine how are used material and human resources of the facility or operator common to several installations;  5. enable the extension in the case when during the emergency occur another event with serious consequences than the ongoing event.  (2) The emergency plan shall contain the following:  1. concept of emergency plan for all types of emergencies, harmonised with National Emergency Response Plan for Nuclear and Radiological Accidents; |
| R 3.1 | The licensee shall have people on-site at all times with the authority and responsibilities to classify and declare an emergency and, upon classification, to initiate promptly the appropriate on-site response76.  76 The on duty shift supervisor could be among those authorised to declare an emergency and to initiate the appropriate on-site response. | JV9  62/1/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti:  1. stalno prisotnost v objektu oziroma za objekte, ki niso jedrska elektrarna, dosegljivost osebja s pristojnostjo in odgovornostjo za razvrstitev in razglasitev izrednega dogodka ter takojšnje izvajanje načrta zaščite in reševanja objekta; | (1) The facility operator of a radiation or nuclear facility shall ensure:  1. continuous presence on site, or, in the case of facilities other than a nuclear power plant, continuous accessibility of the personnel with the authority and responsibility to classify and declare an emergency and to promptly initiate the implementation of the emergency plan of facility; |
| R 3.2 | Sufficient number~~s~~ of qualified personnel shall be available at all times for staffing appropriate positions promptly following the declaration and notification of an emergency. Arrangements shall be established to ensure that sufficiently qualified personnel can staff appropriate emergency positions in long-lasting situations. | JV9 62/1/2 | (1) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti:  2. zadostno število usposobljenega osebja za prevzem delovnih mest v organizaciji za obvladovanje izrednega dogodka objekta takoj po razglasitvi začetka takega dogodka. Zagotavljati je treba tudi zadostno število dovolj usposobljenega osebja za dolgotrajne izredne dogodke; | (1) The facility operator of a radiation or nuclear facility shall ensure:  2. sufficient numbers of qualified personnel for staffing appropriate positions in the emergency management organisation promptly following the declaration of the emergency. Arrangements shall be established to ensure that sufficiently qualified personnel can staff appropriate emergency positions in long-lasting situations.; |
| R 3.3 | Arrangements shall be made to provide technical assistance to operational staff. Teams for mitigating the consequences of an emergency (e.g. radiation protection, damage control, fire fighting, etc) shall be available. | JV9  62/1/3-4 | (1) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti:  3. potrebno tehnično pomoč za osebje, ki upravlja objekt;  4. razpoložljivost ustreznih služb za omejitev posledic izrednega dogodka, npr. službe za varstvo pred sevanji, vzdrževalcev, požarne zaščite in drugih; | (1) The facility operator of a radiation or nuclear facility shall ensure:  3. adequate technical assistance to operating personnel;  4. availability of appropriate services to mitigate the consequences of an emergency, e.g. radiation protection service, maintenance personnel, fire fighting service and others; |
| R 3.4 | Arrangements shall be made to alert off-site responsible authorities promptly. | JV9 61/1/5 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  5. obveščanje pristojnih državnih organov in javnosti, kar vključuje tudi pravočasno sporočanje in nadaljnje zagotavljanje podatkov, pri čemer morajo biti o izrednem dogodku pristojni državni organ takoj obveščeni uprava, regijski center za obveščanje in Center za obveščanje Republike Slovenije, če gre za izredni dogodek; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  5. informing the authorities and the public, including timely notification and subsequent provision of information as required. In the case of emergency shall be immediately informed Admistration, regional notification center and Center for information of the Republic of Slovenia; |
| R 3.5 | The licensee shall identify those who are authorized to carry out the response functions assigned in the emergency plan. | JV9 61/1/2 | (1) Načrt zaščite in reševanja objekta iz prejšnjega člena mora poleg zahtev iz predpisov, ki urejajo varstvo pred naravnimi in drugimi nesrečami, zagotoviti:  2. organiziranost za obvladovanje izrednega dogodka z jasno določenimi odgovornostmi in pristojnostmi izvajalcev intervencijskih ukrepov; | (1) In addition to the compliance with the requirements of legal provisions governing protection against natural and other disasters, the on-site emergency plan of the facility referred to in the previous article shall ensure:  2. appropriate response organisation, with clearly allocated responsibilities and competencies of the operating organization staff; |
| R 3.6 | The licensee emergency response shall be functional in cases where infrastructures at the site and around the site are severely disrupted. | JV9 62/1/11 | (1) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti:  11. zmožnost ukrepanja v primerih, ko je infrastruktura na lokaciji objekta in okoli nje močno okrnjena, ter zagotovitev potrebne zunanje pomoči pri ukrepanju na lokaciji objekta tudi v takih primerih; | (1) The facility operator of a radiation or nuclear facility shall ensure:  11. arrangements to support on site actions, in place with considerations for large-scale destruction of infrastructure in the vicinity of the site due to external hazards; |
| R 3.7 | Arrangements to support on-site actions shall be in place with considerations for large-scale destruction of infrastructure in the vicinity of the site due to external hazards. | JV9 62/1/11 | (1) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti:  11. zmožnost ukrepanja v primerih, ko je infrastruktura na lokaciji objekta in okoli nje močno okrnjena, ter zagotovitev potrebne zunanje pomoči pri ukrepanju na lokaciji objekta tudi v takih primerih; | (1) The facility operator of a radiation or nuclear facility shall ensure:  11. arrangements to support on site actions, in place with considerations for large-scale destruction of infrastructure in the vicinity of the site due to external hazards; |
| R 4.1 | Appropriate emergency facilities shall be designated for responding to events on site and that will provide co-ordination of off-site monitoring and assessment throughout different phases of an emergency response. | JV9 63/1/1 | (1) Upravljavec jedrske elektrarne mora poleg zahtev iz prejšnjega člena zagotoviti:  1. ustrezne zmogljivosti, vključno z zunanjim podpornim centrom za vodenje celovitega odziva upravljavca jedrske elektrarne na izredni dogodek. Tak center mora imeti zmogljivosti za koordinacijo radiološkega monitoringa, presojo stanja v okolici elektrarne, izdelavo priporočil za zaščitne ukrepe in koordinacijo dejavnosti z zunanjimi organizacijami; | (1) In addition to fulfillment of the requirements of the previous article, the facility operator of a nuclear power plant shall ensure:  1. appropriate capabilities, including an offsite support centre intended for the management of the integrated emergency response of the facility operator of the nuclear power plant. Such a centre shall provide facilities for coordination of off-site radiation monitoring, assessment of the condition in the vicinity of the power plant, issuing recommendations for protective measures and coordination of activities with external organisations; |
| R 4.2 | An “On-site Emergency Control Centre”, which is separated from the main ~~plan~~t control room, shall be provided for on-site emergency management staff. Important information shall be available in the control centre about the plant and radiological conditions on and around the site. The centre shall have means of communicating with the control room, any supplementary control room, other important points on site, and with the on-site and off-site emergency response organizations77.  77 The On-site Emergency Control Centre is the office accommodation and associated office services set aside on or near to the site for staff who are brought together to provide technical support the Operations staff during an emergency or where the licensee emergency response is directed. It may have plant information systems available, but is not expected to have any plant controls | JV9 63/1/2 | (1) Upravljavec jedrske elektrarne mora poleg zahtev iz prejšnjega člena zagotoviti:  2. tehnični podporni center za osebje za obvladovanje izrednega dogodka. Center mora biti ločen od glavne komandne sobe in mora imeti na voljo vse pomembne podatke o stanju jedrske elektrarne ter o radiološkem stanju v njej in njeni okolici. Imeti mora možnost komunikacije s komandno sobo in pomožno komandno sobo ter drugimi pomembnimi mesti v jedrski elektrarni, pa tudi z organizacijo za obvladovanje izrednega dogodka in zunanjimi organizacijami; | (1) In addition to fulfillment of the requirements of the previous article, the facility operator of a nuclear power plant shall ensure:  2. a technical support centre for the personnel involved in emergency management. Such a centre, which is separated from the main control room shall have access to all important information on the condition of the power plant and on the radiological conditions on and around the site. It shall have the means of communicating with the control room and supplementary control room, and with other important points in the nuclear power plant, as well as with organization for emergency management nad external organisations; |
| R 4.3 | Emergency facilities shall be suitably located, designed and protected to ~~enable the exposure of~~  ~~emergency workers to be controlled~~  - remain operational for accident conditions to be managed (including design extensionconditions) from these facilities;  - allow the protection from radiation as well as control of radiation exposure of emergency workers78.  Appropriate measures shall be taken to protect those occupying emergency facilities for a protracted time from hazards resulting from accident~~s~~ conditions79.  78 Emergency workers include workers from the operating organisation and, if necessary, contractors, as well as off-site emergency responders that may be needed on-site.  79 This refers, primarily, to ensuring that the On-site Emergency Control Centre and other locations where staff are expected to spend a significant time are located somewhere that the staff can reach and work throughout an extended emergency with minimum risk to health. This will require location away from areas that are likely to be damaged or~~f~~ affected by radiation fields and, where appropriate, this will include provision of recirculatory air conditioning and continuous radiation monitoring systems. | JV9/63/1/3 | (1) Upravljavec jedrske elektrarne mora poleg zahtev iz prejšnjega člena zagotoviti:  3. prostore, ki se uporabljajo pri izvajanju načrta zaščite in reševanja objekta. Ti prostori morajo biti primerno umeščeni, projektirani in zaščiteni, da ostanejo operativni v razmerah ob nesreči, vključno z razmerami ob razširjenih projektnih nesrečah, ki jih je treba obvladovati iz teh prostorov. Zagotavljati morajo zaščito pred sevanji in nadzor nad izpostavljenostjo izvajalcev interventnih dejavnosti. Z ustreznimi ukrepi je treba zagotoviti zaščito osebja, ki se zadržuje v teh prostorih dlje časa, pred nevarnostmi zaradi razmer ob nesreči. Ti ukrepi so predvsem taka umestitev prostorov, kjer se zadržuje osebje med nesrečo večino časa, da je tveganje za zdravje osebja ob prihodih, izhodih in zadrževanju v teh prostorih čim manjše. Ne smejo biti umeščeni v bližini objektov, za katere se predvideva, da bodo poškodovani, oziroma v bližini območij z visokim sevanjem. Prostori morajo imeti ustrezno prezračevanje in sistem za spremljanje sevanja; | (1) In addition to fulfillment of the requirements of the previous article, the facility operator of a nuclear power plant shall ensure:  3. premises for use in the implementation of the emergency plan of facility. These premises shall be suitably located, designed and protected to remain operational during the accident condition, including the situation in extended design basis accidents, which can be controlled from those premises. They shall provide radiation protection and control limits for operating organization staff. Appropriate measures shall be taken to protect workers, which stay at such premises a long time. before the dangers of the situation at the accident These measures are mainly such placement of premises occupied by personnel during an emergency most of the time that the risk to the health of workers at the arrivals, exits and retention in such premises as small as possible. They shall not be placed near the buildings, which are assumed to be damaged, or near areas with high radiation. Premises shall have adequate ventilation and a system for monitoring radiation; |
| R 4.4 | Instruments, tools, equipment, documentation, and communication systems for use in emergencies (including necessary mobile equipment and consumables such as fuel, lubrication oil etc.), whether located on-site or off-site, shall be stored, maintained, tested and inspected sufficiently frequently so that they will be available and operational during DBA and DEC. Access to these storage locations shall be possible even in case of extensive infrastructure damage. | JV9 63/1/4 | (1) Upravljavec jedrske elektrarne mora poleg zahtev iz prejšnjega člena zagotoviti:  4. inštrumente, orodje, opremo, dokumentacijo in sisteme za komunikacijo, ki se uporabljajo ob izrednem dogodku, vključno s potrebno mobilno opremo in potrošnim materialom. Vse našteto mora biti:  ‒ vedno dostopno, ne glede na to, ali se nahaja na lokaciji objekta ali izven nje,  ‒ ustrezno skladiščeno, redno preizkušano, pregledovano in vzdrževano, tako da se ohranja uporabnost, vključno z ustrezno podporno dokumentacijo,  ‒ uporabno med projektnimi nesrečami in razširjenimi projektnimi nesrečami,  ‒ shranjeno tako, da morebitna nesreča na vse našteto ne bi imela neželenega vpliva,  ‒ dostop do mest hrambe mora biti mogoč tudi v primeru večjega uničenja infrastrukture. | (1) In addition to fulfillment of the requirements of the previous article, the facility operator of a nuclear p 4. instruments, tools, equipment, documentation and communication systems for use in an emergency including the necessary mobile equipment and consumables. All of the above shall be:  - always available, regardless of whether it is located on site or off site of the facility;  - properly stored, regularly tested, inspected and maintained, so as to maintain the usefulness, of including appropriate supporting documents;  - usful during design basis accidents and design extended condition;  - stored in such a way that any accident at all of the above would not have any adverse impact,  - access to these storage locations shall be possible even in case of extensive infrastructure damage.ower plant shall ensure: |
| R 5.1 | Arrangements shall be made to identify the knowledge, skills, and abilities needed for personnel (operating organization staff and, if necessary, contractors) to perform their assigned response functions. | JV9 64/1 | (1) Upravljavec sevalnega ali jedrskega objekta mora določiti znanje, veščine in sposobnosti za izvajanje nalog ob izrednem dogodku, ki jih potrebujejo izvajalci interventnih dejavnosti in osebje zunanjih organizacij, s katerimi ima upravljavec sevalnega ali jedrskega objekta urejeno zagotavljanje nalog za obvladovanje izrednega dogodka na območju sevalnega ali jedrskega objekta. | (1) The facility operator of a radiation or nuclear facility shall make arrangements to identify the knowledge, skills and abilities needed for operating organization staff and contractors, with which the operator of a radiation or nuclear facility perform their functions in response to an emergency management in the site of radiation or nuclear facility. |
| R 5.2 | Arrangements shall be made to inform all employees and all other persons present on the site of the actions to be taken in the event of an emergency. | JV9 66/3 | (3) Upravljavec sevalnega ali jedrskega objekta mora zagotoviti predhodno obveščanje izvajalcev interventnih dejavnosti in drugih ljudi na lokaciji objekta o dejavnostih, ki bi se izvedle ob izrednem dogodku. To mora biti vključeno v vaje iz 64. člena tega pravilnika. | (3) The facility operator of a radiation or nuclear facility shall provide prior notification of operating organization staff and other people on the site, on the activities that would be carried out in case of emergency. This should be included in the exercises from the Article 64 of this Rules. |
| R 5.3 | Training arrangements shall include basic emergency training and ongoing refresher training on an appropriate schedule and shall ensure that emergency response personnel (operating organization staff and, if necessary, contractors) meet the training obligations. | JV9 64/2 | (2) Usposabljanje izvajalcev interventnih dejavnosti mora obsegati temeljno usposabljanje o načrtu zaščite in reševanja objekta, usposabljanje iz varstva pred sevanji in nadaljevalno obnovitveno usposabljanje v časovnih zaporedjih, s katerimi se zagotovi ohranjanje potrebnega znanja. Upravljavec sevalnega ali jedrskega objekta mora zagotoviti, da opravijo načrtovano usposabljanje izvajalci interventnih dejavnosti in osebje zunanjih organizacij, s katerimi ima upravljavec sevalnega ali jedrskega objekta urejeno zagotavljanje nalog za obvladovanje izrednega dogodka na območju sevalnega ali jedrskega objekta. | (2) The training of the operating organization staff shall include basic emergency training and ongoing refresher training on an appropriate schedule to maintain the required level of knowledge. The facility operator of a radiation or nuclear facility shall ensure the implementation of the planned training for operating organization staff and contractors with which the operator of a radiation or nuclear facility perform their functions in response to an emergency management in the site of radiation or nuclear facility. |
| R 5.4 | The site emergency plan shall be regularly exercised at least annually. Some exercises shall be integrated to include as many as possible of the off-site organizations concerned. For sites with multiple nuclear installations, some exercises shall address situations affecting multiple facilities on the site. Exercises shall also include the use and connection of mobile equipment, if any. | JV9 64/3 | (3) Upravljavec jedrske elektrarne mora redno, najmanj enkrat na leto, preveriti načrt zaščite in reševanja objekta z izvedbo vaje. Vaje morajo vključevati čim več zunanjih organizacij, s katerimi ima upravljavec sevalnega ali jedrskega objekta urejeno zagotavljanje nalog za obvladovanje izrednega dogodka na območju sevalnega ali jedrskega objekta. Za lokacije z več jedrskimi objekti morajo nekatere vaje vključevati tudi dogodke, ki prizadenejo več objektov na lokaciji. Vaje morajo vključevati tudi uporabo in priključitev mobilne opreme, če ta obstaja. | (3) The site emergency plan shall be regularly exercised at least annually. Some exercises shall be integrated to include as many as possible of the off-site organizations concerned. For sites with multiple nuclear installations, some exercises shall address situations affecting multiple facilities on the site. Exercises shall also include the use and connection of mobile equipment, if any. |
| R 5.5 | Emergency exercises shall be evaluated systematically, and the emergency preparedness arrangements and the plan shall be subject to review and updating in the light of experience gained. | JV9 64/5 | (5) Vaje za morebitni izredni dogodek morajo biti sistematično ovrednotene. Pridobljene izkušnje morajo biti uporabljene za pregled in posodobitev načrta zaščite in reševanja objekta. | (5) Exercises in emergency management shall be systematically evaluated. The experience gained shall be applied in the review and updating of the emergency plan of the facility. |
| S: Protection against Internal Fires | |  |  |  |
| S 1.1 | The licensee shall implement the defence in depth principle to fire protection, providing measures to prevent fires from starting, to detect and extinguish quickly any fires that do start and to prevent the spread of fires and their effects in or to any area that may affect safety80.  80 In this context, safety refers to all sources of nuclear safety risk, including radioactive waste facilities. | JV5 P1/3.1 | Protipožarna zaščita mora upoštevati načelo obrambe v globino tako, da se zagotovijo:  - ukrepi, ki preprečujejo nastanek požarov,  - hitro zaznavanje, nadzor in pogasitev vsakega požara ter  - preprečitev širitve požara in njegovih posledic na katerem koli območju, kjer bi bila lahko ogrožena varnost jedrske elektrarne, ali do tega območja. | Fire protection shall observe the defence-in-depth principle, to ensure:  - measures to prevent occurrence of fire;  - fast detection, containment and suppression of fires;  - prevention of fire spreading and consequences in any area where they might compromise nuclear power plant safety, or of fire reaching such areas. |
| S 2.1 | SSCs important to safety shall be designed and located so as to minimize the frequency and the effects of fire and to maintain capability for shutdown, residual heat removal, confinement of radioactive material and monitoring of plant state during and after a fire event. | JV5 P1/3.2/1 | 1. SSK, pomembni za varnost, morajo biti projektirani in nameščeni tako, da se:  – kar najbolj zmanjšajo verjetnost za nastanek požara in posledice požara,  – zagotovi zmožnost zaustavitve elektrarne,  – zagotovi zmožnost odvajanja zaostale toplote,  – omeji širjenje radioaktivnih snovi in  – zagotovi nadzor razmer v jedrski elektrarni med požarom in po njem. | 1. Safety related SSCs shall be designed and installed as to:  - minimise the risks of occurrence of fire and its consequences;  - ensure the capability of plant shutdown;  - ensure the capability of residual-heat removal;  - limit the spreading of radioactive substances;  - ensure control over the situation in the nuclear power plant during and following a fire. |
| S 2.2 | Buildings that contain SSCs important to safety shall be suitably81, fire resistant.  81 In accordance with the results of the fire hazard analysis. | JV5 P1/3.2/2 | 2. Zgradbe s SSK, pomembnimi za varnost, morajo biti protipožarno zaščitene v skladu z rezultati analize požarne nevarnosti iz točke 3.4 te priloge. | 2. The buildings containing safety-related SSCs shall be protected against fire in compliance with the findings of the analysis of fire risks referred to item 3.4. of this Annex. |
| S 2.3 | Buildings that contain equipment that is important to safety shall be subdivided into compartments that segregate such items from fire loads and segregate redundant or diverse trains of a safety system~~s~~ from each other82. When a fire compartment approach is not practicable, fire cells shall be used83, providing a balance between passive and active means, as justified by fire hazard analysis.  82 A fire compartment is a building or part of building that is completely surrounded by fire resistant barriers of sufficient rating so that a total combustion of the fire load can occur without breaching the barriers. (Barriers comprise doors, walls, floors and ceilings.) The fire resistance rating of the barriers must be sufficiently high so that the total combustion of the fire load in the compartment can occur without breaching the barriers.  83 In the fire cell approach the spread of fire is avoided by substituting the fire resistant barriers primarily with other passive provisions (e.g. distance, thermal insulation, etc.), that take into account all physical and chemical phenomena that can lead to propagation. Provision of active measures (e.g. fire extinguishing systems) may also be needed in order to achieve a satisfactory level of protection. The achievement of a satisfactory level of protection is demonstrated by the results of the fire hazard analysis. | JV5 P1/3.3/1-3 | 1. Zgradbe, v katerih je za varnost pomembna oprema ali so radioaktivne snovi, in zgradbe, v katerih bi požar lahko vplival na varnost jedrske elektrarne, morajo biti projektirane tako, da so požarno čim varnejše in po potrebi razdeljene na požarne sektorje.  2. Požarni sektorji iz prejšnjega odstavka morajo preprečiti, da bi požar obremenilno vplival na opremo, pomembno za varnost, in ločiti redundantne ali raznovrstne proge posameznih varnostnih sistemov med seboj.  3. Če razdelitev na požarne sektorje iz prejšnjega odstavka ni mogoča ali primerna, je treba uporabiti razdelitev na požarne celice ter zagotoviti ravnovesje med pasivno in aktivno varnostjo, kar mora potrditi analiza požarne nevarnosti iz točke 3.4 te priloge. | 1. Buildings containing safety-related equipment or radioactive substances and buildings, in which a fire might compromise the nuclear power plant's safety, shall be designed so as to maximise their fire safety, and shall be divided into fire compartments as appropriate.  2. Fire compartments referred to in the previous paragraph shall prevent fire loads to safety-related equipment and separate redundant or diverse trains of a safety system.  3. In the case that the division into fire compartments referred to in the previous paragraph is not practicable or is not reasonable, division into fire cells shall be applied and balance achieved between passive and active safety; this shall be confirmed by the fire-risk analysis referred to in Item 3.4 of this Annex. |
| S 2.4 | Buildings that contain radioactive materials that could cause radioactive releases in case of fire shall be designed to minimize such releases. | JV5 P1/3.3/4 | 4. Zgradbe, v katerih so radioaktivne snovi in v katerih bi požar lahko povzročil radioaktivne izpuste, morajo biti projektirane tako, da bi bili ob požaru taki izpusti čim manjši. | 4. Buildings containing radioactive substances and in which fire might result in radioactive releases shall be designed so as to minimise such releases in the event of fire. |
| S 2.5 | Access and escape routes for fire fighting and operating personnel shall be available. | JV5 P1/3.3/5 | 5. Projekt mora zagotoviti požarne poti za vse, ki sodelujejo pri obvladovanju požara, in evakuacijske poti za zaposlene v objektu. | 5. The design shall provide for fire routes for all personnel involved in fire containment and evacuation routes for all plant personnel. |
| S 3.1 | A fire hazard analysis shall be carried out and kept updated to demonstrate that the fire safety objectives are met, that the fire design principles are satisfied, that the fire protection measures are appropriately designed and that any necessary administrative provisions are properly identified. | JV5 P1/3.4/1-2 | 1. Požarno varnost jedrske elektrarne je treba dokazati z analizo požarne nevarnosti, ki jo je treba posodabljati po vsaki večji spremembi oziroma najmanj vsaki dve leti.  2. Analiza požarne nevarnosti mora potrditi, da so:  – doseženi vsi cilji protipožarne zaščite,  – upoštevana načela protipožarnega projektiranja,  – pravilno načrtovani ukrepi protipožarne zaščite in  – pravilno izvedeni vsi potrebni administrativni ukrepi. | 1. Fire protection of a nuclear power plant shall be demonstrated by a fire-risk analysis, which shall be updated upon any major modification or at intervals of a maximum of two years.  2. The fire-risk analysis shall confirm:  - achievement of all the fire-protection objectives;  - compliance with fire-protection design principles;  - proper design of fire-protection measures, and  - proper implementation of all the necessary administrative measures. |
| S 3.2 | The fire hazard analysis shall be developed on a deterministic basis, covering at least:  - For all normal operating and shutdown states, a single fire and consequential spread, anywhere that there is fixed or transient combustible material;  - Consideration of credible combination of fire and other PIEs likely to occur independently of a fire. | JV5 P1/3.4/3 | 3. Deterministični del analize požarne nevarnosti mora zajeti vsaj:  – posamezne požare, pa tudi njihovo širitev na vseh lokacijah, kjer so stalno ali začasno nameščene gorljive snovi, in to v vseh stanjih objekta, vključno z zaustavitvenimi;  – možne kombinacije požara in drugih predpostavljenih začetnih dogodkov, ki se lahko zgodijo neodvisno od požara. | 3. The deterministic part of the fire-risk analysis shall include, as a minimum:  - individual fires as well as their spreading in all locations where combustible materials are kept on a temporary or permanent basis, in all the facility states, including the shutdown states;  - possible combinations of fires and other postulated initiating events that may occur independently of the fire. |
| S 3.3 | The fire hazard analysis shall demonstrate how the possible consequential effects of fire and extinguishing systems operation have been taken into account. | JV5 P1/3.4/4 | 4. Analiza požarne nevarnosti mora pokazati kako so upoštevane morebitne posledice požara in gašenja požara. | 4. The fire-risk analysis shall demonstrate the method of consideration of any consequences of the fire or its suppression. |
| S 3.4 | The fire hazard analysis shall be complemented by probabilistic fire analysis. In PSA level 1, the fires shall be assessed in order to evaluate the fire protection arrangements and to identify risks caused by fires. | JV5 P1/3.4/5 | 5. Sestavni del analize požarne nevarnosti je tudi verjetnostna varnostna analiza požarne nevarnosti, ki mora biti del verjetnostnih varnostnih analiz prve ravni. S to analizo je treba preveriti ustreznost ureditve in ukrepov protipožarne zaščite in določiti tveganja, ki jih povzročajo požari. | 5. A fire-risk analysis shall further include a probabilistic safety analysis of fire risks; this analysis shall constitute part of the level-one probabilistic safety analyses. This analysis shall verify the adequacy of the fire-protection arrangement and measures, and estimate the risks posed by fires. |
| S 4.1 | Each fire compartment or fire cell shall be equipped with fire detection and alarm features, with detailed annunciation for the control room staff of the location of a fire. These features shall be provided with non-interruptible emergency power supplies and appropriate fire resistant supply cables. | JV5 P1/3.5/1 | Projekt mora zagotoviti, da so za sisteme požarne varnosti izpolnjene naslednje zahteve:  1. Vsak požarni sektor in vsaka požarna celica morata biti opremljena s požarnimi detektorji in opozorilnimi napravami, v komandni sobi pa morajo biti alarmni sistemi, ki opozarjajo na požar in njegovo lokacijo. Ta sistem mora biti napajan iz brezprekinitvenega zasilnega vira napajanja s kabli, odpornimi proti požaru. | The design shall ensure the compliance of the fire-protection system with the following requirements:  1. Each fire compartment or fire cell shall be fitted with fire detectors and alarm devices; the control room shall be fitted with alarm systems to indicate the presence and location of a fire. The system shall be supplied from an uninterruptible emergency power supply through fire-resistant cables. |
| S 4.2 | Fixed or mobile, automated or manual extinguishing systems shall be installed. They shall be designed and located so that their rupture, spurious or inadvertent operation does not significantly impair the capability of SSCs important to safety to carry out their safety functions. | JV5 P1/3.5/2 | Projekt mora zagotoviti, da so za sisteme požarne varnosti izpolnjene naslednje zahteve:  2. V jedrski elektrarni morajo biti nameščeni stacionarni ali prenosni, samodejni ali ročni gasilni sistemi. Projektirani in nameščeni morajo biti tako, da s svojim delovanjem in možnimi okvarami ne preprečijo izpolnitve funkcije SSK, pomembne za varnost. | The design shall ensure the compliance of the fire-protection system with the following requirements:  2. A nuclear power plant shall be fitted with stationary and portable, automatic or manual fire extinguishers. Their design shall prevent their interference, through action or failure, with the achievement of the functions of safety-related SSCs |
| S 4.3 | The distribution loop for fire hydrants outside building and the internal standpipes shall provide adequate coverage of areas of the plant relevant to safety. The coverage shall be justified by the fire hazard analysis. | JV5 P1/3.5/3 | Projekt mora zagotoviti, da so za sisteme požarne varnosti izpolnjene naslednje zahteve:  3. Distribucijska zanka požarnih hidrantov zunaj zgradb in požarnih pip v notranjosti zgradb mora zagotoviti ustrezno pokritost za varnost pomembnih področij elektrarne. Pokritost mora biti utemeljena v analizi požarne nevarnosti. | The design shall ensure the compliance of the fire-protection system with the following requirements:  3. The outdoor fire-hydrant distribution loop and fire taps within the buildings shall ensure adequate coverage of safety-related areas of the facility. Coverage shall be substantiated in the fire-risk analysis. |
| S 4.4 | Ventilation systems shall be arranged such that each fire compartment fully fulfils its segregation purpose in case of fire. | JV5 P1/3.5/4 | Projekt mora zagotoviti, da so za sisteme požarne varnosti izpolnjene naslednje zahteve:  4. Ventilacijski sistemi morajo biti izvedeni tako, da je med požarom zagotovljena ločenost požarnih sektorjev. | The design shall ensure the compliance of the fire-protection system with the following requirements:  4. Ventilation system shall be implemented so as to maintain separation between fire compartments in an event of fire. |
| S 4.5 | Parts of ventilation systems (such as connecting ducts, fan rooms and filters) that are located outside fire compartments shall have the same fire resistance as the compartment or be capable of isolation from it by appropriately rated fire dampers. | JV5 P1/3.5/5 | Projekt mora zagotoviti, da so za sisteme požarne varnosti izpolnjene naslednje zahteve:  5. Zunanji deli ventilacijskih sistemov morajo imeti enake protipožarne lastnosti kakor njihovi deli v požarnem sektorju ali pa morajo imeti zagotovljeno možnost požarne izolacije z ustreznimi protipožarnimi loputami. | The design shall ensure the compliance of the fire-protection system with the following requirements:  5. Outdoor sections of ventilation systems shall have fire properties equivalent to sections within fire compartments, as an alternative, outdoor sections shall be provided with fire dampers to ensure their isolation. |
| S 5.1 | In order to prevent fires, procedures shall be established to control and minimize the amount of combustible materials and minimize the potential ignition sources that may affect items important to safety. In order to ensure the operability of the fire protection measures, procedures shall be established and implemented. They shall include inspection, maintenance and testing of fire barriers, fire detection and extinguishing systems. | JV5 P1/3.6 | 1. Za preprečevanje požara mora imeti upravljavec objekta uvedene postopke za nadzor ter zmanjševanje količine gorljivih snovi in zmanjšanje števila možnih povzročiteljev požara, ki lahko vplivajo na SSK, pomembne za varnost.  2. Upravljavec mora imeti in uporabljati postopke, s katerimi zagotavlja izvedljivost ukrepov protipožarne zaščite.  3. Upravljavec mora imeti uvedene postopke za preglede, vzdrževanje in preizkušanje požarnih pregrad, sistemov za detekcijo in gašenje požarov. | 1. For fire-prevention purposes, the facility operator shall implement appropriate procedures to monitor and minimise the volumes of combustible materials and to minimise the number of potential sources of fires that might affect safety-related SSCs.  2. The facility operator shall adopt and implement procedures to ensure the feasibility of fire-protection measures.  3. The facility operator shall implement procedures for inspection, maintenance and testing of fire barriers, detection systems and suppression systems. |
| S 6.1 | The licensee shall implement adequate arrangements for controlling and ensuring fire safety, as identified by the fire hazard analysis84  84 Such arrangements must include nominating persons to be responsible for or have duties with respect to fire protection. The arrangements must set out the requirements for control of all activities that can have impact on fire safety, e.g. Maintenance; control of materials; training; tests and drills; modifications to layouts and systems – such as fire detection, fire extinguishing, ventilation, electrical and control systems. | JV5 P1/3.7/1 | 1. Upravljavec mora izvesti ukrepe za nadzor in zagotavljanje protipožarne varnosti, ki izhajajo iz analize požarne nevarnosti. Ti ukrepi morajo vključevati imenovanje odgovorne osebe za izvajanje protipožarne varnosti in zahteve za nadzor vseh procesov, ki bi lahko vplivali na protipožarno varnost. | 1. The facility operator shall implement measures to monitor and ensure fire safety in compliance with the findings of the fire-risk analysis. Such arrangements shall include nominating persons to be responsible for or have duties with respect to fire protection and shall set out the requirements for control of all activities that can have impact on fire safety. |
| S 6.2 | Written emergency procedures that clearly define the responsibility and actions of staff in responding to any fire in the plant shall be established and kept up to date. A fire fighting strategy shall be developed, kept up-to date, and trained for, to cover each area in which a fire might affect items important to safety and protection of radioactive materials. | JV5 P1/3.7/2-3 | 2. Upravljavec mora pripraviti načrte ukrepanja ob požaru, ki jih je treba posodabljati najmanj vsaki dve leti, in zagotavljati redno usposabljanje o njihovem izvajanju. Načrti morajo predvideti ukrepe na vseh območjih, na katerih bi požar lahko vplival na opremo, pomembno za varnost jedrske elektrarne in zaščito radioaktivnih snovi.  3. Pisni postopki za izredni dogodek morajo jasno opredeliti odgovornost in dejanja osebja ob katerem koli požaru v jedrski elektrarni in jih je treba redno posodabljati v presledkih, ki niso daljši od dveh let. | 2. The facility operator shall devise plans of action in the event of fire and update them at intervals of a maximum of two years, and provide for regular training of their implementation. These plans shall provide for measures in all the areas where a fire might affect safety-related equipment of the nuclear power plant or the protection of radioactive substances.  3. Written procedures for emergencies shall clearly specify responsibilities and actions of personnel in any fire in the nuclear power plant and shall be regularly updated at intervals of a maximum of two years. |
| S 6.3 | When reliance for manual fire fighting capability is placed on an offsite resource, there shall be proper coordination between the plant personnel and the off site response group, in order to ensure that the latter is familiar with the hazards of the plant. | JV5 P1/3.7/4 | 4. Če je za gašenje požara predvideno sodelovanje zunanjih organizacij, mora biti osebje teh organizacij seznanjeno z možnimi nevarnostmi v jedrski elektrarni. Sodelovanje z zunanjimi izvajalci mora biti v takem primeru vodeno ustrezno usklajeno in vključeno v načrte ukrepanja ob požaru. | 4. If the system envisages the engagement of outside organisations in fire suppression, personnel of such organisations shall be informed of relevant risks in the nuclear power plant. Under such an arrangement, collaboration with outside organisations shall be appropriately organised and managed and covered by the fire-action plan. |
| S 6.4 | If plant personnel are required to be involved in fire fighting, their organization, minimum staffing level, equipment, fitness requirements, and training shall be documented and their adequacy shall be confirmed by a competent person. | JV5 P1/3.7/5 | 5. Če je predvideno, da osebje jedrske elektrarne sodeluje pri gašenju, morajo biti protipožarna organiziranost, minimalno število sodelujočih, zahteve za opremo, izurjenost in usposabljanje dokumentirani. Ustreznost vsega navedenega mora potrditi oseba, usposobljena v skladu z zakonom, ki ureja varstvo pred požarom. | 5. If the system envisages the engagement of nuclear power plant personnel in fire suppression, the fire-protection organisational arrangements, the minimum number of personnel involved, and requirements for equipment, qualifications and training shall be documented. The adequacy of all the above arrangements shall be confirmed by a person qualified in accordance with according to the law governing fire protection. |
| T. Natural Hazards | |  |  |  |
| T 1.1 | Natural hazards shall be considered an integral part of the safety demonstration of the plant (including spent fuel storage). Threats from natural hazards shall be removed or minimised as far as reasonably practicable for all operational plant states. The safety demonstration in relation to natural hazards shall include assessments of the design basis and design extension conditions85 with the aim to identify needs and opportunities for improvement.  85 Design extension conditions could result from natural events exceeding the design basis events or from events leading to conditions not included in the design basis accidents | JV5 P1/5.1 | Naravne nevarnosti je treba upoštevati pri dokazovanju varnosti elektrarne, vključno s skladiščem izrabljenega goriva. Grožnje zaradi naravnih nevarnosti med normalnim in nenormalnim obratovanjem je treba izločiti ali omejiti, če je to praktično smiselno. Presoditi je treba tudi vpliv naravnih nevarnosti na razvoj nesreč ter prepoznati potrebe in možnosti za izboljšanje. | Natural hazards shall be considered an integral part of the safety demonstration of the plant, including spent fuel storage. Threats from natural hazards shall be removed or minimised as far as reasonably practicable for all operational plant states. The safety demonstration in relation to natural hazards shall include assessments of the design basis and design extension conditions with the aim to identify needs and opportunities for improvement. |
| T 2.1 | All natural hazards that might affect the site shall be identified, including any related hazards (e.g. earthquake and tsunami). Justification shall be provided that the compiled list of natural hazards is complete and relevant to the site. | JV5 P1/5.2/1 | 1. Prepoznati je treba vse naravne nevarnosti, ki lahko vplivajo na lokacijo, vključno s takšnimi, ki so lahko medsebojno povezane (npr. potres in poplave). Dokazati je treba, da so naravne nevarnosti ustrezno izbrane in da so upoštevane vse pomembne nevarnosti za to lokacijo. | 1. All natural hazards that might affect the site shall be identified, including any related hazards (e.g. earthquake and floods). Justification shall be provided that the compiled list of natural hazards is complete and relevant to the site. |
| T 2.2 | Natural hazards shall include:  - Geological hazards;  - Seismotectonic hazards;  - Meteorological hazards;  - Hydrological hazards;  - Biological phenomena;  - Forest fire. | JV5 P1/5.2/2 | 2. Naravne nevarnosti morajo vključevati:  – geološke nevarnosti,  – seizmotektonske nevarnosti,  – meteorološke nevarnosti,  – hidrološke nevarnosti,  – biološke pojave,  – gozdne požare. | 2. Natural hazards shall include:  - geological hazards;  - seismotectonic hazards;  - meteorological hazards;  - hydrological hazards;  - biological phenomena;  - forest fire. |
| T 3.1 | Natural hazards identified as potentially affecting the site can be screened out on the basis of being incapable of posing a physical threat or being extremely unlikely with a high degree of confidence. Care shall be taken not to exclude hazards which in combination with other hazards86 have the potential to pose a threat to the facility. The screening process shall be based on conservative assumptions. The arguments in support of the screening process shall be justified.  86 This could include other natural hazards, internal hazards or human induced hazards. Consequential hazards and causally linked hazards shall be considered, as well as random combinations of relatively frequent hazards. | JV5 P1/5.3/1 | 1. Naravne nevarnosti, ki so prepoznane, da lahko vplivajo na lokacijo, se lahko s presejanjem izločijo iz nadaljnje obravnave, če se z veliko stopnjo gotovosti zagotovi, da ne pomenijo fizične grožnje objektu ali pa je njihova verjetnost manjša od 10-7. Pri tem je treba paziti, da se ne izločijo nevarnosti, ki bi v kombinaciji z drugimi nevarnostmi (druge naravne nevarnosti, notranje nevarnosti ali nevarnosti kot posledica človekovih dejanj) lahko pomenile grožnjo objektu. Pri tem je treba upoštevati posledične nevarnosti in vzročno povezane nevarnosti ter tudi naključne kombinacije relativno pogostih nevarnosti, ki pomenijo grožnjo objektu. Postopek presejanja je treba izvesti s konzervativnimi predpostavkami. Dokazila v postopku presejanja je treba utemeljiti. | 1. Natural hazards identified as potentially affecting the site can be screened out on the basis of being incapable of posing a physical threat or being extremely unlikely with with the exceedance frequency less than 10-7 per year. Care shall be taken not to exclude hazards which in combination with other hazards (other natural hazards, internal hazards or human induced hazards) have the potential to pose a threat to the facility. Consequential hazards and causally linked hazards shall be considered, as well as random combinations of relatively frequent hazards. The screening process shall be based on conservative assumptions. The arguments in support of the screening process shall be justified. |
| T 3.2 | For all natural hazards that have not been screened out, hazard assessments shall be performed using deterministic and, as far as practicable probabilistic methods taking into account the current state of science and technology. This shall take into account all relevant available data, and produce a relationship between the hazards severity (e.g. magnitude and duration) and exceedance frequency, where practicable. The maximum credible hazard severity shall be determined where this is practicable. | JV5 P1/5.3/2 | 2. Za vse naravne nevarnosti, ki niso bile izločene s presejanjem, je treba izvesti ocene nevarnosti z uporabo determinističnih in, če je to ustrezno, verjetnostnih metod z upoštevanjem sedanjega stanja znanosti in tehnologije. Pri tem je treba upoštevati vse smiselne razpoložljive podatke in, kadar je to mogoče, določiti razmerje med stopnjo nevarnosti (npr. obseg in trajanje) in njeno pogostostjo. Kadar je to mogoče, je treba določiti največjo še smiselno stopnjo nevarnosti, ki jo je treba upoštevati. | 2. For all natural hazards that have not been screened out, hazard assessments shall be performed using deterministic and, as far as practicable, probabilistic methods taking into account the current state of science and technology. This shall take into account all relevant available data, and produce a relationship between the hazards severity (e.g. magnitude and duration) and exceedance frequency, where practicable. The maximum credible hazard severity shall be determined where this is practicable. |
| T 3.3 | The following shall apply to hazard assessments.  - The hazard assessment shall be based on all relevant site and regional data. Particular attention shall be given to extending the data available to include beyond recorded and historical data.  - Special consideration shall be given to hazards whose severity changes during the expected lifetime of the plant.  - The methods and assumptions used shall be justified. Uncertainties affecting the results of the hazard assessments shall be evaluated. | JV5 P1/5.3/3 | 3. Pri oceni nevarnosti je treba:  – kot osnovo za oceno nevarnosti uporabiti vse ustrezne podatke o lokaciji in območju okoli nje, upoštevati pa je treba tudi vse razpoložljive podatke, ki niso bili dokumentirani ali zgodovinsko zabeleženi.  – posebno pozornost nameniti nevarnostim, katerih pomembnost se med pričakovano obratovalno dobo elektrarne spreminja,  – utemeljiti metode in predpostavke, uporabljene za oceno nevarnosti, ter oceniti negotovosti, ki vplivajo na rezultate ocen nevarnosti. | 3. The following shall apply to hazard assessments:  - the hazard assessment shall be based on all relevant site and regional data. Par-ticular attention shall be given to extending the data available to include events beyond recorded and historical data.  - special consideration shall be given to hazards whose severity changes during the expected lifetime of the plant.  - the methods and assumptions used shall be justified. Uncertainties affecting the results of the hazard assessments shall be evaluated. |
| T 4,1 | Design basis events87 shall be defined based on the site specific hazard assessment.  87 These design basis events are individual natural hazards or combinations of hazards (causally or non-causally linked). The design basis may either be the original design basis of the plant (when it was commissioned) or a reviewed design basis for example following a PSR. | JV5 P1/5.4/1 | 1. Projektne dogodke je treba določiti na podlagi ocene nevarnosti, ki so značilne za to lokacijo. Ti projektni dogodki so posamezne naravne nevarnosti ali njihove kombinacije. Projektni dogodek je lahko izvirni projektni dogodek elektrarne iz časa njene izgradnje ali pa dopolnjeni projektni dogodek, npr. po občasnem varnostnem pregledu. | 1. Design basis events shall be defined based on the site specific hazard assessment. These design basis events are individual natural hazards or combinations of hazards. The design basis may either be the original design basis of the plant, when it was commissioned, or a reviewed design basis for example following a periodic safety review. |
| T 4.2 | The exceedance frequencies of design basis events shall be low enough to ensure a high degree of protection with respect to natural hazards. A common target value of frequency, not higher than 10-4 per annum, shall be used for each design basis event. Where it is not possible to calculate these probabilities with an acceptable degree of certainty, an event shall be chosen and justified to reach an equivalent level of safety. For the specific case of seismic loading, as a minimum, a horizontal peak ground acceleration value of 0.1g (where ‘g’ is the acceleration due to gravity) shall be applied, even if its exceedance frequency would be below the common target value. | JV5 P1/5.4/2 | 2. Pogostosti preseganja projektnih dogodkov morajo biti dovolj nizke, da je zagotovljena visoka stopnja zaščite pred naravnimi nevarnostmi. Pogostost preseganja posameznega projektnega dogodka mora biti manj kot 10-4 na leto. Kadar ni mogoče razviti verjetnostnega modela in izračunati pogostosti preseganja projektnega dogodka s sprejemljivo stopnjo gotovosti, je treba izbrani projektni dogodek utemeljiti na drugačen način (strokovna presoja občutljivostne analize, ocene najhujših možnih dogodkov in posledic ipd.), da se tako doseže enakovredna stopnja varnosti. Za poseben primer seizmične obremenitve je treba uporabiti najmanj vrednost največjega vodoravnega pospeška 0,1 g (kjer je g pospešek zaradi gravitacije), tudi če bi bila pogostost preseganja manjša od 10-4 na leto. | 2. The exceedance frequencies of design basis events shall be low enough to ensure a high degree of protection with respect to natural hazards. A common target value of frequency, not higher than 10–4 per annum, shall be used for each design basis event. Where it is not possible to calculate these probabilities with an acceptable degree of certainty, an event shall be chosen and justified to reach an equivalent level of safety (expert assessment of the sensitivity analysis, the assessment of the worst possible events and consequences, etc). For the specific case of seismic loading, as a minimum, a horizontal peak ground ac-celeration value of 0.1g (where ‘g’ is the acceleration due to gravity) shall be applied, even if its exceedance frequency would be below 10–4 per annum. |
| T 4.3 | The design basis events shall be compared to relevant historical data to verify that historical extreme events are enveloped by the design basis with a sufficient margin. | JV5 P1/5.4/3 | 3. Projektne dogodke je treba primerjati z ustreznimi zgodovinskimi podatki, da se tako dokaže, da projektne osnove zajemajo te izredne zgodovinske dogodke z zadostno rezervo. | 3. The design basis events shall be compared to relevant historical data to verify that historical extreme events are enveloped by the design basis with a sufficient margin. |
| T 4.4 | Design basis parameters shall be defined for each design basis event taking due consideration of the results of the hazard assessments. The design basis parameter values shall be developed on a conservative basis. | JV5 P1/5.4/4 | 4. Za vsak projektni dogodek morajo biti konzervativno določeni projektni parametri z upoštevanjem rezultatov ocene nevarnosti. | 4. Design basis parameters shall be defined for each design basis event taking due consideration of the results of the hazard assessments. The design basis parameter values shall be developed on a conservative basis. |
| T 5.1 | Protection shall be provided for design basis events88. A protection concept89 shall be established to provide a basis for the design of suitable protection measures.  88 If the hazard levels of RL T4.2 for seismic hazards were not used for the initial design basis of the plant and if it is not reasonably practicable to ensure a level of protection equivalent to a reviewed design basis, methods such as those mentioned in IAEA NS-G-2.13 may be used. This shall quantify the seismic capacity of the plant, according to its actual condition, and demonstrate the plant is protected against the seismic hazard established in RL T4.2.  89 A protection concept, as meant here, describes the overall strategy followed to cope with natural hazards. It shall encompass the protection against design basis events, events exceeding the design basis and the links into EOPs and SAMGs. | JV5 P1/5.5/1,7 | 1. Zagotoviti je treba zaščito pred projektnimi dogodki. Zasnova te zaščite mora vključevati zaščito pred projektnimi dogodki in razširjenimi projektnimi dogodki ter postopke za ravnanje ob nezgodi in smernice za obvladovanje težkih nesreč.  7. Za jedrsko elektrarno Krško se lahko zahteve prve točke pod 5.5 te priloge, povezane s seizmično varnostjo, izpolnijo tako, da se na podlagi dejanskega stanja elektrarne določi njena seizmična sposobnost in izkaže njena zaščita pred seizmičnimi nevarnostmi v skladu z zahtevami 2. točke pod 5.4 te priloge. Na podoben način lahko jedrska elektrarna Krško izpolni tudi zahteve, povezane z izjemnimi zunanjimi temperaturami. | 1. Protection shall be provided for design basis events. A protection concept shall include design bases event and design extension conditions and also emergency operation procedures and severe accident management guideline.  7. For Krško nuclear power plant the requirements under the first item under 5.5 of this Annex, related to seismic safety, can be met by determining its actual seismic capability and demonstrating its protection against seismic hazards in accordance with the requirements of item 2 under 5.4 of this Annex. In a similar way, Krško nuclear power plant can satisfy the requirements associated with extreme external temperatures. |
| T 5.2 | The protection concept shall be of sufficient reliability that the fundamental safety functions are conservatively ensured for any direct and credible indirect effects of the design basis event. | JV5 P1/5.5/2 | 2. Zasnova zaščite iz prve točke mora biti dovolj zanesljiva, da so osnovne varnostne funkcije konzervativno zagotovljene tudi za primere kakršnihkoli neposrednih in verjetnih posrednih učinkov projektnega dogodka. | 2. The protection concept shall be of sufficient reliability that the fundamental safety functions are conservatively ensured for any direct and credible indirect effects of the design basis event. |
| T 5.3 | The protection concept shall:  (a) apply reasonable conservatism providing safety margins in the design;  (b) rely primarily on passive measures as far as reasonable practicable;  (c) ensure that measures to cope with a design basis accident remain effective during and following a design basis event;  (d) take into account the predictability and development of the event over time;  (e) ensure that procedures and means are available to verify the plant condition during and following design basis events;  (f) consider that events could simultaneously challenge several redundant or diverse trains of a safety system, multiple SSCs or several units at multi-unit sites, site and regional infrastructure, external supplies and other countermeasures;  (g) ensure that sufficient resources remain available at multi-unit sites considering the use of common equipment or services;  (h) not adversely affect the protection against other design basis events (not originating from natural hazards). | JV5 P1/5.5/3 | 3. Zasnova zaščite iz prve točke mora:  a) že med projektiranjem uporabiti smiselno konzervativnost za zagotovitev varnostnih rezerv;  b) se zanašati predvsem na pasivne ukrepe, če je to mogoče;  c) zagotoviti, da ukrepi za obvladovanje projektne nesreče ostanejo učinkoviti med projektnim dogodkom in po njem;  č) upoštevati možnost napovedi dogodka in časovni potek razvoja dogodka;  d) zagotoviti, da so na voljo postopki in sredstva za preverjanje razmer v elektrarni med projektnim dogodkom in po njem;  e) upoštevati, da dogodki lahko hkrati ogrozijo več redundantnih ali raznovrstnih prog varnostnega sistema, mnogotere SSK ali več enot na lokacijah z več enotami ter infrastrukturo na lokaciji in okoli nje, zunanjo dostavo in druge protiukrepe;  f) zagotoviti, da ostajajo na voljo zadostni viri na lokacijah z več enotami z upoštevanjem uporabe skupne opreme ali služb;  g) preprečiti nasprotno učinkovanje na zaščito pred drugimi projektnimi dogodki, ki ne izvirajo iz naravnih nevarnosti. | 3. The protection concept shall:  a) apply reasonable conservatism providing safety margins in the design;  b) rely primarily on passive measures as far as reasonable practicable;  c) ensure that measures to cope with a design basis accident remain effective during and following a design basis event;  d) take into account the predictability and development of the event over time;  e) ensure that procedures and means are available to verify the plant condition during and following design basis events;  f) consider that events could simultaneously challenge several redundant or diverse trains of a safety system, multiple SSCs or several units at multi-unit sites, site and regional infrastructure, external supplies and other countermeasures;  g) ensure that sufficient resources remain available at multi-unit sites considering the use of common equipment or services;  h) not adversely affect the protection against other design basis events (not originating from natural hazards). |
| T 5.4 | For design basis events, SSCs identified as part of the protection concept with respect to natural hazards shall be considered as important to safety. | JV5 P1/5.5/4 | 4. SSK, ki so določeni kot del zaščite pred projektnimi dogodki, se morajo obravnavati kot SSK, pomembni za varnost. | 4. For design basis events, SSCs identified as part of the protection concept with respect to natural hazards shall be considered as important to safety. |
| T 5.5 | Monitoring and alert processes shall be available to support the protection concept. Where appropriate, thresholds (intervention values) shall be defined to facilitate the timely initiation of protection measures. In addition, thresholds shall be identified to allow the execution of preplanned post-event actions (e.g. inspections). | JV5 P1/5.5/5 | 5. Zaščita iz prve točke mora biti podprta z ustreznimi sistemi za nadzor in alarmiranje. Kadar je to smiselno, je treba določiti intervencijske ravni kot pomoč pri odločanju o pravočasnem začetku izvajanja zaščitnih ukrepov ter za izvedbo vnaprej načrtovanih ukrepov po takem dogodku (npr. preglede).vnaprej načrtovanih ukrepov po takem dogodku (npr. preglede). | 5. Monitoring and alert processes shall be available to support the protection concept. Where appropriate, thresholds (intervention values) shall be defined to facilitate the timely initiation of protection measures. In addition, thresholds shall be identified to allow the execution of pre-planned post-event actions (e.g. inspections). |
| T 5.6 | During long-lasting natural events, arrangements for the replacement of personnel and supplies shall be available. | JV5 P1/5.5/6 | 6. Za primer dolgotrajnih naravnih dogodkov morajo biti načrtovane rešitve za zamenjavo osebja in zalog. | 6. During long-lasting natural events, arrangements for the replacement of personnel and supplies shall be available. |
| T 6.1 | Events that are more severe than the design basis events shall be identified as part of DEC analysis. Their selection shall be justified.90 Further detailed analysis of an event will not be necessary, if it is shown that its occurrence can be considered with a high degree of confidence to be extremely unlikely.  90 See issue F section 2. | JV5 1/5.6/1 | 1. Dogodki, ki so težji kot projektni dogodki, morajo biti določeni v sklopu analiz razširjenih projektnih osnov. Njihova izbira mora biti utemeljena. Nadaljnja podrobna analiza takega dogodka ni potrebna, če se z visoko stopnjo zaupanja izkaže, da je tak dogodek izredno malo verjeten. | 1. Events that are more severe than the design basis events shall be identified as part of design extension conditions analysis. Their selection shall be justified. Further detailed analysis of an event will not be necessary, if it is shown that its occurrence can be considered with a high degree of confidence to be extremely unlikely. |
| T 6.2 | To support identification of events and assessment of their effects, the hazards severity as a function of exceedance frequency or other parameters related to the event shall be developed, when practicable. | JV5 P1/5.6/2 | 2. Za podporo določitvi dogodkov in oceno njihovih učinkov je treba, kadar je to mogoče, določiti odvisnost stopnje nevarnosti od njene pogostosti ali drugih parametrov, povezanih z dogodkom. | 2. To support identification of events and assessment of their effects, the hazards severity as a function of exceedance frequency or other parameters related to the event shall be developed, when practicable. |
| T 6.3 | When assessing the effects of natural hazards included in the DEC analysis, and identifying reasonably practicable improvements related to such events, analysis shall, as far as practicable, include:  (a) demonstration of sufficient margins to avoid “cliff-edge effects” that would result in loss of a fundamental safety function;  (b) identification and assessment of the most resilient means for ensuring the fundamental safety functions;  (c) consideration that events could simultaneously challenge several redundant or diverse trains of a safety system, multiple SSCs or several units at multi-unit sites, site and regional infrastructure, external supplies and other countermeasures;  (d) demonstration that sufficient resources remain available at multi-unit sites considering the use of common equipment or services;  (e) on-site verification (typically by walk-down methods). | JV5 P1/5.6/3 | 3. Pri ocenjevanju naravnih nevarnosti, ki so del analiz razširjenih projektnih osnov, ter določanju še smiselnih praktičnih izboljšav v povezavi s takšnimi dogodki, mora analiza, če je to mogoče, vključevati:  – prikaz zadostnih rezerv za preprečitev primerov, ko bi majhna sprememba posameznega parametra povzročila težke in nesprejemljive posledice (angleško »cliff edge effect«), kot je izguba osnovnih varnostnih funkcij;  – določitev in oceno zanesljivih sredstev za zagotovitev osnovnih varnostnih funkcij;  – upoštevanje, da dogodki lahko hkrati ogrozijo več redundantnih ali raznovrstnih prog varnostnega sistema, mnogotere SSK ali več enot na lokacijah z več enotami, infrastrukturo na lokaciji in okoli nje, zunanje dobave in druge protiukrepe;  – prikaz, da ostajajo na voljo zadostni viri na lokacijah z več enotami, z upoštevanjem uporabe skupne opreme in služb;  – upoštevanje preverjanje stanja na lokaciji (običajno z obhodi). | 3. When assessing the effects of natural hazards included in the design extension conditions analysis, and identifying reasonably practicable improvements related to such events, analysis shall, as far as practicable, include:  - demonstration of sufficient margins to avoid cases where small change of a parameter could cause extensive and unacceptable consequences, such as loss of a fundamental safety function;  - identification and assessment of the most resilient means for ensuring the fundamental safety functions;  - consideration that events could simultaneously challenge several redundant or diverse trains of a safety system, multiple SSCs or several units at multi-unit sites, site and regional infrastructure, external supplies and other countermeasures;  - demonstration that sufficient resources remain available at multi-unit sites considering the use of common equipment or services;  - on-site verification (typically by walk-down methods). |