REPUBLIC OF SLOVENIA
MINISTRY OF ENVIRONMENT AND SPATIAL PLANNING
SLOVENIAN NUCLEAR SAFETY ADMINISTRATION

4th Slovenian Report on Nuclear Safety

Answers to Questions of Other Contracting Parties

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Address: SNSA, Železna cesta 16, P.O.Box 5759, 1001 Ljubljana
Tel.: +386-1/472 11 00
Fax: +386-1/472 11 99
e-mail: snsa@gov.si
Web page: http://www.ursjv.gov.si

Country	Art.	Question	Answer
Austria-1	Article 6	What was the reason for the OSART follow-up mission's observations that "the plant should enhance the use and adherence to procedures"? What percentage of operational events has been caused by inappropriate use of procedures?	The main reasons for OSART follow-up mission's observations in the area of procedure use were based on a few examples where procedures were not required to be used in the field and some procedure revisions were overdue (periodic checks failed to be performed in the required period) across the plant organizations. In response to that, the procedure on Procedure Use and Adherence has been revised. It defines three main categories of procedure usage: continuous use, reference use, and information use. The procedure provides clear criteria for the classification of procedures in each of these categories. Training of personnel on the use of new procedures has been done. The Krško NPP regularly reviews the status of overdue procedure revisions across the plant organization. Statistics: Percentage of operational events caused by inappropriate use of procedures: 2003: 3,7 2004: 3,3 2005: 3,1 2006: 2,0 2007: 1,6 It is evident that performance indicators regarding the number of events due to procedure deficiencies and inadequate adherence to procedures has been steadily improving since the OSART mission.
Austria-2	Article 10	Are changes to the management structure of an operating organisation independently for possible safety impact? Are proposals for such changes also submitted to the	Changes to the management system are considered as modifications, which may be classified into two categories; so called second and third category according to 2002 Act (the safety screening and safety evaluations of modifications are performed according to US 10 CFR 50.59). After the change to the management structure is classified, it is considered

		regulatory body for review?	accordingly. For changes, that may influence nuclear safety, the SNSA approval is needed.
Austria-3	Article 13	2. Why was the Nuclear Oversight function incorporated within the new Quality System Division?	Continuous improvement in "Management System of organizations directly responsible for operating facilities" requires the development of different tools to provide critical, independent oversight, quality assurance and evaluating activities against a broad scope of industry standards of excellence. Because some of the tools were already developed under Independent Safety Evaluation Group (independent review of plant activities including maintenance, modifications, operations, and operational analysis, and aid in establishing programmatic requirements for plant activities), a synergy between similar quality activities and better, unique control over broad analysis as well as corrective actions to enhance the overall assessment of plant quality and safety performance together with benchmarking results supported by WANO/INPO visits were the reasons for incorporation of Nuclear Oversight to Quality and Nuclear Oversight division (previously Quality System Division). Quality and Nuclear Oversight Division is an independent Organizational Unit reporting directly to the Management Board.
Austria-4	Article 13	1. What was the reason for reorganization of the Quality System Division?	The reasons for reorganization were as follows: the recommendation of OSART mission, industrial practice, performed benchmarking (EU + USA) and management commitment towards continuous improvement in this area. In addition, the Independent Safety Engineering Group (ISEG) became a part of the Quality and Nuclear Oversight organization. This has enhanced the overall assessment of plant quality and safety performance.
Austria-5	Article 14.2	To which standards was the previous discharge limit of 20 TBq per year for liquid tritium effluents established?	The previous value of 20 TBq per year was based on a reactor technology and radiological significance as described in following paragraphs. Tritium can not be accumulated neither treated and all the tritium, which enters reactor coolant is sooner or later released. In a PWR reactor the main source of tritium in reactor coolant is production of tritium by absorption of neutron by B-10, which gives tritium plus two atoms of helium. This process accounts for about 90 % of tritium in reactor coolant. Due to transfer to longer (18 month cycle) the reactor core needs more excess reactivity at the start-up. Thus, to compensate this reactivity more boron is added to the coolant and subsequently more tritium is produced.

			Briefly, the old values were aimed at H-3 production in a shorter fuel cycle, while the new value takes into account a longer fuel cycle. The previous annual limit did not have a lot of margin. In fact, the releases of H-3 were mostly in the range of 80 to 90 % of the limit.In relation to the public exposure, the previous discharge limit for tritium was established in 1984 according to the former regulations and the IAEA guidelines (BSS Safety Series No. 9 from 1982). Derived concentration of tritium for drinking water in the regulations was set to 11 MBq/m^3. Average annual tritium concentration in the Sava River in case of annual release of 20 TBq would be about four thousand times less than H-3 derived concentration for drinking water. See also the answer to question of the Republic of Korea (Art. 15).
Austria-6	Article 15	What were the reasons for the two findings of the EC mission regarding the monitoring programme and the accreditation of laboratories?	Measurements of radioactive discharges to the environment have been performed by the laboratories of the operator (the Krško NPP). According to the regulations, effectively independent measurements of the discharged radioactivity have been performed by the technical support organisations (institutes). These measurements were based on the contract between the NPP and TSOs, and the Commission suggested that independent monitoring shall be financed by the regulatory authority and not by the operator. The laboratories that performed the radioactivity measurements were not accredited for all measuring methods. According to the requirements of the new regulations on environmental radioactivity monitoring (2007), all laboratories which are involved in monitoring of environmental radioactivity shall be accredited within two years (till March 2009). All involved laboratories applied for accreditation in 2007.
Croatia-1	Article 6	What is the current status of activities in the SNSA project Managing of the aging processes in Krško NPP? Please describe the SNSA work-plan on this project after commissioning the initial database.	All five parts of the project are completed (see the report, page 68-69). In part 4 the draft procedure is prepared. The software from part 5 is already working and it has already been tested for 20 components. The next step is database expansion with the most important components, and after that the use of the system for aging process management.
Croatia-2	Article 6	Could you be more specific about the effects of the new seismic hazard (the	As the part of the ongoing periodic safety review (PSR) of the Krško NPP, the update of the IPEEE seismic PSA study was conducted to address seismic

		reason for the update of the existing seismic PSA) especially about the reconciling of the new seismic hazard input in a deterministic manner?	issues (seismic design and new PSHA study). Seismic issues were identified in “Krško Periodic Safety Review PSRD - Safety Assessment Task, Seismic Design and Seismic PSHA Summary Report”. In order to address all issues, a complete update of the seismic probabilistic safety assessment (SPSA) has been decided to conduct. The new seismic probabilistic hazard analysis (SPHA) was conducted in the 2002 to 2004 time period taking into account more recent geologic, seismologic, geophysical and geodetic investigations. The resulting new seismic hazard is more severe than the hazard used in the original SPSA. The frequency of occurrence of the PGA has increased, but is offset to a small extent by a lower amplification in the ground motion spectrum. As the part of the Krško Periodic Safety Review, a study was conducted to compare the original seismic design of Krško NPP to current standards. This comparison resulted in recommendations for additional seismic evaluations to be made. It was suggested that the most feasible approach to address all seismic issues during the periodic safety review was to completely update the existing SPSA originally performed in 1996, as the part of the individual plant examination for external events (IPEEE). The update was to include the effects of the new seismic hazard and to include additional evaluations of upgraded structures, systems and components (SSCs) that could alter the calculated seismic risk. Thus, the objective of the updated SPSA of Krško NPP was to conduct a risk informed evaluation of all seismic issues that have an effect on the safety of the plant. A new ANS standard has been developed in the mean time, for the external event Seismic Probabilistic Risk Assessments (SPRA) that provides requirements for three capability categories or levels of detail for SPRA. In conducting the update of the Krško SPSA, it was a further objective to meet the requirements of Capability Category II of the ANS Standard. Capability Category II requires that the performance of relays be explicitly modeled and that a full uncertainty analysis be conducted to update NEK SPSA model

			accordingly, and to perform analysis of seismic risk with updated SPSA model, and to document and interpret the results for new baseline case and selected sensitivity cases. NEK PSA model was updated and re-modeled, related to the before mentioned tasks the NEK was responsible for. The new developed seismic baseline model reflects the above seismic inputs. As related to the deterministic reconciliation of the new seismic hazard it has to be pointed out that as part of the original SPSA analyses performed in 1995, state of the art technology and current practice was used for soil structure interaction analyses. As input free field response spectra determined in first PSHA, scaled to 0.6 g (twice the size of the SSE values) was used. The floor response spectra obtained were very similar to the design floor response spectra. The main reason for that are conservative methodology and assumptions used in the original design. In the original design, peak ground acceleration of the SSE ground motion amounted to PGA=0.3 g. It was applied without any reduction at the level of foundation. The soil – structure interaction in the original structural model was modeled by using spring elements representing soil. Based on that and the fact that new PSHA seismic inputs are lower than the values used in seismic PSA (0,6 g) there is no need to reconcile this further in a deterministic manner.
Croatia-3	Article 6	You have mentioned that SNSA had approved NPP Krško PSR Action Plan which contains issues to be implemented at the NPP Krško together with the associated milestones. Could you specify the actions that were preformed during the year 2007 and actions that will be preformed during the year 2008?	During 2007 following actions were completed: - PSR 2.3-25 - Review of the NEK Performing Specific Maintenance or Testing Activities - PSR 5.3-5 Ex-Vessel Steam Explosion - PSR 2.6B-18 Uncertainty in External Flooding Frequency - PSR 2.6A-9 Probabilistic Safety Assessment – Internal Events/At Power CCF Analysis - PSR 2.2B-6 Operating Limits and Procedures Review - Complementary EOP Verification on Specific Topics - PSR CH2.3_P9 RAMP Background Information on Physical Phenomena of Steam Explosion - PSR CH2.11_P17 RAMP Expand the WOG SAMGs to Shutdown States

			- PSR RCP 6.3-118 Bulletin 81-02, Failure of Gate Type Valves to Close Against Differential Pressure - PSR 2.12-7 Electrical Supply Support Systems Potential Problem in Service Water Pump 3 and Component Cooling Pump - PSR 2.6B-25 Frequency of Intake Plugging - PSR WOG 1 -7 Operations Subcommittee - Critical Tasks (CTS) Within the Emergency Response Guidelines - PSR WOG 5-9 Systems and Equipment Engineering Subcommittee Develop a Work Plan to Generically Eliminate or Address Pressure Locking and Thermal Binding (PL/TB) of Safety-Related Motor Operated Gate Valves - PSR WOG 1-4 Operations Subcommittee - Develop a Methodology to Determine the Maximum Differential Pressure Which Could Occur Across the Motor Operated Valves - PSR RCP 11.7-3 Motor-Operated Valves Program Verification of Switch Settings - PSR 2.3-26 Maintenance, Testing and Inspection Procedures - Authorization of ISEG to Perform an Independent Survey of the Deficiencies With Procedures and Their Use - PSR 2.6A-8 PSA – Internal Events/At Power - Upgrade of HRA Analysis and Model - PSR WOG1-120 MUHP-2140/2141 Review - Reduce the Number of Unnecessary SI Actuations - PSR RCP 6.2-475 Generic Letters Safety-Related Motor-Operated Valve Testing and Surveillance - PSR RCP 6.2-475.7 Generic Letters Consideration of Valve Mispositioning in Pressurized-Water Reactors - PSR RCP 6.2-552 Generic Letters Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves - PSR RCP 6.3-64 Bulletin 79-01, Environmental Qualification of Class 1E Equipment - PSR RCP 6.3-64.1 Bulletin 79-01A, Environmental Qualification of Class 1E Equipment - PSR RCP 6.3-64.2 Bulletin 79-01B, Environmental Qualification of Class 1E Equipment - PSR RCP 6.3-64.5 Bulletin 79-01B Supplement 3, Environmental

			Qualification of Class 1E Equipment - PSR 2.9C1-1 Safeguard Systems; Containment Spray System Possibility to Provide a Double Containment Sump In 2008 the following PSR actions will be performed: - PSR RCP 6.2-467 Generic Letters Actions to Improve the Detection of Counterfeit and Fraudulently Marketed Products - PSR RCP 6.2-502 Generic Letters - Licensee Commercial-Grade Procurement and Dedication Programs - PSR 2.10A-11 I&C Safety Related Systems - Review Procedure SMI-4.055 Rev. 3 to Include Recommended Changes - PSR 2.2B-3 AOP/EOP Setpoint Calculation Update - PSR-2.3-4 Maintenance, Testing and Inspection Procedures - Some Surveillance Procedures Could Not Be Identified - PSR 2.11A-1 Review of Civil Structure Adequacy of Containment Buckling Capacity - PSR RCP 6.3-143 Bulletin - Fastener Testing to Determine Conformance With Applicable Material Specifications - PSR CH2.2_P7 -3 RAMP Coolability for the Burnable Gas Management and Containment Long Term Pressure Management - PSR WOG 1 -9 Operations Subcommittee - Operator Response Time - PSR 2.6B-19 Third Upstream Dam - PSR 2.6B-28 Credit For Operator Actions - PSR 2.6B-1 Plant Damage States - PSR RCP 11.7-5 Motor-Operated Valves Program - Procedures and Guidelines - PSR RCP 11.7-2.5 Motor-Operated Valves Program Establish Switch Settings - PSR RCP 11.7-2.4 Motor-Operated Valves Program Development of Procedures - PSR RCP 6.2-478 Generic Letters Service Water System Problems Affecting Safetyrelated Equipment - PSR RCP 4.1-86 Resolved Generic Safety Issues Detached Thermal Sleeves - PSR RCP 2.1-20 Requirements and Recommendations Design Review of

			Plant Shielding and Environmental Qualification of Equipment for Spaces/Systems Which May Be Used in Post-Accident Operations - PSR WOG 7-1 THROUGHT 7-15; Steering Committee Subcommittee Provide An Aging Management Review in Accordance With the Requirements of 10 CFR Part 54 (License Renewal) - PSR WOG 7-2 Steering Committee Subcommittee Provide an Aging Management Review in Accordance With the Requirements of 10 CFR Part 54 (License Renewal) - PSR 2.6B-17 Frequency of External Floods From Dam Failures - PSR 2.6B-16 Frequency of External Floods From High River Flow - PSR 2.6B-5 Initiating Event Screening Criteria - PSR 2.8D1-2 Mitigation of Pressurizer Insurge/Outsurge Trans. - PSR CH2.12_P18-3 RAMP of Passive Autocatalytic Recombiners (PAR) - PSR CH2.12 -P18-7 RAMP Non-Condensable Gases in the Containment - PSR 2.2B-7 Operating Limits and Procedures Review - Re-Validation of the AOP/EOP Package - PSR RCP 6.2-292 Generic Letter 82-16 (September 20, 1982): NUREG-0737 Technical Specifications. NUREG-0737 ("Clarification of TMI Action Plan Requirements") Identified Those Items for Which Technical Specifications Were Required. - PSR RCP 6.3-148 Bulletin - Nonconforming Materials Supplied by Piping Supplies, Inc - PSR RCP 6.3-148.1 Bulletin by Piping Supplies, Inc - PSR RCP 6.3-148.2 Bulletin - Nonconforming Materials Supplied by Piping Supplies, Inc - PSR RCP 6.3-153 Bulletin - Nonconforming Molded-Case Circuit Breakers - PSR RCP 11.4-Overall Procurement - PSR RCP 4.1-24 Resolved Generic Safety Issues Instruments for Monitoring Radiation and Process Variables During Accidents - PSR RCP 6.2-544 Generic Letters Pressure Locking and Thermal Binding of Safety Related Power-Operated Gate Valves - PSR 2.6A-11 Probabilistic Safety Assessment – Internal Events/At Power - PSR 2.9F-1 Safeguard Systems - Shutdown Support Systems - PSR 2.8C-3 Mechanical Analyses – Piping & Supports

			- PSR WOG 1 -3 Operations Subcommittee - Evaluate the Findings in NUREG 1190 (Entitled "Loss of Power and Water Hammer Event at San Onofre Unit 1, on November 21, 1985") and Develop Generic Resolutions - PSR WOG 1 -22 Operations Subcommittee - Pressurizer Safety Valve Set Pressure Shift Program - Address the concerns that the Nuclear Regulatory Commission (NRC) expressed with the WOG in December 1989 (Reference Letter WOG 90 001) and satisfy the commitment of the WOG to the NRC to evaluate a means toward issue resolution. - PSR 2.2B-4 Operating Limits and Procedures Review - Background Documentation of AOP- 3.6 Should be Developed and Maintained - PSR CH2.12_P18-5 RAMP Station Blackout Ultimately Leading to Core Damage, Whereupon the SAMGs are Followed are Entered - PSR WOG 9 -3 Acceptable Results for the SBLOCA Analysis for Mode 4 Operation Without Relying Upon the RHR Pumps for LOCA Mitigation - PSR 2.2B-5 Operating Limits and Procedures Review Item - Background Documentation of EOP-3.5 Should be Made Plant Specific and Maintained - PSR WOG3-3 STS Improvement Program MUHP2056 Review - PSR 2.2A-5 Operating Limits - Proceed to the Conversion of the NEK Technical Specifications to the NUREG-1431 Structures and Format - PSR RCP 4.1-61 Resolved Generic Safety Issues Improving the Reliability of Open Cycle Service Water Systems - PSR RCP 4.1-96 Resolved Generic Safety Issues Loss of Essential Service Water in LWRS - PSR RCP 6.3-61.1 Bulletin 78-12A, Atypical Weld Material in Reactor Pressure Vessel Welds
Croatia-4	Article 16.1	Does Slovenia have any procedure for treating the presence of a vessel with nuclear propulsion in its territorial waters? Also, does Slovenia have a procedure for response to possible accidents that might happen on the nuclear installations of that vessel?	Entry of such vessels is regulated by the Maritime Code. No special procedure is developed under the 2002 Act on Protection against Ionizing Radiation and Nuclear Safety. Also, the definition of “nuclear installation” under Convention on Nuclear Safety (CNS) focuses mainly on land-based civil nuclear power plant with adjacent facilities and nuclear propelled vessels are out of scope of the CNS.
Croatia-5	Article 16.1	Regarding the positive outcome of the bilateral meetings with Croatia, when is it possible to expect that the agreement	Slovenia and Croatia had in 2007 two bilateral meetings about the agreement on the direct notification from the Krško NPP to the Croatian Emergency Notification Centre. The last bilateral meeting of the Permanent Croatian –

		on the direct notification from Krško NPP to the Croatian State Notification Centre (Centre 112) could be implemented?	Slovenian joint committee for protection and rescue from disaster was in September 2007. At that meeting the Slovenian delegation agreed, that the competent authorities in Slovenia will examine the Croatian proposal. Under current arrangements in case of the emergency in NPP Krško Croatian authorities are notified from CORS (Central Notification Centre of Slovenia) in Ljubljana immediately after the first information is received. That means that Croatian authorities will be notified 2-3 minutes after information is received from the NPP and at the same time as Slovenian authorities. In the mean time internal instructions of the CORS operators have been changed so, that the notification of the Croatian Authorities is put on the top of the list of all institutions being notified. In parallel the direct computer access to the current meteorological data around the NPP Krško was offered to Croatia on 8 May 2007, but the offer was never accepted.
Finland-1	Article 8.1	What kind of systematic training and development programmes you have for your new regulatory staff members? How do you ensure that they are ready to conduct their duties as regulatory staff members in the tasks assigned to them?	Each position in the SNSA organisational scheme has recognized necessary competences for the staff member occupying it. When the SNSA employs new (and usually young) members usually they don't have proper competences yet. In the call for application there are only formal requirements (such as education; working experience; knowledge of languages). The selected candidate is a person who fulfils those formal requirements the best. Once employed she/he has to pass the state exam for the public servants, which is not specific but rather general. In parallel the individual program for acquirement of necessary competences is going on. The course on Fundamentals of Nuclear Technology and other courses at the Nuclear Training Centre in Ljubljana are frequently used, as well as the events (courses, workshops) organised by the IAEA and also many of the SNSA staff attended courses on Westinghouse Technology organized in the US NRC Training Center in Chattanooga. For each year the SNSA prepares so called Educational and Training Plan for its employees, where a special attention is given to newly employed colleagues. There are also other tools used for career development of our young staff members, as yearly interviews, on the job training, etc.

Finland-2	Article 8.1	Do you have currently in your regulatory staff, or in a technical support organization (TSO) working for the regulatory body, an adequate number of technical experts (e.g., in the areas of reactor physics, thermo-hydraulics, and materials engineering) who can conduct an in-depth safety assessment of nuclear power plant, as would be needed for evaluation of operating events, large power upgrade, lifetime extension, or new build? Do these experts have tools and ability to conduct independent safety analysis, including both deterministic analysis and PRA? What is the number of such experts in various technical areas within the regulatory body and within the TSO? What is the outlook concerning the number of experts in a few years ahead?	For the time being the currently available technical staff in our regulatory body (SNSA) and TSOs adequately cover needs in various technical areas, although there is always room for improvement. The TSOs are not limited to Slovenian organisations only. Several TSOs are from Austria and Croatia. On the other hand the SNSA believes that for the Krško NPP lifetime extension, which is likely, or a new NPP the technical staff of both, the SNSA and its TSOs should be increased. The concrete analyses of needs has not been done yet because no ultimate decision has been taken with regard to lifetime extension and/or new built. The staff in the SNSA and TSO has tools and ability to conduct independent safety analysis, both deterministic and PRA. It is difficult to say exactly how many experts are available for each area, as most are sharing their time to different activities, analyses being only one of these activities. The total number of SNSA staff is presented in the Chapter 8.1 of the report. The rough estimate of the personnel of that kind in TSOs is somewhere between 30 and 40.
Finland-3	Article 14.1	Is there a requirement in your country to apply PRA methods to support periodic safety review, licensing of plant life extension or power upgrade, or licensing of new build?	In Slovenian legislation there are no direct requirements for using PRA methods to support Periodic Safety Review. Nevertheless, PRA was used as a supporting tool during the first PSR at the Krško NPP. PRA itself is also a part of Periodic Safety Review Programme and is a subject of review. For the time being PRA is not required for licensing of plant life extension or licensing of a new build as well. Detailed regulations from this area still do not exist. On the other hand the regulations in force clearly require using of PRA during all phases of plant operation to evaluate safety important activities like: - power upgrades - introduction of important design improvements and modification - planning of activities during regular plant outages - planning of on-line maintenance - planning of surveillance testing - evaluation of operational events

			- authorization of changes of operational limits and conditions - modifications of important plant programmes and procedures - etc
Finland-4	Article 14.1	Do you have access to the results of large nuclear safety related experimental test programmes to study physical phenomena and to validate analysis models used in safety analysis? Does this access adequately cover your needs for experimental data in different areas, taking into account the current state of your nu-clear programme?	Directly we do not participate in any large nuclear safety related experimental test programme. Nevertheless we actively follow these programmes and requirements for experimental validation of analyses and its presumptions with our involvement into NEA/OECD, especially into work of OECD/NEA CSNI WGAMA (Working Group on Analysis & Management of Accidents). We have access to all key documents from this area.
Finland-5	Article 18.1	What is your national policy concerning need for Severe Accident Management (SAM) procedures or back-fitting measures at operating facilities, aiming to protect the reactor containment integrity after a possible severe core damage? Are SAM procedures in place at the operating nuclear power plants? Has back-fitting been completed that addresses all physical phenomena, which might endanger containment integrity?	Introduction of SAM procedures has been strongly encouraged by SNSA. This resulted in introduction of SAMGs at our only NPP in the year 2000. Nevertheless it is planned to introduce formal requirement for SAMGs into our regulation in accordance with WENRA harmonized requirements. Back-fitting of NPP for dealing with severe accidents is not formally required. The issue has been addressed through several avenues such as IAEA RAMP mission, PSA based analyses and PSR. Most of the issues could be closed, the wet cavity approach has been adopted and decision to add an additional full scope emergency diesel generator taken. Studies based on present state of knowledge in the world have shown that steam explosions are highly unlikely to challenge the containment of our only NPP therefore no back-fitting regarding this phenomenon is needed. The issue of hydrogen is still under discussion and an appropriate analysis is underway but due to a large containment and presence of thermal recombiners the issue is unlikely to result in substantial back-fitting.
Finland-6	Article 18.2	Have you met specific problems to find spare parts or replacement components properly qualified to a high safety class, as needed for plant lifetime management? If yes, how have you addressed the problem?	This problem has been recognized by nuclear industry. If original safety part is not available in the market, possible solutions applied at the Krško NPP are: - equivalency evaluation of replacement item (safety related) EPRI report 6406; - implementation of dedication process of commercial grade item for nuclear

			safety related applications - EPRI report NP 5652; - reverse engineering EPRI TR-107372; - equipment modification through implementation of engineering modification process. The Krško NPP has recently submitted to the SNSA a request to replace water cooled chillers of the main control room air conditioner with the new air cooled chillers. Since there is no safety related chillers manufacturer in the world, the Krško NPP decided to use Commercial Grade Item (CGI) dedication approach as defined by the EPRI Guideline for the utilization of commercial grade items in nuclear safety related applications (NCIG-07), NP-5652. The replacement chillers will be controlled by digital programmed logic controllers and for that purpose the CGI dedication approach was performed according to the EPRI Guideline on evaluation and acceptance of commercial grade digital equipment for nuclear safety applications, TR-106439. This is the first time that the CGI dedication approach was proposed. The licensing of the modification is under way.
Finland-7	Article 19.7	Please explain your national policy and practice of sending feedback reports to the international interested parties on actions that have been taken in your country as response to significant events reported through international channels (e.g., WANO, IRS).	Slovenia is open to the exchange of experiences and every issue asked by the third parties is answered. The SNSA is active in IRS system, while the Krško NPP is similarly active in WANO and INPO.
Finland-8	Article 19.7	Please explain how the regulatory body ensures or verifies that the operators are informed and properly analyse the operating experiences reported through the well established international channels (e.g., WANO, IRS), and that they address the lessons learned by taking proper actions.	This is done by the SNSA inspection, by continuous communication with the management of the NPP about current issues and challenges and by the system of performance and safety indicators.
Finland-9	Article 19.7	Please explain the principles or criteria applied by the regulator and operator for screening other experience than incidents (e.g., management issues,	The SNSA has the system in place for screening and analysing of all kind of experiences, including other than incidents. It covers both events in the NPP Krško as well as international operating experiences, which could be applicable for nuclear safety in Slovenia. This is described in internal

		unexpected degradation, design weak-nesses, external hazards not considered earlier), for the purpose of ensuring adequate sharing of important experience with in-ternational interested parties (regulatory bodies, operators, de-signers, international bodies). Identify the relevant guide docu-ments, if any, used for the screening.	procedures (e.g. OP 2.1.2 Monitoring of Foreign Operational Experiences). Results of such screening and analyses are communicated internationally either through formal channels like IRS or during different international meetings and conferences. The Krško NPP shares within INPO/WANO Newsgroup and NUMEX all on-site events for which investigation was performed. These events are significant occurrences which affect plant safety (transients, redundant safety system malfunctions, events involving nuclear safety, fuel handling and storage, excessive radiation exposure or personnel injury, excessive discharge of radioactivity, management needs, personnel or general public), less significant SSC (systems, structures, components) or human deficiencies which affects plant safety or reliability (deficiencies in design, analysis, operation, maintenance, procedures or training, unplanned radiation exposure, major equipment damage) and minor conditions which affects quality of process (failures on non-safety SSC, minor human issues, non-radiological environmental events, isolated seismic deficiencies on components). The technical director shall confirm suitability of reported information which is prepared according to the WANO Operating experience programme guideline WPG-02.
France-1	Article 6	PSA development and several PSA applications are presented. In the framework of PSR, could Slovenia precise what are the main findings of PSA (especially the seismic PSA), and how probabilistic and deterministic approaches are combined?	Main SPSA findings are: The new SPSA has shown that in spite of the increased seismic hazard the calculated core damage frequency has decreased due to some seismic upgrades, inclusion of additional systems in the model and revised selected fragilities. Sensitivity studies indicating the value of further plant modifications were performed in the 2004 seismic PSA study. Modifications like additional third independent full size diesel generator, incorporation of existing small portable diesel generator (DG) to the power positive displacement pump and battery charger, implementation of backup to existing condensate storage tank (CST), addition of nitrogen tanks for operation of pressurizer power operated relief valves and implementation of backup to the existing essential service water (ESW) system, were evaluated. It was evaluated that especially the addition of third large 6.3kV or incorporation of the existing small portable diesel generator would significantly reduce the seismic risk (third diesel for more than 50 % and portable diesel for more than 25 %). Due to significant

			safety benefit the SNSA showed strong interest in the additional diesel generator to increase the Krško NPP safety in case of a seismic event and also other events with loss of offsite power. After performing the cost/benefit analysis the NPP decided to add additional third independent full size diesel generator.
France-2	Article 6	Among various action taken in the frame of the PSR, the report mentions an ageing program management. Could Slovenia give some more details about the main issues raised by the ageing program management?	The Krško NPP AMP is aimed to determine, if ageing is adequately managed by existing activities The two phases of AMP were concluded. In preparation is the third phase to determine, which actions in relation to the AMP would need to be taken. The third phase should be completed until the end of 2008. So far ageing problems in the Krško NPP are managed by the programs like preventive and corrective maintenance, in-service inspection, in-service testing, environmental qualification and erosion/corrosion program. In this manner some major projects of component replacement were performed in the past, e.g. steam generator replacement, secondary piping replacements, moisture separator reheater replacement, heater replacements.
France-3	Article 8.1	Though the report provides information on the organization and on the number of staff of the SNSA, it does not mention any qualification or training programme for the staff of the SNSA. Could Slovenia provide such information?	Regarding the training programme – please see our answer to the Finnish question related to systematic training of the regulatory authority staff (Art.8).
France-4	Article 12	The report explains that the turnover is rather low and is mostly due to retirement. Nevertheless Slovenia does not give information about the workforce. Could Slovenia present some more information concerning the average age of the NPP staff?	Qualifications of the Krško NPP employees are: - university degree: 193 - secondary and (first-tier) higher education (i.e. technicians and engineers): 288 - skilled work force: 92 The number of the Krško NPP employees with regard to their age is as follows: There are 76 employees at the plant under the age of 30, 147 employees aged between 31 and 40 years, 200 employees aged between 41 and 50 years, 143 of them are between 51 and 60 years old, and there are 7

			employees older than 60 years of age. The average age of the Krško NPP worker is 43 years.
France-5	Article 15	Could Slovenia specify what are the actions to reduce the collective dose ? In the paragraph “Optimisation of radiation exposure covers … with a preset alarm”, could Slovenia specify what are the means to reduce the dose rate?	The collective dose became substantially lower after the replacement of the steam generators in 2000 (SGs). The outage time with the new SGs is much shorter since SG maintenance by tube plugging is almost negligible. The lower cobalt content in the Iconel tubes of new SGs resulted also in lower contamination with Co-60. The stellite replacement is taken into account only in case of purchasing new valves. In the future the actions for reducing the collective dose are related to exchange of reactor vessel head and its improved design of shielding and of some features for its quick installation. Additional ion exchangers will be installed for spent fuel pool cleaning in order to achieve lower dose rates for the refueling work. The plant has also benchmarked good practice in the industry related to shutdown cleaning of reactor coolant water and there is a possibility to use it in the future. The important activities for dose rate reduction are temporary use of shields, decontamination of equipment. Unfortunately during the 2007 outage the unplanned need for Steam Generator U-tube plugging due to the loose parts on the secondary side further contributed to the collective dose.
France-6	Article 15	Could Slovenia indicate whether they perform site safety reassessment?	Yes. For more detailed answer see also answer to the question from UK on Article 17.3 on the re-evaluation of site related factors.
France-7	Article 15	Could Slovenia specify the values of the authorised limits for each nuclide or group of nuclides as well as those of the gaseous and liquid releases ?	1. Limits for nuclide groups: a) gaseous releases: - noble gases:110 TBq Xe-133 equiv. - iodine 18.5 GBq I-131 equiv.

		Could Slovenia specify the ratio between the limits and the releases for each nuclide or group of nuclides ?	-aerosols (fission & activation products) 18.5 GBq b) liquid releases: - fission & activation products (200 GBq) - tritium: 45 TBq 2. Releases versus limits ratio (2006): Gaseous releases: - noble gases:1.5 % - iodines: 0.28 % - aerosols: 0.015 % Liquid releases: - fission&activation prod.: 0.1 % - tritium: 44.4 %.
France-8	Article 15	Could Slovenia specify what are the exceptional circumstances to authorize 50 mSv/year for occupationally exposed workers?	Such cases have not been met in practice in Slovenia till now. The special circumstances are not related to the emergency cases. Specially authorized exposure would be considered, for instance, in the situation where some technical problems in high radiation area might occur and there is rather scarce number of skilled technical workers available in place, provided that engaging workers from other companies would cause unreasonable high collective exposure in the group, or unreasonable high costs or unreasonable delay of outage. The same would apply for situation where carefully planned but rather quick action is needed to reduce exposures of other workers.
France-9	Article 15	Could Slovenia give examples of practical improvements on plants resulting of the Quality Assurance policy?	Intensive and successful implementation of the technological upgrades and modernization (replacement of steam generators, moisture separator reheaters, low pressure turbine, heaters, containment sump screens…) make it possible for the plant to increase the level of safety and run very smoothly without major power reductions or shutdown during the last few years. This is also visible through WANO/INPO performance indicators where the plant has reached most of the goals which are set for the industry by the year 2010. For example during the last fuel cycle the plant has operated continuously (breaker to breaker) for 510 days. Implementation of unique Plant Corrective Action Program, Observations and Safety-Assessment using industry

			standards of excellence, Internal Audits on Cross-Functional Areas, Overall Assessment of plant quality and safety performance and other activities contribute to safe and reliable plant operation.
France-10	Article 19.3	The report details the regulations and programs in place to collect and analyze operating experience. Could Slovenia give practical examples of national or foreign incident analysis and of actions taken as a result of lessons learnt?	The SNSA and the Krško NPP systematically follow international operating experience. For instance: - SNSA in 2007 reviewed 40 international OEF reports and discussed in more detail 30 of them; if necessary the analysis was performed. - In 2007 the detailed analysis of implications of Forsmark event for the NPP Krško was performed (but no immediate corrective actions were identified). - Sump clogging issue was closed in 2007 by adopting US NRC GL 2004-02 requirements. The Krško NPP replaced piping isolation at lower containment elevations and at critical points with metallic reflective insulation, the strainer area was increased to 300m^2 and additional procedures were adopted about control of materials in the containment. The following example is one of the domestic lessons learnt: The Krško NPP was manually shutdown in August 2005 due to inoperability of containment ventilation unit caused by electromotor guide bearing failure. At that time the fuel cycle was prolonged from 15 to 18 months what contributed to the lack of grease in the bearing. The corrective actions include mounting of new grease unit whit the battery powered electromotor. The vibration and temperature monitoring system for diverse ventilation units in containment (ventilation of containment, control rod drive mechanism, charcoal system …) was re-established again since it was abolished in mid-80. This will enable remote monitoring of components when the reactor is on power.
France-11	Article 19.7	Could Slovenia give practical examples of information on incidents provided by the designer of the NPP (Westinghouse) or by its national regulator (USNRC)? Could Slovenia give information on safety measures implemented as a result of such exchanges?	The Krško NPP Quality Management System requires from qualified suppliers of safety grade parts to report to the plant itself any type of defect or non-compliance recognized anywhere else in nuclear industry. This requirement is not common in Europe and their roots are coming from the US NRC, Title 10, Code of Federal Regulations PART 21-REPORTING OF DEFECTS AND NONCOMPLIANCE. That is the reason why the Krško NPP also analyses reports from suppliers. Examples:

			1. In accordance with 10CFR21 REPORT CONCERING BORG-WARNER 3" AND 4" SWING CHECK VALVES the preventive review of valves was done in outage 2007. 2. Based on recommendations from WESTINGHOUSE Technical Bulletin 07-1, UNIVERSAL LOGIC BOARD FAILURES the inspection of all logic boards with installed chip MC668P was done in outage 2007. 3. Based on recommendations from NRC Information Notice 2006-26: FAILURE OF MAGNESIUM ROTORS IN MOTOR-OPERATED VALVE ACTUATORS the preventive maintenance procedure for motor-operated valve actuators with magnesium rotors was revised. 4. According to the information obtained in the US NRC Bulletin 2003-01 and Generic Letter 2004-02 the NPP Krško performed two modifications during the outage 2007: Reactor building recirculation sump strainer replacement and Replacement of thermo insulation within containment.
Germany-1	Article 8.1	According to the diagram “Manpower development of the SNSA” the manpower has slightly been decreasing since 2005. Please explain the policy of SNSA concerning the further development of manpower. How is the necessary manpower determined to fulfil the regulatory tasks?	In recent years the government of Slovenia has strictly followed the policy of not increasing the number of civil servants. Therefore it is also not possible to increase the number of staff of SNSA. In parallel the SNSA has substantially improved its management system and increased the effectiveness of its work. The staff number is now adequate for fulfilling the current needs. However, if Slovenia decides to construct the second nuclear power plant, the number of staff will have to be increased accordingly. For how much we don’t know yet, appropriate studies are underway.
Germany-2	Article 8.2	The following question is of special interest for Germany for the further development in this field. As this item may already be covered by your report or by other questions posted by Germany, we do not expect repetitions of information already delivered. Please just give additional information as appropriate. It was decided at the Third Review Meeting	We are convinced that CNS requirement on “effective separation” is ensured in Slovenia as far as the SNSA as a regulatory body for safety of nuclear installations is concerned. Regarding “independence” it is clear that the perfect model does not exist and the answer to this question must take into consideration also overall context of the particular Contracting Party/Country: historical, political, cultural, legal and administrative circumstances.

		to discuss this topic at the Fourth Review Meeting. Question: Is there any difference to your point of view between “effective separation” and “independence” as referred to in your report?	
Germany-3	Article 8.2	The following question is of special interest for Germany for the further development in this field. As this item may already be covered by your report or by other questions posted by Germany, we do not expect repetitions of information already delivered. Please just give additional information as appropriate. It was decided at the Third Review Meeting to discuss this topic at the Fourth Review Meeting. Question: Is the principle of effective separation (as given in Art. 8 Para 2) laid down explicitly in any binding national law or is this principle met by a sum of state organisational measures?	The principle of “effective separation” as given in Article 8/(2) of the NSC is not laid down explicitly in our 2002 Act. It is met by a sum of different provisions of different laws and by-laws which generally define: the position of such administrative bodies within the structure of the ministries; the structure of state budget, the reporting scheme within the governmental frame; the decision making hierarchy in appeal process within administrative procedure, etc.
Germany-4	Article 9	The following question is of special interest for Germany for the further	The “prime responsibility of the licence holder” principle is explicitly laid down as one of the few general principles which govern the 2002 Act (on Protection against Ionizing Radiation and Nuclear Safety) – Article 4! Our report

		development in this field. As this item may already be covered by your report or by other questions posted by Germany, we do not expect repetitions of information already delivered. Please just give additional information as appropriate. It was decided at the Third Review Meeting to discuss this topic at the Fourth Review Meeting. Question: Is the principle, that prime responsibility for the safety of nuclear installations rests with the holder of the relevant license laid down explicitly in any binding national law or is this principle met by a sum of regulatory requirements?	furthermore desires to explain the way this principle has been met by the sum of regulatory requirements (of the same Act or in the corresponding regulations and Ordinances).
Germany-5	Article 10	The following question is of special interest for Germany for the further development in this field. As this item may already be covered by your report or by other questions posted by Germany, we do not expect repetitions of information already delivered. Please just give additional information as appropriate. It was decided at the Third Review Meeting to discuss this topic at the Fourth Review Meeting.	The priority to nuclear safety is given in the general principles of the Ionising Radiation Protection and Nuclear Safety Act.

		Question: Is the principle of priority to safety laid down explicitly in any binding national law or is this principle met by a sum of regulatory requirements?	
Germany-6	Article 10	Reference to the Summary Report of the 3rd Review Meeting, item 36, 38, 42 and 43 The following set of questions is of special interest for Germany for the further development in this field. As some of these items may already be covered by your report or by other questions posted by Germany, we do not expect repetitions of information already delivered. Please just give additional information as appropriate. It was decided at the Third Review Meeting to discuss this topic at the Fourth Review Meeting. Question: 1. Is a safety management system (SMS) planned or implemented? 2. What is the basis of the SMS (IAEA Requirements, other criteria)? 3. Is the implementation of a SMS voluntary or obligatory? (Does the	Safety management system as a broader concept which involves quality assurance and safety culture are very important subject in Slovenia. Some overviews are already presented in the report in article 13 and appendix II: A) Challenges (ii and vii). Nevertheless, the answers are below: 1. Safety management system has been already implemented, but some activities are also planned in the future. 2. Safety management system is very complicated subject and so one source is not enough. The primary source was the IAEA requirements which were supplemented with other sources (WENRA, NRC) and also other broad industrial requirements (aircraft industry, NASA, etc.) 3. It will become obligatory (set of rules which will be incorporated into legislation), but nowadays is voluntary. 4. SMS assessment is still in preparation phase, so we haven't yet developed process. However, the SMS is implicitly checked through the regular review, assessment and inspection of the NPP. 5. External review will be also defined in the future. It depends on who will be reviewers and what will be object of reviewing and of course scope of review. External review of NPP will be performed by regulatory body or support organizations. 6. Some indicators already exist. Regulations do exist and there are plans to improve regulations, because some of the secondary legislation is still in preparation. As defined in INSAG-13, the safety management system provides a framework by which the organization ensures good safety performance through planning, control and supervision of safety related activities. These features are fully incorporated in the Krško NPP "Plant Management Manual"

			regulator require the implementation of the SMS? If yes, how detailed are the requirements for the contents of the SMS?) 4. How is the SMS assessed and approved? (Does the regulatory body check whether the appropriate processes are implemented or available in the SMS? Does the regulatory body check whether and to which extent the applicable criteria for a safety management system are fulfilled? Is the authority entitled to inspect the results of the SMS assessment and if so, to which extent?) 5. How is an external review process performed? 6. What are the key elements of an SMS? (Indicators, Integrated or stand alone system, Continuous improvement and treatment of deviations (Are there regulations how to handle	and “Code of Safety and Business Ethics”. Accordingly, measures are provided in order to promote and support strong safety culture. In addition to procedural methods, other instruments of Safety management assessment at the Krško NPP used by authorities are provided through frequent Slovenian Nuclear Safety Administration inspections and examinations, Periodic Safety Reviews, Technical Support Organisation reviews and other means supported by the IAEA. The Krško Safety Committee and Independent Safety Engineering Group activities, various Technical Assessment missions, Peer Review missions and Benchmarking are supplementary independent ways of safety management assessment. Key elements of the safety management system are divided into the areas as follows: Safety Culture, Nuclear Safety, Management Activities, Internal organisation, Training, Monitoring and assessments of activities, Housekeeping, Respect to Operating procedures and Regulatory requirements, Quality Assurance, Public Relations, Radiation Protection, Industrial Safety and Planning. These areas are described in the Krško NPP umbrella document “Management objectives and expectations”. Some of the key tools used in the safety management system are Safety Culture Self-assessment, Periodic Focused Self-assessment, Plant Performance Monitoring Program (including Performance Indicators), Corrective Action Program and Quality Assurance Plan.

		deviations from the specified process?); Participation on benchmarks exercises of licensees	
Germany-7	Article 14.2	It is mentioned that the utility maintains a living PSA. Are insights from this PSA also used by the utility for risk-informed decision making?	Yes. The living PSA is used by the utility as a support tool for decision making at following areas; introduction of important design improvements and modification (fire protection improvements), planning of activities during regular plant outages, planning of on-line maintenance, planning of surveillance testing and modifications of important plant programmes and procedures.
Germany-8	Article 17.3	All aspects of a licensing process are described in Article 17. It is also recognised that according to Article 6, some reassessment of external hazards has been performed, e.g. a new seismic probabilistic hazard analysis and some other analyses concerning the hydroelectric power plants at the Sava river. Is there a programme in place to reassess systematically the influence of external hazards based on new insights?	For more detailed answer see also answer to the question from UK on Article 17.3 on the re-evaluation of site related factors.
Germany-9	Article 18.1	In Article 18, the legal basis of the design and the main modifications in the reporting period are described. Could you reflect on how defence in depth is realised in the plant and whether the authority is satisfied with the experience made during the reporting period?	The safety screening and safety evaluations of modifications are performed according to US 10 CFR 50.59. The Krško NPP submits to the SNSA 2nd and 3rd category modifications. The SNSA reviews plant's screening and evaluations and each year requires for one or two proposed modifications to be upgraded from 2nd to 3rd category modification. The 1st category modifications shall be, according to the current legislation, reported within 6 months after the implementation, but this requirement was violated many times (see Article 14.1.1 of the Report for description of categories). The defence-in-depth is built into screening and evaluation process requiring more thorough process if defence-in-depth is challenged.

Germany-10	Article 18.2	In Article 18, the legal basis of the design and the main modifications in the reporting period are described. Is it possible to show some experience that the technology used in the plant is proven and that a reliable, stable and easily manageable operation takes place?	Computer program PAD 4.0 was licensed by the US NRC. Program PAD 4.0 was used only to verify the fuel project criteria. Input data for the safety analysis are obtained according to the more conservative (previous) program PAD 3.4. Beacon-TSM application was also licensed by the US NRC and implements in more US NPPs. The replacement of central alarm system results from recommendation, issued in I.D.1 NUREG-0737. The new water pre-treatment and treatment system had eliminated the usage of hydrochloric acid and caustic soda for water regeneration and therefore there is no more regeneration waste to neutralizing sump. Operation will be fully automatic and on-line process supervision from two control locations.
Germany-11	Article 19.2	It is explained that the utility has a Plant Performance Monitoring Program with about 90 indicators and that SNSA has developed an internal set of its own indicators for regulatory purposes. 1) Can the indicators of the authority be described? 2) Can the authority reflect on the experience in using its own set of indicators and possibly of different insights compared to the insights based on the Plant Performance Monitoring Program of the utility?	1. The SNSA approach and set of indicators with definitions can be obtained in NEA/CNRA/R(2006)1 report "Regulatory uses of safety performance indicators" (http://www.nea.fr/html/nsd/docs/2006/cnra-r2006-1.pdf) 2. Some SNSA specific indicators have definitions different from the Krško NPP definitions. For example, the SNSA rework indicator includes all reworks on defined equipment (i.e. failure due to worn out seal and subsequent failure due to improper installation of flange on the same component are 2 inputs for indicator) while the Krško NPP rework indicator includes only repetitive works on defined equipment (i.e. two times worn out seal). Trending and evaluation of indicators is convenient when enough information is obtained and for that more time is needed. Anyway, when the up-to-date indicators value noticeable exceeds usual values, the SNSA starts inquiry in the plant.
Germany-12	Article 19.7	Reference to the Summary Report of the 3rd Review Meeting, item 36, 38, 42 and 43 The following set of questions is of special interest for Germany for the further development in this field. As some of these items may already be covered by your report or by other questions posted by Germany, we do	1. The NPP Krško screening criteria categorize internal events into four levels. First level are more significant conditions which affects safety of the plant, personnel or general public (transients, redundant safety system malfunctions, events involving nuclear safety, fuel handling and storage, excessive radiation exposure or personnel injury, excessive discharge of radioactivity, management needs). Second level are less significant SSC or human deficiencies which affects plant safety or reliability (deficiencies in design, analysis, operation, maintenance, procedures or training, unplanned radiation exposure, major equipment damage). The third level are minor conditions which affects quality of process (failures on non-safety SSC, minor human issues, non-radiological environmental events, isolated seismic

		not expect repetitions of information already delivered. Please just give additional information as appropriate. It was decided at the Third Review Meeting to discuss this topic at the Fourth Review Meeting. Question: 1. Which are the screening criteria for the internal and external experiences to be considered? (Are audits and reviews performed by external experts for controlling the effectiveness of OEF? Which procedures, committees etc. are established for the review and exchange of operating experience at the plant operator level and the supervisory level?) 2. How is the implementation of lessons learned from operational experience monitored? 3. How are operating experiences handled that are below the statutory reporting threshold?	deficiencies on components). The fourth level comprises minor conditions which do not affect quality of process and which are tracked only due to trending. External events and lessons learned that are selected for plant's further evaluation are those which are likely to become problem at the NPP Krško regarding plant or personnel safety and plant reliability. Furthermore, external administrative issue events are distributed within the plant for info only. Screening of events and audits are performed by the ISEG (Independent Safety Evaluation Group), situated within the plant, and reviewed by the Krško operating committee. Department for quality assurance performs internal audits for effectiveness of operating experience assessment program. For the repetitive internal events, major events (INES ≥ 1) or PSA significant events (ΔCDF ≥ 1%) the SNSA perform internal analysis and compare results with the Krško NPP results. Operating experience assessment program establishes the responsibility as stated. Engineering service division distributes off-site event reports to ISEG. System engineers determine the applicability of industry events for the Krško NPP. Station managers, superintendents and supervisors are responsible for maintaining an awareness of operating experience pertinent to their areas. Training managers introduce specific significant events into training program. 2. Operating experience tracking information system was developed to support monitoring process, procedures and activities regarding the deviation reports, operating events, events screening, events evaluation, events action tracking and events cause. All data are accessible in the plant information system. 3. In accordance with the legislation for on-site events reporting, approximately 5 to 8 events per year are reported. These events are usually classified among NPP Krško Level 1 events. Number of events below the statutory reporting threshold is fairly greater than above the threshold. See above-quoted info of operating experience implementation.
Hungary	Planned	The paragraph states that obligations	In the decommissioning plan for the Krško NPP the estimate was done, how

	Activities	relating to the decommissioning of the Krško NPP are defined by the treaty between the Slovenian and Croatian Governments. Croatia issued the Governmental Decree in April 2006 and started to collect decommissioning funds on a separate account within the state budget. What is the solution for granting half of the funds for the financing of all activities related to decommissioning and radioactive waste disposal by Croatia within a relatively shorter period?	much the decommissioning costs will be. It is the Croatian obligation to adjust the financial levy from each kWh spent in Croatia in such a manner, that the final sum in the fund would correspond to the half of the estimated decommissioning costs. It has to be added that this figure is not fixed, but it is adjusted with every revision of the decommissioning plan (approx. every 3-5 years).
Korea, Republic of	Article 15	(Article 15, Section 15.2) In relation to Section 15.2 Radioactive Discharges and Environmental Monitoring, Krško NPP changed the authorized release limit of 8 TBq with quarterly limit to 45 TBq annually for H-3 and the SNSA approved the new value. - What is the technical basis that the SNSA approved the new value that Krško NPP changed the release limit of H-3?	The SNSA as the Regulatory Authority changed the authorised annual limit of 20 TBq for tritium to the new limit of 45 TBq. The need for increase originated in the change of the period of fuel cycle from 12 months to 18 months. Correspondingly, the production rate of the tritium was increased due to several reasons, mainly fuel with higher enrichment, higher boron concentration in the primary coolant and more fuel rods with burnable poisons. The thorough analysis of the proposed increase has shown, that the estimated dose increase to reference group for postulated releases of 45 TBq of liquid tritium is very low (only 8 nSv) if compared to the authorised effective dose for the public of 50 microSv per year from all releases from the Krško NPP.
Latvia-1	Article 7.1	Could you explain in more details legal provisions for decision on suspension? From the text is clear that only competent inspector can use this procedure, but further is statement – no rights of appeal. But, in practice, used in other countries (and also in other sectors) there are rights to appeal, but	In some cases the 2002 Acts provides that appeal against SNSA ruling is not possible. That does not mean that the licensee has no judicial remedy on its disposal. The licensee may not use an appeal in the administrative procedure but has a constitutional right to submit its case to the court within the civil law procedure. Such cases when the appeal in administrative procedure is not allowed are not limited only to nuclear field; they can be find also in laws of other sectors; but are limited – generally, as well as in the 2002 Act.

		operator has to fulfil decision on suspension and have to ensure fulfilment of relevant requests related to the safety etc. Appeal should be considered by relevant officials (e.g. by head of Regulatory Body or chief inspector) or directly only by court.	
Latvia-2	Article 10	Could you explain in more details application of the US NRC regulations for domestic uses in Slovenia? Have you any plans to expand national regulations to incorporate provisions from the US NRC regulations? How you ensure consistency for implementation when “legislator” is the regulator of other country, e.g. new amendments come in force for the US facilities, but operator in Slovenia is not informed about such changes? This question applies also to other parts of the report.	The US NRC regulations are not mandatory for Krško NPP. However, both the licensee and the SNSA are very closely following the developments in US in that area and practically implementing newest developments. One could say that US NRC requirements are considered as kind of international standards, which we licensee is following. The current legislation and the new regulations under preparation do not intend to incorporate everything from US NRC regulations into the domestic one. Only the main principles and limits (mostly based on WENRA reference levels) will be prescribed. It is expected that the licensee will follow good internationally recognized detailed solutions, among which the legal requirements of developed nuclear technology supplying country will play major role. Both the licensee and the SNSA are very well and very quickly informed about any news in that respect anywhere in the world. In addition the SNSA has always the possibility to enforce implementation of some important improvements that would come from abroad.
Latvia-3	Article 11.1	Slovenia is a single country, which changes its legal obligations related to third party liability (from Vienna convention to Brussels convention), what are benefits from such changes?	A few years ago Slovenia terminated the application of the Vienna Convention (on civil liability for nuclear damage) and become a party to the Paris Convention. Basically the reasons/benefits for such a decision are that the amounts of operator’s liability were in that time much higher in PC than in VC and thus also compensation amounts, available for the victims. But Slovenia did not adhere only to PC; it became also a party to Brussels Supplementary convention which in case of a nuclear incident provides additional funds for compensation, i.e. second (public fund) and third (international fund) tier. Since the Convention on Supplementary Compensation for Nuclear Damage (under the IAEA auspices) has not

			entered into force yet – the potential benefits are obvious.
Latvia-4	Article 15	In part 8 about regulatory infrastructure there is a statement, that SNSA is responsible for nuclear safety and industrial radiation sources, but SRPA for radiation protection. In this part you described authorisation of radiation applications (radiography, X-ray devices and calibration sources) by SNSA. How it is ensured that requirements from both authorities are met apart from inspections by both authorities (e.g. unified data bases, acceptance criteria, unified ALARA programs etc.)?	Both inspections, the inspection of the SNSA and the SRPA notify each other on all related findings and requirements (copies of inspection minutes are sent to the other inspection). Some cases require jointly conducted inspection of both authorities. Both authorities also exchange the data from their data bases. The SRPA has a remote access to the SNSA data bases (register of radiation practices, register of radiation sources, etc.)
Nether-lands-1	Article 10	Monitoring of plant operation: Does SNSA receive reports about the performance indicator monitoring results?	SNSA receives annual report about Performance Indicators, which include 19 indicators (8 of them are WANO indicators). In the report are included comments on indicator changes. In the report are also some other data about additional indicators which are not represented in diagrams.
Nether-lands-2	Article 10	Independent outage reviews by TSOs: The text does not explain the role of SNSA during the outage. Does SNSA have an inspection programme during outage? Does the TSO perform the described activities under a contract for SNSA?	The SNSA follows the outage activities by onsite inspections and through special visits of the SNSA experts with regard to specific topics. The two SNSA outage coordinators are responsible for review of the planned activities in Krško NPP and accept proposals from the other SNSA staff for special topical visits to the outage. A plan of outage oversight is made and coordinated with the Krško NPP prior and during the outage. The coordinators gather the information from the SNSA staff and compile it into the outage analysis report. The main result of that report is the action plan for activities of SNSA during the next fuel cycle. An onsite SNSA inspector is present at daily meetings of Krško NPP staff where outage plan performance is reviewed and open issues are presented. These inspections are focused mainly at major activities, eventual events or failed tests of safety equipment, causes for outage plan delays etc. All the information gathered and eventual findings are written in inspection notices. Special visits by other SNSA staff are dedicated to supervision of plant

			modifications implementation, testing of safety relevant equipment and major maintenance activities. In case of significant events special visits are made to gather information on the root causes for these events and to review the plant's corrective actions to prevent recurring of such events. The TSOs follow selected outage activities and prepare weekly reports that confirm the proper fulfilment of these activities. Eventual non-compliances or findings are notified to the Krško NPP staff and are cleared during the outage or are included as recommendations in the summary report of the TSOs on outage activities. The TSOs perform activities under the contract, which has been concluded and was paid by the licensee, but the scope of activities is determined by the SNSA.
Nether-lands-3	Article 18.3	In the context of article 18(iii), could you please comment on the developments in Slovenia in the area of human factors and the man-machine interface with respect to reliable, stable and easily manageable operation?	The most of the activities in this area in recent period were related to enhancement of plant parameters display to the operators. The NPP Krško NPP Process Information System (PIS) has been modified substantially to enable the operators user-friendly access to the parameters. In 2007 the Human Reliability Analysis was updated but it did not reveal any substantial improvements to be made. The NPP Krško Process Information System (PIS) is computer-assisted system for monitoring plant operations. PIS enables access to the history of process, radiological, meteorological data, core parameters, component and system status as well as critical safety function status. During the outage in 2007 the parameters of emergency diesel generators and diesel generators' room as well as liquid waste processing and floor drain instrumentation circuits were connected to PIS. The purpose of modification is transfer and archiving of local data in main control room. The new regulation on design basis (that is in the preparation phase) will include human factors requirements regarding the IAEA recommendations. For human factors see also description in the report under Article 12.
Nether-lands-4	General	Appendix 2, A, Challenges, pressure of the owners to reduce operating costs. Are there any requirements applicable for the owners of NPPs like commitments to principles like "priority to safety"?	The priority to nuclear safety is given in the general principles of the Ionising Radiation Protection And Nuclear Safety Act. In practice, the owners of the only Slovenian NPP are two state owned electrical utilities from Slovenia and Croatia. The price of a kWh of electricity produced by Krško NPP is set out by the NPP management and approved by the Supervisory Board, based on the yearly business plan. Such price covers all gross operating expenses, i.e. electricity generation costs as well as

			necessary investments. Besides this the Supervisory Board annually approves the Long-term (five years) investment plan. The amount foreseen for investments and improvements is stable and gives the management proper flexibility for long term maintenance of nuclear safety. Both owners are obliged to settle their respective obligations towards the Krško NPP within 15 days of issuing an invoice. In recent years there have been no problems with any delayed payments, thus the owners respect the Krško management decisions including the safety related investments.
Pakistan-1	Article 9	How is the interface between the operator and the regulatory body with regard to the responsibility for safety organized?	As stated in our report the prime responsibility for nuclear safety rests, by the explicit provision of the 2002 Act, by the operator of nuclear installation. The responsibilities of SNSA with respect to nuclear safety are related (and limited) to the authority and competences SNSA has and are assigned to it as a national regulatory body for the safety of nuclear installations (as for example: establishment of safety requirements; assessment; licensing; inspection; enforcement; etc.)
Pakistan-2	Article 8.1	Can Slovenia provide information about the function of International Cooperation Division? How are arrangements established for the exchange of safety related information, bi-laterally or regionally, with relevant intergovernmental organizations to fulfill safety obligations ?	The International Co-operation Office of the SNSA acts as the focal point for the international activities. Within its scope of responsibilities are relations with the EU institutions, the IAEA and the OECD/NEA. The Office closely follows the activities in these institutions, while the experts from other divisions of the SNSA and other organizations take part in different committees and working groups. Within the Office is the liaison officer for the IAEA Technical Assistance programme, who also coordinates applications for the IAEA courses and meetings. For some international activities the Office receives a support from other divisions (e.g. issues related to nuclear non-proliferation /NPT, safeguards/ are covered by Radiation Safety and Materials Division, third party liability (Paris Convention) by the General Office). The bilateral relations and the exchange of information is the following: on an annual basis we have separate meetings with Austria and Croatia (each year one country hosts the meeting and the countries alternate); with the Czech Republic, Hungary and Slovakia we have quadrilateral meetings once per year with all four countries together; with other countries we exchange information on a case by case basis (mostly via e-mail or letters).
Pakistan-3	Article 10	What is the status of issues discussed during the outage in 2006 regarding the	It is true that Switchyard equipment is operating from the beginning of the

		problems with ageing and leakage of the reactor vessel head vent path, according to NRC GL 89-13?	plant life ('80), but outage scope was completed 100% and equipment is verified fully operational. Replacement is scheduled for the next few years in accordance with the system standards and needs. Leakage path from the RCS was solved and continuously controlled. It is not a problem with the Reactor Vessel head integrity but with the valves in the Reactor Vessel Head Vent path. The valves were replaced and spares are in the warehouse.
Pakistan-4	Article 11.2	There is no separate department for human resource development in the organizational chart of SNSA. How does the SNSA manage human resources, qualification and training activities?	The fact that the Slovene population is only around 2 millions and that because of relatively small nuclear programme also SNSA is small (around 50 staff members) clarifies somehow absence of a separate department for HRD in the organisational chart of SNSA. On the other hand on the level of the Ministry of Environment a separate organisational unit responsible for HRD is serving also the needs of SNSA.. With respect to qualification and training of the staff – please see our answer to both Finnish questions to Article 8.
Pakistan-5	Article 15	What measures have been taken to minimize the fraction of fission products in liquid discharges to half the previous value in order to meet the new release limit?	The fraction of fission and activation products in liquid discharges is very low due to nuclear fuel with very low portion of clad damage which is less than 0,004%. Calculations on which the original release limit of 200 GBq/year was based on the postulated 1% fuel clad leakage. Discharged activity has been currently at the level of only 0.1 % of the authorised limit therefore reduced limit will not cause the NPP any operational problem. Dose to an individual from the reference group at the newly postulated limit is less than 10% of an authorized limit of 50 microSv/year for an individual due to NPP's operation.
Pakistan-6	Article 15	Please provide information about the requirements raised by SNSA upon Steam Generator Replacement?	We assumed that this question refers to the collective dose received by the personnel during the Steam Generator Replacement. The SNSA did not put any specific requirements neither stipulate the maximum collective dose. The SNSA monitored the match between the calculated (foreseen) and actually received collective dose. The calculated dose was represented in daily increments. The ALARA dose planning was carefully monitored, i.e. all activities which delivered collective above the prescribed limit (10 man-mSv) were re-evaluated in accordance with ALARA principle.
Pakistan-7	Article 16	Kindly elaborate how different stations involved in emergency exercise communicate with each other? What is	In Slovenia there is one NPP with one unit only, thus the other stations can not be involved in emergency exercises. On-site emergency exercises are at the site level once a year with different

		the frequency and types of on-site emergency exercises performed at the Krsko NPP and how much time has been demonstrated for the evacuation of plant personnel?	objectives selected from the five - years exercise's objectives plan. Also the following drills are regularly conducted accordance to the emergency drill's plan: fire response, first aid and medical response, evacuation, emergency response organization activation, off-site radiological measurements and dose assessment, off-site notifications. Evacuation of plant personnel is demonstrated once a year as partial drill, as integrated drill (for example together with fire response drill) or as an objective of the annual exercise. The reference time for plant evacuation is 30 minutes, which has been achieved in the most of evacuation drills. This is time needed that non-essential plant personnel leaves the plant through the main gate.
Pakistan-8	Article 17	Please indicate the magnitude of SSE and OBE for Krsko NNP?	The NPP Krsko design ground response spectra for SSE comply with US NRC RG 1.60. The SSE vertical acceleration is equal to horizontal in all frequency regions. The peak horizontal ground accelerations used are 0.3g for SSE and 0.15g for OBE.
Pakistan-9	Article 19	Kindly elaborate NEK's policy regarding permanent storage (dry storage) of spent fuel when SFP storage (wet storage) gets expired?	The original spent fuel storage racks were designed for 828 fuel assemblies. That capacity was sufficient for the first 20 years of NPP Krško operation, i.e. including year 2003. In 2002 the SNSA approved the first stage of spent fuel pit reracking performed. The capacity was enlarged to 1694 fuel assemblies what is enough for the next 20 years of operation. The second stage of spent fuel pit reracking is foreseen in the future in case NPP Krško will submit application for life extension from 40 to 60 years of operation. The Slovenian details of strategy on longterm management of SNF are laid down in the *Programme for the Decommissioning of the Krško NPP and Disposal of Low and Intermediate Level Waste and Spent Fuel* and *Resolution on National Programme of Management with Radioactive Waste and Spent Nuclear Fuel for the Period 2006 to 2015. Off. Gaz. RS No. 15/2006*, where the construction of of a dry SNF storage is planned in 2023 (after the NPP shutdown), which should operate until 2070. The final SNF repository is planned for operation from 2064 to 2069.
Pakistan-10	Article 19.3	Can Slovenia elaborate the mechanism of revision/re-evaluation of procedures and programs in the area of operation and maintenance?	Safety related procedures shall be reviewed in the period within 2 years while both non-safety related and quality related procedures and programs within 5 years. Next to the periodic reviews the procedures shall be re-evaluated after unplanned transient or unusual event (on defined equipment) or on staff demand. Revisions to procedures explicitly described in Safety Analysis

			Report and administrative programs require safety evaluations according to US 10 CFR 50.59 if the intent of the procedure is changed. Also safety evaluation screening (10 CFR 50.59) to these procedures might be performed when the responsible engineer on the sound engineering judgment determines that.
Pakistan-11	Article 19.7	Can SNSA provide information on the set of indicators developed for Krško NPP to identify operational safety performance of plant from regulators perspective?	The SNSA approach and set of indicators with definitions can be obtained in NEA/CNRA/R(2006)1 report "Regulatory uses of safety performance indicators" (http://www.nea.fr/html/nsd/docs/2006/cnra-r2006-1.pdf)
Poland-1	Article 11.1	The NP Krsko is a joint property of Slovenia and Croatia, but it is situated in Slovenia. What is the participation of Croatian Nuclear Safety Authority In establishing the regulations in force for Krsko? •Have there been any problems due to international character of the plant?	The regulatory and legislative framework is governed only by the Slovenian side, since the Krško NPP is situated on the Slovene territory. The Croatian Nuclear Safety Authority does not participate in establishing regulations. The fact that both countries were part of former Yugoslavia and that the Krško NPP was constructed as a joint project of the electric utilities of Slovenia and Croatia created some problems after the independence of both countries. The bilateral Treaty has been designed for that reason: to settle the historically based disputes and to protect both parties from potential new ones.
Poland-2	Article 11.2	Are Croatian citizens allowed to work in Krsko? What is the language used as the working language at the plant? Is the question of language the source of any problems?	Yes, Croatian citizens are allowed to work at the Krško NPP. Both languages are used as the working language. As the languages are very similar and most of the people are bi-lingual (Slovenian, Croatian), use of both languages is not the source of problems or misunderstanding.
Poland-3	Article 12	•Does the regulator in Slovenia monitor organisational aspects independently of the utility and industry initiatives (eg WANO) such as: Human performance, Competencies, Organisational structure and processes, Financial capacity (eg for decommissioning) •If yes, what criteria do you apply?	See answer to German question (on Article 10 on safety management systems).
Poland-4	Article 19.7	•Does the NSA require that the plant follow exactly the developments of the US vendor?	The SNSA and Slovenian legislation do not require the Krško NPP to follow exactly the developments of the US vendor, but there is a positive mutual understanding between the regulator and the licensee for doing so.

		•If not, on what basis does the NSA assess the need for safety upgrades?	The new national regulations that will cover various areas (design, OEF, reporting requirements, QA…) are in preparation and will follow the WENRA reference levels, complemented with existing Krško NPP and SNSA practice. However, also there will be no requirement to follow foreign practice. The potential safety upgrades are assessed by SNSA based on a foreign practice and are screened against its importance to safety. In recent years there was no need to force the licensee to implement such upgrade, the licensee always agreed to implement it voluntarily.
Romania-1	Article 6	Please provide information on the criteria used by the licensee for the classification of PSR findings and for the prioritization of improvement measures and corrective actions.	Prioritization process consisted of pre-screening and ranking process. Pre-screening eliminated from consideration in the ranking process all safety issues identified as desirable and requiring minimum effort to implement (example: minor corrections to plant procedures that can be implemented as a part of corrective processes and programs that normally take place in the plant are screened from further consideration in the ranking process). Some identified safety issues may necessitate conditions that required immediate or very near term resolution. For example, they may require that the plant promptly go into an outage or extend an outage in progress, a power reduction, or equipment damage or degradation which, as required by TS, results in a near term power reduction or outage. All such safety issues did not require ranking as they must be accomplished in the near term to mitigate potential substantial economic consequences to NEK. A significant number of issues did survive the pre-screening process. All this safety issues were assessed based on a set of attributes utilizing a telescopic filtering method as described in Haimes' Risk Modelling, Assessment and Management. In the first phase, all attributes were ranked with respect to each other based on guidance from 10 CFR Part 50, Safety Goals for the Operations of Nuclear Power Plants and 10 CFR Part 830, Nuclear Safety Management. Issues were initially divided into those where a direct link to plant safety can be established and those which are a re-evaluation of the safety basis only. The generic attribute categories had been derived to allow for an efficient safety issue ranking method for NEK issues where a direct link to plant safety can be established. A three-tier ranking method was utilized for determining the relative significance of the attributes where first, risk and degradation of defense-in-

			depth are evaluated; second, prior risk information is determined; and finally, qualitative cost categories were assigned. The risk and degradation of defense-in-depth evaluation provided the dominant discriminator between safety issues. Issues involving re-evaluations of the safety basis and potential identification of new risk and degradation of defense-in-depth were ranked independently of issues where a direct link can be established to the reduction of residual plant risk or defense-in-depth. A three-tier ranking method was utilized for determining the relative significance of the attributes where first, a qualitative evaluation of the potential change in the plant risk profile was performed; second, prior risk information was determined; and finally, qualitative cost categories were assigned. The potential change in the plant risk profile evaluation provided the dominant discriminator between safety issues where a direct link to plant risk or degradation of defense-in-depth cannot be established.
Romania-2	Article 8.1	Could you please provide information on the composition of the Expert Council for Radiation and Nuclear Safety? What are the responsibilities of this advisory body?	The member of the Council : - should be an expert in the field - should not be at the same time part of the management of the nuclear installation Furthermore, each one should be from a different institution (e.g. two of them can be from the same nuclear installation). There are five members of the Council. After expiration of each mandate he/she may be elected again. Office is held in a personal and honorary capacity. As regards responsibilities of the Council they are defined in the 2002 Act. - opinions and proposals during the preparation of regulations pursuant to 2002 Act - opinions on annual Report, annual work plan…. - opinions and proposals on other issues requested by the SNSA and/or Ministry of Environment.
Romania-3	Article 10	It is stated that “Establishing such a program of monitoring and assessing operational plant safety performance indicators represents an effective safety culture of the plant personnel by itself. The results of these performance	The improvements of Safety Culture may be seen through the trends of Performance Indicators. In case of any negative trends, the implementation of improvements is initiated. This iterative process is possible through the Corrective Action Program where corrective actions are defined, administratively processed and monitored until completed. Typical performance indicators observed which result in improvements in safety

		indicators reviews identify weak points and define corrective actions for the adverse trend indicators". Could you please provide some examples of improvements in the safety culture observed as an outcome of the implementation of this programme?	culture are Number of Significant Events, Number of Safety Systems Failures, Number of Operation Human Performance Events and Number of Human Related Events, etc.
Romania-4	Article 11.2	Could you please provide more information on the composition of the SNSA's Expert Commission for the Examination of the Operator's Qualifications and on the examination process?	In accordance to our legislation the SNSA nominated nine members of the Expert Commission for the Examination of the Operator's Qualifications (Commission). Members of the Commission are nominated from: Regulatory Body (2), Technical Support Organisations (4), Krško NPP (2) and retired Krško NPP senior staff (1). The examination process consists of: – written examination: 38 to 40 questions (mainly multiple choice) – simulator examination – AOP, EOP and EIP procedures, – oral examination: reactor physics, nuclear safety, thermo hydraulics, technical specifications and administrative procedures, emergency preparedness
Romania-5	Article 13	Is the quality assurance system of Krsko NPP based on the process approach? It is stated that the Krsko NPP implementing procedures are in compliance with GS-R-3 and GS-G-3.1. As a review of these IAEA documents are there any changes planned to the quality assurance system of the NPP?	Yes, it is based on the process approach. The Quality Assurance system is well-described in Section 13.2 of the Fourth Slovenian Report on Nuclear Safety where 10CFR50App.B is basis of NPP Quality Assurance Plan with additional elements of new safety standards and regulations. Continuous improvement in the development of safety standards requires proper revision of the existing plant documents. The NPP intends to improve its QA system.
Romania-6	Article 19.6	Please specify what changes are planned to be introduced by the new regulation that will replace the present regulation on the method and frequencies for keeping records and reporting to the regulatory body.	Routine reporting: Daily/monthly/quarterly and annual reporting will be done through electronic communication system between the licensee and regulator. Most of data will be inputs for the SNSA system of safety/performance indicators. The period of keeping records is prescribed by current legislation for period of five years. Event reporting: The proposed reporting regulation is based on the US 10 CFR 50.72/73, completed with the Event reporting guidelines 10 CFR 50.72

			and 50.73, NUREG-1022. The required time for submitting event reports to the SNSA will be prolonged from 30 to 60 days. The existing regulation (dated 1981) quoted events that are subject to reporting, while the new regulations will be focused more on the plant states with respect to nuclear and radiological safety.
United Kingdom-1	Article 7.1	The report infers that all the regulations that are based on Acts that were in place prior to the 2002 Act on Ionising Radiation and Nuclear safety, will be replaced or reviewed during 2007 and 2008. Will this include a review of Regulations E-1 and E-2 that are quoted widely in Article 17 and 19 and which seem to be fundamental to defining the operating parameters of the NPP?	Yes, so called E-1 and E-2 regulations shall be repealed during 2008 since the new regulations (which will include also WENRA requirements) shall be adopted, which will supersede E-1 and E-2.
United Kingdom-2	Article 7.2.2	The report refers to major and minor offences. Could Slovenia give some examples of minor offences for which an inspector may apply a financial penalty directly? Are these penalties applied to an individual or to the Company? Is there an appeal process? Does the penalty system lead to a lack of openness when reporting violations?	Examples of minor offences: – If the licensee is not implementing Operational Experience Feedback Program – If the licensee is not implementing adequate Quality Assurance Programme – If the licensee is not implementing adequate system for public information These penalties are applied to an individual and to the Company. Besides the financial penalty an inspector may apply also a written warning. There is an appeal process. At the moment the penalty system does not lead to a lack of openness when reporting violations.
United Kingdom-3	Article 8.1	The report states that the Regulatory body is funded by the State budget. Does Croatia contribute financially, or in any other way, to the running of the regulatory authority?	No, the SNSA is financed only from the Slovenia state budget and Croatia does not contribute in any way to functioning of the SNSA.
United Kingdom-4	Article 9	How does the licence holder ensure that any contractors on the NPP site fulfill their safety responsibilities?	Each and every person who enters the Krško NPP site is obliged to follow the Krško NPP internal rules and procedures – including those related to general and nuclear safety. For those who work on the site the contract stipulates

			more precisely such provisions. This includes also the need that the contractors internal QA/QC must be compatible with the one of operator: This is a basic condition for granting the contract.
United Kingdom-5	Article 10	The response to Article 10 identifies many safety related activities. However it does not state whether these are regarded as priority activities (when, for example, compared with commercial activities). Could Slovenia provide more information on the underlying policies that give due priority to safety (as required by Article 10)?	The safety priority is one of the basic principles written down in 2002 Law. In terms of policy, the priority to safety is clearly outlined and discussed in the Krško NPP management program MD-1 “Notranje usmeritve in cilji” (Management Objectives and Goals).
United Kingdom-6	Article 10	The report describes reviews of outage activities and surveillance tests that are carried out by Technical Support Organisations (TSOs). Do the TSOs have a legal status? To whom do the TSOs report – the Krsko Plant Management or the Regulatory Authority?	TSO’s have a legal status defined in Act on Ionising Radiation Protection And Nuclear Safety Act and in subsidiary legislative JV3 (Regulation on authorised experts for radiation and nuclear safety). For particular activity TSOs are contracted by the NPP so legally they are reporting to them. However, their report is submitted by the NPP to the SNSA as the independent review. On the other hand TSOs have to report to SNSA once a year about their activity in the scope of their competences.
United Kingdom-7	Article 10	The report describes the roles of the Krsko Operating Committee, the Krsko Safety committee and the Independent Safety Engineering Group. Do these groups have any statutory or other decision making function? Is the Krsko management obliged to act on advice received from these committees?	The ISEG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities or other means of improving unit safety to the Management Board. The Krško Operating Committee shall function to advise the Technical Director on all matters related to nuclear safety. The Krško Safety Committee (KSC) shall function to provide independent review and audit of activities. The KSC shall report to and advise the Management Board. The President of the Management Board is not obliged to act on advice, but he shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in important activities for nuclear safety.
United Kingdom-	Article 13	Paragraph 13.1 summarises the Regulatory Authority’s move towards	Yes. The elements of GS-R-3 Integrated Management System (integration of safety, health, environmental, security, quality and economic elements) are

8		an integrated management system as set out in IAEA document GS-R-3. Are there any plans for Krsko to move towards the requirements of GS-R-3?	planned to be implemented within the next revision of the Quality Assurance Plan. The basis for the NPP Quality Assurance Plan will remain 10CFR50 Appendix B. The NPP Krško implementing procedures are in compliance with the intent of the new IAEA safety standards such as GS-R-3, GS-G-3.1, etc.
United Kingdom-9	Article 13	The report states that one goal of SNSA is to acquire ISO 9001 accreditation. This represents a change in the policy stated in Slovenia's 2005 National Report. Is there a reason for this change?	The SNSA successfully acquired the ISO 9001:2000 certification for the management system in December 2007. The SNSA management system considers all requirements of the ISO 9001.2000 standard "Quality Management System – Requirements" as well as all requirements of the IAEA Safety Standards Series No. GS-R-3 "The Management system for Facilities and activities. The SNSA decided to certificate the management system due to the following reasons: 1. The new IAEA Safety Standards Series No. GS-R-3, which considered the requirements of the ISO 9001.2000 standard as well, was issued in the year 2006, thus both standards are becoming more harmonised; 2. The SNSA recognized, that the performance of external audits can contribute to the effectiveness and efficiency of the management system since in order to maintain the ISO certificate the organization has to demonstrate to the certification body on a regular basis continuous improvement of the management system. 3. The ISO 9001 accreditation is also improving the image of SNSA among the stakeholders and in the public.
United Kingdom-10	Article 17.3	The response to the requirements of Article 17 describes fully the processes, procedures and consultations that are required for evaluating the factors relevant to the siting of a new plant. It does not however address the issue of the re-evaluation of site related factors to ensure continued safety of an existing plant. Does the 2002 Act, or regulation E-1, have any provision for requiring re-evaluation?	Nuclear installation shall according to the 2002 Act (Art. 81) perform a periodic safety review (PSR) at least every 10 years. The PSR shall include also site safety reassessment and is thus considered as the systematic programme for reassessment. A report on the PSR is a prerequisite for extension of the operating license. With the PSR the operator of the nuclear installation shall perform systematic and integral evaluation and reassessment of nuclear and radiation safety, including impacts of external hazards (re-evaluated, newly emerged or potential risks), e.g. site safety. All findings of the PSR are put in an action plan to implement corrective measures if necessary. The plan shall be approved by the SNSA.

			The SNSA can also request an exceptional safety review in case new and relevant evidences on nuclear and radiation safety of the installation emerge or legislative requirements have changed. A new regulation JV9 is in preparation (expected adoption in 2008) that will arrange detailed requirements for PSR. The recent site reassessment in Slovenia include probable maximum flood studies, probabilistic seismic hazard analysis, fire hazard analysis and station black-out analysis. The most site reassessments are subject to the PSR, while some are being implemented as such.
United Kingdom-11	Article 18.1	Paragraph 18.1 identifies the criteria to which Krsko NPP was originally designed and constructed. Paragraph 18.2 describes some of the recent modifications to the plant. To what criteria were these modifications designed and how did they meet the requirements of Article 18?	All modifications in the plant are subject to the safety screening and safety evaluations according to US 10 CFR 50.59. The safety significant modifications shall be referred to the technology proven by experience. For example, the computer program PAD 4.0 and Beacon-TSM application were licensed by the US NRC and implemented in many US NPPs (see also answer to German question, Art. 18.2).
United States of America-1	Article 6	OSART mission in 2005 observed some areas for improvement re: adherence to procedures in the field. The first PSR (completed in 2005) identified several deficiencies of design, operation, and safety culture. A PSDR action plan containing 124 actions grouped in 13 areas, has been developed to address them by year 2010. Does SNSA plan to perform a review to assess the regulatory effectiveness for problem and identification and resolution?	SNSA is regularly following the implementation of the PSR action plan and taking appropriate actions when necessary.
United States of	Article 17.1	This article describes the regulations in place, but does not provide information	According to the requirements of the Regulation E-1, during the siting process the investor shall prepare scientific data:

America-2		on actual siting of power plants in Slovenia. What are the details for the siting of the second unit to be constructed at Krsko?	1) on natural characteristics of the area, that can affect the safety of the nuclear facility; 2) on characteristics of industrial and other facilities in the area, that can affect the safety of the nuclear facility; 3) on characteristics of the nuclear facility important for evaluation of its impact on spatial planning and environment; 4) on planning of public safety. The investor of the nuclear facility shall evaluate and assess the site of the nuclear facility with: 1) field investigations of characteristics of the site area; 2) an analysis of characteristics of the site area; 3) a proposal of design bases for the nuclear facility and safety measures, that result from the analysis of characteristics of the site area and selected external design basis events; 4) an assessment of radiological impact of the nuclear facility on human environment. The investigations of the site of the nuclear facility shall comprise of: 1) geological, seismological; seismotectonic and geotechnical investigations 2) hydro-geological investigations 3) meteorological investigations 4) extreme impacts of human activities in the site area 5) demographic and socio-economic characteristics 6) use of terrain and water in the site area including especially protected areas, areas of special application, ecologically sensitive zones etc.;
United States of America-3	Article 18.1	What are the general specifications on the design of the second unit to be built at Krsko?	Regarding the current legislation no general design specifications of the second NPP Krško unit is foreseen. However, new regulation on design requirements is in the final stage of preparation. Specific requirements about new plants will include CDF (core damage frequency) and LERF (large early release frequency) limits, capability of containment to sustain the crash of commercial airplane, auxiliary control room…
United States of	Article 19.1	What criteria were used to select the 33 “potentially interesting” events that	Information obtained through the US NRC (Generic Letter, Information Notice, Bulletin …), IAEA (INES, IRS…) and other channels are inputs for the

America-4		were reviewed for applicability to Krsko in 2004? Are external entities such as WANO or the IAEA used in selecting or reviewing these or similar recent events?	SNSA foreign operating experience tracking process. Through the SNSA screening process the SNSA expert selects inputs, which are related to the following criteria: nuclear safety or reliability, core reactivity, failures of main parts of equipment, likelihood to cause transients, reliability of plant, repetitive failures, common causes, radioactive releases and contamination, and also administrative and management issues. The SNSA as a regulator has no insight into WANO database.
United States of America-5	Article 19.1	How does the Krsko operator maintain quality assurance for design changes and major projects that are outsourced?	The Krško NPP Quality Assurance Plan imposes that procurement of material, equipment and service shall be consistent to: 10 CFR 50 App.B, Criterion IV, Sentence 1#; ANSI N18.7-1976, Sec.5.2.13.1, Sentence 1; ANSI N45.2-1977, Sec.5, Sentence 1; ANSI/ASME NQA-1-1979. Sec.4, Sentence 1; ASME Code, Sec.III, NCA-4000 (Winter 1982 Addenda), Art.4134.4; ANSI N45.2.13-1976, Sec.3.1, Sentence 1. The supplier QA program requirements shall be consistent to: 10 CFR 50 App.B, Criterion IV, Sentence 2#; ANSI N18.7-1976, Sec.5.2.13.1, Sentence 1 and Par.2 item (1); ANSI N45.2-1977, Sec.5, Sentence 3 and Par.2 item (1)#; ANSI/ASME NQA-1-1979. Sec.4, Sentence 2 and Supp.4S-1, Sec.2.3; ASME Code, Sec.III, NCA-4000 (Winter 1982 Addenda), Art.4134.4; ANSI N45.2.13-1976, Sec.3.2.3, Sentence 1. At each tier of procurement, the purchaser (NPP Krško) shall have access to the supplier's plant facilities and records for inspection or audit, regarding the: ANSI N18.7-1975 Sec.5.2.13.1, Par.2 items (3) and (5); ANSI N45.2-1977, Sec.5, Par.5 items (3) and (5); etc.