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Draft Safety Analysis Report for the Vrbina Krško LILW Repository

Chapter 16 Decommissioning programme

DOCUMENT HISTORY

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16 REPOSITORY DECOMMISSIONING PROGRAMME

16.1 GENERAL

This chapter, on the repository decommissioning programme, which addresses the decommissioning of the non-disposal part of the repository, is summarised from the LILW repository reference document “Program razgradnje odlagališča NSRAO Vrbina, Krško” [1].

In drafting the decommissioning programme, a graded approach was applied in order to secure radiation and nuclear safety. The decommissioning strategy and the relevant plans have been adapted to take into account the complexity of the facility, the type of radioactive waste within it and, in particular, the fact that the programme is being developed in the phase of preparing the draft safety analysis report, i.e. ahead of repository construction and operation [2].

The contents and structure of the repository decommissioning programme comply with the requirements of the Rules on radiation and nuclear safety factors (JV5) [2]. In drafting the programme, a graded approach has been applied, with due consideration to the fact that the decommissioning programme is prepared for an LILW repository and to the fact that, pursuant to provisions of JV5, this programme will need several reviews and updates and regular amendments, progressively incorporating ever more details relating to the decommissioning strategy and implementation. The programme will need amendments both to account for any deviations from the planned course of activities and to accommodate requirements posed by activities themselves during decommissioning. The programme is drawn up based on background documents of the project of construction of the LILW repository Vrbina, Krško [3], under the assumptions that the repository is going to remain in operation up to 2061 at least and that the RW is going to be conditioned for disposal in the Krško NPP [3], and is drawn up in accordance with the provisions of the Decree on the detailed plan of national importance for the low- and intermediate-level radioactive waste repository at Vrbina in the Municipality of Krško [4] and requirements and solutions laid out in the approved investment programme [5].

The LILW repository Vrbina, Krško decommissioning programme will be reviewed and updated in parallel with the actual progress of the repository project. The first such updating is envisaged in the procedure of application for consent to construction of the radioactive waste repository and then, at a minimum, in the scope of initial trial operation of the repository and later, in the scope of the periodic safety reviews stipulated for nuclear facilities, for the purposes of upgrading, updating and amending the decommissioning strategy, developments in technology, changes in the legislative framework and other changes in the facility that may have impacts on decommissioning. The programme will also be adjusted in the event of changes to important repository decommissioning or operating time milestones or changes in the plans for RW management in technological facilities or the application of technological equipment or in the event of the erection of a new radiation or nuclear facility in the area of the repository [6].

Upon the end of operation of the LILW repository at Vrbina, Krško, provisions must be made for its decommissioning. Timely planning of the decommissioning of a nuclear facility and of

the management of waste generated in the course of decommissioning is a legal obligation of the facility operator, which must also keep available financial means for decommissioning [7]. The process of repository decommissioning entails dismantling the non-disposal facilities within the radiologically controlled area and their release to unlimited use upon the completion of decommissioning (change of the facility status [3]).

This chapter addresses repository decommissioning only in its part not intended for disposal (technological facilities within the radiologically controlled area) and covers in particular equipment decontamination and dismantling [6]. The decommissioning activities relating directly to the disposal unit (silo) and associated construction elements and mechanical and electrical systems and decommissioning activities relating to non-radioactive waste at the repository are addressed in Chapter 12 on the repository decommissioning in the draft safety analysis report and in the reference document “Program zapiranja odlagališča” [8].

LILW generated in the process of the decommissioning of the repository technological facilities and devices and repository closure will be treated in part in the way described in general terms for primary LILW (i.e. LILW deriving from the Krško NPP, CSRAO and TRIGA operation and decommissioning), while in part this waste will have to be processed and conditioned for disposal outside Krško NPP or the technological facility (since these are envisaged to be decommissioned at the time of processing). This last waste deriving from decommissioning will be conditioned in the hall above the disposal silo [3].

Since LILW will continue to be generated in Slovenia even beyond 2062 (e.g. waste from institutions) and the need for disposal of such LILW will also continue, instead of repository decommissioning in 2062, we may anticipate a repetition of the transition of the repository into a phase in which disposal will not take place until the filling of all the storage capacities in other nuclear facilities in Slovenia, which will then be followed by a restart of active disposal of LILW [5], [9]. Events associated with the repository after its decommissioning in 2062 are very remote in the future and have not been addressed in any background document yet; therefore they are now only at a level of assumption and will likely be considered in the next phases of development of the LILW repository at Vrbina, Krško decommissioning programme.

General details of the repository site and facilities and technological procedures involved in LILW disposal are given in Chapters 2 and 9 of the draft safety analysis report.

16.2 METHOD OF DECOMMISSIONING

The assumed repository time periods according to [3], [9] envisage, in the basic LILW repository at Vrbina, Krško, scenario of operation, its decommissioning in 2061 and its closure in 2062, in line with the plans for the completion of the Krško NPP decommissioning [10]. The decommissioning of the repository only involves technological facilities within the radiologically controlled area, i.e. the part of the repository not intended for disposal. Due to decommissioning the technological facilities (which does not necessarily mean their dismantling), these facilities will be released for unlimited use after the repository closure. Total removal of no-disposal facilities is not justified, as they may, after the repository is closed, serve for the purposes of repository long-term monitoring and maintenance.

Starting points and assumptions for the development of the decommissioning programme

Considering the envisaged procedures and activities in the scope of conditioning of RW for disposal at the Krško NPP [3], [9], [4], in accordance with the applicable acceptance criteria [11], control of packages in the scope of RW transport or reception at the repository and envisaged operational activities at the LILW repository, and the fact that only solid LILW will be brought to the repository, and in particular the fact that the area to be decommissioned in the non-disposal part of the repository is relatively small and contains little technological equipment, we expect no emergency events to occur in the LILW repository operating period that might result in major contamination of the repository technological part or its immediate surroundings. Hence the following assumptions are used:

- The selected decommissioning strategy envisages immediate dismantling of systems and components and decontamination of premises and technological equipment.
- Project solutions used minimise the volume of generated radioactive waste to the lowest level practically achievable and quantities that facilitate decommissioning.
- No contamination of walls and partition walls, floors and ceilings within the radiologically controlled area in the storage facility premises, in the measuring station, or at the control point is anticipated.
- RW package surfaces will not be contaminated.
- Movable technological equipment in the secondary LILW storage, hot workshop and reserve room provided for the purposes of storage and repair of damaged containers will not be contaminated.
- In the technological facility, there will be no contamination of electrical and mechanical installations, physical and technical security systems, fire protection systems, or sewerage system.
- No contamination is anticipated in the administration and service facility, since these structures will not be a part of the radiologically controlled area and will not be involved in any handling of RW.
- Along with contamination of wastewater in the system for collection and treatment of liquids from the radiologically controlled area (washing basins, showers for personal decontamination), contamination of the floor drain sump and reservoir can be envisaged.
- Due to the system for drainage of water from the disposal area, which comprises extraction of floor drainage water from the provisional hall above the disposal silo, sinking water and runoff water from the disposal silo and water from paved drive surfaces within the radiologically controlled area in the repository, and considering the plan envisaging pumping of water into the control pool in the event of contamination, to await processing, contamination of the control pool and transfer pumps may be envisaged.
- In the ventilation system within the radiologically controlled area of the technological facility, contamination can be envisaged in the filtering device filters, ducts, piping and dampers.

As the repository decommissioning is still a long way off, and since this is the first programme of this kind, all new SSC necessary for decommissioning and envisaged organisational modifications, including the solutions to preserve know-how necessary for the decommissioning phase, will be considered in the future updates to this programme.

16.2.1 DECOMMISSIONING ACTIVITIES

The decommissioning of the LILW repository at Vrbina, Krško, will be carried out as a sequence of activities through which the nuclear facility will be released from active supervision as stipulated by the Ionising Radiation Protection and Nuclear Safety Act [7]. The activities will be divided into the following phases:

Phase 1: Procedure of application for approvals, complete with drafting the documents

- Permit for termination of operation of a nuclear facility: the content of the application is laid down in Rules JV5, [2] Article 30; the application must be submitted two years prior to the intended termination of operation at the latest (the permit is granted by SNSA).
- Consent and permit for commencement of decommissioning of a nuclear facility: the contents of the applications are laid down in Rules JV5, [2] Articles 31 and 32. Obtaining a construction permit for the removal of a radiation or nuclear facility, with the possibility of complete decommissioning of all systems and structures down to a “greenfield” site will not be required, since we envisage the final state in the form of a brownfield site, where structures will not be removed and where this will facilitate use for industrial purposes or for implementing long-term surveillance and maintenance of the repository after closure.

Phase 2: Decommissioning

- Monitoring the working and natural environment is conducted throughout the decommissioning of the technological facility and pertaining infrastructure in the radiologically controlled area.
- Emptying the technological facility:
  - Removal of all the LILW packages in the reserve storage facility that may happen to be stored in the technological part of the repository, due to being damaged in an accident at the repository site and awaiting remedying of damages, and removal of secondary LILW generated by the repository operations and of other movable technological equipment. Prior to disposal, LILW packages will be conditioned in the hall above the disposal silo in accordance with the acceptance criteria for disposal. During decommissioning, in the technological facility we anticipate the need to adapt the system of ventilation and retention of air and adapt the transportation route to the technological facility and between that facility and the hall over the disposal silo for personnel, equipment and waste.
  - Since the final inventory of the technological equipment and RW packages in the technological facility is not yet known, the precise implementing plan will be set out upon the next update of the repository project and of the programme document for decommissioning and in the decommissioning design plan.
- Measurements of contamination in the technological facility, system for collection possible contaminated water, the ventilation system and implementation of the necessary decontamination:
  - Detailed measurements of contamination will be conducted of the emptied technological facility and associated technological systems. Detailed measurements will be necessary of contamination of the ground, walls and ceilings, including taking samples at specific points for determining contamination.
  - Detailed measurements of contamination will be conducted in the system for collecting and processing liquids (floor drain sump, collection reservoir, pipes, etc.), in the system for removing water from the area of the disposal units (control pool with pipes and pumps).
  - Detailed measurements will be conducted in the ventilation system in the radiologically controlled area of the technological facility (filters, dampers, pipelines, etc.).

If contamination is detected on the surfaces of the technological facility, in the system for the collection and processing of liquids or in the ventilation system, appropriate decontamination procedures will have to be carried out. Since the planned time of decommissioning is a long way off, it will be necessary to use appropriate mechanical, chemical, electrical and other techniques for removing contamination from surfaces (concrete, metal, plastic and so forth) that are available at the time. The waste generated from the decontamination process will have to be adequately processed and placed in appropriate containers (drums) and then conditioned for disposal in accordance with the acceptance criteria. Where decontamination is not possible for components and surfaces, equipment will have to be disassembled and facilities dismantled and the materials generated conditioned for disposal in accordance with the acceptance criteria.

- Dismantling of contaminated systems

  In the system for collection and treatment of liquids from the radiologically controlled part of the technological facility, on identifying contamination and failure of decontamination, the drain sump, reservoir and related pipes are to be dismantled. In the system for draining water from the disposal section that collects in the control pool, the pipes and pumps, along with other small equipment, will need to be dismantled. In the ventilation system within the radiologically controlled area of the technological facility, filters, dampers, piping and so forth will need to be dismantled.

All radioactive waste generated in this way will have to be adequately separated, measurements taken of the contamination, dose rate, mass and so forth, and the waste processed and conditioned for disposal in accordance with the acceptance criteria.

Phase 3: Final activities and end of decommissioning
Radiological measurements will need to be taken in the area surrounding the technological facility (at the exhaust of the ventilation system, by the control pool, by the pipes in the system for collecting and processing liquids, on the plateau by the technological system and by the transport route to the disposal silo).
A report must be drawn up about all the measurements conducted, and this must include a final overview of the radiological status.

In accordance with the JV5 Rules [2] Article 33, or the relevant regulations in force at that time, the facility operator will submit an application for a permit to conclude decommissioning of the repository with all the necessary annexes.
The decommissioning activities will be conducted and implemented by the facility operator with the help of outside contractors.
It is anticipated that additional outside contractors will be involved in [8]:

- construction works,
- smaller demolitions and dismantling,
- major decontamination work and
- conditioning waste from decommissioning for disposal.

In accordance with the legislative requirements and the system of management, working instructions will be prepared for the envisaged activities. The work will need to observe the procedures for minimising the generation of RW through the use of conditional and unconditional abandoning of surveillance. The detailed timetable for decommissioning will be worked out in the next updates to the programme. The total duration of decommissioning,

starting from the obtaining of permits and preparation of documents, through decommissioning and to final activities and issuing the decision permitting the conclusion of decommissioning will not exceed one year [3], [9].

16.2.2 WASTE MANAGEMENT

The dismantling of the non-disposal part of the LILW repository will generate, in particular, waste due to contamination of premises and technological equipment within the radiologically controlled area, within the system for collection and treatment of liquids and within the ventilation system. Their volume and activity will largely depend on normal occurrences and emergencies in the course of operation and decommissioning. Generation of flammable, inflammable (compressible, incompressible) and liquid LILW may be anticipated, processed by compaction or compression and packaged in standard 210 L drums. The RW processing procedures will be similar to that applied for waste from decommissioning of the Krško NPP [11].

In accordance with acceptance criteria, prior to disposal, waste will be conditioned in appropriate packages (containers) in the hall above the silo. The estimated volume of waste generated in relation with the repository operations and including repository operational waste, waste from conditioning for disposal in the Krško NPP and waste generated in the course of repository decommissioning amounts to 47.4 t total [3], [11]. The majority of this waste is associated with conditioning for disposal at the Krško NPP and will be generated there. Only 10% of this LILW is expected to be generated at the repository site.

Based on this estimate of LILW generated at the repository site and technological facility construction design plans, generation of 2 N2b disposal containers of LILW at the most is anticipated. Calculation of disposal volume is made based on a disposal container of type N2b with a useful capacity of 6.31 m^3 that may accommodate 4 TTCs or 12 standard drums [3].

The volume of LILW resulting from the decommissioning of the non-disposal part of the repository is small thanks to the plan to build the technological facility in its minimum size for the purposes of control point, repository operational management, radiation safety, energy supply, etc.

Since some of envisaged predominant radionuclides in LILW resulting from decommissioning are short-lived (Fe-55, Mn-54, Co-60, etc.), further reduction of LILW for disposal may be achieved through clearance procedures.

In addition to a small volume of radioactive waste, non-hazardous non-radioactive waste, mostly construction waste, will be generated from decommissioning, in predominant volumes. This waste will be treated in accordance with environmental legislation and will be handed over to an authorised agency [12], [13], [14].
Radioactive waste resulting from the decommissioning of the technological part of the repository will be placed in the repository disposal silo in accordance with the applicable acceptance criteria for disposal.

16.2.3 ENVIRONMENTAL IMPACT

Considering the basic premises and assumptions of the decommissioning strategy in section 16.2 of this document, according to which no major contamination is to result from normal operation in structures, RW packages or movable technological equipment, except in the water collection and treatment systems and ventilation systems, and that all the LILW packages will be removed from the reserve storage facility and other structures within the radiologically controlled area, no significant contamination of surfaces or radiological impacts on the environment as a result of ionising radiation is to be expected.
Further, during decommissioning and conditioning of waste for disposal, no impacts on the environment are expected from the transport of LILW packages resulting from the decommissioning of the technological facility and mechanical and technological systems to the point of their conditioning for disposal in the hall above the disposal silo.

Should, however, surfaces outside the technological facility be contaminated in the course of decommissioning, e.g. the local transport route, decontamination and appropriate protection measures will be necessary to prevent spreading of contamination into the natural environment.

Assessment of impacts on the environment for nuclear facilities in the decommissioning phase is imposed by certain
EU documents, such as DS 2011/92/EURATOM and DS 2014/52/EURATOM, and IAEA documents [15].

But, since the commencement of repository decommissioning is very remote in time, the need for assessment of impacts on the environment will be addressed in line with the then applicable legislation and regulations or be included in an update of this document if so required.

Final inspection of the radiological condition

The application for a permit for completion of decommissioning pursuant to JV5 [2] will include a report on the final inspection of the radiological condition of the facility site, this based on control measurements performed by an authorised radiation protection expert.
The final report will provide data, calculations and evidence proving that the levels of radioactivity, including the ionising radiation dose rates and contaminations of structures, systems, water and soil masses with alpha, beta and gamma emitters are below the statutory limit values. It will also provide detailed descriptions of the sampling methods and frequencies, measurement quality management and assurance system, comparison with the base case and comparison between certain limit values based on national and international regulations and recommendations. The report will further provide the inventory of all the repository zones and SSCs fit for clearance from the regime of administrative surveillance of a nuclear facility. For areas where this is not possible, the contents of the envisaged long-term surveillance and maintenance will be provided.

16.3 SAFETY DURING DECOMMISSIONING

To ensure safety during decommissioning, a safety assessment will be produced, this in the scope of the drawing up of the safety report for decommissioning activities listed in section 16.2.1. The safety assessment will provide a detailed assessment of the impact of the planned modifications on the radiation and nuclear safety of the LILW repository [6], [2]. The safety assessment will be drawn up upon the completion of the decommissioning implementation project design; it will lay out detailed descriptions of approaches and procedures to be applied in the implementation.

For the purposes of safety assessment, a safety analysis will be performed in accordance with applicable legislation and regulations and applying internationally established methodologies. The safety analysis will identify potential normal occurrences and emergencies during decommissioning that may have impacts on the safety of the workers and of the reference group of the public and on the environment in the period of decommissioning of facilities, and a safety analysis report for decommissioning will be drawn up.

Radioactive effluents during decommissioning, defence in depth and radiological risks

Radioactive effluents during decommissioning must comply with the ALARA principle and within the range of allowable limit values.
During decommissioning, monitoring will be provided, tailored to the characteristics of decommissioning, for effluents from the ventilation system and the wastewater system. Radiological control of the collected wastewater will be carried out before the discharge of collected industrial or municipal wastewater from the radiologically controlled part of the repository, this by means of sampling and analysing the samples applying the method of high resolution gamma spectrometry. The monitoring of gaseous discharges is carried out through continuous sampling of the exhaust air from the technological facility. Several safety measures will be deployed in system design and operation to achieve a defence in depth even in the event of failure of one of the systems.

Already in the phase of operation, the repository is to be kept free of contamination of surfaces and any contamination is to be immediately remedied.

Since the area envisaged for decommissioning within the non-disposal part of the repository is relatively small, and given no contamination of walls, partition walls, floors and ceilings within the radiologically controlled area, and since no dismantling of disposal facilities within the radiologically controlled area is planned, no major radiological risks are envisaged as a result of large-scale cutting of SSCs or of contamination of large structures and systems or of dismantling and disassembly works. Hence no extensive special measures will be necessary in the process of disassembly and dismantling of SSCs.

Occupational health and safety

For the purposes of ensuring occupational health and safety, a safety plan will need to be drawn up prior to the commencement of decommissioning works, this in accordance with the provisions of occupational health and safety regulations [16]. In addition to the basic health and safety at work principles, all secondary implementing regulations relating to specific types

of work will also be adhered to. It will be necessary to ensure that the workers employ the prescribed personal protection equipment and means of work fully complaint with the applicable regulations.

In the scope of the decommissioning programme, an assessment will be made of radiation protection [7] and an optimisation plan for the protection of people and environment against ionising radiation during decommissioning will be developed. An assessment of the radiation protection of exposed workers will provide an assessment of the nature and magnitude of the radiation risk for exposed workers, along with an optimisation plan for ionising radiation protection in all planned activities of the decommissioning phase. Written instructions for safe work in the radiologically controlled area will be drawn up.

Along with the above-listed requirements, all workers must fully meet the conditions laid down by occupational health and safety legislation, nuclear and radiation safety legislation, and fire-protection legislation. This means that workers must be trained for the intended operations and informed of the hazards and risks, of the necessary measures for avoidance of accidents and for the minimisation of exposure to radiation, of the actions to be taken in cases of increased risks of accidents or of exposure to radiation in emergency situations, accidents at work, of particular collective measures, of extra hazardous tasks and implementation of common measures to ensure health and safety.

A more detailed plan of protection at work to address exposure to ionising radiation and exposure to significant non-radiological risks, such as lifting and handling of heavy loads, use of hazardous materials in decommissioning processes, stability of decontaminated SSCs, disassembly and dismantling, will be drawn up in the scope of the next programme updates.

Protection and rescue plan

To provide for protection and rescue measures in cases of emergencies in the nuclear facility in the course of decommissioning, a document will be drawn up in the scope of development of the documents to support application for the consent to the facility decommissioning [2] laying out all the necessary measures to protect the environment, the public and employees in accordance with the regulations governing protection against natural disasters and other accidents. The document will contain an action plan for emergencies that might affect the environment and the area outside the repository during decommissioning.

Physical protection of nuclear and radioactive materials

In accordance with the law governing protection against ionising radiation and nuclear safety (ZVSIJV) [7] and the Rules on the physical protection of nuclear facilities and nuclear and radioactive materials and the transport of nuclear materials [17], in the scope of drafting documents to support the application for consent to construction of the radioactive waste repository, a detailed plan will be developed of the scope and methods of providing measures of physical protection of the repository facilities during its construction, operation and decommissioning. The plan of physical protection during decommissioning will also define emergency physical protection measures and other specified contents. Appropriate work

instructions will lay down criteria for entry into/exit from and presence of persons and equipment at the repository site.

The developed documents will be handled in accordance with the legislation governing secret information.
During operation and decommissioning, physical protection will be provided by the facility operator with the help of outside contractors [3]. Provision of physical and technical protection will be provided in the repository administrative building, which is situated outside the radiologically controlled area and will continue to function without obstructions during decommissioning. For the purposes of physical protection, external and internal fencing will be erected. During decommissioning, the external fence will act as the perimeter of the protected area and will, at the same time, restrict direct access to the repository site itself. The internal fence will separate the controlled area of physical protection from the repository site protected area.

During the repository decommissioning, the system of repository physical protection, the regime of personal access to and exit from the repository site and the regime of introduction of objects into and their removal from the repository site are envisaged to remain the same as during the repository operation. Since it is not planned to release the repository complete with appurtenant facilities into unlimited use, but rather its industrial use is envisaged (i.e. abandoned site), it will be possible to retain and continue to apply, during decommissioning, the installed and effective system of burglar protection and installed systems of active fire protection arranged in the repository administrative and service building.

16.4 DOCUMENTS REQUIRED FOR DECOMMISSIONING

The system of collection and filing of records necessary for quality decommissioning will be addressed in the next updates of this document. All the detailed information on the facility necessary for its decommissioning, such as the operational history and data generated in all the facility phases, from its siting, design and construction, through trial operation and operation to the termination of operation, will be completed in phases, in parallel with the facility life-cycle phases and envisaged updates to the decommissioning programme.

Given the above bases and assumptions, there is a realistic scenario to close the repository in 2062, which is conditional upon the duration of repository operation and intermediate phases, in which disposal is not envisaged [3], [9] (repository standby phase) and, as a consequence, upon the commencement of the facility decommissioning. Considering the final state of the facilities and the site after decommissioning, the scenario is as follows:
In 2061, in accordance with Rules JV5 [2], procedures are started to obtain permits to start and to complete decommissioning of the repository. In compliance with the provisions of the permits, dismantling of systems and components and decontamination of premises and technological equipment take place leading to the planned final condition of the facilities – fitness for industrial use. All the decommissioning procedures are envisaged to take one year.

In accordance with the Rules on radioactive waste and spent fuel management (JV7) [18], the decommissioning contractor will keep records of generation of RW from decommissioning, their holding, technological processing, storage or release or clearance from surveillance.

Together with the data on annual forecasts of generation of radioactive waste from decommissioning, these data will be reported to the central register of radioactive waste and spent fuel [18].

16.5 PLANNING OF PRELIMINARY WORKS

The procedure of application for approvals, complete with drafting the documents, is described in section 16.2.1. According to plans, prior to decommissioning, the permit for termination of operation of a nuclear facility and the permit for commencement of decommissioning of a nuclear facility will have to be obtained [2].

Project management

Project management will be addressed in the decommissioning implementation design document, which will be drawn up based on the latest approved programme of decommissioning and in accordance with Article 51 of Rules JV5 [2] or the applicable administrative procedure at the time of application for the permit for commencement of decommissioning. The project will be implemented in the framework of the operator's management system in effect, in compliance with the safety and quality management requirements of Rules JV5 [2] chapter V.

Activities that need to be planned or implemented in the repository operation phase

To ensure effective and safe decommissioning, regular SSC inspections and maintenance will be required during the repository operating phase, along with gathering and maintenance of adequate knowledge of the facility. Throughout the operating phase, the repository operator will have to keep relevant registers, records and reports critical for the implementation of decommissioning (records of the use of facilities and equipment, records and reports on occurrences and accidents, registers of waste inventory, dose rate and contamination). The repository operator will have to provide for regular upkeep of the repository free of contamination of surfaces and remedy any contamination immediately.

Inspections and maintenance

In the period from the commencement of the repository decommissioning up to its termination, and in the course of the procedure of repository closure, the programme of SSC inspections and maintenance and the programme of radioactivity monitoring will be adjusted to the dynamics of the decommissioning project. For this purpose, a special programme will be developed prior to the commencement and will be incorporated in the decommissioning implementation project design. The programme of maintenance, testing and inspection of SSCs, which will remain installed at the time of completion of decommissioning to the stage of abandoned site and release of the facilities for industrial use, will be handed over, complete with the relevant documents, to the future facility operator or the provider of repository long-term surveillance and maintenance if the facilities are to enter such use.

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